

Mike

File 1 of 2 attached – main text.

Kind regards

LESLIE HUTCHINGS

Able UK Ltd
Able House
Billingham Reach Industrial Estate
Billingham
Teesside TS23 1PX
Tel: XXXX
Fax: XXXX
Email: XXXX
Web: www.ableuk.com & www.ableshiprecycling.com

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Applicant's Comments on the Written Representations

August 2012
Revision: 0
Able UK Ltd

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APPROVAL & REVISION REGISTER

	NAME	SIGNATURE	DATE
Originator:	R. Cram		03/08/2012
Checked by:	N. Etherington		03/08/2012
Approved by:	P. Stephenson	PMS	03/08/2012

REVISION	COMMENTS	DATE
A	ISSUED TO PLANNING INSPECTORATE	03/08/2012

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1. **INTRODUCTION**

- 1.1 This document consists of the comments of Able Humber Ports Ltd ('the Applicant') on the 31 Written Representations (WRs) received by the Planning Inspectorate on their application for the proposed Able Marine Energy Park (AMEP).
- 1.2 While the applicant believes that the information provided with its application is sufficient for it to be examined and determined, it acknowledges the concerns raised by the parties making representations and has accordingly provided, in this response, additional information in response to them. It should be noted that the additional information supports the conclusions reached in the Environmental Statement (ES) and other application documents and does not change the Project.
- 1.3 In response to the Written Representations and as a result of the Issue Specific Hearing on Development Consent Order (DCO) held on 12th July, the applicant also proposes certain changes to the DCO and the additional information provided with these comments include a tracked change third draft of it at Appendix WR1.1, a commentary at Appendix WR1.2 and revised plans (showing minor modifications in response to the WRs) at Appendix WR1.3.

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2. **CLARK WEIGHTMAN ON BEHALF OF BETHANY JAYNE**

Summary of Written Representation

2.1 Objects to the compulsory acquisition of approximately 1.685 ha of land.

Applicant's Comments

- 2.2 In respect of the roadway, the Applicant proposes to acquire the land and grant rights to use the road to all those who currently use it and will have a continuing need to use it, including Bethany Jayne. Bethany Jayne will therefore have no diminution in its ability to access its business.
- 2.3 The Applicant will also use this road itself to access its site. It would not be practicable to create a new access instead, as the local highway authority are strongly opposed to more than three accesses to the site from Rosper Road and to do so would create a fourth access.
- 2.4 Furthermore, to leave this road under the ownership of another party would sever the southern part of the onshore site from the remainder, which would threaten the viability and cohesion of the project as a single entity. One of the main barriers to developing a facility such as AMEP has been the historically fragmented land ownership of which this site is an example. Although Able has now purchased the vast majority of the site without resorting to compulsory powers, the few remaining parcels such as this one must be acquired in this way.
- 2.5 In respect of the storage area, again for the Project to operate effectively, parts of it cannot be in other ownership and the maximum amount of onshore land is required to support the quay, as demonstrated in the statement of reasons (document reference TR030001/APP/13a).
- 2.6 Able is in negotiation with Bethany Jayne to acquire its land by agreement and will continue to pursue this. Even if compulsory powers are necessary, Bethany Jayne will be compensated for the market value of this land.

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3. **DLA PIPER ON BEHALF OF C.RO PORTS KILLINGHOLME**

Summary of Written Representation

- 3.1 The Written Representation sets out in detail the following:-
- 3.1.1 Concerns over navigation to and from C.RO during construction and operation;
 - 3.1.2 Concerns that, if AMEP is constructed, the consequential change in the sedimentary regime will increase C.RO's maintenance costs;
 - 3.1.3 Concern that the compulsory acquisition of the Network Rail land will sever rail access from C.RO;
 - 3.1.4 Concerns over the drafting of the DCO.
- 3.2 All of the concerns above have been reviewed and Applicant's comments to each point follows in the order submitted in the Written Representation.

Applicant's Comments

Navigation

- 3.3 Simulation exercises undertaken at South Tyneside Marine College and reported in Annex 14.3 of the ES and in the supplementary report EX14.4, have demonstrated that berthing and unberthing of vessels onto the berths at C.RO can be undertaken safely and without any increased requirements for tug support.
- 3.4 It is inevitable that the management of vessel movements will be made a little more complex during the construction and, less so, during the operation of AMEP (as maximum vessel movement will occur during construction). Whether, however, that increased complexity actually results in any serious detriment to C.RO is unlikely.
- 3.5 With regard to construction, an indicative dredging programme is included in Annex 7.6 of the ES, and shows that at any time, up to two TSHDs will be operating at the site or, alternatively, a single backhoe dredger with 3 split hopper barges. The complexity this introduces can however be managed by experienced mariners, by close cooperation between the parties and need not cause any delays to C.RO sailings. C.RO already manage extensive dredging campaigns at their own berths.
- 3.6 Despite the statements made in paragraph 14.3.1 of the WR, C.RO are well aware that navigation simulation exercises were undertaken at South Tyneside Marine College (STMC) using up to date hydrodynamic data on 27th March 2012 in the presence of the Harbour Master Humber and a senior Humber pilot; they know because they were invited to attend but declined to do so. A report of the simulation exercise is provided in EX14.4. At C.RO's request, as an alternative to attending STMC, the Applicant provided C.RO with sufficient information for them to undertake their own independent navigation exercise. C.RO has not disclosed their assessment to the Applicant.
- 3.7 The statements made in paragraph 14.3.2 of the Written Representation seem contradictory; initially it is asserted that the navigation assessment did not consider vessel movements from CPK and then it states that the assessment of it is '*numerically downplayed*'. Navigational risk assessment is dependent upon

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qualitative judgements and the Applicant has employed a suitably qualified and experienced consultant to undertake this piece of work. CPK attended the navigation workshop arranged by the Applicant in January 2011 and was issued with a draft hazard log on 9th February with a request to comment. BMT specifically noted in their request that, *'the main concern is that the majority of hazards and controls have been identified'*, and sought comments within 2 weeks. In response, HST replied, *'As far as the RA's are concerned it is proving difficult to fully understand your methodology of assessment and somewhat heavy going in attempting to agree with your mitigating measures to reduce the risk. For this reason we will not be in a position to pass comment within your proposed timescale'*. No comments were ever subsequently received from them, although other attendees did respond. Taken as a whole, the risk assessment demonstrates that all shipping hazards associated with the development can be appropriately managed and mitigated.

- 3.8 The references to *'a 600% increase in traffic within C.RO's area of operation'*, needs to be set in context. The assessment of vessel movements was reviewed following the preparation of the navigational risk assessment and the total number of construction vessel movements increased from 3 600, stated in Annex 14.2, to 5 500 as stated in the ES; refer to Figures 3.1 and 3.2 below which illustrates how this change arose. However, the EIA had regard to this change as recorded in Section 14.2 of the ES. As can be deduced from a comparison of the figures below, the increase from a peak of 400 vessel movements per month to 700, is substantially due to **one** extra split hopper barge (from two to three) being used in association with the backhoe dredger, together with modified assumptions on production rates. The backhoe dredger will be, to all intents and purposes, static, and will be operating predominantly within the berthing pocket, allowing the free passage of ships for most of the time. The number of vessel movements will also decrease significantly following the identification of beneficial use for glacial clay deposits within the berthing pocket. This is reported in EX7.7 included in the volume of supplementary information.
- 3.9 The split hopper barges will sit alongside the backhoe dredger arriving and departing on the instruction of Harbour Master through VTS. The TSHD will be operating at very slow speeds throughout the project area. The management of this increased traffic is well within the capability of qualified and experienced mariners. Indeed C.RO will have experience themselves of managing major dredging operations close to their own facility, since they are obliged to maintain their own facilities by dredging their own berths and approaches.
- 3.10 It is a trite argument that an ES contains *'insufficient'* information or is *'inadequate'* or that *'more detail is required'*, and it is used in this Written Representation to claim that detailed management arrangements have not been prepared for shipping movements to and from C.RO. The ES, as defined in legislation, need only contain *'the information referred to in Part 1 of Schedule 4 (of the EIA Regulations) as is reasonably required to assess the environmental effects of the development and of any associated development and which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile'*, (underline added). The Applicant contends that there is sufficient information in the ES to reasonably understand the potential impacts on navigation within the Humber Estuary. Shipping hazards change continuously and appropriate methods exist for their identification and assessment on a routine basis as part of normal port operations. It is quite clear from the assessment presented in the ES that all

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identifiable risks are within the reasonable competency of experienced mariners to manage and to mitigate. No further assessment is necessary at this stage.

Hydrodynamic and Sedimentary Regime

- 3.11 Hydrodynamic modelling is a complex science and the results do not provide a level of precision that might be implied from this WR. The assessment of sedimentation at Immingham Outer Harbour, for example, appears to have been significantly under-estimated during its design. The results of modelling therefore provide an indication of the likely significant effects of a project but actual effects may vary temporally, spatially or in scale. In response to the Relevant Representation commenting upon the EIA's reliance of modelling results from various quay design iterations, the Applicant has provided additional modelling results based on the quay layout; these are included in reports EX8.7, EX8.8 and EX8.10. As anticipated, the effects do not vary in any significant way to those reported in the ES.
- 3.12 The Applicant proposed Heads of Terms to C.RO by letter dated 6th March 2012 to address the residual uncertainty of the sediment transport modelling. Proposed terms addressed any potential increased maintenance costs due to a change in sedimentation in C.RO's berths due to AMEP. On 15th June the Applicant was advised that C.RO preferred the matter to be addressed in the DCO through protective provisions.

Compulsory Acquisition of the Railway

- 3.13 This issue is addressed in Chapter 29 and in Appendix WR22.3.

Efficacy of the Draft DCO

- 3.14 The Written Representation questions three issues with the DCO:-
- that article 10 is too wide and its effects have not been properly environmentally assessed;
 - that there is no, or no sufficient, restriction on the use of the quay when the environmental statement and habitats regulations assessment report are on the basis that it will be used for renewable energy infrastructure; and
 - that the DCO should contain a provision similar to that used for the Rookery South project to provide comfort that the Able group of companies will be able to pay compensation for the acquisition of land.
- 3.15 The first issue is a disagreement with the government's model provisions (model provision 7 for harbours – subsidiary works), on which article 10 is closely based. Indeed paragraph 17.3 of the Written Representation suggests that the approach of the model provision is 'not authorised by the Planning Act 2008'.
- 3.16 The applicant submits that the same approach should continue to be undertaken for harbour facilities authorised under the Planning Act 2008, and this project in particular, as has hitherto been undertaken by means of Harbour Empowerment and Revision Orders and, before them, private Acts. There is no reason given why this project should be treated differently from others of the same type, which generally include a similar clause in their authorisations. As an example,

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the Humber Sea Terminal (Phase III) Harbour Revision Order 2006 (for C.RO's own facility) has at article 7:-

7. The Company may from time to time within the limits of deviation make such trial boreholes or erect, construct and maintain whether temporarily or permanently all such works and conveniences as may be necessary or convenient for the purposes of or in connection with or incidental to the construction, maintenance or use of the works.

- 3.17 The article above is arguably wider than article 10 of the DCO because it does not specify the types of works that are included.
- 3.18 Article 10 restricts the works so that they must be 'necessary or convenient for the construction of the authorised development or the operation of the undertaking'. Thus the article would not cover works that were unrelated to the development authorised by the DCO.
- 3.19 The ability to construct minor structures as part of the harbour development is assumed in the ES, which explicitly contemplates and assesses items such as buildings, roads, lighting columns and implicitly includes items incidental to these such as fences and ladders.
- 3.20 The applicant does recognise, however, that while these minor works are appropriate and are contemplated in the environmental assessment for the quay and the onshore facilities, they are not appropriate in some cases for some parts of the order land. These include the areas of the sea bed within the order limits where this would require a marine licence under the Marine and Coastal Access Act 2009, and the environmental areas where the items are not related to the construction or operation of the environmental area, and the applicant is including drafting changes to this article in the revised draft DCO it is submitting with its comments on the written representations.
- 3.21 On the second issue, the applicant has accepted that it is appropriate to include a requirement restricting the use of the quay and has included a draft of such a requirement in the revised draft DCO.
- 3.22 On the third issue, C.RO is referring to article 8 of the Rookery South DCO, which reads as follows:

8. (1) The authorised development must not be commenced and the undertaker must not begin to exercise the powers of articles 17 to 27 of this Order unless either a guarantee in respect of the liabilities of the undertaker to pay compensation under this Order or an alternative form of security for that purpose is in place which has been approved by the relevant planning authorities.

(2) A guarantee given in respect of any liability of the undertaker to pay compensation under this Order is to be treated as enforceable against the guarantor by any person to whom such compensation is payable.

- 3.23 C.RO is the only party who has raised this issue, perhaps prompted by the fact that their legal team worked on the Rookery South DCO. In that case, the promoter Covanta Energy did not operate in the UK at the time, whereas Able is a long-established UK company based on Teesside and the Humber. No other DCO to date has an equivalent article. The applicant does not presently intend to propose amendments to the DCO as it does not believe that they are necessary.

Figure 3.1 Assessment of Construction Vessel Movements Used in RA

		2012										2013										2014				
Equipment	Application	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
Vessels importing hydraulic fill																										
TSHD 1	importing fill			1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6												534
TSHD 2	importing fill					1,7	1,7	1,7	1,7	1,7	1,7	1,7	1,7													413
Total Vessel Movements per day		0,0	0,0	1,6	1,6	3,3	3,3	3,3	3,3	3,3	3,3	3,3	3,3	1,6	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
Days/Month		30	31	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	Total:
Total Vessel Movements per month		0	0	48	50	102	99	102	99	102	102	92	102	48	0	0	0	0	0	0	0	0	0	0	0	948
Dredging vessels																										
TSHD 3	dredging / disposal	3,2	3,2	3,2	3,2	3,2	3,2	3,2	3,2																	781
BH 1	operating on site		0	0	0																					
SB1	transport to disposal	0,5	2	2	0,6																					156
SB2	transport to disposal	0,5	2	2	0,6																					156
EKB 1	operating on site																	0	0	0						
SB1	transport to disposal																	4,8	4,8	3,9						414
SB2	transport to disposal																	4,8	4,8	3,9						414
SB3	transport to disposal																	3,2	3,2	2,6						276
Total Vessel Movements per day		4,2	7,2	7,2	4,4	3,2	3,2	3,2	3,2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	12,8	12,8	10,4	0,0	0,0	0,0	0,0	0,0	
Days/Month		30	31	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	Total:
Total Vessel Movements per month		126	223	216	136	99	96	99	96	0	0	0	0	0	0	0	0	397	384	322	0	0	0	0	0	2195
Supply vessels to the installation rigs																										
GE1_WR	operating on site	0	0	0	0	0	0						0	0												
MP 1 + Tug	transporting material	0,4	0,8	0,8	0,8	0,8	0,6						0,6	0,6						0,3	0,3	0,3	0,3	0,3	0,4	223
GE2_WR	operating on site	0	0	0	0	0	0						0	0												
MP 2 + Tug	transporting material	0,4	0,5	0,6	0,6	0,6	0,6						0,6	0,6												137
GE3_WR	operating on site		0	0	0	0	0																			
MP 3 + Tug	transporting material		0,4	0,5	0,6	0,4																				58
Total Vessel Movements per day		0,8	1,7	1,9	2,0	1,8	1,2	0,0	0,0	0,0	0,0	0,0	1,2	1,2	0,0	0,0	0,0	0,0	0,0	0,3	0,3	0,3	0,3	0,3	0,4	
Days/Month		30	31	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	Total:
Total Vessel Movements per month		24	53	57	62	56	36	0	0	0	0	0	37	36	0	0	0	0	0	9	9	9	9	8	12	418
Total Vessel Movements per day		5,0	8,9	10,7	8,0	8,3	7,7	6,5	6,5	3,3	3,3	3,3	4,5	2,8	0,0	0,0	0,0	12,8	12,8	10,7	0,3	0,3	0,3	0,3	0,4	
Days/Month		30	31	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30	31	30	31	31	28	31	Total:
Total Vessel Movements per month		150	276	321	248	257	231	202	195	102	102	92	140	84	0	0	0	397	384	332	9	9	9	8	12	3561

Legend:

Code	Equipment	Application	Remark
Vessels importing hydraulic fill			
TSHD 1:	Trailing Suction Hopper Dredge 1	Importing and placing hydraulic fill	Assumed sailing distance to location of potential winning area of fill: 60 km
TSHD 2:	Trailing Suction Hopper Dredge 2	Importing and placing hydraulic fill	Assumed sailing distance to location of potential winning area of fill: 60 km
Dredging vessels			
TSHD 3:	Trailing Suction Hopper Dredge 3	Dredging and transporting to disposal area	Assumed sailing distance to location of disposal area: 25 km (maybe CSD)
BH 1:	Back hoe dredger	Dredging and loading on split hopper barge	O: operating on site within site boundary
EKB 1:	Floating Bucket ladder dredger	Dredging and loading on split hopper barge	O: operating on site within site boundary
Installation rigs			
Ge1_WR:	Jack-up barge 1	Piling works	O: operating on site within site boundary
Ge2_WR:	Jack-up barge 2	Piling works	O: operating on site within site boundary
Ge3_WR:	Jack-up barge 3	Piling works	O: operating on site within site boundary
Supply vessels to the installation rigs			
SB1:	Split Hopper Barge 1	Transport of dredge material to disposal area	Assumed sailing distance to location of disposal area: 25 km
SB2:	Split Hopper Barge 2	Transport of dredge material to disposal area	Assumed sailing distance to location of disposal area: 25 km
SB3:	Split Hopper Barge 3	Transport of dredge material to disposal area	Assumed sailing distance to location of disposal area: 25 km
MP 1 + Tug:	Material Pontoon 1 (Tug assisted)	Transport & storage of piling material & quay equipment	Location of transshipment point to be defined
MP 2 + Tug:	Material Pontoon 2 (Tug assisted)	Transport & storage of piling material	Location of transshipment point to be defined
MP 3 + Tug:	Material Pontoon 3 (Tug assisted)	Transport & storage of piling material	Location of transshipment point to be defined

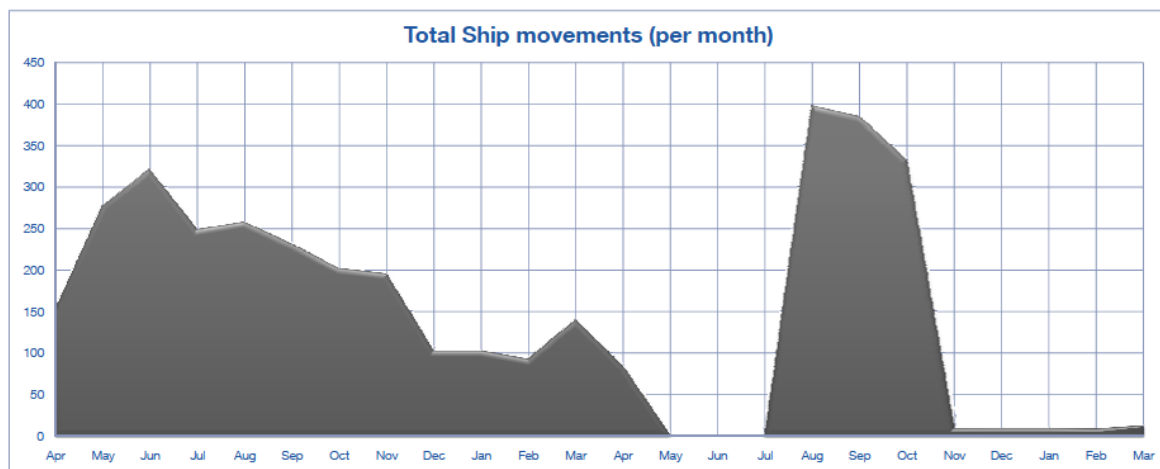
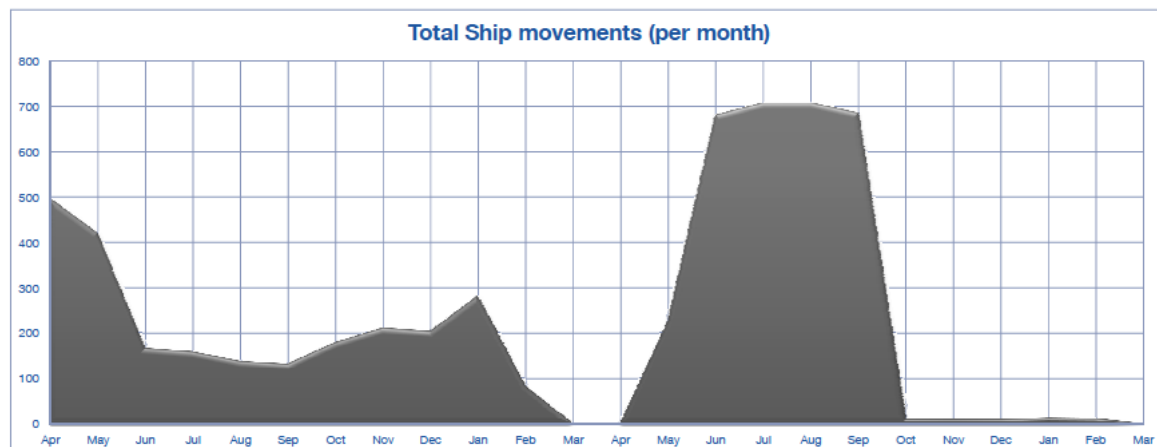


Figure 3.2 Revised Assessment of Construction Vessel Movements Reported in ES

		2013										2014												2015				
Equipment	Application	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total		
Vessels importing hydraulic fill																												
TSHD 1	Importing fill		3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,5																830		
	Operating Days/Month		23	30	31	31	30	31	30	31																		
TSHD 2	Importing fill							3,5	3,5	3,5																270		
	Operating Days/Month							20	30	27																		
MO 1	operating only on site		O	O	O	O	O	O	O	O																		
	Total Vessel Movements per day	0	4	4	4	4	4	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Total:		
	Total Vessel Movements per month	0	81	105	109	109	105	179	210	203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1099		
Dredging vessels																												
TSHD 1	dredging / disposal										16,6	9,1														364		
TSHD 3	dredging / disposal	15,4	15,4																							739		
	Operating Days/Month	30	18								17	9																
BH 1	operating only on site	O													O	O	O	O	O									
SB1	transport to disposal														7,5	7,5	7,5	7,5	7,5							990		
SB2	transport to disposal														7,5	7,5	7,5	7,5	7,5							990		
SB3	transport to disposal														7,5	7,5	7,5	7,5	7,5							990		
	Operating Days/Month	8													10	30	31	31	30									
	Total Vessel Movements per day	15	15	0	0	0	0	0	0	0	17	9	0	0	23	23	23	23	23	0	0	0	0	0	0	Total:		
	Total Vessel Movements per month	462	277	0	0	0	0	0	0	0	282	82	0	0	225	675	698	698	675	0	0	0	0	0	0	4073		
Supply vessels to the installation rigs																												
GE1_WR	operating only on site	O	O	O	O	O																						
MP 1 + Tug	transporting material	0,6	1	1	1	1										0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,4	0,4		195		
	Operating Days/Month	18	31	30	31	9										15	31	31	30	31	30	31	31	28				
GE2_WR	operating only on site	O	O	O	O	O	O																					
MP 2 + Tug	transporting material	0,5	0,5	0,6	0,6	0,8	1,3																			113		
	Operating Days/Month	30	31	30	31	25	20																					
GE3_WR	operating only on site	O	O	O																								
MP 3 + Tug	transporting material	0,5	0,5	0,6																						37		
	Operating Days/Month	18	31	21																								
	Total Vessel Movements per day	1,6	2,0	2,2	1,6	1,8	1,3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,4	0,4	0,0	Total:		
	Total Vessel Movements per month	35	62	61	50	29	26	0	0	0	0	0	0	0	0	5	9	9	9	9	9	9	12	11	0	345		
All vessels																												
	Total Vessel Movements per day	17,0	20,9	5,7	5,1	5,3	4,8	7,0	7,0	7,0	16,6	9,1	0,0	0,0	22,5	22,8	22,8	22,8	22,8	0,3	0,3	0,3	0,4	0,4	0,0	Total: 5518		
	Days/Month	30	31	30	31	31	30	31	30	31	31	28	31	30	31	30	31	31	30	31	30	31	31	28	31			
	Total Vessel Movements per month	497	420	166	158	138	131	179	210	203	282	82	0	0	225	680	707	707	684	9	9	9	12	11	0			

Legend:

Code	Equipment	Application	Remark
Vessels importing hydraulic fill			
TSHD 1:	TSHD Barent Zanen (8,000 m3)	Importing and placing of selected and hydraulic fill	Approximate sailing distance to location of fill winning area and back: 60 km
TSHD 2:	TSHD Oranje (16,000 m3)	Importing and placing hydraulic fill	Approximate sailing distance to location of fill winning area and back: 60 km
MO 1:	Multicat vessel BKM	Assistance with pipeline connections to hydraulic fill	O: operating on site within site boundary
Dredging vessels			
TSHD 1:	TSHD Barent Zanen (8,000 m3)	Dredging Alluvium, Sand & Gravel from Berthing pocket, Turning Area and Approaches	Assumed sailing distance to disposal at Humber 2 or 3 and back: 25 km
TSHD 3:	TSHD Sospan Dau (1,400 m3)	Dredging Alluvium from Reclamation Area	Assumed sailing distance to disposal at Humber 2 or 3 and back: 25 km
BH 1:	Back hoe Nordic Giant (Tug assisted)	Dredging Glacial Till	O: operating on site within site boundary
Installation rigs			
Ge1_WR:	Jack-up barge 1	Piling works and anchor installation	O: operating on site within site boundary
Ge2_WR:	Jack-up barge 2	Piling works	O: operating on site within site boundary
Ge3_WR:	Jack-up barge 3	Piling works	O: operating on site within site boundary
Supply vessels to the installation rigs			
SB1:	Spill Hopper Barge 1	Transport of dredge material from BH to disposal area	Assumed sailing distance to disposal at Humber 2 or 3 and back: 25 km
SB2:	Spill Hopper Barge 2	Transport of dredge material from BH to disposal area	Assumed sailing distance to disposal at Humber 2 or 3 and back: 25 km
SB3:	Spill Hopper Barge 3	Transport of dredge material from BH to disposal area	Assumed sailing distance to disposal at Humber 2 or 3 and back: 25 km
MP 1 + Tug:	Material Pontoon 1 (Tug assisted)	Transport & storage of piling material & quay equipment	Location of transshipment point to be defined
MP 2 + Tug:	Material Pontoon 2 (Tug assisted)	Transport & storage of piling material	Location of transshipment point to be defined
MP 3 + Tug:	Material Pontoon 3 (Tug assisted)	Transport & storage of piling material	Location of transshipment point to be defined



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4. C.GEN KILLINGHOLME LIMITED

Summary of Written Representation

- 4.1 The Written Representation from C.RO Ports Killingholme Limited (C.RO or 'CPK') sets out the following issues:-
 - 4.1.1 Concerns over navigation to and from C.RO during construction and operation
 - 4.1.2 Concerns that, if AMEP is constructed, the consequential change in the sedimentary regime will increase C.RO's maintenance costs;
 - 4.1.3 Concern that the compulsory acquisition of the Network Rail land will sever rail access from C.RO;
 - 4.1.4 The impact of the development on the local highway network;
 - 4.1.5 Concerns the over the surface water drainage scheme.
- 4.2 All of the concerns above have been reviewed and the Applicant's comments to each point follows in the order submitted in the Written Representation.

Applicant's Comments

Navigation

- 4.3 Whilst C.GEN express concern that the Applicant has not undertaken an adequate assessment of the impact of AMEP on navigational impacts on C.RO Ports, the concern is not specific and it is impossible for the applicant to respond to such vague concerns. The issues raised by C.RO Ports themselves are addressed in the previous chapter.

Sedimentary Regime

- 4.4 In the preliminary plans issued by C.GEN they show their cooling water intake (CWI) adjacent to the berths for C.RO Port's jetties. Clearly, these berths are periodically dredged in order to maintain the required draft for vessels using the facility. This would necessitate the use of Trailing Station Hopper Dredgers (TSHDs) in close proximity to the berths and this would inevitably generate elevated suspended sediment concentration compared to background. Dredging at AMEP will be similar but much more remote and consequently there is no credible likelihood of AMEP having a significantly adverse effect on the operation of the proposed CWI, since it will already be designed for more extreme events.
- 4.5 It is, of course, a matter for C.GEN whether or not they rely on information provided by third parties.

Compulsory Acquisition of the Operational Railway

- 4.6 The Applicant met with C.GEN on 31st July 2012 and fully appreciates C.GEN's concern that any change in ownership of the railway might be detrimental to their development plans for a solid fuel power station that would be reliant upon rail deliveries. This matter is addressed in the response to Network Rail in Chapter 29 of this report.

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The Local Highway Network

- 4.7 Again, the Written Representation refers to 'deficiencies' within the ES with regard to the assessment of impacts on the highway network. Since no deficiencies are actually identified, it is actually impossible for the applicant to respond to this issue.

The Surface Water Drainage System

- 4.8 Whilst the surface water drainage scheme promoted by NELDB includes a pumping station that provides for the discharge of surface water from impervious land on areas allocated for development but as yet undeveloped, the scheme has for several years lacked funding. Over a considerable period of time, the NELDB sought to obtain proportionate contributions from those parties that would derive a benefit from the scheme, but were unable to secure a complete funding package. Accordingly the scheme has not advanced to construction. Should that situation pertain at the time of any grant of DCO then the Applicant will construct a pumping station to cater for the AMEP development and can also provide capacity for other parties subject to their willingness to contribute on a fair and proportionate basis to the capital costs of the pumping station. It would be unreasonable for third parties to derive a benefit from a scheme without a fair financial contribution.

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5. **BNP PARIBAS ON BEHALF OF CENTRICA**

Summary of Written Representation

- 5.1 Centrica own and operate Killingholme Power Station and associated infrastructure at Chase Hill Road, North Killingholme; and Centrica Storage Land at Station Road, North Killingholme
- 5.2 The Written Representation set out in detail the following:-
 - 5.2.1 Concerns over the impact of the proposed quay on the Power Station's cooling water inlet / outfall in the River Humber;
 - 5.2.2 Concerns that Centrica's existing rights of way / access and easements over the land to which the application relates will be extinguished or altered;
 - 5.2.3 Concerns over increases in traffic on local roads, and therefore access to the Power Station, pumping station and CSL site will be restricted;
 - 5.2.4 Concerns over increases in flood risk;
 - 5.2.5 Concerns that the proposed development may restrict Centrica's ability to expand its operations at any of its assets in the area in future, if required;
 - 5.2.6 Required mitigation/ compensation
- 5.3 All of the concerns above have been reviewed and Applicant's comments to each point follows; relevant paragraphs of the Written Representation are quoted below followed by the Applicant's comments.

Applicant's Comments

Cooling Water Inlet/Outfall - General

- 5.4 **Paragraph 3.3:** *As stated in Section 2 of this report, the Killingholme Power Station uses cooling water extracted from the River Humber, under licence from the Environment Agency, to dispose of waste heat from its steam turbine. This significantly increases the thermal efficiency of the power station.*
- 5.4.1 The Applicant fully appreciates that the extraction of water from the River Humber is an important part of the process for electrical generation and maximising efficiency of the steam turbine.

Cooling Inlet/ Outfall – Increases in Water Temperature

- 5.5 **Paragraph 3.5:** *In order to maintain the efficiency of the Power Station, the cooling water extracted from the Humber at this inlet needs to be maintained below a certain temperature. Any slight increases in water temperature, even increases of less than 1 degree, would result in a significant reduction in the thermal efficiency of the Power Station.*
- 5.6 **Paragraph 3.8:** *Able UK has acknowledged that the proposed quay will result in increased water temperatures at the location of Centrica's cooling water inlet. The potential increases in temperature were assessed in Annex 9.2 of the Environmental Statement.*
- 5.6.1 The temperature of the waters in the Estuary cannot be 'maintained below a certain temperature'; the ambient temperature varies throughout the year with

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recent records showing a range of 3.3 – 20.8°C, (ES paragraph 9.5.13). As far as the Applicant is aware, it is used 'as is' by the power station and not raised or lowered before use.

- 5.6.2 Annex 9.2 of the ES details the temperature at the intake both as existing and also if AMEP were to be constructed and the outfall remain in its existing position. Fractional changes in water temperature are reported dependent on the tidal state and the intake temperature is marginally elevated above ambient due to the current operation of the outfall. Supplementary report EX9.7 shows that if both the Centrica and E.ON outfalls are diverted to the quay, then the intake temperature will be elevated above ambient conditions by a fraction of a degree for no more than 1 hour, twice per tide. This is very similar to their existing situation reported in Annex 9.2.
- 5.7 **Paragraph 3.11:** *Able has assessed this increase in temperature to be between 0.2 degrees and 0.25 degrees above ambient temperatures. Whilst this is only a modest increase, as stated above, even small increases in the temperature of water entering the cooling inlet can significantly reduce the thermal efficiency of the power station.*
- 5.7.1 Annex 9.2 of the ES identified that the existing Centrica outfall discharge results in an increase of 0.1°C above ambient temperature at the intake. The net increase as a result of the modelling is therefore 0.1°C to 0.15°C. As stated previously the modelling was based upon a larger quay footprint and as a consequence it is certain that the modelled increases in temperature at the inlet will be lower for the submitted design, if the outfall were to remain in its present position. However the outfall is proposed to be relocated by the Applicant and Centrica confirm that this will be an operational benefit to them.
- 5.8 **Paragraph 3.12:** *It has not taken into consideration the potential cumulative impacts on water temperature in this location if a Development Consent Order (DCO) is granted for the Killingholme Power Project proposed by C.GEN.*
- 5.8.1 C.GEN's proposal for a power station is in preparation – no application has been submitted and at the time of AMEP's application there had been no formal consultation. It is for C.GEN to ensure that their works do not have a detrimental impact on Centrica's intake should they choose to make an application for consent in the future. However, given that the information now provided to the Applicant by C.GEN, the proposed outfall will be circa 800m from the Centrica intake. The likelihood of any interaction therefore appears implausible.
- 5.9 **Paragraph 3.13:** *In addition, it is not clear whether the modelling undertaken by Able UK has made allowances for the increases in water levels in this location as a result of water being displaced due to the construction of the new quay. Increased water levels are also likely to increase water temperatures.*
- 5.9.1 There is a small reduction in the high water level of the Humber local to AMEP as a result of development; refer to EX8.7, Figure 3.7 which confirms the modelling presented in the ES. The Applicant notes that this is a benefit to Centrica.
- 5.10 **Paragraph 3.15:** *In addition, Centrica's licence from the Environment Agency for discharging water into the Humber Estuary is subject to temperature limits. If the temperature of the water discharged into the Estuary by Centrica exceeds a certain temperature, Centrica would be required to reduce the load of the power station, or in extreme circumstances temporarily shut down the power station.*

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The obstruction of the free flow of water by the proposed quay may increase the concentration of higher temperature water in the area immediately adjacent to Centrica's outfall. This may therefore increase the likelihood of shut downs of the power station due to increased concentrations of higher temperature water in this location".

- 5.10.1 At a joint meeting held on the 6th July 2012 between representatives of Able UK, Centrica and E.ON, at E.ON's North Killingholme Power Station, Centrica stated that the issue relating to the water temperature was not related to operation of the plant, rather it was the concern that the maximum permitted discharge temperature of the outfall might be exceeded.
- 5.10.2 Centrica have not provided records of temperature readings taken at the inlet or outlet, nor confirmed the maximum purge temperature at the outfall. Readings and the maximum limit are only available for 2004, which were submitted to the Environment Agency for the Pollution Prevention and Control Permit Application SP3133LY. If the figures from 2004 were used to predict the impact on the outfall by AMEP, an increase in temperature of 0.15°C at the inlet maintained through the entire cooling cycle, would not have resulted in an exceedance of the maximum discharge temperature.
- 5.11 The WR states that Centrica would like assurances that if the alternative location identified in the quay was used as the outfall, there would be no impact upon its efficient operation. This is confirmed in supplementary report EX9.7.

Cooling Inlet/ Outfall – Silt Deposition

- 5.12 **Paragraph 3.19:** *The Environmental Statement assessed that there would be little impact on Centrica's cooling inlet from increased sediment deposition, but there is a risk of 1-2 m of sediment build-up at Centrica's outfall.*
 - 5.12.1 Chapter 8 of the ES states that there is a risk of 1 to 2m of sediment build up at the outfall, however the ES qualifies that this result is inferred from the original calculations for a larger quay. The modelling of the sediment in Chapter 8 was based upon an earlier larger quay design.
 - 5.12.2 Supplementary Report EX 8.8, reports on the Long term Morphology Predictions to the north of AMEP using the final quay layout. The model showed that at the Centrica outfall, there would be no sediment build up or erosion; although there is an element of uncertainty in this prediction and for this reason the Applicant proposes the relocation of the outfall.
- 5.13 **Paragraph 3.24:** *Increased erosion at its inlet could impact on the integrity of its cooling inlet and could also increase the level of suspended sediment in the water column.*
 - 5.13.1 Supplementary Report EX8.8 reports on the long term morphology change to the north of the quay. The report states that the level of erosion potentially could be 0.6m, however it further stated that actual erosion is a function of the seabed composition – but did not state if the bed material is actually erodible.
 - 5.13.2 Centrica have, subsequent to submission of the WR, forwarded a detailed drawing of the outfall and inlet structures. The bed level of the inlet structure was given at -9.00m AOD, which is equivalent to -5.10m Chart Datum. Bathymetric surveys carried out in 2010 which were used to develop the

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morphology modelling appear to indicate that there has been a metre of accretion in the vicinity of the intake since installation.

- 5.13.3 The long term morphology modelling states 0.6m of scouring could potentially occur in the region of the intake but this is subject to the type of bed material present. The ES contains the results and interpretation of a site investigation of the marine soils, refer to Annex 7.3 and 7.4 of the ES. Relevant figures, sections and vibrocore logs are reproduced in Figures 5.1 to 5.4 of this chapter. Essentially the bed material is likely to comprise clays that are unlikely to erode.

Cooling Inlet/ Outfall – Mitigation Dredging

- 5.14 **Paragraph 3.28:** *Able proposes daily dredging / ploughing of the sea bed close to the outfall. It is proposed that self-propelled plough vessel will operate during daylight hours and will remove approximately between 600 – 1,200 cubic metres remove thin layers of sediment per day."*

- 5.14.1 The Applicant does not propose to carry out daily maintenance dredging. Annex 7.6, which is referred to in the Written Response, states that dredging is generally carried out during daylight hours and that using a plough, between 600 and 1200 cubic metres of material can be removed per day. The rate of accretion is modelled in EX 8.8 and would not if the volume of silt is accreted require daily dredging.

- 5.15 **Paragraph 3.29** states that Centrica object to the proposal for maintenance dredging in the vicinity of the Centrica outfall because it

"would increase the level of suspended sediment in the water column and could increase the level of sediment-laden water entering the cooling inlet. As stated above, as the cooling inlet's filters and water treatment plant are not designed to handle increased levels of sediment-laden water, these will need to be significantly upgraded, at great expense, if sediment is to be prevented from entering and damaging the power station".

- 5.15.1 Centrica's intake is currently less than 50m from the dredged channel on the approach to the Humber Sea Terminal, refer to Figure 5.5. Centrica confirmed at a meeting held on the 6th July 2012 between that they are not notified when dredging operations are carried out by HST and that dredging does not have any impact upon the operation of the inlet or the power station cooling water system.

- 5.15.2 The Humber Sea Terminal maintenance dredging is a considerable volume, in the region of 500 000 wet tonnes per year as stated in EX 8.6.

- 5.15.3 The outfall, which is approximately 50m from the inlet, purges silt at periodic intervals during the day. Centrica advised in the joint meeting mentioned above, that the silt is collected and every 15 minutes it is discharged in the purge water over a three minute cycle. Given the timings, this would result in a suspended sediment concentration being discharged significantly in excess of that of the background levels in the river.

- 5.15.4 Annex 9.1 of the AMEP Environmental Assessment includes data for the measured levels of suspended sediments in the river during a tidal cycle. It shows that levels of suspended sediment in the river fluctuated between 97mg/l to 1534mg/l over the measured cycle.

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5.15.5 Given that both the HST dredged channel and the outfall are both approximately 50m away from the inlet, the cooling water system can demonstrably cope with elevated suspended sediment caused through nearby dredging, and those levels discharged from the outfall. The Applicant has proposed to install a monitoring buoy to record suspended sediment concentrations, which would enable suitable caution and stop thresholds to be readily be identified in advance of any dredging works.

5.16 **Paragraph 3.30** states that the following was suggested in the meeting between Centrica and the Applicant on the 21st June 2012

"The construction of a breakwater to the north of the cooling inlet which would result in silt being deposited to the north of the breakwater rather than the quay"

5.16.1 The construction of a breakwater has never been mentioned or discussed as a mitigation measure. A breakwater north of the Centrica inlet and outlet pipes would create an embayment between AMEP and the breakwater which would increase the amount of sedimentation over both the Centrica and EON inlet and outlet pipes and result in increased sediment deposition in the vicinity of Humber Workboats and the Humber Sea Terminal. A breakwater is not therefore a suitable mitigation strategy.

5.17 **Paragraph 3.30** states that the following was suggested in the meeting between Centrica and the Applicant on the 21st June 2012

"The construction of a new silt removal plant to serve both Centrica's and Eon's power stations which would have capacity to remove increased levels of silt from the water entering the inlets"

5.17.1 In response to this, the Applicant directed Centrica to the modelling included in the ES which shows that during operation of the AMEP quay, the suspended sediment concentration (SSC) at the intakes would reduce as the AMEP dredging effectively forms a sediment trap on the flood tide reducing SSCs locally and upstream.

5.18 **Paragraph 3.30** states that Centrica suggested the following mitigation measure:-

"Continued regular monitoring of suspended sediment levels in the water immediately adjacent to the inlet".

5.18.1 The Applicant offered this option as a suitable measure on the 6th July 2012, whereby long term monitoring would be carried out prior to construction with a view to setting trigger levels during the quay construction and capital dredging. Monitoring would be carried out up until six months after completion of the quay. The Applicant agrees that this monitoring will be an essential part of any mitigation strategy.

Centrica's Rights of Way/ Access and Easements

5.19 **Paragraph 3.35:** Centrica requires unrestricted access, 24 / 7 to the pumping station, the CSL site on Station Road and any underground cables and pipelines, including the cooling water pipeline and Condensate Pipeline for maintenance and other operational purposes

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- 5.19.1 The Applicant understands and acknowledges the importance of maintaining access to the pumping station for the cooling water system and as such will maintain a right of access at all times to the pumping station.
- 5.19.2 The Applicant acknowledges that access along the cooling water pipeline is required and as such will agree to a new easement. No details have been provided to date concerning the depth and width of the pipeline; however it is believed that the pipes are between 2 and 3m in depth and approximately 600mm in diameter. The Applicant has assessed the minimum easement width required for E.ON's cooling water pipelines which are at a deeper depth and larger diameter and as such the easement for Centrica's pipeline should be no wider than the 20m assessed for E.ON.
- 5.19.3 The Applicant acknowledges that access to the CSL site needs to be maintained. The Applicant is proposing to upgrade and improve the existing access and will endeavour to ensure access is maintained during re-construction of the road.

Traffic and Transport

- 5.20 Comments on traffic issues are addressed in Chapter 22 Appendix WR22.2.

Centrica's Private Access Road

- 5.21 **Paragraph 3.55:** *Whilst not specifically stated in any of the application documents, Centrica is still concerned that Able will seek to utilise this access road to access the proposed development.*
- 5.21.1 The Applicant wishes to highlight that the application does not include any use of Centrica's private access road, nor can in fact the application site be accessed from Centrica's private access road.
- 5.22 **Paragraph 3.58:** *At the 21st June 2012 meeting it was discussed that Able might agree to extinguish its rights over this access road. Whilst this is not for consideration as part of the DCO application Centrica would welcome this. However, it is also requested that any DCO or CPO granted restricts Able's use of this access road.*
- 5.22.1 The Applicant categorically denies that an offer was made to extinguish rights over the access road and that it was not agreed to review further at the meeting of the 21st June 2012. The Applicant does not wish to change the current legal agreement with regard to the access road and can so no reason why such change should be granted by order of a DCO.

Flood Risk

- 5.23 **Paragraph 3.60:** *The Flood Risk Assessment (FRA) submitted with the DCO application states that the proposed quay has been designed to minimise flood risk to the site and to reduce the potential for overtopping of flood defences. However, it states that there is a risk that area to the north of the proposed quay could be subject to overtopping due to wave reflection as a result of the proposed quay on the ebb tide in this area. It is proposed that in order to limit overtopping in this area, rock armour will be placed over the seaward face of the existing defences in this area.*
- 5.23.1 The Applicant recognises that the Flood Risk Assessment stated that there is an increased risk in wave overtopping to north of the site, therefore in consultation

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with the Environment Agency, the Applicant has included provision of rock armour to mitigate the risk of overtopping to the existing flood defences and to meet the Environment Agency's current management plan for the flood defences along the Humber Estuary.

- 5.24 **Paragraph 3.62:** *In addition, the FRA states that parts of the application site will be raised by approximately 1m to reduce the risk of flooding to the site. Centrica is extremely concerned that the raising of the site will increase the risk of flooding to the surrounding areas, and in particular the pumping station, and in the event of a flood event, would restrict the flow of flood waters away from the surrounding land. The increased site levels could also increase the extent of the area impacted by flooding in the event of a breach of flood defences.*

5.24.1 The Applicant wishes to highlight that the ground level of the pumping station is below the existing flood defences and that the pumping station is within flood zone 3 as identified by the Environment Agency and is at risk of flooding from the sea by a flood that has a 0.5% (1 in 200) or greater chance of happening each year - or from a river by a flood that has a 1% (1 in 100) or greater chance of happening each year.

5.24.2 The flood risk assessment has identified that without the development, the pumping station will be within the flooded zone if a breach occurred north of the site if climate change is taken into account. The flood risk assessment has identified that with the development in place, there is no greater risk of flooding.

5.24.3 The pumping station will therefore be at risk of flooding irrespective of whether the development takes place or not.

Potential Restriction of Centrica's Ability to Expand its Operations in the Area in Future

- 5.25 **Paragraph 3.64:** *Given the large area of land that Able UK proposes to require, there is the potential that this may restrict Centrica's ability to expand its operations in the area in the future. In particular, the application site and the land proposed to be acquired by compulsory purchase completely surrounds the CSL site on Station Road, and includes land immediately adjacent to the power station's pumping station. The proposed development may therefore restrict Centrica's ability to expand these sites if necessary for operational purposes in future. The development therefore may limit the extent to which Centrica can increase cargo deliveries to its offshore platforms or the extent to which the power station can be extended or upgraded in the future.*

5.25.1 Centrica has not approached the Applicant concerning expansion onto land that is owned by the Applicant surrounding the pumping station, or expanding from land which is owned by a third party and which Centrica has a lease to operate the CSL facility from, but which is surrounded by land owned by the Applicant.

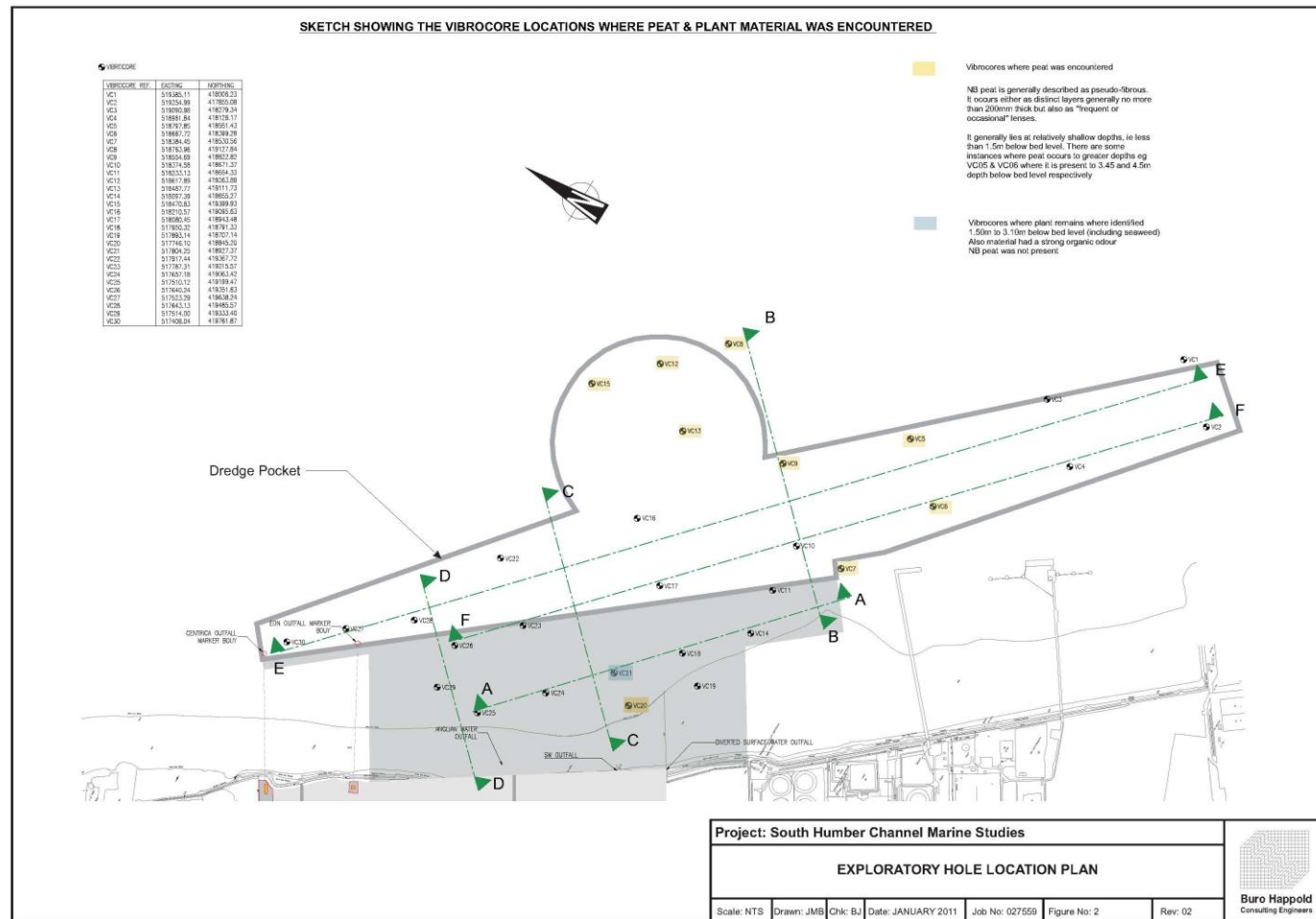
5.25.2 It would be unreasonable for the Applicant to second guess Centrica's future expansion plans with respect to the pumping station and CSL facility without Centrica knowing themselves what they may require. Maintenance and access provisions would be provided by means of an easement agreement which would therefore give sufficient scope to protect Centrica's assets.

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Compensation

- 5.26 **Paragraph 3.67:** *Centrica would seek compensation for a loss of business from Able in the event that the power station was unable to operate as a result of its actions. The compensation likely to be sought would be in the region of £100,000 to £200,000 per day that the power station remains un-operational.*
- 5.26.1 The Applicant wishes to highlight that there are many varied operations and uses of the Humber and likewise a large number of reasons which would be outside of the Applicant's control and not as a direct result of the AMEP site, which could affect the operation of the power station. The Applicant acknowledges that Centrica have placed a monetary value to the loss of business to the power station, of which no calculation or justification has been provided.
- 5.26.2 The Applicant would, given the varied number of factors that may affect the operation of the power station, believe it unjustifiable that blame for any closure or shutdown be placed automatically on the Applicant unless clear and demonstrable proof could be provided.
- 5.27 **Paragraph 3.68:** *It is therefore considered important that sufficient mitigation measures are agreed between the two parties and any DCO granted is subject to provisions or a Development Consent Obligation which secures these mitigation measures.*
- 5.27.1 The Applicant wishes to highlight that a significant mitigation measure has been submitted within the application i.e. the diversion of the cooling water outfall, which may be used as a failsafe should monitoring demonstrate necessary or no agreement can be reached on alternative measures to prevent detrimental impact upon the operation of the power station fail.

Figure 5. 1 – Vibrocore Location Plan (Abstracted from ES Annex 7.4



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Figure 5.2 Soil Log for Vibrocore 29 (Abstracted from EX Annex 7.3.)

Project Name: South Humber Channel Marine Studies		Exploratory Hole Log		Hole ID: VC29	
Project No: F15842				Sheet 1 of 1	
Engineer: Roger Tym & Partners					
Client: Yorkshire Forward					
Ground Level: -0.56m CD		Coordinates: 517514.00 E, 419333.40 N National Grid			
Hole Type: VC		Inclination: Vertical			

Description of Strata	Legend	Depth Below G.L.	Datum Level	Sampling		Blow Count And Sample Recovery				In Situ Test Details	Installation
				Details	Dia.	TCR	SCR	RCR			
Very soft grey slightly sandy CLAY.				D001 0.00-0.50							
				D002 0.50-0.90							
Firm to stiff high strength brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular fine to medium locally coarse of chalk, flint and mudstone.		0.90	-1.46	L003 1.00-1.10 B005 1.00-2.00							
				L004 1.42-1.70							
				D006 2.00-2.25							
				D007 2.25-2.50							
Exploratory hole complete at 2.90 m.		2.90	-3.46								

NOTES: All depths in metres; all diameters in millimetres. See header sheet for details of boring, progress and water. For details of abbreviations, see key		
Log Print Date And Time: 10/11/2010 09:18:11		
Form No. 3 EXP HOLE LOG	Issue Revision No: 103	Issue Date: 04/06/2009
		A trading name of VINCI Construction UK Limited

Figure 5.3 Soil Log for Vibrocore 30 (Abstracted from EX Annex 7.3.)

Project Name South Humber Channel Marine Studies				Exploratory Hole Log				Hole ID.						
Project No. F15842								VC30						
Engineer Roger Tym & Partners								Sheet 1 of 1						
Client Yorkshire Forward														
Ground Level -6.30m CD		Coordinates 517406.00 E, 419761.90 N National Grid												
Hole Type VC		Inclination Vertical												
Description of Strata				Legend	Depth Below G.L.	Datum Level	Sampling		Blow Count And Sample Recovery				In Situ Test Details	Installation
							Details	Dia.	TCR	SCR	RQD			
Soft to firm grey and brown thinly laminated slightly sandy slightly gravelly organic silty CLAY. Sand is fine to coarse. Gravel is subangular fine to medium of chalk. from 0.00m to 0.30m very soft from 0.65m to 1.00m clayey silt					1.66	-7.96	D001	0.00-0.30						
							L002	0.65-1.00						
							D003	1.00-1.35						
Stiff brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is subangular fine to coarse of chalk, flint and mudstone. from 1.83m to 2.00m medium strength					3.00	-9.30	D004	1.66-1.83						
							L006	1.83-2.00						
Exploratory hole complete at 3.00 m.							D006	2.67-2.85						
							L007	2.85-3.00						
NOTES: All depths in metres, all diameters in millimetres. See header sheet for details of boring, progress and water. For details of abbreviations, see key														
Log Print Date And Time: 10/11/2010 09:18:27														
Form No. 3 EXP HOLE LOG Issue Revision No. 103 Issue Date 04/06/2009														
A trading name of VINCI Construction UK Limited														

Figure 5.4 Section E from Figure 5.1 Abstracted from ES Annex 7.4

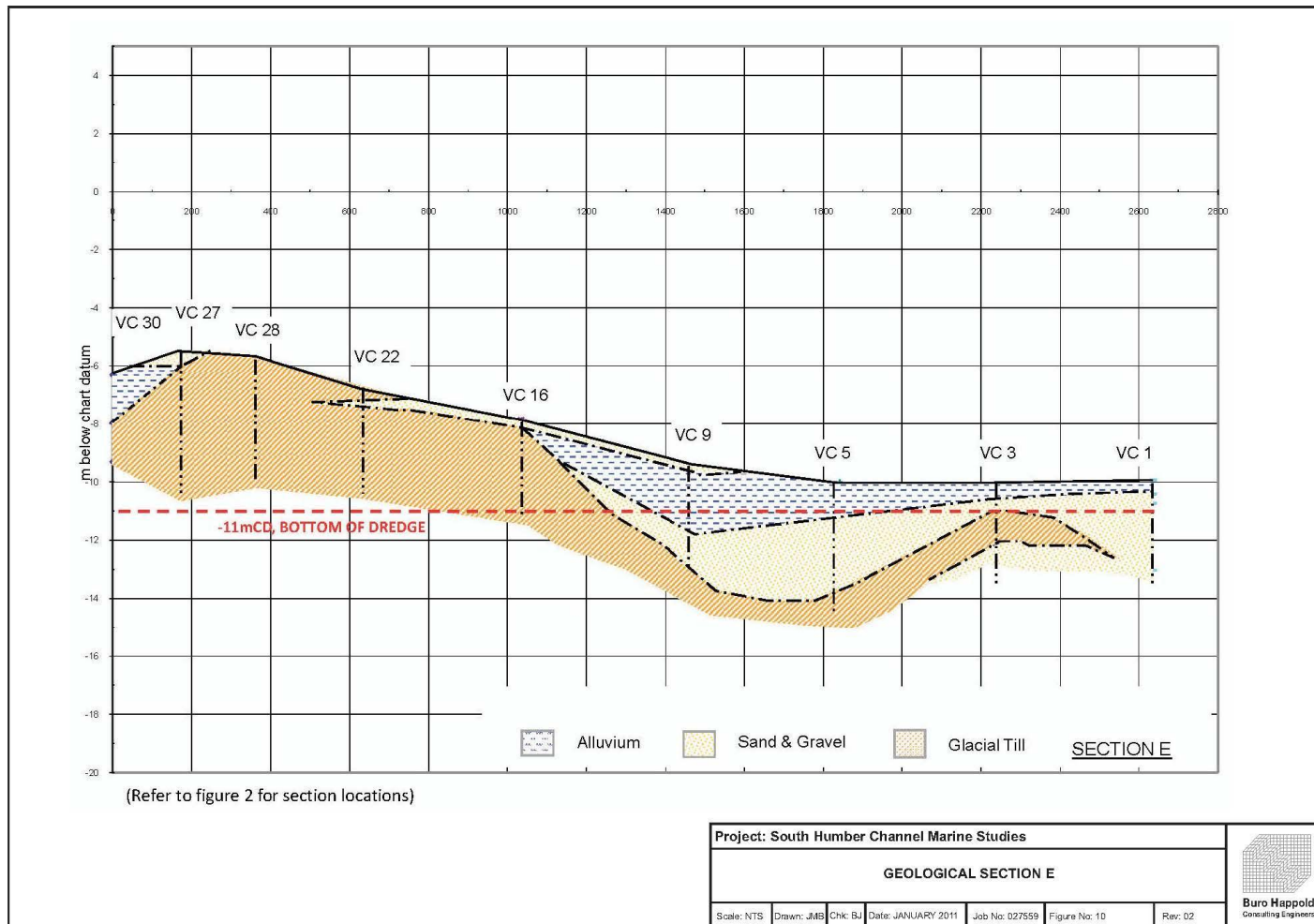
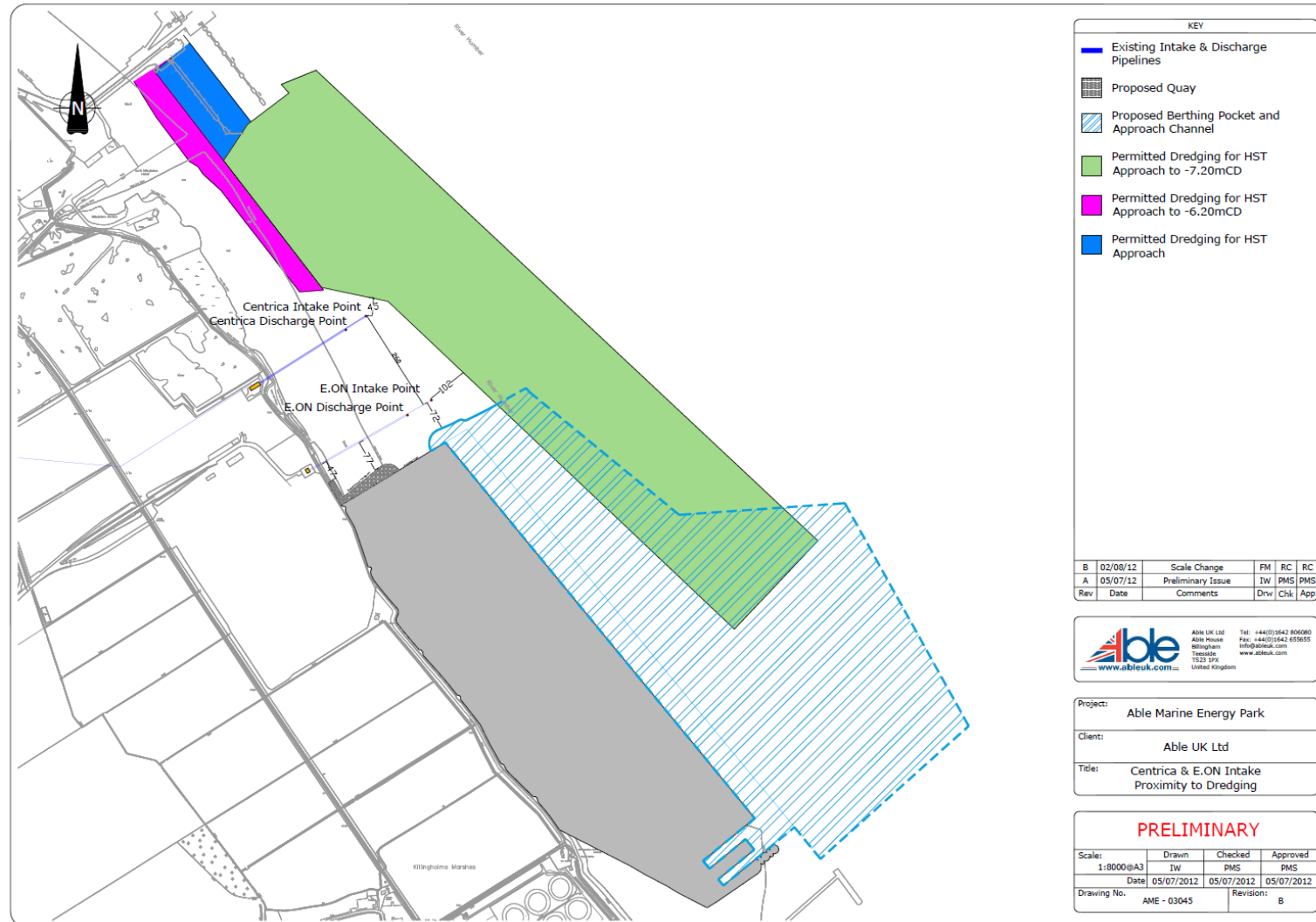


Figure 5.5 Plan showing location of Centrica intake and adjacent dredge areas.



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6. **DRAX BIOMASS IMMINGHAM LIMITED**

Summary of Written Representation

- 6.1 The Written Representation covers six issues.
- 6.1.1 The AMEP boundary overlaps the boundary for the consented DRAX biomass site and there is concern that access to the DRAX site might be affected.
- 6.1.2 Flood depths would increase on the Drax site.
- 6.1.3 Change to the surface water drainage system.
- 6.1.4 Changes in the sediment load and to the temperature of the estuary affecting the cooling water intakes.
- 6.1.5 Objection to the compulsory purchase of Rosper Road.
- 6.1.6 Any adverse impact on the potential for connection to the potable water supply and foul water drainage system.

Applicant's Comments

DRAX Laydown Area

- 6.2 Whilst the applicant is seeking powers of compulsory acquisition over part of the Drax laydown area, the applicant acknowledges the importance of the Drax project and would not wish to prevent it coming to fruition. Accordingly, the applicant suggests that the development of AMEP is appropriately phased to enable both projects to be constructed. Given the need to develop Mitigation Area A, the applicant will seek to agree a suitable phasing approach with Natural England. One option might be to avoid developing the industrial areas to the south of Station Road until Drax vacate the laydown area on completion of their works.

Flood Depth

- 6.3 The location of the Drax development site is shown in Figure 3.1 of the ES.
- 6.4 The principal risk of significant flooding to the site arises from a potential breach of the tidal defences along the Killingholme Marshes frontage. The Written Representation expresses concern that the DRAX site might be flooded to a greater depth because of the AMEP development. This is possible because existing ground levels on the AMEP site will be raised which will reduce the storage capacity of the hinterland leading to increased flood depths locally. The issue arising is whether that increased flood depth is significant.
- 6.5 The Applicant has reviewed the FRA for the Drax development and there are discrepancies between that FRA and the Applicant's FRA with respect to breach modelling. The significant differences appear to be:-
- The width of tidal breach modelled by Drax is 20m, as they have assumed a 'hard' defence, whilst the width of breach assumed in AMEP's FRA is 50m which is appropriate for an 'earth bank'. The defence is an earth bank with a stone revetment on its seaward face. As breaching of this type of defence is likely to be initiated by significant overtopping causing erosion of the

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soft landward side of the defence and thereby initiating failure, it is considered more appropriate to consider the defence to be an earth bank.

- The Drax FRA assumed a breach invert level of 4.5 mAOD, whilst the AMEP FRA assumed a level of 3 mAOD. This is dependent on the ground level to the rear of the breach and the AMEP assessment used a ground model provided by the EA.
- The Drax FRA allows for 75 years of climate change, which amounts to a rise in sea levels of 667mm between 2009 and 2084. AMEP's FRA allows for 100 years of climate change from 2014; this is a significant difference because the additional 25 years used in the AMEP assessment adds 375mm to the sea levels used in the breach assessment. This is not necessarily a discrepancy however; the Drax project is likely to have a limited design life and it would be inappropriate to use 100 years of climate change when assessing the impact on a power station development.
- The Drax FRA used a static water level of 5.05mAOD in 2009, whereas AMEP took a value of 5.18m AOD in 2014; the latter was based on EA's joint probability studies of static water level and wave height for the site.

6.6 In summary therefore, the breach modelling undertaken by Drax and AMEP are very different. In the Drax FRA, the level of flooding on Killingholme Marshes is predicted to be 3.28 mAOD in 2084, and the depth of flooding predicted is shown in Figure 6.1 below. However, the depths indicated are patently inconsistent with the EAs own flood mapping, reproduced in Figure 5.2, which shows present day flooding to be significantly greater than predicted by Drax after 75 years.

6.7 In conclusion of the above, the Applicant agrees that the depth of flooding is likely to increase at the Drax site to some extent, but that the increase will be less than 300mm within the lifetime of the Drax development. The Drax breach modelling appears to be optimistic and may be underestimating flood depths. However, if, notwithstanding the above points, the Drax FRA is considered valid, then the increase in flood depths on the Drax site due to AMEP is likely to be very limited because, as is evident from Figure 6.1, little of the flood water is actually stored within raised areas of the AMEP so the impact of AMEP will be minor.

Drainage Philosophy

6.8 The Drax FRA proposes two alternative solutions to manage surface water run-off, viz.

- Attenuated discharge to limit run-off to no more than 1.3l/s/ha, equivalent to existing greenfield run-off.
- Un-attenuated discharge to a pumping station operated by NELDB.

6.9 The Applicant confirms that, subject to an appropriate financial contribution and statutory consents being obtained, the pumping station can be designed to receive un-attenuated flows from the Drax site.

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Water Quality in the Humber

- 6.10 The Written Representation expresses concern that suspended the sediment concentrations (SSC) in the Humber Estuary might be adversely affected by AMEP. Other than recognising the fact that the Humber Estuary has a high suspended sediment concentration, the ES for Drax's project is silent on the level of SSC that has been taken into account by them; indeed there seems to be no section in the Drax ES that addresses water quality.
- 6.11 Notwithstanding the lack of any criteria for SSCs being specified by Drax in their ES, it is noted in the AMEP ES that dredging and dredge disposal will cause SSCs within the estuary to be elevated above their natural baseline. The Humber Estuary already supports extensive port operations and accordingly, maintenance dredging is already undertaken extensively within the estuary as recorded in the '*Humber Maintenance Dredging Baseline Document*', (ABP-HES, 2008). That document reports SSCs within the estuary to be in the range 20-3200 mg/l with values of up to 20 000 mg/l being recorded. The highest suspended sediment concentrations are in the vicinity of Trent Falls, upstream from the development. A survey of existing levels at the AMEP site are recorded in Annex 9.1 of the ES and range between 177 and 1533 mg/l depending on the tidal state – in other words SSC levels can be highly variable.
- 6.12 The proposed location of the Drax cooling water (CW) intake, as shown in their own ES, is indicated in Figure 6.3. In brief it lies on the edge of the berthing pocket for Humber International Terminal (HIT). The HIT berth is subject to extensive maintenance dredging: 370 000 wet tonnes in 2010 and 312 000 wet tonnes in 2011, refer to EX8.6. It is unclear why Drax have no concerns about the impact of maintenance dredging of HIT on their CWI (to the extent that their own ES did not even consider water quality), but are concerned about the impact of dredging at AMEP.
- 6.13 The most significant impact on SSCs attributable to AMEP arises from the disposal of erodible deposits at HU080 arising from both capital and maintenance dredging. The impacts are detailed in paragraphs 9.8.10 et seq. of the ES and will not affect the Drax CW intake.
- 6.14 The impact of capital dredging on local SSC levels is detailed in Annex 8.4 of the ES. This impact is temporary and, again, will have minimal effect on the Drax intake on an ebb tide and much less than any maintenance dredging at HIT which will already have been allowed for in the design.
- 6.15 To mitigate the impacts of the project on SSCs, good working practices will be adhered to.
- 6.16 Annexes 9.2 and 9.3 of the ES demonstrate that there will be no impact on water temperature at the proposed Drax outfall.

Compulsory Purchase of Rosper Road

- 6.17 The Written Representation expresses concern that the development might adversely impact on the laying of a 400kV cable associated with the Drax plant. The application does not include the compulsory acquisition of Rosper Road, only temporary occupation, as is evident from the Land Plans. For clarity, the only works proposed along Rosper Road are those associated with creating and improving highway access to AMEP and the laying of services.

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Water Supply and Foul Water Capacity

- 6.18 Anglian Water's Written Representation confirms that water resources are available but that new mains will need to be laid.
- 6.19 Anglian Water's Written Representation confirms that wastewater treatment works will need to be improved to accommodate AMEP.

Figure 6.1 : Abstract from Drax FRA Showing Flood Depths Following a 20m Breach of the Sea Wall to a Level of 4.5mAOD in 2084 (0.4-0.8m)

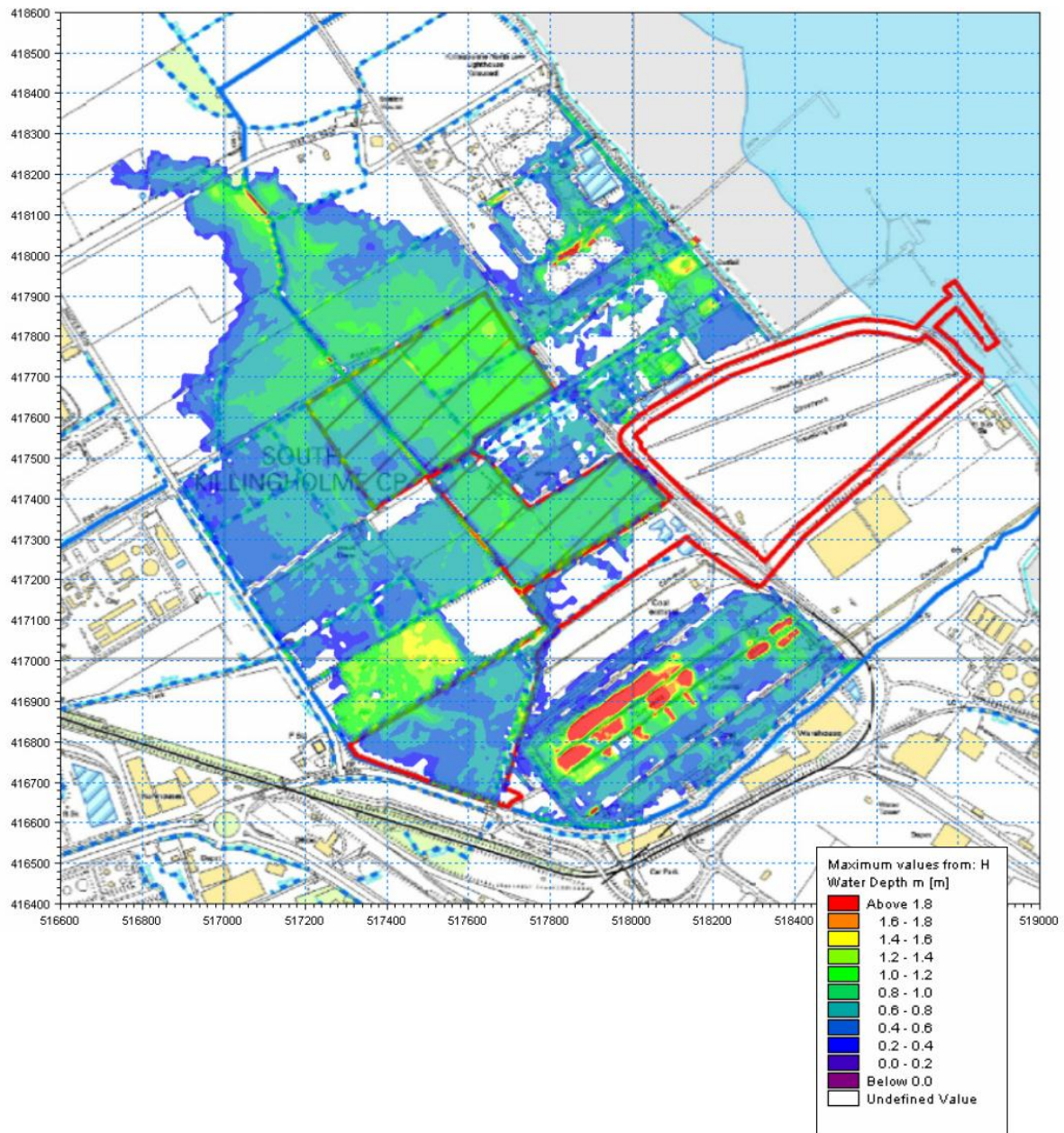
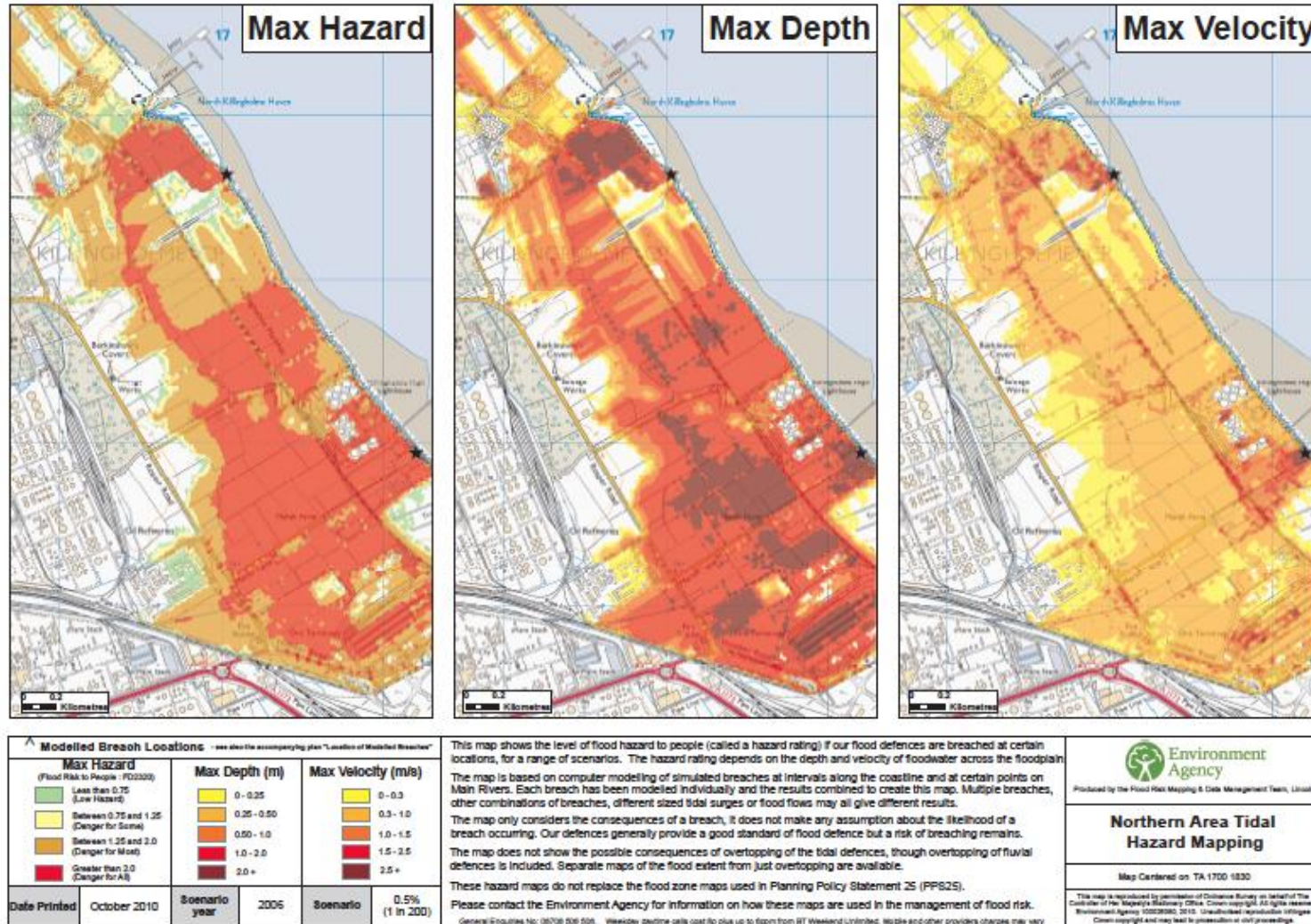


Figure 6.2 : EA Present Day Breach Mapping, Showing 1-2m flood depth on the Drax Site



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7. **DRAX POWER LIMITED**

Summary of Written Representation

- 7.1 The Written Representation covers the same issues that are identified by Drax Biomass Immingham Ltd.

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8. **E.ON CLIMATE & RENEWABLES**

Summary of Written Representation

- 8.1 The Written Representation covers three issues.
 - 8.1.1 Communication;
 - 8.1.2 Interference with their option with the landowner to lay cables under the land;
 - 8.1.3 The impact of the development of Old Little Humber Farm on the installation and operation and maintenance of their cables that will be routed under the land.

Applicant's Comments

Communication

- 8.2 Whilst information was available within the ES regarding proposals for the Old Little Humber Farm Site, the detailed design was not undertaken until after submission of the Written Representation. The detailed design report prepared by Thomson Ecology has been forwarded to E.ON and discussions have been held concerning the design of the scheme and access to the site by E.ON.

Interference to lay cables under the land

- 8.3 The Applicant acknowledges the importance of E.ON's Humber Gateway scheme to provide electricity from renewable sources and as such has no desire to prevent access or cause interference to E.ON whilst laying their ducting, followed by pulling cables through the ducts.
- 8.4 The Applicant recognises that the powers of article 41 should not override any requirement to obtain a certificate under section 138 of the Planning Act 2008, and has amended the article to make this clear.
- 8.5 The diagram of the proposed routeing of the cable appears to conflict with existing easements for gas pipelines owned by National Grid. The Applicant is prepared to consider appropriate protective provisions but needs to be clear whether there is any conflict with other interests at Old Little Humber Farm first.

Impact on the Installation Operation and Maintenance of E.ON's cables

- 8.6 The Applicant is currently in discussion with E.ON regarding the design of the compensation site and the programme of works. E.On has advised that works to install cable and ducting has commenced on sections of the 30km route. The exact timing or work on Old Little Humber Farm is yet to be confirmed but is expected to be late Summer 2012.

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9. **FRIENDS OF THE EARTH**

Summary of Written Representation

9.1 The Written Representation covers one issue.

9.1.1 The long term development of the Compensation Site at Cherry Cobb Sands.

Applicant's Comments

9.2 The Applicant is undertaking detailed modelling of the compensation site. Appendix WR9.1 contains a second interim design report prepared by Black & Veatch and describes the likely development of the current iteration of the design over its first 10 years.

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10. **GROVEPORT LOGISTICS LIMITED**

Summary of Written Representation

10.1 The Written Representation covers one issue.

10.1.1 The potential for AMEP to have unconstrained use.

Applicant's Comments

10.2 The Applicant agrees that the DCO will have to reflect the Project that has been assessed, which is for a specific range of cargo.

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11. **WINCKWORTH SHERWOOD LLP ON BEHALF OF HARBOUR MASTER, HUMBER**

Summary of Written Representation

- 11.1 The Written Representation covers eight issues.
 - 11.1.1 The assessment of the hydrodynamic and sedimentary regime.
 - 11.1.2 Overlap of the AMEP approach channel with the existing approach to Humber Sea Terminal.
 - 11.1.3 Compulsory acquisition of the sea bed.
 - 11.1.4 Limits of jurisdiction of the AMEP harbour.
 - 11.1.5 The volume of maintenance dredging and its disposal.
 - 11.1.6 The drafting of the Protective Provisions for the benefit of the Humber Conservancy.
 - 11.1.7 The operation of the specialist berth to the south of the AMEP quay.
 - 11.1.8 The drafting of the DCO.

Applicant's Comments

The Hydrodynamic and sedimentary Regime

- 11.2 The representation states that, '*the conclusions of the HR Wallingford 2011 3D mud modelling report conveniently dispel the earlier predictions of significant accretion upstream of the AMEP berth contained within the JBA reports*'. This is a somewhat disingenuous comment given that engineering design is an iterative process and the point of EIA is to seek to identify and mitigate the likely significant effects of a proposed project. To this end, the broad process of design development for the quay is clearly set out in Annex 4.4 of the ES. It is therefore demonstrably not '*convenient*' that the Applicant has been able to mitigate the impacts on adjacent port operators; it is the result of a robust and thorough design process.
- 11.3 The WR also records the receipt of reports issued in response to the relevant representations and the first set of Examiner's questions but that the Harbour Master has not been able to fully consider them.

The Overlap of the AMEP and C.RO Approach Channels

- 11.4 The Applicant is in the process of agreeing with C.Ro Ports a dredging strategy for the overlapping areas of the respective approach channels for AMEP and C.Ro.

Compulsory Acquisition of the Sea Bed

- 11.5 The Applicant agrees in principle to an underlease of the estuary bed rather than compulsory acquisition of ABP's leasehold interest.

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Limits of Jurisdiction of the Able Harbour Authority

- 11.6 The Applicant agrees that the Harbour limit need only extend 100m into the Estuary from the berthing line and has substituted the plan at Schedule 10 to the DCO with a plan showing such a limit.

Dredging and Disposal of Arisings

- 11.7 With regard to the annual quantity of maintenance dredge arisings, it is not clear where in the ES the Harbour Master has read the figure of '2.5 million wet tonnes'. Table 8.2 of the ES and Annex 7.6 both quote the same estimate of maintenance dredge arisings in cubic metres, viz. 502 000 – 1 254 000 m³. Allowing for the dredged material to have a density of 1.3T/m³, then the annual dredging requirement lies in the range 652 600 – 1 630 200 wet tonnes. However this new disposal requirement is expected to be partly offset by reduced maintenance dredging in adjacent berths. A revised (lower) estimate of maintenance dredging variability is included in a new report (EX8.6) included in the volume of supplementary information which accompanied the Applicants response to the relevant representations and first set of Examiner's questions.
- 11.8 As explained in the ES, and in Annex 7.6, maintenance dredging requirements are known to be highly variable and the Applicant has consulted with the MMO on suitable disposal sites for the maintenance dredge arisings. MMO's representation contains the following comment:-

'HU080 has taken large quantities of material in the past and, given the dispersive nature of the Humber, the MMO considers that the disposal site has capacity to take the material as currently described in the DCO Application. However, the site will need to be monitored to ensure the material is dispersing as predicted and the MMO will require this to be a condition on the deemed marine licence with the Applicant required to agree the scope of the monitoring with the MMO prior to commencement', (paragraph 7.22).

Protective Provisions for the benefit of the Humber Conservancy

- 11.9 The Humber Harbour Master has helpfully provided a series of suggested drafts for amending the DCO. The applicant has now considered these. It has accepted almost all of the proposed amendments - see the commentary on the revised draft for full details. There is one significant exception - the addition of a requirement that the Harbour Master must approve many documents that are then sent for approval to the Secretary of State, the Marine Management Organisation and the local planning authority. While the applicant recognises that the Harbour Master has an important role in the Humber, and has already conceded that he should approve tidal works before these are sent to the Secretary of State for approval, this seems to be unnecessary duplication. While the applicant is content for the Harbour Master to be consulted on such matters if they relate to his functions, the applicant questions the extent to which the Harbour Master seeks to approve matters that other bodies will also approve. Pending further information on that point, those changes have not been made to the DCO.

The Specialist Berth

- 11.10 The Applicant agrees that, without further risk assessment, vessel movements into and out of the specialist berth should be limited to periods of slack water with the first or last of the flood tide running.

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12. **HULL CITY COUNCIL (HCC)**

Summary of Written Representation

12.1 The Written Representation covers two issues.

12.1.1 Piling works causing disturbance to marine fauna in combination with piling works at Green Port Hull.

12.1.2 The process to be followed for the appropriate assessment.

Applicant's Comments

Piling Disturbance

12.2 HCC record in this Written Representation that they have undertaken an appropriate assessment of the Green Port Hull (GPH) project and that the grant of planning consent was conditional upon piling restrictions being implemented in order to protect certain interest features of the Humber Estuary SPA/SAC site, but in particular migratory fish. A copy of the specific proposed conditions relating to piling is attached to the WR. HCC note that they have had to obtain a S106 Agreement with ABP that serves to prohibit piling at the proposed but, (for the avoidance of doubt), unconsented, Hull Riverside Bulk Terminal when marine piling is on-going at GPH. HCC then note that they were unable to secure any comparable agreement relating to piling at AMEP and consequently find it necessary to recommend that a condition is placed on any subsequent DCO for AMEP which would prevent AMEP from undertaking marine piling concurrently with GPH (paragraph 4.7 of the WR). It is not clear whether HCC expect the entire piling campaign at AMEP to be undertaken sequentially with GPH, or whether it is meant that piling should be undertaken at different times on the same day. Nor is it clear what they have assessed the in combination impact to be and what quantitative benefit arises from their proposal

12.3 Whilst HCC note at paragraph 4.2 that it has taken, '*many months of work with the Environment Agency, Natural England and the Marine Management Organisation and others, to ensure that appropriate mitigation and compensation can be secured*', the Applicant understands that none of the three agencies mentioned above advised HCC to seek a prohibition on piling taking place concurrently at GPH and AMEP. It therefore appears that that particular constraint has been proposed by HCC alone.

12.4 Reproduced below is an abstract from the ES for GPH which records the in combination piling assessment by ABP's consultant URS:-

'21.234 HRBT and AMEP are approximately 3 and 9 km from GPH respectively. Other proposed marine developments such as Humber Sea Terminal Phase IV and Grimsby Ro-Ro Jetty are located at similar or greater distances. As a consequence of these distances, and based on the results of the underwater noise assessment undertaken for GPH alone in Chapter 12 (Marine Ecology and Nature Conservation), cumulative significant physiological effects are not predicted to occur. There is the potential for some cumulative behavioural underwater noise effects between GPH and HRBT (in the unlikely event construction activities do overlap) and to a lesser extent between GPH and AMEP. These will be managed by the application of a range of mitigation measures that are proposed for the effects of piling noise by GPH in isolation (see Chapter

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12 (Marine Ecology and Nature Conservation)). In addition, ABP has advised that percussive piling activities at GPH and HRBT would not occur concurrently, which would rule out any cumulative noise effects between these two developments. Assuming that this cumulative mitigation measure will be applied, significant residual behavioural effects are considered unlikely in relation to all developments but a pragmatic precautionary approach will be adopted with regard to avoidance of any effects upon marine mammals and migratory fish'.

21.235 Following the application of mitigation measures that are proposed for GPH in isolation and cumulatively with other developments, it is assessed that there will be at worst a minor adverse residual cumulative effect from simultaneous piling works associated with AMEP and GPH.' (underline added).

- 12.5 It is worth recording that HRBT has no consent and that ABP are now promoting an equivalent project, HIT3, at the Port of Immingham, which would seemingly negate the need for HRBT as it serves part of the same need - biomass imports for Aire Valley power stations.
- 12.6 The Applicant recorded in its response to the RRs that it is not convinced of the need for significant piling restrictions for the benefit of migrating fish, in particular because there is no evidence that fish in the Humber Estuary have been significantly affected by previous piling campaigns at nearby berths. Nevertheless, the applicant is still in the process of agreeing mitigation measures with the Environment Agency.
- 12.7 In summary, HCC's proposal to prevent piling at GPH and AMEP from occurring concurrently, contained in paragraph 4.7 of their WR, appears unjustified.

The Appropriate Assessment

- 12.8 The Applicant will endeavour to provide HCC with a draft copy of the Statement of Common Ground between the Marine Management Organisation, Natural England and the Environment Agency by 17th August and will provide their comments in an appendix to the Statement.

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13. **NORTH EAST LINCOLNSHIRE COUNCIL**

Summary of Written Representation

- 13.1 The Written Representation covers three issues.
- 13.1.1 The potential for congestion of the local highway network managed by North East Lincolnshire.
- 13.1.2 S106 Agreements to secure funding for local highway improvements.
- 13.1.3 Impacts on air quality in terms of the A1173/Kings Road and Pelham Road AQMA.

Applicant's Comments

Traffic

- 13.2 Comments on traffic issues are addressed in a separate report by JMP included in Appendix WR22.2 of this report.

Air Quality Impact Assessment (AQIA)

- 13.3 Within the AQIA, four Air Quality Management Areas (AQMAs) are identified, these being: Hull (for nitrogen dioxide – NO₂); Immingham (PM₁₀); Scunthorpe (PM₁₀); and Low Stanton (PM₁₀). The AQMA of interest, Immingham, is declared for a small number of residential properties located immediately adjacent to Immingham Docks. The AQMA is declared primarily due to emissions of PM₁₀ (dust) from the docks, the key sources of which are coal storage and dry bulk terminals (as detailed in: North East Lincolnshire Council, Local Air Quality Management Detailed Assessment Report Immingham Port Area Technical Report No: BV/AQ/2388 produced by Bureau Veritas, 2006).
- 13.4 Within the AQIA produced for the AMEP ES the potential impacts on the four AQMAs was discussed, and the following conclusions were drawn:-
- '17.6.36 *As set out in Paragraph 17.5.6, there are four Air Quality Management Areas which have the potential to be adversely impacted as a result of AMEP activities, and potentially locations in North Killingholme where elevated concentrations of NO₂ have been monitoring at locations immediately adjacent to the A160. The assessment demonstrates, as illustrated in Figure 17.1 to Figure 17.6, that the impacts arising due to AMEP operations are minimal and are constrained to an area in close proximity to the AMEP development site. With regard to road traffic associated with the proposed scheme, there is the potential for impacts to arise at North Killingholme; there are no predicted significant impacts in the vicinity of the other AQMAs considered in the study. In the vicinity of North Killingholme, if an AQMA were to be declared, the predicted impacts at this location associated with AMEP traffic would be 'minor adverse'. In the event that no AQMA is declared, the impacts would remain 'not significant'.*
- 13.5 To further expand upon this conclusion, the dispersion modelling undertaken for the AMEP AQIA demonstrated that impacts arising from PM₁₀ emissions from the site and AMEP related shipping are insignificant and would not have a significant impact on the Immingham AQMA. In addition, the large majority of AMEP

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associated traffic does not travel towards Immingham and therefore traffic related impacts at the AQMA will not be significant. During the construction phase, following guidance issued by the Institute of Air Quality Management (IAQM), emissions of dust will be mitigated to render residual impacts insignificant.

- 13.6 Furthermore, the 2012 Updating and Screening Report produced by NELC, concluded that there is sufficient evidence to consider revocation of the Immingham AQMA for PM₁₀. This conclusion is based upon improvements in the concentrations of PM₁₀; the AQIA for AMEP concludes that the proposed development will not have a significant adverse impact on the AQMA.

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14. **SIMON TAYLOR**

Summary of Written Representation

14.1 Further to the relevant representation submitted on 27th February 2012, Mr Taylor has submitted a written representation raising a number of issues, listed below, which have been addressed in turn:-

- 14.1.1 Diversion of the Public Footpath;
- 14.1.2 Long Term Flood Protection provided by the new bank;
- 14.1.3 Size of Compensation Site;
- 14.1.4 Silting up of Stone Creek;
- 14.1.5 Location of the New Southern Flood Bank; and
- 14.1.6 Loss of Valuable Farmland.

Applicant's Comments

Diversion of the Public Footpath

- 14.2 The Written Representation asserts that, *'(t)here is no justification for imposing this condition; inclusion of the public should be an overriding consideration. Moving the Public Footpath suggest undue influence upon the developer by others'*
- 14.3 The main consideration on this issue was whether the realigned footpath on the north bank of the Humber should run along the top of the new flood defence that will surround the compensation site, or should run along its landward toe. Consultees proposed conflicting solutions. In simple terms the proposal advocated by East Riding of Yorkshire Council (ERYC) and the Ramblers, to locate the footpath along the crest of the new flood defence will benefit recreational walkers using the footpath, who will benefit from a view of the estuary. The alternative proposal, advocated by Natural England and the RSPB, to locate the footpath along the landward toe of the new flood defence is considered to be more beneficial to the wildlife using the compensation site as it is less likely to be disturbed. ERYC has also proposed a compromise of having both footpaths, and allowing the use of one or the other at different times of year.
- 14.4 The Humber Estuary Management Scheme commissioned a report from Footprint Ecology to examine, *'the current impacts of recreation on the Humber Estuary, in relation to disturbance to birds'*, ('Desk Based Study on Recreational Disturbance to Birds on the Humber Estuary', Footprint Ecology, 2010). Whilst the estuary wide effects of disturbance are too complex to model quantitatively the report does identify, (Map Annex, Map 37 reproduced in Figure 14.1 below), that this area of Cherry Cobb Sands is frequently used by dog walkers; many ornithologists believe that this activity causes a high level of disturbance to waterbirds.
- 14.5 Providing a footpath to the rear of the flood defence effectively screens the wildlife from potential disturbance and avoids having to increase the size of the compensation site to buffer against disturbance activity. By contrast the

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mitigation site on the south bank is provided with a 150 m buffer zone that results in the core area of 16.7 hectares being located within a c.48 ha plot. The Footprint Ecology report includes amongst its recommendations '*measures to limit impacts of disturbance at realignment sites such as Paull through screening, routing of paths around the base of the embankment on the inland side etc.*'.

- 14.6 Able decided to include the footpath along the landward toe of the bund in its application with bird hides along its crest.

Long Term Flood Protection provided by the new bank

- 14.7 The Written Representation raises the following queries regarding the new flood defence works:-

'Who will be responsible for quality control during construction? What legal assurances will be in place to prevent an adequate but inferior defence bank being built?

Who will take on the long term responsibility for the new bank? Clarity is sought in who will legally adopt and take responsibility for the new bank should the developer fail.

The Developer does not say how the new bank will be built given the existing, on site material is unsuitable'.

- 14.8 A legal agreement between the Applicant and the Environment Agency will be created under Section 41 of the Yorkshire Water Authority Act 1986. The agreement will ensure that maintenance of the new flood defences at Cherry Cobb Sands will be responsibility of the Applicant.

- 14.9 The agreement will include:-

- Details of the sequence of works;
- Timings of the breaching of existing flood defence;
- Specifications for flood protection works;
- Standard of maintenance and inspections (including potential remediation arrangements); and
- Responsibilities and liabilities for the new and old defences.

- 14.10 The ES does describe how the new flood defence will be constructed, refer to paragraph 28.3.12 of the ES. In summary, the material on site is only unsuitable in its in-situ form and can be made suitable for use by modification with lime or cement; this is explained in the ES.

Size of the Compensation Site

- 14.11 The Written Representation raises queries regarding the new flood defence works, viz.

'The proposed compensation site is approx. three times bigger than the habitat being lost. I understand this is not a legal requirement but a condition imposed by Natural England. How can this be justified?

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Why has the developer not been allowed to take into consideration the emergence of the new enlarged mud banks off Cherry Cobb Sands. The developer should be allowed to include this vast area of new habitat gain against any losses due to the proposed development. The need for any compensation site has not been shown by the developer, Natural England or others'.

- 14.12 The need for compensatory habitat is set out in the Regulations 61 to 66 of The Conservation of Habitats and Species Regulations 2010 and is a matter for the decision-maker. The quantum of compensatory habitat that must be provided is not defined in law. Accordingly, the Applicant has sought advice from Natural England, who is 'the appropriate nature conservation body' referred to in Regulation 61(3), and the size of the compensation site reflects the advice received.

Silting up of Stone Creek

- 14.13 The Written Representation states:-

'The developer has only carried out a desk top study of Stone Creek and the immediate estuary and is therefore unaware of the full consequences their proposed development will have on the study area. The investigation work carried out so far is inadequate to support the application.'

- 14.14 The above assertions are untrue. The ES gives due regard to the importance of Stone Creek as an outfall for four significant surface water drainage channels that serve Sunk Island. The Applicant has submitted a Statement of Common Ground in partnership with the three local Internal Drainage Boards which demonstrates the Applicant's commitment to monitor Stone Creek.

Location of the New Southern Flood Bank

- 14.15 The Written Representation states:-

"I have been given assurances by the developer that the new flood bank as proposed has been moved North 300m, this would be acceptable. However the scheme as submitted to the IPC/NIP does not show this and so far the developer has not taken the opportunity to amend the drawings".

- 14.16 In Mr Taylor's response to the Section 42 consultation dated 19th March 2011, he requested that the flood defence bank be "set back from the Radar access road by a distance not less than 100m". The Applicant has actually designed the southern section of the flood defence so that it is set back 300m back from the Radar access road.

- 14.17 The application drawings, as submitted, show the southern part of the application boundary running adjacent to the access road (AME-02001 A File 4 of application documents) but the position of the flood defence bank is set back 300m from it (AME-02016 A File 4 of application drawings).

Loss of Valuable Farmland

- 14.18 The Written Representation states:-

'The compensation site consists of high grade farm land used for growing our food. Once lost it cannot be replaced. In the documentation submitted there is insufficient evidence to demonstrate the cumulative effects this loss of crops will

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have or that consideration of alternative sites has been exhaustively researched."

- 14.19 The loss of agricultural land is acknowledged and has been assessed within the Environmental Statement which states that the

'(c)reation of the Compensation Site will result in the loss of approximately 115 ha of Grade 2 agricultural land at Cherry Cobb Sands and 38ha of Grade 2 agricultural land at Old Little Humber Farm. This loss equates to 0.009 percent of the total agricultural land available in the Yorkshire and Humber region and therefore considering the local, regional and national extent of Grade 2 land, loss of this potential food resource is assessed as being of low magnitude. The sensitivity of the food resource being low as the area of arable farmland being lost is small in comparison to regional and national land resources and it is not currently supporting specialist crops (such as organic produce). The resulting overall effect is a permanent negative impact of minor significance', (paragraph 42.6.13).

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15. **IAN SHORROCK ON BEHALF OF THE HEALTH AND SAFETY EXECUTIVE**

Summary of Written Representation

- 15.1 The Health and Safety Executive (HSE) Written Representation discusses the proximity of AMEP to major hazard installations and explosives sites. The Applicant's response to the issues raised follows the same order as the HSE's Written Representation.

Applicant's Comments

National Grid Gas (NGG) Regional High Pressure pipeline

- 15.2 The HSE notes that the application site lies within seven of HSE's Major Hazard Sites consultation distances as well as bordering a National Grid Gas (NGG) Regional High Pressure pipeline.
- 15.3 The Applicant received a written representation from Squire Sanders on behalf of National Grid which did not express any concerns over the location of the high pressure gas main along Rosper Road were raised. To avoid any doubt the applicant has asked National Grid to comment on the HSE's Written Representation.

Hazardous Substance Zones

- 15.4 Following receipt of the HSE's written representation, the Applicant has also written to the Explosives Inspectorate and is currently awaiting a response.
- 15.5 The HSE note that, '*there is no information in the report [the Scoping Report] to determine how the number of people will be distributed around the site or the number of buildings that will be used*'. Anticipated employee distribution is in fact provided in Annex 4.3 of the ES.

Hazardous Substances Consent (HSC)

- 15.6 The Applicant has reviewed the application against the Planning (Hazardous Substances) (Amendment) (England) Regulations 2009 and there are no named substances at or above the control levels specified within Schedule 1 of the Regulations.

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16. **HOMES & COMMUNITIES AGENCY**

Summary of Written Representation

- 16.1 The Written Representation confirmed that the Homes and Community Agency do not intend to become an interested party.

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17. **LINCOLNSHIRE WILDLIFE TRUST**

Summary of Written Representation

- 17.1 The Written Representation covers nature conservation issues. In this instance the Written Representation is reproduced in full in italics and the Applicant's comments have been inserted in plain type at appropriate intervals.

Applicant's Comments

1. **INTRODUCTION**

- 1.1 *The Lincolnshire Wildlife Trust (LWT) is the historic county of Lincolnshire's major voluntary organisation concerned with all aspects of nature conservation. With more than 25,000 members, 1,250 active volunteers and its management of 98 nature reserves throughout the historic county, covering more than 3,300 hectares of terrestrial, fresh water and inter-tidal habitat, LWT provides a voice for wildlife from the Humber to the Wash. The mission of the Lincolnshire Wildlife Trust is to safeguard wildlife in Lincolnshire and in the neighbouring sea and estuaries.*
- 1.2 *This is a Written Representation produced by the Lincolnshire Wildlife Trust (unique reference number 10015513) in relation to the application by Able Humber Ports Ltd for the Able Marine Energy Park on the south bank of the River Humber at Immingham in North Lincolnshire (Planning Inspectorate reference number TF030001).*
- 1.3 *LWT registered an objection to this application in its Relevant Representation submitted to the Planning Inspectorate in March 2012 on the grounds of adverse impacts of the proposed development on internationally, nationally and locally important habitats and species.*

2. **IMPACTS OF THE DEVELOPMENT**

2.1 **Internationally and Nationally Important Habitats**

- 2.1.1 *The proposed location for the Marine Energy Park is within and adjacent to the Humber Estuary. The Humber Estuary is internationally important for wildlife, supporting a rich variety of habitats and species. As a result of its importance for wildlife the Humber Estuary is designated as a Special Area of Conservation (SAC), a Special Protection Area (SPA), an internationally important wetland under the Ramsar Convention (Ramsar Site) and a Site of Special Scientific Interest (SSSI).*
- 2.1.2 *Given the designations afforded to the Humber Estuary the application must be assessed to determine whether it complies with the Conservation of Habitats and Species Regulations 2010 (the Habitats Regulations) to ensure that there would be no adverse effect on the integrity of the European sites (SAC and SPA). The application must also be assessed for compliance with the Wildlife and Countryside Act 1981 (as amended) to ensure that there would be no adverse impacts on any features of interest of the SSSI.*
- 2.1.3 *If the Examining Authority determines that the development is of Imperative Reasons of Over-riding Public Interest (IROPI) and grants*

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consent then compensation measures will be required to maintain the integrity of the European sites. Given that the arguments in favour of IROPI relate to the manufacture of components for the offshore renewable energy sector the Examining Authority must ensure that adequate provisions are made to ensure the area could not be used for purposes that are not of IROPI.

- 2.1.4 *The Lincolnshire Wildlife Trust has serious concerns regarding the impact of the proposed development on the Humber Estuary SAC, SPA, Ramsar Site and SSSI. Of particular concern is the loss of 45 ha of designated estuarine habitat. This includes 31 ha of the Killingholme Marshes intertidal mudflat habitat (paragraph 6.2.1, Environmental Resources Management Limited, 2011 (Document reference: TR030001/APP/15)). Killingholme Marshes is of particular importance to wintering and migrating SPA wading bird species, such as black-tailed godwit, dunlin and redshank, which have been recorded in numbers greater than 1% of their Humber SPA qualifying populations. 66% of the SPA population of black-tailed godwit has been recorded here (paragraph 6.3.30, Environmental Resources Management Limited, 2011 (Document reference: TR030001/APP/15)).*
- 17.2 The Applicant accepts that construction and operation of AMEP will have an adverse effect on the integrity of the Humber Estuary SPA/SAC/Ramsar site – this is acknowledged in the first paragraph of the ES, and further considered throughout the application package. The Applicant also accepts that because of this adverse effect, it will be necessary for the application to pass the derogation tests set out in the Conservation of Habitats and Species Regulations 2010 (the Habitats Regulations). It is the Applicant's belief that the project will pass those tests, and accordingly appropriate compensatory habitat is provided on the north bank of the estuary.
- 17.3 The importance of the Killingholme Marshes and adjacent mudflat to wintering and migrating birds is acknowledged in the documents referred to by LWT, and it is on the basis of this assessment of the importance of the site that the Compensation Site has been selected, in consultation with Natural England and RSPB.
- 2.1.5 *'Killingholme Marshes foreshore is recognised in the Habitats Regulations Assessment Report as one of the most important areas for black-tailed godwits on the Humber Estuary. The development would result in the loss of the majority of this important feeding area, resulting in a significant displacement of black-tailed godwits with no certainty that the birds can be accommodated elsewhere. This could result in the favourable conservation status of this species not being maintained and an adverse effect on the integrity of the European sites (paragraphs 6.3.37 and 6.3.39, Environmental Resources Management Limited, 2011 (Document reference: TR030001/APP/15)).'*
- 17.4 The Applicant acknowledges the loss of habitat caused by the development, and further acknowledges the importance of this site to black-tailed godwit (BTG). It is these adverse effects, as set out in Chapter 11 of the ES and in the sHRA report, which the Compensation Site is, *inter alia*, designed to compensate for.
- 2.1.6 *'In addition to direct habitat losses there will also be disturbance to birds using the remaining intertidal habitat from noise, light and visible*

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activity. The actual loss of functional estuarine habitat for SPA birds will therefore be larger than that directly lost to the footprint of the new quay. This will require further assessment. Natural England has advised in paragraph 2.3 of its Relevant Representation that 'there has not been proper consideration of construction and operational disturbance arising from the project on designated site birds utilising the remaining SSSI, SPA and Ramsar intertidal habitat and North Killingholme Haven Pits.'

- 17.5 Further to comments received in the Relevant Representations, the Applicant has provided Explanatory Notes EX 11.23 and 11.24, contained in the volume of supplementary environmental information submitted to PINS as part of the Applicant's responses to the RR's and to the Examiner's first set of questions. These documents set out in tabulated form all the habitat losses that will accrue in the short medium and long term from the construction of AMEP.
- 17.6 The functional loss of habitat due to permanent disturbance is assessed to be 11.6 ha of habitat type 1140, '*mudflats and sandflats not covered by seawater at low tide*' as explained in EX11.23. This quantum of habitat has been included in the Applicant's assessment of the total quantum of habitat lost in the short term.
- 17.7 This assessment of loss is then carried forward to the Applicant's assessment of habitat gain and loss in the medium and long terms (set out in explanatory note "EX 11.24 Medium and Long Term Quantum of Habitat Loss"). This report details how the area of habitat subject to disturbance from AMEP is likely to change in the future, and reassesses the habitat loss against the natural changes in the estuary. Accordingly, the quantum of habitat lost due to disturbance has been incorporated in the assessments of total quantum of compensatory habitat required both for short-term and medium/long-term impacts.
- 2.1.7 '*The proximity of the proposed development to North Killingholme Haven Pits SSSI is also of serious concern to LWT. These large saline lagoons, which are managed as a nature reserve by LWT, support significant populations of SPA species such as black-tailed godwit, dunlin and redshank, with breeding avocet and marsh harrier. North Killingholme Haven Pits is an extremely important roost site for black-tailed godwit on the Humber Estuary. 98% of the SPA population of black-tailed godwit has been recorded roosting at Killingholme Haven Pits (Paragraph 6.3.34, Environmental Resources Management Limited, 2011 (Document reference: TR030001/APP/15)).*'
- 17.8 While the Applicant recognises the importance of the NKHP and their particular value on the estuary, it is nevertheless the case that the land surrounding the Pits is already developed (as stated later in LWT's WR, paragraph 2.1.8). In addition to the port developments to the north of Rosper Road, the land adjacent to the Pits to the south and west has the benefit of planning consent for impermeable surfacing and port-related storage, as set out in Section 3.4 and Figure 3.1 of the ES. These consents were granted following an appropriate assessment, and are operational.
- 17.9 The application does not contain proposals to increase the level of operational disturbance around the Pits. The lighting in this area will remain unchanged from that currently installed, and the existing planning conditions restricting noise and disturbance reaching the Pits will be brought forward in the text of the DCO to ensure continued protection of the Pits from the south and west to the same standard of protection they currently enjoy. The existing noise

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disturbance environment originates principally from port-related activity to the north of the Pits (see Annex 16.3 of the ES), and it is unlikely that the proposed activities at AMEP will cause this to increase, as indicated by the noise assessment in Chapter 16 of the ES and the detailed consideration of impacts of noise on ecological receptors in paragraphs 11.6.68 *et seq.* of the ES.

2.1.8 *'North Killingholme Haven Pits SSSI is already surrounded on three sides by development: the proposed quay will increase isolation from the estuary. This, compounded by the loss of a large proportion of the adjacent Killingholme Marshes mudflat which is used for feeding by SPA species, may mean that bird species such as black-tailed godwit stop using Killingholme Haven Pits as a roost site at high tide. We are very concerned that this could significantly impact on the Humber Estuary black-tailed godwit population. The Habitats Regulations Assessment Report states that 'the number of birds which are likely to be lost from North Killingholme Haven Pits is such that the Humber Estuary population would be significantly reduced' (Paragraph 6.3.38, Environmental Resources Management Limited, 2011 (Document reference: TR030001/APP/15)).'*

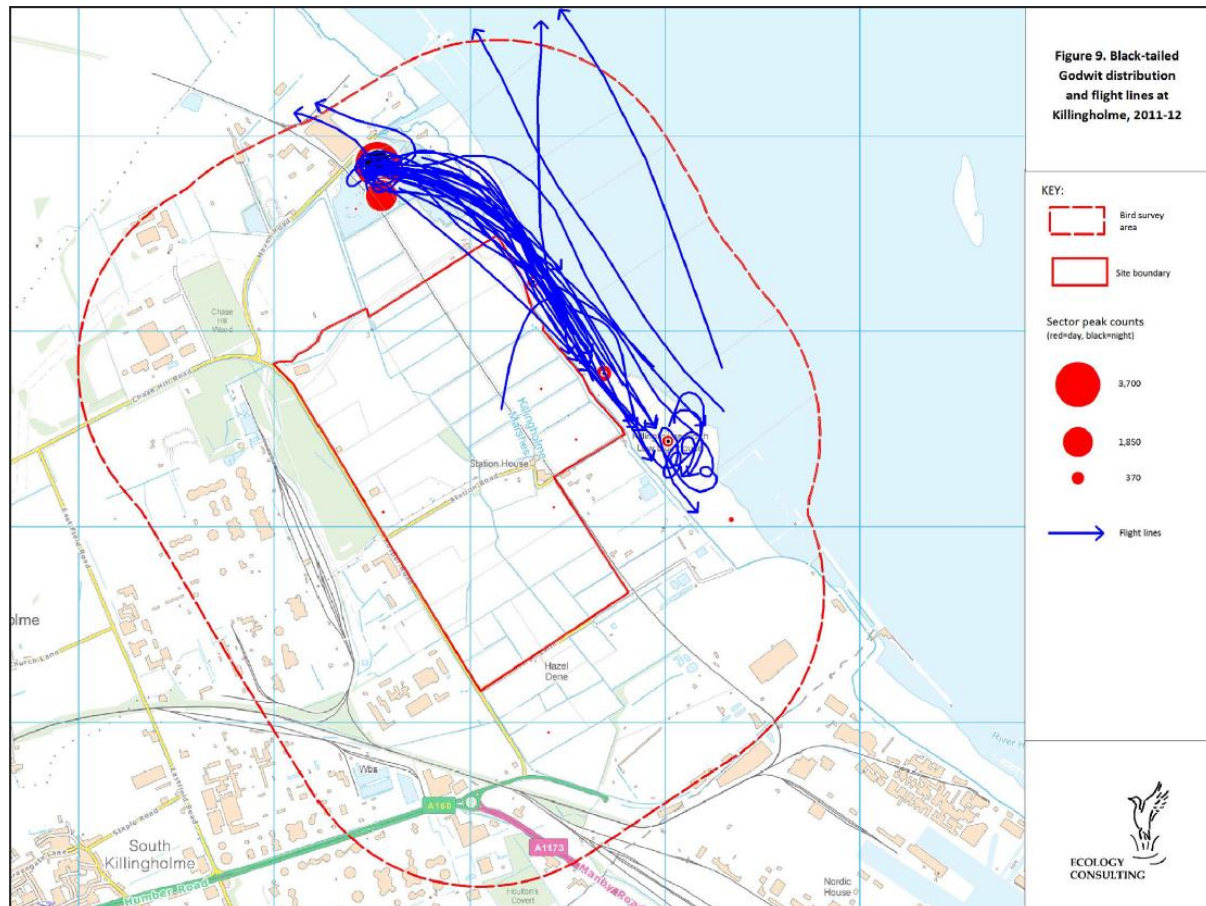
17.10 The Applicant acknowledges that the Pits are surrounded by development on three sides; however the current important population of black-tailed godwits has grown and been reinforced in the context of this ongoing development (see Annex 35.6 of the ES). Although the terrestrial surroundings of the Pits have been subject to development, the frontage with the estuary is largely undeveloped, and a frontage of approximately 350m obtains which is open to the estuary. There is no necessity for any bird to overfly a developed area to access the estuary or its marginal habitats either close to or distant from the AMEP site.

17.11 As set out in Annex 35.6 of the ES, the BTG population currently using the Pits uses this open frontage to access other feeding areas on the estuary, notably the north bank of the estuary and Pyewipe:-

"Whilst increasing industrialisation around the pits to date has not resulted in any decline in the godwit numbers using the Killingholme roost, it may be an important consideration that the birds flight route into/from the pits from the shore has remained open. These birds largely follow the same flight route to/from the pits, flying along the shore to the pits from feeding areas to the south-east rather than over land (Ecology Consulting, unpublished data). It is likely that this route would change slightly following construction of the development to avoid the new quay, but that birds would just fly around this. This would not constitute a significant increase in journey distance/energy expenditure. No new development would block their usual flight route into the pits from the shore – this would still remain open. It is clear from the data available that godwits roosting on the Pits do not solely feed on the adjacent Killingholme shore but also along the southern shore of the estuary to Pyewipe and across to the northern shore." Spatial and Temporal Patterns in Black-Tailed Godwit use of the Humber Estuary, with Reference to Historic Planning and Development at Killingholme Pits, Dr Steve Percival (Ecology Consulting), 2011 (included as Annex 35.6 of the ES)

17.12 The statement in Annex 35.6 that the BTGs will choose the shoreline as a flight-path rather than overflying land, and would therefore divert around the quay rather than be constrained by a reluctance to overfly it, is supported by the

figure below, extracted from the *Able Marine Energy Park Non-Breeding Bird Surveys 2011-12*, Dr Steve Percival, Tracey Percival and Tom Lowe (Ecology Consulting), March 2012. This figure shows the routes adopted by the black-tailed godwit population at present when moving to feeding grounds more distant from the Pits than the Killingholme Marshes foreshore.



17.13 LWT has commented on a sentence taken from paragraph 6.3.38 of the SHRA report, which indicates that BTGs would be lost from the estuary. This sentence was also queried by the examiners (Q51 of the first round of Written Questions), correctly noting that the North Killingholme Haven Pits had been referred to in error in that paragraph. As clarified in the Applicant's responses to those written questions, the sentence should in fact refer to Killingholme Marshes foreshore rather than to the North Killingholme Haven Pits.

2.1.9 'We are concerned that there will be disturbance to breeding, wintering and migrating birds using Killingholme Haven Pits from additional noise, light and visible activity. As mentioned in 2.1.6, Natural England has advised that there has not been proper consideration of disturbance on designated site birds using North Killingholme Haven Pits. Natural England therefore goes on to advise in paragraph 2.3 of its Relevant Representation that 'an assessment of terrestrial construction works on the adjacent North Killingholme Haven Pits should be undertaken.' The Lincolnshire Wildlife Trust agrees that such an assessment should be carried out.'

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- 17.14 Further to comments in paragraphs 16.9 and 16.10 above, the Applicant has undertaken an assessment of the construction disturbance impacts on the North Killingholme Haven Pits from terrestrial works. In terms of visible activity, paragraph 11.6.31 of the ES states:-

"At NKHP no significant visual disturbance is predicted as the site will largely be shielded from construction by the large existing bund which extends around the south of the Pits. This bund is two metres high, seven meters wide and has screen planting on top. In addition, construction within the vicinity of the NKHP will be minimal as the area around the Pits has already been concreted so will require minimal development. In addition, those areas requiring large scale construction works such as the quay or the nacelle, blade, tower and foundations factories and the erection of cranes along the quay are well in excess of 200 m from the NKHP. This area is already subject to planning consent for port related storage and plans set out for AMEP show that, for the car storage compound and all land within 200 m of the NKHP, current conditions will not differ from the baseline other than for noise associated with the construction of the Quay and other buildings outside of the 200 m area." *Chapter 11, AMEP ES.*

- 17.15 In terms of light, paragraph 4.7.2 of the ES states:-

"During construction, local mobile task lighting will be used to illuminate areas under construction during the hours of darkness. This lighting will generally be less than 10 m high and will be directed away from sensitive receptors." *Chapter 4, AMEP ES.*

and paragraph 11.6.56 states:-

"With regard to light emissions it is currently understood that lighting column heights and lux levels (see Chapter 19, Table 19.5) for the area around the NKHP will not exceed those that are currently experienced." *Chapter 11, AMEP ES*

This is supported by the light spill contour drawings contained in Explanatory Note *EX 19.1 Lighting Lux Plans* in the volume of supplementary environmental information – these show the light spill from the existing lighting in the areas surrounding the Pits, which will remain unchanged. Accordingly, if mobile task lighting is used for construction, the construction impacts on the Pits will be less than they are at present; if not, and the existing site lighting is used, there will be no additional construction impact over the present baseline.

- 17.16 In terms of noise, emissions from terrestrial construction plant as specified in Annex 16.4 of the ES and operating during the times specified in Chapter 4 were included in the computer noise model along with the marine construction works. The assessment of terrestrial construction is therefore inherent in the assessment of all construction works, as shown on the contour plots in Annex 16.8 of the ES. This means that the construction noise assessment set out in paragraph 11.6.34 *et seq.* of the ES includes terrestrial works acting cumulatively with marine works. To separate out impacts from terrestrial works, would be an unrealistic representation of the construction noise environment, particularly when piling noise substantially dominates the construction emissions.

2.1.10 "In addition to impacts on birds we have concerns regarding impacts on other SSSI interest features such as the specialist saline lagoonal species that occur at the site. The SSSI citation states that nine species

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of specialist lagoonal species have been recorded in the pits and include the polychaete worm Alkmaria romijni, which is known from just four sites in Great Britain. As suggested by Natural England in paragraph 2.12 of its Relevant Representation, impacts on the saline lagoon specialist species could result through entrainment of the thermal plume or increased sedimentation within North Killingholme Haven Pits. These and other potential impacts on the features of interest of North Killingholme Haven Pits SSSI and the Humber Estuary SSSI will need to be assessed by the Examining Authority under Section 28I of the Wildlife and Countryside Act 1981 (as amended) as advised by Natural England in paragraph 2.12 of its Relevant Representation.'

17.17 It is evident from the thermal plume modelling that there is no credible risk of warm water from the outfall changing the habitat of NKHP as a consequence of AMEP.

2.1.11 *"In addition to the loss of estuarine habitats, the development would also result in the loss of farmland habitat, some of which is used by SPA bird species for roosting and feeding at high tide. We note that curlew are present in notable numbers on the farmland habitat to be developed. We therefore welcome the proposed Mitigation Area A to provide feeding and roosting habitat for curlew and other SPA wader species. Further comments are made on the proposed mitigation in Section 3 below.*

2.1.12 *The farmland habitat at the compensation site at Cherry Cobb Sands will also be lost when the site is flooded. This terrestrial habitat is also utilised as a high tide roost by SPA birds including curlew in notable numbers. We understand from paragraph 2.11 of Natural England's Relevant Representation that the applicant has provided an additional report to assess the loss of this habitat. The Examining Authority must be satisfied that sufficient mitigation is proposed to ensure that there is suitable alternative habitat to provide feeding and roosting habitat for SPA birds.'*

17.18 The Applicant has provided an additional report in response to the request for clarification contained in the Relevant Representations. This report is included as Explanatory Note EX 35.12 *Farmland Disturbance at Cherry Cobb Sands* in the of supplementary environmental information, and sets out an assessment of the disturbance environment in the fields currently used by the SPA birds for roosting at Cherry Cobb, compared with those adjacent fields which will be immediately landward of the new flood-defence bank post-construction. It concludes that the level of disturbance is similar in each set of fields, and that the displaced roosting birds will have the benefit of equivalent roosting habitat landward of the new defences. From this, it is concluded that no negative impact on roosting SPA birds will arise from the construction and operation of the Compensation Site, and no mitigation is thus required.

17.19 This matter is agreed in the Statement of Common Ground between the Applicant and the Environment Agency, Marine Management Organisation and Natural England.

2.2 **"Locally Important Habitats**

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- 2.2.1 *LWT is concerned over the proposed loss of Station Road Field Local Wildlife Site (LWS). This site was assessed against the Lincolnshire Local Wildlife Site Guidelines (Lincolnshire Biodiversity Partnership 2008) and selected by the Lincolnshire Biodiversity Partnership Steering Group on 9 December 2008 as a Local Wildlife Site for its mosaic of habitats, in particular neutral grassland habitat (Lincolnshire Biodiversity Partnership 2012). Neutral grassland is a priority habitat in the UK Biodiversity Action Plan and the Lincolnshire Biodiversity Action Plan: it is estimated that only 724ha remains in the historic county (Lincolnshire Biodiversity Partnership 2011).*
- 2.2.2 *Section 41(3)(a) of the Natural Environment and Rural Communities (NERC) Act 2006 requires the Secretary of State to 'take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section'. The NERC Act 2006 Section 41 list – Habitats and Species of Principal Importance in England, includes lowland meadows and therefore encompasses neutral grassland.*
- 2.2.3 *Policy LC4 of the North Lincolnshire Local Plan refers to the protection of Sites of Importance for Nature Conservation (SINC). Policy LC4 states that 'any development which is likely to have an adverse impact on a Site of Importance for Nature Conservation will not be approved unless it can be clearly demonstrated that there are reasons for the proposal which outweigh the need to safeguard the intrinsic nature conservation value of the site'. SINC is the name previously given to LWSs. Policy LC4 should therefore be taken into account in relation to impacts on Station Road Field LWS.*
- 2.2.4 *Policy CS17 of the North Lincolnshire Council Core Strategy relates to biodiversity and refers to maintaining a network of local wildlife sites, ensuring development retains, protects and enhances features of biological interest, and ensuring development seeks to produce a net gain in biodiversity by designing in wildlife and ensuring any unavoidable impacts are appropriately mitigated for.*
- 2.2.5 *Should this development be consented, the loss of this site must be suitably compensated for in line with the NERC Act 2006 and North Lincolnshire Council Core Strategy Policy CS17. Comments on the proposed compensation are made in Section 4 below.'*
- 17.20 Section 2.2 of LWT's Written Representation refers to the loss of the Station Road Fields local wildlife site, a neutral grassland strip with associated elm hedge and field ponds supporting great crested newts; its loss is identified as a negative impact in Chapter 11 of the ES. The mitigation proposed in the ES is as follows:-
- 'The Station Road Fields Local Wildlife Site is situated within AMEP and as such this area will be completely lost during the proposed works. While initial plans were created to retain some of this site, following consultation with North Lincolnshire Council it was decided that within Mitigation Area A an area of equal size (at least 1.7 ha) would be managed to provide a neutral grassland of similar quality and function. This will be located to the south of the oil pipeline at the southern boundary of AMEP as well as around each of the pasture fields as grassy margins which will also be managed as neutral grassland. This habitat will*

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be planted up with a seed mix either collected (if possible) from the existing station road fields) or from a specially chosen seed mix. As the primary aim for Mitigation Area A will be for wetland bird species, hedges in this area will not be enhanced. However, as the elm hedge which is part of the Wildlife site will be lost, standard elm trees will be planted within Area A (of a resistant cultivar) which will provide habitat for the locally BAP listed white-letter hairstreak', (paragraph 11.7.36).

- 17.21 In essence, it is now proposed and agreed with Natural England, that the loss of Station Road Fields will be compensated for within the AMEP Mitigation Area A by managing 3.4ha of the buffer zone as neutral grassland. This secures twice the area lost as compensation. The great crested newts will be mitigated for by translocation under licence from Natural England to new ponds located in Mitigation Area B. This matter is addressed in the Statement of Common Ground between the Applicant and the EA, MMO and NE. The management of the neutral grassland area will be incorporated in the Environmental Management and Monitoring Plan for the site, the development and implementation of which will be secured by the DCO.

3. MITIGATION

- 3.1 *The applicants are proposing to manage an area of wet grassland in Mitigation Area A (47.8 hectares) to mitigate for the loss of habitat of value for feeding, roosting and loafing estuarine birds. LWT is satisfied that this proposed mitigation appears to fit in with the South Humber Gateway mitigation principles drafted by the South Humber Bank Ecology Group. We note that it is Natural England's advice 'that the proposed wet grassland mitigation (Area A – 16.7ha core area surrounded by 150m buffers) is adequate to mitigate for the loss of waterbird feeding and roosting habitat lost from Killingholme Marshes' (paragraph 1.16.1, Natural England Relevant Representation).*

4. COMPENSATION

- 4.1 *To compensate for the loss of intertidal mudflat, saltmarsh and subtidal estuary habitats the applicants are proposing a 100ha managed realignment site at Cherry Cobb Sands on the north bank of the Humber Estuary. The compensation package also includes the creation of a temporary wet grassland habitat at Old Little Humber Farm to the north of the managed realignment site to provide a feeding area for SPA birds whilst the managed realignment site develops benthic invertebrates.*
- 4.2 *LWT considers that the loss of estuarine habitat is likely to damage the integrity of the Natura 2000 site and is not yet convinced that the proposed compensation would deliver the habitat types in the ratios to compensate for those lost, and also the functionality to provide a feeding resource needed by SPA birds such as blacktailed godwit.*
- 4.3 *We understand that further modelling work is being undertaken by the applicant to predict ground levels and hence mudflat development within the managed realignment site for the first 10 years (paragraph 2.10, Natural England Relevant Representation). This information will be required up front to assess the likely effectiveness of the proposed compensation site. The compensation site must deliver areas of mudflat and saltmarsh to sufficiently compensate for the areas of these habitats*

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to be lost as a result of the development. The European Commission has produced guidance on the implementation of the Birds and Habitats Directives in estuaries and coastal zones. This guidance states that compensation measures 'should accomplish the ecological functions necessary to support the affected species and habitats' (paragraph 3.3.4, European Commission 2011).

- 4.4 *LWT is particularly concerned regarding the provision of mudflat at the compensation site and its maintenance in the long term. The development will result in the loss of mudflat used by significant numbers of SPA birds, in particular blacktailed godwit which feed at this location in high densities and in numbers of international importance. Existing managed realignment sites are showing a trend towards progression to saltmarsh habitat. Paull Holmes Strays managed realignment is a case in point where it was initially anticipated that the site would ultimately create approximately 45 ha of mudflat and 35 ha of saltmarsh. However, monitoring at the site indicates that the majority of the site will become saltmarsh (Environment Agency 2009).*
- 4.5 *Whilst saltmarsh is a valuable habitat in its own right, if the compensation site was to develop mostly into saltmarsh it would not be providing the compensatory mudflat habitat required or the functionality to provide a feeding resource for SPA birds. We note that Natural England has some residual concerns regarding the predictions for the managed realignment site and that the compensation habitat provided may not protect the coherence of the Natura 2000 network (paragraphs 1.16.2 and 1.18.1, Natural England Relevant Representation).'*
- 17.22 In these five paragraphs, LWT sets out its understanding of the requirement for compensation, should the application pass the derogation tests set out in the Habitats Regulations. The Applicant accepts and agrees with the statement in paragraph 4.2 that *'the loss of estuarine habitat is likely to damage the integrity of the Natura 2000 site'*, and that conclusion is set out in the sHRA report submitted as part of the Application. The Applicant further agrees with the statement in paragraph 4.3 that compensation measures *'should accomplish the ecological functions necessary to support the affected species and habitats.'*
- 17.23 The Applicant reiterates that the detailed design for the compensation site at Cherry Cobb Sands is not complete; until it is complete, any assessment of its sufficiency or otherwise, is premature. The second Interim Design Report for Cherry Cobb Sands is included in Appendix WR9.1.
- 17.24 This first Interim Design Report (EX28.1) demonstrates that the Applicant's consultants have had extensive regard to the monitoring reports of other managed realignment sites on the estuary, and to academic research into the influences of sedimentation at Paull Holme Strays. The Applicant is thus fully seized of the processes affecting the compensation targets, and is developing its design in an informed context.
- 4.6 *"To demonstrate its ability to function, the compensation site should be delivered before development begins at Killingholme Marshes. This is supported by European Commission guidance, referred to above in 4.3, which states 'The compensation scheme should be 'effective' at the time the negative effects occur on the site concerned' (paragraph 3.3.4, European Commission 2011). As there are uncertainties over the ability*

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of the compensation site to deliver the required habitats in the quantity and quality required effective monitoring must be carried out.'

- 17.25 In addition to the guidance referred to in LWT's paragraph 4.6 above, the Applicant has also had regard to, '*Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC*', (European Commission, January 2007), which gives more detailed guidance than the simple statements set out in the 2011 guidance referred to be LWT.
- 17.26 The 2007 guidance states that, '*(t)he result of compensation should be effective at the time the damage occurs on the site concerned. Under certain circumstances where this cannot be fully achieved, overcompensation would be required for the interim losses*'. For this reason, the compensation site is designed initially to overcompensate for habitat lost in the ratios set out in explanatory note *EX 11.24 Medium and Long Term Quantum of Habitat Loss*, included in the volume of supplementary information.
- 17.27 Recent judgements have supported this approach. For example, the ABP project to develop Immingham Outer Harbour and Quay 2005 included the issue of the timing of its compensatory measures. The only obligation on ABP with regard to the timing of its works, as stated in the legal Agreement, was simply that it have sufficient '*proprietary interest*' in the compensatory habitat sites before its development commenced. There was thus no requirement for the compensatory habitat to be functional at the time the habitat loss occurred.
- 17.28 Again, in *HST v Secretary of State for Transport and ABP [2005] EWHC 1289 (Admin)*, HST sought to argue that the granting of a Harbour Revision Order for IOH had been unlawful because, '*it was critical that the replacement habitat be available before, or at the latest at the same time as, the destruction of the existing habitat (but) there was no trigger to start the compensatory works in the agreement, something usually achieved by a prohibition on development until the compensation measures were in place*'. In rejecting this, Ousely J observed that the argument failed '*because of the advice which (The Secretary of State) had received from English Nature as to the satisfactory nature of the compensation measures. The (compensation) land had been increased to its present size (as set out in the legal Agreement) **to take account of the risks and possible time lags** between work starting and the replacement reaching its full potential*', (emphasis added).
- 17.29 The Applicant not only proposes to compensate for habitat loss to a greater extent than the loss itself but also proposes to include the creation of wet grassland.
- 4.7 "*If the results of monitoring show that the compensation site is not delivering the habitats as required in form or function, and therefore not providing a feeding resource for SPA birds, in particular black-tailed godwits, then remedial action would be necessary to ensure that the managed realignment site meets its objectives. A contingency plan accompanied by a guarantee that resources will be available for implementation, should therefore be a condition of any approval to ensure adequate compensation is delivered in the event that the compensation proposed is inadequate. The European Commission guidance referred to above states 'In case of any remaining scientific*

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uncertainty with regard to the effects of mitigation or compensatory measures, the measures must include a pre-defined and validated scheme to monitor the actual impacts and a framework, such as a Natura 2000 management plan, integral plan or a programme of measures, to adapt mitigation and compensation measures to the actual impacts' (paragraph 3.4, European Commission 2011).'

- 17.30 It is a Requirement of the revised DCO (Provision 2, Schedule 9) that an Ecological Management and Mitigation Plan be prepared in consultation with the relevant planning authority and implemented during construction and operation. A monitoring plan will thus be in place to address this issue. The need for any contingency habitat is not anticipated at this stage, but is the subject of on-going discussion.

4.8 *"Given the importance of North Killingholme Haven Pits SSSI as a roost site for black-tailed godwit, we have concerns that the proposed compensation package includes compensatory mudflat habitat on the north bank for feeding without any provision for the birds to roost at high tide. Whilst there is the chance that blacktailed godwits may feed on the north bank and fly back across to North Killingholme Haven Pits to roost, this is not certain. The applicant must demonstrate to the Examining Authority that there would be sufficient roosting habitat on the north bank for black-tailed godwits in the event that they no longer use North Killingholme Haven Pits.'*

- 17.31 The Applicant notes LWT's assertion that the BTGs may not choose to use NKHP in conjunction with feeding and roosting sites on opposite banks of the river. However, the Applicant also notes that there is no reason to doubt this, as this is what they do at present. As stated in Annex 35.6 of the ES, and elsewhere in the application, the North Killingholme Haven Pits are a very important high-tide roosting site for the Black-tailed godwits. However, as Annex 35.6 goes on to say,

'North Killingholme Haven Pits is not however the only high tide roost. On neap tides some birds remain on their feeding areas at high tide, particularly at Pyewipe (Catley 2009). There has also been increasing use documented of the recent managed realignment areas, both as roosting and feeding areas, particularly at Paull Holme Strays (IECS 2010a). The latter site is now regularly used by up to 1,000 Black-tailed Godwits as a high tide roost (Mander and Cutts 2005, IECS 2010a)', (Annex 35.6 of the ES)

- 17.32 In terms of low-tide behaviour, when the birds are feeding or loafing, Annex 35.6 goes on to state:-

'In winter, the feeding population concentrated on the mudflats of Pyewipe (Mander and Cutts reported 90% of the Humber population used this sector at this time of year and a similar result was also found in the previous low tide counts, Catley 2000). In spring a high proportion (88%) were found on the new realignment site at Paull Holme Strays.

The older data from the 1998-99 low tide surveys reported a similar pattern of distribution (Catley 2000), with use of three main feeding areas in the autumn (the upper estuary between Blacktoft and Read's Island (roosting on Read's Island or at Blacktoft on spring high tides), the north shore from Saltend to Cherry Cobb, and the south shore from East Halton Skitter to Immingham Docks

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(with birds from both of the latter two sites roosting at North Killingholme Haven pits, though with north bank birds staying on their feeding areas on neap high tides). Later in the autumn birds were almost all roosting at North Killingholme Haven pits and feeding on the north shore around Cherry Cobb and on the south shore down river to Pyewipe, and then from November onwards were using the Pyewipe area for both feeding and roosting (Figure 5)...

... As noted above, the north shore of the Humber has also been an important feeding area, though in general supporting lower numbers than the south shore, and with regular flights across the estuary reported (IECS 2006, Catley 2009). Since the managed realignment sites have been established on the Humber, these too have become important areas for this species. IECS (2010a) reported that the Paull Holme Strays site "over the first four years since breaching, the Paull Holme Strays site has developed as a major roosting/loafing site for Black-tailed Godwit on the Humber, supporting on many occasions flocks of national importance in autumn, as well as increasing numbers of foraging birds". After Killingholme Pits and Pyewipe, this is now the most important site for Black-tailed Godwits on the Humber. Mean counts on the realignment area over the six years since the breach of the sea wall have been 377, 72 and 26 for the autumn, winter and spring periods respectively'.

- 17.33 The author of Annex 35.6 elaborates on this point, as it is clear that the BTGs do currently fly to Pyewipe to feed (a distance of approximately 8km and upwards) before returning to the NKHP to roost. In the context of their current behaviour, therefore, it seems unlikely that the loss of the mudflat adjacent to NKHP will be a critical factor in their continued use of NKHP for roosting.

4.9 *LWT understands that Natural England is working with the applicant and the Humber Industry and Nature Conservation Association to develop three Ecological Management and Monitoring Plans (EMMPs) for terrestrial, marine and the compensation site. LWT welcomes the development of these EMMPs and agrees with Natural England that 'These plans need to be worked-up to a sufficient level of detail to give a sufficient degree of confidence as to the adequacy and efficacy of the proposed measures, and be secured by requirements on the DCO, before consent is granted' (paragraph 3.1, Natural England Relevant Representation).*

- 17.34 It is the Applicant's intention that the EMMP's be developed in this manner, and accordingly they are secured by Provision 2 of Schedule 9 of the revised DCO.

4.10 *We note and support Natural England's advice that 'the wet grassland habitat at Old Little Humber Farm would be required in order to support the compensation package provided in accordance with the Habitats Regulations. Management measures and monitoring requirements for the wet grassland should therefore be included in the Compensation Site Ecological Management and Monitoring Plan. This should be required until it is demonstrated through monitoring and reporting that the managed realignment compensation site at Cherry Cobb Sands is meeting its compensation objectives and that the Old Little Humber Farm site is no longer required' (paragraph 3.1.2, Natural England Relevant Representation).*

4.11 *To compensate for the loss of Station Road Field Local Wildlife Site, paragraph 11.7.36 in Chapter 11 of the Environmental Statement*

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explains that within Mitigation Area A an area of equal size (at least 1.7ha) would be managed to provide neutral grassland of similar quality and function of that to be lost. This proposal requires further examination as this area should be managed as wet grassland to provide feeding and roosting habitat for birds such as curlew. LWT considers that an area of species rich neutral grassland at least double that to be lost should be created and managed without compromising the functioning of Mitigation Area A for SPA birds. We would agree with Natural England that 'Additional details should be included in the Terrestrial Ecological Management and Monitoring Plan to provide sufficient confidence that adequate and effective mitigation can be provided and maintained in the long-term at Mitigation Area A for all its various objectives' (paragraph 3.8, Natural England Relevant Representation).

- 17.35 As noted above, the Applicant recognises the significance of the loss of Station Road Fields LWS, and accordingly proposes to compensate for its loss by provision of neutral grassland habitat within the buffer zone of Mitigation Area A. In accordance with the advice of LWT, the Applicant proposes that this provision should be 3.4ha in extent (twice the area to be lost). The provision and management of this plot of neutral grassland would be secured through the Environmental Mitigation and Management Plan for the site, as required by Provision 2 of Schedule 9 of the revised DCO.

5. CONCLUSION

5.1 *Based on the information submitted, LWT is not satisfied that the mitigation and compensation measures proposed are sufficient to fully mitigate and compensate for the adverse impacts that would be caused to international, national and locally important habitats and species. Granting of consent in this case would be contrary to the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended).*

5.2 *It is for these reasons that the Lincolnshire Wildlife Trust objects to the proposed Able Marine Energy Park and contends that the development should not be granted consent.*

- 17.36 The Applicant has met with LWT since the submission of the Written Representation quoted above, and has presented many of the arguments set out above, which it hopes will resolve many of LWT's concerns. The Applicant welcomes a continuing active consultation with LWT.

18. **ANGLIAN WATER**

Summary of Written Representation

18.1 The Written Representation covers the following issues:-

18.1.1 Water supply and foul water discharge rates.

18.1.2 Diversion of the Anglian Water's sludge and brine mains that pass through the site.

18.1.3 Limited land for the expansion of Killingholme sewage treatment works (STW).

18.2 Relevant sections of Anglian Water's Written Representation are reproduced below in italics with the Applicants comments in plain type. As a general point the Written Representation gives the impression that little dialogue, or exchange of information, has occurred between the Applicant and Anglian Water, and that is fundamentally not the case. To the Applicant, the Written Representation appears ill-informed about the discussions that have taken place, and information that has been supplied, over a long period of time.

18.3 The Applicant confirms that a discussion between representatives from Anglian Water and the Applicant has, following submission of the Written Representation, taken place and a number of matters have been clarified and agreed.

Applicant's Comments

Proposed Flow Rates

18.4 **Section 2.6:** *Able have provided a number of indicative flow rates that affect Anglian Water assets. This statement is written based on the flow assumptions provided by Able on 4th May 2012*

Potable Water	6.6	Litres per second
Non-potable water	75	Litres per second
Foul Water	6.005	Litres per second
Surface Water	0	Litres per second

18.4.1 On the 31st May 2012, Anglian Water forwarded their assumptions relating to flow rates to the Applicant requesting confirmation in order that further modelling work could be carried out and to support the Written Representation. The flow rates submitted by the Applicant in relation to the industrial areas are detailed in Table 18.1

Table 18.1 : AMEP Foul Water flows and Water Demand

Predicted Peak Potable Water	7.552	Litres per second
Predicted Average Potable Water	4.95	Litres per second
Predicted Total Daily Potable Water	513.9	Cubic metres per day
Predicted Peak Foul Water	7.552	Litres per second
Predicted Average Foul Water	4.95	Litres per second
Predicted Total Daily Foul Water	513.9	Cubic metres per day
Predicted Non-potable Water	0	Litres per second
Predicted Surface Water	0	Litres per second

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- 18.4.2 In addition to the above the vessels berthing at AMEP will have a requirement to replenish their supplies and an additional allowance of 500 m³/day of potable water needs to be taken into account. Anglian Water has confirmed that ship replenishment can be accommodated.

Diversion of the Brine and Sludge Mains

- 18.5 The brine and sludge mains assets consist of the following:-

- 18.5.1 Two sludge and brine mains from Elsham Waste Treatment Works, 200mm and 250mm in diameter laid in the early 1990's between two older brine mains, 150mm and 300mm in diameter terminating at a tank storage site on Rosper Road. The new mains are located on the east side of Rosper Road and pass within an easement in the AMEP development up to the Killingholme Sludge Disposal Works ('the tank farm'), wherein the effluent is stored and pumped into two 250 mm pipelines, one of which was installed in the early nineties. The tank farm is located on land outside of the AMEP Development Site Boundary.

- 18.5.2 The two 250mm pipelines pass within an easement through the AMEP development, under the existing flood defences to two submerged pipe outfalls located at Mean Low Water Springs level in the estuary, approximately 195m offshore of the tidal defences.

- 18.6 **Section 3.2:** *Diversion of the Pipelines cannot be carried out in isolation and requires connection of the Water Storage Works and the outfall.*

- 18.6.1 The Applicant acknowledges that the two outfall pipes are connected to the Sludge Disposal/ Storage Works, however it is technically feasible to construct a pipeline diversion, including (if necessary and economic to do so) a new tank farm, whilst maintaining the operation of the infrastructure.

- 18.7 **Section 3.5:** *Able has discussed the potential to divert the Pipelines through the provisions of section 185 of WIA(Water Industry Act). Whilst a section 185 application has been submitted to Anglian Water by Able, it is too early to fully consider at this stage for the following reasons*

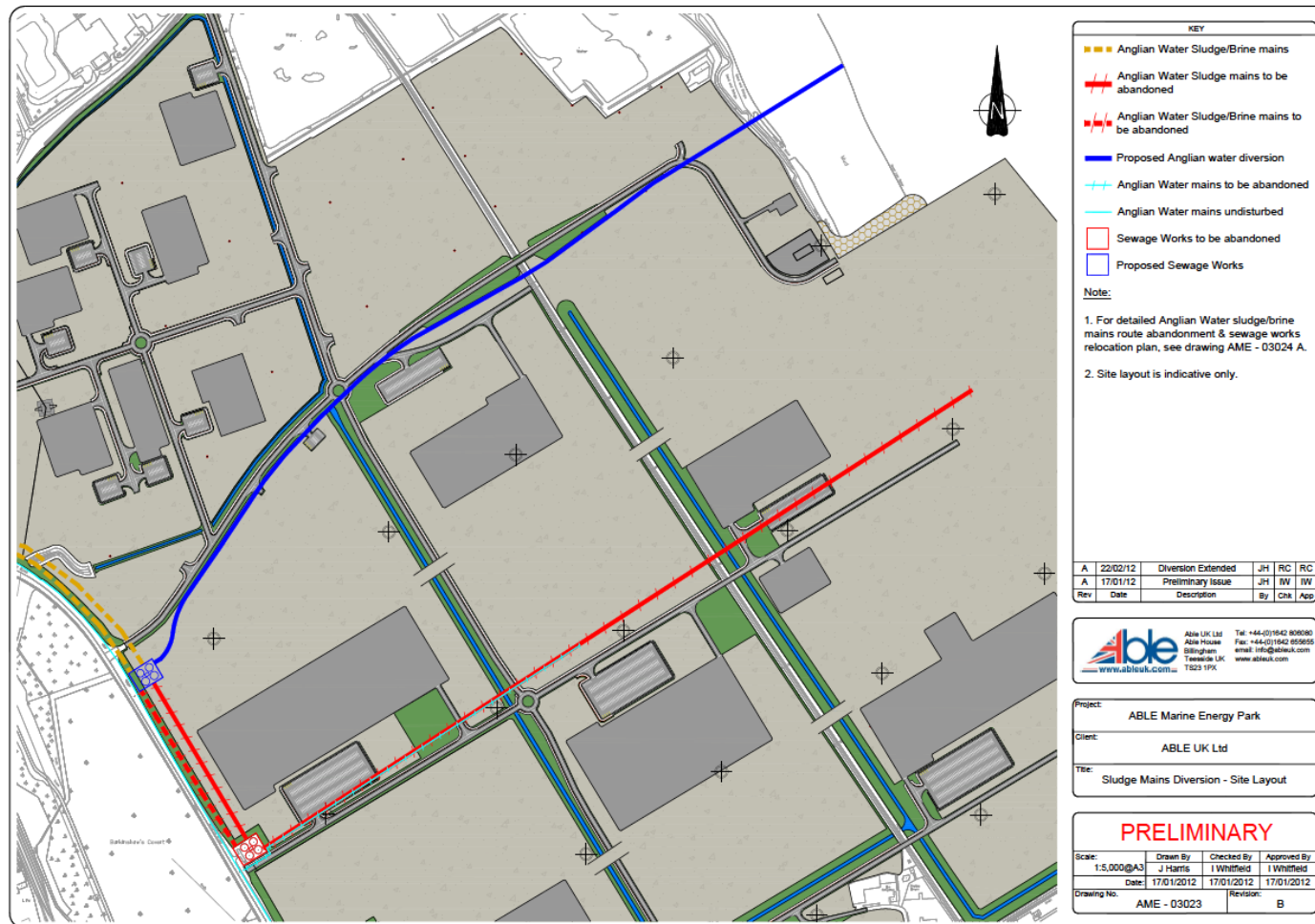
No alternative layout of the Pipelines has been proposed.....

The potential diversion of the Pipelines would include the relocation of the outfall.....Able have underwritten the costs of sampling and modelling the discharge.

- 18.7.1 The Applicant submitted an Application under Section 185 of the Water Industry Act to divert the Pipelines on the 31st January 2012. The Application contained the information required to commence proceedings, in particular a preferred diversion route and a plan showing the extent of the land owned by the Applicant. This has been acknowledged by Anglian Water in order for the modelling of the preferred diversion location to be carried out.

- 18.7.2 In fact, a plan showing the diversion route had first been issued to Anglian Water on 6th October 2010 and was re-issued on 5th April 2011. The proposed diversion route has been shown consistently; the drawing issued with the S185 application is shown in Figure 18.1.

Figure 18.1 : Proposed Route of Diverted Sludge Mains



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- 18.7.3 At a joint meeting with Anglian Water and the Environment Agency, on 28th April 2012, the Applicant was informed that further computer modelling was required, the scope of which had been agreed between the Environment Agency and Anglian Water. Sampling would be complete by the 18th May 2012 and hydraulic modelling complete by the 15th June 2012. An initial interim report would be forwarded following receipt of the sampling results.
- 18.7.4 Anglian Water has subsequent to the submission of the WR, confirmed what modelling is being undertaken. The sludge modelling has been carried out to determine the dispersion patterns and materials discharged from the sludge and brine mains. Samples of existing flows have been taken and the amount of ammonia, nutrients and biological oxygen demand assessed. The results will be analysed and compared with environmental quality standards for both the current location and proposed outfall diversion. The modelling and reports will according to Anglian Water be complete by early September 2012.
- 18.8 **Section 3.9:** *There is a risk that a suitable discharge location is, and permit conditions are, not agreed between Able UK, the Environment Agency and Anglian Water. Should this issue arise Anglian Water would not be in a position to divert the Pipelines.*
- 18.8.1 Anglian Water has confirmed that the modelling being carried out is solely for the proposed outfall location and has not considered alternative provisions. Subsequent to the submission of the WR, the Applicant and Anglian Water have identified alternative locations that appear to be suitable and which will be modelled should the current study demonstrate that the placement of the outfall will not be acceptable in its proposed location.
- 18.9 **Section 3.10:** *Due to the uncertainties Anglian Water currently consider the requirement under Section 185 to be unreasonable whilst there is insufficient information available to assess the options and risks.*
- 18.9.1 Subsection 2 of Section 185 of the Water Industry Act 1991 states "Subject to subsections (3) and (4) below, where a notice is served on a relevant undertaker under subsection (1) above, it shall be the duty of the undertaker to comply with the requirement contained in the notice except to the extent that that requirement is unreasonable".
- 18.9.2 The Applicant does not believe that the duty of Anglian Water to comply with the requirement contained in the Section 185 notice served by the Applicant is unreasonable,
- Water Supply
- 18.10 **Section 3.17:** *There is no formal agreement regarding the site demands, works required and funding. Anglian Water recommends that Able UK commission a detailed appraisal to understand the upfront enabling works, costs, programme and risks.*
- The presence of other significant infrastructure could impact on the design and construction of the water mains. Any changes to the demand requirements may result in the need to re-design*

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Anglian Water has received an initial application, however it was too early for consideration. Once matters have been agreed, Anglian Water would anticipate a formal application under section 41 WIA.

- 18.10.1 The Applicant submitted a formal application to Anglian Water under Sections 41 and 45 of the Water Industry Act 1991 to provide new water supplies (mains and connections) to the AMEP development on the 7th February 2012.
- 18.10.2 Under Section 41 of the Water Industry Act, provided financial conditions are met, the undertaker shall provide a water main in accordance with section 44 of the Act to the timescale provided within that section unless previous agreement between the undertaker and the Applicant.
- 18.10.3 Anglian Water stated in a meeting with the Applicant on the 12th January 2012 that they had carried out an appraisal of the AMEP development prior to the submission of the Section 41 Application, and had identified a suitable route and budget costs to provide water assuming up to 50 litres per second of water would be required, far in excess of that required.
- 18.10.4 At a subsequent meeting on 9th March 2012 between the Applicant and Anglian Water, Anglian Water stated that given the required demand was far less than they had anticipated, they would re-review the capacity of the local supply network. The Applicant has not received any details relating to the review nor until receipt of the Written Representation received any request to commission a detailed appraisal.
- 18.10.5 The Applicant and Anglian Water have, subsequent to the submission of the Written Representation, acknowledged that whilst the Section 41 application was submitted, the provision of the supply within the timescales quoted in the Water Industry Act is not realistic due to the various studies of the existing network and review of water and programme demands of the Applicants development.
- 18.10.6 Anglian Water has confirmed subsequent to the submission of the Written Representation that new pipework infrastructure is required to meet the full needs of the development; and in the interim; they have checked if there is any capacity in the existing adjacent pipework to allow to allow development to be commenced before committing to a new supply. They confirmed that there is no capacity at all for any flow in the adjacent network.

The Expansion of Killingholme STW

- 18.11 **Section 3.25:** *Based on the assumptions (section 2.6) the foul flows at South Killingholme STW will be increasing by more than 100%. This will require a greater process footprint.*
- 18.12 **Section 3.28:** *The current receiving watercourse may not be suitable for increased final effluent flows, and either relocation of the discharge to the Humber Estuary or increasing the size of the watercourse may have to be considered.*

Once the flow volumes and indicative final effluent quality standards are confirmed, Anglian Water can plan for appropriate significant upgrades to ensure the treatment process can accommodate both the new and existing flows.

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Until the relevant standards and discharge locations are agreed with the Environment Agency any timescales for relocation of discharge point and the provision of appropriate sewage treatment technologies cannot be established.

- 18.13 Anglian Water's principal foul water infrastructure in the vicinity of the development consists of Killingholme Sewage Treatment Works, west of the AMEP development, off Chase Hill Road, which is fed via rising main.
- 18.14 Following treatment, the effluent is discharged at a point located between the sewage treatment works and Rosper Road, approximately 220m west of Rosper Road. The discharge is to an open ditch that is maintained by the North East Lyndsey Drainage Board. The ditch passes through a culvert under Rosper Road and across the AMEP development linking into the surrounding ditch network.
- 18.14.1 The Applicant has submitted and confirmed an average flow requirement of less than 5 litres per second. Anglian Water informed the Applicant at the meeting of the 9th March 2012 that the sewage treatment works are close to capacity.
- 18.15 Anglian Water has subsequent to submission of the Written Representation, clarified a number of issues relating to the sewage treatment works. The sewage works are consented to discharge 704 cubic metres per day, which over 24 hours is an average of 8 litres per second. The works were believed to have some capacity if flow entering the system was discharged under gravity. Following further investigation by Anglian Water, the sewage works are deemed to be at capacity during periods of rainfall.
- 18.15.1 Anglian Water has confirmed that they are assessing the impact of increasing the foul flow into the sewage works and the resultant impact on the volume of treated effluent discharged. This will be reviewed by the Environment Agency who will set the threshold criteria for effluent discharge. The design of any changes to the sewage treatment works will take the criteria into account.
- 18.16 **Section 3.37:** *Whilst a section 106 WIA application has been submitted to Anglian Water, it was rejected as there is no premise to serve. We recommend early discussions regarding layout, design and capital contributions associated with the proposed sewerage network.*
- 18.16.1 The Applicant submitted a Section 106 Application for connection to a public sewer on the 7th February 2012, having discussed the matter and been advised in the meeting with Anglian Water on the 12th January 2012 to submit the application. The Applicant has not been informed that the Section 106 application has been rejected.
- 18.16.2 Anglian Water has confirmed subsequent to submission of the Written Representation, that the S106 application effectively commenced review and modelling procedures, following numerous discussions and feasibility work. Both Anglian Water and the Applicant acknowledge that detailed design of the treatment works can only be commenced once deliberations with the Environment Agency are complete. Likewise the detailed design of the on-site foul sewers, which would need to be submitted under a Section 104 application, can only be carried out once the layout and initial sewage treatment works is known.
- 18.16.3 Both the Applicant and Anglian Water acknowledge that regular discussions are necessary and have scheduled further meetings to review modelling results and programme.

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19. **ENVIRONMENT AGENCY**

Summary of Written Representation

- 19.1 This is a wide ranging Written Representation and the comments below focus purely on those matters where the EA currently hold an objection, in order to update the panel on progress since the Written Representation was prepared.

Applicant's Comments

Chapter 4 – Description of the Development

- 19.2 The EA states in paragraph 4.2 of its Written Representation that it will maintain an objection until a Section 30 Agreement (Anglian Water Authority Act 1977) is agreed that covers the design, construction and maintenance of the new flood defences on the south bank. The Applicant is awaiting a draft of this agreement from the EA and anticipates that a final draft will be agreed by the end of the examination period. The EA's objection in paragraph 4.9 will be addressed by the same agreement.

Chapter 7 – Geology, Hydrogeology and Ground Conditions

- 19.3 In paragraph 4.14, the EA states that it has raised the issue of dredge disposal capacity with the Applicant. The proposed 'disposal to sea' of inerrodible material has been reduced since the date of application through the identification of beneficial use as explained in EX7.7 (Materials Management Plan), and the revised quantities are set out in the SoCG prepared by the Applicant and the EA. The impacts of the revised dredge disposal volumes on estuary processes are assessed in explanatory note EX 8.7, included in the volume of supplementary information.
- 19.4 The disposal site HU080 has been proposed for the deposit of the erodible dredge arisings. In ABPs Written Representation they state that the Green Port Hull project will include for the beneficial use of the dredge arisings of the Sunk Dredged Channel works. Helpfully, the disposal volumes for this site are substantially reduced, and capacity accordingly released. However MMO has, in any event, stated that HU080 does have sufficient capacity.

Chapters 8 and 32 – Hydrodynamic and Sedimentary Regime

- 19.5 In paragraph 4.24 the EA refers to an additional 10 ha of intertidal losses caused by the long term geomorphological change. The Applicant commented on the Deltares study in its response to the Relevant Representations, and it is understood that the EA is in the process of replying to that. The Applicant is still awaiting receipt of this response which the EA has stated will now be included in its next submission to PINS.
- 19.6 In paragraph 4.26, the EA states that '*Able has acknowledged that the assessments are inadequate in terms of the issues outlined above*'. The Applicant has not acknowledged this, and does not support this statement of the EA's. The Applicant has agreed to provide further explanation and clarification, which it has done principally through the provision of volumes of supplementary

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information, but its position remains that the ES is adequate for the purposes of examination.

- 19.7 The EA further notes that the Applicant intends to produce a supplement to Annex 8.1 – the Applicant has issued this, report EX8.7, and awaits the EA's response.

Chapters 9 and 33 – Water and Sediment Quality

- 19.8 In paragraph 4.31, the EA requests the provision of information on the impact of increased foul drainage flows. This has been provided in the Applicant's Responses to Relevant Representations, at paragraph 63.40. The Applicant awaits the EA's response.
- 19.9 The EA has suggested in paragraph 4.31 that a Requirement covering the foul water strategy is included in the DCO. The Applicant considers that this is already covered by Requirement 11 of Schedule 11 of the revised DCO (Appendix WR1.1).
- 19.10 In paragraph 4.43, the EA states an objection subject to the receipt of a revised Water Framework Directive assessment – this was provided by the Applicant, and a response was received from the EA on 1st August 2012. The Applicant has forwarded the EA's comments to its consultants, who will work to resolve them.
- 19.11 In paragraph 4.44, to ensure compliance with the Water Framework Directive, the EA has requested the inclusion of an additional Requirement in the DCO. The Applicant considers that the content of this Requirement is already covered by the provision of the Environmental Management and Monitoring Plan, which is already the subject of Provision 2 of Schedule 9 of the revised DCO.
- 19.12 In paragraph 4.46, the EA raises the issue of diversion of the power station intake/outfalls, and suggests the inclusion of an additional Requirement in the DCO – this has now been included as Requirement 29 of Schedule 11 of the revised DCO. The Applicant is progressing discussions with the operators of the power stations, and is seeking alternatives to diversion, which could be implemented through a separate consenting procedure. In the absence of such better alternatives being agreed, the proposal included in the application is intended to be implemented.

Chapter 10 – Aquatic Ecology

- 19.13 The bulk of the EA's commentary on Chapter 10 of the ES concerns piling and underwater noise. The Applicant received the EA's latest piling Requirement proposals on 31st July 2012, and is currently reviewing them. The Applicant and the EA expect to reach agreement very shortly on the matter. The Applicant notes that the Requirements proposed in the EA's Written Representation are effectively superseded by those included in the EA's revised Requirements of 31st July 2012.

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Chapter 13 – Drainage and Flood Risk

- 19.14 The addendum to the FRA referred to by the EA in paragraph 4.76 has been provided by the Applicant as EX 13.2 in the volume of supplementary information.
- 19.15 The Applicant acknowledges and welcomes the EA's confirmation in paragraph 4.77 that the site lies in Flood Zone 3a, not in 3b as incorrectly identified by Centrica.
- 19.16 In paragraph 4.80, the EA has requested the inclusion of a Requirement in the DCO to provide for monitoring of sedimentation. The Applicant considers that the results of this monitoring would most effectively be included in the report required by Requirement 31 of Schedule 11 of the revised DCO.
- 19.17 In paragraph 4.82, the EA discusses flood depth – for the Applicant's response, please see Section 5 of this report.
- 19.18 In paragraph 4.84, the EA requests the inclusion of an additional Requirement in the DCO to cover a detailed surface water drainage scheme for the site – the Applicant considers that this is covered by Requirement 11 of Schedule 11 of the revised DCO.
- 19.19 In paragraph 4.90, the EA suggests the inclusion of a Requirement in the DCO that the finished floor level of all buildings should be a minimum of 300mm above the surrounding ground level. It is not clear why it is proposed to vary from the normal Building Regulations procedure, which would set this level at a minimum of 150mm above surrounding ground level for normal pedestrian accesses. Because of the proposed use of the buildings on AMEP, it will be necessary for large items to be moved by mobile plant into and out of the buildings throughout operation, which will need to be achieved by ramped accesses. To enable this operation to be carried out, it is suggested that the internal finished floor level of all buildings be set instead at 300mm above the level of the external storage areas, to allow a graded accommodation of the height difference within any paved curtilage – please see Requirement 26 of Schedule 11 of the revised DCO.
- 19.20 The Applicant has no objection to the inclusion in the DCO of the additional Requirement suggested by the EA in paragraph 4.91– please see Requirement 26 of Schedule 11 of the revised DCO.
- 19.21 The Applicant also accepts the inclusion in the DCO of the additional Requirement suggested by the EA in paragraph 4.95 – please see Requirement 26 of Schedule 11 of the revised DCO.
- 19.22 In paragraph 4.97, the EA requests a legal agreement or Protective Provision of the DCO to protect its interests in respect of the disapplication of its byelaws. The Applicant would expect to agree suitable wording prior to the conclusion of the Examination period.
- 19.23 In paragraph 4.98, the EA refers to habitat loss within the designated site; as set out above, this matter is the subject of ongoing discussions between the Applicant and the EA and its consultants Deltares.

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Chapter 28 – Description of the Development (Cherry Cobb Sands)

- 19.24 The EA has stated in paragraph 4.103 of its Written Representation that it will maintain an objection until a Section 41 Agreement (Yorkshire Water Authority Act) is agreed that covers the design, construction and maintenance of the new flood defences on the north bank. As noted in paragraph 19.2 above, the Applicant is awaiting a draft of this agreement from the EA and anticipates that a final draft will be agreed by the end of the examination period.

Chapter 30 – Choice of Site

- 19.25 The EA makes extensive commentary on the context of Cherry Cobb Sands in the Humber Estuary CHaMP. The site chosen is identified within the 'Humber Flood Risk Management Strategy', (EA, 2008) for planned habitat creation within the next 20 years. The site has also been sought for development of compensatory habitat by ABP and as a result the owner, The Crown Estate, undertook a competitive tendering process that involved all three parties. The Applicant has been selected as the preferred bidder following this tendering process and does not believe that the EA should be unfairly advantaged in this commercial process.
- 19.26 Whilst the EA is required to compensate for the direct loss of habitat due to its flood defence maintenance strategy, direct losses due to flood management works are actually limited to 15 ha over the next 50 years (CHaMP, Table 8.1). The Applicant accepts that this physical loss of estuarine habitat cannot be mitigated and therefore new estuary habitat must be created outside of the designated site. However, the (very) significant proportion of the EA's requirement for managed realignment sites arises from DEFRA's policy of compensating for the CHANGE in estuarine habitat due to 'coastal squeeze'. Coastal squeeze is caused when rising sea levels give rise to an increase in both the low tide level and the high tide level. Within the Humber Estuary the high tide position is very often constrained by flood defences and is thereby fixed in position against the defence wall, whilst the higher low tide means that, as sea levels rise, less of the estuary bed is exposed during the tidal cycle. This reduces the area of intertidal habitat and increases the area of sub-tidal habitat, although the total area of habitat within the estuary remains exactly the same.
- 19.27 Sea level rise is considered to be natural change but the loss of intertidal habitat due to coastal squeeze is still being compensated for by the EA because it is still assessed to be an indirect effect of maintaining the flood defences. This is because, if the flood defences were not maintained, they would eventually fail and the high tide level would move inland (albeit in an uncontrolled manner). To account for 50 years of coastal squeeze, the EA is planning to provide 600 ha of managed realignment sites by 2050. However, coastal squeeze does not result in a loss of estuarine habitat (the estuary remains the same size), it simply gives rise to habitat change within the estuary; intertidal habitat becomes sub-tidal habitat. Accordingly, it is not essential for the EA to find realignment sites to compensate for habitat change. It could consider alternative solutions to maintaining the habitat balance within the estuary by converting shallow sub-tidal habitat into intertidal areas; this would reduce (potentially significantly) the EA's need for managed realignment sites. For example, simple groyne structures could, subject to an EIA, be used to create accreting areas within protected site, just as the development of HIT has done. The groynes would change the sedimentary regime locally, changing sub-tidal habitat to intertidal and would

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thereby maintain the balance of these two habitat types without needing to increase the estuary size through managed realignment.

Chapter 31 – Geology, Hydrogeology and Ground Conditions

- 19.28 In paragraph 4.115, the EA suggests the inclusion of an additional Requirement in the DCO to address risks associated with contaminated land. This has been addressed through the incorporation of Requirements 33 and 34 in schedule 11 of the revised DCO.
- 19.29 The EA also requests in paragraph 4.116 that an additional Requirement is included in the DCO to secure a verification report for any contaminated land remediation works carried out. The suggested text indicates that this would be carried out prior to the commencement of development; however, the Applicant considers that the remediation works themselves must necessarily form part of the development, and suggests therefore that the wording be amended to require the verification report to be prior to breaching the existing flood defence wall.

Chapter 34 – Aquatic Ecology

- 19.30 The Applicant notes that detailed design of the compensation site is ongoing; the Second Interim Design Report prepared by the Applicant's consultants Black & Veatch details the current iteration of the design. This is included as Appendix WR9.1.

Chapter 36 – Drainage and Flood Risk

- 19.31 In paragraph 4.130, the EA suggests the inclusion of an additional Requirement in the DCO dealing with the monitoring of sedimentation at Stone Creek. Further to the Applicant's comments in paragraph 19.16 above, the Applicant considers that the results of this monitoring would most effectively be included in the report required by Requirement 31 of Schedule 11 of the revised DCO, and that that Provision could be extended to include the monitoring required by the EA.

Chapter 44 – In-Combination

- 19.32 The Applicant has taken note of the comments on its in-combination assessment raised in the Relevant Representations, and accordingly submitted an explanatory note EX 44.1 in the volume of supplementary information. This report contained a more detailed explanation of in-combination assessment, including the projects at Grimsby and the Sunk Dredged Channel referred to by the EA. The Applicant awaits the EA's response to this report.

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General

- 19.33 The Applicant notes that it continues to meet with the EA on a regular basis, and the two parties are working with each other making good progress on the issues raised in the EA's Representations.

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20. **MARINE MANAGEMENT ORGANISATION**

Summary of Written Representation

20.1 The Written Representation is broad ranging, but focuses on presenting the MMO's Relevant Representation with updates on matters where progress had been made between the dates of the two documents. These areas of update were:-

20.1.1 The MMO's comments on licensing requirements under Part 4 of the 2009 Act.

20.1.2 The MMO's comments on the DCO.

20.1.3 The MMO's comments on the environmental impact assessment.

Applicant's Comments

20.1 The MMO's Relevant Representation was made prior to the submission of the Applicant's Responses to Planning Inspectorate's Questions, and accordingly the issues raised in it were considered in that document. It is therefore not proposed to repeat that text here, but to provide updates where necessary on what progress has been made since the submission of the Applicants Responses.

20.2 It is also noted that the Applicant has entered into a Statement of Common Ground with the MMO, the EA and NE, which covers all the issues raised in the MMO's Written Representation and RR, and gives full details of the position reached at the date of signature.

Licensing Requirements - Signposting of Licensable Works Assessments

20.3 The MMO has requested that the applicant 'signpost' where the impacts of the licensable works set out in the MMO's Written Representation are assessed in the application package. The applicant agrees to review the requirement for this exercise within the MMO in the light of the production of the SoCGs covering the ES and the sHRA.

Draft DCO/DML

20.4 The bulk of the MMO's commentary refers to the text of the DCO/DML and the way it is drafted. Regular consultation has been ongoing between the applicant and the MMO since the provision of the MMO's Relevant Representation, and the text has been substantially developed. A revised DCO and Commentary are appended to this document (Appendix WR1.1 and WR1.2), which have been drafted to address the MMO's concerns.

Environmental Impact Assessment

20.5 As stated above, the applicant has responded in some detail to the table of the MMO's comments on the EIA, in its Responses to Planning Inspectorate's Questions. No updated version of this table has been received in response from the MMO, so it is deemed appropriate only to provide update notes here, under the title of each row.

20.6 7.6: the applicant notes that the dredge quantities proposed have been revised and reduced since the time of its last representation, and the text of the revised DCO and DML has been updated to include the revised figures. These figures are also set out in the SoCG between the MMO and the applicant. The revisions

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take account of the identified potential for beneficial use of dredge arisings set out in explanatory note EX 7.7 in the volume of supplementary information. This reduces the amount required to be disposed of at sea.

- 20.7 7.21: this row has been marked as 'applicant's action'. The applicant has now provided an update to the DML, as annexed to this document, and notes the MMO's agreement that updating the dredging strategy should be conditioned in the DML. The issue is now believed to be closed.
- 20.8 7.46: the revised conditions concerning piling restrictions have been updated since the last provision of the table of issues. As stated above in Chapter 19 of this document, the applicant is considering the EA's latest proposals and anticipates reaching agreement in the near future.
- 20.9 7.47: as stated in paragraph 20.8.

General

- 20.10 The applicant notes that regular meetings with the MMO have continued, and the ongoing consultations and discussions have enabled good progress to be made towards reaching agreement on the issues identified by the MMO in their Written Representation.

21. **RSPB**

Summary of Written Representation

- 21.1 The comments in this chapter focus on the issues raised in the Proofs of Evidence of Dr Tony Prater relating to the compensation site at Cherry Cobb Sands (CCS) and Old Little Humber Farm (OLHF). Issues regarding the efficacy of managed realignment sites on the Humber Estuary are addressed in the Managed Realignment and Regulated Tidal Exchanged report reproduced in Appendix WR21.1.
- 21.2 The main issues regarding the functionality of the compensation sites are:-
- the function that needs to be replaced by the compensation site including the numbers of birds that need to be accommodated;
 - the ability of the intertidal mudflat of the compensation site to replace the lost functions; and
 - the potential for OLHF to support black-tailed godwits whilst the intertidal mudflats on the compensation site mature.

Applicant's Comments

General

- 21.3 RSPB's view is that the compensation site as designed will not provide adequate compensatory habitat in the medium and long-term, and the compensation site at CCS together with the temporary wet grassland provision at OLHF, is unlikely to replicate the conditions required to support bird populations (particularly black-tailed godwits (BTGs)) displaced from the North Killingholme Marshes foreshore (NKM).
- 21.4 Of course, whilst the objective of the compensation site is to create habitat suitable for BTGs, to some extent this is precautionary as they may simply choose to forage elsewhere on the Estuary if, in fact, the carrying capacity of the Estuary mudflat is not currently limiting the population.
- 21.5 Detailed design information about Mitigation Area A, including the development of the wet pasture and the invertebrate biomass, will be contained within the Ecological Management and Monitoring Plan (EMMP), the format of which is currently being prepared by Natural England (NE). These issues are therefore not considered further in this response.

Provision of Compensatory Intertidal Mudflat (Mid to Long-term)

- 21.6 The creation and maintenance of a sufficiently large area of mudflat in the mid to longer term is an important first step in delivering on the ecological function of the compensation site at CCS.
- 21.7 The information presented in the ES focused on the creation of an open managed re-alignment scheme at CCS, and was based on the modelling design work at that time. Since then, more detailed design modelling has been undertaken. It has shown that whilst intertidal mudflat is created and retained, the extent likely to be retained in the mid to long term, is less than had been predicted from the initial modelling results.

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- 21.8 The more detailed modelling work that has been undertaken since the ES has underpinned observation of existing managed realignment sites on the Humber Estuary; that they are difficult to maintain as mudflat.
- 21.9 In consultation with NE, the Environment Agency (EA) and the Marine Management Organisation (MMO), a Regulated Tidal Exchange (RTE) scheme is now being developed for the compensation site at CCS (Black & Veatch, 2012). RTE uses engineered structures (eg. pipes, gates, sluices) to allow the regulated exchange of seawater to an area behind fixed sea defences. RTE has been used to successfully create intertidal mudflat, for example in the UK at the Teesside National Nature Reserve (EA, 2003) and Goosemoor, as well as Luneplate in Germany and Breebart in the Netherlands (<http://www.abpmer.net/omreg/easycontrols/database/index.asp?lstType=Regulated+tidal+exchange&Submit=Submit>).
- 21.10 An RTE type approach has also been agreed as a means of providing compensation for the effects of the Port of Bristol's Deep Sea Container Terminal at Steart. RSPB '*strongly supports*' that application, including the RTE, as it provides the necessary compensation and functionality (http://www.westsomerset.gov.uk/online-applications/files/81E4221A3B4B85CEB184A53FC49E71DD/pdf/3_32_11_043-RSPB_COMMENTS-12338.pdf). Hence in principle an RTE scheme is anticipated to be acceptable to RSPB, subject to its ability to deliver the required functional value for birds.
- 21.11 RTE allows a degree of control over water flows and the locations in which they are effective. This allows greater management options over the habitats created, and a greater ability to create (and maintain) intertidal mudflats. The site's clay based soils provide suitable substrate over which to form mudflats, and the water flows (eg rapid entry, slow release, number inundations per annum) and slopes can be manipulated to help in the creation and subsequent maintenance.
- 21.12 The developing design of the RTE is also seeking to maintain the presence of open water within the intertidal compensation site. The water may not always be present in the same part of the site, although there are options to do so, but there could always be an area available for the birds for use as a roost site. The value of areas of open water to shorebirds is discussed below.

Ecological Function - Birds

- 21.13 The aim of the compensation site is to produce high quality mudflat in the mid to long term. The area of intertidal mudflat maintained through the RTE scheme is currently predicted to be 66 hectares (ha) of mudflat after 5 years, which is well in excess of that which is lost at NKM. Longer term predictions are reported in Appendix WR9.1, and an area of intertidal mudflats in excess of 50 ha is predicted to be maintained. Hence it is expected that the mudflats created will be able to accommodate the numbers of birds displaced from NKM.
- 21.14 The submission by Dr Prater makes reference to the calculation of the waterbird assemblage. The calculation of the Humber SPA assemblage given in the sHRA and ES was calculated from raw WeBS data provided by the BTO summing the number of waterbirds in any one month in the year. It is acknowledged that if the mean peak of the five year peaks is used both for the assemblage and the Through the Tide Count (TTTC) (as suggested by Prater) then the overall assemblage displacement from NKM becomes 3.1% (as opposed to the 2.5%

stated in the report). It should be noted that TTTC's can be heavily influenced by birds making short duration stays, and as such the assemblage figure of 5,026 represents a theoretical maxima based on peaks of individual species that can occur months apart, but are in practice unlikely to be present on the site at any one time. Discussions with NE have focused on calculating the size of the compensation site based on how much habitat is currently supporting the assemblage and its component species. This is a reasonable and habitat based approach that very much reflects EC principles and practice (EC, 2000).

- 21.15 As stated above, the design development of the compensation site includes for the provision of some open water that is available at all times. This will provide a roost site for BTG and other shorebirds, and hence will replicate the existing link between foraging and roosting areas at NKM/North Killingholme Haven Pits (NKHP), particularly during the autumn months including the BTG moulting period.

Ecological Function - Intertidal Mudflats and Benthic Invertebrates

- 21.16 RSPB is correct that considerable reference is made to Paull Holme Strays (PHS) in the ES and shadow Habitats Regulations Assessment (sHRA). However, the intention of such references was largely to report the establishment of benthic invertebrate populations over the first three years at PHS. Experience from both managed re-alignment and RTE suggests that it is likely to take at least three years for the mudflats to develop a permanent population of benthic invertebrates that will support feeding shorebirds.
- 21.17 The findings of monitoring surveys on the PHS site and the adjacent intertidal mudflats have shown non-statistically significant variability between years, and recent declines in biomass on PHS have been mirrored by declines in the external reference site.
- 21.18 Whilst the aim of PHS was to create estuarine habitat (80 ha), rather than strictly intertidal mudflat habitat for birds, it was predicted to create 45 ha of intertidal mudflat and 35 ha of saltmarsh. The rapid conversion of the site to saltmarsh that has been observed was not predicted by the modelling undertaken by ABPmer at the time. The more rapid transition to saltmarsh is, however, now widely acknowledged based on the findings of monitoring studies at the managed re-alignment sites on the Humber Estuary. Given the subsequent rapid transition to saltmarsh, it is perhaps not surprising that the numbers of birds that typically forage on intertidal mudflats has declined at PHS. Other managed realignment sites on the Humber Estuary (eg Chowder Ness and Welwick) may also not have been used extensively by BTGs because they are not in areas where large numbers of BTG normally occur, and/or they are small sites located on the upper shore, where saltmarsh establishes rapidly. However, Catley has reported that all the realignment sites have attracted BTGs in their early years (Catley, 2009).
- 21.19 PHS lies in an area that is used regularly by BTGs amongst other species. Whilst more BTGs have been recorded roosting at PHS than foraging, there is evidence that the presence of PHS has increased numbers foraging on the existing intertidal habitat at CCS (Austin et al, 2008). Low levels of foraging within PHS, despite evidence of sufficient biomass and other species being present may be related to a variety of variables including the relatively small area of mudflat, site layout and fidelity to existing sites which remain available for use. The fact that BTGs are not foraging on PHS in any numbers despite the presence of their benthic invertebrate prey species, may also reflect the availability of better

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foraging opportunities on the existing flats at CCS, and at NKM foreshore. BTGs show high site fidelity, with colonisation of new sites such as NKM largely a result of a significant population expansion (Gunnerson et al, 2006).

- 21.20 The monitoring reports for PHS do raise the point that interpreting numbers of birds on the site is difficult, as external influences may be equally important. There is uncertainty for example, about whether any increase in use at PHS represents an influx of new birds, or local movements of existing ones. The 2008/9 and 2009/10 Humber WeBS counts of BTG are both marginally below the five year average (Holt et al, 2011). In addition the pressure on birds, on a large estuary such as the Humber, to seek and use new sites may not be high at present, given the current availability and well-established use of sites such as NKM.
- 21.21 The proposals to use a RTE scheme which will retain more intertidal mudflat in the mid to longer term than traditional managed realignment schemes, will allow the benthic invertebrate fauna of those mudflats to develop over time unaffected by accretion to saltmarsh. The proximity of the compensation site to existing intertidal mudflats at CCS, is likely to assist the colonisation of the compensation site by benthic invertebrates. The proposals at OLHF will provide supplementary foraging habitat for BTGs whilst the benthic invertebrate fauna establishes itself in the intertidal mudflats of the compensation site.

Old Little Humber Farm (OLHF)

- 21.22 The intention of OLHF as described in the ES and sHRA was as a buffer site for the compensation site. It was to provide an alternative roost site (to NKHP) and supplementary inland feeding, particularly for BTGs in the early years, whilst the benthic invertebrate population of the compensation site was establishing.
- 21.23 As stated above, the developing RTE scheme may include one or two areas of open water (each approximately 5 ha) within the intertidal compensation site, in areas that would otherwise transform into saltmarsh. If it does, this would remove the need for a roost site at OLHF, which is also one of RSPB's concerns. Experience of roosting BTG on inland fields around the Eden Estuary on the east coast of Scotland suggests that islands are not necessary, and that areas of standing water alone will provide sufficient security against ground predators (pers comm Les Hatton, Eden Ecology).
- 21.24 In parallel with the RTE development, further consideration of the site design at OLHF, has shown it would be possible to create and maintain areas of standing water over the autumn as well as the winter period. This would provide additional/alternative roosting opportunities to supplement those on the compensation site at CCS, and provide further safeguards about the availability of roosting areas for waders.
- 21.25 The location of OLHF, just over 1km from the estuary edge and just over 2 km from the compensation site, is seen as an issue for BTGs by RSPB. However, the flight line information reported by Catley shows that BTGs regularly cross the Humber Estuary (Catley, 2008; 2011), a distance of over 3-4 km depending upon the tidal state. Over a period of time some BTGs which have moved to feed at Pyewipe as the winter progresses, return to roost at NKHP (Catley, 2009). Additionally, the findings of the TTTCs undertaken as part of the EIA studies, found much greater numbers of BTGs using North Killingholme Haven Pits (NKHP) in August compared with the numbers recorded on the foreshore. This suggests that birds must have travelled to NKHP from further afield. So in

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general, the distance of OLHF from the compensation site should not present a problem to BTGs.

- 21.26 It is possible that the main moulting period is in October, hence the similarity in TTTC numbers at the foreshore at Killingholme and on NKHP. If so, this may reflect a desire by BTGs to travel shorter distances between foraging and roosting habitat during their moult. The creation of a specific roosting area(s) within the compensation site as part of the RTE scheme would address this concern.
- 21.27 The value of inland wet grassland as a foraging resource is not disputed by RSPB, who also note the traditional increase in use of the grassland by some shorebirds as the winter progresses. This is thought to be a response to depleting food resources on the intertidal habitats (Gill et al, 2001). There is little evidence of BTGs using inland wet grassland fields around the Humber Estuary, although this probably reflects the paucity of wet grassland fields around the Estuary. It may also reflect the c.10 000 ha extent of available intertidal mudflat around the Estuary, as the birds from Killingholme Marshes foreshore move to other mudflats along the coast at Pyewipe as the winter progresses.
- 21.28 The Applicant's scheme design at OLHF includes for maintaining wet grassland throughout the year, including during the drier late summer and autumn months using an irrigation system (Thomson Ecology, 2012). The proposals have been drawn up based on the findings of a hydrological report of the site, and taking account of average rainfall levels. The soil moisture levels which result will allow the waders to access invertebrate fauna, and this will not be the concern that RSPB suggest.
- 21.29 The existing terrestrial soil invertebrate fauna of the fields at OLHF is lower than that required (Thomson Ecology, 2012). To allay RSPB's concerns about sufficient food resources being available, it is proposed to artificially enhance the invertebrate biomass in the early years through increasing the organic enrichment and potentially manually supplementing the existing invertebrate population (should it be reasonably practicable to do so) so that an appropriate level of biomass is available to the birds. Such levels of biomass will provide suitable food for BTGs (and some other species which use wet grassland) whilst the benthic biomass levels are building on the compensation site, and more naturally at OLHF. Annual monitoring of the invertebrate biomass will be undertaken, and invertebrate populations could be supplemented if necessary based on the findings of those surveys. This could be achieved, for example, by introducing additional worms into the soils. It is expected that the requirement to supplement the existing invertebrate population would reduce over time as both the wet grassland habitat and the intertidal habitats mature.
- 21.30 There seems to be some confusion with Tony Prater's submissions regarding the permanence of grasslands at OHLF. OHLF will be developed to establish permanent grasslands for the duration that this is required to support and buffer the main CCS intertidal compensation site.

Summary

- 21.31 Detailed modelling of the managed realignment in the form proposed in the ES has concluded that an open managed re-alignment alone at CCS will not provide sufficient compensatory intertidal mudflat in the long term. In consultation with NE, EA and MMO, a RTE scheme is, therefore, being developed as that is expected to maintain a larger area of intertidal mudflat in the long term (66 ha after 5 years and in excess of 50 ha after 10 years), along with an area of open water to provide roosting habitat. Further details on the emerging design are contained in Black & Veatch (2012).
- 21.32 The area of intertidal mudflat that will be created at CCS is predicted to be sufficient to accommodate current BTG numbers in the longer term. Wet grassland provision at OLHF will contribute to the available foraging habitat including in the short term.
- 21.33 Reference to PHS in the ES and sHRA was intended to convey the rapid colonisation ability of the intertidal mudflats by benthic fauna (approximately three years), and hence the ability of these created sites to support feeding shorebirds. The use of RTE to maintain areas of intertidal mudflats in the mid to long term at the compensation site at CCS, rather than allow areas to transform to saltmarsh, will result in larger areas of mudflats remaining for foraging birds compared with managed re-alignments sites elsewhere in the Humber Estuary. The maintenance of mudflats rather than allowing the transformation to saltmarsh will also allow benthic invertebrate populations to continue to colonise and hence the quality of the mudflats (including for foraging birds) will improve as they mature.
- 21.34 The RTE scheme may include maintenance of an area(s) of open water within the compensation site at all times as described. This will provide an appropriate roost site for birds such as BTG, and avoid the birds having to fly longer distances, especially during the moulting period. This will also replicate the existing function between NKM and NKHP.
- 21.35 The creation of a roosting site within the intertidal compensation site at CCS will reduce the need for an area of permanent water to be maintained as a roost at OLHF.
- 21.36 The distance of OLHF is not considered to prevent its use by BTGs, based on the observed use of NKHP attracts feeding birds from up to 8km (ie Pyewipe).
- 21.37 Soil moisture levels will be maintained at levels that allow waders to access soil invertebrates. Measures to artificially increase the invertebrate biomass in the soil at OLHF could be adopted if necessary whilst the benthic biomass of the intertidal mudflats establishes on the compensation site.

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22. **ASSOCIATED BRITISH PORTS**

Summary of Written Representation

- 22.1 As explained in the Applicant's comments to the RRs, it is necessary to understand the context of this representation; it is submitted on behalf of Associated British Ports (ABP). ABP evolved from the British Transport Docks Board (BTDB); under the Transport Act 1981, BTDB was reconstituted and became Associated British Ports on 31 December 1982. ABP claims to be the UK's leading ports group, owning and operating 21 ports around the UK and handling approximately a quarter of the country's seaborne trade. Its ports are: Ayr, Barrow, Barry, Cardiff, Fleetwood, Garston, Goole, Grimsby, Hull, Immingham, Ipswich, King's Lynn, Lowestoft, Newport, Plymouth, Port Talbot, Silloth, Southampton, Swansea, Teignmouth and Troon.
- 22.2 ABP is itself seeking to attract offshore energy business to a number of its ports. On the Humber Estuary, ABP is the harbour authority and also operates a near monopoly on port services with facilities at Grimsby, Immingham, Hull and Goole. As a result, any business wishing to import any significant quantity of goods through the Humber must currently use an ABP port.
- 22.3 ABP is currently planning to develop the Port of Hull as a turbine manufacturing facility with a new 600 m quay. The company has further aspirations to develop land at Paull (up to 700 acres according to a recent publication), near to the Port of Hull, for the offshore wind sector. A Consultation Draft Masterplan for the Port of Immingham covering the period 2010-2030, also states that:-
- 'The Port sees itself as a key partner in supporting the offshore wind sector. With considerable levels of development planned for North Sea locations within proximity of Immingham, significant opportunity exists for the creation of a new offshore service supply industry centred on the Port', (paragraph 5.99)*
- 22.4 Accordingly, ABP has a clear commercial interest in opposing the development of AMEP despite the fact that other port sites will also be needed to support offshore wind development, even if AMEP is consented.
- 22.5 Notwithstanding the above context, the issues raised in the representation are addressed below on an objective basis. The issues are broadly identified by ABP as follows:-
- **NSIP** - It is asserted that the project does not constitute an NSIP, and that what is described in the application as 'associated development' is not, in fact, associated development.
 - **Draft DCO and the Project** - It is asserted that the draft DCO does not limit the development to the project that has been assessed.
 - **Planning Policy** - It is asserted that the ES does not sufficiently address planning policy. A separate report is submitted within the Written Representation by Philip Rowell of Adams Hendry Consulting Ltd.
 - **Ecology** - It is asserted that the assessment in the ES of ecological impacts is inadequate. A separate report is submitted within the Written Representation by Philip Rowell of Adams Hendry Consulting Ltd
 - **Marine Impact** - it is asserted that the assessment within the ES has been inadequate. A separate report is submitted within the Written Representation by Peter Whitehead of ABPmer, the consulting arm of ABP.

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- **Traffic Impact** – It is asserted that the traffic impact is underestimated. A separate report is submitted within the Written Representation by David Tucker Associates.
- **Rail Impact** - It is asserted that the traffic impact is underestimated. A separate report is submitted within the Written Representation by David Tucker Associates.
- **Compulsory Acquisition (CA)** – It is asserted that the CA of ABP land and Network Rail land is unjustified and would cause ABP detriment.

22.6 The issues listed above are responded to in turn below.

Applicant's Comments on Planning Policy Issues

- 22.7 A report by Philip Rowell of Adams Hendry Consultants Limited (AHC) has been submitted within ABP's Written Representation; it comments extensively upon the relationship between the project described in the ES and the development that would be permitted by the draft DCO submitted with the application. It is true that, as drafted in the application documents, the DCO would permit unrestricted use, whilst the ES considers only a specific range of cargo being imported or exported. That is a matter that can be resolved by appropriate re-drafting of the DCO, which would require use of the quay to be restricted (as envisaged in the ES) unless its use was to be subsequently varied by the Local Planning Authority. The Applicant proposes to use similar drafting to that used in The Associated British Ports (Hull) Harbour Revision Order 2006 which enabled the use of Quay 2005, which was restricted to containers, to be varied by Hull City Council so that that it can serve the offshore energy market.
- 22.8 AHC also assert that if use of the quay is restricted then, *'a significant and fundamental problem arises. By virtue of such a restriction the harbour facility created would then be limited in its cargo handling ability to such an extent that it could not qualify as an NSIP'*. This argument is however flawed as the legal test for a harbour to qualify as an NSIP, as set out in The Planning Act 2008, is independent of use - it is related to the quantity of goods that the harbour is *'capable of handling'*. So, if a harbour is capable of handling 5M tonnes of cargo, its actual use is irrelevant in determining whether it is an NSIP or not; there is no threshold for actual, likely or intended use in the 2008 Act.
- 22.9 In separate reports submitted by ABP in this Written Representation, ABP records their own assessment of what the unrestricted quay is *'capable of handling'*; refer for example to Table 5 in the report by Geldard Consulting included in the WR. ABP's assess the quay to be capable of handling over 7.5 M tonnes of cargo – significantly in excess of the NSIP threshold.
- 22.10 AHC further assert that the project is not defined with sufficient certainty within the draft DCO and that Requirement 4 of Schedule 11 is *'unlawful'*, citing case law as authority for this. In effect case law has determined that a condition that grants the local planning authority some discretion in permitting variations to a consent (ie. a tail piece to a condition such as, *'unless otherwise agreed in writing with the Local Planning Authority'*) needs to also contain words that limit that discretion. The Applicant agrees that some limit is essential and will propose suitable alternative drafting.
- 22.11 AHC argue that the manufacturing facilities are not associated development since they are not subordinate to the quay that is the NSIP element of the project. Section 115 of The Planning Act 2008, defines associated development very broadly. It should also be noted that whilst s115(6) of the 2008 Act states

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that '(i)n deciding whether development is associated development, a Panel or the Council must have regard to any guidance issued by the Secretary of State'; this requirement was repealed by virtue of Schedule 13 of the Localism Act.

- 22.12 Although Guidance on associated development was issued by DCLG in September 2009, that Guidance is currently being reviewed and a consultation document was issued on 13th April 2012, the consultation closed on 6th July. AHC quote the existing guidance only (paragraph 5.12 of their report) although it is likely to be superseded by the time of any decision. The existing guidance (to which the Panel does not now need to have regard) provides examples of associated development that, for harbours, includes the creation of logistics and distribution centres and the development of port related process facilities. These examples are expressed to be '*illustrative...not exhaustive...nor prescriptive*', (paragraph 18). The guidance also states that, '*technological and other forms of progress will mean that some types of associated development could not have been foreseen when this guidance was written*', (paragraph 19).
- 22.13 With respect to AMEP, the harbour facility is patently the NSIP element of the project, as explained above, and the manufacturing facilities are consistent with the principles of associated development that are set out in the consultation draft document issued on 13th April 2012. In particular, the manufacturing facilities comprise '*retail/business space (that) is not disproportionate to the retail/business space normally found in similar types of infrastructure of a comparable capacity*'.
- 22.14 With respect to the IROPI case presented in the sHRA, AHC argues that the project cannot satisfy the specific requirements of the Habitats Directive and put forward a case that, if it does, then the project cannot be an NSIP. This is simply a repetition of the 'capability v use' argument that repeats itself through AHCs document. As discussed above, the argument is flawed since the 2008 Act set the threshold for harbours in terms of what they were capable of handling and not their intended, likely or actual use might be.
- 22.15 With respect to the IROPI case, AHC make a somewhat convoluted argument, but in essence the argument is also handicapped by its assumption that where a quay is capable of handling more than 5M tonnes of cargo, but is not used to its capacity, then the development is not NSIP. Again, the argument is flawed for the reasons explained above.
- 22.16 With respect to the consultation process, AHC, argue again that it was deficient as the project described in the draft DCO is different to that consulted upon. The project that was applied for did have differences from the project consulted upon – and changes are allowed as long as the project applied for is not 'fundamentally different' from that consulted upon (draft guidance on the pre-application process, DCLG, paragraph 53). The changes were generally reductions in the physical size of the project and Able's environmental consultants confirmed that they had no additional significant environmental effects. As noted above, the DCO will be re-drafted so that use of the quay is restricted (as envisaged in the ES) unless its use is varied by the Local Planning Authority.

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Comments on the Draft DCO

22.17 In Summary, the issues addressed by Phillip Rowell are as follows:-

- a. the combination of article 10 and article 50 of the DCO would give the applicant the ability to undertake harbour development without seeking further permission;
- b. article 3 should incorporate section 33 of the 1847 clauses Act and article 28 should be removed, and
- c. the use of the quay is unrestricted and should be restricted: restricting it would bring it below the threshold for the project to come under the Planning Act 2008.

Subsidiary works

22.18 Point (a) is a disagreement with the government's model provisions (model provision 7 for harbours – subsidiary works and model provision 50 – operational land for purposes of 1990 Act), on which articles 10 and 50 are closely based. The only difference is that the list of items in article 10 is different in a few respects, but the principle of the article is unchanged.

22.19 The applicant submits that the same approach should continue to be undertaken for harbour facilities authorised under the Planning Act 2008, and this project in particular, as has hitherto been undertaken by means of Harbour Empowerment and Revision Orders and, before them, private Acts. AHC give no reason as to why this project should be treated differently from others of the same type, which generally include a similar clause in their authorisations. As an example, the Associated British Ports (Grimsby Riverside Ro-Ro Terminal) Harbour Revision Order 2011 (for ABP's own facility) has at article 5:-

5. A.B. Ports may from time to time within the limits of deviation erect, construct and maintain all such works, conveniences, appliances and apparatus as they from time to time deem necessary or convenient for the purposes of or in connection with or incidental to, the construction and maintenance of the works or the accommodation of vessels at the works.

22.20 This article is arguably wider than article 10 as it does not specify the works that are included.

22.21 As with this article, article 10 restricts the works so that they must be '*necessary or convenient for the construction of the authorised development or the operation of the undertaking*'. Thus the article would not cover works that were unrelated to the development authorised by the DCO.

22.22 The ability to construct minor structures as part of the harbour development is assumed in the environmental statement, which explicitly contemplates and assesses items such as buildings, roads, lighting columns and implicitly includes items incidental to these such as fences and ladders.

22.23 The applicant does recognise, however, that while these minor works are appropriate and are contemplated in the environmental assessment for the quay and the onshore facilities, they are not appropriate in some cases for some parts of the order land. These include the areas of the sea bed within the order limits

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where this would require a marine licence under the Marine and Coastal Access Act 2009, and the environmental areas where the items are not related to the construction or operation of the environmental area, and the applicant is including drafting changes to this article in the revised draft DCO it is submitting with its comments on the written representations.

- 22.24 Mr Rowell says that article 10(3) is surprising – it should not be, as it is taken directly from the model provisions. However the applicant is amending it to take out the reference to Part 11, because otherwise any development that fell under that part would be exempted from further environmental impact assessment.

Open port duty

- 22.25 The second issue refers to the open port duty incorporated by section 33 of the Harbours, Docks and Piers Clauses Act 1847. Usually, section 33 is incorporated, and then a later article restricts the use of the berths at the port 'notwithstanding' section 33. In the previous draft of the DCO this was done differently by simply not incorporating section 33. However, in response to the representations made, the drafting has been changed to incorporate section 33 and then effectively disapply it, in article 28.

- 22.26 The provision not only mirrors the London Gateway Port Harbour Empowerment Order 2008, but several other recent orders, for example:

- The Poole Harbour Revision Order 2012 (SI 2012/1777), article 8:-

"Notwithstanding anything in article 3 [incorporating section 33] or any other local enactment, the Commissioners may from time to time set apart or appropriate any part of the harbour, or any lands, works, buildings, machinery, equipment or other property of the Commissioners in the harbour, for the exclusive, partial or preferential use or accommodation of any particular trade, activity, person, vessel or class of vessels or goods, subject to the payment of such reasonable charges and to such terms, conditions and regulations as the Commissioners think fit."

- The Portsmouth (Continental Ferry Port Berth 2 Extension) Harbour Revision Order 2011 (SI 2011/3032), article 11:-

"Notwithstanding anything in any statutory provision of local application the City Council or a person authorised by the City Council to manage the Mile End Quay undertaking may from time to time for the purpose of or in connection with the management of the Mile End Quay undertaking set apart and appropriate all or any part of it for the exclusive, partial or preferential use and accommodation of any particular trade, person, vessel or class of vessel, or goods, subject to the payment of such charges and subject to such terms, conditions and regulations as the City Council may think fit."

- The Port of Bristol (Deep Sea Container Terminal) Harbour Revision Order 2010 (SI 2010/2020), article 25:

"Notwithstanding anything in section 33 (harbour, dock, and pier to be free to the public on payment of rates) of the 1847 Act or any other enactment, the Company may from time to time set apart or appropriate the whole or any part or parts of the lands, quays, berths, buildings, facilities, machinery or equipment comprised within Works Nos. 1 to 6 or upon which Works Nos. 1 to 6 are

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constructed and maintained for the exclusive, partial or preferential use and accommodation of any particular trade, person, activity, vessel or goods or any class of trade, person, activity, vessel or goods, subject to the payment of such charges and subject to such terms and conditions and regulations as the Company may think fit."

Restriction and capability

- 22.27 The final issue has been addressed extensively elsewhere. A new requirement has been added to restrict the cargo that the quay can handle to that related to marine energy infrastructure. This can be supplemented by means of a planning permission, Harbour Revision Order or Transport and Works Act Order without constituting a breach of the DCO. This adopts the approach used by ABP at Hull, where it is changing the cargo proposed to be handled by its quay from container traffic to wind energy by means of an application to the Local Planning Authority.
- 22.28 If the cargo is restricted, the applicant's case is that this does not reduce the capability of the quay. To give an analogy, if a car is capable of being driven at 120mph, the fact that there is a 70mph speed limit does not affect its capability. Thus a legal restriction and capability are independent concepts.
- 22.29 Even if the cargo were restricted to marine energy infrastructure it would in fact still be capable of handling more than the threshold of 5m tonnes per year. The quay is expected to be divided into six berths plus a specialist berth. Given that a typical wind turbine weighs over 1000 tonnes when assembled, and a vessel is likely to transport five at a time, only three berths need to do this each day for the threshold to be exceeded ($1000 \times 5 \times 3 \times 365 = 5,475,000$). It is not relevant that in practice it will not do this, the threshold is only a matter of what it is capable of handling.

Applicant's Comments on Ecology Issues

- 22.30 A report by Andrew Baker of Baker Consultants Limited (BCL) has been submitted within the WR; it criticises the contents of the ES in relation to the ecological impact assessment and these criticisms are addressed below.

Invertebrates

- 22.31 It is claimed that the failure to undertake an invertebrate survey was a '*major omission*' in the EIA process; it is asserted to be significant because there is the potential for an elm hedge to support the white-letter hairstreak butterfly and because the '*Humber Estuary SSSI is known to support good assemblages of terrestrial invertebrates*'.
- 22.32 As the white-letter hairstreak feed on the leaves of elm, all elms have the potential to support that species. It is however pointed out in the ES (paragraph 11.5.30) that there are no recent records of the white letter hairstreak butterfly but that mitigation would nevertheless be provided (paragraph 11.7.36). The approach has therefore been precautionary.
- 22.33 With regard to terrestrial invertebrates, the ES had regard to terrestrial invertebrates but Chapter 11 noted that no surveys had been undertaken, refer to paragraph 11.3.28 of the ES. This was because the habitat within the development area is clearly of low value to invertebrates. The only evidence provided by BCL that the '*area is likely to support rare and/or threatened*

invertebrates is in fact a single reference to 'page 56 of the 2006 Phase 1 report (Annex 11.1 Volume 1)'. This reference that they rely upon is in fact an abstract from the Humber Estuary SSSI citation and is, as a consequence, a very broad statement concerning the SSSI as a whole (an area of 37 000.59 ha) and is not specific to the application site (c.271 ha). A slightly more detailed review of terrestrial and freshwater invertebrates of the Humber Estuary may be found in, 'The Humber Estuary: A comprehensive Review of its Nature Conservation Interest', (English Nature, 2003); Table 8 of that report lists the habitat types of value to nationally scarce invertebrates recorded in the Humber Estuary. There is nothing within that document that would indicate that the AMEP site has any special value to any 'rare and/or threatened invertebrates'. It is also worthy of note that the nearby Drax development, consented by Secretary of State for Energy and Climate Change in August 2011, was also supported by an ES that found no need for terrestrial invertebrate surveys – evidently also concluding that impacts on invertebrates in this location were not likely to be significant.

- 22.34 To further support the Applicant's position it is noted that an Entomological Consultant did undertake an invertebrate survey of similar habitat to the north of the application site, on Halton Marshes, in 2007. The surveyor concluded that:-

'The invertebrate value of the arable land, pasture at the former Chase Hill Farm, sea-wall, ditches, hedgerows and the small copse just south of East Halton Skitter must be considered low. Because of the absence of areas of potential invertebrate value within the development site, sampling was not considered important and the samples collected have not been identified', (refer to Supplementary Report EX11.31) included in the Volume of SEI accompanying the Applicant's response to the Relevant Representations.

- 22.35 Natural England have agreed that impacts on terrestrial invertebrates are not likely to be a significant effect of the AMEP project.

Vascular Plants

- 22.36 BCL state that '(t)he Scoping letter from North Lincolnshire Council to the applicant also highlighted the need to undertake surveys of vascular plants within the development'. It is assumed that BCL is referring to NLC's letter to the IPC dated 13 October 2010 which is included in the Scoping Opinion. However that letter does not highlight 'the need to undertake surveys of vascular plants within the development'; it actually states that, '(a)ny notable records of species or communities should be highlighted in the Phase 1 survey. Lincolnshire Local Wildlife survey methods should be used to assess any sites with plant communities indicative of UK BAP priority habitats'.
- 22.37 The EIA did consider vascular plants, refer to paragraph 11.3.28 of the ES. It is however noted that the ES refers to a Phase 2 habitat survey that was undertaken in 2006, but that is not included in the application. For completeness it is included as a Supplementary Report (EX11.27) included in the Volume of SEI. The EIA had due regard to this information, refer for example to paragraph 11.5.25 of the ES.
- 22.38 Comparison of the Phase 1 habitat surveys undertaken in 2006 by Just Ecology (Annex 11.1 of the ES), and in 2010 by Applied Ecology (Annexes 11.2 and 11.2.1 of the ES) show similar habitat within the application site. The exception to this is that by 2010, a greater part of the site had been developed from arable land into paved storage. As such, there was no reasonable justification for further plant survey work following the 2010 survey.

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- 22.39 BCL note that the Phase 1 surveys were undertaken in April and September 2010 and considers these to be outside the key period for botanical surveys. In fact the surveys were undertaken on 29th/30th April and 9 September, whilst the optimal period for surveying vascular plants is mid-May until the end of August. The surveys were therefore undertaken within a marginally sub-optimal period for vascular plants but within a period that such surveys are valid.

Bats

- 22.40 BCL assert that the survey effort has not been sufficient. The survey effort is explained in Report EX11.19 submitted with the supplementary environmental information and it has been accepted by Natural England as sufficient to characterise the use of the site and its surroundings by bats (refer to the Statement of Common Ground). Bat activity on the site is low with no roosts recorded at the time the surveys were undertaken.
- 22.41 Whilst it is asserted that the licensed bat surveyors who undertook the work for the Applicant used equipment that was 'out of date', this is a somewhat disingenuous and unnecessary comment. By the same argument, the majority of computers in use, or cars on the road, can be said to be 'out of date'. The equipment used by the surveyors is not obsolete; it has simply been replaced by a newer model by the manufacturer.
- 22.42 BCL also state that the May 2011 survey indicated that a bat roost may be present in the woodland trees. The survey of the woodland (Annex 11.8 of the ES) states:-

'All of the bat species recorded during the survey were recorded at times later than expected had they emerged from tree roosts within the woodland or, as in the case of Myotis bat/s (which were recorded relatively early during the emergence survey) were not recorded during the return to roost survey. This coupled with a virtual absence of bat activity within the woodland, and sightings of bats commuting into and away from the woodland at dusk and dawn respectively suggests strongly that the woodland did not support a significant bat roost during the survey, and that a breeding (maternity) roost of bats is not present within trees within the wood.'

- 22.43 However the Applicant acknowledges that the establishment of a bat roost cannot be excluded in the future, and so the ES proposed further surveys immediately prior to any felling operations as mitigation.
- 22.44 In summary, the Applicant's assessment has been both proportionate and precautionary.

Great Crested Newts (GCN's)

- 22.45 Additional surveys were undertaken in May 2012 of those ponds to which access had previously been unavailable. The survey found that no other ponds in the area provided suitable habitat for GCNs and this information has been provided to NE to support a draft licence application.
- 22.46 The Applicant has now received comments on their second draft application for a licence to NE for the translocation of the GCNs from the site, correspondence is included in Appendix WR22.1.

Systematic Evaluation

- 22.47 BCL assert that the EIA process did not follow the sequence of: evaluation, impact assessment, mitigation and then residual impacts. This is not true, Chapter 11 of the ES, like all the other chapters of the ES is structured in just that way, so:-

Section 11.5	Baseline (or evaluation)
Section 11.6	Impacts
Section 11.7	Mitigation
Section 11.8	Residual Impacts

- 22.48 At paragraph 4.23 of their report, BCL state that:-

'the analysis also contains unsupported statements which dismiss impacts without any rigorous examination. For example, paragraphs 11.6.57 to 11.6.58 consider the loss of terrestrial habitat, including loss of 21.2 ha of wintering and passage wader habitats, loss of ponds supporting great crested newts, loss of 4.8 km of water vole habitat and permanent loss of breeding bird habitat - including the loss of semi-natural woodland supporting 12 red-listed bird species and one Schedule 1 species. This adverse impact on habitats is dismissed in a single sentence: 'The losses of terrestrial habitats outlined above do not constitute significant losses within the context of the local or regional areas although some of these habitats are either BAP or LBAP listed.' (Paragraph 11.6.28 (sic)).'

It is left open as to whether BCL actually have a different view; that the habitat is a significant loss in a local or regional context. In any event, it is also explained in paragraph 11.6.59 of the ES, that whilst the habitat may not be significant in a local or regional context, it is important in a site context because of the species supported and that therefore mitigation will be provided. BCL chose not to quote this subsequent paragraph of the ES but it renders their example rather useless in supporting their criticism.

- 22.49 At paragraph 4.24 BCL state that:-

'It is hard to see how such a conclusion could be reached. Indeed, given the lack of rigour and process applied throughout Chapter 11 and taking into account the limited baseline data, I find the assessment of the impact upon the terrestrial environment to be grossly understated'.

Of course, if the premise is true (that there is insufficient baseline data) then it cannot also be asserted, on a purely objective basis, that the *'impact upon the terrestrial environment'* is *'grossly understated'*. This clearly evidences BCL's lack of objectivity in relation to their criticisms. The Applicant is entirely satisfied that the EIA process has been undertaken with due skill and care and the existing site has been properly researched and recorded.

- 22.50 At paragraph 4.25, BCL identifies six impacts that they deem significant and then state that they cannot be mitigated or compensated for at Cherry Cobb Sands or Old Little Humber Farm. The Applicant does not propose to compensate for the effects described but to mitigate for them as described in the ES and repeated in Table 22.1 below.

Table 22.1 Mitigation included in the ES for impacts on flora and fauna

IMPACT	MITIGATION IN THE ES
Loss of bat and GCN species	Neither species will be lost. Mitigation for the loss of two ponds and habitat supporting GCNs is provided in Area B, where the GCNs will be translocated, refer to paragraph 11.7.14 of the ES. No bat roosts are expected to be lost and habitat loss will be mitigated, refer to paragraph 11.7.26 of the ES.
Loss of National biodiversity habitats (ponds, hedgerows and neutral grassland)	The loss of ponds is to be mitigated in Area B, Hedgerows will be planted within the site and the neutral grassland recreated in Area A; refer to Annex 4.5 of the ES.
Loss of water vole	Water vole will not be lost from the development site. Mitigation for loss of existing habitat is described in paragraph 11.7.21 <i>et seq</i> of the ES. The Applicant has successfully mitigated loss of ditch habitat on the site in the past and water vole favour the habitat previously created by the Applicant.
Loss of pasture and arable land that supports species designated under the SPA (eg. Curlew)	Mitigation for the loss of terrestrial feeding/roosting habitat is provided in Area A, refer to paragraphs 11.7.9 to 11.7.11 of the ES.
Loss of breeding bird habitat	Mitigation for breeding bird habitat is described in paragraph 11.7.30 <i>et seq</i> of the ES.
Loss of a Local Wildlife Site (Station Road Fields)	Mitigated for within Area A, refer to paragraph 11.7.36 of the ES

22.51 In brief, BCL's assertions that mitigation is not provided are demonstrably uninformed.

Loss of Terrestrial Habitat

22.52 At paragraph 4.26 of their report, BCL state that:-

'There is a large discrepancy in the stated size of Mitigation Area A between the text of the ES 11.7.10 and Annex 4.5, with figures given of 16.7ha and 47.8ha respectively'.

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BCL's comments appear to be almost wilfully uninformed. The ES paragraph 11.7.10 states that, '(m)itigation Area A will be implemented in the southern part of the AMEP scheme, and will comprise a 16.7 ha core area with a 150 m surrounding buffer'. In total, the core area and the buffer, require an area of 47.8 ha. There is therefore no 'large discrepancy'.

Mitigation Area A

- 22.53 At paragraph 4.27 BCL states that Area A will not mitigate for the loss of bat foraging habitat. However the mitigation proposed in paragraphs 11.2.26 *et seq* does not rely on Area A.

Water Voles

- 22.54 BCL assert that, '*much of the compensation (sic) for water vole habitat seems to rely on the provision of narrow drainage channels within the main development site*'. It is not clear what BCL defines as 'narrow' but the ditch details are described in paragraph 4.4.39 of the ES as, '*approximately 15 m wide (subject to detailed design) and comprise a main channel and a flood berm that will store water in extreme events*'. The proposed ditches are much wider than the existing ditches. The Applicant has successfully relocated water voles on the site in the past into ditches similar to the one described and the new habitat that has been created is highly favoured by water vole, as recorded in paragraph 11.7.24 of the ES.

sHRA In-Combination Effects

- 22.55 AB contends that the methodology adopted in the sHRA for in-combination effects is flawed. It is not, and BCL either misunderstand or deliberately misrepresent the argument.
- 22.56 To précis the argument: the competent authority must consider whether a plan or project alone, or in combination with other plans or projects is likely to have a significant effect on any European site. If it is likely, then the competent authority must undertake an appropriate assessment (AA) and ascertain, taking into account any mitigation proposed, whether the plan or project, either alone or in combination with other plans or projects, would adversely affect the integrity of any European site.
- 22.57 Where a project has an adverse effect on the integrity of a European site alone, then compensatory measures are required to ensure the coherence of the Natura 2000 network. There is no need for the AA to consider the in-combination impact of other plans and projects for the particular feature adversely affected. The inevitable result of such an in-combination assessment would be that the project has an adverse effect on integrity in combination as well. This simply leaves the question what effect is the developer to compensate for? Clearly, the developer can only be expected to provide compensation for the project he is promoting - he cannot be expected to compensate for the impacts of other plans and projects as well.
- 22.58 If, on the other hand, a project by itself does not have an adverse effect on integrity, an in combination assessment must be undertaken to ensure that there is no adverse effect on the integrity of any European Site when all other plans and projects are considered in combination. If there is, then again a developer must provide additional mitigation or, if this is not possible

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compensation. But additional mitigation or compensation is only required to the extent that the project under consideration 'tips the balance' of the integrity test.

- 22.59 Accordingly, all that is being stated in Section 6.7 of the sHRA is that where the project alone is assessed to have an adverse effect on the integrity of a European site, compensation has been provided and no in combination assessment needs to be undertaken with respect to certain interest features. And also, where potentially significant effects have been fully mitigated (so that there is no residual adverse effect), then there is also no need to undertake an in combination assessment.

The Compensation Site

- 22.60 The principal contention of BCL is that black tailed godwits (BTGs) might incur a high energetic cost in feeding somewhere other than Killingholme Marshes foreshore and that as a result, they will abandon their roost at NKHP. This appears to represent mere conjecture; an attempt to create a cloud of doubt. In RSPB's representation, an abstract from a Graham Catley report is included which records that BTGs will fly up and down the estuary quite frequently and sometimes move between The Wash and the Humber over a few days and notes these movements to be quite normal. Graham Catley is a well respected ornithologist with extensive knowledge of avifaunal use of the Humber Estuary. Further commentary on this is included in response to RSPB's Written Representation.

Applicant's Comments on Marine Impacts

- 22.61 A report by Peter Whitehead (PW) of ABPmer has also been submitted within this WR; it criticises the contents of the ES in relation to its assessment of the hydrodynamic and sedimentary regime of the Humber Estuary and also its assessment of impact on certain interest features of the estuary. Sections 1-3 of his report provide details of his experience and overall summary and some introductory remarks. No comments are made on these sections. Sections 4-6 are addressed in turn below.

Section 4 - Project Description

- 22.62 ABPmer claim that there is '*confusion and omission throughout the ES and the supporting Annexes on the actual volume of material to be dredged*'. The examples provided to substantiate this statement are responded to below in Table 22.2.

Table 22.2 Response to paragraph 31

ABPmer Comment	Applicant's Response
The volume quoted for removal from the berthing pocket in section Annex 7.6 paragraph 3.4.1 -3.4.3 is 827,000 m³ but this appears to be based on a dredge depth of -11.5m CD and does not include the additional dredge to bedrock (rockhead) which is noted at between -12m and -20m CD. There is therefore an apparent underestimate in the dredge depth of up to 8.5m. It can only be concluded that the ES is underestimating the dredge and disposal requirements of material in the dredge pocket and hence environmental impact at the dredge location.	As stated in the Dredging Strategy, the figure of 827 000m³ is based on a dredge to bedrock, this is clearly stated in the text. The depths to bedrock were assessed from figures presented in Annex 7.4 of the ES.
There is also a knock-on effect for the ecology of the berthing pocket because the very different material type at the base of the new pocket (aggregate compared to existing silty clay and sand) is important to the ecology. This should have been assessed, particularly as the area is designated as a SAC.	This impact of creating the berthing pocket on sub-tidal habitat has been assessed in the ES, refer to paragraphs 10.6.13 to 10.6.15. Supplementary explanation is also provided in report EX10.6.
A further issue is that the additional disposal volumes arising as a result of dredging to the top of the natural bedrock may also not have been included in the impact assessment at the disposal site.	It has been.

- 22.63 The Applicant is also able to confirm that following a detailed geotechnical investigation of the quay footprint and dredge area in 2011, there is no foreseeable need to dredge chalk. The document referred to as '*The Big Space in the Right Place*', does not form part of the application and the description therein does not supersede the description in the ES. PW's reference to that document is irrelevant.
- 22.64 As the berthing pocket is being dredged to bedrock and then backfilled, there is no 'over-dredge' of that element. The modelling results did not identify significant sedimentation within the approach channel or turning circle so that overdredge of these areas is not proposed.
- 22.65 The estimates of dredge arisings from the reclamation area are consistent between the ES and the Dredge Strategy. ES paragraph 4.4.16 states that 250 000 m³ of compressible silt may be removed from the footprint of the quay before placing the fill. Annex 7.6, paragraph 3.5.1 explains that '*250,000m³ of silt material will be dredged from this area to reduce consolidation settlement of the reclamation area. An additional 44,500m³ will be removed from the*

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anchorage trench which requires dredging to -6.2m CD. Total dredge quantities for the reclamation area will be 294,500m³.

- 22.66 It is not true that dredge of the reclamation area has not had regard to the type of dredger that would be used. The use of a small draught dredger within the reclamation area is identified in Appendix 2 of the Dredging Strategy. The assessment in Annex 8.4 had regard to this matter, as evidenced in Section 4.4 of the Annex. Indeed later in PW's report, at paragraph 82, he makes reference to 'the small dredger'.
- 22.67 The proposed approach for AMEP has been included in the hydrodynamic model and the dredging requirements are identified within the Dredging Strategy. The point of noting that the majority of the approach is already dredged (or is maintained to sufficient depth by natural processes), was simply to record that the approach only needed to be dredged local to the proposed berth.
- 22.68 ABPmer assert that '*the source of fill material has been inadequately investigated*' before recording that, in their view, '*it is unlikely to be available*'. The ES identifies the source to be '*either imported marine dredged material or material from the dredge*'. There are a number of licensed extraction sites outside of the Humber, as shown in Figure 22.1. These sites are licensed by the Crown Estate (and subject to their own EIA process) who record the following:-
- The licensed sites comprise fines sands to gravels;
 - Currently 5.05 M tonnes is licensed for extraction per annum;
 - Over the past 10 years, on average 76% of the permitted tonnage has been dredged;
 - There is an opportunity to supply up to 2 M tonnes of extra material per annum;
 - Existing applications will deliver permits for a further 8.46 M tonnes.

(http://www.thecrownestate.co.uk/media/215389/june_2011_aggregates_briefing_note_humber-2.pdf)

On this basis the Crown Estate do not seem to support PW's assertions.

- 22.69 PW also states that material from the IOTA dredge is to be used in the GPH reclamation. The GPH ES identifies a need for 1 245 000 m³ of infill material. The IOTA dredge and disposal strategy is reproduced in Figure 23.2 below. If it is true that suitable dredge arisings from IOTA are to be used at GPH, then it is likely that the granular material would be used in the first instance and that the 895 000 m³ of material that has been consented for disposal at HU080 would no longer be disposed of at that site but would be re-used. This will obviously reduce the in-combination impact of the three projects.

Figure 22.1: Crown Estate Plan of Humber Extraction Sites

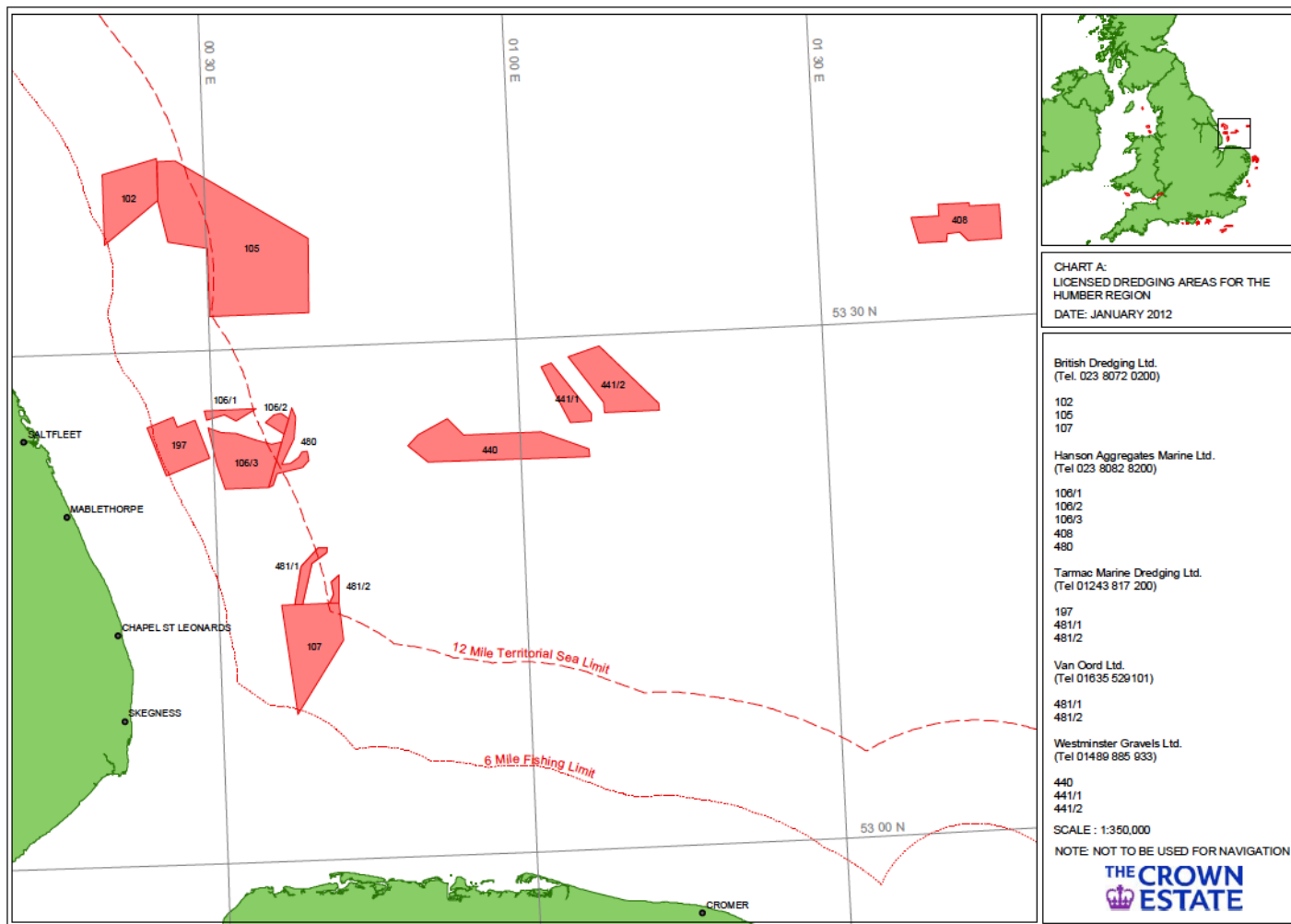


Figure 22.2 : Abstract for ABPmer's Dredging and Disposal Strategy for Immingham Oil Terminal Approach

Table 1. Summary of optimum Immingham Oil Terminal approach channel deepening dredge and disposal strategy

Dredge Location	Dredge Material Volume	Proposed Capital Dredge Depth	Dredge Material Type	Dredge Method	Controlling Depth at Dredge Location	Deposit Location	Deposit Volume	Deposit Site Distance From Dredge Location	Deposit Site Controlling Depth	Deposit Site Approaches - Controlling Depth	Approximate Deposit Site Accessibility (Basis 6.5 m Draught)
Stallingborough Emergency Turning Area	65,000 m ³	11.6 m below CD	Soft clay, silt and sand	TSHD	10.3 m - 10.5 m below CD	Holme Channel Deep (new site) *	22,000 m ³	6.5 km	5 m below CD	4 m below CD	1.75 hours ± HW on spring tides
						Middle Shoal (Humber 1A/HU080)	43,000 m ³	3.5 - 6 km	4 - 5 m below CD	5 m below CD	4 hours ±HW on spring tides
Sunk Dredged Channel - north side	970,000 m ³	11.6 m below CD	Soft clays and silt	TSHD	9 m below CD	Holme Channel Deep (new site) *	311,000 m ³	6 - 14 km	5 m below CD	4 m below CD	1.75 hours ± HW on spring tides
						Middle Shoal on flood tide	659,000 m ³	2.5 - 6 km	4 - 5 m below CD	5 m below CD	4 hours ±HW on spring tides
Sunk Dredged Channel - south side	895,000 m ³	11.6 m below CD	Fine sand	TSHD	9 m below CD	Middle Shoal on ebb tide	895,000 m ³	2.5 - 6 km	4 - 5 m below CD	5 m below CD	4 hours ±HW on spring tides
Sunk Dredged Channel - full area	120,000 m ³	11.6 m below CD	Firm glacial clay	Cutter Suction Dredger **	9 m below CD	SDC area 'C'	120,000 m ³	3 - 4.5 km	5 - 7 m below CD	9 m below CD	Barge or pipe and booster station. No restriction for barges
Hawke Channel	565,000 m ³	11.8 m below CD	Soft clays and silt	TSHD	9.7 - 10.8 m below CD	Bull Sand Fort (disused deposit site HU111)	565,000 m ³	2.5 - 7 km	4 - 16 m below CD, ave 7 m below CD	9 m below CD	No restriction
Chequer Shoal	865,000 m ³	13 m below CD	Fine to medium compacted sand	TSHD	10.4 m below CD	Bull Sand Fort (slight increase in area to NE)	865,000 m ³	6.5 km	4 - 16 m below CD, ave 7 m below CD	9 m below CD	No restriction
Eastern Approaches	170,000 m ³	13.1 m below CD	Fine to medium sand	TSHD	10.5 m below CD	Bull Sand Fort (slight increase in area to NE)	170,000 m ³	7.5 - 10 km	4 - 16 m below CD, ave 7 m below CD	9 m below CD	No restriction
	255,000 m ³	13.1 m below CD	Stiff glacial clay	Backhoe and barges	10.5 m below CD	Bull Sand Fort and SDC areas 'A' and 'B'	255,000 m ³ in clay 'lumps'	20 km	5 - 6 m below CD	5 - 6 m below CD	No restriction for barges

* When tide allows access, otherwise middle shoal
 ** If Backhoe used then SDC 'A' and 'B' must be used

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Section 5 Modelling

- 22.70 This section provides ABPmer's views on the adequacy of the computer modelling work and impact assessment undertaken by JBA Consulting Ltd and HR Wallingford. Paragraphs from this section are briefly summarised below followed by the Applicant's comments.

Paragraph 40

- 22.71 **ABPmer:** Hydrodynamic and Sediment Transport Models may not have incorporated Immingham Outer Harbour (IOH).

Applicant's Comments

- 22.72 The IOH development was included in some of the model runs presented in the ES and not in others. All further work commissioned by the Applicant subsequent to ES submission has included a representation of the IOH development in the model runs (hydrodynamic and sediment).

- 22.73 In terms of a precise representation of IOH at any given time, an extract from Section 4.3.2 of ABPHES (2008) reproduced below indicates that the actual maintained depth, and area extent of maintained depth within IOH, may vary according to commercial needs.

"The future dredging requirements at ABP Immingham may be subject to change depending on a variety of factors including natural sedimentation rates, commercial pressures, new developments and developing dredging technology. Indeed, it has become apparent in recent times that sedimentation rates on the new IOH development have been in excess of that indicated by the numerical modelling (undertaken by ABPmer); leading to a request in 2007 for an extension to the deposit amount in HU060. At the time, this was considered to be a temporary aberration, caused by excessive flood waters draining out of the Humber (which, after all, drains around 20% of the land mass of England). Now that we are in possession of the disposal returns for the first half of 2008, it appears there may be further reason to request variation of the licence."

- 22.74 In light of this uncertainty and the comments raised, changes to model predicted infill rates into adjacent berths have been modelled both with and without the IOH dredge included in the model. The comparison is presented in Tables 22.3 to 22.5 below. Note that the "maximum difference" may be greater than the difference of the maximums in some instances (as explained in HR Wallingford, 2011a).

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Table 22.3 Baseline Maintenance Dredge Model Output

Location	No IOH in model (Dry tonnes per year)		IOH in model (Dry tonnes per year)	
	Lower Estimate	Upper Estimate	Lower Estimate	Upper Estimate
Humber Sea Terminal	215,000	537,000	215,000	537,000
AMEP Berthing Pocket	0	0	0	0
AMEP Dock	0	0	0	0
Region inshore of Centrica and E.ON Intake/Outfall Lines	0	0	0	0
South Killingholme Oil Jetty	56,000	139,000	56,000	139,000
Immingham Gas Terminal	34,000	85,000	34,000	85,000
Humber International Terminal	305,000	763,000	305,000	763,000
Immingham Bu k Terminal	539,000	1,348,000	539,000	1,348,000
Immingham Outer Harbour			824,000	2,060,000

Table 22.4 Maintenance dredge with AMEP final design model output

Location	No IOH in model (Dry tonnes per year)		IOH in model (Dry tonnes per year)	
	Lower Estimate	Upper Estimate	Lower Estimate	Upper Estimate
Humber Sea Terminal	204,000	511,000	204,000	510,000
AMEP Berthing Pocket	234,000	585,000	233,000	582,000
AMEP Dock	17,000	42,000	16,000	41,000
Region inshore of Centrica and E.ON Intake/Outfall Lines	94,000	234,000	92,000	231,000
South Killingholme Oil Jetty	31,000	77,000	32,000	80,000
Immingham Gas Terminal	31,000	77,000	32,000	80,000
Humber International Terminal	279,000	697,000	276,000	691,000
Immingham Bu k Terminal	510,000	1,274,000	507,000	1,267,000
Immingham Outer Harbour			776,000	1,941,000

Table 22.5 Maintenance dredge impact of AMEP (difference between Table 22.3 and 22.4)

Location	No IOH in model (Dry tonnes per year)		IOH in model (Dry tonnes per year)	
	Lower Estimate	Upper Estimate	Lower Estimate	Upper Estimate
Humber Sea Terminal	-10,000	-25,000	-11,000	-27,000
AMEP Berthing Pocket	234,000	585,000	233,000	582,000
AMEP Dock	17,000	42,000	16,000	41,000
Region inshore of Centrica and E.ON Intake/Outfall Lines	94,000	234,000	92,000	231,000
South Killingholme Oil Jetty	-18,000	-46,000	-18,000	-44,000
Immingham Gas Terminal	-2,000	-4,000	0	-1,000
Humber International Terminal	-19,000	-48,000	-21,000	-53,000
Immingham Bu k Terminal	-30,000	-74,000	-28,000	-71,000
Immingham Outer Harbour			-40,000	-100,000

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- 22.75 IOH is a sink for sediment, and full inclusion of the entire area dredged to -10mCD in the 3D mud model slightly reduces the predicted maintenance requirements for AMEP, and slightly reduces the predicted IOH maintenance requirements as a result of AMEP (because AMEP acts as a sediment sink on an ebb tide). Given the uncertainty around the actual maintained depths and extent in IOH, the approach taken in the ES was precautionary and sound.
- 22.76 The 3D mud model predicted baseline sedimentation into IOH is 2,060,000 dry tonnes per year. The range presented below compares very well with the reported maintenance dredging figures for 2010 and 2011 of 974,000 and 1,027,000 dry tonnes respectively (ABP 2010, 2011). Note that ABP quoted values are in wet tonnes and the Applicant has assumed wet and dry densities of 1,300kg/m³ and 500kg/m³ respectively. Modelled sedimentation should be higher than reported maintenance dredging requirements (because actual reported dredged quantities will be subject to the additional variables described by ABP in the excerpt above, and because of vessel activities and the frequency of maintenance dredging operations). An extended comparison of model predicted baseline sedimentation rates against reported values is provided in HR Wallingford 2012c.
- 22.77 The model predictions for this ES contrast with (and represent an improvement on) ABPmer's own predictions of sedimentation into IOH (modelling undertaken before construction), which apparently significantly underestimated the annual maintenance requirements for IOH and resulted in the need to request increased masses for placement at the licensed disposal site.
- 22.78 In summary, some of the modelling in the ES included representation of IOH and some did not. All of the modelling has now included IOH. To account for the unknown extent of maintained depths in the harbour, the tests above have been undertaken to test the sensitivity of outcomes to the inclusion or otherwise of the full extent of IOH dredging. The sensitivity of the modelled outcomes to inclusion or otherwise of IOH (which became operational in 2006) is low. AMEP has been shown to have no adverse effect on sedimentation into IOH.

Paragraph 41

- 22.79 **ABPmer:** Hydrodynamic and Sediment Transport Models may not have incorporated the South Killingholme Oil Jetty and Immingham Gas Jetty.

Applicant's Comments

- 22.80 The validation of the hydrodynamic model against measured ADCP (Acoustic Doppler Current Profiler) flow speeds and water levels is explained in full in Appendix C of JBA (2011a) and is sound. This degree of validation would not be possible, were the ABPmer statement on the representation of these jetty structures true. The main features that affect the baseline flow regime in the area are the Humber International Terminal, berth pockets, detailed intertidal morphology, and subtidal morphology and have been included in the models. The reported model validation has demonstrated their appropriateness for use in assessment (JBA 2011a, HR Wallingford 2011a, 2012d).

22.71 A photo (Figure 22.3) of the South Killingholme jetty infrastructure is shown below. It has little effect on flow blockage or alignment which is dominated by the presence of the Humber International Terminal (HIT).



Figure 22.3

Photo (May 2012) looking downstream to (foreground) South Killingholme Oil Jetty (with widely spaced piles), through Immingham Gas Terminal, to Humber International Terminal (HIT) reclamation.

Paragraph 42

22.81 **ABPmer:** Modelling results may be erroneous due to the absence of IOH and direct impacts on IOH port functions have not been considered.

Applicant's Comments

22.82 As demonstrated in responses to 40 and 41, no adverse impacts are predicted on IOH maintenance dredging requirements. The other impacts presented in the ES are shown to be insensitive to the inclusion of IOH.

22.83 The impacts are reduced (compared with those presented in the ES) with the inclusion of IOH as a "natural" (*sic*) sink for sediment.

22.84 The EIA has had regard to direct impacts from AMEP on adjacent port functions, navigation and port/terminal operations, as evidenced by the simulation

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exercises undertaken at South Tyneside Marine College in the presence of the Humber Harbour Master and reported in Annex 14.3 of the ES and in supplementary report EX14.4.

Paragraph 43 & 44

- 22.85 **ABPmer:** The final design has not been used in all models, so the results cannot be relied upon.

Applicant's Comments

- 22.86 See responses to paragraphs 40, 41 and 42. The modelling has included all of the required features to accurately model baseline conditions as evidenced by the validation reported in Appendix C of (JBA, 2011a), HR Wallingford (2011a, 2012d).
- 22.87 ES Table 8.1 shows which layouts were modelled for ES Chapter 8. After submission of the ES and in response to relevant representations from EA, NE and MMO, Able UK commissioned JBA to model the final design submitted to the IPC (JBA, 2012).
- 22.88 An update to Table 8.1 is provided below in Table 22.6, highlighting which scheme was modelled and where the results may be found. The modelling has not omitted important aspects of the proposed development.

Table 22.6 Quay Model Used in the EIA Studies

Annex	Impact	Model Layout in ES Ch8	Model Layout now available
8.1	Tidal levels	Original	Final ¹
8.1	Tidal currents	Original	Final ¹
8.1	Waves	Original	Final ¹
8.1	Sand transport	Original	Final ¹
8.1	Plume dispersal from dredge disposal site	Original	Original
8.2	Estuary geomorphology	Original	Original
8.3	Fine sediment transport	Final	Final
8.3	Infill / sedimentation	Final	Final
8.3	Longer term change to morphology	Layout 1b	Final ²
8.3	Drainage channel formation on intertidal	Final	Final
8.4	Plume dispersal from construction activities at the AMEP	Layout 1b*	Layout 1b*

* Impacts were revised to relate to the dredged quantities for the final AMEP layout but the model used Layout 1b.

¹ JBA(2012)

² HR Wallingford (2012a,b,e) plus response to paragraph 67 below.

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Paragraphs 45 & 56

22.89 **ABPmer:** The modelling is fundamentally deficient.

Applicant's Comments

22.90 ES Table 8.1 clearly stated which models were commissioned to investigate which changes to hydrodynamic and sediment processes. The 3D fine sediment modelling, including underpinning 3D hydrodynamics, modelled the final design. An updated Table 8.1 is provided in response to paragraph 43, and the ES has been validated by information in supplementary reports submitted in response to the Relevant Representations. There is no "fundamental deficiency".

Paragraph 47

22.91 **ABPmer:** It is wrong to assert that modelling a larger reclamation would give 'worst case' impacts.

Applicant's Comments

22.92 ES paragraph 8.1.5 is repeated below for clarity:-

*8.1.5 During the course of undertaking these studies, the design of the AMEP has evolved (as described in Annex 4.4). The impacts presented in this chapter are informed by hydrodynamic and sediment modelling results for different iterations of the scheme. **In all cases where the impacts are based upon an earlier layout for AMEP, these relate to a larger scheme set forward further into the estuary.** For clarity, the different layouts are shown in Figure 8.1. Table 8.1 lists the model layouts used to inform the various impacts presented in this chapter.*

22.93 Paragraph 8.1.5 is simply factual. The final design has a quay line set 80m further inshore than the original ("larger scheme") alignment.

22.94 On the specific points raised under paragraph 47, it is assumed that ABPmer use the phrase "worst case alignment" to refer to the original layout, with a bigger reclamation extending a further 80m into the Estuary. The ABPmer points raised appear to suggest that a larger reclamation projecting further into the estuary may lead to smaller effects than a smaller reclamation projecting less far into the estuary. The specific points are considered below:

22.95 The dredge requirements for the "final layout" are greater than the "original layout" because the area is further inshore. A comparison of the two quantities is given in Table 22.7 below.

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Table 22.7 Dredge Volume for the Original and Final Layout

Location	Original Layout (m ³)	Final Layout (m ³)
Turning Area	102,350	132,000
Approach Channel	589,920	682,000
Berths	692,000	627,000

- 22.96 The dredge requirement at the berths has decreased because the overall length of the quay was reduced in the final design and one of the specialist berths was removed (refer to Figure 4, in Annex 8.1 of the ES). The ES Chapter 8 used the dredged quantities for the final layout and expert judgement to re-interpret the plume dispersion modelling impacts for the earlier layout (ES paragraph 8.6.17).
- 22.97 The areas immediately adjacent to the reclamation and inshore of the quay line are predicted to be broadly quiescent in terms of flows and promote a depositional environment. The proportion of the estuary cross-section where tidal flows are slowed down by the development is smaller for the smaller scheme than for the larger scheme (with a correspondingly much smaller effect on adjacent berths).
- 22.98 There is no "pseudo-embayment". Design development work showed a much reduced impact on adjacent berths from moving the berthing face inshore (making the reclamation smaller) as reported in Table 8.2 of the ES, reproduced in Table 22.8 below, with the recently available JBA supplementary sand transport modelling results for the final layout added (from JBA, 2012). The "effects on the sedimentary patterns" of retreating the quay face 80m from its original alignment are significantly less adverse.

Table 22.8 : Assessment of Maintenance Dredge Requirements at AMEP

ES Table 8.2 Annualised changes to deposition and erosion derived from the 3D mud and 2D sand transport modelling				EX8.7, Table 3-1
Area	Predicted Annual Increase in Deposition (m3/Year) Original Layout	Predicted Annual Increase in Deposition (m3/Year) Layout with chamfered quay and suspended deck (Layout 1b)	Predicted Annual Increase in Deposition (m3/Year) AMEP (80m set back quay)	Predicted Annual Increase in Deposition (m3/Year) AMEP (80m set back quay)
	2D sand transport model*	3D mud transport model	3D mud transport model	2D sand transport model**
Humber Sea Terminal (CPK)	20,000 to 320,000	14,000 to 36,000	-20,000 to -50,000	5,000 to 8,000
South Killingholme Oil Jetty	0	100,000 to 266,000	-36,000 to -92,000	-6,000 to -8,000
Immingham Gas Terminal	600 to 26,000	74,000 to 186,000	-4,000 to -8,000	2,000 to 3,000
Humber International Terminal	100 to 17,000	241,000 to 624,000	-38,000 to -96,000	2,000 to 3,000
Immingham Bulk Terminal	700 to 16,000	-58,000 to -110,000	-60,000 to -148,000	-1,000 to -2,000
AMEP	280,000 to 1,300,000	687,000 to 1,842,000	502,000 to 1,254,000	300,000 to 740,000
Inshore of E.ON and Centrica Intakes	Not analysed	338,000 to 882,000	188,000 to 468,000	Not analysed

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Paragraph 48

22.99 **ABPmer:** If the DCO alignment provides more adverse results, the effects should be assessed.

Applicant's Comments

22.100 The final alignment has been modelled (see response to paragraph 43). The effects have been quantified and reported in JBA (2012). The additional modelling has not identified any more adverse effects than have been reported in the ES.

Paragraph 49

22.101 **ABPmer:** Observations do not correlate with the model.

Applicant's Comments

22.102 This paragraph provides no evidence whatsoever to support its assertion. The validation of models is sound as evidenced in Appendix C of JBA (2011), HR Wallingford (2011a), HR Wallingford (2012d), and with further validation of baseline modelled sedimentation rates into adjacent berths provided in HR Wallingford (2012c).

Paragraph 50

22.103**ABPmer:** Model calibration is inadequate.

Applicant's Comments

22.104 Again, this point provides no evidence to support its assertion and is factually incorrect. Validation of flows and water levels are described in detail in Appendix C of (JBA, 2011). Validation of the 3D mud transport model is described in HR Wallingford (2011a), with supplementary information provided in HR Wallingford (2012d), and with further validation checks of baseline modelled sedimentation rates provided in HR Wallingford (2012c). The models are demonstrably validated and fit for the purpose of assessment. Additionally, further checks have been made to demonstrate and understand the applicability and uncertainty inherent in the predictions. These have been reported in an open and transparent manner so as not to overstate the certainty in predictions of the future. Concerns raised by EA/MMO/NE have also been responded to and two meetings attended, to further explain to the Regulators the impacts presented in Chapter 8.

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Paragraph 51

22.105 **ABPmer:** The modelling is not demonstrated to be 'fit for purpose'.

Applicant's Comments

22.106 This point offers no supporting evidence and is factually incorrect. The models are well validated and fit for purpose as documented in the responses to paragraphs 49, 50 above.

Paragraph 52

22.107 **ABPmer:** The modelling results are highly uncertain.

Applicant's Comments

22.108 The example ES paragraph offered by ABPmer is repeated here:-

8.3.13 It should be noted that all sediment transport models involve a high level of uncertainty, particularly when used for the purposes of estimating morphological change.

22.109 The above paragraph is interpreted by ABPmer to suggest that the models are not fit for purpose. The models have been demonstrated to be fit for purpose (responses to paragraphs 49 and 50). ES paragraph 8.3.13 merely states that for all sediment transport models there is a relatively (e.g. compared with changes to flows) high level of uncertainty and that there is a still higher level of uncertainty inherent in predicting morphological change. This basic statement is well understood by all modelling specialists. To suggest differently would be to not understand modelling.

22.110 As noted in the response to paragraph 40, the model predictions for this ES contrast with (and represent an improvement on) ABPmer's own predictions of sedimentation into IOH (modelling undertaken before construction), which apparently significantly underestimated the annual maintenance requirements for IOH and resulted in the need to request increased masses for placement at the licensed disposal site.

Paragraph 53

22.111 **ABPmer:** The suspended sediment concentrations in the mud modelling are not consistent with observed values

Applicant's Comments

22.112 The 3D mud model validation is demonstrated in HR Wallingford (2011a).

22.113 A detailed response to questions on validation of the 3D mud modelling is provided in the supplementary report HR Wallingford (2012d).

22.114 The model is shown to be well validated against the available data.

- 22.115 The model comparison for the very large spring tide (for which IECS measurements were taken) is shown in Figure 7 of HR Wallingford (2012d) and demonstrates the ability of the model to reproduce the higher concentrations on the flood tide for such a tide.
- 22.116 The model is not only shown to be well validated against the information available on suspended sediment concentrations. The predicted baseline sedimentation rates in the various berth pockets in the study area also compare well to reported maintenance dredging figures. Importantly, the model predicted sedimentation rates are greater than the reported maintenance dredging figures. A range of estimates are provided to:
- 1) capture the uncertainty in such predictions,
 - 2) allow a precautionary approach to the prediction of impacts for the ES, and;
 - 3) avoid the pitfalls that may occur as a result of under-predicting sedimentation rates for a new development (refer, for example, to Section 4.3.2 of ABPHES, 2008).
- 22.117 Specifically regarding Figure 4 in the Written Representation, lower layer (lower in the water column, nearer the seabed) suspended sediment concentrations of 2,800 mg/l are modelled for the large spring tide (Figure 7, HR Wallingford 2012d). This ties in with the top range of the instrumentation for which data are presented in Figure 4 (which states it represents an amalgamation of data from various depths). The "IECS sample data" shown on this figure represents near-surface suspended sediment concentrations which will be lower than concentrations nearer the seabed. Therefore the model predicted concentrations are shown to fit very well with the distributions shown in Figure 4 presented by ABPmer. Contrary to the point ABPmer are seeking to make.
- 22.118 Specifically regarding Figure 5 in the Written Representation; the predicted tides at Immingham on the 17 October 2001 were:-
- 05:46hrs 7.7m CD
12:24hrs 0.4m CD
18:25hrs 7.6m CD
- 22.119 Therefore a spring tide range of 7.2-7.3m represents a large spring tide (mean spring tide range is 6.4m). it is noted that there are a number of SSC data points in the figure, although no information is supplied on exactly where these measurements were made (inside or outside the dock entrance, near to operational berths or otherwise). However, the large spring tide modelled for AMEP produces concentrations at CPK (previously called HST) which are similar in magnitude (up to 2,800 mg/l near the bed as described above).
- 22.120 Again, the modelling for AMEP appears to correlate very well to the suspended sediment concentrations (SSC) shown in this Figure 5 of the Written Representation, seemingly contrary to the points ABPmer wish to prove.
- 22.121 Again, in Figure 6 of ABPmer's report, no details are provided on the location of measurements or the height within the water column at which the measurements are made, other than the title of the study which is Immingham Dock Impounding Study. The data shows measured concentrations of >3,000 mg/l occurring on the flood tide, with substantially lower concentrations on the ebb. Modelling by HR Wallingford shows peak concentrations around South

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Killingholme occur during the flood tide for very large spring tides and during the ebb tide during more typical spring tides. ABPmer (2009) shows a similar pattern at Grimsby; data which was also used for model validation in this study.

22.122 Figure 7 of ABPmer's report is barely legible and no explanation of it is provided. The title suggests it is a dredge monitoring report, in which case it may represent suspended sediment plumes during dredging, but this would be irrelevant to the model validation.

22.123 In summary, the model validation is sound, takes account of uncertainty and communicates it. ES Chapter 8 takes a precautionary approach, the model predicted infill rates have been compared to reported maintenance dredging figures, and a range provided in terms of impacts.

Paragraph 54

22.124 **ABPmer:** Predicted changes to erosion and accretion patterns are unreliable.

Applicant's Comments

22.125 See response to paragraph 53. The high suspended sediment concentrations are represented in the model. The "*accumulations in baseline conditions and patterns of erosion and accretion*" are sound.

22.126 The maintenance dredging predictions are good. An extended comparison is supplied in the supplementary report HR Wallingford (2012c). HR Wallingford (2011a) and HR Wallingford (2012c) present baseline predicted infill into existing berth pockets. This is discussed in the supplementary note on model validation (HR Wallingford, 2012d). This is supported by the information presented in response to paragraph 40 above. The reports then describe the impacts of the proposed scheme as required by the ES.

22.127 The changes are presented in tabular and graphical form, both spatially and temporally as required (HR Wallingford, 2011a).

Paragraphs 55-58

22.128 **ABPmer:** The conclusions of the ES are unsound.

Applicant's Comments

22.129 Responses to paragraphs 49 to 54 above, and the reports and supplementary reports supplied, all demonstrate the model validation is sound, and the modelling results are valid and appropriate.

Paragraph 59

21.122 **ABPmer:** The disposal of dredge material at the locations identified might change the ecology and features of interest at the designated sites.

Applicant's Comments

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- 22.130 The disposal of dredge material to HU082 was assessed by ABPmer in their ES for the Immingham Oil Terminal Approach Channel Deepening. (Section 9.3.3.3). This project was for a more significant dredge than is needed for AMEP and uses the same deposit grounds. To quote ABPmer, *'the impacts of disposal (on invertebrates) cannot be separated from natural variation'*, and, *'evidence suggests that the effect of the disposals with respect to dispersion and settlement is very small, highly localised and will not be discernible from background conditions.'*
- 22.131 The disposal of dredge material to HU080 was also assessed in the same ES and also found to have no significant effect.
- 22.132 The subsequent appropriate assessment by the Marine Management Organisation also recorded no significant effects as a consequence of the disposal operations
- 22.133 The *'Humber Maintenance Dredging Baseline Document'*, (ABP-HES, 2008) also records that there are *'no grounds for judging the effects (of maintenance dredging) to be adverse'*. HU080 has received significant volumes of maintenance dredge arising in the past.
- 22.134 There is therefore no evidence that the disposal of material within existing licensed sites is likely to have a significant effect on ecology in those sites.

Section 6 Impact Assessment

Paragraph 61

- 22.135 **ABPmer:** The ES is unsound and Annex 8.2 is deficient.

Applicant's Comments

- 22.136 No supporting evidence is offered in this paragraph to support assertions that Annex 8.2 might be "deficient".

Paragraph 62

- 22.137 **ABPmer:** Geomorphological baseline wrongly describes the stability of the Middle Estuary.

Applicant's Comments

- 22.138 ABPmer use inverted commas in this paragraph to indicate that they are quoting from Annex 8.2 of the ES, but there is no such quote to be found in the document. The full text included in Annex 8.2 which it is assumed is the basis of the fabricated 'quote' states:-

'The Middle Humber from the Humber Bridge to Grimsby.

A relatively stable region of the Estuary characterised by resistant boulder clay deposits. Intertidal banks have a stable configuration. The Middle Humber has a slightly more stable configuration with a dominant northern channel and an ephemeral channel along the southern shore. The Halton Middle channel then forms the main channel. The deep stable central channel between Immingham

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and Grimsby is formed in boulder clay deposits and is presently resistant to erosion allowing a stable ledge to form to the south supporting the Pyewipe mudflats'

ABPmer give a misleading impression to the reader of their WR.

Paragraph 63

22.139 **ABPmer:** Deficiencies in Annex 8.2.

Applicant's Comments

22.140 Responding to each of the three points raised:-

- The changes to Killingholme foreshore are described in paragraph 2.14 of Annex 8.2 and are further reported in HR Wallingford (2012e), issued by the Applicant in response to relevant representations.
- It is evident that the authors reviewed a number of previous studies, including ABPmer's own report, '*Historical Analysis of Humber Estuary Morphology*' which considered the impact of the lunar nodal cycle (LNC) on estuary morphology. That report concluded that, '*whilst there is strong evidence that the LNC has an important influence on driving changes in estuary volumes, this does not appear to be as important in terms of intertidal area. The northern shore of the Outer Estuary where there is a significant expanse of intertidal area and relatively low wave activity is an exception to this general finding*'. It is evidenced that the author of Annex 8.2 had regard to these reported impacts of cyclic response and the nodal cycle, refer for example to paragraph 2.5 of the Annex. In addition, HR Wallingford (2012e) has undertaken an assessment of changes between HIT and CPK during the period 1991 to 2008 (subtidal) and 2001 and 2010 (intertidal, using high resolution EA LiDAR data). This assessment recognises that cyclical processes may indeed occur in the region, although no evidence for them was found. The highly dynamic nature of the zone was explored and quantified, with particular regard to the dynamics of Foul Holme Spit and the significant and ongoing intertidal accretion occurring upstream of HIT.
- It is assumed that ABPmer are asserting that Chapter 3 of Annex 8.2 is not 'coherent'. This is too vague a comment to respond to.

Paragraphs 64, 65

22.141 **ABPmer:** Deficiencies in Annex 8.2

Applicant's Comments

22.142 The prediction of geomorphological impacts (which occur over decadal timescales) is not a precise science. When the Environment Agency commissioned an assessment of geomorphological change due to sea level rise in order to inform the Coastal Habitat Management Plan for the Humber Estuary, they obtained results from three separate numerical models; all provided different results with a significant range of impacts predicted. The project cannot

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impact on natural geomorphological change unless estuary processes change by some degree. Changes in estuary processes are relatively local to the development and will be dwarfed by predicted natural changes over decadal timescales. The assessment presented in Annex 8.2 is both proportionate and appropriate.

Paragraph 66

22.143 **ABPmer:** Assessment of impact is too limited

Applicant's Comments

22.144 With respect to ES Chapter 8, ES paragraph 8.3.16 explains that

8.3.16 The approach adopted in this chapter is to describe and, where possible, quantify any predicted changes. The implications of the predicted changes to the hydrodynamic and sedimentary regime are assessed in terms of the significance of the potential impacts on various environmental parameters (e.g. aquatic ecology, water quality, commercial fisheries, etc.) in the relevant chapters of this ES. Similarly, any measures that may be required in order to mitigate a potential impact on a receptor arising from a predicted effect on the hydrodynamic and sedimentary regime of the estuary are described in the relevant chapters.

22.145 Impacts have been quantified in terms of changes to water levels, flow speeds, coarse (sandy) sediments, fine (muddy) sediments, morphology, suspended sediment concentrations, bed shear stresses, waves and maintenance dredging requirements. The impacts are summarised in ES Chapter 8, supported by the technical annexes and further supplementary reports.

Paragraphs 67, 68

22.146 **ABPmer:** Long term effects have not been assessed in the ES.

Applicant's Comments

22.147 The potential geomorphological impacts of the project have been assessed qualitatively in Annex 8.2. This sort of geomorphological assessment inherently contains the highest level of uncertainty of hydraulic studies to support an EIA.

22.148 A more detailed prediction of potential medium term (20-30 years) changes to morphology local to the quay has been provided since submission, in report EX11.24.

22.149 Sea level rise is natural change and is being addressed by the Coastal Habitat Management Plan under the control of the Environment Agency. The EA has appointed Deltares to advise them on the potential quantitative geomorphological change that might be caused by AMEP, based on previous work undertaken by them in relation to managed realignment sites. This on-going work is expected to result in some agreement on the matter with the Regulators.

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Paragraph 69

22.150 **ABPmer:** The final quay has not been modelled so the results are not a reliable basis for decision-making.

Applicant's Comments

22.151 The principal concern of ABPmer, namely that some of the assessments have been made for a larger reclamation and not the final layout, has been addressed by the supplementary modelling reported in JBA (2012). An updated table of modelled designs is provided in response to paragraph 43. The supplementary modelling has confirmed the impacts when considering a less encroaching reclamation are not significantly different to those reported in the ES.

22.152 **ABPmer comment:** The proportional changes in hydrodynamics and sediments are likely to be larger due to the quay being set back further.

22.153 The impacts from a reclamation and associated dredging of approaches and berth pocket will be a combination of reduction in cross section associated with the reclamation and increase in cross section associated with the dredging. It is intuitive that if the dredged depth remains the same and the reclamation is moved back some 80m towards the shoreline then the impacts will be reduced compared to the more seaward position. If the quay were moved back a further 100m or so it is possible that the impacts might start to increase again as the effects of the reclamation on the flows reduce and the relative impact of the dredging becomes greater.

22.154 Specifically, for this development, modelling of impacts on adjacent berths shows much reduced impacts from retreating the quay face; refer to Table 8.2 of the ES, expanded with the results of JBA (2012) and re-presented in response to paragraph 47.

22.155 **ABPmer comment:** particularly concerned that the model results seem to have been interpreted against the inadequate understanding of estuary morphology.

22.156 Understanding is presented in Annex 8.2 (JBA, 2011b) with a further detailed assessment of changes between HIT and CPK provided in (HR Wallingford, 2012e). The important dynamic features in the zone have all been assessed and understood. Although there are also differences, much of the change introduced by AMEP will not be dissimilar in pattern to the impacts of HIT after it was constructed in 2000 (see HR Wallingford 2012e).

22.157 In conclusion, the impacts have not been "*interpreted against the inadequate understanding of estuary morphology*".

Paragraph 70 & 71

22.158 **ABPmer:** Small changes have been discounted in the impact assessment.

Applicant's Comments

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- 22.159 JBA reports uncertainty in the model predicted changes to water levels of +/- 0.01m (1cm) but now, for the benefit of consultees, shows model predicted changes to water levels of > 0.002 m (2mm) in JBA (2012). JBA (2011a) shows full time series changes to water levels with no banding around zero change. No "false impression" is attempted.
- 22.160 The Applicant is in discussion with the EA as to how the development might be perceived to interact with the EA's plans (being implemented) to create managed realignment by tidally inundating land behind the flood defences adjacent to the Humber in different locations to mitigate for loss of intertidal area within the Humber Estuary under the scenario of a future quantity of sea level rise. The question of the contribution of a single development, such as AMEP, to the future long term changes to estuary-wide morphology predicted to arise from sea level rise with planned managed realignment is a topic best addressed by interpreting existing studies which is the approach being taken by EA (especially when the modelled changes to water level are as localised as shown in JBA, 2012). At least the anticipated effect will then be consistent with those that underpin the EA's Humber Strategy.
- 22.161 The resulting longer term change as a consequence of AMEP is not unlikely to be dissimilar to that calculated for the ABP HIT development, although that component of impact assessment has not been seen. It may be that none was provided as it is understood that the boundary of the Humber Estuary European site excluded the proposed footprint of HIT.

Paragraph 72

- 22.162 **ABPmer:** There is a need for temporal and spatial analysis in areas of greatest change (and ABPmer believes the flow patterns are incorrect)

Applicant's Comments

- 22.163 See various responses above demonstrating validation of flows (e.g. Annex 8.1, Appendix C). Temporal and spatial analysis is presented around the areas of greatest change (near to the quay).

Paragraph 73

- 22.164 **ABPmer:**

Applicant's Comments

- 22.165 Section 8.6.48 of ES Chapter 8 (this appears to be the Section to which ABP was responding, not 8.6.46) appears to have been misinterpreted. It reads:-

8.6.48 Analysis of pre- and post-HIT Admiralty Charts shows, in the area of the pink oval marked on Figure 8.12, an apparent effect extending for approximately 600 m alongshore, and with an increase to intertidal levels of approximately 1.5 m at an equivalent location to the Centrica and E.ON outfalls. This observation, combined with the sediment modelling results described in Paragraph 8.6.52 below, indicates a likely requirement for maintenance at these locations.

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22.166 The reason for examining the changes using the Admiralty Chart was to lend more confidence to the model predicted deposition rates at the outfalls located northwest of AMEP (by examining the surveyed deposition from Admiralty Charts). This check served that purpose well. It does not state the greatest distance is 600m away. However, it was recognised that the scope of assessment of changes resulting from HIT could be broadened in light of comments received from EA/MMO/NE and so Able UK commissioned a detailed assessment using EA LiDAR data (high resolution topography data) and ABP collector charts. The findings are reported in HR Wallingford (2012e).

However monitoring by ABPmer shows effects between 1.25-1.75km away over 10 years (ABPmer, 2011), where equilibrium seems to have been achieved. If the same changes from the AMEP development occur then effects would, for example, be seen at HST (now CPK) but the arbitrary 600m "cut-off" means that any other impacts have been excluded from consideration, by default. This would make a significant difference in relation to the ES assessment at the HST (now CPK) and North Killingholme Haven receptors, and it should be noted the latter receptor has not in fact been considered anywhere in the assessment. I therefore question the detail of the analogue used as it would appear to underestimate the potential effect. The ES suggests the area of intertidal affected would be up to 12ha but based on the ABPmer monitoring it would be up to 25ha.

22.167 This detailed assessment (HR Wallingford, 2012e) enhances the now publicly available understanding of baseline intertidal conditions upstream of HIT, showing how 660,000m³ of sediment has been deposited onto the existing intertidal between 2001 and 2010, in an area extending 2km from HIT up to CPK. The impacts of HIT include 0.5m accretion at the Humber Work Boats, 3-3.5m accretion at existing outfalls northwest of HIT, one of which has been buried, and the area affected by accretion does indeed cover an area of 20-25 hectares of intertidal.

22.168 ABPmer is incorrect in stating that "equilibrium seems to have been achieved". HR Wallingford (2012e) shows accretion rates of 0.4m / year between 2007 and 2010 onto the lower intertidal near to HIT. A volumetric assessment shows a volumetric accretion rate of approximately 100,000m³ per year over the same period. On the upper intertidal adjacent to HIT, there is currently loss of mudflat through saltmarsh colonisation. This is likely to continue. If AMEP is not constructed we would reasonably expect to see further accretion on the intertidal between HIT and CPK and to see further conversion of mudflat to saltmarsh.

22.169 Using this information, together with the modelling results and impacts presented in (HR Wallingford 2012a,b, e), a map showing medium term (20-30 years) likely changes in response to AMEP has been produced (EX11.24).

22.170 Northwest of AMEP, the change in orientation of the coastline around CPK, and potentially the operations at CPK if they extend inshore, mean that any morphological change further north will be uncertain.

22.171 North Killingholme Haven is included in the models developed for the EIA. Tidally, it is a quiescent area into which surface water drains from the Killingholme Marshes Drainage catchment outfall. The modelling results did not identify any significant changes to this area.

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Paragraph 74

22.172 **ABPmer:**

Applicant's Comments

22.173 An assessment of morphology changes between HIT and AMEP has been undertaken and is reported in HR Wallingford (2012e). In summary, this is a region which has experienced and is still experiencing, significant accretion in response to the construction of HIT. The inshore environment is predicted to change and become more quiescent, with continued future accretion likely.

22.174 Hydrodynamic modelling has now been completed for the final layout and is presented in (JBA, 2012).

From experience with the design of the HIT Terminal with respect to the location of the Immingham Gas Jetty an eddy is likely to exist on the ebb. With the set back there is a risk of flow speeds and direction changing particularly at the up estuary end of the South Killingholme Oil Jetty Terminal. This would affect the mooring conditions (in terms of safety and risk) at the jetty. No consideration or assessment of these potential impacts has been made in the ES.

22.175 Mooring conditions around the dolphins have been considered in consultation with the berth operator APT, and are reported in EX8.7 with respect to their principal concerns relating to wave reflection and with regard to the local change in the sedimentary regime. It is also possible that an eddy might develop during certain stages of the tide. The Applicant is in the process of drafting an agreement with the operator to ensure the dolphins can be accessed at all times.

Paragraph 75

22.176 **ABPmer:** The capacity of the dredge disposal sites has not been considered.

Applicant's Comments

22.177 With regard to the capacity of the deposit grounds for inerodible deposits, the applicant received correspondence from the MMO before submitting the application confirming that the sites had adequate capacity, refer to correspondence included in Appendix 5 of Annex 7.6 of the ES. The correspondence is reproduced in part below:

'6 Disposal sites

The (Dredging Strategy) document states that 981,150 m³ of material will be disposed of to HU080, Humber 1A and goes on to compare this figure to previous tonnages received at the site. However, the table referenced states tonnages to the Sunk Dredge Channel and not specifically to HU080. I am content that silty erodible material is deposited at HU080.

The remainder of the material (954,350m³) is glacial in origin and is proposed to be split across three sites; HU081, HU082 and HU083, however this quantity is not compared to the amounts the sites have received in previous years. Looking at the data for disposal sites HU081, HU082 and HU083, only 463,028 tonnes of

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*material has been deposited to HU081 (all in 1995). However these sites have been used for beneficial use under construction licences, which unfortunately means that no returns are required to be provided and therefore there is no record of how much material has previously been disposed of at these sites. Approximately 1.9M m³ of material from all proposals, including the licensed Immingham Oil Terminal (375,000 m³), are proposed to be deposited at these three sites. Looking at the areas of the disposal sites and the bathymetry data included in the dredging protocol, **the sites have the capacity to take this quantity of material**. Therefore I am content that stiff glacial material can be deposited at sites HU081, HU082 and HU083. If you intend to refer to this document in the deemed marine licences, the document should also provide the full coordinates of all of the dredge and disposal sites to be used', (emphasis added).*

- 22.178 In ABPmer's ES for the IOTA dredge, they proposed to deposit 375 000 m³ of inerodible material at sites HU081, HU082 and HU083. In their assessment they state the following:

'Previous modelling of the infill of the windows (ABP Research & Consultancy Ltd, 1991) showed that the infill would marginally improve the conveyance of flow through the SDC, with the benefit of increasing flows and orienting them closer to the channel thus both aiding navigation through the channel and reducing the sedimentation potential in the channel (hence maintenance dredging volumes).

Each deposit area has an approximate capacity of about 400 000m³ to fill each 'window' up to the approximate level of the surrounding sub-tidal bathymetry. However, detailed survey of the areas would be required prior to the dredge to determine a barge placement strategy in order to provide a uniform infill. Sufficient capacity, therefore, exists for the deposit of both the stiff glacial clays from the Eastern Approaches and the firm clays from the end of the SDC if this material needs to be dredged by backhoe', (IOTA ES, Appendix D).

- 22.179 The applicants assessment for the deposit of the inerodible deposits into HU082 is included EX8.7; for the quantity now proposed to be disposed of to sea, the impacts are minor.
- 22.180 Given the above and the fact that the applicant has identified opportunities for the beneficial use of around half of the inerodible dredge arisings, it should be common ground that the inerodible deposit sites have sufficient capacity.

Paragraph 76

- 22.181 **ABPmer:** The MMO cannot have agreed that the disposal sites have adequate capacity

Applicant's Comments

- 22.182 Correspondence from the MMO is included in Annex 7.6 of the ES.

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Paragraph 77 & 78

- 22.183 **ABPmer:** There is no assessment of the impact of the change in bathymetry at HU082.
- 22.184 Impacts of changes to morphology from placed non-erodible material have now been modelled / assessed and are presented in JBA (2012).

Paragraph 79 to 81

- 22.185 **ABPmer:** HU080 is not suitable for the disposal of soft silty clays
- 22.186 HU080 is a licensed site for disposal of erodible material.
- 22.187 The Applicant proposes to dispose of alluvium and soft clays to HU080. ABP proposed to dispose of c. 700 000 m³ in the same site in their ES for the IOTA project, refer to Figure 22.2 above. Accordingly they must know the disposal of this type of material to HU080 is acceptable and it is not clear why they have raised this issue.
- 22.188 According to the *Humber Maintenance Dredging Baseline Document* (ABP-HES 2008) the site has received a maximum quantity of 8.9 M wet tonnes in a single year and in the early years of the channel it was silt that was deposited at the site.
- 22.189 The IOTA ES also states that:-
- 'when maintenance dredge requirements are high ... a greater volume of ... finer silt-sized material still requires to be dredged, and when this siltation occurs it tends to be at higher rates during the summer months (and is disposed of in HU080)'*
- 22.190 On this basis, ABPmer appear to contradict their own ESs.

Paragraph 82

- 22.191 **ABPmer comment:** There are a number of other deficiencies of the dispersion of sediment from HU080 namely:-
- There is no consideration of whether material being deposited matches the previous usage of the site as is the norm for licensing and required for previous assessments;
- 22.192 Refer to the response to paragraphs 79 to 81 above.
- 22.193 **ABPmer comment:** The assessment for alluvium material discusses effects of only a proportion of the tidal cycle rather than complete dispersal from the deposit location over a spring neap tidal cycle which is standard/good practice.
- 22.194 The dispersal of material from HU080 modelled a 14 day disposal period plus an additional 4 days as described in paragraph 5.50 of Annex 8.1. The period

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modelled is identical to that modelled by ABPmer for the IOTA disposal at HU080, refer to Appendix H of the IOTA ES (2009).

- 22.195 **ABPmer comment:** The assessment only considers SSC and not bed level change.
- 22.196 This is not true. Paragraph 5.60 of Annex 8.1 states that, '*any accumulation of the disposed sediment on intertidal areas will be negligible compared with the accumulation due to natural processes and present maintenance dredging requirements that are substantially larger than would be required for the AMEP alone*'. ABPmer reached a similar conclusion when they modelled disposal of similar material for their EIA of the IOTA project which stated that, '*(t)here are no predicted significant direct or indirect changes to intertidal habitats resulting from disposal at Middle Shoal*'.
- 22.197 **ABPmer comment:** Only the small dredger with material from the intertidal was modelled.
- 22.198 Some of the proposed disposal quantities changed during the course of the design development and the ES Chapter 8 sought to accommodate all of these changes by interpreting the relevant modelling assessments and scaling up as required for the ES Chapter 8. Reference to other studies of dredge disposal on the Humber at HU080 provide equivalent results in respect of suspended sediment concentrations to those recorded in the AMEP ES.

Paragraph 83

- 22.199 **ABPmer comment:** There has been inadequate assessment of disposal to HU082
- 22.200 Refer to the Applicant's response to paragraph 75.

Paragraphs 84 to 86 Navigation/Maintenance Dredge Requirements

- 22.201 **ABPmer comment:** The assessment of the impact on navigation and maintenance dredge requirements is inadequate
- 22.202 The assessment of sedimentary change throughout the estuary demonstrates that impacts are substantially localised to the AMEP quay and will not result significant in estuary wide impacts for shipping routes. Whilst therefore ABPmer claims that the findings of the ES are '*neither justified bor justifiable*', they manifestly are and are frequently supported by evidence drawn from ABPmer's own ESs for marine projects within the Humber Estuary.

Paragraphs 87 and 88

- 22.203 **ABPmer comment:** The assessment of the impact on fish is inadequate.
- 22.204 ABP has commented that '*indirect changes to water quality and the implications for fish have been described but not quantified*'. This is not the case: paragraph 12.3.10 in the chapter on Commercial Fisheries directs the reader to the Aquatic Ecology chapter for a discussion of indirect water quality impacts on fish. In that chapter, the impact assessment is set out in paragraphs 10.6.59 *et seq.* It is

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noted that in neither the IOTA dredge ES nor the Grimsby Ro-Ro ES are indirect water quality impacts on fish identified as key impact pathways for aquatic ecology, so it is unclear why ABP have raised this issue.

- 22.205 ABP has commented that there is no discussion of the effectiveness of small indirect changes to the north and south of the quay would be as compensation for losses of nursery habitat for commercial fish species. However, it is well recognised that managed realignment sites providing additional intertidal habitat will provide functional nursery habitat for commercial fish species. In the context of the provision of the compensation site, it is considered that the impact on nursery habitat would be fully offset.
- 22.206 ABP has stated that there is no consideration of the potential for entrainment of fish through dredging; this is so, as fish entrainment is not identified as a likely significant effect of the AMEP project. This is supported by the conclusions of the IOTA ES and Grimsby Ro-Ro ES's, both of which were produced by ABPmer and neither of which identified a significant impact on fish due to entrainment.
- 22.207 ABP has commented that the underwater noise assessment in the ES is deficient. An underwater noise assessment was undertaken using the California Department of Transportation methodology set out in Box 10.3 of the ES, and the results were then independently assessed by Subacoustech Environmental, a specialist consultancy in the propagation of underwater noise – Subacoustech's report was included as Annex 10.3 of the AMEP ES.
- 22.208 Subacoustech's assessment covered a large range of piling impact energies, which embraces any construction technique likely to be used for AMEP. The applicant therefore does not agree with ABP's statement that the reported effects are significantly underestimated.
- 22.209 ABP states that the worst-case assumptions used for the assessment are not valid, but does not indicate what it considers a valid worst-case to be.
- 22.210 ABP states that mitigation for impacts on salmon and lamprey are insufficient. The applicant is in the process of agreeing appropriate mitigation with the EA, NE and MMO, and discussions have advanced considerably since the date of application. The applicant anticipates agreeing mitigation measures in the near future.

Paragraphs 89, 90, 91 – Designated Habitats

- 22.211 ABP has raised commentary on the Applicant's treatment of designated habitats in the ES. It has commented that an inadequate number of specific reference points was included in the baseline description; the Applicant contends that an extensive review of the baseline of designated sites is set out in Chapter 10 of the ES.
- 22.212 ABP has commented that there is no consideration of the effects of the scheme on the proposed deposit ground; the reader is referred to the Applicant's response to paragraph 59 above, and also to explanatory note EX 8.7, which includes assessment of this matter.
- 22.213 ABP has commented on the quantification of indirect habitat losses set out in the ES. In response to comments of this kind made at the time of the Relevant Representations, the Applicant submitted explanatory notes 11.23 and 11.24 in

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the volume of supplementary information, which address this issue in considerable detail, and tabulate the habitat losses expected.

- 22.214 ABP queries the assessment made in the ES of the impacts of maintenance dredging on subtidal habitats; the Applicant notes that the volume of maintenance dredge arisings to be disposed of in any given year is approximately equal to the volume of erodible capital dredge arisings to be disposed of. Both sets of arisings are to be disposed of at site HUO80. It is therefore considered that, because they will be disposed of at the same site, and are year-on-year of equivalent volume, the impacts of disposal of maintenance dredge arisings on subtidal habitats will be the same as those of the disposal of capital dredge arisings, and the impact assessment of those, set out in the ES, is suitable to cover the maintenance dredge arisings. Further explanation is provided in explanatory note EX 10.4 in the volume of supplementary information.
- 22.215 ABP queries the Applicant's assessment of estuary-wide ecological impacts; the reader's attention is drawn to Annex 8.2 of the ES, and to explanatory notes EX 10.4 and 11.24, which address this matter in more detail.
- 22.216 ABP states that the Applicant has taken the conservation objectives/targets from the Regulation 33 advice; this is not, however, the case. The reader is referred to the list of data sources set out in paragraph 10.5.4 of the ES, which, in addition to the Regulation 33 advice, also lists the 2009 draft conservation objectives published by Natural England, which provide much more detailed information and which Natural England have confirmed to be the appropriate advice.

Paragraphs 92, 93 – Cumulative/In Combination Assessment

- 22.217 ABP presents comments on the sufficiency of the Applicant's assessment of cumulative and in-combination effects in the ES. In response to more information becoming available since the date of publication of ABP's Green Port Hull ES and other additional information, and in response to similar queries received in the Relevant Representations, the Applicant has prepared and submitted an explanatory note EX 44.1 in the volume of supplementary information. This report provides an extended and updated cumulative and in combination impact assessment.

Paragraphs 94-98 – Mitigation Compensation and Monitoring

- 22.218 The Applicant does not agree with ABP's commentary on the sufficiency of its modelling, as stated above. However, the Applicant notes ABP's statement that a detailed monitoring programme is necessary. Accordingly, this is provided for various Requirements and Protective Provisions of the revised DCO, which require detailed monitoring plans to be drawn up in consultation with the relevant statutory authorities and local planning authorities. These plans will address all monitoring requirements of the project.

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Summary

22.219 In summary, the criticism directed at the EIA undertaken by the applicant on the hydrodynamic and sedimentary regime is ill informed and frequently contradicted by ABP's own studies; in short ABP have sought to raise clouds of doubt but the assessment is sound and proportionate in addressing the likely significant environmental effects.

Applicant's Comments on DTA's Report on Traffic Impacts

22.220 A response to issues raised by David Tucker Associates has been prepared by JMP Consultants and is included in Appendix WR22.2.

Applicant's Comments on Geldard's Report on Rail Impacts

22.221 A response to issues raised by Geldard Consulting has been prepared by Reid Rail and is included in Appendix WR22.3.

Applicant's Comments on John Fitzgerald's Report on the Effects of Development of the Port of Immingham

Introduction

22.222 This is a response by the Applicant to the part of ABP's Written Representations consisting of evidence given by John Fitzgerald, Port Director of the ports of Immingham and Grimsby for ABP. Mr Fitzgerald's evidence relates to the proposed compulsory acquisition of eight parcels of land:-

- a) parcels 03020, 030221 and 03023, a triangular area of onshore land;
- b) parcel 09001, an area of the foreshore; and
- c) parcels 03009, 03014, 03016 and 03021, an area of roadway and verge.

22.223 The triangle of land, roadway and verge are the subject of an application under section 127 of the Planning Act for a certificate from the Secretary of State that the land can be taken from ABP without serious detriment to its undertaking. The panel of three examining inspectors examining the application for a Development Consent Order (DCO) has also been tasked with considering the s127 application, and these comments are relevant to both applications.

Triangle of Land

22.224 Mr Fitzgerald notes that ABP owns over 12 000 acres of land and enclosed docks in the UK (paragraph 4.1), 1 200 acres at Immingham (paragraph 4.3) and that the triangle of land consists of nearly 14 acres of land currently in agricultural use (paragraphs 3.2 and 3.3). The triangle therefore comprises just over 0.1%

¹ This parcel is listed in the book of reference as being of unknown ownership, but these comments are made on the basis that it is owned by ABP

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of its landholding overall and just over 1% of its land at Immingham (although it is not clear if this triangle is included in the 1200 acre port, which may only be developed land).

- 22.225 Mr Fitzgerald lists various planning policies at paragraphs 5.1-5.3, although the development of this land by the Applicant for port-related use fulfils the policies just as much as development by ABP would.
- 22.226 The Consultation Draft Master Plan for the Port of Immingham 2010-2030 (CDMP), states at paragraph 2.12 that *'the intention is to issue a final Master Plan with appropriate amendments, by mid to late 2010'*. No such Master Plan was issued then, or has been issued since, and the draft has been removed from the ABP website. The Master Plan has therefore certainly been delayed by at least two years and the draft is no longer in the public domain.
- 22.227 There are two principal difficulties with ABP's claim that it is intending to develop the triangle of land imminently: need and ecology.

Need to Use the Triangle

- 22.228 Despite the need for the triangle being stated in the CDMP as being triggered some time between 2020 and 2030, when the existing port is full or a new customer comes forward (paragraphs 7.41 and 7.42), the proposed use of the triangle stated by Mr Fitzgerald (in paragraph 5.6 of the WR), is to relocate the Immingham Gas Jetty which would be displaced should a third berth be constructed at Humber International Terminal (HIT3). This is actually at odds with the CDMP which states that Immingham Gas Jetty would be replaced not at the triangle site to the north west, but at Immingham Oil Terminal to the south east (paragraph 7.35, exhibited by Mr Fitzgerald (JF4)).
- 22.229 If the western deep water jetty is to be used for the relocation of the gas jetty, then the work cannot be justified on the basis of the CDMP despite claims that it is in pursuance of it (paragraph 5.12), and no justification has been provided for this departure from it. If however, the western deep water jetty is for the benefit of a different *'existing liquid bulks importer at the Port of Immingham'*, then the case presented is somewhat misleading, since development of HIT3 would not then be dependent on the deep water jetty being developed.
- 22.230 Putting that to one side, if development of the triangle is now a knock-on effect of the HIT3 proposal, then the need for and prospects of the latter must be examined to establish what weight to give to the triangle development proposal. The CDMP suggested that a Harbour Revision Order to authorise HIT3 would be forthcoming in 2010, but there is no sign of it to date and no mention of it in ABP's written representation. Indeed a recent brochure produced by ABP describing their facilities on the Humber, shows the triangle land being developed, but not HIT3, despite the former being described as depending on the latter in the WR.
- 22.231 If HIT3 were in fact to be developed, what would it be used for? According to Chris Geldard's evidence contained in ABP's written representation (paragraph 6.2.1), expansion of capacity at Immingham would be to handle, 3m tonnes per week of biomass material for power stations in the Aire Valley, and 1m tonnes per week for the proposed Centrica power station at Brigg (so it may need a Development Consent Order). There is also mention of additional coal imports in

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the next paragraph. These would appear to constitute the only likely demand for HIT3.

22.232 The Aire Valley users, however, overlap with the users that form the need case for ABP's existing application for the Hull Riverside Bulk Terminal (HBRT), whilst Brigg Power Station is at the planning stage. According to the NID website the original proposal by Centrica was for a 2GW gas fired power station and this was withdrawn in March 2011. The Planning Inspectorate issued a Scoping Opinion for the now proposed Glanford Brigg Biomass Power Station in June 2012. Whilst the Scoping Report identifies Immingham Dock as the preferred location for fuel import, it is not obvious from the submission that Centrica are aware that Immingham does not have the capacity to supply the power station with fuel without ABP undertaking its own £70m development of HIT3. No doubt this fact will have to be considered during the EIA for the power station and reported in the ES.

22.233 The HRBT Harbour Revision Order application was made to the MMO on 19th February 2010 but has not yet been determined. The introduction to chapter 2 of the Environmental Statement for the HRBT application states:-

"There is a need to import biomass products, such as wood chips and wood pellets, into the UK in order to supply the growing needs of the power generation industry and to ensure a secure and cost-effective electricity supply in the UK. Similarly, there is a continuing requirement to import coal into the UK, principally to supply existing power stations in the region. No realistic alternatives to the development have been identified."

22.234 For the need argument to succeed at Hull, it would appear that it must fail at Immingham, or vice versa. Indeed, it is not clear, given the demand indicated in the WR, why HRBT has not been progressed with more haste.

Ecology

22.235 The triangle of land in question is part of an important roosting and feeding site for curlew (see paragraph 11.5.97 of the Environmental Statement – the triangle is one half of 'Field J' that is mentioned). The Applicant has been advised by Natural England that any area that could be used to mitigate the loss of the triangle should be as close as possible to it, and the majority of the undeveloped land near the site with direct connectivity to the SPA is in the Applicant's ownership. Not only that, but the size of any mitigation area would have to be considerably more than the area that was being lost to allow for a buffer zone to protect the mitigation habitat from disturbance.

22.236 The Applicant has therefore included 'mitigation area A', part of the AMEP site, in its application to mitigate for the loss of Field J (amongst other losses, but predominantly because of that field – see paragraphs 6.3.49 and 6.3.50 of the Habitat Regulations Assessment Report, document TR030001/APP/15). Mitigation area A is c.48.5ha in size, compared with about 12ha for Field J, of which 5.5ha is the triangle site.

22.237 If ABP were to develop the triangle site, they would be faced with the same issue, and would have to find considerably more land somewhere else (which, almost certainly, would have to be on land currently owned by the Applicant) to mitigate for its loss.

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22.238 To sum up the ecology issue; if ABP were to consider developing its triangle of land, there would be a significant adverse effect on curlew and this would mean that it would face greater difficulties than the Applicant in doing so. ABP would have to provide mitigation land, but the only undeveloped land nearby is not in its ownership and such land would have to be considerably greater in extent than the triangle itself.

The Applicant's Use for the Land

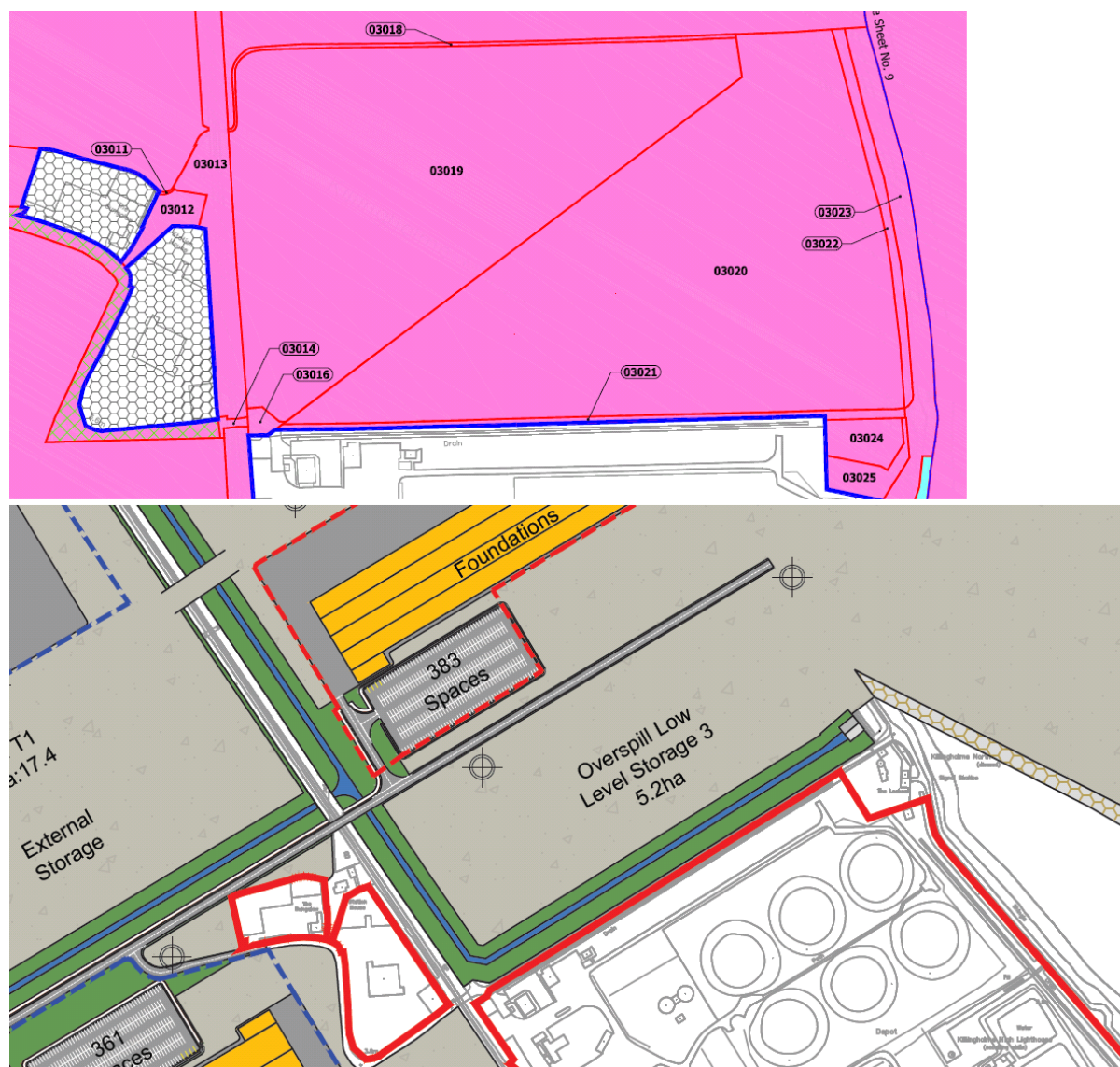
22.239 At paragraph 6.8, Mr Fitzgerald states that the Applicant's use for the land is for a pumping station and overspill low level storage. At Figure 22.4 is the relevant extract from the land plan together with the relevant extract from the indicative masterplan from the ES. While the pumping station is indeed planned to occupy one edge of the triangle, he omits to mention that the quay will occupy the entire of the remainder of the frontage of the triangle site. The pumping station must necessarily be at one side of the quay. 'Low level' is not to imply 'low priority', it is low in terms of height to minimise its impact on the environment, an issue that would also affect any proposal by ABP.

22.240 At paragraph 7.2 of the Written Representation he states that the Applicant's proposed compulsory acquisition '*meets no genuine requirement for its new port development, but rather has instead been identified by the landowner [ABP] for significant and nationally important UK infrastructure requirements*'. The reverse is the case: ABP has not demonstrated a compelling requirement for this land as has been demonstrated above, but the Applicant has included it in its application for what is by definition a nationally significant infrastructure project.

Foreshore acquisition

22.241 ABP also objects to the compulsory acquisition of the foreshore that would be occupied by the Applicant's quay. The Humber harbour master has offered that the Applicant obtains a standard long lease from him instead of acquiring ABP's interest. The Applicant is content to do this but must maintain its compulsory acquisition proposals until such lease negotiations are complete.

Figure 22.4 Abstract from Land Plan 3 (top) and Indicative Masterplan for AMEP (bottom)



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23. **SQUIRE SANDERS ON BEHALF OF E.ON UK PLC**

Summary of Written Representation

- 23.1 The Written Representation by E.ON sets out in detail a number of key issues which were of concern to them, viz.
- 23.1.1 Compulsory acquisition of land;
- 23.1.2 Extent of the proposed easement corridor;
- 23.1.3 The impact upon the activities of the power station by the construction and operation both onshore and offshore of the AMEP development;
- 23.1.4 Sedimentation and its effect upon the operation of E.ON's intake and outfall pipelines;
- 23.1.5 The proposed dredging strategy.
- 23.2 All of the concerns above have been reviewed and Applicant's comments to each point follows; relevant paragraphs of the Written Representation are quoted below in italics, followed by the Applicant's comments.

Applicant's Comments

Compulsory Acquisition

- 23.3 **Summary Paragraph 3.3:** *E.ON objects to the compulsory acquisition of its operational land associated with the CW pipeline and pumphouse.*
- 23.3.1 The Applicant recognises that E.ON will require access to their infrastructure and as such negotiations are ongoing concerning an easement.

Pipeline Easement Width

- 23.4 **Summary Paragraph 4.5:** *In February 2012, E.ON commissioned an internal desk based study to consider an appropriate minimum easement width which might be technically achievable on the basis of the information available at that time. This recommended a 23m minimum width for the easement corridor.*

On 17th May 2012 the undertaker proposed a 12.5m easement corridor albeit with no supporting explanation.

E.ON has commissioned Capita Symonds to consider in more detail the adequacy of the 12.5m easement proposed by the undertaker and, in the event that it was insufficient, to propose and justify a safe, workable alternative. In carrying out the work, Capita Symonds considered three scenarios

E.ON believes that the easement width should not be set below 32.5m following receipt of the Capita Symonds Report.

- 23.4.1 E.ON initially requested a 23m easement but based on previous experiences with the water industry, where easement widths are standard for a given set of variables such as pipe diameter and depth, the Applicant proposed a 12.5m easement.

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- 23.4.2 The Applicant has reviewed the Capita Symonds report included within E.ON's Written Representation and has concurrently carried out a detailed review of the actual conditions of the pipeline to assess the optimum easement width taking into account physical conditions, practicality, economics and health and safety.
- 23.4.3 The Capita Symonds recommendation of a 32.5m easement did not take into account actual physical conditions and included incorrect assumptions and observations. Furthermore the report discounted a standard trench box method of pipeline excavation on health and safety grounds preferring the open excavation with sloped sides.
- 23.4.4 The Capita Symonds report states that the pipelines are no more than 2m in depth and that the Applicant has added an additional 2m of fill over the pipelines. The Applicant has not, and does not propose to significantly change the level of cover over the pipelines.
- 23.4.5 The Applicant's assessment of a proportionate easement width included a review of detailed drawings of the pipeline provided by E.ON, which contradict the Capita Symonds assessment of the actual conditions. Furthermore actual depth observations have been corroborated by the Applicant on site during earlier works on the Applicant's land.
- 23.4.6 The Capita Symonds report discounted trench box method stating that it should only be considered if the conditions for a battered excavation are not deemed suitable.
- 23.4.7 The electrical power cables and control cables which link the power station with the pumping station would need to be removed if the open sloped excavation was used as recommended by Capita Symonds. This would increase the risk of harm to operatives due to the exposure of the cable. The open excavation would also result in significant down time of the power station to replace the pipeline.
- 23.4.8 The Applicant believes that using a trench box method to replace pipelines alongside the existing, would reduce costs relating to excavation and backfill, reduce the risk of impact with other utility apparatus, and enable the power station to remain in operation for a considerably longer length of time than the open excavation method. Using this method and allowing for existing physical conditions, safe working zones and access the easement width required is 20m.

Cooling Water Pipeline Deed of Agreement

- 23.5 **Summary Paragraph 4.9:** *The undertaker is seeking power under Articles 29, 33 and 41 to acquire land and rights over which an easement runs which carries the intake and outfall pipes connecting the Killingholme Power Station to the River Humber. Without these pipes, the power station cannot function as a CCGT power station thereby causing serious detriment to the carrying on of E.ON's undertaking.*

The undertaker has indicated a willingness to grant E.ON a new easement but the parties are in dispute as to the width of the easement and the terms upon which it can operate

- 23.5.1 The Applicant recognises the importance of the cooling water pipes and pumping station for the operation of the power station and further recognises the need for E.ON to be able to access and maintain the infrastructure. As such the Applicant has submitted a draft deed of agreement to E.ON for their comment.

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Proximity of Proposed Buildings and Structures

- 23.6 **Section 5.2:** *E.ON has concerns in two respects. Firstly, E.ON needs to be satisfied that buildings being so close do not affect the ability to maintain, repair or replace the pipeline or other services as already discussed in section 4 above.*

Secondly, E.ON need to be satisfied that the proposed foundations and construction techniques do not place the pipelines and other services at risk, either during or after construction as a result of building works and any resulting settlement.

- 23.6.1 The Applicant acknowledges that E.ON will need to maintain their existing pipelines and needs to be satisfied that building foundations and construction techniques will not affect their property.
- 23.6.2 The Indicative Masterplan submitted with the application does not show any buildings on or over the pipelines.

Crossing Points

- 23.7 **Section 5.5:** *There is already one established point of crossing of E.ON's CW pipelines. The undertaker is proposing an additional four points as part of the AMEP proposal.*

To the extent that there is flexibility within the arrangement of the undertaker's proposals, E.ON request that the number of crossing points is minimised. Where this is not possible, E.ON believes that safeguards could be included via a protective provision

- 23.7.1 The Applicant acknowledges that any crossing points over buried services should be designated to protect them from abnormal loads.
- 23.7.2 The Applicant acknowledges that safeguards with appropriate measures to prohibit traffic movements taking into account vehicle weight and designated crossing points should be used to protect the pipelines and services during construction and operation of the site.

Anglian Water Sewage Pipe (Onshore)

- 23.8 **Section 5.9:** *E.ON has serious concerns about the potential implications of another pipeline crossing the CW pipeline, and requires further information from the undertaker in order to assess the details and the risks involved.*

E.ON requires that a protective provision be included in the draft DCO requiring submission of information for its approval prior to any such works to the Anglian Water pipeline being undertaken.

- 23.8.1 Due to the location of the cooling water pipelines and orientation across the AMEP development, service crossings over the cooling water pipes will be required including the outfall pipes. The Applicant acknowledges that appropriate safeguards would be required to protect E.ON's infrastructure.

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Impacts of Construction and Operation (Offshore)

- 23.9 **Section 6.5:** *Given the potential for such detrimental impacts affecting the Killingholme power station, and the lack of information available, E.ON finds itself at a distinct disadvantage in providing meaningful assessment on the undertaker's plans for the purposes of the examination process. As such, E.ON is being forced to maintain an objection and to reserve its position until sufficient information becomes available.*

Since the application was submitted, the undertaker has provided a report – 'Review of Risks to the E.ON Inlet and Outfall During Construction & Maintenance of the AMEP Quay', June 2012 ("Review of Risks Report") which is provided at Appendix 10. Whilst E.ON welcomes this as a step in the right direction, it is clear that there is still much more to be done in understanding potentially significant impacts upon the power station and identifying mitigations, and in this respect the report has not served to alleviate E.ON's concerns to the extent that it is able to remove its objection

- 23.9.1 There are a number of factors that could affect the operation of the power station, principally the cooling water pipes, and as such a diversion of the outfall pipes is included in the application.
- 23.9.2 The Applicant acknowledges that there may be alternative mitigation proposals to enable the cooling water outfall to remain in situ without any detrimental effect. Should an alternative solution be agreed with E.ON it would be subject to a separate consenting process.

Dredging Operations

- 23.10 **Section 6.8:** *In its Review of Risks Report, the undertaker has proposed a number of mitigations to safeguard E.ON's infrastructure during capital dredging and maintenance dredging.*

E.ON takes the view that whilst the initial safeguarding proposals appear sensible, there is insufficient information to provide confidence at this stage, and E.ON would therefore wish to approve mitigation plans to safeguard E.ON's CW infrastructure before any dredging takes place. Accordingly, a protective provision is proposed within Appendix 11.

- 23.10.1 The Applicant acknowledges that there are potential risks to E.ON's infrastructure when carrying out dredging and as such acknowledge that a dredging strategy shall be secured through Schedule 8 Clause 19 of the Development Consent Order and will be agreed in writing with the Marine Management Organisation following consultation with E.ON.

Suspended Solid Concentrations

- 23.11 **Section 6.11:** *E.ON's Further Issues Report (Appendix 9) notes that there have been no previous problems with sedimentation, erosion suspended solids or siltation at the CW intake or outfall at Killingholme. Therefore, it would be reasonable to assume that any problems that are encountered after the Able Marine works commence are as a result of the AMEP development.*

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23.11.1 The Applicant believes that it would be unreasonable to automatically assume that any problems encountered with the cooling water intake following construction of the AMEP quay are as a direct result of the quay. To exclude any likelihood of an adverse effect of the development on the E.ON intake and outfall the diversion of the outfall has been included in the application.

23.12 **Section 6.12:** *It is also noted that the undertaker has only measured Suspended Solids Concentration ("SSC") in a single tidal cycle during a neap and a spring tide and is then applying the HR Wallingford modelling work (whose credibility was brought into question earlier) to try and reach firm conclusions about the likely increase in sediments.*

E.ON would need to be satisfied based on modelling work for the 'as applied for' proposal that the sediment levels would not be significantly increased in the vicinity of the intake for the power station"

23.12.1 The sediment monitoring carried out to date showed that there is a significant range of suspended solids within the River Humber.

23.12.2 The Applicant is committed to carrying out longer term monitoring prior to, during and following construction of the quay. The monitoring carried out before the construction of the quay and associated dredging will help inform and develop the dredging strategy by identifying trigger and action levels, allowing dredging to be monitored and controlled in real time to mitigate against excess suspended solids at the cooling water intake.

Significant Deposition at Outfall

23.13 **Section 6.16:** *E.ON seeks a reassurance that measures will be put in place to ensure that the outfall is kept clear of deposits, and that monitoring is included with appropriate triggers to initiate a means of remediation if and when deposition reached levels that could impede normal operation of the power station.*

23.13.1 The DCO application includes for the diversion of the cooling water outfall, which will alleviate all concerns relating to silt deposition at the outfall.

23.13.2 The Applicant confirms that discussions are ongoing to find alternative mitigation proposals to enable the cooling water outfall to remain in its current location without any detrimental impact, either via maintenance dredging or other protective measures and shall continue to work with E.ON with this regard. Any such proposals will be subject to separate consent.

Potential Seabed Erosion and Longer Term Deposition at Cooling Water Intake

23.14 **Section 6.19:** *The first issue is the potential for morphological changes to cause erosion of the sea bed at the intake, affecting its integrity. As can be seen from the note of the meeting with the undertaker on 19th June, there is considerable uncertainty around this matter, and potential mitigations are not clear.*

The second issue concerns possible long term changes to the sea bed which could lead to it becoming elevated near to the intake position. The intake is currently designed to abstract water from well above the sea bed to minimise entrainment of bottom dwelling fish and other organisms

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- 23.14.1 The Applicant undertook an over-water ground investigation for the proposed AMEP quay, between July and November 2011. No boreholes were drilled north of the EON cooling water pipelines however, one borehole was situated 100m south at the same distance as the intake within the river channel.
- 23.14.2 The borehole had a bed level approximately 400mm higher than that recorded during a bathymetric survey carried out in 2010. Likewise the intake point indicated a higher bed level than that shown on the design drawings for the intake.
- 23.14.3 The borehole proved that from riverbed level a clayey sandy gravel is present to 0.9m bgl (-3.6m CD). The gravel is underlain by a firm, sandy gravelly clay which in testing shows to become stiff with depth. The clay is maintained to bedrock (chalk) at circa 12m bgl (14.7m CD) with only variations being the amounts of sand and gravel content within the clay.
- 23.14.4 Other boreholes on the same offset from the river bank and in the vicinity encountered firm clay at bed level with bed levels the same as the 2010 survey.
- 23.14.5 The HR Wallingford report was based on a mud (silt/ fine sediment) river bed. The report concluded that the level of scour would be dependent upon bed composition and that the presence of clay would reduce the risk of scour. Records further indicate that a significant depth of large stone (rip rap) was provided to the base of the inlet structure as additional protection.
- 23.14.6 Whilst the HR Wallingford predicted that bed erosion could potentially occur at the intake, the presence of clay and rip rap surround combined with the bed level currently being slightly elevated, the risk and likelihood of erosion occurring to such an extent that the structure would be undermined would be low.

Effect of Anglian Water Brine and Sludge Outfall Diversion

- 23.15 **Section 6.22:** *As explained earlier, the undertaker has talked about diverting Anglian Water's outfall from the Killingholme Waste Water Treatment Works. Insufficient information is available to allow E.ON to better understand the implications of this diversion as noted earlier in section 5 of these written representations. In addition, a further concern is the extent to which the proposed new outfall position might lead to contamination of the CW intake pipe, particularly if it is discharging warm water which could adversely affect the operational efficiency of the power station.*

E.ON would not the water quality or temperature affected in a way that it could adversely affect the operation of the power station. E.ON therefore requests that a protective provision is included in the DCO to ensure that the undertaker consults with E.ON, carries out any necessary modelling works and agrees an appropriate solution with E.ON prior to any diversion of the Anglian Water pipeline.

- 23.15.1 The Applicant submitted an application to Anglian Water to divert the existing apparatus in January 2012; however the Applicant is still awaiting details of Anglian Water's initial review and scoping study of the diversion. It is acknowledged that the permit to discharge for the new diversion will need to be obtained from the Environment Agency and, as such, modelling will be carried out to satisfy the Environment Agency's requirements.

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24. **MR S KIRKWOOD (HICKLING-GRAY ASSOCIATES)**

24.1 Further to the relevant representation issued in March 2012, Hickling-Grey Associates have submitted a Written Representation, on behalf of Mr S. Kirkwood. The representation raises a number of issues, listed below, and these are addressed in turn following:-

- Need for nature compensation land
- Loss of agricultural land
- Alternative sites
- Increased Flood Risk to Sands House
- Inadequate data/lack of future management plan and mitigation strategy
- Not "like for like" compensation
- Increased silting
- Soil suitability and land contamination
- The footpath diversion

Applicant's Comments

Need for compensation land

24.2 This issue arose in Mr Kirkwood's relevant representation (RR) and was addressed in the Applicant's response to those.

Loss of agricultural land

24.3 This issue arose in RR No. 7 and the response to that made reference to paragraph 42.6.13 of the ES which is reproduced below.

'(c)reation of the Compensation Site will result in the loss of approximately 115 ha of Grade 2 agricultural land at Cherry Cobb Sands and 38ha of Grade 2 agricultural land at Old Little Humber Farm. This loss equates to 0.009 percent of the total agricultural land available in the Yorkshire and Humber region and therefore considering the local, regional and national extent of Grade 2 land, loss of this potential food resource is assessed as being of low magnitude. The sensitivity of the food resource being low as the area of arable farmland being lost is small in comparison to regional and national land resources and it is not currently supporting specialist crops (such as organic produce). The resulting overall effect is a permanent negative impact of minor significance', (paragraph 42.6.13).

Alternative sites

24.4 This issue arose in Mr Kirkwoods RR and was also raised in the Examiner's questions. The Applicant cannot add anything further to the information already provided in response to both.

Increased Flood Risk to Sands House

24.5 Whilst it is asserted that this has not been assessed by the Applicant, it is addressed in Section 2.4 of Annex 36.1 of the ES. Following further consultation between the Applicant and the Environment Agency, an Explanatory Note (EX36.2 of the Supplementary Environmental Information, submitted 29th June 2012) on the change in flood risk to properties on Sunk Island has been

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prepared and is included in the volume of supplementary environmental information.

Inadequate data/lack of future management plan and mitigation strategy

- 24.6 This issue was raised in Mr Kirkwood's RR and addressed in the Applicant's comments on those, refer to paragraph 33.3.1.1 *et seq* of the Applicant's response.

Not "like for like" compensation

- 24.7 This issue was raised in Mr Kirkwood's RR and addressed in the Applicant's comments on those; refer to paragraphs 33.2.1.1 to 33.2.3.

Increased silting

- 24.8 The Statement of Common Ground between the Applicant and the three relevant Internal Drainage Boards is relevant to this issue.
- 24.9 Mr Kirkwood met Dr Keiller on 24th February 2011. Since that meeting, neither the Applicant nor Dr Keiller has received any request for a further meeting. It is not true that the Applicant has prevented or instructed or requested Dr Keiller not to speak to Mr Kirkwood.

Soil suitability and land contamination

- 24.10 This issue is addressed in paragraph 33.3.1.19 of the Applicants Responses to Mr Kirkwood's RR; for ease of reference it is reproduced below.

"The application does not assume that the soils within the realignment site are suitable for use. The applicant has sought the opinion of suitably qualified and experienced contractors with regard to the suitability of the soil for treatment with lime or cement. Such treatment will modify the soils and render them suitable for re-use. The impact of importing material to the site to stabilise the in-situ material is assessed in the application."

The footpath diversion

- 24.11 This issue was raised in RR No.14; refer to paragraphs 15.2 to 15.5 of the Applicant's comments on those.

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25. **NATS (EN ROUTE) LTD**

Summary of Written Representation

25.1 The Written Representation raises no issues that require comment.

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26. **YORKSHIRE WILDLIFE TRUST**

Summary of Written Representation

- 26.1 The Written Representation covers nature conservation issues, limited to the north bank of the estuary. In this instance the Written Representation is reproduced in full in italics and the Applicant's comments have been inserted in plain type at appropriate intervals.

Applicant's Comments

"Old Little Humber Farm

Black-tailed Godwit

We are concerned that the Old Little Humber Farm site will not provide adequate interim habitat for black-tailed godwit. Annex 35.6 says that 'Black-tailed Godwit use of feeding areas outside the inter-tidal zone on the Humber is much less frequent'. They are therefore unlikely to fly inland to reach this site. In addition although black-tailed godwits will use wet grassland this is more likely to be associated with breeding habitat rather than the post-breeding and overwintering habitat which will be lost as part of the development.

- 26.2 The applicant notes that Yorkshire Wildlife Trust (YWT) had not at the time of making its WR, had sight of a completed design for Old Little Humber Farm. This design has since been submitted as explanatory note EX 28.2 in the volume of supplementary information; this document sets out how the site will be managed to achieve the habitat required. In terms of YWT's concerns over the extent to which the black-tailed godwits will make use of the site, the reader is referred to the Applicant's comments on the Written Representation of the RSPB, which deals with this subject in some detail.

Other

The Environmental Statement says that this site is also expected to provide mitigation for breeding birds and the loss of terrestrial habitat. However as the site is only intended to be temporary we agree with Natural England that Able need to clarify how these impacts will be mitigated in the long term.

- 26.3 As noted by YWT, Natural England (NE) has also raised this issue. In further consultation since the provision of the Relevant Representations, it has subsequently been agreed between the applicant and NE, that mitigation for breeding birds will not be provided at OLHF. Instead, it is now proposed that landscape planting strips will be provided along the north-western and south-eastern sides of the managed realignment site at Cherry Cobb Sands to provide mitigation for breeding bird habitat loss. These planting strips will also provide foraging for badgers using the site, and accordingly are referred to in paragraph 31.3.5 of the Statement of Common Ground between the Applicant, NE, the EA and the MMO. The details of the planting will be set out in the Environmental Management and Monitoring Plan required by Provision 2 of Schedule 9 of the revised DCO, included here as Appendix WR1.1.

Monitoring

The site should be monitored to ensure that the habitats are functioning correctly before the development takes place.

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- 26.4 The programme of monitoring for the site will be agreed with Natural England and included in the Environmental Management and Monitoring Plan required by Provision 2 of Schedule 9 of the revised DCO. With regard to any time lag in the development of functionality, please refer to comments in paragraphs 17.25-17.29 of this report, containing the applicant's comments on similar concerns raised by Lincolnshire Wildlife Trust.

Cherry Cobb Sands

Timing

The compensation at Cherry Cobb Sands should be completed before the development begins, especially given the risk that the Old Little Humber Farm site may not provide suitable habitat for black-tailed godwit. This is supported in the European Commission's guidance document which states that 'The compensatory measures must ensure the continuity of the ecological processes essential for maintaining the overall coherence of the Natura 2000 network. The compensation scheme should be 'effective' at the time the negative effects occur on the site concerned. Early implementation is of the essence'. The site should be monitored to ensure that the habitats are functioning correctly before development takes place. If the site did not provide sufficient habitat then further compensation would be required before the development could go ahead. We agree with LWT that a contingency plan should be put in place.

- 26.5 Please refer to paragraphs 17.25-17.30 of this report, containing the applicant's comments on similar concerns raised by Lincolnshire Wildlife Trust.

Habitat

The compensation site must deliver sufficient areas of intertidal mudflat and saltmarsh to adequately compensate for the habitat lost at the development site. Previous managed realignment schemes on the northern bank have resulted in significantly less intertidal mudflat creation than was initially intended as much of the proposed intertidal area has become saltmarsh habitat, for example at Paull Holme Strays. Annex 32.4 paragraph 5.1.14 also states that 'In view of the uncertainty inherent in sedimentation predictions, it would be prudent to assume that the predicted changes in ground levels probably have an uncertainty of ± 50 percent.' We are therefore very concerned that there is a high risk that the habitats will not be created in the ratio needed to compensate for the loss. In order for the site to provide adequate compensation there may also need to be a mix of habitats. Existing mudflats opposite the proposed development site are not used in the same way as those at Killingholme or in the same proportions indicating that the suite of habitats at Killingholme may be very important. The provision of roosting habitat near to the Cherry Cobb Sands site may be required to ensure that the compensation is successful.

- 26.6 Please refer to paragraphs 17.23 of this report, and the comments set out in the response to the Written Representation of the RSPB, contained in Section 21 of this report. These make it clear that design is ongoing, and that the second interim design report for Cherry Cobb Sands annexed to this report (Appendix WR 9.1) provides an updated assessment of habitat development based on a system of regulated tidal exchange.

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Management

The sites should be managed in perpetuity to compensate for the long term impact of the development. As mentioned in our registration submission we would be keen to work with Able to manage the sites especially given that we will soon be taking on the management of Paull Holme Strays nearby.

- 26.7 The Applicant acknowledges the requirement for ongoing management, and notes that this is secured in Provision 2 of schedule 9 of the revised DCO annexed at Appendix WR1.1 to this report. The applicant welcomes YWT's offer to be involved in the management of the sites, and will be seeking a meeting with YWT to discuss management options.

Living Landscapes

The NPPF states that 'The planning system should contribute to and enhance the natural and local environment by: ...establishing coherent ecological networks that are more resilient to current and future pressures' (Paragraph 109). The Cherry Cob Sands site is within our Outer Humber Living Landscape (<http://www.wildlifetrusts.org/living-landscape/schemes/outer-humber>). This is an area that we have identified as an important corridor for wildlife which connects habitats and allows wildlife to move between areas. We would therefore be keen to see Cherry Cobb Sands managed in a way which links with our other three reserves in this Living Landscape; Spurn Point, Welwick Saltmarsh and Hodgson's Fields (<http://www.ywt.org.uk/reserves>) to create a coherent ecological network.

- 26.8 The Cherry Cobb Sands and Old Little Humber Farm sites will be subject to bespoke management plans as required by Provision 2 of Schedule 9 of the revised DCO. However, the Applicant welcomes YWT's desire to be involved in the management of the site, and will be seeking to meet with YWT as stated above.

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27. **FOR-WARD PLANNING CONSULTANCY ON BEHALF OF CONOCO PHILLIPS LTD**

Summary of Written Representation

27.1 The Written Representation covers four issues:-

27.1.1 The potential for Mitigation Area A to adversely impact on the development of Conoco's own landholding on adjacent to Rosper Road.

27.1.2 The potential for highway improvements to affect Conoco's landholdings.

27.1.3 The potential for the quay to adversely affect the South Killingholme Oil Jetty.

27.1.4 The potential for the development to adversely affect flood risk on Conoco's landholdings.

Applicant's Comments

Mitigation Area A

27.2 Whilst the South Humber Bank is allocated for industrial development, this does not preclude the normal planning requirement to mitigate for any adverse environmental effects of development. The Applicant has explored a number of mitigation options for SPA species with Natural England, as explained in the response to Examiner's question No. 14, and Area A has been chosen due to its proximal location to the adverse effect it seeks to mitigate.

27.3 Mitigation Area A comprises a 16.7 ha core area protected by a 150 m buffer to all sides making the mitigation area c.48.5 ha overall; the entire area will be managed by the Applicant as wet grassland. The 16.7 ha core area is sufficient in itself to provide feeding and roosting habitat for the SPA species that will be displaced from their existing sites on Killingholme Marshes by AMEP. The 150 m buffer that surrounds this core area ensures that the core is protected from external disturbance, including disturbance from traffic and footpath users along Marsh Lane. Accordingly, if Conoco do develop their Rosper Road site, it should not impact on the value of the core mitigation area within Area A, as the edge of the core area is 150 m north of Marsh Lane.

27.4 Because the Applicant has buffered the core mitigation area, development of Area A will not, *'fetter or severely restrict the ability of CPL to carry out development operations upon the Rosper Road site'*.

Use of Marsh Lane and other Highway Issues

27.5 The application site does not incorporate Marsh Lane and the Applicant has no proposals that would impact on Conoco's ability to access their infrastructure along it.

27.6 The Applicant's use of Marsh Lane will be very limited and will principally occur during the construction work when the existing arable and pasture land is developed into wet grassland.

27.7 With regard to vehicular access over the railway at Marsh Lane, this will not be affected by AMEP. The gated portion of the line would be located just south of Station Road, several hundred metres from Marsh Lane.

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- 27.8 The Applicant included for compulsory acquisition of Network Rail land between Marsh Lane and Station Road, as this was the extent of land that Network Rail had advised the Applicant it was willing to sell, subject to certain conditions being satisfied. The Applicant's proposals for the compulsory acquisition of Network Rail land are being reviewed to take account of ABP'S current development proposals for HIT3; refer to Chapter 29. Unfortunately neither Network Rail nor ABP chose to disclose, during the consultation process, details of their proposals for a new head shunt facility to serve HIT3 between Marsh Lane and Station Road; they only disclosed all relevant details in their WRs. The Applicant would not wish to jeopardise proposals for HIT3 and anticipates that both HIT3 and AMEP can be developed without detriment to each other. The majority of increased traffic north of Marsh Lane will then result from the HIT3 development, but current proposals for that appear to include a narrow road bridge to provide a grade separated crossing which would avoid any adverse effect on access across the railway.
- 27.9 The junction improvements proposed at Manby Road are detailed in the Transport Assessment for AMEP, refer to Annex 15.1 of the ES, Appendix Q.
- 27.10 The only works in Eastfield Road are those relating to the laying of a public sewer between the application site and South Killingholme sewage treatment works.
- South Killingholme Oil Jetty (SKOJ)
- 27.11 SKOJ is currently leased to Associated Petroleum Terminals (APT), a company that is jointly owned by Conoco and Total. The Applicant has held discussions with APT to ensure their concerns are addressed to the extent that they are not caused any significant detriment.
- 27.12 With regard to dredging, APT has provided details of their maintenance dredging activities since 2001; annual volumes dredges vary between 600 and 6 000 m³. The Applicant has assessed the potential for additional sediment to accumulate within SKOJ berthing pocket and this is included in Annex 8.3 of the ES. The assessment indicates that there will be no increase in the maintenance dredging liability for SKOJ.
- 27.13 There is no reason for the proximity of AMEP and SKOJ to be detrimental to the operation of SKOJ. Vessels already pass SKOJ to access the Humber Sea Terminal. Ship departures and arrivals for all facilities will be coordinated by the Harbour Master as is the normal practice.
- 27.14 The Applicant has undertaken two navigation simulation studies at the South Tyneside Marine College; the Harbour Master attended both. Simulations undertaken in November 2010 are reported in Annex 14.3 of the ES. Further simulations undertaken in March 2012 are reported in Supplementary Report (EX 14.4) included in the volume of supplementary environmental information accompanying these comments. Berthing and unberthing onto the AMEP can both be undertaken safely with vessels on adjacent AMEP berths. Use of the specialist berth at the southern end of AMEP is proposed to be tidally restricted to ensure its safe use.
- 27.15 The Land Plans included in the application include provision for temporary access along the sea wall to the south of AMEP. This was included in the event that any improvements to the sea wall were required and the Applicant expects agreement from the Environment Agency that no works are in fact required.

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Flood Risk

- 27.16 The application is accompanied by a comprehensive Flood Risk Assessment. In the absence the internal Drainage board bringing forward a scheme for the Killingholme Marshes catchment, the Applicant has included in the application proposals for a pumping station to ensure increased run-off from the development site is appropriately managed. The detailed design of the drainage scheme will be subject to approval by the Local Planning Authority in accordance with Requirement 11 of Schedule 11 of the draft DCO. Flood risk within the catchment will be improved by the development of AMEP.

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28. **SQUIRE SANDERS ON BEHALF NATIONAL GRID**

Summary of Written Representation

28.1 The Written Representation covers two issues.

28.1.1 The need for access National Grid (NG's) existing overhead line transmission infrastructure where it passes through the application site.

28.1.2 The impact of the development of wet grassland at OLHF on the integrity of three gas pipelines passing underground beneath the site.

Applicant's Comments

Access To Overhead Infrastructure

28.2 The Applicant has no intention of developing the land in a way that would interfere with NG's ability to access and maintain their overhead line infrastructure. The Applicant is discussing the drafting of a deed of easement or, alternatively, appropriate protective provisions with NG.

Underground Pipelines at OLHF

28.3 The Applicant has provided NG with detailed proposals for OLHF and they have confirmed that they can remove their objection on this point.

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29. **EVERSHEDS LLP ON BEHALF OF NETWORK RAIL**

Summary of Written Representation

- 29.1 The Written Representation covers three issues.
 - 29.1.1 The level of consultation.
 - 29.1.2 The compulsory acquisition of operational railway.
 - 29.1.3 Technical issues in relation to the operation of the railway.

Applicant's Comments

Consultation

- 29.2 In terms of process the sale of the land (by Network Rail to the Applicant) was agreed 'in principle' in January 2011 and at that time Network Rail sought to divest all of their land from the northern boundary of Immingham Port through to Ulceby. This is not the action of a body seeking to protect the concept of the 'Loop'. Some ten months later that offer was withdrawn for 'operational reasons' noting that a number of schemes, seemingly forever consigned to obscurity, were coming forward promoted by a small number of players. A record of correspondence with Network Rail is included in Table 29.1.
- 29.3 Given the current circumstances, the Applicant and Network Rail seek a pragmatic way forward and continue to have constructive discussions in reviewing a variety of options with a view to agreeing an appropriate mechanism to manage the line.

Compulsory Acquisition of Operational Railway

- 29.4 The Applicant recognises that the Port of Immingham contributes a very substantial element of UK generated rail freight (25%). That trend seems set to continue for the foreseeable future from the base position of around 120 trains per day.
- 29.5 AMEP will, if consented, provide a diverse manufacturing cluster for the burgeoning offshore wind turbine (OWT) sector and as such the development will see the relatively frequent movement of large products and components around the site and therefore across the existing railway line that bisects it. These rail crossings are needed to move outgoing products and incoming raw materials to and from the new quay(s). For example, the site will require significant quantities of steel plate that could be supplied by TATA Steelworks at Scunthorpe and be transported by rail.
- 29.6 The Applicant has sought to acquire – through either an agreed sale or through compulsory purchase powers – the land and infrastructure currently owned by Network Rail that lies beyond the Port of Immingham and is, to all intents and purposes, mothballed and has not been used for over 5 years. Alternatively the Applicant would consider a suitable lease arrangement with the owner, subject to terms and conditions being agreed that are not detrimental to the operation of AMEP.

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- 29.7 The rationale behind this approach is to ensure the effective and safe management of the railway line that enables AMEP tenants to operate effectively, retaining the benefit of the line whilst being able to cross it at regular intervals. In this regard it is crucial to understand that the nature of the manufacturing site proposed means that it produces very large and heavy units that need to be moved using specialist equipment that operate on flat ground. Private ownership of the line would enable proportionate arrangements regarding crossing points that reflect rail use and the (effective if not actual) speed limit. Thus, in private ownership level crossings can be used instead of the grade separated crossings necessary on Network Rail track that they say are necessary should the line remain under their direct management.
- 29.7.1 The development of the Able Marine Energy Park (AMEP) has been seen by a small number of players as a project that has the potential to conflict with their own proposed initiatives. These include development proposals by ABP Port of Immingham, C.Ro Killingholme, C.Gen Power Station as well as indirect adverse effects on Centrica's Brigg Biomass power station and power stations in the Aire Valley). The possibility is also raised that AMEP adversely affects the longer term possibility of re-instating the 'Killingholme Loop'. These projects are explained below and the impact of AMEP assessed:-
- 29.7.2 ABP, in seeking to provide a large-scale solid fuel importation facility (HIT 3), have identified a necessity to create a Headshunt that would allow the efficient flow of trains in and out of the new facility. It has been pre-supposed that the AMEP development would preclude that opportunity. However there is a very simple solution and had ABP consulted with the Applicant, a significant amount of expense and confusion would have been avoided. The Applicant is prepared to remove the relevant land parcels, required by ABP for the Headshunt, from the scope of the compulsory purchase powers it is seeking to obtain. If leasing of the track is possible, then track that is needed for the Headshunt, as shown on current drawings, can be excluded from any agreement discussed with Network Rail, to the south of Station Road.
- 29.7.2.1 The Applicant will require assurances that the Headshunt will not adversely affect the movement of trains from AMEP, C.Ro-C.Gen or Able Logistics Park on to the main Network via ABP Immingham Dock.
- 29.7.3 C.Gen is proposing to develop a 470MW power station which we understand is intended to be operated initially as a Combined Cycle Gas Turbine and perhaps subsequently as an Integrated Gasification Combined Cycle Plant. It is understood that the latter would require solid fuel – almost certainly coal but possibly biomass. C.Gen have stated in their consultation documents that the supply of fuel would, on a worst case basis, give rise to a maximum of five 'half' trains per day – 10 train paths – transporting the solid fuels (probably) from Immingham Dock. In the event that C.Gen submit an application and an ES is produced the Applicant will respond in detail with regard to the likely effect of the proposals on AMEP and in particular the likely impacts of Coal fired power generation on the development of the South Humber Bank. In the meantime, and without prejudice to their comments on the final submitted scheme, the Applicant believes that, subject to appropriate dust mitigation measures being agreed, the proposed movements will not adversely impact upon the operations at AMEP.
- 29.7.3.1 The Applicant will seek to agree with C.Gen an agreement to maintain the existing access rights of C.Ro/C.Gen and to establish an appropriate mechanism

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to manage the same, noting that a mutual objective will be to minimise inconvenience for both site and train operators.

- 29.7.4 C.Ro (the former Humber Sea Terminal) operate six finger Ro-Ro quays to the immediate north of the AMEP site. The Applicant understands that a Rail Connection Agreement exists between C.Ro and Network Rail – the Applicant has not however had sight of such a document, despite a number of requests to both parties. During communications with C.Ro, the Applicant has been at pains to point out that, in principle, and subject to reviewing the actual documentation, those access rights would be maintained in the event that the Applicant either obtains the freehold of the land or is able to agree a lease arrangement with Network Rail.
- 29.7.4.1 The Applicant will seek to agree with C.Ro an agreement to maintain the existing access rights of C.Ro and to establish an appropriate mechanism to manage the same, noting that a mutual objective will be to minimise inconvenience for both site and train operators.
- 29.7.5 It is not anticipated that the Ro-Ro activities at C.Ro will generate a significant increase in rail activity – noting, of course that the last commercial train to have crossed the line was in 2007. The quays, rather than being suitable for bulk products, are designed for accompanied Ro-Ro traffic destined for onward transmission by road.
- 29.7.6 The Killingholme Loop is a published development proposal of Network Rail. It has been an aspiration almost since the time that the Beeching review removed the original track back in the 1960s. The Loop would provide a type of circuit running from the main network, through ABP Immingham, AMEP and C.Ro and through the Able Logistics Park to the immediate north. From there an effective 'new' build would complete the loop – via Goxhill – back on to the main network. The construction of the Loop would represent a significant challenge in terms of commercial realities (the NR cost estimate, which excluded the necessary upgrade to the Barton branch is £40m), and also in the context of planning and ecological issues. The land of the redundant line has provided an safe habitat for protected species and the existing line passes **through** the Humber Estuary SPA/SAC/ site and the North Killingholme Haven Pits SSSI which, of course, enjoys legal protection from disturbance, almost certainly limiting the speed of any train passing through. As NR have advised in response to the Examiners questions, the scheme is not currently financially viable.
- 29.7.7 More recently (July 2012) the Humber Local Enterprise Partnership concluded that the Loop would not feature in their on-going priorities for future public sector transport funding.
- 29.8 In conclusion the Loop may well remain a worthy aspiration but its delivery and funding will also remain as only a remote and academic possibility. On the other hand, the realistic aspirations of current users can be accommodated if AMEP is consented. In the view of the Applicant the proposed AMEP development should not be jeopardised for a project that has little chance of funding, or no chance at all, of delivery in the foreseeable future. Indeed, there is an inherent contradiction in the case for the Loop. Rail freight is a service industry and the Loop is justified on the basis of its potential to serve the port industry on the South Humber Bank. Perversely it could now become a barrier to the development of the very industry it is meant to serve; surely an unintended consequence of an otherwise rational idea.

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Operation of the Railway

- 29.9 Operational issues covered in the Written Representation are addressed within Appendix WR22.3

Summary

- 29.10 In summary of the above the Applicant proposes the following:-
- 29.10.1 Removal of the relevant land parcels, required by ABP for the Headshunt, from the scope of the compulsory purchase powers the Applicant is seeking to obtain. If leasing of the track is possible, then track that is needed for the Headshunt, as shown on current drawings, can be excluded from any agreement discussed with Network Rail.
- 29.10.2 An agreement with C.Ro/C.Gen to maintain the existing access rights of C.Ro and establish an appropriate mechanism to manage the same.
- 29.10.3 An agreement with Network Rail for the appropriate management of the line taking into account its particular characteristics.

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Table 29.1 - Network Rail Correspondence

Date	Type	Participants	Subject
11-Aug-10	Meeting	Neil Etherington (AHPL) Richard Cram (AHPL) Mike Stancliffe (NR) John McCormack (NR)	Introduction of AMEP proposals
17-Aug-10	Meeting	Neil Etherington (AHPL) Mike Stancliffe (NR) John McCormack (NR)	Follow-up to introductory meeting
08-Dec-10	Meeting	Peter Stephenson (AHPL) David Bowden (NR – Land Agent)	Opening commercial discussion
7-Jan-11	E - Mail	David Bowden (NR – Land Agent)	Confirms agreement 'in-principle' to sell the Network Rail Land to AHPL
10-Oct-11	E - Mail	David Bowden (NR – Land Agent)	For operational reasons we are no longer able to a disposal of the 'mothballed' line
14-Oct-11	Meeting	Peter Stephenson (AHPL) David Bowden (NR – Land Agent)	DB explains intervention of HST and ABP
08-Dec-11	Meeting	Peter Stephenson (AHPL) David Bowden (NR – Land Agent)	Land purchase
22-Feb-12	E - Mail	David Bowden (NR – Land Agent) to Peter Stephenson (AHPL)	Proposal to divert line - offer of meeting
22-Feb-12	E - Mail	Peter Stephenson (AHPL) to David Bowden (NR – Land Agent)	Meeting Request
27-Mar-12	Telecon	Neil Etherington (AHPL) to Mike Stancliffe (NR)	Query re progress – NR 'under the impression' that AHPL wishes to close the line, have no intention of agreeing with HST and that there had been no safety case/discussions on safety
27-Mar-12	E - Mail	Neil Etherington (AHPL) to Mike Stancliffe (NR)	AHPL confirms that line would be retained and that AMEP wishes to use it; will continue HST rights and is seeking to reach an agreement and Safety issues had been discussed with ORR –

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			Meeting requested
13-Apr-12	E - Mail	Neil Etherington (AHPL) to Mike Stancliffe (NR)	Repeat meeting request – NR response 'awaiting legal advice'
3-May-12	E - Mail	Mike Stancliffe (NR)	To protect HST NR cannot sell the land. Three Options: diversion; bridging; land becomes a private siding under HST control
3-May-12	E - Mail	Peter Stephenson (AHPL)	Comments on the above: diversion has major practical issues; bridging not appropriate for large structures crossing; 'high level' meeting request
8-May-12	E - Mail	Mike Stancliffe (NR)	Issue of HST rights highlighted in August 10.
17-May-12	Meeting	Peter Stephenson (AHPL) Neil Etherington (AHPL) Mike Stancliffe (NR)	Agreed major practical issues and costs re diversion; the Immingham Network has limited capacity; HST should have been paying an annual fee for their agreement but that was not the issues – reaching agreement – AHPL/NR/HST was a mutual objective. A private line would have less stringent restrictions to enable the type of crossings required. Until such a time as HST was resolved NR would continue to object. AHPL requests copy of the HST/NR agreement (previously rejected on a number of occasions.
13-Jun-12	E - Mail	Neil Etherington (AHPL) to Mike Stancliffe (NR)	Confirms discussion of the same day: AHPL still pursuing HST (meeting planned later that week); AHPL will retain line as operational; need for multiple crossing points;
15-Jun-12	E - Mail	Mike Stancliffe (NR) to Neil Etherington (AHPL)	NR had 'tracked down' HST agreement – an 'old agreement' any new arrangement would be in the modern format (see NR website). Note: the original agreement is still unseen
12-Jul-12	Meeting	Mike Stancliffe (NR) Neil Etherington (AHPL)	Short meeting at DCO hearing: MS raised possibility of a Lease to AHPL
18-Jul-12	E - Mail	Mike Stancliffe (NR) to Neil Etherington (AHPL)	Lease proposal – AHPL could become a Licensed Network Operator; crossings the issue; need for bridges; likely intervention by ORR prohibiting 'multiple' crossings

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23-Jul-12	E - Mail	Neil Etherington (AHPL) to Mike Stancliffe (NR)	Response to Lease proposal; impracticality of tunnels/bridges; line needs to be in private ownership which could be achieved with agreement from HST; questions growth potential and appetite of any player to fund a Killingholme Loop.
1-Aug-12	Telecon	Neil Etherington (AHPL) to Mike Stancliffe (NR)	Seeking progress report – terms of a potential lease?
1-Aug-12	E - Mail	Mike Stancliffe (NR) to Neil Etherington (AHPL)	Potential Lease terms summarized: 99 years; Open Access arrangements; this option has been sent out to 'consultees'

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30. **NATURAL ENGLAND**

Summary of Written Representation

30.1 The Written Representation provided by NE focuses on the following principal topics:-

30.1.1 Impacts of the proposals on birds associated with the SPA/SAC/Ramsar site;

30.1.2 Impacts on the designated habitats protected;

30.1.3 Compensation provision and its sustainability (Cherry Cobb Sands and Old Little Humber Farm).

Applicant's Comments

30.2 Because of the constraints of the Examination Timetable, NE in common with all other parties had to submit its Written Representation without sight of the Applicant's Responses to the Relevant Representations and accompanying volumes of supplementary information. These documents contained a substantial amount of clarification and additional information, and had been scoped in detailed consultation with NE as part of the series of Ecology meetings referred to in NE's Written Representation. Accordingly, many issues set out in NE's Written Representation have already been addressed.

30.3 NE has also, in conjunction with the MMO and the EA, prepared and entered into a Statement of Common Ground with the Applicant, which details matters which were agreed as of 27th July 2012, and presents the cases of both parties where matters remained at issue at that date. It is not considered necessary to repeat that information here. With this in mind, this commentary on NE's Written Representation is brief, and focuses on points known to be still at issue.

Quantum of Habitat Lost

30.4 NE has questioned the statements made in the application setting out the quantum of habitat to be lost through indirect effects of the quay, in the context of further work commissioned by the EA (the Deltares Report). The Applicant has prepared and submitted a series of explanatory reports detailing further modelling conducted by the Applicant and its consultants (EX 8.5-8.10 in the volume of supplementary information). The results of the work set out in these reports also provided input into two further reports (EX 11.23 and 11.24) which detail the Applicant's updated and revised assessment of the quantum of habitat to be lost due to the application. It is believed that the clarification provided by these notes gives a more comprehensive understanding of the impacts of the project.

30.5 Further and more detailed commentary on the positions both of the Applicant and NE is set out in the SoCG between the two parties.

Cherry Cobb Sands Design

30.6 NE has correctly stated that the extent of modelling and design completed by the Applicant and its consultant at the time of the Written Representation left doubt that a suitable quantum of compensatory habitat would be developed at Cherry Cobb Sands, on the basis of the design then proposed. NE also noted that design work was ongoing, and that further iterations of design would be produced by Black & Veatch.

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- 30.7 Included as Appendix WR9.1 to this document is the Second Interim Design Report produced by Black & Veatch. This sets out modified design details for Cherry Cobb Sands, and the quanta of habitat expected to develop. As a result of improvements to the design and layout of the site, this report indicates that a suitable amount of compensatory habitat can be generated and sustained on the site with reasonable confidence. The Applicant believes that this design could substantially resolve NE's concerns regarding the sufficiency and deliverability of compensatory intertidal habitat.

Old Little Humber Farm Design

- 30.8 NE had not, at the time of the Written Representation, been presented with a final design for OLHF. It has raised concerns that the creation of wet grassland on the site would '*require very substantial engineering works to raise water levels*' and would '*not be capable of supporting displaced birds at the time of predicted mudflat loss.*'
- 30.9 The Applicant submitted a completed design report for Old Little Humber Farm in its volume of supplementary information (EX 28.2) – it has since provided supplementary reports to NE giving more details on the hydrological regime and biomass conditions on the site, in support of the design set out in EX 28.2. The Applicant has yet to receive NE's comments on this design.

Disturbance to Humber Estuary SPA/Ramsar waterbirds

- 30.10 Further to NE's comments in its WR, this matter is addressed in detail in the SoCG. The Applicant's assessment of the functional loss arising from disturbance is clarified in Explanatory Note EX 11.23, included in the volume of supplementary information.

Berthing pocket construction

- 30.11 NE has expressed concern regarding the construction of the berthing pocket and the effect this will have in terms of habitat loss and requirement for compensation. The applicant has submitted an Explanatory Note EX 10.6 clarifying this issue. This report was not available to NE during the preparation of its Written Representation, but has now been provided; the SoCG records NE's view that construction of the berthing pocket will not give rise to a significant effect.

Mitigation for Great Crested Newts

- 30.12 As NE sets out clearly, the Applicant has submitted a draft licence application for its proposed GCN mitigation works, received NE's comments, and resubmitted a revised draft application, addressing the issues raised by NE. The Applicant received NE's further comments on the draft on 24th July 2012 (refer to Appendix WR22.1), and is now working to address those comments for the submission of third draft; the Applicant does not consider any of the comments raised by NE on the second draft to present significant difficulties to overcome, and it is hoped that NE will on consideration of the third draft feel able to issue a letter of comfort.

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General

- 30.13 The Applicant and Natural England have continued to meet on a regular basis throughout the examination period, working together to resolve issues. In this way, the SoCG has been achieved and good progress has been made on a wide range of matters. The Applicant and Natural England continue to work together in this way.

	ABLE MARINE ENERGY PARK APPLICANT COMMENTS ON THE WRITTEN REPRESENTATIONS	AUGUST 2012

31. **GARRY LYONS ON BEHALF OF STONE CREEK BOAT CLUB**

Summary of Written Representation

- 31.1 Further to the Relevant Representation submitted on 30th March 2012, this written representation repeats the concerns of Stone Creek Boat Club regarding the siltation and sedimentary regime at Stone Creek and the impact thereof on the navigation out into the Humber Estuary.

Applicant's Comments

Silting up of Stone Creek

- 31.2 The computer model used to predict sedimentation local to Stone Creek is based upon the model created by JBA for the main site (Annex 8.1 of the ES). The original model extends significantly up and downstream of the sites to ensure sufficient tidal flows are included. Paragraph 2.2 of Annex 8.1 details data collated to create the model.

- 31.3 The Applicant's response to this correspondent, and to Mr Taylor's Relevant Representation, addressed this concern and, for ease of reference, the response to those is reproduced below.

"19.6 The impact of the scheme on sedimentation in Stone Creek is assessed in Annex 32.4, Section 4.5 of the ES. Siltation is not expected to change as a consequence of the scheme. Nevertheless, an effect cannot be excluded due to the uncertainty attached to hydrodynamic modelling. Accordingly paragraph 4.5.5 of the ES recommends monitoring of sediment levels. Routine maintenance dredging is currently undertaken. It is considered that there is only a slight risk that the frequency of dredging operations increases due to the scheme."

- 31.4 Since the responses were submitted, a Statement of Common Ground (SoCG) has been prepared between the Applicant and the local Internal Drainage Boards (Thorngumbald, Keyingham and Ottringham). The SoCG records the Applicants agreement to undertake appropriate monitoring of siltation within Stone Creek and that "(i)f the development of Cherry Cobb Sands is found to be causing siltation above the baseline AHPL agrees to make a proportional contribution towards the routine dredging activity", (SoCG page 12).

Existence of the Intertidal Drainage Channel

- 31.5 A digital terrain ground model (DTM) for the computer modelling was created by combining bathymetry from the 2010 ABP navigation chart, the LiDAR flown in 2007 by the Environment Agency and a 2010 topographic survey of the Compensation Site and adjacent features. This model is presented as Figure 3 in Annex 32.2 of the ES. The figure clearly shows the drainage channel the Objector has noted as being only visible from aerial photography.

Navigation

- 31.6 The correspondent refers to Annex 14.2 of the ES. Stone Creek Boat Club was not ignored in the review of berths and moorings, it should be noted that the paragraph referred to in the ES does state that information was not available for all marinas/clubs at the time of writing.

	ABLE MARINE ENERGY PARK APPLICANT COMMENTS ON THE WRITTEN REPRESENTATIONS	AUGUST 2012

APPENDICES

Mike

File 2 of 2 attached – appendices.

Kind regards

LESLIE HUTCHINGS

Able UK Ltd
Able House
Billingham Reach Industrial Estate
Billingham
Teesside TS23 1PX
Tel: XXXX
Fax: XXXX
Email: XXXX
Web: www.ableuk.com & www.ableshiprecycling.com

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	ABLE MARINE ENERGY PARK APPLICANT COMMENTS ON THE WRITTEN REPRESENTATIONS	AUGUST 2012

APPENDICES

 The logo for Able Marine Energy Park (amep) features a stylized circular graphic with concentric arcs in red and blue, resembling a target or a wave. Below the graphic, the text 'amep' is written in a bold, lowercase, sans-serif font. Underneath 'amep', the full name 'able marine energy park' is written in a smaller, lowercase, sans-serif font.	ABLE MARINE ENERGY PARK APPLICANT COMMENTS ON THE WRITTEN REPRESENTATIONS	AUGUST 2012

**APPENDIX WR1.1
Revised Draft Development Consent Order**

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Regulation 5(2)(b)

Document reference: TR030001/DCO/3

**The proposed Able Marine Energy Park
Draft Development Consent Order**

3 August 2012

Revision: 3

Bircham Dyson Bell

2012 No. XXXX

INFRASTRUCTURE PLANNING

HARBOURS, DOCKS, PIERS AND FERRIES

**The Able Marine Energy Park
Development Consent Order 2013**

<i>Made</i>	- - - -	2013
<i>Coming into force</i>	- -	2013

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Able has applied for an order granting development consent to the Infrastructure Planning Commission in accordance with the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009.

the application was examined by an Examining authority under Part 4 of the Planning Act 2008(a);

the Examining authority has considered the application and the relevant representations made in relation to it, and has reported its recommendation to the Secretary of State as decision-maker under section [74(2)(b) / 83(2)(b)] of that Act;

the decision-maker has decided under section 104 of that Act to make an order granting development consent;

(a) 2008 c. 29, as amended

the decision-maker makes the following Order under section 114 of that Act.

PART 1

PRELIMINARY

Citation and Commencement

1. This Order may be cited as the Able Marine Energy Park Development Consent Order 2013 and shall come into force the day on which it is made.

Interpretation

2.—(1) In this Order—

“the 1847 Act” means the Harbours, Docks and Piers Clauses Act 1847(a);

“the 1961 Act” means the Land Compensation Act 1961(b);

“the 1965 Act” means the Compulsory Purchase Act 1965(c);

“the 1980 Act” means the Highways Act 1980(d);

“the 1984 Act” means the Road Traffic Regulation Act 1994(e);

“the 1990 Act” means the Town and Country Planning Act 1990(f);

“the 1991 Act” means the New Roads and Street Works Act 1991(g);

“the 2008 Act” means the Planning Act 2008(h);

“AB Ports” means Associated British Ports, company number ZC000195, registered at 79-91 Aldwych, London WC2B 4HN;

“area of jurisdiction” means the area shown bounded by the line described as ‘boundary of jurisdiction of the Harbour Authority’ on the plan at Schedule 10; and in the following provisions of this Order, references to the limits of the harbour shall be construed as references to the limits so shown;

“area of seaward construction activity” means the area of the sea within the Order limits shown on the land plan;

“authorised development” means the development and associated development described in Schedule 1 (authorised development) and any other development authorised by this Order, being development within the meaning of section 32 of the 2008 Act;

“the book of reference” means the book of reference certified by the decision-maker as the book of reference for the purposes of this Order;

“building” includes any structure or erection or any part of a building, structure or erection;

“carriageway” has the same meaning as in the 1980 Act;

“the Company” means Able Humber Ports Limited, company number 107029, registered at Ogier House, The Esplanade, St Helier, Jersey, JE4 9WG;

“the compensation environmental management and monitoring plan” means the plan certified as the compensation environmental management and monitoring plan by the decision-maker for the purposes of this Order;

-
- (a) 1847 (10 & 11 Vict) c. 27, as amended at the date of the coming into force of this Order
(b) 1961 c. 33, as amended at the date of the coming into force of this Order.
(c) 1965 c. 56, as amended at the date of the coming into force of this Order
(d) 1980 c. 66, as amended at the date of the coming into force of this Order.
(e) 1984 c. 27, as amended at the date of the coming into force of this Order.
(f) 1990 c. 8, as amended at the date of the coming into force of this Order.
(g) 1991 c. 22, as amended at the date of the coming into force of this Order.
(h) 2008 c. 29, as amended at the date of the coming into force of this Order.

“the Conservancy Authority” means AB Ports Humber Estuary Services in its role as harbour authority for the Humber Conservancy;

“compulsory acquisition notice” means a notice served in accordance with section 134 of the 2008 Act;

“the Crown land plan” means the plan certified as the Crown land plan by the decision-maker for the purposes of this Order;

“the decision-maker” has the same meaning as in section 103 of the 2008 Act;

“the dockmaster” means the dockmaster appointed by the Harbour Authority under this Order;

“the design drawings” means the design drawings submitted under regulation 5(2)(o) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 and certified as the design drawings by the decision-maker for the purposes of this Order;

“an environmental management and monitoring plan” means the compensation environmental management and monitoring plan, the marine environmental and monitoring plan or the terrestrial environmental management and monitoring plan;

“harbour” means the authorised development within the area of jurisdiction, and includes all other works, land, buildings, ancillary works, plant, property and conveniences connected with it, as from time to time existing;

“the Harbour Authority” means the Company in its capacity as harbour authority established by article 7 (jurisdiction of the Harbour Authority);

“the harbour master” means the harbour master appointed by AB Ports to be a harbour master for an area that includes the area of jurisdiction and includes the harbour master’s deputies and assistants;

“the heritage plan” means the plan certified as the heritage plan by the decision-maker for the purposes of this Order;

“highway” and “highway authority” have the same meaning as in the 1980 Act;

“the land plan” means the plan certified as the land plan by the decision-maker for the purposes of this Order;

“level of high water” means the level of mean high-water springs;

“maintain” includes inspect, repair, adjust, alter, remove, reconstruct or replace the authorised development and any derivative of “maintain” shall be construed accordingly;

“the marine environmental management and monitoring plan” means the plan referred to at paragraph 13 of Schedule 8;

“Network Rail” means Network Rail Infrastructure Ltd, company number 02904587 registered at King’s Place, 90 York Way, London N1 9AG;

“Order land” means the land shown on the land plan which is within the boundary of land required for or affected by the proposed development, and described in the book of reference;

“the Order limits” means the limits shown as such on the works plan, and are the limits within which the development and works may be carried out;

“owner”, in relation to land, has the same meaning as in section 7 of the Acquisition of Land Act 1981(a);

“relevant planning authority” means the local authority for the area in which the relevant land to which the provisions of this Order apply is situated;

“requirement” means the corresponding paragraph of Schedule 11;

“the rights of way plan” means the plan certified as the rights of way plan by the decision-maker for the purposes of this Order;

(a) 1981 c. 67, as amended at the date of the coming into force of this Order.

“statutory undertaker” means any person falling within section 127(8), 128(5) or 129(2) of the 2008 Act;

“street” means a street within the meaning of section 48 of the 1991 Act, together with land on the verge of a street or between two carriageways, and includes part of a street;

“street authority”, in relation to a street, has the same meaning as in Part 3 of the 1991 Act;

“the terrestrial environmental management and monitoring plan” means the plan referred to at paragraph 2 of Schedule 9;

“tidal work” means so much of any work authorised by this Order as is on, under or over tidal waters or tidal lands below the level of high water;

“tree preservation order” has the meaning given in section 198 of the 1990 Act;

“the tribunal” means the Lands Chamber of the Upper Tribunal;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“the undertaker” means the person who has the benefit of this Order in accordance with section 156 of the 2008 Act and articles 11 and 12;

“the undertaking” means the harbour undertaking of the undertaker as authorised from time to time;

“vessel” means every description of vessel or water-borne structure, however propelled, moved or constructed, and includes displacement and non-displacement craft, personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over or placement in water and which is at the time in, on or over water;

“watercourse” includes all rivers, streams, ditches, drains, canals, cuts, culverts, dykes, sluices, sewers and passages through which water flows except a public sewer or drain; and

“the works plan” means the plan certified as the works plan by the decision-maker for the purposes of this Order.

(2) References in this Order to rights over land include references to rights to do or to place and maintain, anything in, on or under land or in the air-space above its surface.

(3) All distances, directions and lengths referred to in this Order are approximate and distances between points on a work comprised in the authorised development shall be taken to be measured along that work.

Incorporation of the Harbours, Docks and Piers Clauses Act 1847

3.—(1) With the exception of sections 6 to 23, 25, the proviso to section 28, section 31, the proviso to section 32, sections 35, 36, 38, 39, 42, 43, 45, 48 to 50, 53 to 55, 59 to 64, 66 to 69, 71 to 73, 76 and 79 to 90, 92, 97, 98 and 102, the 1847 Act is incorporated in this Order subject to the modifications stated in paragraph (2).

(2) In construing the 1847 Act as so incorporated—

- (a) the expression “the special Act” means this Order;
- (b) the expressions “the Promoters of the undertaking” and “the undertakers” mean the undertaker;
- (c) the expression “the harbour, dock or pier” means the authorised development within the area of jurisdiction;
- (d) the expressions “limits” and “prescribed limits” mean the area of jurisdiction;
- (e) the expression “near the pier” does not extend beyond the area of jurisdiction;
- (f) the expression “the harbour master”, in relation to the authorised development means the harbour master as defined in article 2;
- (g) the definition of “vessel” in article 2(1) shall be substituted for the definition in section 3 of the 1847 Act; and

- (h) any requirement to comply with a notice or direction given by the harbour master shall be construed as including a requirement that, in complying with such notice or direction, a person who is subject to the notice or direction shall also comply with any relevant notice or direction given by AB Ports or the harbour master in the exercise by either or both of them of any function conferred by or under any enactment (including this Order).

Modification of enactments

4.—(1) Sections 25 and 26 of the River Humber Conservancy Act 1852^(a), section 9 (licences for execution of works) of the Humber Conservancy Act 1899^(b) and section 6(2) (no erections in Humber below river lines or without licence above river lines) of the Humber Conservancy Act 1905^(c) do not apply to the authorised development.

(2) The requirement to obtain consent under section 23(1) of the Land Drainage Act 1991^(d) does not apply to the authorised development.

PART 2

PRINCIPAL POWERS

Development consent etc. granted by the Order

5.—(1) Subject to the provisions of this Order and to the requirements in Schedule 11 (requirements) the undertaker is granted development consent for the authorised development, to be carried out within the Order limits.

(2) Subject to article 5A (limits of deviation) the authorised development comprising the works described in Schedule 1 shall be constructed in the lines and situations shown on the works plan and the levels shown on the sections.

Limits of deviation

5A. In carrying out the authorised development the undertaker may—

- (a) deviate laterally from the lines or situations of the authorised development shown on the works plan to the extent of the limits of deviation shown on the plans; and
- (b) deviate vertically from the levels of the authorised development shown on the sections—
 - (i) to any extent not exceeding 1 metre upwards; or
 - (ii) to any extent downwards as may be found necessary or convenient.

Period for completion of work

6. If the authorised development is not completed within ten years from the coming into force of this Order or such extended time as the decision-maker may on the application of the undertaker allow, then on the expiration of that period or such extended time (as the case may be) the rights granted by this Order to the undertaker for making and maintaining the works shall cease except as to so much of them as is then substantially commenced.

(a) 1852 c. cxxx, as amended at the date of the coming into force of this Order.

(b) 1899 c. cci, as amended at the date of the coming into force of this Order.

(c) 1905 c. clxxix, as amended at the date of the coming into force of this Order.

(d) 1991 c. 59, as amended at the date of the coming into force of this Order

Jurisdiction of the Harbour Authority

7.—(1) Without prejudice to the functions of AB Ports exercisable within its limits, the Company shall be the harbour authority for the area of jurisdiction.

(2) Without prejudice to any provision of the 1847 Act as incorporated by article 3 (incorporation of the Harbours, Docks and Piers Clauses Act 1847), the area within which the Harbour Authority and the dockmaster may exercise their functions under this Order shall be the area of jurisdiction.

(3) The jurisdiction of the Harbour Authority over vessels within the area of jurisdiction shall not extend to—

- (a) any vessel unless it is at anchor or otherwise moored or is causing an obstruction within the area of jurisdiction; or
- (b) signalling or any other activity connected with the movement of the vessel.

(4) Where any person referred to in paragraph (5)(a) considers that there is an actual or anticipated conflict between—

- (a) the exercise of any function of any person mentioned in paragraph (5)(a); and
- (b) the exercise of any function of any person mentioned in paragraph (5)(b),

then that person may give notice to the relevant person in paragraph (5)(b).

(5) The persons referred to in paragraph (4) are—

- (a) AB Ports and the harbour master; and
- (b) the Harbour Authority and the dockmaster.

(6) The notice referred to in paragraph (4) shall set out any requirements concerning the exercise of the relevant function by the relevant person mentioned in paragraph (5)(b).

(7) The requirements referred to in paragraph (6) may—

- (a) make general provision in relation to the exercise of functions over time; or
- (b) make specific provision about the exercise of a particular function or functions on a particular occasion.

(8) If—

- (a) a notice sets out requirements falling within paragraph (7)(a) it must be made in writing; and
- (b) a notice sets out requirements falling within paragraph (7)(b) it may be made in writing or an any other manner considered appropriate by the person giving the notice.

(9) On receipt of a notice given under paragraph (4), the recipient of the notice shall comply with the notice.

(10) Save where expressly provided elsewhere in this Order, no person mentioned in paragraph (5)(b) is obliged to seek any permission or otherwise notify any person mentioned in paragraph (5)(a) prior to exercising any function.

(11) Subject to the requirements of any notice given under paragraph (4), the functions of the Harbour Authority and the dockmaster shall be exercised in accordance with Part 2 of Schedule 9 (for the protection of AB Ports).

Agreements entered into by Company, etc.

8. Any agreement or undertaking entered into by the Company before the coming into force of this Order in connection with the proposed exercise of its functions as Harbour Authority shall be binding upon the Harbour Authority notwithstanding that it was entered into by the Company before it was established as a Harbour Authority by article 7 (jurisdiction of the Harbour Authority) unless any provision of the agreement or undertaking could not be entered into by the Company once established as a Harbour Authority.

Maintenance of authorised development

9. The undertaker may at any time maintain the authorised development and within the limits of the harbour, from time to time relay temporarily or permanently the authorised development, except to the extent that this Order or an agreement made under it provides otherwise.

Provision of works

10.—(1) The undertaker may from time to time within the area of jurisdiction provide and operate such harbour facilities, together with works ancillary to those facilities, as may be necessary or convenient for the construction of the authorised development or the operation of the undertaking, and for this purpose the undertaker may construct and maintain roads, railway lines, buildings, sheds, offices, workshops, depots, walls, foundations, fences, gates, tanks, pumps, conduits, pipes, drains, wires, mains, cables, electrical substations, signals, conveyors, cranes, container handling equipment, lifts, hoists, lighting columns, weighbridges, stairs, ladders, stages, platforms, catwalks, equipment, machinery and appliances and such other works and conveniences as may be necessary or expedient.

(2) Without prejudice to paragraph (1) the undertaker may within the Order limits carry out and maintain such other works as may be necessary or convenient for the purposes of, or in connection with or in consequence of, the construction, maintenance or use of the authorised development, including—

- (a) works for the accommodation or convenience of vessels (including but not limited to berthing heads, mooring posts, ladders, buoys, bollards, dolphins, fenders, rubbing strips and fender panels, fender units and pontoons);
- (b) works to divert, remove or replace apparatus, including mains, sewers, drains, pipes, conduits, cables, electrical substations and electrical lines; and
- (c) landscaping and other works to mitigate any adverse effect of the construction, maintenance and operation of the works or to benefit or protect any person or premises affected by the construction, maintenance and operation of the works.

(3) Article 3 of, and Part 17 in Schedule 2 to, the Town and Country Planning (General Permitted Development) Order 1995^(a) shall apply as if this Order were a grant of planning permission.

Benefit of Order

11. Subject to article 12 (consent to transfer benefit of Order), the provisions of this Order shall have effect solely for the benefit of the Company.

Consent to transfer benefit of Order

12.—(1) The undertaker may, with the consent of the Secretary of State—

- (a) transfer to another person (“the transferee”) any or all of the benefit of the provisions of this Order and such related rights as may be agreed between the undertaker and the transferee; or
- (b) grant to another person (“the lessee”) for a period agreed between the undertaker and the lessee any or all of the benefit of the provisions of this Order and such related rights as may be so agreed.

(2) The powers of paragraph (1)(a) may only be exercised by the Company or a transferee.

(3) A lessee (“the granting lessee”) may not make a grant under paragraph (1)(b)—

- (a) for a longer period than the period of the grant to the granting lessee; or
- (b) conferring any benefit or right that is not conferred by the grant to the granting lessee.

(a) SI 1995/418, as amended at the date of the coming into force of this Order.

(4) Where an agreement has been made in accordance with paragraph (1), references in this Order to the undertaker, except in paragraph (3), shall include references to the transferee or the lessee.

(5) The exercise by a person of any benefits or rights conferred in accordance with any transfer or grant under paragraph (1) shall be subject to the same restrictions, liabilities and obligations as would apply under this Order if those benefits or rights were exercised by the undertaker.

(6) Before giving consent under this article, the Secretary of State shall consult such parties as the Secretary of State thinks appropriate.

PART 3

STREETS

Street works

13.—(1) The undertaker may, for the purposes of the authorised development, enter on so much of any of the streets specified in Schedule 2 (streets subject to street works) as is within the Order limits and may—

- (a) break up or open the street, or any sewer, drain or tunnel under it;
- (b) tunnel or bore under the street;
- (c) place apparatus in the street;
- (d) maintain apparatus in the street or change its position; and
- (e) execute any works required for or incidental to any works referred to in sub-paragraphs (a), (b), (c) and (d).

(2) The authority given by paragraph (1) is a statutory right for the purposes of sections 48(3) (streets, street works and undertakers) and 51(1) (prohibition of unauthorised street works) of the 1991 Act.

(3) The provisions of sections 54 to 106 of the 1991 Act apply to any street works carried out under paragraph (1).

(4) In this article “apparatus” has the same meaning as in Part 3 of the 1991 Act.

Temporary stopping up of streets

14.—(1) The undertaker, during and for the purposes of carrying out the authorised development, may temporarily stop up, alter or divert any street and may for any reasonable time—

- (a) divert the traffic from the street; and
- (b) subject to paragraph (2), prevent all persons from passing along the street.

(2) The undertaker shall provide reasonable access for pedestrians, and where reasonably practicable vehicles, going to or from premises abutting a street affected by the temporary stopping up, alteration or diversion of a street under this article if there would otherwise be no such access.

(3) Without prejudice to the generality of paragraph (1), the undertaker may temporarily stop up, alter or divert the streets specified in columns (1) and (2) of Schedule 3 (streets to be temporarily stopped up) to the extent specified, by reference to the letters and numbers shown on the rights of way plan, in column (3) of that Schedule.

(4) The undertaker shall not temporarily stop up, alter or divert—

- (a) any street specified as mentioned in paragraph (3) without first consulting the street authority; and
- (b) any other street without the consent of the street authority which may attach reasonable conditions to any consent.

(5) Any person who suffers loss by the suspension of any private right of way under this article shall be entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

Access to works

15.—(1) The undertaker may, for the purposes of the authorised development—

- (a) form and lay out means of access to a public highway, or improve existing means of access to a public highway, in the location specified in columns (1) and (2) of Schedule 4 (access to works); and
- (b) with the approval of the relevant planning authority after consultation with the highway authority, form and lay out such other means of access to a public highway or improve existing means of access to a public highway, at such locations within the Order limits as the undertaker reasonably requires for the purposes of the authorised development.

(2) If a relevant planning authority which receives an application for approval under paragraph (1)(b) fails to notify the undertaker of its decision before the end of the period of 28 days beginning with the date on which the application was made, it shall be deemed to have granted approval.

Agreements with street authorities

16.—(1) A street authority and the undertaker may enter into agreements with respect to—

- (a) the strengthening, improvement, repair or reconstruction of any street required as a result of the exercise of the powers conferred by this Order;
- (b) any stopping up, alteration or diversion of a street authorised by this Order; or
- (c) the carrying out in the street of any of the works referred to in article 13(1) (street works).

(2) Such an agreement may, without prejudice to the generality of paragraph (1)—

- (a) make provision for the street authority to carry out any function under this Order which relates to the street in question;
- (b) include an agreement between the undertaker and street authority specifying a reasonable time for the completion of the works; and
- (c) contain such terms as to payment and otherwise as the parties consider appropriate.

Public rights of way

17.—(1) With effect from the date of certification by the local highway authority that the agreed alternative right of way has been created to the standard defined in the implementation plan, the section of each public right of way (being a footpath) specified in columns (1), (2) and (3) of Schedule 3 (footpaths to be diverted) is extinguished.

(2) With effect from that same date, the alternative section of each footpath specified in column (4) of Schedule 5 is created.

(3) In this article—

“implementation plan” means the written plan prepared by the undertaker and approved by the local highway authority for the creation of the agreed alternative right of way to the defined standard; and

“local highway authority” has the same meaning as in section 329(1) of the 1980 Act.

PART 4

SUPPLEMENTAL POWERS

Discharge of water

18.—(1) The undertaker may use any watercourse or any public sewer or drain for the drainage of water in connection with the carrying out or maintenance of the authorised development and for that purpose may lay down, take up and alter pipes and may, on any land within the Order limits, make openings into, and connections with, the watercourse, public sewer or drain.

(2) Any dispute arising from the making of connections to or the use of a public sewer or drain by the undertaker pursuant to paragraph (1) shall be determined as if it were a dispute under section 106 of the Water Industry Act 1991^(a) (right to communicate with public sewers).

(3) The undertaker shall not discharge any water into any watercourse, public sewer or drain except with the consent of the person to whom it belongs; and such consent may be given subject to such terms and conditions as that person may reasonably impose, but shall not be unreasonably withheld.

(4) The undertaker shall not make any opening into any public sewer or drain except—

- (a) in accordance with plans approved by the person to whom the sewer or drain belongs, but such approval shall not be unreasonably withheld; and
- (b) where that person has been given the opportunity to supervise the making of the opening.

(5) The undertaker shall not, in carrying out or maintaining works pursuant to this article, damage or interfere with the bed or banks of any watercourse forming part of a main river.

(6) The undertaker shall take such steps as are reasonably practicable to secure that any water discharged into a watercourse or public sewer or drain pursuant to this article is as free as may be practicable from gravel, soil or other solid substance, oil or matter in suspension.

(7) This article does not authorise the entry into controlled waters of any matter whose entry or discharge into controlled waters is prohibited by regulation 12 of the Environmental Permitting (England and Wales) Regulations 2010^(b) (requirement for an environmental permit).

(8) In this article—

- (a) “public sewer or drain” means a sewer or drain which belongs to the Homes and Communities Agency, the Environment Agency, a harbour authority within the meaning of section 57 of the Harbours Act 1964^(c) (interpretation), an internal drainage board, a joint planning board, a local authority, a National Park Authority, a sewerage undertaker or an urban development corporation; and
- (b) other expressions, excluding watercourse, used both in this article and in the Environmental Permitting (England and Wales) Regulations 2010 have the same meaning as in those Regulations.

Protective work to buildings

19.—(1) Subject to the following provisions of this article, the undertaker may at its own expense carry out such protective works to any building lying within the Order limits as the undertaker considers necessary or expedient.

(2) Protective works may be carried out—

- (a) at any time before or during the carrying out in the vicinity of the building of any part of the authorised development; or

^(a) 1991 c.56, as amended at the date of the coming into force of this Order.

^(b) S.I. 2010/675, as amended at the date of the coming into force of this Order.

^(c) 1964 c.40, as amended at the date of the coming into force of this Order.

- (b) after the completion of that part of the authorised development in the vicinity of the building at any time up to the end of the period of 5 years beginning with the day on which that part of the authorised development is first opened for use.

(3) For the purpose of determining how the functions under this article are to be exercised the undertaker may enter and survey any building falling within paragraph (1) and any land within its curtilage.

(4) For the purpose of carrying out protective works under this article to a building the undertaker may (subject to paragraphs (5) and (6))—

- (a) enter the building and any land within its curtilage; and
- (b) where the works cannot be carried out reasonably conveniently without entering land which is adjacent to the building but outside its curtilage, enter the adjacent land (but not any building erected on it).

(5) Before exercising—

- (a) a right under paragraph (1) to carry out protective works to a building;
- (b) a right under paragraph (3) to enter a building and land within its curtilage;
- (c) a right under paragraph (4)(a) to enter a building and land within its curtilage; or
- (d) a right under paragraph (4)(b) to enter land,

the undertaker shall, except in the case of emergency, serve on the owners and occupiers of the building or land not less than 14 days' notice of its intention to exercise that right and, in a case falling within sub-paragraph (a) or (c), specifying the protective works proposed to be carried out.

(6) Where a notice is served under paragraph (5)(a), (c) or (d), the owner or occupier of the building or land concerned may, by serving a counter-notice within the period of 10 days beginning with the day on which the notice was served, require the question whether it is necessary or expedient to carry out the protective works or to enter the building or land to be referred to arbitration under article 58 (arbitration).

(7) The undertaker shall compensate the owners and occupiers of any building or land in relation to which rights under this article have been exercised for any loss or damage arising to them by reason of the exercise of those rights.

(8) Where—

- (a) protective works are carried out under this article to a building; and
- (b) within the period of 5 years beginning with the day on which the part of the authorised development carried out in the vicinity of the building is first opened for use it appears that the protective works are inadequate to protect the building against damage caused by the carrying out or use of that part of the authorised development,

the undertaker shall compensate the owners and occupiers of the building for any loss or damage sustained by them.

(9) Nothing in this article shall relieve the undertaker from any liability to pay compensation under section 10(2) of the 1965 Act (compensation for injurious affection).

(10) Any compensation payable under paragraph (7) or (8) shall be determined, in case of dispute, under Part 1 of the 1961 Act (determination of questions of disputed compensation).

(11) In this article “protective works” in relation to a building means—

- (a) underpinning, strengthening and any other works the purpose of which is to prevent damage which may be caused to the building by the carrying out, maintenance or use of the authorised development; and
- (b) any works the purpose of which is to remedy any damage which has been caused to the building by the carrying out, maintenance or use of the authorised development.

Authority to survey and investigate the land

20.—(1) The undertaker may for the purposes of this Order enter on any land shown within the Order limits or in pursuance of an environmental management and monitoring plan and—

- (a) survey or investigate the land;
- (b) without prejudice to the generality of sub-paragraph (a), make trial holes in such positions on the land as the undertaker thinks fit to investigate the nature of the surface layer and subsoil and remove soil samples;
- (c) without prejudice to the generality of sub-paragraph (a), carry out ecological or archaeological investigations on such land; and
- (d) place on, leave on and remove from the land apparatus for use in connection with the survey and investigation of land and making of trial holes.

(2) No land may be entered or equipment placed or left on or removed from the land under paragraph (1) unless at least 14 days' notice has been served on every owner and occupier of the land.

(3) Any person entering land under this article on behalf of the undertaker—

- (a) shall, if so required upon entering the land, produce written evidence of their authority to do so; and
- (b) may take with them such vehicles and equipment as are necessary to carry out the survey or investigation or to make the trial holes.

(4) No trial holes shall be made under this article—

- (a) in land located within the highway boundary without the consent of the highway authority; or
- (b) in a private street without the consent of the street authority,

but such consent shall not be unreasonably withheld.

(5) The undertaker shall compensate the owners and occupiers of the land for any loss or damage arising by reason of the exercise of the authority conferred by this article, such compensation to be determined, in case of dispute, Part 1 (determination of questions of disputed compensation) of the 1961 Act.

Right to dredge

21.—(1) The undertaker may, for the purposes of constructing and maintaining the authorised development and of affording access to the authorised development by vessels, from time to time deepen, dredge, scour, cleanse, alter and improve so much of the bed, shores and channels of the River Humber as adjoin or are near to the work and may use, appropriate or dispose of the materials (other than wreck within the meaning of Part 9 of the Merchant Shipping Act 1995) from time to time dredged by them.

(2) No such materials shall be laid down or deposited—

- (a) in contravention of the provisions of any enactment as respects the disposal of waste; or
- (b) in any place below the level of high water otherwise than in such position and under such conditions and restrictions as may be approved or prescribed by the Marine Management Organisation pursuant to Part 2 of Schedule 8 (deemed marine licence).

(3) The undertaker shall consult with the Conservancy Authority before exercising the rights conferred on them by this article.

Tidal works not to be executed without approval of Secretary of State

22.—(1) Unless its construction has commenced within five years of the coming into force of this Order, no tidal work shall be constructed, reconstructed, extended, enlarged, replaced or relaid except in accordance with plans and sections approved by the Secretary of State and subject to any conditions and restrictions imposed by the Secretary of State before that work is begun.

(2) If a tidal work is constructed, reconstructed, extended, enlarged, replaced or relaid in contravention of paragraph (1) or of any condition or restriction imposed under that paragraph—

(a) the Secretary of State may by notice in writing require the undertaker at its own expense to remove the tidal work or any part of it and restore the site to its former condition; and, if on the expiration of 30 days beginning with the date when the notice is served on the undertaker it has failed to take reasonable steps to comply with the requirements of the notice, the Secretary of State may take whatever steps the Secretary of State considers appropriate to achieve the result required by the notice; or

(b) if it appears to the Secretary of State urgently necessary so to do, the Secretary of State may remove the tidal work, or part of it, and restore the site to its former condition,

and any expenditure incurred by the Secretary of State in so doing shall be recoverable from the undertaker.

Abatement of works abandoned or decayed

23.—(1) Where a tidal work is abandoned, or suffered to fall into decay, the Secretary of State may by notice in writing require the undertaker at its own expense either to repair and restore that work or any part, or to remove that work and restore the site to its former condition, to such an extent and within such limits as the Secretary of State thinks proper.

(2) Where a work consisting partly of a tidal work and partly of works on or over land above the level of high water is abandoned or suffered to fall into decay and that part of the work on or over land above the level of high water is in such condition as to interfere or to cause reasonable apprehension that it may interfere with the right of navigation or other public rights over the foreshore, the Secretary of State may include that part of the work, or any portion of it, in any notice under this article.

(3) If the undertaker fails to comply in any respect with a notice served under this article within the period of 30 days beginning with the date of service of the notice, the Secretary of State may take whatever steps the Secretary of State considers appropriate to achieve the result required by the notice; and any expenditure incurred by the Secretary of State in so doing shall be recoverable from the undertaker

Survey of tidal works

24. If the Secretary of State considers it expedient to do so, the Secretary of State may order a survey and examination of a tidal work or of the site on which it is proposed to construct the work, and any expenditure incurred by the Secretary of State in any such survey and examination shall be recoverable from the undertaker.

Lights on tidal works etc. during construction

25. The undertaker shall at or near—

(a) a tidal work, including any temporary work; or

(b) any plant, equipment or other obstruction placed, in connection with any authorised development or any work authorised by article 10 (provision of works), within the area of seaward construction activity,

during the whole time of the construction, reconstruction, extension, enlargement, replacement or relaying, exhibit every night from sunset to sunrise such lights, if any, and take such other steps for the prevention of danger to navigation as the Secretary of State and the Conservancy Authority or, failing agreement between them, the Secretary of State may from time to time direct.

Provision against danger to navigation

26. In case of damage to, or destruction or decay of, a tidal work or any part of it, the undertaker shall as soon as reasonably practicable notify the Conservancy Authority and Trinity House and shall lay down such buoys, exhibit such lights and take such other steps for preventing danger to

navigation as Trinity House and the Conservancy Authority or, failing agreement between them, the Conservancy Authority may from time to time direct.

Permanent lights on tidal works

27. After the completion of a tidal work the undertaker shall at the outer extremity of it exhibit every night from sunset to sunrise such lights, if any, and take such other steps, if any, for the prevention of danger to navigation as the Conservancy Authority and Trinity House or, failing agreement between them, the Conservancy Authority may from time to time direct.

Power to appropriate

28.—(1) Notwithstanding anything in section 33 (harbour, dock, and pier to be free to the public on payment of rates) of the 1847 Act or any other enactment, the undertaker may from time to time set apart and appropriate any part of the harbour for the exclusive or preferential use and accommodation of any trade, person, vessel or goods or any class of trader, vessel or goods, subject to the payment of such charges and to such terms, conditions and regulations as the undertaker may think fit.

(2) No person or vessel shall make use of any part of the harbour so set apart or appropriated without the consent of the harbour master, and—

- (a) the harbour master may order any person or vessel making use of the harbour without such consent to leave or be removed; and
- (b) the provisions of section 58 of the 1847 Act (powers of harbour master as to mooring of vessels in harbour), as incorporated by this Order, shall extend and apply with the necessary modifications to any such vessel.

PART 5

POWERS OF ACQUISITION

Compulsory acquisition of land

29.—(1) The undertaker may acquire compulsorily so much of the Order land as is shown washed pink on the land plan as is required for the authorised development or to facilitate it.

(2) As from the date on which a compulsory acquisition notice under section 134(3) of the 2008 Act is served or the date on which the Order land, or any part of it, is vested in the undertaker, whichever is the later, that land or that part of it which is vested (as the case may be) shall be discharged from all rights, trusts and incidents to which it was previously subject.

(3) Any person who suffers loss by the extinguishment or suspension of any private right of way under this article shall be entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

(4) This article is subject to article 39 (temporary use of land for carrying out the authorised development).

Power to override easements and other rights

30.—(1) Any authorised activity undertaken by the undertaker which takes place on land within the Order limits (whether the activity is undertaken by the undertaker or by any person deriving title under it) is authorised by this Order if it is done in accordance with the terms of this Order, notwithstanding that it involves—

- (a) an interference with an interest or right to which this article applies; or
- (b) a breach of a restriction as to the user of land arising by virtue of a contract.

(2) In this article “authorised activity” means—

- (a) the erection, construction or carrying out, or maintenance of any building or work on land;
- (b) the erection, construction, or maintenance or anything in, on, over or under land; or
- (c) the use of any land.

(3) The interests and rights to which this article applies are any easement, liberty, privilege, right or advantage annexed to land and adversely affecting other land, including and any natural right to support.

(4) Nothing in this article shall authorise interference with any right of way or right of laying down, erecting, continuing or maintaining apparatus on, under or over land which is—

- (a) a right vested in or belonging to statutory undertakers for the purpose of the carrying on of their undertaking, or
- (b) a right conferred by or in accordance with the electronic communications code on the operator of an electronic communications code network.

(5) Where any interest or right to which this article applies is interfered with or any restriction breached by any authorised activity in accordance with the terms of this article the interest or right shall be extinguished, abrogated or discharged at the time that the interference or breach in respect of the authorised activity in question commences.

(6) In respect of any interference, breach extinguishment, abrogated or discharged in pursuance of this article, compensation—

- (a) shall be payable under section 7 or 10 of the 1965 Act; and
- (b) shall be assessed in the same manner and subject to the same rules as in the case of other compensation under those sections in respect of injurious affection where—
 - (i) the compensation is to be estimated in connection with a purchase under those acts; or
 - (ii) the injury arises from the execution of works on or use of land acquired under those acts.

(7) Nothing in this article shall be construed as authorising any act or omission on the part of any person which is actionable at the suit of any person on any grounds other than such an interference or breach as is mentioned in paragraph (1) of this article.

(8) Nothing in this article shall be construed as restricting the entitlement of any person to compensation.

(9) Where a person deriving title under the undertaker by whom the land in question was acquired or appropriated—

- (a) is liable to pay compensation, and
- (b) fails to discharge that liability,

the liability shall be enforceable against the undertaker.

Compulsory acquisition of land – incorporation of the mineral code

31. Parts 2 and 3 of Schedule 2 to the Acquisition of Land Act 1981^(a) (minerals) are incorporated in this Order subject to the modification that for “the acquiring authority” substitute “the undertaker”.

Time limit for exercise of authority to acquire land compulsorily

32.—(1) After the end of the period of 5 years beginning on the day on which this Order is made—

- (a) no notice to treat shall be served under Part 1 of the 1965 Act; and

(a) 1981 c. 67, as amended at the date of the coming into force of this Order

- (b) no declaration shall be executed under section 4 of the Compulsory Purchase (Vesting Declarations) Act 1981 as applied by article 35 (application of the Compulsory Purchase (Vesting Declarations) Act 1981)(a).

(2) The authority conferred by article 39 (temporary use of land for carrying out the authorised development) shall cease at the end of the period referred to in paragraph (1), but nothing in this paragraph shall prevent the undertaker remaining in possession of land after the end of that period, if the land was entered and possession was taken before the end of that period.

Compulsory acquisition of rights

33.—(1) The undertaker may acquire compulsorily the existing rights and create and acquire compulsorily the new rights described in the book of reference and shown on the land plan.

(2) As from the date on which a compulsory acquisition notice is served or the date on which any new right is vested in the undertaker, whichever is the later, the land over which any new rights is acquired shall be discharged from all rights, trusts and incidents to which it was previously subject so far as their continuance would be inconsistent with the exercise of that new right.

(3) Subject to section 8 of the 1965 Act, as substituted by article 37 (acquisition of part of certain properties), where the undertaker acquires an existing right over land under paragraph (1), the undertaker shall not be required to acquire a greater interest in that land.

(4) Any person who suffers loss as a result of the extinguishment or suspension of any private right of way under this article shall be entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

Private rights of way

34.—(1) Subject to the provisions of this article, all private rights of way over land subject to compulsory acquisition under this Order shall be extinguished—

- (a) as from the date of acquisition of the land by the undertaker, whether compulsorily or by agreement; or
- (b) on the date of entry on the land by the undertaker under section 11(1) of the 1965 Act (power of entry),

whichever is the earlier.

(2) Subject to the provisions of this article, all private rights of way over land owned by the undertaker which, being within the limits of land which may be acquired shown on the land plan, is required for the purposes of this Order shall be extinguished on the appropriation of the land by the undertaker for any of those purposes.

(3) Subject to the provisions of this article, all private rights of way over land of which the undertaker takes temporary possession under this Order shall be suspended and unenforceable for as long as the undertaker remains in lawful possession of the land.

(4) Any person who suffers loss by the extinguishment or suspension of any private right of way under this article shall be entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

(5) This article does not apply in relation to any right of way to which section 138 of the 2008 Act (extinguishment of rights, and removal of apparatus, of statutory undertakers etc.) or article 41 (statutory undertakers) applies.

(6) Paragraphs (1) to (3) shall have effect subject to—

- (a) any notice given by the undertaker before—
 - (i) the completion of the acquisition of the land,

(a) 1981 c.66., as amended at the date of the coming into force of this Order.

- (ii) the undertaker's appropriation of it,
 - (iii) the undertaker's entry onto it, or
 - (iv) the undertaker's taking temporary possession of it,
- that any or all of those paragraphs shall not apply to any right of way specified in the notice; and
- (b) any agreement made at any time between the undertaker and the person in or to whom the right of way in question is vested or belongs.
- (7) If any such agreement as is referred to in paragraph (6)(b)—
- (a) is made with a person in or to whom the right of way is vested or belongs; and
 - (b) is expressed to have effect also for the benefit of those deriving title from or under that person,

it shall be effective in respect of the persons so deriving title, whether the title was derived before or after the making of the agreement.

Application of the Compulsory Purchase (Vesting Declarations) Act 1981

35.—(1) The Compulsory Purchase (Vesting Declarations) Act 1981(a) shall apply as if this Order were a compulsory purchase order.

(2) The Compulsory Purchase (Vesting Declarations) Act 1981, as so applied, shall have effect with the following modifications.

(3) In section 3 (preliminary notices), for subsection (1) there shall be substituted—

“(1) Before making a declaration under section 4 with respect to any land which is subject to a compulsory purchase order, the acquiring authority shall include the particulars specified in subsection (3) in a notice which is—

- (a) given to every person with a relevant interest in the land with respect to which the declaration is to be made (other than a mortgagee who is not in possession); and
- (b) published in a local newspaper circulating in the area in which the land is situated.”.

(4) In that section, in subsection (2), for “(1)(b)” there shall be substituted “(1)” and after “given” there shall be inserted “and published”.

(5) In that section, for subsections (5) and (6) there shall be substituted—

“(5) For the purposes of this section, a person has a relevant interest in land if—

- (a) that person is for the time being entitled to dispose of the fee simple of the land, whether in possession or in reversion; or
- (b) that person holds, or is entitled to the rents and profits of, the land under a lease or agreement, the unexpired term of which exceeds one month.”.

(6) In section 5 (earliest date for execution of declaration)—

- (a) in subsection (1), after “publication” there shall be inserted “in a local newspaper circulating in the area in which the land is situated”; and
- (b) subsection (2) shall be omitted.

(7) In section 7 (constructive notice to treat), in subsection (1)(a), the words “(as modified by section 4 of the Acquisition of Land Act 1981)” shall be omitted.

(8) References to the 1965 Act in the Compulsory Purchase (Vesting Declarations) Act 1981 shall be construed as references to that Act as applied by section 125 of the 2008 Act to the compulsory acquisition of land under this Order.

(a) 1981 c. 66. as amended at the date of the coming into force of this Order

Acquisition of subsoil only

36.—(1) The undertaker may acquire compulsorily so much of, or such rights in, the subsoil of the land referred to in paragraph (1) of article 29 (compulsory acquisition of land) as may be required for any purpose for which that land may be acquired under that provision instead of acquiring the whole of the land.

(2) Where the undertaker acquires any part of, or rights in, the subsoil of land under paragraph (1), the undertaker shall not be required to acquire an interest in any other part of the land.

(3) Paragraph (2) shall not prevent article 37 (acquisition of part of certain properties) from applying where the undertaker acquires a cellar, vault, arch or other construction forming part of a house, building or manufactory.

Acquisition of part of certain properties

37.—(1) This article shall apply instead of section 8(1) of the 1965 Act (other provisions as divided land) (as applied by section 125 of the 2008 Act) where—

(a) a notice to treat is served on a person (“the owner”) under the 1965 Act (as so applied) in respect of land forming only part of a house, building or manufactory or of land consisting of a house with a park or garden (“the land subject to the notice to treat”); and

(b) a copy of this article is served on the owner with the notice to treat.

(2) In such a case, the owner may, within the period of 21 days beginning with the day on which the notice was served, serve on the undertaker a counter-notice objecting to the sale of the land subject to the notice to treat which states that the owner is willing and able to sell the whole (“the land subject to the counter-notice”).

(3) If no such counter-notice is served within that period, the owner shall be required to sell the land subject to the notice to treat.

(4) If such a counter-notice is served within that period, the question whether the owner shall be required to sell only the land subject to the notice to treat shall, unless the undertaker agrees to take the land subject to the counter-notice, be referred to the tribunal.

(5) If on such a reference the tribunal determines that the land subject to the notice to treat can be taken—

(a) without material detriment to the remainder of the land subject to the counter-notice; or

(b) where the land subject to the notice to treat consists of a house with a park or garden, without material detriment to the remainder of the land subject to the counter-notice and without seriously affecting the amenity and convenience of the house,

the owner shall be required to sell the land subject to the notice to treat.

(6) If on such a reference the tribunal determines that only part of the land subject to the notice to treat can be taken—

(a) without material detriment to the remainder of the land subject to the counter-notice; or

(b) where the land subject to the notice to treat consists of a house with a park or garden, without material detriment to the remainder of the land subject to the counter-notice and without seriously affecting the amenity and convenience of the house,

the notice to treat shall be deemed to be a notice to treat for that part.

(7) If on such a reference the tribunal determines that—

(a) the land subject to the notice to treat cannot be taken without material detriment to the remainder of the land subject to the counter-notice; but

(b) the material detriment is confined to a part of the land subject to the counter-notice,

the notice to treat shall be deemed to be a notice to treat for the land to which the material detriment is confined in addition to the land already subject to the notice, whether or not the additional land is land which the undertaker is authorised to acquire compulsorily under this Order.

(8) If the undertaker agrees to take the land subject to the counter-notice, or if the tribunal determines that—

- (a) none of the land subject to the notice to treat can be taken without material detriment to the remainder of the land subject to the counter-notice or, as the case may be, without material detriment to the remainder of the land subject to the counter-notice and without seriously affecting the amenity and convenience of the house; and
- (b) the material detriment is not confined to a part of the land subject to the counter-notice,

the notice to treat shall be deemed to be a notice to treat for the land subject to the counter-notice whether or not the whole of that land is land which the undertaker is authorised to acquire compulsorily under this Order.

(9) Where, by reason of a determination by the tribunal under this article, a notice to treat is deemed to be a notice to treat for less land or more land than that specified in the notice, the undertaker may, within the period of six weeks beginning with the day on which the determination is made, withdraw the notice to treat; and, in that event, shall pay the owner compensation for any loss or expense occasioned to the owner by the giving and withdrawal of the notice, to be determined in case of dispute by the tribunal.

(10) Where the owner is required under this article to sell only part of a house, building or manufactory or of land consisting of a house with a park or garden, the undertaker shall pay the owner compensation for any loss sustained by the owner due to the severance of that part in addition to the value of the interest acquired.

Rights under or over streets

38.—(1) The undertaker may enter on and appropriate so much of the subsoil of, or air-space over, any street within the Order limits as may be required for the purposes of the authorised development and may use the subsoil or air-space for those purposes or any other purpose ancillary to the authorised development.

(2) Subject to paragraph (3), the undertaker may exercise any power conferred by paragraph (1) in relation to a street without being required to acquire any part of the street or any easement or right in the street.

(3) Paragraph (2) shall not apply in relation to—

- (a) any subway or underground building; or
- (b) any cellar, vault, arch or other construction in, on or under a street which forms part of a building fronting onto the street.

(4) Subject to paragraph (5), any person who is an owner or occupier of land appropriated under paragraph (1) without the undertaker acquiring any part of that person's interest in the land, and who suffers loss as a result, shall be entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

(5) Compensation shall not be payable under paragraph (4) to any person who is an undertaker to whom section 85 of the 1991 Act (sharing cost of necessary measures) applies in respect of measures of which the allowable costs are to be borne in accordance with that section.

Temporary use of land for carrying out the authorised development

39.—(1) The undertaker may, in connection with the carrying out of the authorised development—

- (a) enter on and take temporary possession of—
 - (i) the land specified in columns (1) and (2) of Schedule 6 (land of which temporary possession may be taken) for the purpose specified in relation to that land in column (3) of that Schedule relating to the part of the authorised development specified in column (4) of that Schedule; and

- (ii) any of the Order land in respect of which no notice of entry has been served under section 11 of the 1965 Act or no declaration has been made under section 4 of the Compulsory Purchase (Vesting Declarations) Act 1981;
 - (b) remove any buildings and vegetation from that land; and
 - (c) construct temporary works (including the provision of means of access) and buildings on that land.
- (2) Not less than 14 days before entering on and taking temporary possession of land under this article the undertaker shall serve notice of the intended entry on the owners and occupiers of the land.
- (3) The undertaker may not, without the agreement of the owners of the land, remain in possession of any land under this article—
- (a) in the case of land of which temporary possession may be taken, after the end of the period of one year beginning with the date of completion of the part of the authorised development specified in relation to that land in column (4) of Schedule 6;
 - (b) in the case of any Order land, after the end of the period of two years beginning with the date of completion of the work for which temporary possession of the land was taken unless the undertaker has, by the end of that period, served a notice of entry under section 11 of the 1965 Act or made a declaration under section 4 of the Compulsory Purchase (Vesting Declarations) Act 1981 in relation to that land.
- (4) Before giving up possession of land of which temporary possession has been taken under this article, the undertaker shall remove all temporary works and restore the land to the reasonable satisfaction of the owners of the land; but the undertaker shall not be required to replace a building removed under this article.
- (5) The undertaker shall pay compensation to the owners and occupiers of land of which temporary possession is taken under this article for any loss or damage arising from the exercise in relation to the land of any power conferred by this article.
- (6) Any dispute as to a person's entitlement to compensation under paragraph (5), or as to the amount of the compensation, shall be determined under Part 1 of the 1961 Act.
- (7) Nothing in this article shall affect any liability to pay compensation under section 10(2) of the 1965 Act (further provisions as to compensation for injurious affection) or under any other enactment in respect of loss or damage arising from the carrying out of the authorised development, other than loss or damage for which compensation is payable under paragraph (5).
- (8) The undertaker may not compulsorily acquire under this Order the land referred to in paragraph (1)(a)(i) except that the undertaker shall not be precluded from—
- (a) acquiring new rights over any part of that land under article 33 (compulsory acquisition of rights); or
 - (b) acquiring any part of the subsoil (or rights in the subsoil) of that land under article 36 (acquisition of subsoil only).
- (9) Where the undertaker takes possession of land under this article, the undertaker shall not be required to acquire the land or any interest in it.
- (10) Section 13 of the 1965 Act (refusal to give possession to acquiring authority) shall apply to the temporary use of land pursuant to this article to the same extent as it applies to the compulsory acquisition of land under this Order by virtue of section 125 of the 2008 Act (application of compulsory acquisition provisions).

Temporary use of land for maintaining authorised development

40.—(1) Subject to paragraph (2), at any time during the maintenance period relating to any part of the authorised development, the undertaker may—

- (a) enter on and take temporary possession of any land within the Order limits if such possession is reasonably required for the purpose of maintaining the authorised development; and

- (b) construct such temporary works (including the provision of means of access) and buildings on the land as may be reasonably necessary for that purpose.
- (2) Paragraph (1) shall not authorise the undertaker to take temporary possession of—
 - (a) any house or garden belonging to a house; or
 - (b) any building (other than a house) if it is for the time being occupied.
- (3) Not less than 28 days before entering on and taking temporary possession of land under this article the undertaker shall serve notice of the intended entry on the owners and occupiers of the land.
- (4) The undertaker may only remain in possession of land under this article for so long as may be reasonably necessary to carry out the maintenance of the part of the authorised development for which possession of the land was taken.
- (5) Before giving up possession of land of which temporary possession has been taken under this article, the undertaker shall remove all temporary works and restore the land to the reasonable satisfaction of the owners of the land.
- (6) The undertaker shall pay compensation to the owners and occupiers of land of which temporary possession is taken under this article for any loss or damage arising from the exercise in relation to the land of the provisions of this article.
- (7) Any dispute as to a person's entitlement to compensation under paragraph (6), or as to the amount of the compensation, shall be determined under Part 1 of the 1961 Act.
- (8) Nothing in this article shall affect any liability to pay compensation under section 10(2) of the 1965 Act (further provisions as to compensation for injurious affection) or under any other enactment in respect of loss or damage arising from the maintenance of the authorised development, other than loss or damage for which compensation is payable under paragraph (6).
- (9) Where the undertaker takes possession of land under this article, the undertaker shall not be required to acquire the land or any interest in it.
- (10) Section 13 of the 1965 Act (refusal to give possession to acquiring authority) shall apply to the temporary use of land pursuant to this article to the same extent as it applies to the compulsory acquisition of land under this Order by virtue of section 125 of the 2008 Act (application of compulsory acquisition provisions).
- (11) In this article “the maintenance period”, in relation to any part of the authorised development, means the period of 5 years beginning with the date on which that part of the authorised development is first opened for use.

Statutory undertakers

- 41.**—(1) The undertaker may—
 - (a) acquire compulsorily the land belonging to statutory undertakers shown on the land plan within the limits of the land to be acquired and described in the book of reference;
 - (b) extinguish the rights of, remove or reposition the apparatus belonging to statutory undertakers shown on the land plan and described in the book of reference; and
 - (c) acquire compulsorily the new rights over land belonging to statutory undertakers shown on the land plan and described in the book of reference.
- (2) Nothing in paragraph (1) removes any requirement to obtain a certificate under section 138 of the 2008 Act.

Recovery of costs of new connections

- 42.**—(1) Where any apparatus of a public utility undertaker or of a public communications provider is removed under article 41 (statutory undertakers) any person who is the owner or occupier of premises to which a supply was given from that apparatus shall be entitled to recover from the undertaker compensation in respect of expenditure reasonably incurred by that person, in

consequence of the removal, for the purpose of effecting a connection between the premises and any other apparatus from which a supply is given.

(2) Paragraph (1) shall not apply in the case of the removal of a public sewer but where such a sewer is removed under article 41, any person who is—

- (a) the owner or occupier of premises the drains of which communicated with that sewer; or
- (b) the owner of a private sewer which communicated with that sewer,

shall be entitled to recover from the undertaker compensation in respect of expenditure reasonably incurred by that person, in consequence of the removal, for the purpose of making the drain or sewer belonging to that person communicate with any other public sewer or with a private sewerage disposal plant.

(3) This article shall not have effect in relation to apparatus to which Part 3 of the 1991 Act applies.

(4) In this article—

“public communications provider” has the same meaning as in section 151(1) of the Communications Act 2003; and

“public utility undertaker” has the same meaning as in the 1980 Act.

PART 6

MISCELLANEOUS AND GENERAL

Deemed marine licence

43. The undertaker is deemed to be granted a licence under section 66 of the Marine and Coastal Access Act 2009^(a) to carry out the works described in Schedule 8, subject to the provisions set out in that Schedule, which shall be treated as licence conditions.

Felling or lopping of trees

44.—(1) The undertaker may fell or lop any tree or shrub near any part of the authorised development, or cut back its roots, if it reasonably believes it to be necessary to do so to prevent the tree or shrub—

- (a) from obstructing or interfering with the construction, maintenance or operation of the authorised development or any apparatus used in connection with the authorised development; or
- (b) from constituting a danger to persons using the authorised development.

(2) In carrying out any activity authorised by paragraph (1), the undertaker shall do no unnecessary damage to any tree or shrub and shall pay compensation to any person for any loss or damage arising from such activity.

(3) Any dispute as to a person’s entitlement to compensation under paragraph (2), or as to the amount of compensation, shall be determined under Part 1 of the 1961 Act.

Trees subject to tree preservation orders

45.—(1) The undertaker may fell or lop any tree described in Schedule 7 and identified on the land plan, or cut back its roots if it reasonably believes it to be necessary in order to do so to prevent the tree or shrub—

(a) 2009 c. 23, as amended at the date of the coming into force of this Order

- (a) from obstructing or interfering with the construction, maintenance or operation of the authorised development or any apparatus used in connection with the authorised development; or
 - (b) from constituting a danger to persons using the authorised development.
- (2) In carrying out any activity authorised by paragraph (1)—
- (a) the undertaker shall do no unnecessary damage to any tree or shrub and shall pay compensation to any person for any loss or damage arising from such activity; and
 - (b) the duty contained in section 206(1) of the 1990 Act (replacement of trees) shall not apply.
- (3) The authority given by paragraph (1) shall constitute a deemed consent under the relevant tree preservation order.
- (4) Any dispute as to a person's entitlement to compensation under paragraph (2), or as to the amount of compensation, shall be determined under Part 1 of the 1961 Act.

Railway and navigation undertakings

46.—(1) Subject to the following provisions of this article, the undertaker may not under article 13 (street works) break up or open a street where the street, not being a highway maintainable at public expense (within the meaning of the 1980 Act)—

- (a) is under the control or management of, or is maintainable by, railway or tramway undertakers or a navigation authority; or
- (b) forms part of a level crossing belonging to any such undertakers or to such an authority or to any other person,

except with the consent of the undertakers or authority or, as the case may be, of the person to whom the level crossing belongs.

(2) Paragraph (1) shall not apply to the carrying out under this Order of emergency works, within the meaning of Part 3 of the 1991 Act.

(3) A consent given for the purpose of paragraph (1) may be made subject to such reasonable conditions as may be specified by the person giving it but shall not be unreasonably withheld.

(4) In this paragraph “navigation authority” means any person who has a duty or power under any enactment to work, maintain, conserve, improve or control any canal or other inland navigation, navigable river, estuary or harbour.

Railway network

47.—(1) The undertaker, or any person permitted by the undertaker, may operate and use the railway crossing the Order land together with any ancillary works as a system, or part of a system, for the carriage of goods.

(2) The Office of Rail Regulation, Network Rail and the undertaker may enter into agreements in connection with the operation and use of the railway crossing the Order land.

Arrangements with Her Majesty's Revenue and Customs

48. The undertaker and Her Majesty's Revenue and Customs may enter into any such agreement or arrangement as they think fit to provide for, or to facilitate, the assessment, collection or recovery of charges, including an agreement or arrangement as to the provision and maintenance of accommodation at the harbour.

Application of landlord and tenant law

49.—(1) This article applies to—

- (a) any agreement for leasing to any person the whole or any part of the authorised development or the right to operate the same; and

(b) any agreement entered into by the undertaker with any person for the construction, maintenance, use or operation of the authorised development, or any part of it, so far as any such agreement relates to the terms on which any land which is the subject of a lease granted by or under that agreement is to be provided for that person's use.

(2) No enactment or rule of law regulating the rights and obligations of landlords and tenants shall prejudice the operation of any agreement to which this article applies.

(3) Accordingly, no such enactment or rule of law shall apply in relation to the rights and obligations of the parties to any lease granted by or under any such agreement so as to—

- (a) exclude or in any respect modify any of the rights and obligations of those parties under the terms of the lease, whether with respect to the termination of the tenancy or any other matter;
- (b) confer or impose on any such party any right or obligation arising out of or connected with anything done or omitted on or in relation to land which is the subject of the lease, in addition to any such right or obligation provided for by the terms of the lease; or
- (c) restrict the enforcement (whether by action for damages or otherwise) by any party to the lease of any obligation of any other party under the lease.

Operational land for purposes of the 1990 Act

50. Development consent granted by this Order within the area of jurisdiction shall be treated as specific planning permission for the purposes of section 264(3)(a) of the 1990 Act (cases in which land is to be treated as operational land for the purposes of that Act).

Defence to proceedings in respect of statutory nuisance

51.—(1) Where proceedings are brought under section 82(1) of the Environmental Protection Act 1990(a) (summary proceedings by person aggrieved by statutory nuisance) in relation to a nuisance falling within paragraph (g) of section 79(1) of that Act (noise emitted from premises so as to be prejudicial to health or a nuisance) no order shall be made, and no fine may be imposed, under section 82(2) of that Act if

- (a) the defendant shows that the nuisance—
 - (i) relates to premises used by the undertaker for the purposes of or in connection with the construction or maintenance of the authorised development and that the nuisance is attributable to the carrying out of the authorised development in accordance with a notice served under section 60 (control of noise on construction site), or a consent given under section 61 (prior consent for work on construction site) or 65 (noise exceeding registered level), of the Control of Pollution Act 1974(b); or
 - (ii) is a consequence of the construction or maintenance of the authorised development and that it cannot reasonably be avoided; or
- (b) the defendant shows that the nuisance—
 - (i) relates to premises used by the undertaker for the purposes of or in connection with the use of the authorised development and that the nuisance is attributable to the use of the authorised development in accordance with a scheme of monitoring and attenuation of noise agreed with the relevant planning authority as described in requirement 19; or
 - (ii) is a consequence of the use of the authorised development and that it cannot reasonably be avoided.

(2) Section 61(9) (consent for work on construction site to include statement that it does not of itself constitute a defence to proceedings under section 82 of the Environmental Protection Act

(a) 1990 c.43, as amended at the date of the coming into force of this Order.

(b) 1974 c.40, as amended at the date of the coming into force of this Order.

1990) of the Control of Pollution Act 1974 and section 65(8) of that Act (corresponding provision in relation to consent for registered noise level to be exceeded), shall not apply where the consent relates to the use of premises by the undertaker for the purposes of or in connection with the construction or maintenance of the authorised development.

Protection of interests

52. Schedule 9 to this Order has effect.

Saving for Trinity House

53. Nothing in this Order prejudices or derogates from any of the rights, duties or privileges of Trinity House.

Disapplication of regulation 73 of the Conservation of Habitats and Species Regulations 2010

54.—(1) Regulation 73 of the Conservation of Habitats and Species Regulations 2010(a) (general development orders) (“the Habitats Regulations”) shall not apply to any planning permission which relates to the works authorised by article 10 (provision of works) and which is granted by article 3(1) of the Town and Country Planning (General Permitted Development) Order 1995(b) for the class of development described as permitted development in Part 11 of Schedule 2 to that Order.

(2) Paragraph (1) does not apply if and to the extent that those works—

- (a) do not form part of the plan and project which was subject to an assessment under the Habitats Regulations in connection with the making of this Order; and
- (b) are not the subject of a further consent, permission or authorisation by a competent authority as defined in the Habitats Regulations.

Planning, etc. jurisdiction

55.—(1) During the period beginning with the date when this Order comes into force and ending on the accretion date, the area within the Order limits shall, for the purposes of the Control of Pollution Act 1974(c) and the 1990 Act, be annexed to and incorporated with the area of the relevant planning authority.

(2) In this article, “accretion date” means the date when the works authorised by this Order have been completed or, if earlier, the date when the benefits and rights granted by this Order cease to have effect pursuant to article 6 (period for completion of work).

Certification of plans etc

56.—(1) The undertaker shall, as soon as practicable after the making of this Order, submit to the decision-maker copies of—

- (a) the book of reference;
- (b) the Crown land plan;
- (c) the ecology plan;
- (d) the heritage plan;
- (e) the land plan;
- (f) the rights of way plan; and
- (g) the works plan,

(a) S.I. 2010/400 as amended at the date of the coming into force of this Order

(b) S.I. 1995/418 as amended at the date of the coming into force of this Order

(c) 1974 c. 40 as amended at the date of the coming into force of this Order

for certification that they are true copies of the documents referred to in this Order.

(2) A plan or document so certified shall be admissible in any proceedings as evidence of the contents of the document of which it is a copy.

Service of notices

57.—(1) A notice or other document required or authorised to be served for the purposes of this Order may be served—

- (a) by post; or
- (b) with the consent of the recipient and subject to paragraphs (6) to (8) by electronic transmission.

(2) Where the person on whom a notice or other document to be served for the purposes of this Order is a body corporate, the notice or document is duly served if it is served on the secretary or clerk of that body.

(3) For the purposes of section 7 of the Interpretation Act 1978(a) as it applies for the purposes of this article, the proper address of any person in relation to the service on that person of a notice or document under paragraph (1) is, if that person has given an address for service, that address, and otherwise—

- (a) in the case of the secretary or clerk of a body corporate, the registered or principal office of that body; and
- (b) in any other case, the last known address of that person at the time of service.

(4) Where for the purposes of this Order a notice or other document is required or authorised to be served on a person as having any interest in, or as the occupier of, land and the name or address of that person cannot be ascertained after reasonable enquiry, the notice may be served by—

- (a) addressing it to that person by name or by the description of “owner”, or as the case may be “occupier”, of the land (describing it); and
- (b) either leaving it in the hands of a person who is or appears to be resident or employed on the land or leaving it conspicuously affixed to some building or object on or near the land.

(5) Where a notice or other document required to be served or sent for the purposes of this Order is served or sent by electronic transmission the requirement shall be taken to be fulfilled only where—

- (a) the recipient of the notice or other document to be transmitted has given consent to the use of electronic transmission in writing or by electronic transmission;
- (b) the notice or document is capable of being accessed by the recipient;
- (c) the notice or document is legible in all material respects; and
- (d) in a form sufficiently permanent to be used for subsequent reference.

(6) Where the recipient of a notice or other document served or sent by electronic transmission notifies the sender within 7 days of receipt that the recipient requires a paper copy of all or part of that notice or other document the sender shall provide such a copy as soon as reasonably practicable.

(7) Any consent to the use of electronic communication given by a person may be revoked by that person in accordance with paragraph (8).

(8) Where a person is no longer willing to accept the use of electronic transmission for any of the purposes of this Order—

- (a) that person shall give notice in writing or by electronic transmission revoking any consent given by that person for that purpose; and

(a) 1978 c. 30.

- (b) such revocation shall be final and shall take effect on a date specified by the person in the notice but that date shall not be less than 7 days after the date on which the notice is given.

(9) This article shall not be taken to exclude the employment of any method of service not expressly provided for by it.

Arbitration

58. Any difference under any provision of this Order, unless otherwise provided for, shall be referred to and settled by a single arbitrator to be agreed between the parties or, failing agreement, to be appointed on the application of either party (after giving notice in writing to the other) by the President of the Institution of Civil Engineers.

Requirements - appeals

59.—(1) Where an application is made to the relevant planning authority for any consent, agreement or approval required by a requirement, the following provisions apply, so far as they relate to a consent, agreement or approval of a local planning authority required by a condition imposed on a grant of planning permission, as if the requirement was a condition imposed on the grant of planning permission—

- (a) sections 78 and 79 of the 1990 Act (right of appeal in relation to planning decisions);
- (b) any orders, rules or regulations which make provision in relation to a consent, agreement or approval of a local planning authority required by a condition imposed on the grant of planning permission.

(2) For the purposes of paragraph (1), a provision relates to a consent, agreement or approval of a local planning authority required by a condition imposed on a grant of planning permission in so far as it makes provision in relation to an application for such a consent, agreement or approval, or the grant or refusal of such an application, or a failure to give notice of a decision on such an application.

Signed by authority of the Secretary of State

[xxx] 2013

Department for Transport

SCHEDULES

SCHEDULE 1

Article 5

AUTHORISED DEVELOPMENT

NATIONALLY SIGNIFICANT INFRASTRUCTURE PROJECT

1.In the district of North Lincolnshire—

Work No. 1—a quay of solid construction.

ASSOCIATED DEVELOPMENT

2.In the district of North Lincolnshire—

Work No. 2—works to the junction of Humber Road and Rosper Road;

3.In the district of North Lincolnshire—

Work No. 3—a passing loop on the North Killingholme Branch Line;

4.In the district of North Lincolnshire and within the Order limits—

- (a) dredging and land reclamation in accordance with Schedule 8 (deemed marine licence);
- (b) the provision of onshore facilities for the manufacture, assembly and storage of components and parts for offshore marine energy and related items;
- (c) works to Rosper Road, Eastfield Road, the A160 and the A180;
- (d) surface and foul water disposal arrangements;
- (e) lighting;
- (f) parking;
- (g) ecological mitigation works; and
- (h) the re-siting of apparatus.

5.In the district of the East Riding of Yorkshire and within the Order limits, the development of compensatory environmental habitat.

SCHEDULE 2

Article 13

STREETS SUBJECT TO STREET WORKS

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Street subject to street works</i>
District of North Lincolnshire	Rosper Road
	Chase Hill Road

SCHEDULE 3

Article 14

STREETS TO BE TEMPORARILY STOPPED UP

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Street to be temporarily stopped up</i>	<i>(3)</i> <i>Extent of temporary stopping up</i>
District of North Lincolnshire	Rosper Road	Between points C and D as shown on the rights of way plan
	Rosper Road	Between points E and F as shown on the rights of way plan
	Eastfield Road	Between points G and H as shown on the rights of way plan

SCHEDULE 4

Article 15

ACCESS TO WORKS

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Subject to street works</i>
District of North Lincolnshire	Improved access from Rosper Road shown at the point marked A on sheet 2 of the rights of way plan
	New access from Rosper Road shown at the point marked A on sheet 3 of the rights of way plan

SCHEDULE 5

Article 17

FOOTPATHS TO BE STOPPED UP

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Footpath to be stopped up</i>	<i>(3)</i> <i>Extent of stopping up</i>	<i>(4)</i> <i>New footpath to be substituted</i>
District of North Lincolnshire	Footpath 50	From point F1 to point F2 as shown in orange on the rights of way plan	A footpath between points F1 and F3 as shown in blue on the rights of way plan
District of the East Riding of Yorkshire	Paull Footpath 6	From point F4 to point F5 as shown in orange on the rights of way plan	A footpath between points F4 and F5 as shown in blue on the rights of way plan

SCHEDULE 6

Article 39

LAND OF WHICH TEMPORARY POSSESSION MAY BE TAKEN

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Number of land shown on land plan</i>	<i>(3)</i> <i>Purpose for which temporary possession may be taken</i>	<i>(4)</i> <i>Relevant part of the authorised development</i>
District of North Lincolnshire	01001, 01002, 01003	Works to A160 / Rosper Road junction	Works to Rosper Road
	02001, 03001, 04001, 05001	Works to Rosper Road	Works to Rosper Road
	02009, 02010, 02011, 02012, 03027	Footpath diversion	Footpath diversion
	03026	Private track diversion	Private track diversion
	02013	Quay construction - access	Marine works
	06001, 06002, 06003, 06004, 06005	Installation of a sewer and works to sewage treatment works	Sewage improvement works

SCHEDULE 7

Article 45

TREES SUBJECT TO TREE PRESERVATION ORDERS

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Identification of tree shown on ecology plan</i>	<i>(3)</i> <i>Work to be carried out</i>
District of North Lincolnshire	Marked with T1 on sheet 3 of the ecology plan	Felling to allow authorised development to proceed
	Marked with T2 on sheet 3 of the ecology plan	Felling to allow authorised development to proceed

SCHEDULE 8

Article 43

DEEMED MARINE LICENCE

PART 1

INTRODUCTORY

Interpretation

1. (1) In this Schedule:—

“the 2009 Act” means the Marine and Coastal Access Act 2009;

“the approach channel” means the area bounded by co-ordinates (53°39.57’N, 00°13.43’W), (53°39.61’N, 00°13.30’W), (53°39.40’N, 00°12.90’W), (53°39.03’N, 00°12.41’W) and (53°38.94’N, 00°12.60’W) and shown on sheet xx of the works plan;

“the berthing pocket” means the area bounded by co-ordinates (53°39.55’N, 00°13.48’W), (53°39.57’N, 00°13.43’W), (53°38.94’N, 00°12.60’W) and (53°39.92’N, 00°12.64’W) and shown on sheets 4, 8 and 9 of the works plan;

“the Centrica outfall” means the area bounded by co-ordinates xxx, xxx, xxx and xxx and shown on sheet 5 of the works plan;

“Cherry Cobb sands channel” means the area bounded by co-ordinates (53°39.34’N, 00°08.44’W), (53°39.28’N, 00°08.34’W), (53°39.25’N, 00°08.38’W) and (53°39.31’N, 00°08.48’W);

“clay” means dredged materials with a diameter of less than 31.25 micrometres;

“the E.ON outfall” means the area bounded by co-ordinates xxx, xxx, xxx and xxx and shown on sheet 5 of the works plan;

“earthworks season” means the period from April to October or such other period set out in British Standard 6031;

“gravel” means dredged materials with a diameter of at least 2 and less than 64 millimetres;

“HU080” means the area bounded by co-ordinates (53°36.95’N, 00°03.47’W), (53°36.55’N, 00°00.42’E), (53°36.30’N, 00°00.62’W) and (53°36.47’N, 00°02.32’W);

“HU082” means the area bounded by co-ordinates (53°37.47’N, 00°02.27’W), (53°37.25’N, 00°00.80’W), (53°36.97’N, 00°00.81’W) and (53°37.12’N, 00°02.29’W);

“licence holder” means the Company and any agent or contractor acting on its behalf;

“licensable activity” means an activity licensable under section 66 of the 2009 Act;

“licensed activity” means any activity described in Part 2 of this Schedule;

“MMO” means the Marine Management Organisation;

“mean high water springs” means the average of high water heights occurring at the time of spring tides;

“named vessel” means a vessel whose name and type has been notified to the MMO in writing;

“the pumping station site” means the area bounded by co-ordinates (53°38.59’N, 00°13.10’W), (53°38.58’N, 00°13.08’W), and (53°38.58’N, 00°13.09’W) and shown on sheets 3 and 9 of the works plan;

“the quay limits” means the area bounded by co-ordinates (53°39.46’N, 00°13.68’W), (53°39.54’N, 00°13.45’W), (53°38.95’N, 00°12.67’W), (53°38.88’N, 00°12.75’W) and (53°38.98’N, 00°13.18’W) and shown on sheets 8 and 9 of the works plan;

“sand” means dredged materials with a diameter of at least 62.5 micrometres and less than 2 millimetres;

“sea bed” means the ground under the sea;

“silt” means dredged materials with a diameter of at least 31.25 and less than 62.5 micrometres; and

“turning area” means the area bounded by co-ordinates (53°39.40’N, 00°12.90’W), (53°39.41’N, 00°12.53’W), (53°39.11’N, 00°12.26’W) and (53°39.03’N, 00°12.41’W) and shown on sheets 8 and 9 of the works plan.

(2) Unless otherwise specified, all geographical co-ordinates given in this Schedule are in latitude and longitude degrees and minutes to two decimal places.

(3) Tonnages of dredged materials are expressed in wet tonnes.

Addresses

2. (1) Unless otherwise advised in writing by the MMO, the address for postal correspondence with the MMO for the purposes of this schedule is the Marine Management Organisation, Marine Licensing Team, PO Box 1275, Newcastle upon Tyne, NE99 5BN.

(2) Unless otherwise advised in writing by the MMO, the address for electronic communication with the MMO for the purposes of this schedule is marine.consents@marinemanagement.org.uk.

PART 2

LICENSED ACTIVITIES

3. For the purpose of constructing and maintaining the authorised development the licence holder may carry out the activities set out in this Part as if such activities were licensed under the 2009 Act.

Construction of the quay

4. (1) The licence holder is permitted to construct a quay and carry out associated land reclamation within the quay limits and according to the following specification:—

- (a) no more than 550 tubular and 1100 sheet steel perimeter piles may be driven into the bed of the estuary to form the external face of the quay, where such piles are to be installed from named vessels moored in the estuary;
- (b) two return walls may be constructed between the ends of the quay and the existing flood defence wall, comprising no more than 23,000 steel piles driven into the bed of the estuary from named vessels and also earthwork revetments with no more than 75,000 tonnes of rock armour protection, such revetments and rock armour to be constructed using land-based plant;
- (c) no more than 450 flap anchor piles may be fixed to the landward face of the perimeter piles and seated in a trench on the bed of the estuary, to be installed from named vessels moored in the estuary;
- (d) no more than 70 steel anchor piles may be driven into the bed of the estuary and fixed to perimeter piles, to be installed from named vessels moored in the estuary;

- (e) the area of estuary approximately 50 metres landward of the quay perimeter piles may be reclaimed by depositing marine dredged sands and gravels from named vessels using rainbowing techniques;
 - (f) the remaining area of estuary enclosed by the quay perimeter piles and the two return walls may be reclaimed using marine dredged sands and gravels by constructing two granular dams that extend from the existing flood defence wall to the area reclaimed under paragraph (e), so that the dams divide the remaining reclaim area into three approximately equal cells, whereupon named vessels shall pump fluidised granular material into each cell in sequence, allowing estuarine water that is retained within each cell to overflow the dams as the fluidised material is deposited and settles within the cell, such activity to continue until all cells attain their design levels; and
 - (g) steel plates may be attached to the perimeter piles by welding and bolting, whereupon a fender may be attached to each steel plate by bolts, all such works being undertaken from a man basket suspended from a crane located on land.
- (2) Drainage outfalls and cooling water outfalls may be incorporated into the quay.
- (3) Monitoring equipment fixed to buoys shall be deployed at locations in the estuary during the piling works permitted by sub-paragraph (1) in accordance with a mitigation and monitoring plan to be submitted to and approved by the MMO following consultation with the Environment Agency and Natural England.

Temporary dolphins

5. (1) The licence holder is permitted to construct and remove up to seven temporary dolphins within the berthing pocket, such that each dolphin comprises three tubular steel piles driven into the bed of the estuary from named plant moored in the estuary, whereupon the piles shall be braced with interconnecting steelwork.
- (2) The dolphins constructed under sub-paragraph (1) may be used to moor named vessels involved in the carrying out of any of the other activities listed in this Part.
- (3) Monitoring equipment fixed to buoys shall be deployed at locations in the estuary during the piling works permitted by sub-paragraph (1) in accordance with the marine environmental mitigation and monitoring plan referred to in paragraph 13.
- (4) Each temporary dolphin must be removed as soon as practicable once the activities for which they have been constructed have been completed.

Berthing pocket infill

6. Following or during the dredging of the berthing pocket, the licence holder must deposit up to 250,000 tonnes of gravel and rock from named vessels into the berthing pocket so that its depth does not exceed -11 metres chart datum.

Pumping station

7. (1) The licence holder is permitted to construct a pumping station at the pumping station site according to the following specification:—
- (a) a temporary steel cofferdam containing up to six drainage pipes may be installed through the existing flood defence and extend onto the foreshore, whereupon the flood defence wall shall be reinstated to its original seaward profile using inert soil materials and concrete;
 - (b) a section of drainage channel may be created by excavating the foreshore seawards from the outfall pipe, whereupon material shall be removed down to the invert level of the drainage pipes over the width of the pipes and up to 50 metres seawards of the pipes;
 - (c) a stone mattress may be placed within the drainage channel created under (b) over a distance of 20 metres seawards of the outfall pipes; and
 - (d) a pumping station may be constructed such that its seaward extend it above the stone mattress.

(2) Works outside the cofferdam shall be undertaken using land based plant operating from a berm formed within the south-eastern return wall of the quay.

Compensation site creation

8. The licence holder is permitted to remove a 250 metre section of the existing north bank flood wall to create the Cherry Cobb Sands channel under the following conditions:—

- (a) a new flood defence shall have been constructed landward of the existing flood defence;
- (b) a channel shall have been excavated from the site of the breach to the foreshore at the level of the breach;
- (c) all material is to be removed using land-based plant;
- (d) all excavated material is to be disposed of in the intertidal area created between the old and new flood defences.

Capital dredging

9. (1) The licence holder is permitted to carry out capital dredging at the following locations:—

- (a) the quay site to a depth of -6.5 metres Chart Datum;
- (b) the berthing pocket to a depth of -14.5 metres Chart Datum;
- (c) the approach channel to a depth of -9 metres Chart Datum;
- (d) the turning area to a depth of -9 metres Chart Datum;
- (e) the pumping station channel to a depth of 0.5 metres Chart Datum; and
- (f) the Cherry Cobb Sands channel to a depth of 5.7 metres Chart Datum.

(2) The materials must be dredged in the approximate quantities and deposited at the locations according to the following table:

<i>Location</i>	<i>Material</i>	<i>Maximum tonnage per year</i>	<i>Deposit location</i>	<i>Total licensed tonnage</i>
Quay site	Gravel	50,000	HU080	725,000
	Sand	110,000		
	Silt	390,000		
	Clay	175,000	HU082	
The berthing pocket			HU080	1,675,000
	Sand	50,000		
	Silt	150,000		
	Clay	1,475,000	HU082	
The approach channel	Gravel	300,000	HU080	1,650,000
	Sand	600,000		
	Silt	500,000		
	Clay	250,000	HU082	
The turning area	Gravel	35,000	HU080	250,000
	Sand	95,000		
	Silt	80,000		
	Clay	40,000	HU082	
The pumping station channel	Sand	500	HU080	2,500
	Silt	2,000		
The Cherry Cobb Sands channel	Sand	2,000	The intertidal area landward of the Cherry Cobb Sands channel	10,000
	Silt	8,000		

Maintenance dredging

10. (1) The licence holder is permitted to carry out maintenance dredging at the following locations:—

- (a) the quay site;
- (b) the berthing pocket to a depth of -11 metres Chart Datum;
- (c) the approach channel to a depth of -9 metres Chart Datum;
- (d) the turning area to a depth of -9 metres Chart Datum;
- (e) the E.ON outfall to keep it free of siltation;
- (f) the Centrica outfall to keep it free of siltation;
- (g) the pumping station channel to a depth of -3 metres Chart Datum; and
- (h) the Cherry Cobb Sands channel to a depth of -5.7 metres Chart Datum.

(2) The dredging under sub-paragraph (1) may only be carried out for the purpose of:—

- (a) maintaining the authorised development;
- (b) maintaining access to the authorised development;
- (c) maintaining access to neighbouring developments; and
- (d) removing siltation caused by the authorised development.

(3) The materials must be dredged in the approximate quantities and deposited at the locations according to the following table:

<i>Location</i>	<i>Material</i>	<i>Maximum tonnage per year</i>	<i>Deposit location</i>	<i>Total licensed tonnage</i>
The berthing pocket	Sand	150,000	HU082	1,075,000
	Silt	925,000		
The approach channel	Sand	10,000	HU082	50,000
	Silt	40,000		
The turning area	Sand	10,000	HU082	50,000
	Silt	40,000		
The E.ON outfall	Sand	500	HU082	2,500
	Silt	2,000		
The Centrica outfall	Sand	500	HU082	2,500
	Silt	2,000		
The pumping station channel	Sand	50	HU080	100
	Silt	50		

PART 3

ENFORCEMENT

11. Any breach of this Schedule shall not constitute a breach of this Order but shall be subject to the enforcement regime in Chapter 3 of Part 4 of the 2009 Act as if this Schedule were a licence granted under that Act.

PART 4

CONDITIONS

General conditions

12. (1) The conditions set out at paragraphs 13 to 37 are licence conditions attached to the deemed marine licence granted by article 43.

(2) For such of the licensed activities that involve the construction, alteration or improvement of works in or over the sea or on or under the sea bed, the conditions shall apply to any person who for the time being owns, occupies or enjoys any use of the licensed activity.

13. (1) No licensed activity shall be carried out until a marine environmental management and mitigation plan has been agreed in writing by the MMO following consultation with the Environment Agency and Natural England, and the licensed activities shall be carried out in accordance with the marine environmental management and mitigation plan.

(2) The licence holder shall consult C.R.O Ports (Killingholme) Ltd, E.ON UK plc and Centrica on the contents of the marine environmental management and mitigation plan in relation to those elements of the capital dredging licensed under paragraph 9 that may affect those parties' interests.

14. No licensed activity shall be carried out until a vessel movement management plan has been agreed in writing by the MMO, and the licensed activities shall be carried out in accordance with the vessel movement management plan.

15. The MMO must be notified by the licence holder at least five working days before the commencement of any licensed activity of its acceptance of the provisions of this Schedule and that the company and any agents or contractors employed by it to carry out the licensed activities have knowledge of the provisions of this Schedule.

16. The MMO must be notified by the licence holder at least five working days before the commencement of each licensed activity that that such licensed activity is about to commence.

17. The MMO must be notified by the licence holder in writing of any agents, contractors or sub-contractors that will be carrying out any licensed activity on behalf of the licence holder at least five working days before the commencement of the licensed activity.

18. The licence holder must ensure that a copy of this Schedule and any subsequent revisions or amendments has been provided to, read and understood by any agents, contractors or sub-contractors that will be carrying out any licensed activity on behalf of the licence holder.

19. The MMO must be provided with notification of any vessel being used to undertake any licensed activity no less than 24 hours before the commencement of the licensed activity, such notification setting out

- (a) the vessel type,
- (b) the vessel International Maritime Organization (IMO) number; and
- (c) the vessel owner or operating company.

20. The licence holder must ensure that a copy of this Schedule and any subsequent revisions or amendments has been provided to, read and understood by the master of any vessel being used to undertake any licensed activity, and that a copy of this Schedule is held on board any such vessel.

21. Should the licence holder become aware that any of the information on which the granting of this deemed marine licence was based has changed or is likely to change, the licence holder must notify the MMO at the earliest opportunity.

22. Any breach of the conditions of this deemed marine licence may be treated as the breach of a marine licence over which the MMO may take enforcement action under the 2009 Act.

Project wide conditions

23. The works shall be carried out in accordance with a works schedule to be agreed in writing between the licence holder and the MMO prior to the commencement of the works, and any changes to the works schedule are also to be agreed in writing with the MMO.

24. (1) The following dependencies apply to the licensed activities in paragraphs 4 to 11.

(2) If the licence holder carries out any of the activities licensed under paragraph 4 (construction of the quay), then it must:

- (a) carry out the activity licensed under paragraph 8 (compensation site creation) in the June following the creation of the compensation site, which in turn must be done during the first earthworks season following the commencement of the activity licensed under paragraph 4;
- (b) carry out the activity licensed under paragraph 7 (pumping station);
- (c) carry out the activity licensed under paragraph 11(1)(e) (the E.On outfall maintenance dredging) unless agreed in writing with E.ON; and
- (d) carry out the activity licensed under paragraph 11(1)(f) (the Centrica outfall maintenance dredging) unless agreed in writing with Centrica.

(3) If the licence holder carries out the activity licensed under paragraph 10(1)(b) (berthing pocket capital dredging) then it must carry out the activity licensed under paragraph 6 (berthing pocket infill) to the extent that the dredging is below -11 metres Chart Datum.

Piling conditions

25. (1) No operations consisting of piling shall commence until a piling method statement has been submitted to and agreed in writing by the MMO, following consultation with the Environment Agency and Natural England, such statement to include the following:—

- (a) the use of pile pads,
- (b) the use of pile shrouds,

- (c) the specification of piles to be used,
- (d) soft start procedures to be followed after any cessation of piling of more than 10 minutes that ensure an incremental increase in pile power over a set time period until full operational power is achieved, over a period of not less than 20 minutes,
- (e) marine mammal observation, and
- (f) implementation of an active monitoring scheme under paragraph 26.

(2) Percussive piling shall only be carried out in accordance with the relevant piling method statement.

26. (1) No development shall be commenced until an active monitoring scheme has been submitted to and agreed in writing by the MMO, to include the following details:—

- (a) the location of active monitoring buoys and the depth and design of sensors,
- (b) details of the frequency of measurement of temperature and dissolved oxygen,
- (c) 24-hour monitoring of noise,
- (d) when monitoring shall commence and cease, to include a two-week period of pre- and post-construction monitoring to establish baseline conditions and the return to baseline conditions respectively,
- (e) a log of the number and approximate locations of piling rigs that are in operation on any given day, and
- (f) details of how the monitored information will be accessed by or communicated to the site contractor and the MMO as necessary.

(2) The development shall be carried out in accordance with the relevant active monitoring scheme.

(3) No percussive piling shall take place while the data from the relevant active monitoring scheme shows either the temperature to be above 21.5 degrees Celsius or dissolved oxygen to be below 5 milligrams per litre.

27. No percussive piling shall take place between 7 April and 1 June inclusive in any calendar year.

28. (1) Percussive piling shall be restricted at other times as follows:—

- (a) from 2 June to 22 July inclusive in any year, the maximum amount of percussive piling permitted within any four-week period shall not exceed:—
 - (i) 101 hours where a single piling rig is in operation, or
 - (ii) a total of 168 hours where two or more rigs are in operation;
- (b) from 23 July to 10 September inclusive in any year, the maximum amount of percussive piling permitted within any four-week period shall not exceed:—
 - (i) 25 hours where a single piling rig is in operation, or
 - (ii) a total of 42 hours where two or more rigs are in operation;
- (c) from 11 September to 31 October inclusive in any year, the maximum amount of percussive piling permitted within any four-week period shall not exceed:—
 - (i) 134 hours where a single piling rig is in operation, or
 - (ii) a total of 224 hours where two or more rigs are in operation.
- (d) from 1 November in any year to 6 April in the following year inclusive, the maximum amount of percussive piling permitted within any eight-week period shall not exceed:—
 - (i) 336 hours where a single piling rig is in operation, or
 - (ii) a total of 560 hours where two or more rigs are in operation.

(2) For the purposes of calculating hours of operation under this paragraph, these shall be calculated to be the time elapsed between the first and last percussive strikes during any one day.

29. No percussive piling shall take place on a Sunday, or before 0600 hours or after 2200 hours on any other day.

30. The maximum diameter of marine piles shall be 2.1 metres.

Dredge and disposal conditions

31. Conditions 32 to 37 shall apply to licensed activities consisting of dredging and disposal.

32. (1) The licence holder must agree a dredge and disposal strategy with the MMO before the commencement of any licensed activities.

(2) The dredging and disposal must be carried out in accordance with the dredge and disposal strategy.

33. The licence holder must install bunding and/or storage facilities to contain and prevent the release of fuel, oils, and chemicals associated with plant, refuelling and construction equipment, into the marine environment such that secondary containment should be used with a capacity of not less than 110% of any container's storage capacity.

34. The licence holder must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO Marine Pollution Response Team (0870 7851050 and dispersants@marinemangement.org.uk)

35. The licence holder must ensure that to minimise the amount of man-made materials disposed of at sea any man-made material must be separated from the dredged material and disposed of to land.

36. The licence holder must employ methods to minimise resuspension of sediment during dredging operations.

37. The licence holder must ensure that the Environment Agency's Pollution Prevention Guidelines for works in or near water (PPG5) are adhered to at all times.

PROTECTIVE PROVISIONS

PART 1

FOR THE PROTECTION OF NATURAL ENGLAND

1. For the protection of Natural England the following provisions shall, unless otherwise agreed in writing between the undertaker and Natural England, have effect.

Ecological management and monitoring

Terrestrial mitigation and enhancement

2.—(1) No stage of the authorised development shall commence until a terrestrial Ecological Management and Monitoring Plan has been prepared by the undertaker and approved by Natural England in consultation with the relevant Local Planning Authority

(2) The authorised development shall be carried out in accordance with the terrestrial Ecological Management and Monitoring Plan and the undertaker shall implement the monitoring and other measures as detailed in that plan.

European Protected Species

3. No works shall be carried out that will disturb a European protected species under regulation 41 of the Conservation of Habitats and Species Regulations 2010 unless a licence has first been obtained from Natural England under regulation 53 (Licences for certain activities relating to animals or plants) of those regulations.

PART 2

FOR THE PROTECTION OF THE HUMBER CONSERVANCY

Interpretation

4. In this Part—

“the Conservancy Authority” means AB Ports Humber Estuary Services in its role as harbour authority for the Humber Conservancy;

“the Able Dockmaster” means the dockmaster appointed by the Able Harbour Authority under this Order;

“environmental document” means—

- (a) the environmental statement prepared for the purposes of the application for this Order together with any supplementary environmental statement or other document so prepared by way of clarification or amplification of the environmental statement; and
- (b) any other document containing environmental information provided by the Able Harbour Authority to the Secretary of State or the Conservancy Authority for the purposes of any tidal works approval under article 22 (tidal works not to be constructed without approval of the Secretary of State) or this Schedule; and

“the Able Harbour Authority” means Able Humber Ports Ltd in its role as harbour authority for the Able Marine Energy Park;

“the Humber Harbour Master” means the harbour master appointed by the Conservancy Authority to be a harbour master for an area that includes the area of jurisdiction and includes the harbour master’s deputies and assistants; and

“the river” means the River Humber.

General

5.—(1) The provisions of this Schedule shall, unless otherwise agreed in writing between the Able Harbour Authority and the Conservancy Authority, have effect for the protection of the Conservancy Authority and the users of the river.

(2) For the purposes of this Schedule, the definition of “tidal work” shall be taken to include—

- (a) any projection over the river outside the area of jurisdiction by booms, cranes and similar plant or machinery, whether or not situated within the area of jurisdiction; and
- (b) any authorised work which affects the river or any functions of the Conservancy Authority, whether or not that authorised work is within the limits of the Conservancy Authority,

but shall not include any maintenance dredging.

Tidal Works: approval of detailed design

6.—(1) Before—

- (a) submitting any plans and sections for any tidal work to the Secretary of State for her approval under article 22 (tidal works not to be constructed without approval of the Secretary of State);
- (b) commencing any operation for the construction of a tidal work where approval of the Secretary of State under article 22 is not required; or
- (c) commencing any operation for the maintenance of a tidal work,

the Able Harbour Authority shall submit to the Conservancy Authority plans and sections of the tidal work or operation and such further particulars as the Conservancy Authority may, within 28 days from the day on which plans and sections are submitted under this sub-paragraph, reasonably require.

(2) No application for the Secretary of State’s approval under article 22 shall be made in respect of a tidal work until plans and sections in respect of that tidal work submitted under sub-paragraph (1) have been approved by the Conservancy Authority.

(3) Any tidal work not requiring the Secretary of State’s approval under article 22 shall not be constructed, and no tidal work shall be maintained, except in accordance with such plans as may be approved in writing by the Conservancy Authority or determined under paragraph 26.

(4) Any approval of the Conservancy Authority required under this paragraph shall not be unreasonably withheld or delayed but may be given subject to such reasonable requirements as the Conservancy Authority may make for the protection of—

- (a) traffic in, or the flow or regime of, the river;
- (b) the use of its operational land or the river for the purposes of performing its functions; or
- (c) the performance of any of its functions connected with environmental protection.

(5) Requirements made under sub-paragraph (4) may include conditions as to—

- (a) the relocation, provision and maintenance of works, moorings, apparatus and equipment necessitated by the tidal work; and
- (b) the expiry of the approval if the Able Harbour Authority does not commence construction of the tidal work approved within a prescribed period.

(6) Subject to sub-paragraphs (8) and (9), any such approval shall be deemed to have been refused if it is neither given nor refused within 42 days of the specified day.

(7) Before making a decision on any such approval, the Conservancy Authority shall take into account any opinion on plans and sections provided to it by the Environment Agency.

(8) Accordingly, an approval of the Conservancy Authority under this paragraph shall not be deemed to have been unreasonably withheld if approval within the time limited by sub-paragraph (6) has not been given pending the outcome of any consultation on the approval in question that the Conservancy Authority is obliged in the proper exercise of its functions to carry out provided that during the course of such consultation, the Conservancy Authority has acted with all due expedition.

(9) In this paragraph “the specified day” means, in relation to any tidal work—

- (a) the day on which plans of that work are submitted to the Conservancy Authority under sub-paragraph (1); or
- (b) the day on which the Able Harbour Authority provides the Conservancy Authority with all such particulars of the work as have been reasonably requested by the Conservancy Authority under that sub-paragraph;

whichever is the later.

(10) Whenever the Able Harbour Authority provides the Secretary of State with an environmental document it shall at the same time send a copy to the Conservancy Authority.

7. Any operations for the construction of any tidal work approved in accordance with this Order shall, once commenced, be carried out by the Able Harbour Authority with all reasonable dispatch and to the reasonable satisfaction of the Conservancy Authority so that river traffic, the flow or regime of the river and the exercise of the Conservancy Authority’ functions shall not suffer more interference than is reasonably practicable, and the Conservancy Authority shall be entitled by its officer at all reasonable times, on giving such notice as may be reasonable in the circumstances, to inspect and survey such operations.

Discharges, etc.

8.—(1) The Able Harbour Authority shall not without the consent of the Conservancy Authority—

- (a) deposit in or allow to fall or be washed into the river any gravel, soil or other material; or
- (b) discharge or allow to escape either directly or indirectly into the river any offensive or injurious matter in suspension or otherwise.

(2) Any consent of the Conservancy Authority under this paragraph shall not be unreasonably withheld but may be given subject to such terms and conditions as the Conservancy Authority may reasonably impose.

(3) Any such approval shall be deemed to have been given if it is neither given nor refused (or is refused but without an indication of the grounds for refusal) within 35 days of the day on which the request for consent is submitted under sub-paragraph (1).

(4) In its application to the discharge of water into the river, article 18 (discharge of water) shall have effect subject to the terms of any conditions attached to a consent given under this paragraph.

9. The Able Harbour Authority shall not, in exercise of the powers conferred by article 18, damage or interfere with the beds or banks of any watercourse forming part of the river unless such damage or interference is approved as a tidal work under this Order or is otherwise approved in writing by the Conservancy Authority.

Obstruction in river

10. If any pile, stump or other obstruction to navigation becomes exposed in the course of constructing any tidal work (other than a pile, stump or other obstruction on the site of a structure comprised in any permanent work), the Able Harbour Authority shall, as soon as reasonably practicable after the receipt of notice in writing from the Conservancy Authority requiring such action, remove it from the river or, if it is not reasonably practicable to remove it—

- (a) cut the obstruction off at such level below the bed of the river as the Conservancy Authority may reasonably direct; or
- (b) take such other steps to make the obstruction safe as the Conservancy Authority may reasonably require.

Removal, etc. of the Conservancy Authority moorings and buoys

11. If—

- (a) by reason of the construction of any tidal work it is reasonably necessary for the Conservancy Authority to incur reasonable costs in temporarily or permanently altering, removing, re-siting, repositioning or reinstating existing moorings or aids to navigation (including navigation marks or lights) owned by the Conservancy Authority, or laying down and removing substituted moorings or buoys, or carrying out dredging operations for any such purpose, not being costs which it would have incurred for any other reason; and
- (b) the Conservancy Authority gives to the Able Harbour Authority not less than 28 days' notice of its intention to incur such costs, and takes into account any representations which the Able Harbour Authority may make in response to the notice within 14 days of the receipt of the notice,

the Able Harbour Authority shall pay the costs reasonably so incurred by the Conservancy Authority.

Navigational lights, buoys, etc.

12. In addition to any requirement under articles 25 (lights on tidal works during construction) and 27 (permanent lights on tidal works), the Able Harbour Authority shall, at or near every tidal work, and any other work of which the Able Harbour Authority is in possession in exercise of any of the powers of this Order (being in either case a work which is below mean high water level forming part of the river), exhibit such lights, lay down such buoys and take such other steps for preventing danger to navigation as the Conservancy Authority may from time to time reasonably require.

Removal of temporary works

13. On completion of the construction of any part of a permanent authorised work, the Able Harbour Authority shall as soon as practicable remove—

- (a) any temporary tidal work carried out only for the purposes of that part of the permanent work; and
- (b) any materials, plant and equipment used for such construction, and shall make good the site to the reasonable satisfaction of the Conservancy Authority.

Protective action

14.—(1) If any tidal work—

- (a) is constructed otherwise than in accordance with the requirements of this Schedule or with any condition in an approval given pursuant to paragraph 6(4); or
 - (b) during construction gives rise to sedimentation, scouring, currents or wave action detrimental to traffic in, or the flow or regime of, the river,
- then the Conservancy Authority may by notice in writing require the Able Harbour Authority at the Able Harbour Authority's own expense to comply with the remedial requirements specified in the notice.

(2) The requirements that may be specified in a notice given under sub-paragraph (1) are—

- (a) in the case of a tidal work to which sub-paragraph (1)(a) applies, such requirements as may be specified in the notice for the purpose of giving effect to the requirements of—
 - (i) this Schedule; or
 - (ii) the condition that has been breached; or
- (b) in any case within sub-paragraph (1)(b), such requirements as may be specified in the notice for the purpose of preventing, mitigating or making good the sedimentation, scouring, currents or wave action so far as required by the needs of traffic in, or the flow or regime of, the river.

(3) If the Able Harbour Authority does not comply with a notice under sub-paragraph (1), or is unable to do so then the Conservancy Authority may in writing require the Able Harbour Authority to—

- (a) remove, alter or pull down the tidal work, and where the tidal work is removed to restore the site of that work (to such extent as the Conservancy Authority reasonably requires) to its former condition; or
- (b) take such other action as the Conservancy Authority may reasonably specify for the purpose of remedying the non-compliance to which the notice relates.

(4) If a tidal work gives rise to environmental impacts over and above those anticipated by any environmental document, the Able Harbour Authority shall, in compliance with its duties under any enactment and, in particular, under section 48A of the 1964 Act, take such action as is necessary to prevent or mitigate those environmental impacts and in so doing shall consult and seek to agree the necessary measures with the Conservancy Authority.

(5) If the Conservancy Authority becomes aware that any tidal work is causing an environmental impact over and above those anticipated by any environmental document, the Conservancy Authority shall notify the Able Harbour Authority of that environmental impact, the reasons why the Conservancy Authority believes that the environmental impact is being caused by the tidal work and of measures that the Conservancy Authority reasonably believes are necessary to counter or mitigate that environmental impact. The Able Harbour Authority shall implement the measures that the Conservancy Authority has notified to the Able Harbour Authority or shall implement such other measures as the Able Harbour Authority believes are necessary to counter the environmental impact identified, giving reasons to the Conservancy Authority as to why it has implemented such other measures.

Abandoned or decayed works

15.—(1) If any tidal work or any other work of which the Able Harbour Authority is in possession in exercise of any of the powers of this Order (being in either case a work which is below mean high water level) is abandoned or falls into decay, the Conservancy Authority may by notice in writing require the Able Harbour Authority to take such reasonable steps as may be specified in the notice either to repair or restore the work, or any part of it, or to remove the work and (to such extent as the Conservancy Authority reasonably requires) to restore the site to its former condition.

(2) If any tidal work is in such condition that it is, or is likely to become, a danger to or an interference with navigation in the river, the Conservancy Authority may by notice in writing require the Able Harbour Authority to take such reasonable steps as may be specified in the notice—

- (a) to repair and restore the work or part of it; or
- (b) if the Able Harbour Authority so elects, to remove the tidal work and (to such extent as the Conservancy Authority reasonably requires) to restore the site to its former condition.

(3) If after such reasonable period as may be specified in a notice under this paragraph the Able Harbour Authority has failed to begin taking steps to comply with the requirements of the notice, or after beginning has failed to make reasonably expeditious progress towards their implementation, the Conservancy Authority may carry out the works specified in the notice and any expenditure reasonably incurred by it in so doing shall be recoverable from the Able Harbour Authority.

Facilities for navigation

16.—(1) The Able Harbour Authority shall not in the exercise of the powers granted by this Order interfere with any marks, lights or other navigational aids in the river without the agreement of the Conservancy Authority, and shall ensure that access to such aids remains available during and following construction of any tidal works.

(2) The Able Harbour Authority shall provide at any tidal works, or shall afford reasonable facilities at such works (including an electricity supply) for the Conservancy Authority to provide

at the Able Harbour Authority's cost, from time to time, such navigational lights, signals, radar or other apparatus for the benefit, control and direction of navigation of users of the river in general as the Conservancy Authority may deem necessary by reason of the construction of any tidal works, and shall ensure that access remains available to apparatus during and following construction of such works.

(3) The Able Harbour Authority shall comply with the directions of the Humber Harbour Master from time to time with regard to the lighting on the tidal works or within the harbour, or the screening of such lighting, so as to ensure safe navigation on the river.

Survey of riverbed

17.—(1) Before the commencement of construction of the first tidal work to be constructed following approval pursuant to article 22 (tidal works not to be constructed without approval of the Secretary of State), the Conservancy Authority may, at the Able Harbour Authority's reasonable expense, carry out a survey of such parts of the river as might be affected by sedimentation, scouring, currents or wave action that might result from the construction of such of the authorised works as would constitute tidal works if they were to be constructed, for the purposes of establishing the condition of the river at that time.

(2) Before the commencement of construction of any other tidal work approved pursuant to article 22, the Conservancy Authority may, at the Able Harbour Authority's reasonable expense, carry out a survey of such parts of the river as might be affected by sedimentation, scouring, currents or wave action resulting from that tidal work for the purpose of establishing the condition of the river at that time.

(3) The Conservancy Authority may carry out such surveys of the river as are reasonably required during the construction of any tidal work to ascertain the effect of that tidal work on the river and the Conservancy Authority shall make available to the Able Harbour Authority the results of any such survey in electronic and paper format.

(4) After completion of, respectively, any tidal work and all the tidal works constructed under this Order, the Conservancy Authority may, at the Able Harbour Authority's expense carry out a further survey of the parts of the river which were surveyed prior to the construction of that work, or as the case may be a survey of the completed tidal works as so constructed, for the purpose of establishing the condition of the river and the effect that the tidal work is, or as the case may be the tidal works are, having on navigation, the flow and the regime of the river and the exercise of the Conservancy Authority's functions.

(5) The Conservancy Authority shall not under this paragraph carry out a survey of any part of the river as respects which the Able Harbour Authority has provided to the Conservancy Authority survey material which the Conservancy Authority is reasonably satisfied establishes the condition of the river, and in the case of a survey under sub-paragraph (3), the effect of the tidal work, or as the case may be the tidal works.

Sedimentation, etc.: remedial action

18.—(1) This paragraph applies if any part of the river becomes subject to sedimentation, scouring, currents or wave action which—

- (a) is, during the period beginning with the commencement of the construction of that tidal work and ending with the expiration of 10 years after the date on which all the tidal works constructed under this Order are completed, wholly or partly caused by a tidal work; and
- (b) for the safety of navigation or for the protection of works in the river, should in the reasonable opinion of the Conservancy Authority be removed or made good.

(2) The Able Harbour Authority shall either—

- (a) pay to the Conservancy Authority any additional expense to which the Conservancy Authority may reasonably be put in dredging the river to remove the sedimentation or in making good the scouring so far as (in either case) it is attributable to the tidal work; or

- (b) carry out the necessary dredging at its own expense and subject to the prior approval of the Conservancy Authority, such prior approval not to be unreasonably withheld or delayed;

and the reasonable expenses payable by the Able Harbour Authority under this paragraph include any additional expenses accrued or incurred by the Conservancy Authority in carrying out surveys or studies in connection with the implementation of this paragraph.

Indemnity

19.—(1) The Able Harbour Authority shall be responsible for and make good to the Conservancy Authority all reasonable financial costs or losses not otherwise provided for in this Schedule which may reasonably be incurred or suffered by the Conservancy Authority by reason of—

- (a) the construction or operation of the authorised works or the failure of the authorised works;
- (b) anything done in relation to a mooring or buoy pursuant to paragraph 11; or;
- (c) any act or omission of the Able Harbour Authority, its employees, contractors or agents or others whilst engaged upon the construction or operation of the authorised works or dealing with any failure of the authorised works;

and the Able Harbour Authority shall indemnify the Conservancy Authority from and against all claims and demands arising out of or in connection with the authorised works or any such failure, act or omission.

(2) The fact that any act or thing may have been done—

- (a) by the Conservancy Authority on behalf of the Able Harbour Authority; or
- (b) by the Able Harbour Authority, its employees, contractors or agents in accordance with plans or particulars submitted to or modifications or conditions specified by the Conservancy Authority, or in a manner approved by the Conservancy Authority, or under its supervision or the supervision of its duly authorised representative;

shall not (if it was done or required without negligence on the part of the Conservancy Authority or its duly authorised representative, employee, contractor or agent) excuse the Able Harbour Authority from liability under the provisions of this paragraph.

(3) The Conservancy Authority shall give the Able Harbour Authority reasonable notice of any such claim or demand as is referred to in sub-paragraph (1), and no settlement or compromise of any such claim or demand shall be made without the prior consent of the Able Harbour Authority.

Entry for survey, etc.

20.—(1) Before exercising the powers of article 20 to enter any land situated below the level of high water the undertaker shall provide the Harbour Master with written particulars of—

- (a) the location of the land (including a plan);
- (b) the nature of the things proposed to be done in that land in exercise of that article;
- (c) the duration and frequency of the undertaker's intended presence on the land;
- (d) any vehicles or equipment proposed to be brought on the land;

and such other details as the Harbour Master may reasonably request.

(2) The undertaker may not enter any land the subject of written particulars provided under sub-paragraph (1) except in accordance with such conditions as the Harbour Master may impose, including conditions as to the time of entry and the way in which activities are to be carried out.

Statutory functions

21.—(1) Subject to article 4(1) and this paragraph, any function of the Able Harbour Authority or any officer of the Able Harbour Authority, whether conferred by or under this Order or any other enactment, shall be subject to—

- (a) any enactment relating to the Conservancy Authority;

- (b) any byelaw, direction or other requirement made by the Conservancy Authority or the Humber Harbour Master under any enactment; and
- (c) any other exercise by the Conservancy Authority or the Humber Harbour Master of any function conferred by or under any enactment.

(2) The Able Harbour Authority or Able Dockmaster shall not take any action in the river outside the area of jurisdiction under sections 57 and 65 of the 1847 Act as incorporated by article 3 (incorporation of the Harbours, Docks and Piers Clauses Act 1847) except with the consent of the Humber Harbour Master, which shall not be unreasonably withheld.

(3) The Able Dockmaster shall not give or enforce any special direction to any vessel under section 52 of the 1847 Act, as incorporated by article 3 (incorporation of the Harbours, Docks and Piers Clauses Act 1847), if to do so would conflict with a special direction given to the same vessel by the Humber Harbour Master.

(4) The Conservancy Authority shall consult the Able Harbour Authority before making any byelaw which directly applies to or which could directly affect the construction, operation or maintenance of the Able Marine Energy Park.

(5) The Conservancy Authority or the Humber Harbour Master (as appropriate) shall consult the Able Harbour Authority before giving any general direction which directly affects the construction, operation or maintenance of the Able Marine Energy Park.

(6) The Able Dockmaster shall consult the Humber Harbour Master in relation to the initiation, operation and any change in the Port Marine Safety Code as having effect in relation to the harbour, and the Able Harbour Authority shall comply with any requirement of the Humber Harbour Master for the adjustment of the Port Marine Safety Code as affecting the River Humber and the functions of the Conservancy Authority or the Humber Harbour Master.

Operating procedures

22. Before commencing harbour operations the Able Harbour master shall submit to the Humber Harbour Master for approval a written statement of proposed safe operating procedures for access to and egress from the harbour and shall operate the harbour only in accordance with such procedure as approved, including any approve alteration made from time to time.

Consideration for dredged material

23.—(1) Subject to any agreement concluded between the Able Harbour Authority, the Conservancy Authority and any other party benefiting from material dredged by the Conservancy Authority, the Able Harbour Authority shall pay the Conservancy Authority for material dredged by the Conservancy Authority under this Order from so much of the river as is vested in the Conservancy Authority, consideration calculated at a rate agreed between them and otherwise in accordance with this paragraph.

(2) The Able Harbour Authority shall pay reasonable consideration under sub-paragraph (1) as respects material dredged in the course of the construction of the works authorised by article 21 (right to dredge) based on the quantity of such material that—

- (a) is not used for the construction of—
 - (i) the authorised works;
 - (ii) any other works related to the construction of Able Marine Energy Park; or
 - (iii) the related development; and
- (b) is not owned by the undertaker, and
- (c) is sold by the Able Harbour Authority or by any other person exercising any powers under this Order.

Removal of wrecks and obstructions, etc.

24.—(1) Before exercising any power under section 252 of the Merchant Shipping Act 1995(a) or under section 56 of the 1847 Act, the Able Dockmaster shall notify the Humber Harbour Master.

(2) The Able Dockmaster shall comply with any reasonable instructions that the Humber Harbour Master may give in relation to the exercise of the powers referred to in sub-paragraph (1).

25. Within 14 days after the date of any transfer or grant under article 12 (consent to transfer benefit of Order), the undertaker who made the transfer or grant shall serve notice on the Humber Harbour Master containing the name and address of the transferee or lessee, the territorial extent of the transfer or grant and, in the case of a grant, the period for which it is granted and the extent of benefits and rights granted.

Disputes

26. Any dispute arising between the Able Harbour Authority and the Conservancy Authority under this Schedule shall be determined by arbitration as provided in article 58 (arbitration).

PART 3

FOR THE PROTECTION OF THE ENVIRONMENT AGENCY

27. For the protection of the Environment Agency, the following provisions shall, unless otherwise agreed in writing between the undertaker and the Environment Agency, have effect.

28. The requirement for consent under section 109 of the Water Resources Act 1991 and byelaw 27 of the Anglian Region Land Drainage and Sea Defence Byelaws 1987 shall not be required for the authorised development subject to the conditions contained in paragraphs 29 to 32.

29. The authorised development should be carried out to ensure minimum obstruction to flows in the watercourse at all times.

30. The requirements set out in the Environment Agency's Pollution Prevention Guideline 5 (Works and Maintenance in or near Water) must be complied with to ensure that the works are carried out in a proper manner and do not adversely affect the watercourse.

31. On completion of the works, all debris and surplus material shall be removed from the banks of the watercourse and that the banks are left in a stable condition with adequate protection provided to avoid erosion, to the satisfaction of the Environment Agency.

32. The Company must bring the conditions contained in paragraphs 29 to 31 to the attention of any agent or contractor responsible for carrying out the authorised development.

PART 4

FOR THE PROTECTION OF THE HIGHWAYS AGENCY

33. For the protection of the Highways Agency, no part of the authorised development shall be occupied until improvements to the following junctions (or alternatives approved in writing by the local planning authority in consultation with the Highways Agency) have been implemented in accordance with details approved by the local planning authority in consultation with the Highways Agency:

- (a) A160/A1173/Humber Road (Manby Road Roundabout),
- (b) A160/Top Road/Habrough Road,
- (c) A160/A1077 Ulceby Road,
- (d) A160/Eastfield Road (signalised junction), and
- (e) A180/A160 Merge/Diverge (Brocklesby Interchange).

PART 5

FOR THE PROTECTION OF NETWORK RAIL

34. For the protection of Network Rail, the following provisions shall, unless otherwise agreed in writing between the undertaker and Network Rail, have effect.

35. In this part of this Schedule,

“railway property” means any railway belonging to Network Rail and—

(a) any station, land, works, apparatus and equipment belonging to Network Rail or connected with any such railway; and

(b) any easement or other property interest held by or used for the benefit of Network Rail for the purposes of such railway or works, apparatus or equipment; and

“specified work” means so much of any of the authorised project as is situated upon, across, under, over or within 15 metres of, or may in any way adversely affect, railway property.

36.—(1) Where under this Schedule Network Rail is required to give its consent or approval in respect of any matter, that consent or approval shall not be unreasonably withheld or delayed but may be subject to reasonable conditions (while recognising that the engineer has sole discretion in matters relating to safety) and is subject to the condition that Network Rail complies with any relevant railway operational procedures and any obligations under its network licence or under statute.

(2) In so far as any specified work or the acquisition or use of railway property is or may be subject to railway operational procedures, Network Rail shall—

(a) co-operate with the Company with a view to avoiding undue delay and securing conformity as between any plans approved by the engineer and requirements emanating from those procedures; and

(b) use its reasonable endeavours to avoid any conflict arising between the application of those procedures and the proper implementation of the authorised project pursuant to this Order.

37.—(1) The Company shall not exercise the powers conferred by article 20 (authority to survey and investigate the land) or the powers conferred by section 11(3) of the 1965 Act as applied to this Order by the 2008 Act in respect of any railway property unless the exercise of such powers is with the consent of Network Rail.

(2) The Company shall not in the exercise of the powers conferred by this Order prevent pedestrian or vehicular access to any railway property, unless preventing such access is with the consent of Network Rail.

38. – (1) The Company shall before commencing construction of any specified work supply to Network Rail proper and sufficient plans of that work for the reasonable approval of the engineer and the specified work shall not be commenced except in accordance with such plans as have been approved in writing by the engineer or settled by arbitration.

(2) The approval of the engineer under subparagraph (1) shall not be unreasonably withheld or delayed, and if by the end of the period of 28 days beginning with the date on which such plans have been supplied to Network Rail the engineer has not intimated his disapproval of those plans and the grounds of his disapproval the Company may serve upon the written notice requiring the engineer to intimate his approval or disapproval within a further period of 28 days beginning with the date upon which the engineer receives written notice from the Company. If by expiry of the further period of 28 days the engineer has not intimated his approval or disapproval, he engineer shall be deemed to have approved the plans as submitted.

(3) If by the end of the period of 56 days beginning with the date on which such plans have been supplied to Network Rail, Network Rail gives notice to the Company that Network Rail desires itself to construct any part of a specified work which in the opinion of the engineer will or may affect the stability of railway property or the safe operation of traffic on the railways of Network Rail then, if the Company desires such part of the specified work to be constructed, Network Rail shall construct it with all reasonable dispatch on behalf of and to the reasonable satisfaction of the Company in accordance with the plans approved or deemed to be approved or settled under this paragraph.

(4) When signifying his approval of the plans the engineer may specify any protective works (whether temporary or permanent) which in his opinion should be carried out before the commencement of the construction of a specified work to ensure the safety or stability of railway property or the continuation of safe and efficient operation of the railways of Network Rail or the services of operators using the same (including any relocation of works, apparatus and equipment necessitated by a specified work and the comfort and safety of passengers who may be affected by the specified works), and such protective works as may be reasonably necessary for those purposes shall be constructed by Network Rail but at the expense of the Company, or if Network Rail so desires such protective works shall be carried out by the Company at its own expense with all reasonable dispatch, and the Company shall not commence the construction of the specified works until the engineer has notified the Company that the protective works have been completed to his reasonable satisfaction.

39.—(1) Any specified work and any protective works to be constructed by virtue of paragraph 38(4) shall, when commenced, be constructed—

(a) with all reasonable dispatch in accordance with the plans approved or deemed to have been approved or settled under paragraph 38;

(b) under the supervision (where appropriate and if given) and to the reasonable satisfaction of the engineer;

(c) in such manner as to cause as little damage as is possible to railway property; and

(d) so far as is reasonably practicable, so as not to interfere with or obstruct the free, uninterrupted and safe use of any railway of Network Rail or the traffic thereon and the use by passengers of railway property.

(2) If any damage to railway property or any such interference or obstruction shall be caused by the carrying out of, or in consequence of the construction of a specified work, the Company shall, notwithstanding any approval described in paragraph 38(1)(a), make good such damage and shall pay to Network Rail all reasonable expenses to which Network Rail may be put and compensation for any loss which it may sustain by reason of any such damage, interference or obstruction.

(3) Nothing in this Schedule shall impose—

(a) any liability on the Company with respect to any damage, costs, expenses or loss attributable to the negligence of Network Rail or its servants, contractors or agents; or

(b) any liability on Network Rail with respect to any damage, costs, expenses or loss attributable to the negligence of the Company or its servants, contractors or agents.

40. The Company shall—

(a) at all times afford reasonable facilities to the engineer for access to a specified work during its construction; and

(b) supply the engineer with all such information as he may reasonably require with regard to a specified work or the method of constructing it.

41. Network Rail shall at all times afford reasonable facilities to the Company and its agents for access to any works carried out by Network Rail under this Schedule during their construction and

shall supply the Company with such information as it may reasonably require with regard to such works or the method of constructing them.

42.—(1) If any permanent or temporary alterations or additions to railway property, or any protective works under paragraph 38(4), are reasonably necessary during the construction of a specified work, or during a period of 12 months after the opening for public use of any part of the authorised project that includes a specified work, in consequence of the construction of that specified work, such alterations and additions may be carried out by Network Rail and if Network Rail gives to the Company reasonable notice of its intention to carry out such alterations or additions, the Company shall pay to Network Rail all costs reasonably and properly incurred in constructing those alterations or additions including, in respect of any such alterations and additions as are to be permanent, a capitalised sum representing the increase of the costs which may be expected to be reasonably incurred by Network Rail in maintaining, working and, when necessary, renewing any such alterations or additions.

(2) If during the construction of a specified work by the Company, Network Rail gives notice to the Company that Network Rail desires itself to construct that part of the specified work which in the opinion of the engineer is endangering the stability of railway property or the safe operation of traffic on the railways of Network Rail then, if the Company desires that part of the specified work to be constructed, Network Rail shall assume construction of that part of the specified work and the Company shall, notwithstanding any such approval of a specified work under paragraph 38(1), pay to Network Rail all reasonable expenses to which Network Rail may be put and compensation for any loss which it may suffer by reason of the execution by Network Rail of that specified work.

(3) If the cost of maintaining, working or renewing railway property is reduced in consequence of any such alterations or additions, a capitalised sum representing such saving shall be set off against any sum payable by the Company to Network Rail under this paragraph.

43. The Company shall repay to Network Rail all fees, costs, charges and expenses reasonably and properly incurred by Network Rail—

(a) in constructing any part of a specified work on behalf of the Company as provided by paragraph 37(3) or in constructing any protective works under the provisions of paragraph 37(4) including, in respect of any permanent protective works, a capitalised sum representing the cost of maintaining and renewing those works;

(b) in respect of the approval by the engineer of plans submitted by the Company and the supervision by him of the construction of a specified work and otherwise in connection with the implementation of the provisions of this Part;

(c) in respect of the employment or procurement of the services of any inspectors and other persons whom it shall be reasonably necessary to appoint for inspecting, watching and lighting railway property and for preventing, so far as may be reasonably practicable, interference, obstruction, danger or accident arising from the construction or failure of a specified work;

(d) in respect of any additional temporary lighting of railway property in the vicinity of the specified works, being lighting made reasonably necessary by reason or consequence of the construction or failure of a specified work; and

(e) in respect of any special traffic working resulting from any speed restrictions which may, in the opinion of the engineer, require to be imposed by reason or in consequence of the construction or failure of a specified work or from the substitution of diversion of services which may be reasonably necessary for the same reason.

44. If at any time after the completion of a specified work, not being a work vested in Network Rail, Network Rail gives notice to the Company informing it that the state of maintenance of any part of the specified work appears to be such as adversely affects the operation of railway property, the Company shall, on receipt of such notice, take such steps as may be reasonably

necessary to put that specified work in such state of maintenance as not adversely to affect railway property.

45. Any additional expenses which Network Rail may reasonably and properly incur in altering, reconstructing, maintaining or working railway property under any powers existing at the making of this Order by reason of the existence of a specified work shall, provided that 56 days' previous notice of the commencement of such alteration, reconstruction, maintenance or working has been given to the Company, be repaid by the Company to Network Rail.

46.—(1) The Company shall pay to Network Rail all costs, charges, damages and expenses not otherwise provided for in this Schedule which may be occasioned to or reasonably and properly incurred by Network Rail—

(a) by reason of the construction, working or maintenance of a specified work, or the failure thereof; or

(b) by reason of any act or omission of the Company or of any person in its employ or of its contractors or others whilst engaged upon a specified work;

(2) Network Rail shall give the Company reasonable notice of any such claim or demand and no settlement or compromise of such a claim or demand shall be made without the prior consent of the Company.

(3) The sums payable by the Company under sub-paragraph (1) may include a sum equivalent to the relevant costs.

47. Network Rail shall, on receipt of a request from the Company, from time to time provide the Company free of charge with written estimates of the costs, charges, expenses and other liabilities for which the Company is or will become liable under this Schedule (including the amount of the relevant costs mentioned in paragraph 46) and with such information as may reasonably enable the Company to assess the reasonableness of any such estimate or claim made or to be made pursuant to this Schedule (including any claim relating to those relevant costs).

48. In the assessment of any sums payable to Network Rail under this Part there shall not be taken into account any increase in the sums claimed that is attributable to any action taken by or any agreement entered into by Network Rail if that action or agreement was not reasonably necessary and was taken or entered into with a view to obtaining the payment of those sums by the Company under this Schedule or increasing the sums so payable.

49. The Company shall no later than 28 days from the date that the plans submitted to and certified by the Secretary of State in accordance with article 56 are certified by the Secretary of State, provide a set of those plans to Network Rail in the form of a computer disc with read only memory.

PART 6

FOR THE PROTECTION OF C.GEN KILLINGHOLME LTD AND C.RO PORTS (KILLINGHOLME) LTD

50. For the protection of C.GEN Killingholme Ltd ('C.GEN') and C.RO Ports (Killingholme) Ltd ('C.RO'), the following provisions shall, unless otherwise agreed in writing between the undertaker and C.GEN or C.RO, have effect.

51. In this part of this Schedule, 'CPK' means C.RO Ports Killingholme, a statutory harbour authority located upriver of the authorised development.

52. The Able Harbour Authority shall not in the exercise of the powers granted by this Order interfere with any marks, lights or other navigational aids in the river relating to CPK without the agreement of C.RO, and shall ensure that access to such aids remains available during and following construction of any tidal works.

53. The undertaker shall pay to C.RO the reasonable costs incurred by C.RO of such alterations to the marking and lighting of the navigational channel of the river as may be necessary during or in consequence of the construction of a tidal work.

54. The undertaker shall afford to C.RO such facilities as C.RO may reasonably require for the placing and maintenance on any tidal works of signals, tide-boards, tide-gauges or other apparatus for the safety or benefit of navigation.

55. With the exception of any duty owed by C.GEN or C.RO to the undertaker which is expressly provided for in this Part of this Schedule, nothing in this Order shall be construed as imposing upon C.GEN or C.RO either directly or indirectly, any duty or liability to which C.GEN or C.RO would not otherwise be subject and which is enforceable by proceedings before any court.

56. Unless otherwise agreed in writing, any dispute arising between the undertaker and C.GEN or C.RO under this Schedule shall be determined by arbitration as provided in article 58 (arbitration).

PART 7

FOR THE PROTECTION OF PHILLIPS 66 LIMITED

57. In this Part

“P66” means Phillips 66 Limited (Company number 00529086); and

“ the pipelines” means the 4 pipelines crossing the Order land owned and operated by P66 used at various times for the passage of multi-purpose hydrocarbon fuels and all ancillary apparatus including such works and apparatus properly appurtenant to the Pipelines as are specified by Section 65(2) of the Pipelines Act 1962

58. Before commencing any part of the authorised development or the operation of the authorised undertaking which would have an effect on the operation and maintenance of the pipelines and access thereto the undertaker shall submit to P66 plans and sections of the proposed works and such further particulars as P66 may, within 28 days from the day on which plans and sections are submitted under this paragraph, reasonably require.

59. No works comprising any part of the authorised development or the operation of the authorised undertaking which would have an effect in full or in part on the operation, maintenance, repair , replacement and abandonment of the pipelines and access thereto shall be commenced until plans and sections in respect of those works submitted under paragraph 58 have been approved by P66.

60. Any approval of P66 required under paragraph 59 shall not be unreasonably withheld or delayed but may be given subject to such reasonable requirements as P66 may require to be made for-

(a) the continuing safety and operational viability of the pipelines;

(b) the requirement for P66 to have uninterrupted and unimpeded access to the pipelines at all times.

PART 8

FOR THE PROTECTION OF NATIONAL GRID

61. In this Part

“National Grid” means National Grid Plc and shall include any reference to National Grid Gas Plc.

The “Electric Line” shall mean line 2AJ Killingholme Substation to Humber Refinery Substation and the term electric line shall have the same meaning as contained in section 64(1) of the Electricity Act 1989.

The “Pipelines” shall mean the three pipelines situated within plots 14002, 14004 and 14008 situated at Old Little Humber Farm and which are the subject of Deeds of Easement dated 8 May 1967 between Winfred Garton, John Garton & Mary Spetch and the Gas Council; dated 1 April 1985 between J Garton, D A Spetch & W M White and the British Gas Corporation and 5 October 2009 between D A Spetch & W M White and National Grid Gas Plc.

“Electric Line Works” shall mean works which have been agreed with National Grid for the removal or relocation of the Electric Line.

“Gas Works” shall mean works which have been agreed with National Grid to be carried out to the Pipelines.

62.For the protection of National Grid the following provisions shall, unless otherwise agreed in writing between the undertaker and National Grid, have effect.

Electric line

63.Notwithstanding the provisions of Article 41, the Electric Line Works shall not be implemented until they have been submitted to and approved by National Grid.

64.At the request of the undertaker National Grid shall carry out the Electric Line Works in accordance with the terms of any approval.

65.The undertaker shall pay to National Grid the reasonable costs of carrying out the Electric Line Works.

Gas

66.Notwithstanding the provisions of Article 41, the Gas Works shall not be implemented until they have been submitted to and approved by National Grid.

67.At the request of the undertaker National Grid shall carry out the Gas Works in accordance with the terms of any approval.

68.The undertaker shall pay National Grid the reasonable costs of carrying out the Gas Works.

General

69.Any dispute arising between the undertaker and National Grid under this Schedule shall be determined by arbitration as provided in Article 58 (arbitration).

PART 9

FOR THE PROTECTION OF E.ON UK PLC

70.In this Part:

“E.ON” means E.ON UK Plc whose registered office is at Westwood Way, Westwood Business Park, Coventry, West Midlands CV4 8LG (company registration number 02366970).

“the outfall and intake” means that part of the pipelines which are located in the river at grid reference [grid reference to be confirmed between E.ON and the undertaker].

“the pipelines” means the intake and outfall pipelines situated within plots 04023, 04024, 04027, 04028, 04029, 05003 to 05016 (inclusive), 05019, 05026, 05027, 05028, 05036, 05037, 05038, 05044, and 06006 which are the subject of a Deed of Easement dated 9 July 2004 between Able UK Limited and E.ON.

“the river” means the River Humber.

71. For the protection of E.ON the following provisions shall, unless otherwise agreed in writing between the undertaker and E.ON, have effect.

The Pipelines

72.—(1) Notwithstanding the provisions of Article 41, no stage of the authorised development shall commence until a construction method statement to protect the pipelines (offshore and onshore) and intake and outfall, which may involve diverting them, has been prepared by the undertaker and submitted to and agreed with E.ON.

(2). The construction method statement shall include provisions in respect of: (a) the location and methods of reinforcement of crossing points over the pipelines;

(b) a mechanism for the enforcement of the undertaker’s use of designated crossing points over the pipelines and the agreed reinforcement methods; and

(c) adoption of a prior notification and consent regime which would require the undertaker to:

(i) notify E.ON of its intention to carry out any development within the vicinity of the pipelines and intake and outfall, such notification to be provided at least 48 hours prior to any such development occurring; and

(ii) seek E.ON’s consent to the carrying out of the proposed development within the vicinity of the pipelines and intake and outfall, such consent not to be unreasonably withheld; and

the authorised development shall thereafter be carried out in accordance with the approved construction method statement.

General

73. Any dispute arising between the undertaker and E.ON under this Schedule shall be determined by arbitration as provided in article 58 (arbitration).

PART 10

FOR THE PROTECTION OF CENTRICA PLC

74. For the protection of Centrica the following provisions shall, unless otherwise agreed in writing between the undertaker and Centrica, have effect.

75. In this Part

“Centrica” means Centrica plc; and

“the pipelines” means Centrica’s cooling water pipelines and condensate pipeline,

The Pipelines

76.—(1) Notwithstanding the provisions of Article 41, no stage of the authorised development shall commence until a construction method statement to protect the pipelines (offshore and onshore) and intake and outfall, which may involve diverting them, has been prepared by the undertaker and submitted to and agreed with Centrica.

(2). The construction method statement shall include provisions in respect of:

- (a) the location and methods of reinforcement of crossing points over the pipelines;
- (b) a mechanism for the enforcement of the undertaker's use of designated crossing points over the pipelines and the agreed reinforcement methods; and
- (c) adoption of a prior notification and consent regime which would require the undertaker to:
 - (i) notify Centrica of its intention to carry out any development within the vicinity of the pipelines and intake and outfall, such notification to be provided at least 48 hours prior to any such development occurring; and
 - (ii) seek Centrica's consent to the carrying out of the proposed development within the vicinity of the pipelines and intake and outfall, such consent not to be unreasonably withheld; and

the authorised development shall thereafter be carried out in accordance with the approved construction method statement.

General

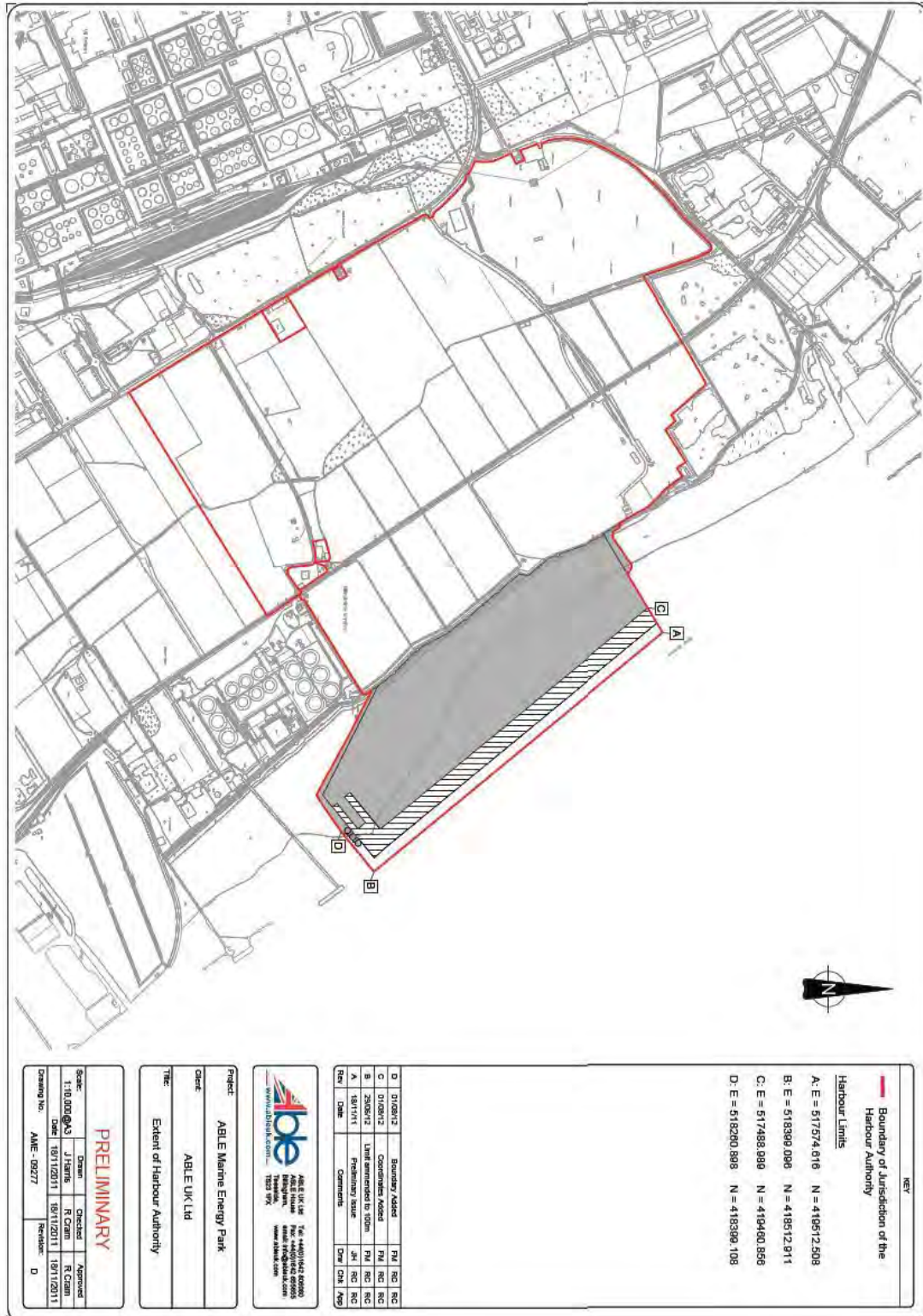
77. Any dispute arising between the undertaker and Centrica under this Schedule shall be determined by arbitration as provided in article 58 (arbitration).

PART 11

FOR THE PROTECTION OF ANGLIAN WATER

78. The Company shall not interfere with any assets of Anglian Water within the Order land unless otherwise agreed in writing with Anglian Water, such provision being brought to the attention of any agent or contractor responsible for carrying out the authorised development.

LIMITS OF HARBOUR



SCHEDULE 11

Article 5

REQUIREMENTS

1. In this Schedule—

“the 1990 Act” means the Town and Country Planning Act 1990;

“the 2008 Act” means the Planning Act 2008;

“authorised development” means the development and associated development described in Schedule 1 (authorised development) and any other development authorised by this Order, which is development within the meaning of section 32 of the 2008 Act;

“environmental statement” means the statement submitted under regulation 5(2)(a) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009(a), together with any supplementary statement;

“highway” and “highway authority” have the same meaning as in the 1980 Act;

“the relevant planning authority” means North Lincolnshire Council for land in that council’s area and East Riding of Yorkshire Council for land in that council’s area;

Time limits

2. The authorised development must be begun within 7 years of the date of this Order.

Stages of the development

3. No part of the authorised development shall commence until a written scheme setting out all the stages of the authorised development has, after consultation with the highway authority, been submitted to and approved by the relevant planning authority.

Cargo restriction

3A.—(1) The cargo for which the authorised development is authorised to handle the embarkation and disembarkation shall be restricted to items associated with marine energy infrastructure and any cargo that is incidental or ancillary to such items.

(2) If further categories of cargo are authorised by means of planning permission or an order under section 14 of the Harbours Act 1964 or section 1 of the Transport and Works Act 1992, then the implementation of such authorisations shall not constitute a breach of this order.

Detailed design approval

4. The authorised development shall be carried out in accordance with the design drawings listed below, unless otherwise approved in writing by the relevant planning authority and the altered development falls within the Order limits and has no significant environmental effects beyond those assessed in the Environmental Statement accompanying the application:

- (a) those of planning application drawings with reference TR030001/APP/24a comprising:
 - (i) drawing "AME-02006",
 - (ii) drawing "AME-02007",
 - (iii) drawing "AME-02008",
 - (iv) drawing "AME-02009",

(a) S.I. 2009/2264

- (v) drawing "AME-02010",
 - (vi) drawing "AME-02011",
 - (vii) drawing "AME-02012",
 - (viii) drawing "AME-02013",
 - (ix) drawing "AME-02014",
 - (x) drawing "AME-02016",
 - (xi) drawing "AME-02017", and
 - (xii) drawing "AME-02018".
- (b) those of the design drawings with reference TR030001/APP/24b comprising:
- (i) drawing "AMEP_PID_D_001",
 - (ii) drawing "AMEP_PID_D_002",
 - (iii) drawing "AMEP_PID_D_003",
 - (iv) drawing "AMEP_PID_D_004",
 - (v) drawing "AMEP_PID_D_005",
 - (vi) drawing "AMEP_PID_D_006",
 - (vii) drawing "AMEP_PID_D_007",
 - (viii) drawing "AMEP_PID_D_009",
 - (ix) drawing "AMEP_PID_D_101",
 - (x) drawing "AMEP_PID_D_102",
 - (xi) drawing "AMEP_PID_D_103",
 - (xii) drawing "AMEP_PID_D_104",
 - (xiii) drawing "AMEP_PID_D_105",
 - (xiv) drawing "AMEP_PID_D_106", and
 - (xv) drawing "AMEP_PID_D_107".

Provision of landscaping

5. No stage of the authorised development, other than tidal works, shall commence until a written landscaping scheme has been submitted to and approved by the relevant planning authority after consultation with National Grid. The landscaping scheme must include details of all proposed hard and soft landscaping works, including—

- (a) location, number, species, size and planting density of any proposed planting;
- (b) cultivation, importing of materials and other operations to ensure plant establishment;
- (c) proposed finished ground levels;
- (d) hard surfacing materials;
- (e) vehicular and pedestrian access, parking and circulation areas;
- (f) minor structures, such as furniture, refuse or other storage units, signs and lighting;
- (g) proposed and existing functional services above ground, including drainage, power and communications cables and pipelines and supports;
- (h) details of existing trees to be retained, with measures for their protection during the construction period;
- (i) retained historic landscape features and proposals for restoration, where relevant; and
- (j) implementation timetables for all landscaping works.

Implementation and maintenance of landscaping

6.—(1) All landscaping works must be carried out in accordance with the landscaping scheme approved under requirement 5 and to a reasonable standard in accordance with the relevant recommendations of appropriate British Standards or other recognised codes of good practice.

(2) The landscaping works must be carried out in accordance with implementation timetables approved under requirement 5.

(3) Any tree or shrub planted as part of an approved landscaping scheme that, within a period of five years after planting, is removed, dies or becomes, in the opinion of the relevant planning authority, seriously damaged or diseased, must be replaced in the first available planting season with a specimen of the same species and size as that originally planted, unless otherwise approved by the relevant planning authority.

Trees

7. No stage of the authorised development, other than tidal works, shall commence until written details of any proposed tree planting and the proposed times of planting have been approved in writing by the relevant planning authority after consultation with National Grid; and all tree planting shall be carried out in accordance with those details and at those times.

Highway access

8.—(1) No stage of the authorised development shall commence until for that stage, written details of the siting, design and layout of any new permanent or temporary means of access to a public highway to be used by vehicular traffic, or any alteration to an existing means of access to a public highway used by vehicular traffic, has, after consultation with the relevant highway authority, been submitted to and approved by the relevant planning authority, after consultation with Centrica plc.

(2) The public highway accesses must be constructed, or, as the case may be, altered, in accordance with the approved details.

(3) No stage of the authorised development shall commence until for that stage, a written scheme (the “Access Management Scheme”) has, after consultation with the relevant highway authority, been submitted to and approved by the relevant planning authority.

(4) The Access Management Scheme must be carried out in accordance with the approved details.

Public rights of way

9.—(1) No stage of the authorised development shall commence that would affect North Lincolnshire Footpath 50 or East Riding of Yorkshire Paull Footpath 6 until a written implementation plan and specification for the making up of an alternative right of way has, after consultation with the relevant highway authority, been submitted to and approved by the relevant planning authority.

(2) The alternative Footpath 50 and Paull Footpath 6 shall be implemented in accordance with the relevant approved plan and specification.

Fencing and other means of enclosure

10.—(1) No stage of the authorised development shall commence until, for that stage, written details of all proposed permanent and temporary fences, walls or other means of enclosure have been submitted to and approved by the relevant planning authority.

(2) Any temporary fencing must be removed on completion of the authorised development.

(3) Any approved permanent fencing of the authorised development must be completed before the authorised development is brought into use.

Surface water drainage

11.—(1) No stage of the authorised development shall commence until, for that stage, written details of the surface and foul water drainage system (including means of pollution control and funding arrangements) have, after consultation with the sewerage and drainage authority, been submitted to and approved by the relevant planning authority, after consultation with Anglian Water and Centrica plc.

(2) The surface and foul water drainage system must be constructed in accordance with the approved details.

Contaminated land

12.—(1) No stage of the authorised development shall commence until a written scheme applicable to that stage, to deal with the contamination of any land, including groundwater and ground gas, within the Order limits which is likely to cause significant harm to persons or pollution of controlled waters or the environment has, after consultation with the Environment Agency, been submitted to and approved by the relevant planning authority.

(2) The scheme shall include an investigation and assessment report, prepared by a suitably qualified person, to identify the extent of any contamination and the remedial measures to be taken to render the land fit for its intended purpose, together with a management plan which sets out long-term measures with respect to any contaminants remaining on the site.

(3) Remediation must be carried out in accordance with the approved scheme.

Archaeology

13.—(1) No stage of the authorised development shall commence until, for that stage, a written scheme for the investigation of areas of archaeological interest as identified in chapters 18 and 40 of the environmental statement has been submitted to and approved by the relevant planning authority.

(2) The scheme shall identify areas where fieldwork and/or a watching brief are required, and the measures to be taken to protect, record or preserve any significant archaeological remains that may be found.

(3) Any archaeological works or watching brief carried out under the scheme must be by a suitably qualified person or body.

(4) Any archaeological works or watching brief must be carried out in accordance with the approved scheme.

Ecological mitigation

14.—(1) No stage of the authorised development shall commence until the compensation ecological management and monitoring plan for that stage reflecting the survey results and ecological mitigation and enhancement measures included in the environmental statement, has been submitted to and approved by Natural England after consultation with the relevant planning authority.

(2) The compensation ecological management and monitoring plan shall include an implementation timetable and must be carried out as approved.

Code of construction practice

15.—(1) No stage of the authorised development shall commence until a code of construction practice for that stage has been submitted to and approved by the relevant planning authority.

(2) All construction works shall be undertaken in accordance with the approved code, unless otherwise agreed by the relevant planning authority.

Design of roads

16.—(1) No stage of the authorised development consisting of the construction or alteration of a street which is a trunk road, including any traffic management and control measures, shall

commence until written details of the design of the street have been submitted to and approved by the Highways Agency, after consultation with Centrica plc.

(2) The authorised development construction or alteration of the street or the taking of traffic management and control measures shall be carried out in accordance with the approved design.

External lighting

17.—(1) No stage of the authorised development, shall commence until written details of any external lighting to be installed at any of the construction sites within that stage, including measures to prevent light spillage, have, after consultation with the highway authority and Natural England, been submitted to and approved by the relevant planning authority; and any approved means of lighting must subsequently be installed and retained for the duration of the construction period, and removed within six months of the completion of construction.

(2) Sub-paragraph (1) is subject to any direction given to the undertaker by the Humber Harbour Master or Trinity House.

Construction traffic

18.—(1) No stage of the authorised development shall commence until written details of the preferred route for that stage to be used by construction traffic on public highways, after consultation with the highway authority and Centrica plc, is submitted to and approved by the relevant planning authority.

(2) Notices shall be erected and maintained throughout the period of construction at every construction site exit to a public highway, indicating to drivers the route agreed by the relevant planning authority for traffic entering and leaving the site.

Control of noise during construction

19.—(1) No stage of the authorised development shall commence until a written scheme for noise management during construction and maintenance of that stage has been submitted to the relevant planning authority.

(2) The scheme shall set out the particulars of—

- (a) the works, and the method by which they are to be carried out;
- (b) the noise attenuation measures to be taken to minimise noise resulting from the works, including any noise limits; and
- (c) a scheme for monitoring the noise during the works to ensure compliance with the noise limits and the effectiveness of the attenuation measures.

(3) The approved noise management scheme must be implemented before and maintained during construction and maintenance of the relevant stage of the authorised development.

(4) The construction and maintenance works must be undertaken in accordance with the approved noise management scheme.

Control of emissions

20.—(1) No stage of the authorised development shall commence until a written scheme for that stage—

(a) for the management and mitigation of emissions of—

- (i) odour,
- (ii) artificial light,
- (iii) dust,
- (iv) smoke, and
- (v) steam; and

(b) to ensure the prevention of infestation or emanation of insects

from the authorised development has been submitted to and approved by the relevant planning authority.

(2) The approved scheme must be implemented before and maintained during the construction, operation and decommissioning of the relevant stage of the authorised development.

(3) For the purposes of this requirement, “insects” excludes insects that are wild animals included in Schedule 5 to the Wildlife and Countryside Act 1981((a)) (animals which are protected), unless they are included in respect of section 9(5) of that Act only.

Travel plan

21.—(1) No stage of the of the authorised development shall commence until, for that stage, after consultation with the highway authority and Contrica plc, a travel plan, which must include details of the expected means of travel to and from the authorised development and any parking to be provided, has been submitted to and approved by the relevant planning authority.

(2) No part of the authorised development shall be brought into use until, after consultation with the highway authority, a travel plan, which must include details of the expected means of travel to and from the authorised development and any parking to be provided, has been submitted to and approved by the relevant planning authority.

(3) The plan approved under paragraph (1) must be implemented during the construction of the authorised development and the plan approved under paragraph (2) must be implemented within one month of the authorised development being brought into use and shall continue to be implemented for as long as the authorised development is used.

European protected species

22.—(1) No stage of the authorised development shall be begun that is likely to affect a European protected species until, after consultation with Natural England and the Secretary of State for the Environment, Food and Rural Affairs, a scheme of protection and mitigation measures for that species has been submitted to and approved by the relevant planning authority; and the authorised development shall be carried out in accordance with the approved scheme.

(2) “European protected species” has the same meaning as in regulations 40 and 44 of the Conservation of Habitats and Species Regulations 2010.

Requirement for written approval

23. Where under any of the above requirements the approval or agreement of the relevant planning authority or another person is required, that approval or agreement must be given in writing.

Amendments to approved details

24. With respect to any requirement which requires the authorised development to be carried out in accordance with the details approved by the relevant planning authority, the approved details shall be taken to include any amendments that may subsequently be approved in writing by the relevant planning authority.

Requirement for consent of Civil Aviation Authority and Ministry of Defence

25. No stage of the authorised development shall commence until for that stage, after consultation with the Civil Aviation Authority and the Ministry of Defence, written details for the operation of the authorised development and its effect on radar have been submitted to and agreed by the relevant planning authority.

Flood warning and evacuation plan

26.—(1) No building of the authorised development shall be occupied until, after consultation with the relevant planning authority, written details of a flood warning and evacuation plan, which must include details of expected means of evacuation or safe refuge during a tidal flood event with safe refuge areas at at least 6.84 metres Ordnance Datum Newlyn, has been submitted to and approved by the relevant planning authority.

(a) 1981 c. 69, as amended at the date that this Order comes into force

(2) Unless otherwise agreed in writing with the relevant planning authority, the finished floor level of all buildings shall be set a minimum of 300mm above the level of the external storage areas and the buildings shall incorporate flood resistant and resilient design with their construction.

Listed buildings

27. No stage of the authorised development shall commence until a listed building management plan applicable to that stage, which must include details of protection of any building referred to from vibration damage and the renovation or re-use of the building, has been submitted to and approved by the relevant planning authority in consultation with English Heritage.

Tall structures

28. No structure shall be erected over 45 metres in height above finished ground level until written details of a lighting scheme applicable to that structure has been submitted to and approved in writing by the relevant planning authority following consultation with the Civil Aviation Authority.

Cooling water intakes and outfalls

29.—(1) No development shall commence until a scheme for the monitoring of the lines of the Centrica and E.ON cooling intakes and outfalls has been submitted to and approved in writing by the Marine Management Organisation, in consultation with the Environment Agency, Centrica plc and E.ON UK plc. The scheme shall include:

- (a) details of monitoring proposals, including location and frequency; and
- (b) details of trigger levels and resultant actions/mitigation required if trigger levels are exceeded.

(2) Development shall proceed fully in accordance with the approved scheme and timetable contained therein.

Piling

30. For any piling to take place above high water mark, the piling conditions at paragraphs 25 to 30 of Schedule 8 (deemed marine licence) shall apply as if references to the MMO were to the relevant local planning authority.

Sedimentation

31.—(1) No development shall commence until a scheme for the monitoring of the foreshore and sediment levels around the quay have been submitted to and agreed in writing by the Marine Management Organisation, in consultation with the Environment Agency.

(2) Annual monitoring reports shall be submitted to the MMO within 6 weeks of the anniversary of implementation up to 2033.

(3) The scheme shall include trigger points for requiring improvements to the defences.

(4) The approved monitoring scheme shall be implemented and complied with at all times.

32. No development shall commence until a scheme for the monitoring of sediment and siltation for Stone Creek has been submitted to and approved in writing by the relevant planning authority, such scheme to include:

- (a) details of monitoring proposals, including location and frequency, and
- (b) details of trigger levels and resultant actions required if trigger levels are exceeded.

(2) Development shall proceed fully in accordance with the approved scheme and timetable contained therein, unless agreed otherwise in writing by the relevant planning authority.

Contaminants and remediation

33.—(1) Prior to the commencement of the relevant stage of the authorised development, the following components of a scheme to deal with the risks associated with contamination of the site shall each be submitted to and approved, in writing, by the relevant planning authority:

- (a) a preliminary risk assessment which has identified:
 - (i) all previous uses,
 - (ii) potential contaminants associated with those uses,
 - (iii) a conceptual model of the site indicating sources, pathways and receptors, and
 - (iv) potentially unacceptable risks arising from contamination at the site;
- (b) a site investigation scheme, based on sub-paragraph (a) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site;
- (c) the results of the site investigation and detailed risk assessment referred to in sub-paragraph (b) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken;
- (d) a verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy in sub-paragraph (c) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

(2) The scheme shall be implemented as approved, and any changes to these components require the express consent of the relevant planning authority.

34.—(1) Prior to carrying out paragraph 8 of Schedule 8 (deemed marine licence – compensation site creation), a verification report demonstrating completion of the works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved, in writing, by the relevant planning authority.

(2) The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met, and shall also include any plan (a "long-term monitoring and maintenance plan") for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan, and for the reporting of this to the relevant planning authority.

(3) The long-term monitoring and maintenance plan shall be implemented as approved unless otherwise confirmed in writing by the relevant planning authority.

EXPLANATORY NOTE

(This note is not part of the Order)

This order authorises the construction and operation of a quay, associated onshore facilities and other development, to be situated on the south bank of the River Humber to the north east of Immingham, together with the creation of a compensatory environmental habitat on the north bank of the River Humber to the north east of the quay.

STATUTORY INSTRUMENTS

2012 No. XXXX

INFRASTRUCTURE PLANNING

HARBOURS, DOCKS, PIERS AND FERRIES

The Able Marine Energy Park
Development Consent Order 2012

BIRCHAM DYSON BELL LLP
50 Broadway
London SW1H 0BL
Solicitors and Parliamentary Agents
8222187.1 — 30.11.11

	ABLE MARINE ENERGY PARK APPLICANT COMMENTS ON THE WRITTEN REPRESENTATIONS	AUGUST 2012

Revised Draft Development Consent Order – tracked changes

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009
Regulation 5(2)(b)
Document reference: TR030001/DCO/~~3~~

Deleted: 2

**The proposed Able Marine Energy Park
Draft Development Consent Order**

~~3 August~~ 2012
Revision: ~~3~~
Bircham Dyson Bell

Deleted: 29 June

Deleted: 2

STATUTORY INSTRUMENTS

2012 No. XXXX

INFRASTRUCTURE PLANNING

HARBOURS, DOCKS, PIERS AND FERRIES

**The Able Marine Energy Park
Development Consent Order 2013**

Made - - - - 2013

Coming into force - - 2013

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Able has applied for an order granting development consent to the Infrastructure Planning Commission in accordance with the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009.

the application was examined by an Examining authority under Part 4 of the Planning Act 2008(a);

the Examining authority has considered the application and the relevant representations made in relation to it, and has reported its recommendation to the Secretary of State as decision-maker under section [74(2)(b) / 83(2)(b)] of that Act;

the decision-maker has decided under section 104 of that Act to make an order granting development consent;

(a) 2008 c 29, as amended

the decision-maker makes the following Order under section 114 of that Act.

PART 1

PRELIMINARY

Citation and Commencement

1. This Order may be cited as the Able Marine Energy Park Development Consent Order 2013 and shall come into force the day on which it is made.

Interpretation

2.—(1) In this Order—

“the 1847 Act” means the Harbours, Docks and Piers Clauses Act 1847(a);

“the 1961 Act” means the Land Compensation Act 1961(b);

“the 1965 Act” means the Compulsory Purchase Act 1965(c);

“the 1980 Act” means the Highways Act 1980(d);

“the 1984 Act” means the Road Traffic Regulation Act 1994(e);

“the 1990 Act” means the Town and Country Planning Act 1990(f);

“the 1991 Act” means the New Roads and Street Works Act 1991(g);

“the 2008 Act” means the Planning Act 2008(h);

“AB Ports” means Associated British Ports, company number ZC000195, registered at 79-91 Aldwych, London WC2B 4HN;

“area of jurisdiction” means the area shown bounded by the line described as ‘boundary of jurisdiction of the Harbour Authority’ on the plan at Schedule 10; and in the following provisions of this Order, references to the limits of the harbour shall be construed as references to the limits so shown;

“area of seaward construction activity” means the area of the sea within the Order limits shown on the land plan;

“authorised development” means the development and associated development described in Schedule 1 (authorised development) and any other development authorised by this Order, being development within the meaning of section 32 of the 2008 Act;

“the book of reference” means the book of reference certified by the decision-maker as the book of reference for the purposes of this Order;

“building” includes any structure or erection or any part of a building, structure or erection;

“carriageway” has the same meaning as in the 1980 Act;

“the Company” means Able Humber Ports Limited, company number 107029, registered at Ogier House, The Esplanade, St Helier, Jersey, JE4 9WG;

“the compensation environmental management and monitoring plan” means the plan certified as the compensation environmental management and monitoring plan by the decision-maker for the purposes of this Order;

(a) 1847 (10 & 11 Vict) c 27, as amended at the date of the coming into force of this Order

(b) 1961 c 33, as amended at the date of the coming into force of this Order

(c) 1965 c 56, as amended at the date of the coming into force of this Order

(d) 1980 c 66, as amended at the date of the coming into force of this Order

(e) 1984 c 27, as amended at the date of the coming into force of this Order

(f) 1990 c 8, as amended at the date of the coming into force of this Order

(g) 1991 c 22, as amended at the date of the coming into force of this Order

(h) 2008 c 29, as amended at the date of the coming into force of this Order

“the Conservancy Authority” means AB Ports Humber Estuary Services in its role as harbour authority for the Humber Conservancy;

“compulsory acquisition notice” means a notice served in accordance with section 134 of the 2008 Act;

“the Crown land plan” means the plan certified as the Crown land plan by the decision-maker for the purposes of this Order;

“the decision-maker” has the same meaning as in section 103 of the 2008 Act;

“the dockmaster” means the dockmaster appointed by the Harbour Authority under this Order;

“the design drawings” means the design drawings submitted under regulation 5(2)(o) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 and certified as the design drawings by the decision-maker for the purposes of this Order;

“an environmental management and monitoring plan” means the compensation environmental management and monitoring plan, the marine environmental and monitoring plan or the terrestrial environmental management and monitoring plan;

“harbour” means the authorised development within the area of jurisdiction, and includes all other works, land, buildings, ancillary works, plant, property and conveniences connected with it, as from time to time existing;

“the Harbour Authority” means the Company in its capacity as harbour authority established by article 7 (jurisdiction of the Harbour Authority);

“the harbour master” means the harbour master appointed by AB Ports to be a harbour master for an area that includes the area of jurisdiction and includes the harbour master’s deputies and assistants;

“the heritage plan” means the plan certified as the heritage plan by the decision-maker for the purposes of this Order;

“highway” and “highway authority” have the same meaning as in the 1980 Act;

“the land plan” means the plan certified as the land plan by the decision-maker for the purposes of this Order;

“level of high water” means the level of mean high-water springs;

“maintain” includes inspect, repair, adjust, alter, remove, reconstruct or replace the authorised development and any derivative of “maintain” shall be construed accordingly;

“the marine environmental management and monitoring plan” means the plan referred to at paragraph 13 of Schedule 8;

“Network Rail” means Network Rail Infrastructure Ltd, company number 02904587 registered at King’s Place, 90 York Way, London N1 9AG;

“Order land” means the land shown on the land plan which is within the boundary of land required for or affected by the proposed development, and described in the book of reference;

“the Order limits” means the limits shown as such on the works plan, and are the limits within which the development and works may be carried out;

“owner”, in relation to land, has the same meaning as in section 7 of the Acquisition of Land Act 1981(a);

“relevant planning authority” means the local authority for the area in which the relevant land to which the provisions of this Order apply is situated;

“requirement” means the corresponding paragraph of Schedule 11;

“the rights of way plan” means the plan certified as the rights of way plan by the decision-maker for the purposes of this Order;

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(a) 1981 c 67, as amended at the date of the coming into force of this Order

“statutory undertaker” means any person falling within section 127(8), 128(5) or 129(2) of the 2008 Act;

“street” means a street within the meaning of section 48 of the 1991 Act, together with land on the verge of a street or between two carriageway, and includes part of a street;

“street authority”, in relation to a street, has the same meaning as in Part 3 of the 1991 Act;

“the terrestrial environmental management and monitoring plan” means the plan referred to at paragraph 2 of Schedule 9;

“tidal work” means so much of any work authorised by this Order as is on, under or over tidal waters or tidal lands below the level of high water;

“tree preservation order” has the meaning given in section 198 of the 1990 Act;

“the tribunal” means the Lands Chamber of the Upper Tribunal;

“Trinity House” means the Corporation of Trinity House of Deptford Strond;

“the undertaker” means the person who has the benefit of this Order in accordance with section 156 of the 2008 Act and articles 11 and 12;

“the undertaking” means the harbour undertaking of the undertaker as authorised from time to time;

“vessel” means every description of vessel or water-borne structure, however propelled, moved or constructed, and includes displacement and non-displacement craft, personal watercraft, a seaplane on the surface of the water, a hydrofoil vessel, a hovercraft or any other amphibious vehicle and any other thing constructed or adapted for movement through, in, on or over or placement in water and which is at the time in, on or over water;

“watercourse” includes all rivers, streams, ditches, drains, canals, cuts, culverts, dykes, sluices, sewers and passages through which water flows except a public sewer or drain; and

“the works plan” means the plan certified as the works plan by the decision-maker for the purposes of this Order.

(2) References in this Order to rights over land include references to rights to do or to place and maintain, anything in, on or under land or in the air-space above its surface.

(3) All distances, directions and lengths referred to in this Order are approximate and distances between points on a work comprised in the authorised development shall be taken to be measured along that work.

Incorporation of the Harbours, Docks and Piers Clauses Act 1847

3.—(1) With the exception of sections 6 to 23, 25, the proviso to section 28, section 31, the proviso to section 32, ~~sections 35, 36, 38, 39, 42, 43, 45, 48 to 50, 53 to 55, 59 to 64, 66 to 69, 71 to 73, 76 and 79 to 90, 92, 97, 98 and 102,~~ the 1847 Act is incorporated in this Order subject to the modifications stated in paragraph (2).

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(2) In construing the 1847 Act as so incorporated—

- (a) the expression “the special Act” means this Order;
- (b) the expressions “the Promoters of the undertaking” and “the undertakers” mean the undertaker;
- (c) the expression “the harbour, dock or pier” means the authorised development within the area of jurisdiction;
- (d) the expressions “limits” and “prescribed limits” mean the area of jurisdiction;
- (e) the expression “near the pier” does not extend beyond the area of jurisdiction;
- (f) the expression “the harbour master”, in relation to the authorised development means the harbour master as defined in article 2;
- (g) the definition of “vessel” in article 2(1) shall be substituted for the definition in section 3 of the 1847 Act; and

- (h) any requirement to comply with a notice or direction given by the harbour master shall be construed as including a requirement that, in complying with such notice or direction, a person who is subject to the notice or direction shall also comply with any relevant notice or direction given by AB Ports or the harbour master in the exercise by either or both of them of any function conferred by or under any enactment (including this Order).

Modification of enactments

4. —(1) Sections 25 and 26 of the River Humber Conservancy Act 1852(a), section 9 (licences for execution of works) of the Humber Conservancy Act 1899(b) and section 6(2) (no erections in Humber below river lines or without licence above river lines) of the Humber Conservancy Act 1905(c) do not apply to the authorised development.

(2) The requirement to obtain consent under section 23(1) of the Land Drainage Act 1991(d) does not apply to the authorised development.

PART 2

PRINCIPAL POWERS

Development consent etc. granted by the Order

5. —(1) Subject to the provisions of this Order and to the requirements in Schedule 11 (requirements) the undertaker is granted development consent for the authorised development, to be carried out within the Order limits.

(2) Subject to article 5A (limits of deviation) the authorised development comprising the works described in Schedule 1 shall be constructed in the lines and situations shown on the works plan and the levels shown on the sections.

Limits of deviation

5A. In carrying out the authorised development the undertaker may—

(a) deviate laterally from the lines or situations of the authorised development shown on the works plan to the extent of the limits of deviation shown on the plans; and

(b) deviate vertically from the levels of the authorised development shown on the sections—

(i) to any extent not exceeding 1 metre upwards; or

(ii) to any extent downwards as may be found necessary or convenient.

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Period for completion of work

6. If the authorised development is not completed within ten years from the coming into force of this Order or such extended time as the decision-maker may on the application of the undertaker allow, then on the expiration of that period or such extended time (as the case may be) the rights granted by this Order to the undertaker for making and maintaining the works shall cease except as to so much of them as is then substantially commenced.

(a) 1852 c cxxx, as amended at the date of the coming into force of this Order
(b) 1899 c cci, as amended at the date of the coming into force of this Order
(c) 1905 c clxxix, as amended at the date of the coming into force of this Order
(d) 1991 c 59, as amended at the date of the coming into force of this Order

Jurisdiction of the Harbour Authority

7.—(1) Without prejudice to the functions of AB Ports exercisable within its limits, the Company shall be the harbour authority for the area of jurisdiction.

(2) Without prejudice to any provision of the 1847 Act as incorporated by article 3 (incorporation of the Harbours, Docks and Piers Clauses Act 1847), the area within which the Harbour Authority and the dockmaster may exercise their functions under this Order shall be the area of jurisdiction.

(3) The jurisdiction of the Harbour Authority over vessels within the area of jurisdiction shall not extend to—

- (a) any vessel unless it is at anchor or otherwise moored or is causing an obstruction within the area of jurisdiction; or
- (b) signalling or any other activity connected with the movement of the vessel.

(4) Where any person referred to in paragraph (5)(a) considers that there is an actual or anticipated conflict between—

- (a) the exercise of any function of any person mentioned in paragraph (5)(a); and
- (b) the exercise of any function of any person mentioned in paragraph (5)(b),

then that person may give notice to the relevant person in paragraph (5)(b).

(5) The persons referred to in paragraph (4) are—

- (a) AB Ports and the harbour master; and
- (b) the Harbour Authority and the dockmaster.

(6) The notice referred to in paragraph (4) shall set out any requirements concerning the exercise of the relevant function by the relevant person mentioned in paragraph (5)(b).

(7) The requirements referred to in paragraph (6) may—

- (a) make general provision in relation to the exercise of functions over time; or
- (b) make specific provision about the exercise of a particular function or functions on a particular occasion.

(8) If—

- (a) a notice sets out requirements falling within paragraph (7)(a) it must be made in writing; and
- (b) a notice sets out requirements falling within paragraph (7)(b) it may be made in writing or in any other manner considered appropriate by the person giving the notice.

(9) On receipt of a notice given under paragraph (4), the recipient of the notice shall comply with the notice.

(10) Save where expressly provided elsewhere in this Order, no person mentioned in paragraph (5)(b) is obliged to seek any permission or otherwise notify any person mentioned in paragraph (5)(a) prior to exercising any function.

(11) Subject to the requirements of any notice given under paragraph (4), the functions of the Harbour Authority and the dockmaster shall be exercised in accordance with Part 2 of Schedule 9 (for the protection of AB Ports).

Agreements entered into by Company, etc.

8. Any agreement or undertaking entered into by the Company before the coming into force of this Order in connection with the proposed exercise of its functions as Harbour Authority shall be binding upon the Harbour Authority notwithstanding that it was entered into by the Company before it was established as a Harbour Authority by article 7 (jurisdiction of the Harbour Authority) unless any provision of the agreement or undertaking could not be entered into by the Company once established as a Harbour Authority.

Maintenance of authorised development

9. The undertaker may at any time maintain the authorised development and within the limits of the harbour, from time to time ~~relax temporarily or permanently~~ the authorised development, except to the extent that this Order or an agreement made under it provides otherwise.

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Provision of works

10.—(1) The undertaker may from time to time within the ~~area of jurisdiction~~ provide and operate such harbour facilities, together with works ancillary to those facilities, as may be necessary or convenient for the construction of the authorised development or the operation of the undertaking, and for this purpose the undertaker may construct and maintain roads, railway lines, buildings, sheds, offices, workshops, depots, walls, foundations, fences, gates, tanks, pumps, conduits, pipes, drains, wires, mains, cables, electrical substations, signals, conveyors, cranes, container handling equipment, lifts, hoists, lighting columns, weighbridges, stairs, ladders, stages, platforms, catwalks, equipment, machinery and appliances and such other works and conveniences as may be necessary or expedient.

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(2) Without prejudice to paragraph (1) the undertaker may within the Order limits carry out and maintain such other works as may be necessary or convenient for the purposes of, or in connection with or in consequence of, the construction, maintenance or use of the authorised development, including—

- (a) works for the accommodation or convenience of vessels (including but not limited to berthing heads, mooring posts, ladders, buoys, bollards, dolphins, fenders, rubbing strips and fender panels, fender units and pontoons);
- (b) works to divert, remove or replace apparatus, including mains, sewers, drains, pipes, conduits, cables, electrical substations and electrical lines; and
- (c) landscaping and other works to mitigate any adverse effect of the construction, maintenance and operation of the works or to benefit or protect any person or premises affected by the construction, maintenance and operation of the works.

(3) Article 3 of, and Part ~~17~~ in Schedule 2 to, the Town and Country Planning (General Permitted Development) Order 1995(a) shall apply as if this Order were a grant of planning permission.

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Benefit of Order

11. Subject to article 12 (consent to transfer benefit of Order), the provisions of this Order shall have effect solely for the benefit of the Company.

Consent to transfer benefit of Order

12.—(1) The undertaker may, with the consent of the Secretary of State—

- (a) transfer to another person (“the transferee”) any or all of the benefit of the provisions of this Order and such related rights as may be agreed between the undertaker and the transferee; or
- (b) grant to another person (“the lessee”) for a period agreed between the undertaker and the lessee any or all of the benefit of the provisions of this Order and such related rights as may be so agreed.

(2) The powers of paragraph (1)(a) may only be exercised by the Company or a transferee.

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(3) A lessee (“the granting lessee”) may not make a grant under paragraph (1)(b)—

(a) for a longer period than the period of the grant to the granting lessee; or

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(b) conferring any benefit or right that is not conferred by the grant to the granting lessee.

(a) SI 1995/418, as amended at the date of the coming into force of this Order

(4) Where an agreement has been made in accordance with paragraph (1), references in this Order to the undertaker, except in paragraph (3), shall include references to the transferee or the lessee.

(5) The exercise by a person of any benefits or rights conferred in accordance with any transfer or grant under paragraph (1) shall be subject to the same restrictions, liabilities and obligations as would apply under this Order if those benefits or rights were exercised by the undertaker.

(6) Before giving consent under this article, the Secretary of State shall consult such parties as the Secretary of State thinks appropriate.

PART 3

STREETS

Street works

13.—(1) The undertaker may, for the purposes of the authorised development, enter on so much of any of the streets specified in Schedule 2 (streets subject to street works) as is within the Order limits and may—

- (a) break up or open the street, or any sewer, drain or tunnel under it;
- (b) tunnel or bore under the street;
- (c) place apparatus in the street;
- (d) maintain apparatus in the street or change its position; and
- (e) execute any works required for or incidental to any works referred to in sub-paragraphs (a), (b), (c) and (d).

(2) The authority given by paragraph (1) is a statutory right for the purposes of sections 48(3) (streets, street works and undertakers) and 51(1) (prohibition of unauthorised street works) of the 1991 Act.

(3) The provisions of sections 54 to 106 of the 1991 Act apply to any street works carried out under paragraph (1).

(4) In this article “apparatus” has the same meaning as in Part 3 of the 1991 Act.

Temporary stopping up of streets

14.—(1) The undertaker, during and for the purposes of carrying out the authorised development, may temporarily stop up, alter or divert any street and may for any reasonable time—

- (a) divert the traffic from the street; and
- (b) subject to paragraph (2), prevent all persons from passing along the street.

(2) The undertaker shall provide reasonable access for pedestrians, and where reasonably practicable vehicles, going to or from premises abutting a street affected by the temporary stopping up, alteration or diversion of a street under this article if there would otherwise be no such access.

(3) Without prejudice to the generality of paragraph (1), the undertaker may temporarily stop up, alter or divert the streets specified in columns (1) and (2) of Schedule 3 (streets to be temporarily stopped up) to the extent specified, by reference to the letters and numbers shown on the rights of way plan, in column (3) of that Schedule.

(4) The undertaker shall not temporarily stop up, alter or divert—

- (a) any street specified as mentioned in paragraph (3) without first consulting the street authority; and
- (b) any other street without the consent of the street authority which may attach reasonable conditions to any consent.

(5) Any person who suffers loss by the suspension of any private right of way under this article shall be entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

Access to works

15.—(1) The undertaker may, for the purposes of the authorised development—

- (a) form and lay out means of access to a public highway, or improve existing means of access to a public highway, in the location specified in columns (1) and (2) of Schedule 4 (access to works); and
- (b) with the approval of the relevant planning authority after consultation with the highway authority, form and lay out such other means of access to a public highway or improve existing means of access to a public highway, at such locations within the Order limits as the undertaker reasonably requires for the purposes of the authorised development.

(2) If a relevant planning authority which receives an application for approval under paragraph (1)(b) fails to notify the undertaker of its decision before the end of the period of 28 days beginning with the date on which the application was made, it shall be deemed to have granted approval.

Agreements with street authorities

16.—(1) A street authority and the undertaker may enter into agreements with respect to—

- (a) the strengthening, improvement, repair or reconstruction of any street required as a result of the exercise of the powers conferred by this Order;
- (b) any stopping up, alteration or diversion of a street authorised by this Order; or
- (c) the carrying out in the street of any of the works referred to in article 13(1) (street works).

(2) Such an agreement may, without prejudice to the generality of paragraph (1)—

- (a) make provision for the street authority to carry out any function under this Order which relates to the street in question;
- (b) include an agreement between the undertaker and street authority specifying a reasonable time for the completion of the works; and
- (c) contain such terms as to payment and otherwise as the parties consider appropriate.

Public rights of way

17.—(1) With effect from the date of certification by the local highway authority that the agreed alternative right of way has been created to the standard defined in the implementation plan, the section of each public right of way (being a footpath) specified in columns (1), (2) and (3) of Schedule 3 (footpaths to be diverted) is extinguished.

(2) With effect from that same date, the alternative section of each footpath specified in column (4) of Schedule 5 is created.

(3) In this article—

“implementation plan” means the written plan prepared by the undertaker and approved by the local highway authority for the creation of the agreed alternative right of way to the defined standard; and

“local highway authority” has the same meaning as in section 329(1) of the 1980 Act.

PART 4

SUPPLEMENTAL POWERS

Discharge of water

18.—(1) The undertaker may use any watercourse or any public sewer or drain for the drainage of water in connection with the carrying out or maintenance of the authorised development and for that purpose may lay down, take up and alter pipes and may, on any land within the Order limits, make openings into, and connections with, the watercourse, public sewer or drain.

(2) Any dispute arising from the making of connections to or the use of a public sewer or drain by the undertaker pursuant to paragraph (1) shall be determined as if it were a dispute under section 106 of the Water Industry Act 1991(a) (right to communicate with public sewers).

(3) The undertaker shall not discharge any water into any watercourse, public sewer or drain except with the consent of the person to whom it belongs; and such consent may be given subject to such terms and conditions as that person may reasonably impose, but shall not be unreasonably withheld.

(4) The undertaker shall not make any opening into any public sewer or drain except—

- (a) in accordance with plans approved by the person to whom the sewer or drain belongs, but such approval shall not be unreasonably withheld; and
- (b) where that person has been given the opportunity to supervise the making of the opening.

(5) The undertaker shall not, in carrying out or maintaining works pursuant to this article, damage or interfere with the bed or banks of any watercourse forming part of a main river.

(6) The undertaker shall take such steps as are reasonably practicable to secure that any water discharged into a watercourse or public sewer or drain pursuant to this article is as free as may be practicable from gravel, soil or other solid substance, oil or matter in suspension.

(7) This article does not authorise the entry into controlled waters of any matter whose entry or discharge into controlled waters is prohibited by regulation 12 of the Environmental Permitting (England and Wales) Regulations 2010(b) (requirement for an environmental permit).

(8) In this article—

- (a) “public sewer or drain” means a sewer or drain which belongs to the Homes and Communities Agency, the Environment Agency, a harbour authority within the meaning of section 57 of the Harbours Act 1964(c) (interpretation), an internal drainage board, a joint planning board, a local authority, a National Park Authority, a sewerage undertaker or an urban development corporation; and
- (b) other expressions, excluding watercourse, used both in this article and in the Environmental Permitting (England and Wales) Regulations 2010 have the same meaning as in those Regulations.

Protective work to buildings

19.—(1) Subject to the following provisions of this article, the undertaker may at its own expense carry out such protective works to any building lying within the Order limits as the undertaker considers necessary or expedient.

(2) Protective works may be carried out—

- (a) at any time before or during the carrying out in the vicinity of the building of any part of the authorised development; or

(a) 1991 c 56, as amended at the date of the coming into force of this Order
(b) S I 2010/675, as amended at the date of the coming into force of this Order
(c) 1964 c 40, as amended at the date of the coming into force of this Order

- (b) after the completion of that part of the authorised development in the vicinity of the building at any time up to the end of the period of 5 years beginning with the day on which that part of the authorised development is first opened for use.

(3) For the purpose of determining how the functions under this article are to be exercised the undertaker may enter and survey any building falling within paragraph (1) and any land within its curtilage.

(4) For the purpose of carrying out protective works under this article to a building the undertaker may (subject to paragraphs (5) and (6))—

- (a) enter the building and any land within its curtilage; and
- (b) where the works cannot be carried out reasonably conveniently without entering land which is adjacent to the building but outside its curtilage, enter the adjacent land (but not any building erected on it).

(5) Before exercising—

- (a) a right under paragraph (1) to carry out protective works to a building;
- (b) a right under paragraph (3) to enter a building and land within its curtilage;
- (c) a right under paragraph (4)(a) to enter a building and land within its curtilage; or
- (d) a right under paragraph (4)(b) to enter land,

the undertaker shall, except in the case of emergency, serve on the owners and occupiers of the building or land not less than 14 days' notice of its intention to exercise that right and, in a case falling within sub-paragraph (a) or (c), specifying the protective works proposed to be carried out.

(6) Where a notice is served under paragraph (5)(a), (c) or (d), the owner or occupier of the building or land concerned may, by serving a counter-notice within the period of 10 days beginning with the day on which the notice was served, require the question whether it is necessary or expedient to carry out the protective works or to enter the building or land to be referred to arbitration under article 58 (arbitration).

(7) The undertaker shall compensate the owners and occupiers of any building or land in relation to which rights under this article have been exercised for any loss or damage arising to them by reason of the exercise of those rights.

(8) Where—

- (a) protective works are carried out under this article to a building; and
- (b) within the period of 5 years beginning with the day on which the part of the authorised development carried out in the vicinity of the building is first opened for use it appears that the protective works are inadequate to protect the building against damage caused by the carrying out or use of that part of the authorised development,

the undertaker shall compensate the owners and occupiers of the building for any loss or damage sustained by them.

(9) Nothing in this article shall relieve the undertaker from any liability to pay compensation under section 10(2) of the 1965 Act (compensation for injurious affection).

(10) Any compensation payable under paragraph (7) or (8) shall be determined, in case of dispute, under Part 1 of the 1961 Act (determination of questions of disputed compensation).

(11) In this article “protective works” in relation to a building means—

- (a) underpinning, strengthening and any other works the purpose of which is to prevent damage which may be caused to the building by the carrying out, maintenance or use of the authorised development; and
- (b) any works the purpose of which is to remedy any damage which has been caused to the building by the carrying out, maintenance or use of the authorised development.

Authority to survey and investigate the land

20.—(1) The undertaker may for the purposes of this Order enter on any land shown within the Order limits or ~~in pursuance of an environmental management and monitoring plan~~ and—

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- (a) survey or investigate the land;
- (b) without prejudice to the generality of sub-paragraph (a), make trial holes in such positions on the land as the undertaker thinks fit to investigate the nature of the surface layer and subsoil and remove soil samples;
- (c) without prejudice to the generality of sub-paragraph (a), carry out ecological or archaeological investigations on such land; and
- (d) place on, leave on and remove from the land apparatus for use in connection with the survey and investigation of land and making of trial holes.

(2) No land may be entered or equipment placed or left on or removed from the land under paragraph (1) unless at least 14 days' notice has been served on every owner and occupier of the land.

(3) Any person entering land under this article on behalf of the undertaker—

- (a) shall, if so required upon entering the land, produce written evidence of their authority to do so; and
- (b) may take with them such vehicles and equipment as are necessary to carry out the survey or investigation or to make the trial holes.

(4) No trial holes shall be made under this article—

- (a) in land located within the highway boundary without the consent of the highway authority; or
- (b) in a private street without the consent of the street authority,

but such consent shall not be unreasonably withheld.

(5) The undertaker shall compensate the owners and occupiers of the land for any loss or damage arising by reason of the exercise of the authority conferred by this article, such compensation to be determined, in case of dispute, Part 1 (determination of questions of disputed compensation) of the 1961 Act.

Right to dredge

21.—(1) The undertaker may, for the purposes of constructing and maintaining the authorised development and of affording access to the authorised development by vessels, from time to time deepen, dredge, scour, cleanse, alter and improve so much of the bed, shores and channels of the River Humber as adjoin or are near to the work and may use, appropriate or dispose of the materials (other than wreck within the meaning of Part 9 of the Merchant Shipping Act 1995) from time to time dredged by them.

(2) No such materials shall be laid down or deposited—

- (a) in contravention of the provisions of any enactment as respects the disposal of waste; or
- (b) in any place below the level of high water otherwise than in such position and under such conditions and restrictions as may be approved or prescribed by the Marine Management Organisation pursuant to Part 2 of Schedule 8 (deemed marine licence).

(3) The undertaker shall consult with the ~~Conservancy Authority~~ before exercising the rights conferred on them by this article.

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Tidal works not to be executed without approval of Secretary of State

22.—(1) Unless its construction has commenced within five years of the coming into force of this Order, no tidal work shall be constructed, reconstructed, extended, enlarged, replaced or relaid except in accordance with plans and sections approved by the Secretary of State and subject to any conditions and restrictions imposed by the Secretary of State before that work is begun.

(2) If a tidal work is constructed, reconstructed, extended, enlarged, replaced or relaid in contravention of paragraph (1) or of any condition or restriction imposed under that paragraph—

- (a) the Secretary of State may by notice in writing require the undertaker at its own expense to remove the tidal work or any part of it and restore the site to its former condition; and, if on the expiration of 30 days beginning with the date when the notice is served on the undertaker it has failed to take reasonable steps to comply with the requirements of the notice, the Secretary of State may take whatever steps the Secretary of State considers appropriate to achieve the result required by the notice; or
- (b) if it appears to the Secretary of State urgently necessary so to do, the Secretary of State may remove the tidal work, or part of it, and restore the site to its former condition, and any expenditure incurred by the Secretary of State in so doing shall be recoverable from the undertaker.

Abatement of works abandoned or decayed

23.—(1) Where a tidal work is abandoned, or suffered to fall into decay, the Secretary of State may by notice in writing require the undertaker at its own expense either to repair and restore that work or any part, or to remove that work and restore the site to its former condition, to such an extent and within such limits as the Secretary of State thinks proper.

(2) Where a work consisting partly of a tidal work and partly of works on or over land above the level of high water is abandoned or suffered to fall into decay and that part of the work on or over land above the level of high water is in such condition as to interfere or to cause reasonable apprehension that it may interfere with the right of navigation or other public rights over the foreshore, the Secretary of State may include that part of the work, or any portion of it, in any notice under this article.

(3) If the undertaker fails to comply in any respect with a notice served under this article within the period of 30 days beginning with the date of service of the notice, the Secretary of State may take whatever steps the Secretary of State considers appropriate to achieve the result required by the notice; and any expenditure incurred by the Secretary of State in so doing shall be recoverable from the undertaker

Survey of tidal works

24. If the Secretary of State considers it expedient to do so, the Secretary of State may order a survey and examination of a tidal work or of the site on which it is proposed to construct the work, and any expenditure incurred by the Secretary of State in any such survey and examination shall be recoverable from the undertaker.

Lights on tidal works etc. during construction

25. The undertaker shall at or near—

- (a) a tidal work, including any temporary work; or
- (b) any plant, equipment or other obstruction placed, in connection with any authorised development or any work authorised by article 10 (provision of works), within the area of seaward construction activity,

during the whole time of the construction, reconstruction, extension, enlargement, replacement or relaying, exhibit every night from sunset to sunrise such lights, if any, and take such other steps for the prevention of danger to navigation as the Secretary of State and the ~~Conservancy Authority~~, or, failing agreement between them, the Secretary of State may from time to time direct.

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Provision against danger to navigation

26. In case of damage to, or destruction or decay of, a tidal work or any part of it, the undertaker shall as soon as reasonably practicable notify the ~~Conservancy Authority~~, and Trinity House and shall lay down such buoys, exhibit such lights and take such other steps for preventing danger to

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navigation as Trinity House and the Conservancy Authority or, failing agreement between them, the Conservancy Authority may from time to time direct.

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Permanent lights on tidal works

27. After the completion of a tidal work the undertaker shall at the outer extremity of it exhibit every night from sunset to sunrise such lights, if any, and take such other steps, if any, for the prevention of danger to navigation as the Conservancy Authority and Trinity House or, failing agreement between them, the Conservancy Authority may from time to time direct.

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Power to appropriate

28.—(1) Notwithstanding anything in section 33 (harbour, dock, and pier to be free to the public on payment of rates) of the 1847 Act or any other enactment, the undertaker may from time to time set apart and appropriate any part of the harbour for the exclusive or preferential use and accommodation of any trade, person, vessel or goods or any class of trader, vessel or goods, subject to the payment of such charges and to such terms, conditions and regulations as the undertaker may think fit.

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(2) No person or vessel shall make use of any part of the harbour so set apart or appropriated without the consent of the harbour master, and—

- (a) the harbour master may order any person or vessel making use of the harbour without such consent to leave or be removed; and
- (b) the provisions of section 58 of the 1847 Act (powers of harbour master as to mooring of vessels in harbour), as incorporated by this Order, shall extend and apply with the necessary modifications to any such vessel.

PART 5

POWERS OF ACQUISITION

Compulsory acquisition of land

29.—(1) The undertaker may acquire compulsorily so much of the Order land as is shown washed pink on the land plan as is required for the authorised development or to facilitate it.

(2) As from the date on which a compulsory acquisition notice under section 134(3) of the 2008 Act is served or the date on which the Order land, or any part of it, is vested in the undertaker, whichever is the later, that land or that part of it which is vested (as the case may be) shall be discharged from all rights, trusts and incidents to which it was previously subject.

(3) Any person who suffers loss by the extinguishment or suspension of any private right of way under this article shall be entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

(4) This article is subject to article 39 (temporary use of land for carrying out the authorised development).

Power to override easements and other rights

30.—(1) Any authorised activity undertaken by the undertaker which takes place on land within the Order limits (whether the activity is undertaken by the undertaker or by any person deriving title under it) is authorised by this Order if it is done in accordance with the terms of this Order, notwithstanding that it involves—

- (a) an interference with an interest or right to which this article applies; or
- (b) a breach of a restriction as to the user of land arising by virtue of a contract.

(2) In this article “authorised activity” means—

- (a) the erection, construction or carrying out, or maintenance of any building or work on land;
 - (b) the erection, construction, or maintenance of anything in, on, over or under land; or
 - (c) the use of any land.
- (3) The interests and rights to which this article applies are any easement, liberty, privilege, right or advantage annexed to land and adversely affecting other land, including any natural right to support.
- (4) Nothing in this article shall authorise interference with any right of way or right of laying down, erecting, continuing or maintaining apparatus on, under or over land which is—
- (a) a right vested in or belonging to statutory undertakers for the purpose of the carrying on of their undertaking, or
 - (b) a right conferred by or in accordance with the electronic communications code on the operator of an electronic communications code network.
- (5) Where any interest or right to which this article applies is interfered with or any restriction breached by any authorised activity in accordance with the terms of this article the interest or right shall be extinguished, abrogated or discharged at the time that the interference or breach in respect of the authorised activity in question commences.
- (6) In respect of any interference, breach extinguishment, abrogated or discharged in pursuance of this article, compensation—
- (a) shall be payable under section 7 or 10 of the 1965 Act; and
 - (b) shall be assessed in the same manner and subject to the same rules as in the case of other compensation under those sections in respect of injurious affection where—
 - (i) the compensation is to be estimated in connection with a purchase under those acts; or
 - (ii) the injury arises from the execution of works on or use of land acquired under those acts.
- (7) Nothing in this article shall be construed as authorising any act or omission on the part of any person which is actionable at the suit of any person on any grounds other than such an interference or breach as is mentioned in paragraph (1) of this article.
- (8) Nothing in this article shall be construed as restricting the entitlement of any person to compensation.
- (9) Where a person deriving title under the undertaker by whom the land in question was acquired or appropriated—
- (a) is liable to pay compensation, and
 - (b) fails to discharge that liability,
- the liability shall be enforceable against the undertaker.

Compulsory acquisition of land – incorporation of the mineral code

31. Parts 2 and 3 of Schedule 2 to the Acquisition of Land Act 1981^(a) (minerals) are incorporated in this Order subject to the modification that for “the acquiring authority” substitute “the undertaker”.

Time limit for exercise of authority to acquire land compulsorily

32.—(1) After the end of the period of 5 years beginning on the day on which this Order is made—

- (a) no notice to treat shall be served under Part 1 of the 1965 Act; and

(a) 1981 c 67, as amended at the date of the coming into force of this Order

- (b) no declaration shall be executed under section 4 of the Compulsory Purchase (Vesting Declarations) Act 1981 as applied by article 35 (application of the Compulsory Purchase (Vesting Declarations) Act 1981)(a).

(2) The authority conferred by article 39 (temporary use of land for carrying out the authorised development) shall cease at the end of the period referred to in paragraph (1), but nothing in this paragraph shall prevent the undertaker remaining in possession of land after the end of that period, if the land was entered and possession was taken before the end of that period.

Compulsory acquisition of rights

33.—(1) The undertaker may acquire compulsorily the existing rights and create and acquire compulsorily the new rights described in the book of reference and shown on the land plan.

(2) As from the date on which a compulsory acquisition notice is served or the date on which any new right is vested in the undertaker, whichever is the later, the land over which any new rights is acquired shall be discharged from all rights, trusts and incidents to which it was previously subject so far as their continuance would be inconsistent with the exercise of that new right.

(3) Subject to section 8 of the 1965 Act, as substituted by article 37 (acquisition of part of certain properties), where the undertaker acquires an existing right over land under paragraph (1), the undertaker shall not be required to acquire a greater interest in that land.

(4) Any person who suffers loss as a result of the extinguishment or suspension of any private right of way under this article shall be entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

Private rights of way

34.—(1) Subject to the provisions of this article, all private rights of way over land subject to compulsory acquisition under this Order shall be extinguished—

- (a) as from the date of acquisition of the land by the undertaker, whether compulsorily or by agreement; or
- (b) on the date of entry on the land by the undertaker under section 11(1) of the 1965 Act (power of entry),

whichever is the earlier.

(2) Subject to the provisions of this article, all private rights of way over land owned by the undertaker which, being within the limits of land which may be acquired shown on the land plan, is required for the purposes of this Order shall be extinguished on the appropriation of the land by the undertaker for any of those purposes.

(3) Subject to the provisions of this article, all private rights of way over land of which the undertaker takes temporary possession under this Order shall be suspended and unenforceable for as long as the undertaker remains in lawful possession of the land.

(4) Any person who suffers loss by the extinguishment or suspension of any private right of way under this article shall be entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

(5) This article does not apply in relation to any right of way to which section 138 of the 2008 Act (extinguishment of rights, and removal of apparatus, of statutory undertakers etc.) or article 41 (statutory undertakers) applies.

(6) Paragraphs (1) to (3) shall have effect subject to—

- (a) any notice given by the undertaker before—
 - (i) the completion of the acquisition of the land,

(a) 1981 c 66, as amended at the date of the coming into force of this Order

- (ii) the undertaker's appropriation of it,
 - (iii) the undertaker's entry onto it, or
 - (iv) the undertaker's taking temporary possession of it,
- that any or all of those paragraphs shall not apply to any right of way specified in the notice; and

- (b) any agreement made at any time between the undertaker and the person in or to whom the right of way in question is vested or belongs.

(7) If any such agreement as is referred to in paragraph (6)(b)—

- (a) is made with a person in or to whom the right of way is vested or belongs; and
- (b) is expressed to have effect also for the benefit of those deriving title from or under that person,

it shall be effective in respect of the persons so deriving title, whether the title was derived before or after the making of the agreement.

Application of the Compulsory Purchase (Vesting Declarations) Act 1981

35.—(1) The Compulsory Purchase (Vesting Declarations) Act 1981(a) shall apply as if this Order were a compulsory purchase order.

(2) The Compulsory Purchase (Vesting Declarations) Act 1981, as so applied, shall have effect with the following modifications.

(3) In section 3 (preliminary notices), for subsection (1) there shall be substituted—

“(1) Before making a declaration under section 4 with respect to any land which is subject to a compulsory purchase order, the acquiring authority shall include the particulars specified in subsection (3) in a notice which is—

- (a) given to every person with a relevant interest in the land with respect to which the declaration is to be made (other than a mortgagee who is not in possession); and
- (b) published in a local newspaper circulating in the area in which the land is situated.”.

(4) In that section, in subsection (2), for “(1)(b)” there shall be substituted “(1)” and after “given” there shall be inserted “and published”.

(5) In that section, for subsections (5) and (6) there shall be substituted—

“(5) For the purposes of this section, a person has a relevant interest in land if—

- (a) that person is for the time being entitled to dispose of the fee simple of the land, whether in possession or in reversion; or
- (b) that person holds, or is entitled to the rents and profits of, the land under a lease or agreement, the unexpired term of which exceeds one month.”.

(6) In section 5 (earliest date for execution of declaration)—

- (a) in subsection (1), after “publication” there shall be inserted “in a local newspaper circulating in the area in which the land is situated”; and
- (b) subsection (2) shall be omitted.

(7) In section 7 (constructive notice to treat), in subsection (1)(a), the words “(as modified by section 4 of the Acquisition of Land Act 1981)” shall be omitted.

(8) References to the 1965 Act in the Compulsory Purchase (Vesting Declarations) Act 1981 shall be construed as references to that Act as applied by section 125 of the 2008 Act to the compulsory acquisition of land under this Order.

(a) 1981 c 66 as amended at the date of the coming into force of this Order

Acquisition of subsoil only

36.—(1) The undertaker may acquire compulsorily so much of, or such rights in, the subsoil of the land referred to in paragraph (1) of article 29 (compulsory acquisition of land) as may be required for any purpose for which that land may be acquired under that provision instead of acquiring the whole of the land.

(2) Where the undertaker acquires any part of, or rights in, the subsoil of land under paragraph (1), the undertaker shall not be required to acquire an interest in any other part of the land.

(3) Paragraph (2) shall not prevent article 37 (acquisition of part of certain properties) from applying where the undertaker acquires a cellar, vault, arch or other construction forming part of a house, building or manufactory.

Acquisition of part of certain properties

37.—(1) This article shall apply instead of section 8(1) of the 1965 Act (other provisions as divided land) (as applied by section 125 of the 2008 Act) where—

- (a) a notice to treat is served on a person (“the owner”) under the 1965 Act (as so applied) in respect of land forming only part of a house, building or manufactory or of land consisting of a house with a park or garden (“the land subject to the notice to treat”); and
- (b) a copy of this article is served on the owner with the notice to treat.

(2) In such a case, the owner may, within the period of 21 days beginning with the day on which the notice was served, serve on the undertaker a counter-notice objecting to the sale of the land subject to the notice to treat which states that the owner is willing and able to sell the whole (“the land subject to the counter-notice”).

(3) If no such counter-notice is served within that period, the owner shall be required to sell the land subject to the notice to treat.

(4) If such a counter-notice is served within that period, the question whether the owner shall be required to sell only the land subject to the notice to treat shall, unless the undertaker agrees to take the land subject to the counter-notice, be referred to the tribunal.

(5) If on such a reference the tribunal determines that the land subject to the notice to treat can be taken—

- (a) without material detriment to the remainder of the land subject to the counter-notice; or
- (b) where the land subject to the notice to treat consists of a house with a park or garden, without material detriment to the remainder of the land subject to the counter-notice and without seriously affecting the amenity and convenience of the house,

the owner shall be required to sell the land subject to the notice to treat.

(6) If on such a reference the tribunal determines that only part of the land subject to the notice to treat can be taken—

- (a) without material detriment to the remainder of the land subject to the counter-notice; or
- (b) where the land subject to the notice to treat consists of a house with a park or garden, without material detriment to the remainder of the land subject to the counter-notice and without seriously affecting the amenity and convenience of the house,

the notice to treat shall be deemed to be a notice to treat for that part.

(7) If on such a reference the tribunal determines that—

- (a) the land subject to the notice to treat cannot be taken without material detriment to the remainder of the land subject to the counter-notice; but
- (b) the material detriment is confined to a part of the land subject to the counter-notice,

the notice to treat shall be deemed to be a notice to treat for the land to which the material detriment is confined in addition to the land already subject to the notice, whether or not the additional land is land which the undertaker is authorised to acquire compulsorily under this Order.

(8) If the undertaker agrees to take the land subject to the counter-notice, or if the tribunal determines that—

- (a) none of the land subject to the notice to treat can be taken without material detriment to the remainder of the land subject to the counter-notice or, as the case may be, without material detriment to the remainder of the land subject to the counter-notice and without seriously affecting the amenity and convenience of the house; and
- (b) the material detriment is not confined to a part of the land subject to the counter-notice,

the notice to treat shall be deemed to be a notice to treat for the land subject to the counter-notice whether or not the whole of that land is land which the undertaker is authorised to acquire compulsorily under this Order.

(9) Where, by reason of a determination by the tribunal under this article, a notice to treat is deemed to be a notice to treat for less land or more land than that specified in the notice, the undertaker may, within the period of six weeks beginning with the day on which the determination is made, withdraw the notice to treat; and, in that event, shall pay the owner compensation for any loss or expense occasioned to the owner by the giving and withdrawal of the notice, to be determined in case of dispute by the tribunal.

(10) Where the owner is required under this article to sell only part of a house, building or manufactory or of land consisting of a house with a park or garden, the undertaker shall pay the owner compensation for any loss sustained by the owner due to the severance of that part in addition to the value of the interest acquired.

Rights under or over streets

38.—(1) The undertaker may enter on and appropriate so much of the subsoil of, or air-space over, any street within the Order limits as may be required for the purposes of the authorised development and may use the subsoil or air-space for those purposes or any other purpose ancillary to the authorised development.

(2) Subject to paragraph (3), the undertaker may exercise any power conferred by paragraph (1) in relation to a street without being required to acquire any part of the street or any easement or right in the street.

(3) Paragraph (2) shall not apply in relation to—

- (a) any subway or underground building; or
- (b) any cellar, vault, arch or other construction in, on or under a street which forms part of a building fronting onto the street.

(4) Subject to paragraph (5), any person who is an owner or occupier of land appropriated under paragraph (1) without the undertaker acquiring any part of that person's interest in the land, and who suffers loss as a result, shall be entitled to compensation to be determined, in case of dispute, under Part 1 of the 1961 Act.

(5) Compensation shall not be payable under paragraph (4) to any person who is an undertaker to whom section 85 of the 1991 Act (sharing cost of necessary measures) applies in respect of measures of which the allowable costs are to be borne in accordance with that section.

Temporary use of land for carrying out the authorised development

39.—(1) The undertaker may, in connection with the carrying out of the authorised development—

- (a) enter on and take temporary possession of—
 - (i) the land specified in columns (1) and (2) of Schedule 6 (land of which temporary possession may be taken) for the purpose specified in relation to that land in column (3) of that Schedule relating to the part of the authorised development specified in column (4) of that Schedule; and

- (ii) any of the Order land in respect of which no notice of entry has been served under section 11 of the 1965 Act or no declaration has been made under section 4 of the Compulsory Purchase (Vesting Declarations) Act 1981;
 - (b) remove any buildings and vegetation from that land; and
 - (c) construct temporary works (including the provision of means of access) and buildings on that land.
- (2) Not less than 14 days before entering on and taking temporary possession of land under this article the undertaker shall serve notice of the intended entry on the owners and occupiers of the land.
- (3) The undertaker may not, without the agreement of the owners of the land, remain in possession of any land under this article—
- (a) in the case of land of which temporary possession may be taken, after the end of the period of one year beginning with the date of completion of the part of the authorised development specified in relation to that land in column (4) of Schedule 6;
 - (b) in the case of any Order land, after the end of the period of two years beginning with the date of completion of the work for which temporary possession of the land was taken unless the undertaker has, by the end of that period, served a notice of entry under section 11 of the 1965 Act or made a declaration under section 4 of the Compulsory Purchase (Vesting Declarations) Act 1981 in relation to that land.
- (4) Before giving up possession of land of which temporary possession has been taken under this article, the undertaker shall remove all temporary works and restore the land to the reasonable satisfaction of the owners of the land; but the undertaker shall not be required to replace a building removed under this article.
- (5) The undertaker shall pay compensation to the owners and occupiers of land of which temporary possession is taken under this article for any loss or damage arising from the exercise in relation to the land of any power conferred by this article.
- (6) Any dispute as to a person's entitlement to compensation under paragraph (5), or as to the amount of the compensation, shall be determined under Part 1 of the 1961 Act.
- (7) Nothing in this article shall affect any liability to pay compensation under section 10(2) of the 1965 Act (further provisions as to compensation for injurious affection) or under any other enactment in respect of loss or damage arising from the carrying out of the authorised development, other than loss or damage for which compensation is payable under paragraph (5).
- (8) The undertaker may not compulsorily acquire under this Order the land referred to in paragraph (1)(a)(i) except that the undertaker shall not be precluded from—
- (a) acquiring new rights over any part of that land under article 33 (compulsory acquisition of rights); or
 - (b) acquiring any part of the subsoil (or rights in the subsoil) of that land under article 36 (acquisition of subsoil only).
- (9) Where the undertaker takes possession of land under this article, the undertaker shall not be required to acquire the land or any interest in it.
- (10) Section 13 of the 1965 Act (refusal to give possession to acquiring authority) shall apply to the temporary use of land pursuant to this article to the same extent as it applies to the compulsory acquisition of land under this Order by virtue of section 125 of the 2008 Act (application of compulsory acquisition provisions).

Temporary use of land for maintaining authorised development

- 40.**—(1) Subject to paragraph (2), at any time during the maintenance period relating to any part of the authorised development, the undertaker may—
- (a) enter on and take temporary possession of any land within the Order limits if such possession is reasonably required for the purpose of maintaining the authorised development; and

- (b) construct such temporary works (including the provision of means of access) and buildings on the land as may be reasonably necessary for that purpose.
- (2) Paragraph (1) shall not authorise the undertaker to take temporary possession of—
- (a) any house or garden belonging to a house; or
 - (b) any building (other than a house) if it is for the time being occupied.
- (3) Not less than 28 days before entering on and taking temporary possession of land under this article the undertaker shall serve notice of the intended entry on the owners and occupiers of the land.
- (4) The undertaker may only remain in possession of land under this article for so long as may be reasonably necessary to carry out the maintenance of the part of the authorised development for which possession of the land was taken.
- (5) Before giving up possession of land of which temporary possession has been taken under this article, the undertaker shall remove all temporary works and restore the land to the reasonable satisfaction of the owners of the land.
- (6) The undertaker shall pay compensation to the owners and occupiers of land of which temporary possession is taken under this article for any loss or damage arising from the exercise in relation to the land of the provisions of this article.
- (7) Any dispute as to a person's entitlement to compensation under paragraph (6), or as to the amount of the compensation, shall be determined under Part 1 of the 1961 Act.
- (8) Nothing in this article shall affect any liability to pay compensation under section 10(2) of the 1965 Act (further provisions as to compensation for injurious affection) or under any other enactment in respect of loss or damage arising from the maintenance of the authorised development, other than loss or damage for which compensation is payable under paragraph (6).
- (9) Where the undertaker takes possession of land under this article, the undertaker shall not be required to acquire the land or any interest in it.
- (10) Section 13 of the 1965 Act (refusal to give possession to acquiring authority) shall apply to the temporary use of land pursuant to this article to the same extent as it applies to the compulsory acquisition of land under this Order by virtue of section 125 of the 2008 Act (application of compulsory acquisition provisions).
- (11) In this article "the maintenance period", in relation to any part of the authorised development, means the period of 5 years beginning with the date on which that part of the authorised development is first opened for use.

Statutory undertakers

41. ~~(1)~~ The undertaker may—

- (a) acquire compulsorily the land belonging to statutory undertakers shown on the land plan within the limits of the land to be acquired and described in the book of reference;
- (b) extinguish the rights of, remove or reposition the apparatus belonging to statutory undertakers shown on the land plan and described in the book of reference; and
- (c) acquire compulsorily the new rights over land belonging to statutory undertakers shown on the land plan and described in the book of reference.

(2) Nothing in paragraph (1) removes any requirement to obtain a certificate under section 138 of the 2008 Act.

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Recovery of costs of new connections

42.—(1) Where any apparatus of a public utility undertaker or of a public communications provider is removed under article 41 (statutory undertakers) any person who is the owner or occupier of premises to which a supply was given from that apparatus shall be entitled to recover from the undertaker compensation in respect of expenditure reasonably incurred by that person, in

consequence of the removal, for the purpose of effecting a connection between the premises and any other apparatus from which a supply is given.

(2) Paragraph (1) shall not apply in the case of the removal of a public sewer but where such a sewer is removed under article 41, any person who is—

- (a) the owner or occupier of premises the drains of which communicated with that sewer; or
- (b) the owner of a private sewer which communicated with that sewer,

shall be entitled to recover from the undertaker compensation in respect of expenditure reasonably incurred by that person, in consequence of the removal, for the purpose of making the drain or sewer belonging to that person communicate with any other public sewer or with a private sewerage disposal plant.

(3) This article shall not have effect in relation to apparatus to which Part 3 of the 1991 Act applies.

(4) In this article—

“public communications provider” has the same meaning as in section 151(1) of the Communications Act 2003; and

“public utility undertaker” has the same meaning as in the 1980 Act.

PART 6

MISCELLANEOUS AND GENERAL

Deemed marine licence

43. The undertaker is deemed to be granted a licence under section 66 of the Marine and Coastal Access Act 2009^(a) to carry out the works described in Schedule 8, subject to the provisions set out in that Schedule, which shall be treated as licence conditions.

Felling or lopping of trees

44.—(1) The undertaker may fell or lop any tree or shrub near any part of the authorised development, or cut back its roots, if it reasonably believes it to be necessary to do so to prevent the tree or shrub—

- (a) from obstructing or interfering with the construction, maintenance or operation of the authorised development or any apparatus used in connection with the authorised development; or
- (b) from constituting a danger to persons using the authorised development.

(2) In carrying out any activity authorised by paragraph (1), the undertaker shall do no unnecessary damage to any tree or shrub and shall pay compensation to any person for any loss or damage arising from such activity.

(3) Any dispute as to a person’s entitlement to compensation under paragraph (2), or as to the amount of compensation, shall be determined under Part 1 of the 1961 Act.

Trees subject to tree preservation orders

45.—(1) The undertaker may fell or lop any tree described in Schedule 7 and identified on the land plan, or cut back its roots if it reasonably believes it to be necessary in order to do so to prevent the tree or shrub—

(a) 2009 c 23, as amended at the date of the coming into force of this Order

- (a) from obstructing or interfering with the construction, maintenance or operation of the authorised development or any apparatus used in connection with the authorised development; or
 - (b) from constituting a danger to persons using the authorised development.
- (2) In carrying out any activity authorised by paragraph (1)—
- (a) the undertaker shall do no unnecessary damage to any tree or shrub and shall pay compensation to any person for any loss or damage arising from such activity; and
 - (b) the duty contained in section 206(1) of the 1990 Act (replacement of trees) shall not apply.
- (3) The authority given by paragraph (1) shall constitute a deemed consent under the relevant tree preservation order.
- (4) Any dispute as to a person's entitlement to compensation under paragraph (2), or as to the amount of compensation, shall be determined under Part 1 of the 1961 Act.

Railway and navigation undertakings

46.—(1) Subject to the following provisions of this article, the undertaker may not under article 13 (street works) break up or open a street where the street, not being a highway maintainable at public expense (within the meaning of the 1980 Act)—

- (a) is under the control or management of, or is maintainable by, railway or tramway undertakers or a navigation authority; or
- (b) forms part of a level crossing belonging to any such undertakers or to such an authority or to any other person,

except with the consent of the undertakers or authority or, as the case may be, of the person to whom the level crossing belongs.

(2) Paragraph (1) shall not apply to the carrying out under this Order of emergency works, within the meaning of Part 3 of the 1991 Act.

(3) A consent given for the purpose of paragraph (1) may be made subject to such reasonable conditions as may be specified by the person giving it but shall not be unreasonably withheld.

(4) In this paragraph “navigation authority” means any person who has a duty or power under any enactment to work, maintain, conserve, improve or control any canal or other inland navigation, navigable river, estuary or harbour.

Railway network

47.

(1) The undertaker, or any person permitted by the undertaker, may operate and use the railway crossing the Order land together with any ancillary works as a system, or part of a system, for the carriage of goods.

(2) The Office of Rail Regulation, Network Rail and the undertaker may enter into agreements in connection with the operation and use of the railway crossing the Order land.

Deleted: — The modification of the railway network consisting of the removal of the line crossing the Order land from the network operated by Network Rail shall be treated as a minor modification for the purposes of Part 4 of the Railways Act 2005(a)

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Arrangements with Her Majesty's Revenue and Customs

48. The undertaker and Her Majesty's Revenue and Customs may enter into any such agreement or arrangement as they think fit to provide for, or to facilitate, the assessment, collection or recovery of charges, including an agreement or arrangement as to the provision and maintenance of accommodation at the harbour.

Application of landlord and tenant law

49.—(1) This article applies to—

- (a) any agreement for leasing to any person the whole or any part of the authorised development or the right to operate the same; and
 - (b) any agreement entered into by the undertaker with any person for the construction, maintenance, use or operation of the authorised development, or any part of it,
- so far as any such agreement relates to the terms on which any land which is the subject of a lease granted by or under that agreement is to be provided for that person's use.
- (2) No enactment or rule of law regulating the rights and obligations of landlords and tenants shall prejudice the operation of any agreement to which this article applies.
- (3) Accordingly, no such enactment or rule of law shall apply in relation to the rights and obligations of the parties to any lease granted by or under any such agreement so as to—
- (a) exclude or in any respect modify any of the rights and obligations of those parties under the terms of the lease, whether with respect to the termination of the tenancy or any other matter;
 - (b) confer or impose on any such party any right or obligation arising out of or connected with anything done or omitted on or in relation to land which is the subject of the lease, in addition to any such right or obligation provided for by the terms of the lease; or
 - (c) restrict the enforcement (whether by action for damages or otherwise) by any party to the lease of any obligation of any other party under the lease.

Operational land for purposes of the 1990 Act

50. Development consent granted by this Order within the area of jurisdiction shall be treated as specific planning permission for the purposes of section 264(3)(a) of the 1990 Act (cases in which land is to be treated as operational land for the purposes of that Act).

Defence to proceedings in respect of statutory nuisance

51.—(1) Where proceedings are brought under section 82(1) of the Environmental Protection Act 1990(a) (summary proceedings by person aggrieved by statutory nuisance) in relation to a nuisance falling within paragraph (g) of section 79(1) of that Act (noise emitted from premises so as to be prejudicial to health or a nuisance) no order shall be made, and no fine may be imposed, under section 82(2) of that Act if

- (a) the defendant shows that the nuisance—
 - (i) relates to premises used by the undertaker for the purposes of or in connection with the construction or maintenance of the authorised development and that the nuisance is attributable to the carrying out of the authorised development in accordance with a notice served under section 60 (control of noise on construction site), or a consent given under section 61 (prior consent for work on construction site) or 65 (noise exceeding registered level), of the Control of Pollution Act 1974(b); or
 - (ii) is a consequence of the construction or maintenance of the authorised development and that it cannot reasonably be avoided; or
- (b) the defendant shows that the nuisance—
 - (i) relates to premises used by the undertaker for the purposes of or in connection with the use of the authorised development and that the nuisance is attributable to the use of the authorised development in accordance with a scheme of monitoring and attenuation of noise agreed with the relevant planning authority as described in requirement 19; or
 - (ii) is a consequence of the use of the authorised development and that it cannot reasonably be avoided.

(a) 1990 c 43, as amended at the date of the coming into force of this Order
 (b) 1974 c 40, as amended at the date of the coming into force of this Order

(2) Section 61(9) (consent for work on construction site to include statement that it does not of itself constitute a defence to proceedings under section 82 of the Environmental Protection Act 1990) of the Control of Pollution Act 1974 and section 65(8) of that Act (corresponding provision in relation to consent for registered noise level to be exceeded), shall not apply where the consent relates to the use of premises by the undertaker for the purposes of or in connection with the construction or maintenance of the authorised development.

Protection of interests

52. Schedule 9 to this Order has effect.

Saving for Trinity House

53. Nothing in this Order prejudices or derogates from any of the rights, duties or privileges of Trinity House.

Disapplication of regulation 73 of the Conservation of Habitats and Species Regulations 2010

54.—(1) Regulation 73 of the Conservation of Habitats and Species Regulations 2010(a) (general development orders) (“the Habitats Regulations”) shall not apply to any planning permission which relates to the works authorised by article 10 (provision of works) and which is granted by article 3(1) of the Town and Country Planning (General Permitted Development) Order 1995(b) for the class of development described as permitted development in Part 11 of Schedule 2 to that Order.

(2) Paragraph (1) does not apply if and to the extent that those works—

- (a) do not form part of the plan and project which was subject to an assessment under the Habitats Regulations in connection with the making of this Order; and
- (b) are not the subject of a further consent, permission or authorisation by a competent authority as defined in the Habitats Regulations.

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Planning, etc. jurisdiction

55.—(1) During the period beginning with the date when this Order comes into force and ending on the accretion date, the area within the Order limits shall, for the purposes of the Control of Pollution Act 1974(c) and the 1990 Act, be annexed to and incorporated with the area of the relevant planning authority.

(2) In this article, “accretion date” means the date when the works authorised by this Order have been completed or, if earlier, the date when the benefits and rights granted by this Order cease to have effect pursuant to article 6 (period for completion of work).

Certification of plans etc

56.—(1) The undertaker shall, as soon as practicable after the making of this Order, submit to the decision-maker copies of—

- (a) the book of reference;
- (b) the Crown land plan;
- (c) the ecology plan;
- (d) the heritage plan;
- (e) the land plan;
- (f) the rights of way plan; and

(a) S I 2010/400 as amended at the date of the coming into force of this Order

(b) S I 1995/418 as amended at the date of the coming into force of this Order

(c) 1974 c 40 as amended at the date of the coming into force of this Order

(g) the works plan,
for certification that they are true copies of the documents referred to in this Order.

(2) A plan or document so certified shall be admissible in any proceedings as evidence of the contents of the document of which it is a copy.

Service of notices

57.—(1) A notice or other document required or authorised to be served for the purposes of this Order may be served—

- (a) by post; or
- (b) with the consent of the recipient and subject to paragraphs (6) to (8) by electronic transmission.

(2) Where the person on whom a notice or other document to be served for the purposes of this Order is a body corporate, the notice or document is duly served if it is served on the secretary or clerk of that body.

(3) For the purposes of section 7 of the Interpretation Act 1978^(a) as it applies for the purposes of this article, the proper address of any person in relation to the service on that person of a notice or document under paragraph (1) is, if that person has given an address for service, that address, and otherwise—

- (a) in the case of the secretary or clerk of a body corporate, the registered or principal office of that body; and
- (b) in any other case, the last known address of that person at the time of service.

(4) Where for the purposes of this Order a notice or other document is required or authorised to be served on a person as having any interest in, or as the occupier of, land and the name or address of that person cannot be ascertained after reasonable enquiry, the notice may be served by—

- (a) addressing it to that person by name or by the description of “owner”, or as the case may be “occupier”, of the land (describing it); and
- (b) either leaving it in the hands of a person who is or appears to be resident or employed on the land or leaving it conspicuously affixed to some building or object on or near the land.

(5) Where a notice or other document required to be served or sent for the purposes of this Order is served or sent by electronic transmission the requirement shall be taken to be fulfilled only where—

- (a) the recipient of the notice or other document to be transmitted has given consent to the use of electronic transmission in writing or by electronic transmission;
- (b) the notice or document is capable of being accessed by the recipient;
- (c) the notice or document is legible in all material respects; and
- (d) in a form sufficiently permanent to be used for subsequent reference.

(6) Where the recipient of a notice or other document served or sent by electronic transmission notifies the sender within 7 days of receipt that the recipient requires a paper copy of all or part of that notice or other document the sender shall provide such a copy as soon as reasonably practicable.

(7) Any consent to the use of electronic communication given by a person may be revoked by that person in accordance with paragraph (8).

(8) Where a person is no longer willing to accept the use of electronic transmission for any of the purposes of this Order—

- (a) that person shall give notice in writing or by electronic transmission revoking any consent given by that person for that purpose; and

(a) 1978 c 30

(b) such revocation shall be final and shall take effect on a date specified by the person in the notice but that date shall not be less than 7 days after the date on which the notice is given.

(9) This article shall not be taken to exclude the employment of any method of service not expressly provided for by it.

Arbitration

58. Any difference under any provision of this Order, unless otherwise provided for, shall be referred to and settled by a single arbitrator to be agreed between the parties or, failing agreement, to be appointed on the application of either party (after giving notice in writing to the other) by the President of the Institution of Civil Engineers.

Requirements - appeals

59. ~~—(1) Where an application is made to the relevant planning authority for any consent, agreement or approval required by a requirement, the following provisions apply, so far as they relate to a consent, agreement or approval of a local planning authority required by a condition imposed on a grant of planning permission, as if the requirement was a condition imposed on the grant of planning permission—~~

~~(a) sections 78 and 79 of the 1990 Act (right of appeal in relation to planning decisions);~~

~~(b) any orders, rules or regulations which make provision in relation to a consent, agreement or approval of a local planning authority required by a condition imposed on the grant of planning permission.~~

~~(2) For the purposes of paragraph (1), a provision relates to a consent, agreement or approval of a local planning authority required by a condition imposed on a grant of planning permission in so far as it makes provision in relation to an application for such a consent, agreement or approval, or the grant or refusal of such an application, or a failure to give notice of a decision on such an application.~~

Deleted: Section 78 of the 1990 Act shall apply to an application for any consent, agreement or approval of a local planning authority under Schedule 11 as if such consent, agreement or approval were required pursuant to a condition imposed on a grant of planning permission

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Signed by authority of the Secretary of State

[xxx] 2013

Department for Transport

SCHEDULES

SCHEDULE 1

Article 5

AUTHORISED DEVELOPMENT

NATIONALLY SIGNIFICANT INFRASTRUCTURE PROJECT

1. In the district of North Lincolnshire—

Work No. 1—a quay of solid construction.

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ASSOCIATED DEVELOPMENT

2. In the district of North Lincolnshire—

Work No. 2—works to the junction of Humber Road and Rosper Road;

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3. In the district of North Lincolnshire—

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Work No. 3—a passing loop on the North Killingholme Branch Line;

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4. In the district of North Lincolnshire and within the Order limits—

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- (a) dredging and land reclamation in accordance with Schedule 8 (deemed marine licence);
- (b) the provision of onshore facilities for the manufacture, assembly and storage of components and parts for offshore marine energy and related items;
- (c) works to Rosper Road, Eastfield Road, the A160 and the A180;
- (d) surface and foul water disposal arrangements;
- (e) lighting;
- (f) parking;
- (g) ecological mitigation works; and
- (h) the re-siting of apparatus.

5. In the district of the East Riding of Yorkshire and within the Order limits, the development of compensatory environmental habitat.

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SCHEDULE 2

Article 13

STREETS SUBJECT TO STREET WORKS

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Street subject to street works</i>
District of North Lincolnshire	Rosper Road
	Chase Hill Road

SCHEDULE 3

Article 14

STREETS TO BE TEMPORARILY STOPPED UP

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Street to be temporarily stopped up</i>	<i>(3)</i> <i>Extent of temporary stopping up</i>
District of North Lincolnshire	Rosper Road	Between points C and D as shown on the rights of way plan
	Rosper Road	Between points E and F as shown on the rights of way plan
	Eastfield Road	Between points G and H as shown on the rights of way plan

SCHEDULE 4
ACCESS TO WORKS

Article 15

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Subject to street works</i>
District of North Lincolnshire	Improved access from Rosper Road shown at the point marked A on sheet 2 of the rights of way plan
	New access from Rosper Road shown at the point marked A on sheet 3 of the rights of way plan

SCHEDULE 5

Article 17

FOOTPATHS TO BE STOPPED UP

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Footpath to be stopped up</i>	<i>(3)</i> <i>Extent of stopping up</i>	<i>(4)</i> <i>New footpath to be substituted</i>
District of North Lincolnshire	Footpath 50	From point F1 to point F2 as shown in orange on the rights of way plan	A footpath between points F1 and F3 as shown in blue on the rights of way plan
District of the East Riding of Yorkshire	Paull Footpath 6	From point F4 to point F5 as shown in orange on the rights of way plan	A footpath between points F4 and F5 as shown in blue on the rights of way plan

SCHEDULE 6

Article 39

LAND OF WHICH TEMPORARY POSSESSION MAY BE TAKEN

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Number of land shown on land plan</i>	<i>(3)</i> <i>Purpose for which temporary possession may be taken</i>	<i>(4)</i> <i>Relevant part of the authorised development</i>
District of North Lincolnshire	01001, 01002, 01003	Works to A160 / Rosper Road junction	Works to Rosper Road
	02001, 03001, 04001, 05001	Works to Rosper Road	Works to Rosper Road
	02009, 02010, 02011, 02012, 03027	Footpath diversion	Footpath diversion
	03026	Private track diversion	Private track diversion
	02013	Quay construction - access	Marine works
	06001, 06002, 06003, 06004, 06005	Installation of a sewer and works to sewage treatment works	Sewage improvement works

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SCHEDULE 7

Article 45

TREES SUBJECT TO TREE PRESERVATION ORDERS

<i>(1)</i> <i>Area</i>	<i>(2)</i> <i>Identification of tree shown on ecology plan</i>	<i>(3)</i> <i>Work to be carried out</i>
District of North Lincolnshire	Marked with T1 on sheet 3 of the ecology plan	Felling to allow authorised development to proceed
	Marked with T2 on sheet 3 of the ecology plan	Felling to allow authorised development to proceed

SCHEDULE 8

Article 43

DEEMED MARINE LICENCE

PART 1

INTRODUCTORY

Interpretation

1. (1) In this Schedule:—

“the 2009 Act” means the Marine and Coastal Access Act 2009;

“the approach channel” means the area bounded by co-ordinates (53°39.57’N, 00°13.43’W), (53°39.61’N, 00°13.30’W), (53°39.40’N, 00°12.90’W), (53°39.03’N, 00°12.41’W) and (53°38.94’N, 00°12.60’W) and shown on sheet xx of the works plan;

“the berthing pocket” means the area bounded by co-ordinates (53°39.55’N, 00°13.48’W), (53°39.57’N, 00°13.43’W), (53°38.94’N, 00°12.60’W) and (53°39.92’N, 00°12.64’W) and shown on sheets 4, 8 and 9 of the works plan;

“the Centrica outfall” means the area bounded by co-ordinates xxx, xxx, xxx and xxx and shown on sheet 5 of the works plan;

“Cherry Cobb sands channel” means the area bounded by co-ordinates (53°39.34’N, 00°08.44’W), (53°39.28’N, 00°08.34’W), (53°39.25’N, 00°08.38’W) and (53°39.31’N, 00°08.48’W);

“clay” means dredged materials with a diameter of less than 31.25 micrometres;

“the E.ON outfall” means the area bounded by co-ordinates xxx, xxx, xxx and xxx and shown on sheet 5 of the works plan;

“earthworks season” means the period from April to October or such other period set out in British Standard 6031;

“gravel” means dredged materials with a diameter of at least 2 and less than 64 millimetres;

“HU080” means the area bounded by co-ordinates (53°36.95’N, 00°03.47’W), (53°36.55’N, 00°00.42’E), (53°36.30’N, 00°00.62’W) and (53°36.47’N, 00°02.32’W);

“HU082” means the area bounded by co-ordinates (53°37.47’N, 00°02.27’W), (53°37.25’N, 00°00.80’W), (53°36.97’N, 00°00.81’W) and (53°37.12’N, 00°02.29’W);

“licence holder” means the Company and any agent or contractor acting on its behalf;

“licensable activity” means an activity licensable under section 66 of the 2009 Act;

“licensed activity” means any activity described in Part 2 of this Schedule;

“MMO” means the Marine Management Organisation;

“mean high water springs” means the average of high water heights occurring at the time of spring tides;

“named vessel” means a vessel whose name and type has been notified to the MMO in writing;

Deleted: “flood wall at Cherry Cobb Sands” means the area bounded by co-ordinates xxx, xxx, xxx and xxx and shown on sheets 10, 11, 12 and 13 of the works plan.¶

Deleted: “licensed undertaker” means the Company and any agent or contractor acting on its behalf.¶

“the pumping station site” means the area bounded by co-ordinates ~~(53°38.59’N, 00°13.10’W), (53°38.58’N, 00°13.08’W), and (53°38.58’N, 00°13.09’W)~~ and shown on sheets 3 and 9 of the works plan;

Deleted: “the North Killingholme Haven Pits sluice site” means the area bounded by co-ordinates xxx, xxx, xxx and xxx and shown on sheet 5 of the works plan¶

“the quay limits” means the area bounded by co-ordinates (53°39.46’N, 00°13.68’W), (53°39.54’N, 00°13.45’W), (53°38.95’N, 00°12.67’W), (53°38.88’N, 00°12.75’W) and (53°38.98’N, 00°13.18’W) and shown on sheets 8 and 9 of the works plan;

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“sand” means dredged materials with a diameter of at least 62.5 micrometres and less than 2 millimetres;

“sea bed” means the ground under the sea;

“silt” means dredged materials with a diameter of at least 31.25 and less than 62.5 micrometres; and

“turning area” means the area bounded by co-ordinates (53°39.40’N, 00°12.90’W), (53°39.41’N, 00°12.53’W), (53°39.11’N, 00°12.26’W) and (53°39.03’N, 00°12.41’W) and shown on sheets 8 and 9 of the works plan.

(2) Unless otherwise specified, all geographical co-ordinates given in this Schedule are in latitude and longitude degrees and minutes to two decimal places.

(3) Tonnages of dredged materials are expressed in wet tonnes.

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Addresses

2. (1) Unless otherwise advised in writing by the MMO, the address for postal correspondence with the MMO for the purposes of this schedule is the Marine Management Organisation, Marine Licensing Team, PO Box 1275, Newcastle upon Tyne, NE99 5BN.

(2) Unless otherwise advised in writing by the MMO, the address for electronic communication with the MMO for the purposes of this schedule is marine.consents@marinemangement.org.uk.

PART 2

LICENSED ACTIVITIES

3. For the purpose of constructing and maintaining the authorised development the licence holder may carry out the activities set out in this Part as if such activities were licensed under the 2009 Act.

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Construction of the quay

4. (1) The licence holder is permitted to construct a quay and carry out associated land reclamation within the quay limits and according to the following specification:—

- (a) no more than 550 tubular and 1100 sheet steel perimeter piles may be driven into the bed of the estuary to form the external face of the quay, where such piles are to be installed from named vessels moored in the estuary;
- (b) two return walls may be constructed between the ends of the quay and the existing flood defence wall, comprising no more than 23,000 steel piles driven into the bed of the estuary from named vessels and also earthwork revetments with no more than 75,000 tonnes of rock armour protection, such revetments and rock armour to be constructed using land-based plant;
- (c) no more than 450 flap anchor piles may be fixed to the landward face of the perimeter piles and seated in a trench on the bed of the estuary, to be installed from named vessels moored in the estuary;
- (d) no more than 70 steel anchor piles may be driven into the bed of the estuary and fixed to perimeter piles, to be installed from named vessels moored in the estuary;

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- (e) the area of estuary approximately 50 metres landward of the quay perimeter piles may be reclaimed by depositing marine dredged sands and gravels from named vessels using rainbowing techniques;
 - (f) the remaining area of estuary enclosed by the quay perimeter piles and the two return walls may be reclaimed using marine dredged sands and gravels by constructing two granular dams that extend from the existing flood defence wall to the area reclaimed under paragraph (e), so that the dams divide the remaining reclaim area into three approximately equal cells, whereupon named vessels shall pump fluidised granular material into each cell in sequence, allowing estuarine water that is retained within each cell to overflow the dams as the fluidised material is deposited and settles within the cell, such activity to continue until all cells attain their design levels; and
 - (g) steel plates may be attached to the perimeter piles by welding and bolting, whereupon a fender may be attached to each steel plate by bolts, all such works being undertaken from a man basket suspended from a crane located on land.
- (2) Drainage outfalls and cooling water outfalls may be incorporated into the quay.
- (3) Monitoring equipment fixed to buoys shall be deployed at locations in the estuary during the piling works permitted by sub-paragraph (1) in accordance with a mitigation and monitoring plan to be submitted to and approved by the MMO following consultation with the Environment Agency and Natural England.

Temporary dolphins

5. (1) The licence holder is permitted to construct and remove up to seven temporary dolphins within the berthing pocket, such that each dolphin comprises three tubular steel piles driven into the bed of the estuary from named plant moored in the estuary, whereupon the piles shall be braced with interconnecting steelwork.
- (1) The dolphins constructed under sub-paragraph (1) may be used to moor named vessels involved in the carrying out of any of the other activities listed in this Part.
- (2) Monitoring equipment fixed to buoys shall be deployed at locations in the estuary during the piling works permitted by sub-paragraph (1) in accordance with the marine environmental mitigation and monitoring plan referred to in paragraph 13,
- (3) Each temporary dolphin must be removed as soon as practicable once the activities for which they have been constructed have been completed.

Berthing pocket infill

6. Following or during the dredging of the berthing pocket, the licence holder must deposit up to 250,000 tonnes of gravel and rock from named vessels into the berthing pocket so that its depth does not exceed -11 metres chart datum.

Pumping station

7. (1) The licence holder is permitted to construct a pumping station at the pumping station site according to the following specification:—
- (a) a temporary steel cofferdam containing up to six drainage pipes may be installed through the existing flood defence and extend onto the foreshore, whereupon the flood defence wall shall be reinstated to its original seaward profile using inert soil materials and concrete;
 - (b) a section of drainage channel may be created by excavating the foreshore seawards from the outfall pipe, whereupon material shall be removed down to the invert level of the drainage pipes over the width of the pipes and up to 50 metres seawards of the pipes;
 - (c) a stone mattress may be placed within the drainage channel created under (b) over a distance of 20 metres seawards of the outfall pipes; and
 - (d) a pumping station may be constructed such that its seaward extend it above the stone mattress.

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(2) Works outside the cofferdam shall be undertaken using land based plant operating from a berm formed within the south-eastern return wall of the quay.

Compensation site creation

8. The licence holder is permitted to remove a 250 metre section of the existing north bank flood wall ~~to create the~~ Cherry Cobb Sands channel under the following conditions:—

- (a) a new flood defence shall have been constructed landward of the existing flood defence;
- (b) a channel shall have been excavated from the site of the breach to the foreshore at the level of the breach;
- (c) all material is to be removed using land-based plant;
- (d) all excavated material is to be disposed of in the intertidal area created between the old and new flood defences.

Capital dredging

9. (1) The licence holder is permitted to carry out capital dredging at the following locations:—

- (a) the quay site to a depth of -6.5 metres Chart Datum;
- (b) the berthing pocket to a depth of -14.5 metres Chart Datum;
- (c) the approach channel to a depth of -9 metres Chart Datum;
- (d) the turning area to a depth of -9 metres Chart Datum;
- (e) the pumping station channel to a depth of 0.5 metres Chart Datum; and
- (f) the Cherry Cobb Sands channel to a depth of 5.7 metres Chart Datum.

(2) The materials must be dredged in the approximate quantities and deposited at the locations according to the following table:

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the amount of excavated material shall not exceed xxx

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<#> The licence holder is permitted to carry out works to the existing sluice at the North Killingholme Haven Pits sluice site according to the following specification:—¶

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<#>the Centrica outfall to a depth of xxx;¶

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Location	Material	Maximum tonnage per year	Deposit location	Total licensed tonnage
Quay site	Gravel	50,000	HU080	725,000
	Sand	110,000		
	Silt	390,000		
	Clay	175,000	HU082	
The berthing pocket			HU080	1,675,000
	Sand	50,000		
	Silt	150,000		
	Clay	1,475,000	HU082	
The approach channel	Gravel	300,000	HU080	1,650,000
	Sand	600,000		
	Silt	500,000		
	Clay	250,000	HU082	
The turning area	Gravel	35,000	HU080	250,000
	Sand	95,000		
	Silt	80,000		
	Clay	40,000	HU082	
The pumping station channel			HU080	2,500
	Sand	500		
	Silt	2,000		
			HU082	
The Cherry Cobb Sands channel			The intertidal area landward of the Cherry Cobb Sands channel	10,000
	Sand	2,000		
	Silt	8,000		

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Maintenance dredging

10. (1) The licence holder is permitted to carry out maintenance dredging at the following locations:—

- the quay site;
- the berthing pocket to a depth of -11 metres Chart Datum;
- the approach channel to a depth of -9 metres Chart Datum;
- the turning area to a depth of -9 metres Chart Datum;
- the E.ON outfall to keep it free of siltation;
- the Centrica outfall to keep it free of siltation;
- the pumping station channel to a depth of -3 metres Chart Datum; and
- the Cherry Cobb Sands channel to a depth of -5.7 metres Chart Datum.

(2) The dredging under sub-paragraph (1) may only be carried out for the purpose of:—

- maintaining the authorised development;
- maintaining access to the authorised development;
- maintaining access to neighbouring developments; and

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(d) removing siltation caused by the authorised development.

(3) The materials must be dredged in the approximate quantities and deposited at the locations according to the following table:

Location	Material	Maximum tonnage per year	Deposit location	Total licensed tonnage
The berthing pocket			HU082	1,075,000
	Sand	150,000		
	Silt	925,000		
The approach channel			HU082	50,000
	Sand	10,000		
	Silt	40,000		
The turning area			HU082	50,000
	Sand	10,000		
	Silt	40,000		
The E.ON outfall			HU082	2,500
	Sand	500		
	Silt	2,000		
The Centrica outfall			HU082	2,500
	Sand	500		
	Silt	2,000		
The pumping station channel			HU080	100
	Sand	50		
	Silt	50		
			HU082	

PART 3

ENFORCEMENT

11. Any breach of this Schedule shall not constitute a breach of this Order but shall be subject to the enforcement regime in Chapter 3 of Part 4 of the 2009 Act as if this Schedule were a licence granted under that Act.

PART 4

CONDITIONS

General conditions

12. (1) The conditions set out at paragraphs 13 to 37, are licence conditions attached to the deemed marine licence granted by article 43.

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(2) For such of the licensed activities that involve the construction, alteration or improvement of works in or over the sea or on or under the sea bed, the conditions shall apply to any person who for the time being owns, occupies or enjoys any use of the licensed activity.

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13. (1) No licensed activity shall be carried out until a marine environmental management and mitigation plan has been agreed in writing by the MMO following consultation with the Environment Agency and Natural England, and the licensed activities shall be carried out in accordance with the marine environmental management and mitigation plan.

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(2) The licence holder shall consult C.R.O Ports (Killingholme) Ltd, E.ON UK plc and Centrica on the contents of the marine environmental management and mitigation plan in relation to those elements of the capital dredging licensed under paragraph 9 that may affect those parties' interests.

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14. No licensed activity shall be carried out until a vessel movement management plan has been agreed in writing by the MMO, and the licensed activities shall be carried out in accordance with the vessel movement management plan.

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15. The MMO must be notified by the licence holder at least five working days before the commencement of any licensed activity of its acceptance of the provisions of this Schedule and that the company and any agents or contractors employed by it to carry out the licensed activities have knowledge of the provisions of this Schedule.

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16. The MMO must be notified by the licence holder at least five working days before the commencement of each licensed activity that that such licensed activity is about to commence.

17. The MMO must be notified by the licence holder in writing of any agents, contractors or sub-contractors that will be carrying out any licensed activity on behalf of the licence holder at least five working days before the commencement of the licensed activity.

18. The licence holder must ensure that a copy of this Schedule and any subsequent revisions or amendments has been provided to, read and understood by any agents, contractors or sub-contractors that will be carrying out any licensed activity on behalf of the licence holder.

19. The MMO must be provided with notification of any vessel being used to undertake any licensed activity no less than 24 hours before the commencement of the licensed activity, such notification setting out

- (a) the vessel type,
- (b) the vessel International Maritime Organization (IMO) number; and
- (c) the vessel owner or operating company.

20. The licence holder must ensure that a copy of this Schedule and any subsequent revisions or amendments has been provided to, read and understood by the master of any vessel being used to undertake any licensed activity, and that a copy of this Schedule is held on board any such vessel.

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21. Should the licence holder become aware that any of the information on which the granting of this deemed marine licence was based has changed or is likely to change, the licence holder must notify the MMO at the earliest opportunity.

22. Any breach of the conditions of this deemed marine licence may be treated as the breach of a marine licence over which the MMO may take enforcement action under the 2009 Act.

Project wide conditions

23. The works shall be carried out in accordance with a works schedule to be agreed in writing between the licence holder and the MMO prior to the commencement of the works, and any changes to the works schedule are also to be agreed in writing with the MMO.

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24. (1) The following dependencies apply to the licensed activities in paragraphs 4 to 11.

(2) If the licence holder carries out any of the activities licensed under paragraph 4 (construction of the quay), then it must:

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(a) carry out the activity licensed under paragraph 8 (compensation site creation) in the June following the creation of the compensation site, which in turn must be done during the first earthworks season following the commencement of the activity licensed under paragraph 4;

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(b) carry out the activity licensed under paragraph 7 (pumping station);

(c) carry out the activity licensed under paragraph 11(1)(e) (the E.On outfall maintenance dredging) unless agreed in writing with E.ON; and

(d) carry out the activity licensed under paragraph 11(1)(f) (the Centrica outfall maintenance dredging) unless agreed in writing with Centrica.

(3) If the licence holder carries out the activity licensed under paragraph 10(1)(b) (berthing pocket capital dredging) then it must carry out the activity licensed under paragraph 6 (berthing pocket infill) to the extent that the dredging is below -11 metres Chart Datum.

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Piling conditions

25. (1) No operations consisting of piling shall commence until a piling method statement has been submitted to and agreed in writing by the MMO, following consultation with the Environment Agency and Natural England, such statement to include the following:—

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- (a) the use of pile pads,
- (b) the use of pile shrouds,
- (c) the specification of piles to be used,
- (d) soft start procedures to be followed after any cessation of piling of more than 10 minutes that ensure an incremental increase in pile power over a set time period until full operational power is achieved, over a period of not less than 20 minutes,
- (e) marine mammal observation, and
- (f) implementation of an active monitoring scheme under paragraph 26.

(2) Percussive piling shall only be carried out in accordance with the relevant piling method statement.

26. (1) No development shall be commenced until an active monitoring scheme has been submitted to and agreed in writing by the MMO, to include the following details:—

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- (a) the location of active monitoring buoys and the depth and design of sensors,
- (b) details of the frequency of measurement of temperature and dissolved oxygen,
- (c) 24-hour monitoring of noise,
- (d) when monitoring shall commence and cease, to include a two-week period of pre- and post-construction monitoring to establish baseline conditions and the return to baseline conditions respectively,
- (e) a log of the number and approximate locations of piling rigs that are in operation on any given day, and
- (f) details of how the monitored information will be accessed by or communicated to the site contractor and the MMO as necessary.

(2) The development shall be carried out in accordance with the relevant active monitoring scheme.

(3) No percussive piling shall take place while the data from the relevant active monitoring scheme shows either the temperature to be above 21.5 degrees Celsius or dissolved oxygen to be below 5 milligrams per litre.

27. No percussive piling shall take place between 7 April and 1 June inclusive in any calendar year.

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28. (1) Percussive piling shall be restricted at other times as follows:—

- (a) from 2 June to 22 July inclusive in any year, the maximum amount of percussive piling permitted within any four-week period shall not exceed:—
 - (i) 101 hours where a single piling rig is in operation, or
 - (ii) a total of 168 hours where two or more rigs are in operation;
- (b) from 23 July to 10 September inclusive in any year, the maximum amount of percussive piling permitted within any four-week period shall not exceed:—
 - (i) 25 hours where a single piling rig is in operation, or
 - (ii) a total of 42 hours where two or more rigs are in operation;
- (c) from 11 September to 31 October inclusive in any year, the maximum amount of percussive piling permitted within any four-week period shall not exceed:—
 - (i) 134 hours where a single piling rig is in operation, or
 - (ii) a total of 224 hours where two or more rigs are in operation.
- (d) from 1 November in any year to 6 April in the following year inclusive, the maximum amount of percussive piling permitted within any eight-week period shall not exceed:—
 - (i) 336 hours where a single piling rig is in operation, or
 - (ii) a total of 560 hours where two or more rigs are in operation.

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(2) For the purposes of calculating hours of operation under this paragraph, these shall be calculated to be the time elapsed between the first and last percussive strikes during any one day.

29. No percussive piling shall take place on a Sunday, or before 0600 hours or after 2200 hours on any other day.

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30. The maximum diameter of marine piles shall be 2.1 metres.

Dredge and disposal conditions

31. Conditions 32 to 37 shall apply to licensed activities consisting of dredging and disposal.

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32. (1) The licence holder must agree a dredge and disposal strategy with the MMO before the commencement of any licensed activities.

(2) The dredging and disposal must be carried out in accordance with the dredge and disposal strategy.

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33. The licence holder must install bunding and/or storage facilities to contain and prevent the release of fuel, oils, and chemicals associated with plant, refuelling and construction equipment, into the marine environment such that secondary containment should be used with a capacity of not less than 110% of any container's storage capacity.

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34. The licence holder must ensure that any oil, fuel or chemical spill within the marine environment is reported to the MMO Marine Pollution Response Team (0870 7851050 and dispersants@marinemanagement.org.uk)

35. The licence holder must ensure that to minimise the amount of man-made materials disposed of at sea any man-made material must be separated from the dredged material and disposed of to land.

36. The licence holder must employ methods to minimise resuspension of sediment during dredging operations.

37. The licence holder must ensure that the Environment Agency's Pollution Prevention Guidelines for works in or near water (PPG5) are adhered to at all times.

SCHEDULE 9

Article 52

PROTECTIVE PROVISIONS

PART 1

FOR THE PROTECTION OF NATURAL ENGLAND

1. For the protection of Natural England the following provisions shall, unless otherwise agreed in writing between the undertaker and Natural England, have effect.

Ecological management and monitoring

Terrestrial mitigation and enhancement

2.—(1) No stage of the authorised development shall commence until a terrestrial Ecological Management and Monitoring Plan has been prepared by the undertaker and approved by Natural England in consultation with the relevant Local Planning Authority

(2) The authorised development shall be carried out in accordance with the terrestrial Ecological Management and Monitoring Plan and the undertaker shall implement the monitoring and other measures as detailed in that plan.

European Protected Species

3. No works shall be carried out that will disturb a European protected species under regulation 41 of the Conservation of Habitats and Species Regulations 2010 unless a licence has first been obtained from Natural England under regulation 53 (Licences for certain activities relating to animals or plants) of those regulations.

PART 2

FOR THE PROTECTION OF THE HUMBER CONSERVANCY

Interpretation

4.In this Part—

“the Conservancy Authority” means AB Ports Humber Estuary Services in its role as harbour authority for the Humber Conservancy;

“the Able Dockmaster” means the dockmaster appointed by the Able Harbour Authority under this Order;

“environmental document” means—

- (a) the environmental statement prepared for the purposes of the application for this Order together with any supplementary environmental statement or other document so prepared by way of clarification or amplification of the environmental statement; and
- (b) any other document containing environmental information provided by the Able Harbour Authority to the Secretary of State or the Conservancy Authority for the purposes of any tidal works approval under article 22 (tidal works not to be constructed without approval of the Secretary of State) or this Schedule; and

“the Able Harbour Authority” means Able Humber Ports Ltd in its role as harbour authority for the Able Marine Energy Park;

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<#> No stage of the authorised development shall commence until a biodiversity enhancement and monitoring plan has been prepared for that stage by the undertaker and approved by Natural England ¶

<#> Each stage of the authorised development shall be carried out and monitoring undertaken in accordance with the relevant biodiversity enhancement and monitoring plan ¶
Sediment transport and geomorphological effects¶

No tidal work shall commence until a post-construction plan for the monitoring of indirect sediment transport and geomorphological effects caused by that work development has been prepared by the undertaker and approved by Natural England ¶

<#>The undertaker will carry out post-construction monitoring as detailed in the plan agreed under paragraph 4

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“the Humber Harbour Master” means the harbour master appointed by the Conservancy Authority to be a harbour master for an area that includes the area of jurisdiction and includes the harbour master’s deputies and assistants; and

“the river” means the River Humber.

General

5.—(1) The provisions of this Schedule shall, unless otherwise agreed in writing between the Able Harbour Authority and the Conservancy Authority, have effect for the protection of the Conservancy Authority and the users of the river.

(2) For the purposes of this Schedule, the definition of “tidal work” shall be taken to include—

- (a) any projection over the river outside the area of jurisdiction by booms, cranes and similar plant or machinery, whether or not situated within the area of jurisdiction; and
- (b) any authorised work which affects the river or any functions of the Conservancy Authority, whether or not that authorised work is within the limits of the Conservancy Authority,

but shall not include any maintenance dredging.

Tidal Works: approval of detailed design

6.—(1) Before—

- (a) submitting any plans and sections for any tidal work to the Secretary of State for her approval under article 22 (tidal works not to be constructed without approval of the Secretary of State);
- (b) commencing any operation for the construction of a tidal work where approval of the Secretary of State under article 22 is not required; or
- (c) commencing any operation for the maintenance of a tidal work,

the Able Harbour Authority shall submit to the Conservancy Authority plans and sections of the tidal work or operation and such further particulars as the Conservancy Authority may, within 28 days from the day on which plans and sections are submitted under this sub-paragraph, reasonably require.

(2) No application for the Secretary of State’s approval under article 22 shall be made in respect of a tidal work until plans and sections in respect of that tidal work submitted under sub-paragraph (1) have been approved by the Conservancy Authority.

(3) Any tidal work not requiring the Secretary of State’s approval under article 22 shall not be constructed, and no tidal work shall be maintained, except in accordance with such plans as may be approved in writing by the Conservancy Authority or determined under paragraph **26**,

(4) Any approval of the Conservancy Authority required under this paragraph shall not be unreasonably withheld or delayed but may be given subject to such reasonable requirements as the Conservancy Authority may make for the protection of—

- (a) traffic in, or the flow or regime of, the river;
- (b) the use of its operational land or the river for the purposes of performing its functions; or
- (c) the performance of any of its functions connected with environmental protection.

(5) Requirements made under sub-paragraph (4) may include conditions as to—

- (a) the relocation, provision and maintenance of works, moorings, apparatus and equipment necessitated by the tidal work; and
- (b) the expiry of the approval if the Able Harbour Authority does not commence construction of the tidal work approved within a prescribed period.

(6) Subject to sub-paragraphs (8) and (9), any such approval shall be deemed to have been refused if it is neither given nor refused within 42 days of the specified day.

(7) Before making a decision on any such approval, the Conservancy Authority shall take into account any opinion on plans and sections provided to it by the Environment Agency.

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(8) Accordingly, an approval of the Conservancy Authority under this paragraph shall not be deemed to have been unreasonably withheld if approval within the time limited by sub-paragraph (6) has not been given pending the outcome of any consultation on the approval in question that the Conservancy Authority is obliged in the proper exercise of its functions to carry out provided that during the course of such consultation, the Conservancy Authority has acted with all due expedition.

(9) In this paragraph “the specified day” means, in relation to any tidal work—

- (a) the day on which plans of that work are submitted to the Conservancy Authority under sub-paragraph (1); or
- (b) the day on which the Able Harbour Authority provides the Conservancy Authority with all such particulars of the work as have been reasonably requested by the Conservancy Authority under that sub-paragraph;

whichever is the later.

(10) Whenever the Able Harbour Authority provides the Secretary of State with an environmental document it shall at the same time send a copy to the Conservancy Authority.

7. Any operations for the construction of any tidal work approved in accordance with this Order shall, once commenced, be carried out by the Able Harbour Authority with all reasonable dispatch and to the reasonable satisfaction of the Conservancy Authority so that river traffic, the flow or regime of the river and the exercise of the Conservancy Authority’s functions shall not suffer more interference than is reasonably practicable, and the Conservancy Authority shall be entitled by its officer at all reasonable times, on giving such notice as may be reasonable in the circumstances, to inspect and survey such operations.

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Discharges, etc.

8.—(1) The Able Harbour Authority shall not without the consent of the Conservancy Authority—

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- (a) deposit in or allow to fall or be washed into the river any gravel, soil or other material; or
- (b) discharge or allow to escape either directly or indirectly into the river any offensive or injurious matter in suspension or otherwise.

(2) Any consent of the Conservancy Authority under this paragraph shall not be unreasonably withheld but may be given subject to such terms and conditions as the Conservancy Authority may reasonably impose.

(3) Any such approval shall be deemed to have been given if it is neither given nor refused (or is refused but without an indication of the grounds for refusal) within 35 days of the day on which the request for consent is submitted under sub-paragraph (1).

(4) In its application to the discharge of water into the river, article 18 (discharge of water) shall have effect subject to the terms of any conditions attached to a consent given under this paragraph.

9. The Able Harbour Authority shall not, in exercise of the powers conferred by article 18, damage or interfere with the beds or banks of any watercourse forming part of the river unless such damage or interference is approved as a tidal work under this Order or is otherwise approved in writing by the Conservancy Authority.

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Obstruction in river

10. If any pile, stump or other obstruction to navigation becomes exposed in the course of constructing any tidal work (other than a pile, stump or other obstruction on the site of a structure comprised in any permanent work), the Able Harbour Authority shall, as soon as reasonably practicable after the receipt of notice in writing from the Conservancy Authority requiring such action, remove it from the river or, if it is not reasonably practicable to remove it—

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- (a) cut the obstruction off at such level below the bed of the river as the Conservancy Authority may reasonably direct; or
- (b) take such other steps to make the obstruction safe as the Conservancy Authority may reasonably require.

Removal, etc. of the Conservancy Authority moorings and buoys

11. If—

- (a) by reason of the construction of any tidal work it is reasonably necessary for the Conservancy Authority to incur reasonable costs in temporarily or permanently altering, removing, re-siting, repositioning or reinstating existing moorings or aids to navigation (including navigation marks or lights) owned by the Conservancy Authority, or laying down and removing substituted moorings or buoys, or carrying out dredging operations for any such purpose, not being costs which it would have incurred for any other reason; and
- (b) the Conservancy Authority gives to the Able Harbour Authority not less than 28 days' notice of its intention to incur such costs, and takes into account any representations which the Able Harbour Authority may make in response to the notice within 14 days of the receipt of the notice,

the Able Harbour Authority shall pay the costs reasonably so incurred by the Conservancy Authority.

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Navigational lights, buoys, etc.

12. In addition to any requirement under articles 25 (lights on tidal works during construction) and 27 (permanent lights on tidal works), the Able Harbour Authority shall, at or near every tidal work, and any other work of which the Able Harbour Authority is in possession in exercise of any of the powers of this Order (being in either case a work which is below mean high water level forming part of the river), exhibit such lights, lay down such buoys and take such other steps for preventing danger to navigation as the Conservancy Authority may from time to time reasonably require.

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Removal of temporary works

13. On completion of the construction of any part of a permanent authorised work, the Able Harbour Authority shall as soon as practicable remove—

- (a) any temporary tidal work carried out only for the purposes of that part of the permanent work; and
 - (b) any materials, plant and equipment used for such construction,
- and shall make good the site to the reasonable satisfaction of the Conservancy Authority.

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Protective action

14.—(1) If any tidal work—

- (a) is constructed otherwise than in accordance with the requirements of this Schedule or with any condition in an approval given pursuant to paragraph 6(4); or
- (b) during construction gives rise to sedimentation, scouring, currents or wave action detrimental to traffic in, or the flow or regime of, the river,

then the Conservancy Authority may by notice in writing require the Able Harbour Authority at the Able Harbour Authority's own expense to comply with the remedial requirements specified in the notice.

(2) The requirements that may be specified in a notice given under sub-paragraph (1) are—

- (a) in the case of a tidal work to which sub-paragraph (1)(a) applies, such requirements as may be specified in the notice for the purpose of giving effect to the requirements of—
 - (i) this Schedule; or
 - (ii) the condition that has been breached; or
- (b) in any case within sub-paragraph (1)(b), such requirements as may be specified in the notice for the purpose of preventing, mitigating or making good the sedimentation, scouring, currents or wave action so far as required by the needs of traffic in, or the flow or regime of, the river.

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(3) If the Able Harbour Authority does not comply with a notice under sub-paragraph (1), or is unable to do so then the Conservancy Authority may in writing require the Able Harbour Authority to—

- (a) remove, alter or pull down the tidal work, and where the tidal work is removed to restore the site of that work (to such extent as the Conservancy Authority reasonably requires) to its former condition; or
- (b) take such other action as the Conservancy Authority may reasonably specify for the purpose of remedying the non-compliance to which the notice relates.

(4) If a tidal work gives rise to environmental impacts over and above those anticipated by any environmental document, the Able Harbour Authority shall, in compliance with its duties under any enactment and, in particular, under section 48A of the 1964 Act, take such action as is necessary to prevent or mitigate those environmental impacts and in so doing shall consult and seek to agree the necessary measures with the Conservancy Authority.

(5) If the Conservancy Authority becomes aware that any tidal work is causing an environmental impact over and above those anticipated by any environmental document, the Conservancy Authority shall notify the Able Harbour Authority of that environmental impact, the reasons why the Conservancy Authority believes that the environmental impact is being caused by the tidal work and of measures that the Conservancy Authority reasonably believes are necessary to counter or mitigate that environmental impact. The Able Harbour Authority shall implement the measures that the Conservancy Authority has notified to the Able Harbour Authority or shall implement such other measures as the Able Harbour Authority believes are necessary to counter the environmental impact identified, giving reasons to the Conservancy Authority as to why it has implemented such other measures.

Abandoned or decayed works

15.—(1) If any tidal work or any other work of which the Able Harbour Authority is in possession in exercise of any of the powers of this Order (being in either case a work which is below mean high water level) is abandoned or falls into decay, the Conservancy Authority may by notice in writing require the Able Harbour Authority to take such reasonable steps as may be specified in the notice either to repair or restore the work, or any part of it, or to remove the work and (to such extent as the Conservancy Authority reasonably requires) to restore the site to its former condition.

(2) If any tidal work is in such condition that it is, or is likely to become, a danger to or an interference with navigation in the river, the Conservancy Authority may by notice in writing require the Able Harbour Authority to take such reasonable steps as may be specified in the notice—

- (a) to repair and restore the work or part of it; or
- (b) if the Able Harbour Authority so elects, to remove the tidal work and (to such extent as the Conservancy Authority reasonably requires) to restore the site to its former condition.

(3) If after such reasonable period as may be specified in a notice under this paragraph the Able Harbour Authority has failed to begin taking steps to comply with the requirements of the notice, or after beginning has failed to make reasonably expeditious progress towards their implementation, the Conservancy Authority may carry out the works specified in the notice and any expenditure reasonably incurred by it in so doing shall be recoverable from the Able Harbour Authority.

Facilities for navigation

16.—(1) The Able Harbour Authority shall not in the exercise of the powers granted by this Order interfere with any marks, lights or other navigational aids in the river without the agreement of the Conservancy Authority, and shall ensure that access to such aids remains available during and following construction of any tidal works.

(2) The Able Harbour Authority shall provide at any tidal works, or shall afford reasonable facilities at such works (including an electricity supply) for the Conservancy Authority to provide

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at the Able Harbour Authority's cost, from time to time, such navigational lights, signals, radar or other apparatus for the benefit, control and direction of navigation of users of the river in general as the Conservancy Authority may deem necessary by reason of the construction of any tidal works, and shall ensure that access remains available to apparatus during and following construction of such works.

(3) The Able Harbour Authority shall comply with the directions of the Humber Harbour Master from time to time with regard to the lighting on the tidal works or within the harbour, or the screening of such lighting, so as to ensure safe navigation on the river.

Survey of riverbed

17.—(1) Before the commencement of construction of the first tidal work to be constructed following approval pursuant to article 22 (tidal works not to be constructed without approval of the Secretary of State), the Conservancy Authority may, at the Able Harbour Authority's reasonable expense, carry out a survey of such parts of the river as might be affected by sedimentation, scouring, currents or wave action that might result from the construction of such of the authorised works as would constitute tidal works if they were to be constructed, for the purposes of establishing the condition of the river at that time.

(2) Before the commencement of construction of any other tidal work approved pursuant to article 22, the Conservancy Authority may, at the Able Harbour Authority's reasonable expense, carry out a survey of such parts of the river as might be affected by sedimentation, scouring, currents or wave action resulting from that tidal work for the purpose of establishing the condition of the river at that time.

(3) The Conservancy Authority may carry out such surveys of the river as are reasonably required during the construction of any tidal work to ascertain the effect of that tidal work on the river and the Conservancy Authority shall make available to the Able Harbour Authority the results of any such survey in electronic and paper format.

(4) After completion of, respectively, any tidal work and all the tidal works constructed under this Order, the Conservancy Authority may, at the Able Harbour Authority's expense carry out a further survey of the parts of the river which were surveyed prior to the construction of that work, or as the case may be a survey of the completed tidal works as so constructed, for the purpose of establishing the condition of the river and the effect that the tidal work is, or as the case may be the tidal works are, having on navigation, the flow and the regime of the river and the exercise of the Conservancy Authority's functions.

(5) The Conservancy Authority shall not under this paragraph carry out a survey of any part of the river as respects which the Able Harbour Authority has provided to the Conservancy Authority survey material which the Conservancy Authority is reasonably satisfied establishes the condition of the river, and in the case of a survey under sub-paragraph (3), the effect of the tidal work, or as the case may be the tidal works.

Sedimentation, etc.: remedial action

18.—(1) This paragraph applies if any part of the river becomes subject to sedimentation, scouring, currents or wave action which—

- (a) is, during the period beginning with the commencement of the construction of that tidal work and ending with the expiration of 10 years after the date on which all the tidal works constructed under this Order are completed, wholly or partly caused by a tidal work; and
- (b) for the safety of navigation or for the protection of works in the river, should in the reasonable opinion of the Conservancy Authority be removed or made good.

(2) The Able Harbour Authority shall either—

- (a) pay to the Conservancy Authority any additional expense to which the Conservancy Authority may reasonably be put in dredging the river to remove the sedimentation or in making good the scouring so far as (in either case) it is attributable to the tidal work; or

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(b) carry out the necessary dredging at its own expense and subject to the prior approval of the Conservancy Authority, such prior approval not to be unreasonably withheld or delayed;
and the reasonable expenses payable by the Able Harbour Authority under this paragraph include any additional expenses accrued or incurred by the Conservancy Authority in carrying out surveys or studies in connection with the implementation of this paragraph.

Indemnity

19.—(1) The Able Harbour Authority shall be responsible for and make good to the Conservancy Authority all reasonable financial costs or losses not otherwise provided for in this Schedule which may reasonably be incurred or suffered by the Conservancy Authority by reason of—

- (a) the construction or operation of the authorised works or the failure of the authorised works;
- (b) anything done in relation to a mooring or buoy pursuant to paragraph 11; or;
- (c) any act or omission of the Able Harbour Authority, its employees, contractors or agents or others whilst engaged upon the construction or operation of the authorised works or dealing with any failure of the authorised works;

and the Able Harbour Authority shall indemnify the Conservancy Authority from and against all claims and demands arising out of or in connection with the authorised works or any such failure, act or omission.

(2) The fact that any act or thing may have been done—

- (a) by the Conservancy Authority on behalf of the Able Harbour Authority; or
- (b) by the Able Harbour Authority, its employees, contractors or agents in accordance with plans or particulars submitted to or modifications or conditions specified by the Conservancy Authority, or in a manner approved by the Conservancy Authority, or under its supervision or the supervision of its duly authorised representative;

shall not (if it was done or required without negligence on the part of the Conservancy Authority or its duly authorised representative, employee, contractor or agent) excuse the Able Harbour Authority from liability under the provisions of this paragraph.

(3) The Conservancy Authority shall give the Able Harbour Authority reasonable notice of any such claim or demand as is referred to in sub-paragraph (1), and no settlement or compromise of any such claim or demand shall be made without the prior consent of the Able Harbour Authority.

Entry for survey, etc.

20.—(1) Before exercising the powers of article 20 to enter any land situated below the level of high water the undertaker shall provide the Harbour Master with written particulars of—

- (a) the location of the land (including a plan);
- (b) the nature of the things proposed to be done in that land in exercise of that article;
- (c) the duration and frequency of the undertaker's intended presence on the land;
- (d) any vehicles or equipment proposed to be brought on the land;

and such other details as the Harbour Master may reasonably request.

(2) The undertaker may not enter any land the subject of written particulars provided under sub-paragraph (1) except in accordance with such conditions as the Harbour Master may impose, including conditions as to the time of entry and the way in which activities are to be carried out.

Statutory functions

21.—(1) Subject to article 4(1) and this paragraph, any function of the Able Harbour Authority or any officer of the Able Harbour Authority, whether conferred by or under this Order or any other enactment, shall be subject to—

- (a) any enactment relating to the Conservancy Authority;

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- (b) any byelaw, direction or other requirement made by the Conservancy Authority or the Humber Harbour Master under any enactment; and
 - (c) any other exercise by the Conservancy Authority or the Humber Harbour Master of any function conferred by or under any enactment.
- (2) The Able Harbour Authority or Able Dockmaster shall not take any action in the river outside the area of jurisdiction under sections 57 and 65 of the 1847 Act as incorporated by article 3 (incorporation of the Harbours, Docks and Piers Clauses Act 1847) except with the consent of the Humber Harbour Master, which shall not be unreasonably withheld.
- (3) The Able Dockmaster shall not give or enforce any special direction to any vessel under section 52 of the 1847 Act, as incorporated by article 3 (incorporation of the Harbours, Docks and Piers Clauses Act 1847), if to do so would conflict with a special direction given to the same vessel by the Humber Harbour Master.
- (4) The Conservancy Authority shall consult the Able Harbour Authority before making any byelaw which directly applies to or which could directly affect the construction, operation or maintenance of the Able Marine Energy Park.
- (5) The Conservancy Authority or the Humber Harbour Master (as appropriate) shall consult the Able Harbour Authority before giving any general direction which directly affects the construction, operation or maintenance of the Able Marine Energy Park.

(6) The Able Dockmaster shall consult the Humber Harbour Master in relation to the initiation, operation and any change in the Port Marine Safety Code as having effect in relation to the harbour, and the Able Harbour Authority shall comply with any requirement of the Humber Harbour Master for the adjustment of the Port Marine Safety Code as affecting the River Humber and the functions of the Conservancy Authority or the Humber Harbour Master.

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Operating procedures

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22. Before commencing harbour operations the Able Harbour master shall submit to the Humber Harbour Master for approval a written statement of proposed safe operating procedures for access to and egress from the harbour and shall operate the harbour only in accordance with such procedure as approved, including any approve alteration made from time to time.

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Consideration for dredged material

23.—(1) Subject to any agreement concluded between the Able Harbour Authority, the Conservancy Authority and any other party benefiting from material dredged by the Conservancy Authority, the Able Harbour Authority shall pay the Conservancy Authority for material dredged by the Conservancy Authority under this Order from so much of the river as is vested in the Conservancy Authority, consideration calculated at a rate agreed between them and otherwise in accordance with this paragraph.

(2) The Able Harbour Authority shall pay reasonable consideration under sub-paragraph (1) as respects material dredged in the course of the construction of the works authorised by article 21 (right to dredge) based on the quantity of such material that—

- (a) is not used for the construction of—
 - (i) the authorised works;
 - (ii) any other works related to the construction of Able Marine Energy Park; or
 - (iii) the related development; and
- (b) is not owned by the undertaker, and
- (c) is sold by the Able Harbour Authority or by any other person exercising any powers under this Order.

Removal of wrecks and obstructions, etc.

24.—(1) Before exercising any power under section 252 of the Merchant Shipping Act 1995(a) or under section 56 of the 1847 Act, the Able Dockmaster shall notify the Humber Harbour Master.

(2) The Able Dockmaster shall comply with any reasonable instructions that the Humber Harbour Master may give in relation to the exercise of the powers referred to in sub-paragraph (1).

25. Within 14 days after the date of any transfer or grant under article 12 (consent to transfer benefit of Order), the undertaker who made the transfer or grant shall serve notice on the Humber Harbour Master containing the name and address of the transferee or lessee, the territorial extent of the transfer or grant and, in the case of a grant, the period for which it is granted and the extent of benefits and rights granted.

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Disputes

26. Any dispute arising between the Able Harbour Authority and the Conservancy Authority under this Schedule shall be determined by arbitration as provided in article 58 (arbitration).

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PART 3

FOR THE PROTECTION OF THE ENVIRONMENT AGENCY

27. For the protection of the Environment Agency, the following provisions shall, unless otherwise agreed in writing between the undertaker and the Environment Agency, have effect.

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28. The requirement for consent under section 109 of the Water Resources Act 1991 and byelaw 27 of the Anglian Region Land Drainage and Sea Defence Byelaws 1987 shall not be required for the authorised development subject to the conditions contained in paragraphs 29 to 32.

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29. The authorised development should be carried out to ensure minimum obstruction to flows in the watercourse at all times.

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30. The requirements set out in the Environment Agency's Pollution Prevention Guideline 5 (Works and Maintenance in or near Water) must be complied with to ensure that the works are carried out in a proper manner and do not adversely affect the watercourse.

31. On completion of the works, all debris and surplus material shall be removed from the banks of the watercourse and that the banks are left in a stable condition with adequate protection provided to avoid erosion, to the satisfaction of the Environment Agency.

32. The Company must bring the conditions contained in paragraphs 29 to 31 to the attention of any agent or contractor responsible for carrying out the authorised development.

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PART 4

FOR THE PROTECTION OF THE HIGHWAYS AGENCY

33. For the protection of the Highways Agency, no part of the authorised development shall be occupied until improvements to the following junctions (or alternatives approved in writing by the local planning authority in consultation with the Highways Agency) have been implemented in accordance with details approved by the local planning authority in consultation with the Highways Agency:

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- (a) A160/A1173/Humber Road (Manby Road Roundabout),
- (b) A160/Top Road/Habrough Road,
- (c) A160/A1077 Ulceby Road,
- (d) A160/Eastfield Road (signalised junction), and
- (e) A180/A160 Merge/Diverge (Brocklesby Interchange).

PART 5

FOR THE PROTECTION OF NETWORK RAIL

34. For the protection of Network Rail, the following provisions shall, unless otherwise agreed in writing between the undertaker and Network Rail, have effect.

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35. In this part of this Schedule,

“railway property” means any railway belonging to Network Rail and—

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(a) any station, land, works, apparatus and equipment belonging to Network Rail or connected with any such railway; and

(b) any easement or other property interest held by or used for the benefit of Network Rail for the purposes of such railway or works, apparatus or equipment; and

“specified work” means so much of any of the authorised project as is situated upon, across, under, over or within 15 metres of, or may in any way adversely affect, railway property.

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36.—(1) Where under this Schedule Network Rail is required to give its consent or approval in respect of any matter, that consent or approval shall not be unreasonably withheld or delayed but may be subject to reasonable conditions (while recognising that the engineer has sole discretion in matters relating to safety) and is subject to the condition that Network Rail complies with any relevant railway operational procedures and any obligations under its network licence or under statute.

(2) In so far as any specified work or the acquisition or use of railway property is or may be subject to railway operational procedures, Network Rail shall—

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(a) co-operate with the Company with a view to avoiding undue delay and securing conformity as between any plans approved by the engineer and requirements emanating from those procedures; and

(b) use its reasonable endeavours to avoid any conflict arising between the application of those procedures and the proper implementation of the authorised project pursuant to this Order.

37.—(1) The Company shall not exercise the powers conferred by article 20 (authority to survey and investigate the land) or the powers conferred by section 11(3) of the 1965 Act as applied to this Order by the 2008 Act in respect of any railway property unless the exercise of such powers is with the consent of Network Rail.

(2) The Company shall not in the exercise of the powers conferred by this Order prevent pedestrian or vehicular access to any railway property, unless preventing such access is with the consent of Network Rail.

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38. – (1) The Company shall before commencing construction of any specified work supply to Network Rail proper and sufficient plans of that work for the reasonable approval of the engineer and the specified work shall not be commenced except in accordance with such plans as have been approved in writing by the engineer or settled by arbitration.

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(2) The approval of the engineer under subparagraph (1) shall not be unreasonably withheld or delayed, and if by the end of the period of 28 days beginning with the date on which such plans have been supplied to Network Rail the engineer has not intimated his disapproval of those plans and the grounds of his disapproval the Company may serve upon the written notice requiring the engineer to intimate his approval or disapproval within a further period of 28 days beginning with the date upon which the engineer receives written notice from the Company. If by expiry of the further period of 28 days the engineer has not intimated his approval or disapproval, he engineer shall be deemed to have approved the plans as submitted.

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(3) If by the end of the period of 56 days beginning with the date on which such plans have been supplied to Network Rail, Network Rail gives notice to the Company that Network Rail

desires itself to construct any part of a specified work which in the opinion of the engineer will or may affect the stability of railway property or the safe operation of traffic on the railways of Network Rail then, if the Company desires such part of the specified work to be constructed, Network Rail shall construct it with all reasonable dispatch on behalf of and to the reasonable satisfaction of the Company in accordance with the plans approved or deemed to be approved or settled under this paragraph.

(4) When signifying his approval of the plans the engineer may specify any protective works (whether temporary or permanent) which in his opinion should be carried out before the commencement of the construction of a specified work to ensure the safety or stability of railway property or the continuation of safe and efficient operation of the railways of Network Rail or the services of operators using the same (including any relocation of works, apparatus and equipment necessitated by a specified work and the comfort and safety of passengers who may be affected by the specified works), and such protective works as may be reasonably necessary for those purposes shall be constructed by Network Rail but at the expense of the Company, or if Network Rail so desires such protective works shall be carried out by the Company at its own expense with all reasonable dispatch, and the Company shall not commence the construction of the specified works until the engineer has notified the Company that the protective works have been completed to his reasonable satisfaction.

39.—(1) Any specified work and any protective works to be constructed by virtue of paragraph 38(4) shall, when commenced, be constructed—

(a) with all reasonable dispatch in accordance with the plans approved or deemed to have been approved or settled under paragraph 38;

(b) under the supervision (where appropriate and if given) and to the reasonable satisfaction of the engineer;

(c) in such manner as to cause as little damage as is possible to railway property; and

(d) so far as is reasonably practicable, so as not to interfere with or obstruct the free, uninterrupted and safe use of any railway of Network Rail or the traffic thereon and the use by passengers of railway property.

(2) If any damage to railway property or any such interference or obstruction shall be caused by the carrying out of, or in consequence of the construction of a specified work, the Company shall, notwithstanding any approval described in paragraph 38(1)(a), make good such damage and shall pay to Network Rail all reasonable expenses to which Network Rail may be put and compensation for any loss which it may sustain by reason of any such damage, interference or obstruction.

(3) Nothing in this Schedule shall impose—

(a) any liability on the Company with respect to any damage, costs, expenses or loss attributable to the negligence of Network Rail or its servants, contractors or agents; or

(b) any liability on Network Rail with respect to any damage, costs, expenses or loss attributable to the negligence of the Company or its servants, contractors or agents.

40. The Company shall—

(a) at all times afford reasonable facilities to the engineer for access to a specified work during its construction; and

(b) supply the engineer with all such information as he may reasonably require with regard to a specified work or the method of constructing it.

41. Network Rail shall at all times afford reasonable facilities to the Company and its agents for access to any works carried out by Network Rail under this Schedule during their construction and shall supply the Company with such information as it may reasonably require with regard to such works or the method of constructing them.

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42.—(1) If any permanent or temporary alterations or additions to railway property, or any protective works under paragraph 38(4), are reasonably necessary during the construction of a specified work, or during a period of 12 months after the opening for public use of any part of the authorised project that includes a specified work, in consequence of the construction of that specified work, such alterations and additions may be carried out by Network Rail and if Network Rail gives to the Company reasonable notice of its intention to carry out such alterations or additions, the Company shall pay to Network Rail all costs reasonably and properly incurred in constructing those alterations or additions including, in respect of any such alterations and additions as are to be permanent, a capitalised sum representing the increase of the costs which may be expected to be reasonably incurred by Network Rail in maintaining, working and, when necessary, renewing any such alterations or additions.

(2) If during the construction of a specified work by the Company, Network Rail gives notice to the Company that Network Rail desires itself to construct that part of the specified work which in the opinion of the engineer is endangering the stability of railway property or the safe operation of traffic on the railways of Network Rail then, if the Company desires that part of the specified work to be constructed, Network Rail shall assume construction of that part of the specified work and the Company shall, notwithstanding any such approval of a specified work under paragraph 38(1), pay to Network Rail all reasonable expenses to which Network Rail may be put and compensation for any loss which it may suffer by reason of the execution by Network Rail of that specified work.

(3) If the cost of maintaining, working or renewing railway property is reduced in consequence of any such alterations or additions, a capitalised sum representing such saving shall be set off against any sum payable by the Company to Network Rail under this paragraph.

43.—(1) The Company shall repay to Network Rail all fees, costs, charges and expenses reasonably and properly incurred by Network Rail—

(a) in constructing any part of a specified work on behalf of the Company as provided by paragraph 37(3) or in constructing any protective works under the provisions of paragraph 37(4) including, in respect of any permanent protective works, a capitalised sum representing the cost of maintaining and renewing those works;

(b) in respect of the approval by the engineer of plans submitted by the Company and the supervision by him of the construction of a specified work and otherwise in connection with the implementation of the provisions of this Part;

(c) in respect of the employment or procurement of the services of any inspectors and other persons whom it shall be reasonably necessary to appoint for inspecting, watching and lighting railway property and for preventing, so far as may be reasonably practicable, interference, obstruction, danger or accident arising from the construction or failure of a specified work;

(d) in respect of any additional temporary lighting of railway property in the vicinity of the specified works, being lighting made reasonably necessary by reason or consequence of the construction or failure of a specified work; and

(e) in respect of any special traffic working resulting from any speed restrictions which may, in the opinion of the engineer, require to be imposed by reason or in consequence of the construction or failure of a specified work or from the substitution of diversion of services which may be reasonably necessary for the same reason.

44. If at any time after the completion of a specified work, not being a work vested in Network Rail, Network Rail gives notice to the Company informing it that the state of maintenance of any part of the specified work appears to be such as adversely affects the operation of railway property, the Company shall, on receipt of such notice, take such steps as may be reasonably

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necessary to put that specified work in such state of maintenance as not adversely to affect railway property.

45. Any additional expenses which Network Rail may reasonably and properly incur in altering, reconstructing, maintaining or working railway property under any powers existing at the making of this Order by reason of the existence of a specified work shall, provided that 56 days' previous notice of the commencement of such alteration, reconstruction, maintenance or working has been given to the Company, be repaid by the Company to Network Rail.

46. The Company shall pay to Network Rail all costs, charges, damages and expenses not otherwise provided for in this Schedule which may be occasioned to or reasonably and properly incurred by Network Rail—

(a) by reason of the construction, working or maintenance of a specified work, or the failure thereof; or

(b) by reason of any act or omission of the Company or of any person in its employ or of its contractors or others whilst engaged upon a specified work;

(2) Network Rail shall give the Company reasonable notice of any such claim or demand and no settlement or compromise of such a claim or demand shall be made without the prior consent of the Company.

(3) The sums payable by the Company under sub-paragraph (1) may include a sum equivalent to the relevant costs.

47. Network Rail shall, on receipt of a request from the Company, from time to time provide the Company free of charge with written estimates of the costs, charges, expenses and other liabilities for which the Company is or will become liable under this Schedule (including the amount of the relevant costs mentioned in paragraph 46) and with such information as may reasonably enable the Company to assess the reasonableness of any such estimate or claim made or to be made pursuant to this Schedule (including any claim relating to those relevant costs).

48. In the assessment of any sums payable to Network Rail under this Part there shall not be taken into account any increase in the sums claimed that is attributable to any action taken by or any agreement entered into by Network Rail if that action or agreement was not reasonably necessary and was taken or entered into with a view to obtaining the payment of those sums by the Company under this Schedule or increasing the sums so payable.

49. The Company shall no later than 28 days from the date that the plans submitted to and certified by the Secretary of State in accordance with article 56 are certified by the Secretary of State, provide a set of those plans to Network Rail in the form of a computer disc with read only memory.

PART 6

FOR THE PROTECTION OF C.GEN KILLINGHOLME LTD AND C.RO PORTS (KILLINGHOLME) LTD

50. For the protection of C.GEN Killingholme Ltd ('C.GEN') and C.RO Ports (Killingholme) Ltd ('C.RO'), the following provisions shall, unless otherwise agreed in writing between the undertaker and C.GEN or C.RO, have effect.

51. In this part of this Schedule, 'CPK' means C.RO Ports Killingholme, a statutory harbour authority located upriver of the authorised development.

52. The Able Harbour Authority shall not in the exercise of the powers granted by this Order interfere with any marks, lights or other navigational aids in the river relating to CPK without the agreement of C.RO, and shall ensure that access to such aids remains available during and following construction of any tidal works.

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53. The undertaker shall pay to C.RO the reasonable costs incurred by C.RO of such alterations to the marking and lighting of the navigational channel of the river as may be necessary during or in consequence of the construction of a tidal work.

54. The undertaker shall afford to C.RO such facilities as C.RO may reasonably require for the placing and maintenance on any tidal works of signals, tide-boards, tide-gauges or other apparatus for the safety or benefit of navigation.

55. With the exception of any duty owed by C.GEN or C.RO to the undertaker which is expressly provided for in this Part of this Schedule, nothing in this Order shall be construed as imposing upon C.GEN or C.RO either directly or indirectly, any duty or liability to which C.GEN or C.RO would not otherwise be subject and which is enforceable by proceedings before any court.

56. Unless otherwise agreed in writing, any dispute arising between the undertaker and C.GEN or C.RO under this Schedule shall be determined by arbitration as provided in article 58 (arbitration).

PART 7

FOR THE PROTECTION OF PHILLIPS 66 LIMITED

57. In this Part

“P66” means Phillips 66 Limited (Company number 00529086); and

“ the pipelines” means the 4 pipelines crossing the Order land owned and operated by P66 used at various times for the passage of multi-purpose hydrocarbon fuels and all ancillary apparatus including such works and apparatus properly appurtenant to the Pipelines as are specified by Section 65(2) of the Pipelines Act 1962

58. Before commencing any part of the authorised development or the operation of the authorised undertaking which would have an effect on the operation and maintenance of the pipelines and access thereto the undertaker shall submit to P66 plans and sections of the proposed works and such further particulars as P66 may, within 28 days from the day on which plans and sections are submitted under this paragraph, reasonably require.

59. No works comprising any part of the authorised development or the operation of the authorised undertaking which would have an effect in full or in part on the operation, maintenance, repair, replacement and abandonment of the pipelines and access thereto shall be commenced until plans and sections in respect of those works submitted under paragraph 58 have been approved by P66.

60. Any approval of P66 required under paragraph 59 shall not be unreasonably withheld or delayed but may be given subject to such reasonable requirements as P66 may require to be made for:-

(a) the continuing safety and operational viability of the pipelines;

(b) the requirement for P66 to have uninterrupted and unimpeded access to the pipelines at all times.

PART 8

FOR THE PROTECTION OF NATIONAL GRID

61. In this Part

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“National Grid” means National Grid Plc and shall include any reference to National Grid Gas Plc.

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The “Electric Line” shall mean line 2AJ Killingholme Substation to Humber Refinery Substation and the term electric line shall have the same meaning as contained in section 64(1) of the Electricity Act 1989.

The “Pipelines” shall mean the three pipelines situated within plots 14002, 14004 and 14008 situated at Old Little Humber Farm and which are the subject of Deeds of Easement dated 8 May 1967 between Winfred Garton, John Garton & Mary Spetch and the Gas Council; dated 1 April 1985 between J Garton, D A Spetch & W M White and the British Gas Corporation and 5 October 2009 between D A Spetch & W M White and National Grid Gas Plc.

“Electric Line Works” shall mean works which have been agreed with National Grid for the removal or relocation of the Electric Line.

“Gas Works” shall mean works which have been agreed with National Grid to be carried out to the Pipelines.

62. For the protection of National Grid the following provisions shall, unless otherwise agreed in writing between the undertaker and National Grid, have effect.

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Electric line

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63. Notwithstanding the provisions of Article 41, the Electric Line Works shall not be implemented until they have been submitted to and approved by National Grid.

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64. At the request of the undertaker National Grid shall carry out the Electric Line Works in accordance with the terms of any approval.

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65. The undertaker shall pay to National Grid the reasonable costs of carrying out the Electric Line Works.

Gas

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66. Notwithstanding the provisions of Article 41, the Gas Works shall not be implemented until they have been submitted to and approved by National Grid.

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67. At the request of the undertaker National Grid shall carry out the Gas Works in accordance with the terms of any approval.

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68. The undertaker shall pay National Grid the reasonable costs of carrying out the Gas Works.

General

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69. Any dispute arising between the undertaker and National Grid under this Schedule shall be determined by arbitration as provided in Article 58 (arbitration).

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PART 9

FOR THE PROTECTION OF E.ON UK PLC

70. In this Part:

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“E.ON” means E.ON UK Plc whose registered office is at Westwood Way, Westwood Business Park, Coventry, West Midlands CV4 8LG (company registration number 02366970).

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“the outfall and intake” means that part of the pipelines which are located in the river at grid reference [grid reference to be confirmed between E.ON and the undertaker].

“the pipelines” means the intake and outfall pipelines situated within plots 04023, 04024, 04027, 04028, 04029, 05003 to 05016 (inclusive), 05019, 05026, 05027, 05028, 05036, 05037, 05038, 05044, and 06006 which are the subject of a Deed of Easement dated 9 July 2004 between Able UK Limited and E.ON.

“the river” means the River Humber.

71. For the protection of E.ON the following provisions shall, unless otherwise agreed in writing between the undertaker and E.ON, have effect.

The Pipelines

72.-(1) Notwithstanding the provisions of Article 41, no stage of the authorised development shall commence until a construction method statement to protect the pipelines (offshore and onshore) and intake and outfall, which may involve diverting them, has been prepared by the undertaker and submitted to and agreed with E.ON.

(2). The construction method statement shall include provisions in respect of: (a) the location and methods of reinforcement of crossing points over the pipelines;

(b) a mechanism for the enforcement of the undertaker’s use of designated crossing points over the pipelines and the agreed reinforcement methods; and

(c) adoption of a prior notification and consent regime which would require the undertaker to:

- (i) notify E.ON of its intention to carry out any development within the vicinity of the pipelines and intake and outfall, such notification to be provided at least 48 hours prior to any such development occurring; and
- (ii) seek E.ON’s consent to the carrying out of the proposed development within the vicinity of the pipelines and intake and outfall, such consent not to be unreasonably withheld; and

the authorised development shall thereafter be carried out in accordance with the approved construction method statement.

General

73. Any dispute arising between the undertaker and E.ON under this Schedule shall be determined by arbitration as provided in article 58 (arbitration).

PART 10

FOR THE PROTECTION OF CENTRICA PLC

74. For the protection of Centrica the following provisions shall, unless otherwise agreed in writing between the undertaker and Centrica, have effect.

75. In this Part

“Centrica” means Centrica plc; and

“the pipelines” means Centrica’s cooling water pipelines and condensate pipeline.

The Pipelines

76.-(1) Notwithstanding the provisions of Article 41, no stage of the authorised development shall commence until a construction method statement to protect the pipelines (offshore and onshore) and intake and outfall, which may involve diverting them, has been prepared by the undertaker and submitted to and agreed with Centrica.

(2). The construction method statement shall include provisions in respect of:

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(a) the location and methods of reinforcement of crossing points over the pipelines;

(b) a mechanism for the enforcement of the undertaker's use of designated crossing points over the pipelines and the agreed reinforcement methods; and

(c) adoption of a prior notification and consent regime which would require the undertaker to:

(i) notify Centrica of its intention to carry out any development within the vicinity of the pipelines and intake and outfall, such notification to be provided at least 48 hours prior to any such development occurring; and

(ii) seek Centrica's consent to the carrying out of the proposed development within the vicinity of the pipelines and intake and outfall, such consent not to be unreasonably withheld; and

the authorised development shall thereafter be carried out in accordance with the approved construction method statement.

General

77. Any dispute arising between the undertaker and Centrica under this Schedule shall be determined by arbitration as provided in article 58 (arbitration).

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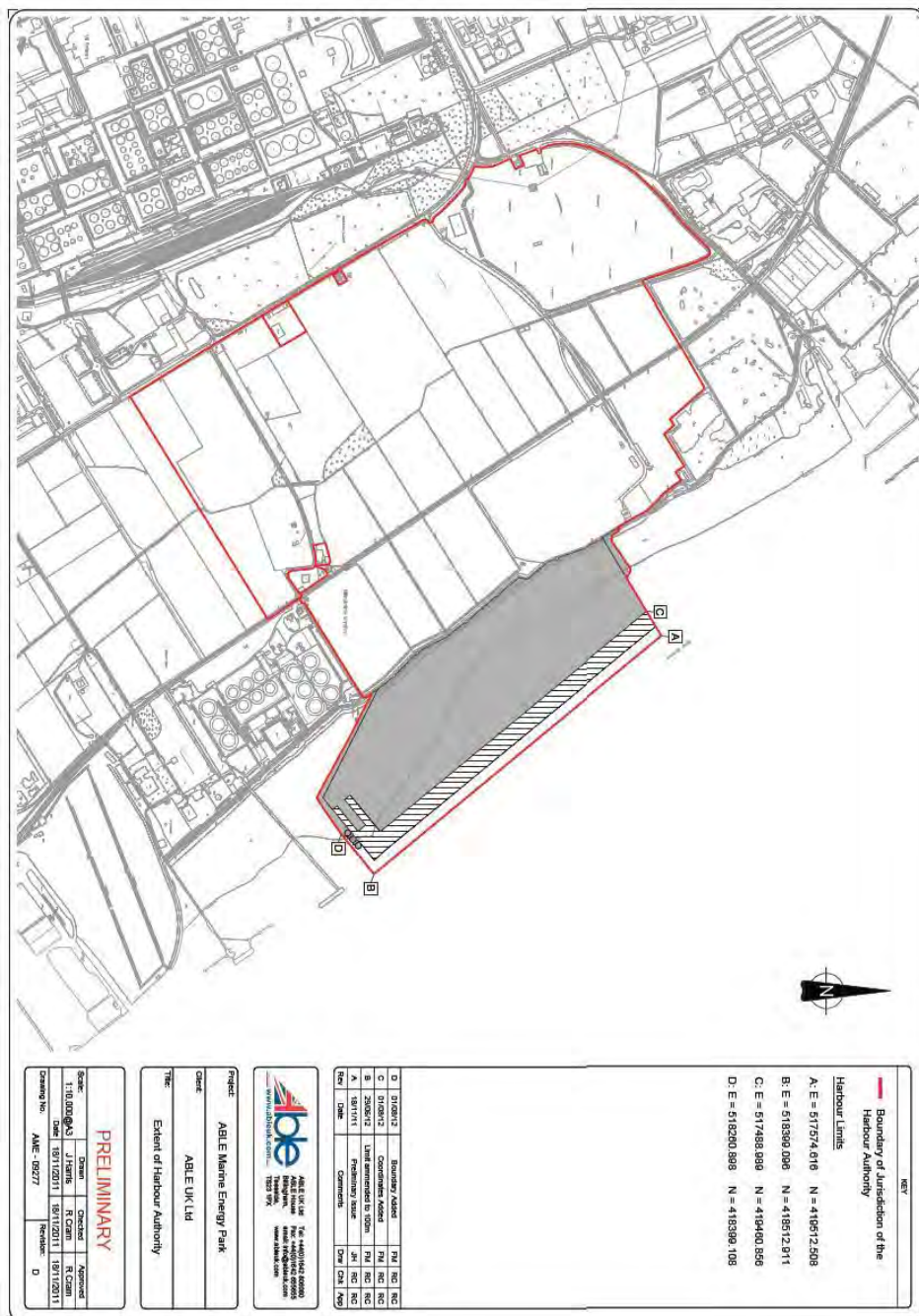
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SCHEDULE 10

LIMITS OF HARBOUR

Article 2



SCHEDULE 11

Article 5

REQUIREMENTS

1. In this Schedule—

“the 1990 Act” means the Town and Country Planning Act 1990;

“the 2008 Act” means the Planning Act 2008;

“authorised development” means the development and associated development described in Schedule 1 (authorised development) and any other development authorised by this Order, which is development within the meaning of section 32 of the 2008 Act;

“environmental statement” means the statement submitted under regulation 5(2)(a) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009(a), together with any supplementary statement;

“highway” and “highway authority” have the same meaning as in the 1980 Act;

“the relevant planning authority” means North Lincolnshire Council for land in that council’s area and East Riding of Yorkshire Council for land in that council’s area;

Time limits

2. The authorised development must be begun within 7 years of the date of this Order.

Stages of the development

3. No part of the authorised development shall commence until a written scheme setting out all the stages of the authorised development has, after consultation with the highway authority, been submitted to and approved by the relevant planning authority.

Cargo restriction

3A.—(1) The cargo for which the authorised development is authorised to handle the embarkation and disembarkation shall be restricted to items associated with marine energy infrastructure and any cargo that is incidental or ancillary to such items.

(2) If further categories of cargo are authorised by means of planning permission or an order under section 14 of the Harbours Act 1964 or section 1 of the Transport and Works Act 1992, then the implementation of such authorisations shall not constitute a breach of this order.

Detailed design approval

4. The authorised development shall be carried out in accordance with the design drawings listed below, unless otherwise approved in writing by the relevant planning authority and the altered development falls within the Order limits and has no significant environmental effects beyond those assessed in the Environmental Statement accompanying the application:

(a) those of planning application drawings with reference TR030001/APP/24a comprising:

(i) drawing "AME-02006",

(ii) drawing "AME-02007",

(iii) drawing "AME-02008",

(iv) drawing "AME-02009".

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- (v) drawing "AME-02010"
- (vi) drawing "AME-02011"
- (vii) drawing "AME-02012"
- (viii) drawing "AME-02013"
- (ix) drawing "AME-02014"
- (x) drawing "AME-02016"
- (xi) drawing "AME-02017", and
- (xii) drawing "AME-02018"
- (b) those of the design drawings with reference TR030001/APP/24b comprising:
 - (i) drawing "AMEP P1D D 001"
 - (ii) drawing "AMEP P1D D 002"
 - (iii) drawing "AMEP P1D D 003"
 - (iv) drawing "AMEP P1D D 004"
 - (v) drawing "AMEP P1D D 005"
 - (vi) drawing "AMEP P1D D 006"
 - (vii) drawing "AMEP P1D D 007"
 - (viii) drawing "AMEP P1D D 009"
 - (ix) drawing "AMEP P1D D 101"
 - (x) drawing "AMEP P1D D 102"
 - (xi) drawing "AMEP P1D D 103"
 - (xii) drawing "AMEP P1D D 104"
 - (xiii) drawing "AMEP P1D D 105"
 - (xiv) drawing "AMEP P1D D 106", and
 - (xv) drawing "AMEP P1D D 107"

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Provision of landscaping

5. No stage of the authorised development, other than tidal works, shall commence until a written landscaping scheme has been submitted to and approved by the relevant planning authority after consultation with National Grid. The landscaping scheme must include details of all proposed hard and soft landscaping works, including—

- (a) location, number, species, size and planting density of any proposed planting;
- (b) cultivation, importing of materials and other operations to ensure plant establishment;
- (c) proposed finished ground levels;
- (d) hard surfacing materials;
- (e) vehicular and pedestrian access, parking and circulation areas;
- (f) minor structures, such as furniture, refuse or other storage units, signs and lighting;
- (g) proposed and existing functional services above ground, including drainage, power and communications cables and pipelines and supports;
- (h) details of existing trees to be retained, with measures for their protection during the construction period;
- (i) retained historic landscape features and proposals for restoration, where relevant; and
- (j) implementation timetables for all landscaping works.

Implementation and maintenance of landscaping

6.—(1) All landscaping works must be carried out in accordance with the landscaping scheme approved under requirement 5 and to a reasonable standard in accordance with the relevant recommendations of appropriate British Standards or other recognised codes of good practice.

(2) The landscaping works must be carried out in accordance with implementation timetables approved under requirement 5.

(3) Any tree or shrub planted as part of an approved landscaping scheme that, within a period of five years after planting, is removed, dies or becomes, in the opinion of the relevant planning authority, seriously damaged or diseased, must be replaced in the first available planting season with a specimen of the same species and size as that originally planted, unless otherwise approved by the relevant planning authority.

Trees

7. No stage of the authorised development, other than tidal works, shall commence until written details of any proposed tree planting and the proposed times of planting have been approved in writing by the relevant planning authority after consultation with National Grid; and all tree planting shall be carried out in accordance with those details and at those times.

Highway access

8.—(1) No stage of the authorised development shall commence until for that stage, written details of the siting, design and layout of any new permanent or temporary means of access to a public highway to be used by vehicular traffic, or any alteration to an existing means of access to a public highway used by vehicular traffic, has, after consultation with the relevant highway authority, been submitted to and approved by the relevant planning authority after consultation with Centrica plc.

(2) The public highway accesses must be constructed, or, as the case may be, altered, in accordance with the approved details.

(3) No stage of the authorised development shall commence until for that stage, a written scheme (the “Access Management Scheme”) has, after consultation with the relevant highway authority, been submitted to and approved by the relevant planning authority.

(4) The Access Management Scheme must be carried out in accordance with the approved details.

Public rights of way

9.—(1) No stage of the authorised development shall commence that would affect North Lincolnshire Footpath 50 or East Riding of Yorkshire Paull Footpath 6 until a written implementation plan and specification for the making up of an alternative right of way has, after consultation with the relevant highway authority, been submitted to and approved by the relevant planning authority.

(2) The alternative Footpath 50 and Paull Footpath 6 shall be implemented in accordance with the relevant approved plan and specification.

Fencing and other means of enclosure

10.—(1) No stage of the authorised development shall commence until, for that stage, written details of all proposed permanent and temporary fences, walls or other means of enclosure have been submitted to and approved by the relevant planning authority.

(2) Any temporary fencing must be removed on completion of the authorised development.

(3) Any approved permanent fencing of the authorised development must be completed before the authorised development is brought into use.

Surface water drainage

11.—(1) No stage of the authorised development shall commence until, for that stage, written details of the surface and foul water drainage system (including means of pollution control and funding arrangements) have, after consultation with the sewerage and drainage authority, been submitted to and approved by the relevant planning authority, after consultation with Centrica plc.

(2) The surface and foul water drainage system must be constructed in accordance with the approved details.

Contaminated land

12.—(1) No stage of the authorised development shall commence until a written scheme applicable to that stage, to deal with the contamination of any land, including groundwater and ground gas, within the Order limits which is likely to cause significant harm to persons or pollution of controlled waters or the environment has, after consultation with the Environment Agency, been submitted to and approved by the relevant planning authority.

(2) The scheme shall include an investigation and assessment report, prepared by a suitably qualified person, to identify the extent of any contamination and the remedial measures to be taken to render the land fit for its intended purpose, together with a management plan which sets out long-term measures with respect to any contaminants remaining on the site.

(3) Remediation must be carried out in accordance with the approved scheme.

Archaeology

13.—(1) No stage of the authorised development shall commence until, for that stage, a written scheme for the investigation of areas of archaeological interest as identified in chapters 18 and 40 of the environmental statement has been submitted to and approved by the relevant planning authority.

(2) The scheme shall identify areas where fieldwork and/or a watching brief are required, and the measures to be taken to protect, record or preserve any significant archaeological remains that may be found.

(3) Any archaeological works or watching brief carried out under the scheme must be by a suitably qualified person or body.

(4) Any archaeological works or watching brief must be carried out in accordance with the approved scheme.

Ecological mitigation

14.—(1) No stage of the authorised development shall commence until the compensation ecological management and monitoring plan for that stage reflecting the survey results and ecological mitigation and enhancement measures included in the environmental statement, has been submitted to and approved by Ntural England after consultation with the relevant planning authority.

(2) The compensation ecological management and monitoring plan shall include an implementation timetable and must be carried out as approved.

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Code of construction practice

15.—(1) No stage of the authorised development shall commence until a code of construction practice for that stage has been submitted to and approved by the relevant planning authority.

(2) All construction works shall be undertaken in accordance with the approved code, unless otherwise agreed by the relevant planning authority.

Design of roads

16.—(1) No stage of the authorised development consisting of the construction or alteration of a street which is a trunk road, including any traffic management and control measures, shall commence until written details of the design of the street have been submitted to and approved by the Highways Agency, after consultation with Centrica plc.

(2) The authorised development construction or alteration of the street or the taking of traffic management and control measures shall be carried out in accordance with the approved design.

External lighting

17.—(1) No stage of the authorised development, shall commence until written details of any external lighting to be installed at any of the construction sites within that stage, including measures to prevent light spillage, have, after consultation with the highway authority and Natural England, been submitted to and approved by the relevant planning authority; and any approved means of lighting must subsequently be installed and retained for the duration of the construction period, and removed within six months of the completion of construction.

(2) Sub-paragraph (1) is subject to any direction given to the undertaker by the Humber Harbour Master or Trinity House.

Construction traffic

18.—(1) No stage of the authorised development shall commence until written details of the preferred route for that stage to be used by construction traffic on public highways, after consultation with the highway authority and Centrica plc, is submitted to and approved by the relevant planning authority.

(2) Notices shall be erected and maintained throughout the period of construction at every construction site exit to a public highway, indicating to drivers the route agreed by the relevant planning authority for traffic entering and leaving the site.

Control of noise during construction

19.—(1) No stage of the authorised development shall commence until a written scheme for noise management during construction and maintenance of that stage has been submitted to the relevant planning authority.

(2) The scheme shall set out the particulars of—

- (a) the works, and the method by which they are to be carried out;
- (b) the noise attenuation measures to be taken to minimise noise resulting from the works, including any noise limits; and
- (c) a scheme for monitoring the noise during the works to ensure compliance with the noise limits and the effectiveness of the attenuation measures.

(3) The approved noise management scheme must be implemented before and maintained during construction and maintenance of the relevant stage of the authorised development.

(4) The construction and maintenance works must be undertaken in accordance with the approved noise management scheme.

Control of emissions

20.—(1) No stage of the authorised development shall commence until a written scheme for that stage—

(a) for the management and mitigation of emissions of—

- (i) odour,
- (ii) artificial light,
- (iii) dust,
- (iv) smoke, and
- (v) steam; and

(b) to ensure the prevention of infestation or emanation of insects

from the authorised development has been submitted to and approved by the relevant planning authority.

(2) The approved scheme must be implemented before and maintained during the construction, operation and decommissioning of the relevant stage of the authorised development.

(3) For the purposes of this requirement, “insects” excludes insects that are wild animals included in Schedule 5 to the Wildlife and Countryside Act 1981^(a) (animals which are protected), unless they are included in respect of section 9(5) of that Act only.

Travel plan

21.—(1) No stage of the of the authorised development shall commence until, for that stage, after consultation with the highway authority and Contrica plc, a travel plan, which must include details of the expected means of travel to and from the authorised development and any parking to be provided, has been submitted to and approved by the relevant planning authority.

(2) No part of the authorised development shall be brought into use until, after consultation with the highway authority, a travel plan, which must include details of the expected means of travel to and from the authorised development and any parking to be provided, has been submitted to and approved by the relevant planning authority.

(3) The plan approved under paragraph (1) must be implemented during the construction of the authorised development and the plan approved under paragraph (2) must be implemented within one month of the authorised development being brought into use and shall continue to be implemented for as long as the authorised development is used.

European protected species

22.—(1) No stage of the authorised development shall be begun that is likely to affect a European protected species until, after consultation with Natural England and the Secretary of State for the Environment, Food and Rural Affairs, a scheme of protection and mitigation measures for that species has been submitted to and approved by the relevant planning authority; and the authorised development shall be carried out in accordance with the approved scheme.

(2) “European protected species” has the same meaning as in regulations 40 and 44 of the Conservation of Habitats and Species Regulations 2010.

Requirement for written approval

23. Where under any of the above requirements the approval or agreement of the relevant planning authority or another person is required, that approval or agreement must be given in writing.

Amendments to approved details

24. With respect to any requirement which requires the authorised development to be carried out in accordance with the details approved by the relevant planning authority, the approved details shall be taken to include any amendments that may subsequently be approved in writing by the relevant planning authority.

Requirement for consent of Civil Aviation Authority and Ministry of Defence

25. No stage of the authorised development shall commence until for that stage, after consultation with the Civil Aviation Authority and the Ministry of Defence, written details for the operation of the authorised development and its effect on radar have been submitted to and agreed by the relevant planning authority.

Flood warning and evacuation plan

26.—(1) No building of the authorised development shall be occupied until, after consultation with the relevant planning authority, written details of a flood warning and evacuation plan, which must include details of expected means of evacuation or safe refuge during a tidal flood event with safe refuge areas at at least 6.84 metres Ordnance Datum Newlyn, has been submitted to and approved by the relevant planning authority.

(a) 1981 c 69, as amended at the date that this Order comes into force

(2) Unless otherwise agreed in writing with the relevant planning authority, the finished floor level of all buildings shall be set a minimum of 300mm above the level of the external storage areas and the buildings shall incorporate flood resistant and resilient design with their construction.

Listed buildings

27. No stage of the authorised development shall commence until a listed building management plan applicable to that stage, which must include details of protection of any building referred to from vibration damage and the renovation or re-use of the building, has been submitted to and approved by the relevant planning authority in consultation with English Heritage.

Tall structures

28. No structure shall be erected over 45 metres in height above finished ground level until written details of a lighting scheme applicable to that structure has been submitted to and approved in writing by the relevant planning authority following consultation with the Civil Aviation Authority.

Flood and sea defences

Cooling water intakes and outfalls

29.—(1) No development shall commence until a scheme for the monitoring of the lines of the Centrica and E.ON cooling intakes and outfalls has been submitted to and approved in writing by the Marine Management Organisation, in consultation with the Environment Agency, Centrica plc and E.ON UK plc. The scheme shall include:

- (a) details of monitoring proposals, including location and frequency; and
- (b) details of trigger levels and resultant actions/mitigation required if trigger levels are exceeded.

(2) Development shall proceed fully in accordance with the approved scheme and timetable contained therein.

Piling

30. For any piling to take place above high water mark, the piling conditions at paragraphs 25 to 30 of Schedule 8 (deemed marine licence) shall apply as if references to the MMO were to the relevant local planning authority.

Sedimentation

31.—(1) No development shall commence until a scheme for the monitoring of the foreshore and sediment levels around the quay have been submitted to and agreed in writing by the Marine Management Organisation, in consultation with the Environment Agency.

(2) Annual monitoring reports shall be submitted to the MMO within 6 weeks of the anniversary of implementation up to 2033.

(3) The scheme shall include trigger points for requiring improvements to the defences.

(4) The approved monitoring scheme shall be implemented and complied with at all times.

32. No development shall commence until a scheme for the monitoring of sediment and siltation for Stone Creek has been submitted to and approved in writing by the relevant planning authority, such scheme to include:

- (a) details of monitoring proposals, including location and frequency, and
- (b) details of trigger levels and resultant actions required if trigger levels are exceeded.

(2) Development shall proceed fully in accordance with the approved scheme and timetable contained therein, unless agreed otherwise in writing by the relevant planning authority.

Contaminants and remediation

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33.—(1) Prior to the commencement of the relevant stage of the authorised development, the following components of a scheme to deal with the risks associated with contamination of the site shall each be submitted to and approved, in writing, by the relevant planning authority:

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(a) a preliminary risk assessment which has identified:

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(i) all previous uses,

(ii) potential contaminants associated with those uses,

(iii) a conceptual model of the site indicating sources, pathways and receptors, and

(iv) potentially unacceptable risks arising from contamination at the site;

(b) a site investigation scheme, based on sub-paragraph (a) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site;

(c) the results of the site investigation and detailed risk assessment referred to in sub-paragraph (b) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken;

(d) a verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy in sub-paragraph (c) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

(2) The scheme shall be implemented as approved, and any changes to these components require the express consent of the relevant planning authority.

34.—(1) Prior to carrying out paragraph 8 of Schedule 8 (deemed marine licence – compensation site creation), a verification report demonstrating completion of the works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved, in writing, by the relevant planning authority.

(2) The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met, and shall also include any plan (a "long-term monitoring and maintenance plan") for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan, and for the reporting of this to the relevant planning authority.

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(3) The long-term monitoring and maintenance plan shall be implemented as approved unless otherwise confirmed in writing by the relevant planning authority.

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EXPLANATORY NOTE

(This note is not part of the Order)

This order authorises the construction and operation of a quay, associated onshore facilities and other development, to be situated on the south bank of the River Humber to the north east of Immingham, together with the creation of a compensatory environmental habitat on the north bank of the River Humber to the north east of the quay.

STATUTORY INSTRUMENTS

2012 No. XXXX

INFRASTRUCTURE PLANNING

HARBOURS, DOCKS, PIERS AND FERRIES

The Able Marine Energy Park
Development Consent Order 2012

BIRCHAM DYSON BELL LLP
50 Broadway
London SW1H 0BL
Solicitors and Parliamentary Agents
8222187.1 — 30.11.11

	ABLE MARINE ENERGY PARK APPLICANT COMMENTS ON THE WRITTEN REPRESENTATIONS	AUGUST 2012

**APPENDIX WR1.2
Commentary on Revised Draft Development Consent Order**

ABLE MARINE ENERGY PARK, REFERENCE TR030001

NOTES TO ACCOMPANY REVISED DEVELOPMENT CONSENT ORDER

(VERSION 3, 3 AUGUST 2012)

Introduction

1. These notes accompany and explain the changes proposed by the applicant to the draft of the Development Consent Order (DCO) for the Able Marine Energy Park that has been submitted in response to:

- a. the written representations made by other parties the deadline of 29 June 2012,
- b. oral submissions made during the specific issue hearing on the drafting of the DCO that took place in Grimsby on 12 July 2012, and
- c. elaborations of those submissions and drafts provided in the summaries of cases made at the specific issue hearing by the deadline of 23 July 2012.

Principal issues

Cargo to be handled

2. The applicant recognises the concerns expressed at the hearing about the cargo to be handled at the quay. A new requirement 3A has been added to restrict the cargo handled at the quay to marine energy infrastructure and associated items. The ability to handle further types of cargo may be authorised by means of a planning application or an application under the Transport and Works Act 1992 or the Harbours Act 1964. Such applications would be subject to environmental impact assessment and appropriate assessment in the usual way, depending on their effects. This adopts the approach used by ABP at Hull where they are currently seeking a change to a condition on their Harbour Revision Order restricting port use to container traffic to wind turbine traffic by means of an application to Hull City Council, the local planning authority. The relevant reference is paragraph 2(4) of Schedule 1 to the Associated British Ports (Hull) Harbour Revision Order 2006 (SI 2006/1135).

References to plans

3. Several submissions have been made about different plans that should be required, sign-off bodies and consultees.

4. For the assistance of the panel and interested parties, the following is a summary of the plans, schemes, etc. required in the DCO, where they are required and who discharges them (with any consultees).

Plan	Where required	Who discharges	Consultees
Land plan	Application document		
Works plan	Application document		
Ecology plan	Application document		
Rights of way plan	Application document		
Heritage plan	Application document		
Crown land plan	Application document		

[Diversion rights of way] implementation plan	Article 17, paragraph 9 of Schedule 11	Local highway authority	
[Drain or sewer] plan	Article 19	Drain or sewer owner	
Tidal works plan	Article 22, paragraph 6 of Schedule 9	Secretary of State, Humber harbour master	
Marine environmental management and mitigation plan	Paragraph 13 of Schedule 8	Marine Management Organisation	Natural England, Environment Agency
Vessel movement management plan	Paragraph 14 of Schedule 8	Marine Management Organisation	
Terrestrial environmental management and mitigation plan	Paragraph 2 of Schedule 9	Natural England	Local planning authority
[Below high water mark survey] plan	Paragraph 20 of Schedule 9	Humber harbour master	
[Railway works] plan	Paragraph 38 of Schedule 9	Network Rail engineer	
Development stages	Paragraph 3 of Schedule 11	Local planning authority	Highway authority
Detailed design approval	Paragraph 4 of Schedule 11	Local planning authority	
Landscaping scheme	Paragraph 5 of Schedule 11	Local planning authority	National Grid
Tree planting details	Paragraph 7 of Schedule 11	Local planning authority	National Grid
Highway access details	Paragraph 8 of Schedule 11	Local planning authority	Highway authority, Centrica
Fencing details	Paragraph 10 of Schedule 11	Local planning authority	
Surface and foul water drainage details	Paragraph 11 of Schedule 11	Local planning authority	Anglian Water, Centrica
[Contaminated land] management plan	Paragraph 12 of Schedule 11	Local planning authority	Environment Agency
Archaeology scheme	Paragraph 13 of Schedule 11	Local planning authority	
Compensation ecological management and mitigation plan	Paragraph 14 of Schedule 11	Natural England	Local planning authority
Code of Construction Practice	Paragraph 15 of Schedule 11	Local planning authority	
Trunk road alterations	Paragraph 16 of Schedule 11	Highways Agency	Centrica
Lighting details	Paragraph 17 of Schedule 11	Local planning authority	Highway authority, Natural England
Construction traffic	Paragraph 18 of Schedule 11	Local planning authority	Highway authority,

details	Schedule 11	authority	Centrica
Noise management scheme	Paragraph 19 of Schedule 11	Local planning authority	
Scheme for control of nuisance	Paragraph 20 of Schedule 11	Local planning authority	
Travel plan	Paragraph 21 of Schedule 11	Local planning authority	Highway authority, Centrica
Scheme for European protected species	Paragraph 22 of Schedule 11	Local planning authority	Secretary of State, Natural England
Effect of radar details	Paragraph 25 of Schedule 11	Local planning authority	Civil Aviation Authority, Ministry of Defence
Flood warning and evacuation plan	Paragraph 26 of Schedule 11	Local planning authority	
Listed building management plan	Paragraph 27 of Schedule 11	Local planning authority	English Heritage
Tall structure lighting scheme	Paragraph 28 of Schedule 11	Local planning authority	Civil Aviation Authority
Cooling water monitoring scheme	Paragraph 29 of Schedule 11	Marine Management Organisation	Environment Agency, Centrica, E.ON
Stone Creek monitoring scheme	Paragraph 32 of Schedule 11	Local planning authority	
Contamination risk scheme	Paragraph 33 of Schedule 11	Local planning authority	
Compensation site verification scheme	Paragraph 34 of Schedule 11	Local planning authority	

Design drawings

5. Submissions were made about the sign-off of design drawings and the degree to which these could vary.

Effects on existing infrastructure

6. Several parties who are responsible for the maintenance of infrastructure that has been installed on, over or under the order land have expressed concern that their infrastructure would not be sufficiently protected. The applicant is treating such infrastructure in three ways:

- a. most infrastructure will remain undisturbed and where there is an existing easement in place this will not be acquired – the freehold will be acquired, leaving the easement intact;
- b. where the infrastructure is to remain undisturbed and there is no existing easement or it is considered unsuitable, the promoter intends to acquire the land and then re-grant an easement that it considers suitable – with the agreement of the owner as to its terms if possible;
- c. in some cases the infrastructure does need to be moved, in which case any rights will be extinguished in the current location of the infrastructure and re-granted in the new location.

7. For ease of reference, the affected infrastructure falls under the categories above as follows:
- a. The following infrastructure falls within category (a) above:
 - i. National Grid pipelines crossing Old Little Humber Farm;
 - ii. E.ON's cooling water pump house electricity cable, water supply, telephone cable, electricity cable from pump house to water flow meter and water flow meter on the south bank;
 - b. The following infrastructure falls within category (b) above:
 - i. National Grid's electric line crossing the south bank land (no easement currently exists);
 - ii. E.ON's cable crossing the south bank (the easement is too wide);
 - iii. E.ON Climate and Renewables' prospective cables crossing Old Little Humber Farm (no easement currently exists);
 - iv. Network Rail's railway (although the applicant does not propose to regrant any rights at present)
 - c. The following infrastructure falls within category (c) above:
 - i. If necessary, E.ON's cooling water intake and outfall;
 - ii. If necessary, Centrica's cooling water intake and outfall;
 - iii. Anglian Water's sludge and brine mains, although the diversions are outside the scope of the DCO..

Railway

8. The applicant will consider other mechanisms for control of the railway but until these have been agreed to the applicant's satisfaction, the compulsory purchase powers will remain in the DCO. In terms of other users, namely C.RO and prospectively C.GEN, the applicant is in discussions with these parties to reach agreement on handling trains on and crossings over the railway running through the Order land. The applicant is proposing the appointment of an independent train manager who will deal with such matters. If the applicant is to start using its own trains, but only if one of the other parties is also using them, then it will build a passing loop parallel to the railway and not operate any trains until this is complete. This has been included as a separate work.

9. The applicant recognises that ABP is planning its HIT head shunt project that overlaps with the southern section of the railway on the Order land, and will remove this section (two land parcels) from the scope of compulsory purchase.

Phasing

10. This part of the note clarifies the issue of what works are required, and what others depend on those, and how this is captured in the DCO. The dependencies within the deemed marine licence have been set out in a new condition, paragraph 24 of Schedule 8, so that:

- a. if the applicant carries out the construction of the quay, it must provide the compensation site, build the pumping station, and, if necessary, divert the E.ON and Centrica cooling water pipelines;
- b. if the applicant dredges the berth pocket below -11 metres, it must back-fill it to that level.

11. In terms of the design and provision of mitigation areas A and B, and the compensation sites at Cherry Cobb Sands, the three Environmental Management and Mitigation Plans must be completed before development of the quay can commence, which is how Natural England, the MMO and the Environment Agency will ensure that appropriate mitigation and compensation are in progress or completed before the quay works start.

Limit of jurisdiction

12. The applicant has substituted the plan at Schedule 10 to the DCO with a new plan that shows:

- a. a 100m seaward limit revised from 200m, in line with the recommendation of the Humber harbourmaster (although the applicant notes in passing that ABP has given itself the following limits in recent years:
 - i. 200m in the case of the Associated British Ports (Immingham Gas Jetty) Harbour Revision Order 2007 (SI 2007/1803), article 9;
 - ii. 200m in the case of the Associated British Ports (Hull) Harbour Revision Order 2006 (SI 2006/1135), article 10;
 - iii. 600m in the case of the Associated British Ports (Grimsby Riverside Ro-Ro Terminal) Harbour Revision Order 2011 (SI 2011/950), article 9; and
 - iv. 200m in the case of the Associated British Ports (Immingham Outer Harbour) Harbour Revision Order 2004 (SI 2004/2190), article 15;)
- b. co-ordinates at the seaward vertices, as requested by the Marine Management Organisation; and
- c. a landward area to denote the operational harbour as a subset of the Order land, for the purposes of various comments made at the hearing.

Article by article commentary

13. In what follows, 'ABP' has been used to mean ABP in its commercial capacity and 'HMH' has been used to mean ABP as harbour master, Humber. The applicant has endeavoured to capture all the points made by interested parties at the hearing and subsequently.

Article 2 (interpretation)

14. C.GEN and C.RO have asked that 'other development' be removed from the definition of 'authorised development'. No change has been made – this would mean that the authorised

development did not cover all the development authorised by the DCO, which is its intended and natural meaning.

15. Network Rail have asked that 'or affected by' be removed from the definition of 'Order land'. No change has been made – this is the text used on the plans and to remove it would mean that the DCO did not correspond to them; furthermore to remove the text from both would not affect the effect of the DCO, since it is what is shown on the land plan that defines the Order land rather than the words used.

16. C.GEN and C.RO have asked that 'order limits' be changed to 'shown as limits within which development and works may be carried out' since this is the wording on the works plan. This change improves the correspondence between the DCO and the works plan and so **the change has been made**.

17. Natural England ask that the plans relating to ecology be rationalised so that the different types instead refer to the suite of three environmental management and monitoring plans (EMMPs) that they have proposed. **The change has been made** to accommodate Natural England's wishes. The ecology plan definition has been replaced by three EMMPs, for the compensation site, the marine area and the terrestrial (south bank) area respectively, and a further definition has been added to refer to any one of these.

18. HMH has asked that the Humber Conservancy Board be referred to as the Conservancy Authority so **a change has been made** to add a definition has been added for this purpose.

19. ABP have asked for the definition of 'harbour' to be clarified. **A change has been made** to align this with the operational harbour area in response to other points made. The 'harbour' is now the authorised development within the area of jurisdiction, plus any subsequent development within that area (so that the definition does not need to be changed should any further development take place within this area).

Article 3 (Incorporation of the Harbours, Docks and Piers Clauses Act 1847)

20. ABP objected to the non-incorporation of section 33 of this Act, which was effectively replaced by the provision at Article 28. In response to this objection, **a change has been made** to incorporate section 33 of the Act and to amend article 28 to bring it more closely in line with the London Gateway Port Harbour Empowerment Order 2008. The provision not only mirrors that Order, but several other recent orders, for example:

- a. The Poole Harbour Revision Order 2012 (SI 2012/1777), article 8:

"Notwithstanding anything in article 3 or any other local enactment, the Commissioners may from time to time set apart or appropriate any part of the harbour, or any lands, works, buildings, machinery, equipment or other property of the Commissioners in the harbour, for the exclusive, partial or preferential use or accommodation of any particular trade, activity, person, vessel or class of vessels or goods, subject to the payment of such reasonable charges and to such terms, conditions and regulations as the Commissioners think fit."

- b. The Portsmouth (Continental Ferry Port Berth 2 Extension) Harbour Revision Order 2011 (SI 2011/3032), article 11:

“Notwithstanding anything in any statutory provision of local application the City Council or a person authorised by the City Council to manage the Mile End Quay undertaking may from time to time for the purpose of or in connection with the management of the Mile End Quay undertaking set apart and appropriate all or any part of it for the exclusive, partial or preferential use and accommodation of any particular trade, person, vessel or class of vessel, or goods, subject to the payment of such charges and subject to such terms, conditions and regulations as the City Council may think fit.”

- c. The Port of Bristol (Deep Sea Container Terminal) Harbour Revision Order 2010 (SI 2010/2020), article 25:

“Notwithstanding anything in section 33 (harbour, dock, and pier to be free to the public on payment of rates) of the 1847 Act or any other enactment, the Company may from time to time set apart or appropriate the whole or any part or parts of the lands, quays, berths, buildings, facilities, machinery or equipment comprised within Works Nos. 1 to 6 or upon which Works Nos. 1 to 6 are constructed and maintained for the exclusive, partial or preferential use and accommodation of any particular trade, person, activity, vessel or goods or any class of trade, person, activity, vessel or goods, subject to the payment of such charges and subject to such terms and conditions and regulations as the Company may think fit.”

Articles 5 (Development consent etc. granted by the Order) and 5A (limits of deviation)

21. HMH has asked that vertical limits of deviation be included as well as lateral limits for the works. **A change has been made** via a new article 5A that provides for such a limit in line with the HMH drafting.

Article 7 (jurisdiction of the harbour authority)

22. C.RO has asked to be added to article 7 to give it the same status as HMH. This is not appropriate – the area of jurisdiction overlaps with that of the HMH and so the article is expressed to be without prejudice to the powers of the HMH (i.e. within the area of overlap), whereas the area of jurisdiction does not overlap with C.RO's area of jurisdiction, which is around Humber Sea Terminal further north. No change has been made.

Article 8 (agreements entered into by Company, etc.)

23. ABP argued that while recognising the utility of this article, it should not allow the undertaker to enter into agreements with HMH that it would not be able to enter into once it became a harbour authority. **A change has been made** to prevent this.

Article 9 (maintenance of the authorised development)

24. C.GEN, C.RO, the Environment Agency, Natural England and ABP all objected to the words 'enlarge and extend' used in this article. **A change has been made** to remove the words.

Article 10 (provision of works)

25. C.GEN and C.RO ask to remove the words 'railway lines' and make any railway works a separate work. The applicant does not know at this stage what sidings a tenant of the site may

require, and it is usual for sidings not to be shown on a works plan of this nature. However in recognition of concerns about sharing of the railway, a passing loop has been added as a separate work to show what would be constructed if the applicant and either C.GEN or C.RO (or both) needed to use the railway. No change has therefore been made in response to these points, but a new work has been added to Schedule 1 and substitute sheets of the works plan have been provided.

26. Natural England asked that the works be restricted to the operational area of the harbour, and so **a change has been made** to restrict 10(1) to the limits of jurisdiction rather than all of the Order land, although note that article 10(2) still applies to the whole Order land because 10(2)(b) and (c) in particular may be required on the mitigation and compensation areas.

27. C.GEN and C.RO have asked for article 10(2)(c) to be deleted. No justification for this was given either at the hearing or the written summary and the applicant is unsure why C.GEN and C.RO would wish to prevent e.g. landscaping works from being carried out, so no change has been made.

28. Finally, C.GEN and C.RO have asked for 'Part 11' to be removed from article 10(3). This would have the effect of requiring environmental impact assessment (if above the threshold) for any subsequent works carried out at the harbour that were still in pursuance of this DCO (such as rights of maintenance). The applicant agrees that this would be appropriate and **a change has been made** to effect this.

Article 12 (consent to transfer benefit of Order)

29. National Grid and E.ON have asked that the Secretary of State seeks the consent of third parties before agreeing to a transfer or lease of the benefit of the provisions of the DCO. The applicant does not think it appropriate for third parties to have to give consent as well as the Secretary of State, but **a change has been made** to require the Secretary of State to consult any parties he or she thinks necessary so that there is a trigger for consultation to occur.

30. HMH suggests that only a transferee or the undertaker should be able to transfer (i.e. not a lessee) and that a lessee cannot transfer a larger interest than it has. **A change has been made** to accept the drafting of the HMH along those lines.

31. The MMO suggested at the hearing that this power should not avoid any requirement for an order under the Harbours Act 1964. Given that a Harbour Revision Order, unlike a DCO, is not compulsory, and the Secretary of State is consenting a transfer in any event, the applicant does not propose a change to this provision.

Article 13 (street works)

32. C.GEN and C.RO have asked that vehicular and pedestrian access to properties be maintained at all times while the powers of this article are being exercised. As the powers of this article are subject to sections 54 to 106 of the New Roads and Street Works Act 1991, where the street authority must licence any works under this article and can impose conditions, these would be where any requirement to provide pedestrian and/or vehicular access would be imposed rather than in the article itself. It would not be possible to guarantee that pedestrian and vehicular access will always be able to be provided in every case. No change has been made to the article.

Article 14 (temporary stopping up of streets)

33. C.GEN and C.RO have asked that vehicular access as well as pedestrian access be provided at all times when a street is temporarily stopped up. Again, it is not possible to guarantee at this stage that vehicular access will always be able to be provided, but **a change has been made** to the article so that vehicular access will be provided where practicable.

Article 20 (authority to survey and investigate the land)

34. C.GEN, C.RO, Phillips 66, ABP and HMM argued against the inclusion of the ability to survey land outside the limits of deviation (despite this being in the model provisions). Having considered whether any such land will in fact need to be surveyed, the applicant has concluded that this will only happen in pursuance of one of the EMMPs. **A change has been made** to limit the power to such cases.

35. Natural England asked for an additional protection for such additional land (that wildlife consents be obtained if necessary). Since the land has been removed from the scope of the article, this is no longer necessary.

Article 21 (right to dredge)

36. HMM has asked that references to the Humber Conservancy Board in this and other articles be changed to the Conservancy Authority. **Change have been made** to effect this – the other articles are 25, 26 and 27.

Article 22 (tidal works not to be executed without approval of Secretary of State)

37. C.GEN and C.RO have asked that 'reconstructed' be removed from article 22(1). The effect of that would be not to require the Secretary of State's approval of reconstruction after five years of the DCO coming into force. No change has therefore been made.

Article 23 (abatement of works abandoned or decayed)

38. The panel noted at the hearing that this article gave the same power to the Secretary of State as what is now paragraph 15 of Schedule 9 gives to the HMM. The applicant has left both provision in the DCO so that either body may use the powers.

Article 27 (permanent lights on tidal works)

39. HMM has asked that Trinity House be removed from this article. No change has been made pending receipt of the views of Trinity House. If they are content, then the article will be amended.

Article 28 (power to appropriate)

40. ABP has argued that this article does not follow the London Gateway Port Harbour Empowerment Order closely enough. While the applicant believes that the previous draft has the same effect, **a change has been made** to mirror that Order and others, e.g. those mentioned at paragraph 20.

Article 29 (compulsory acquisition of land)

41. C.GEN and C.RO have asked that the land comprising the railway be removed from the scope of this article, and HMH has asked that his land below the high water mark be removed from the scope of this article.

42. The applicant intends to remove some of the railway land from the scope of compulsory purchase powers, namely the land south of Station Road comprising parcels 02008 and 03015. This is so as not to interfere with ABP's proposed HIT head shunt project, should it be implemented. As to the rest of the railway land, it may be possible to reach some other agreement about it but until an agreement acceptable to the applicant is reached, the land remains subject to compulsory purchase in the DCO. Even if the land is removed from the scope of compulsory purchase, this would not be done by amending this article, but either by amending the land plan and book of reference or entering into an undertaking not to use its compulsory acquisition powers over such land

43. The applicant intends to enter into a lease of the HMH land and again when this has been done it will remove the land from the scope of this article, but not by amending the article.

Article 30 (power to override easements and other rights)

44. C.GEN, C.RO and HMH have made the same points in respect of this article as with article 29. The applicant does not propose any change to the article, even should the land be removed from the scope of compulsory purchase, as that would be effected by other means as explained above.

Article 34 (private rights of way)

45. C.GEN, C.RO and HMH have made similar points again to private rights of way, and the same considerations apply as above. The applicant is not aware of any existing easement that C.GEN or C.RO have to cross the railway that is mentioned in the summaries of the companies' cases at the hearing.

Article 39 (temporary use of land for carrying out the development)

46. ABP argue that this power is too draconian and that 14 days' notice is insufficient. As this article only applies to Order land, not any other land, the applicant does not see any justification for departing from the model provisions.

Article 41 (statutory undertakers)

47. National Grid and E.ON do not wish this article to have the effect of overriding any requirement to obtain a certificate from the Secretary of State pursuant to section 138 of the Planning Act 2008. **A change has been made** to make this clear.

Article 47 (railway network)

48. C.GEN, C.RO and Network Rail wish this article to be deleted altogether. The applicant is persuaded that article 47(1) is only appropriate for railways used by passengers, but unless and until any alternative to compulsory acquisition of the railway is agreed upon, article 47(2) remains in the DCO. Article 47(3) is uncontroversial and should remain in any case. **A change has been made** to remove article 47(1).

Article 50 (operational land for the purposes of the 1990 Act)

49. Natural England wish the compensation site and mitigation areas to be removed from the scope of this article. The applicant agrees that this is appropriate and **a change has been made** to reduce the scope of the article to the area of jurisdiction.

Article 51 (defence to proceedings in statutory nuisance)

50. ABP asked that the defence not be available in proceedings brought by individuals. The applicant has decided to retain the model provision and not make any change to this article.

Article 54 (disapplication of regulation 73 of the Conservation of Habitats and Species Regulations 2010)

51. Natural England, having considered this article further at the behest of the examining Authority, has no disagreement with it in principle but requests that 'appropriate assessment' be replaced with 'assessment under the Habitats Regulations'. **A change has been made** to effect this.

52. ABP complains that this article contains sloppy drafting (despite being based on the model provisions). No further changes have been made.

Article 56 (certification of plans etc.)

53. Natural England have renamed the plans to EMMPs and have asked that this article be changed. The 'ecology plan' mentioned is a geographical plan required by the Application Regulations rather than one of the plans that has been replaced by EMMPs, so the article has not been changed.

Article 59 (requirements: appeals)

54. C.GEN and C.RO have asked that this article be replaced wholesale by an equivalent to the Rookery South Development Consent Order (although the text suggested in their submission is different to the text of the Order). The applicant agrees and **a change has been made** to give effect to this (using the Order text rather than C.GEN/C.RO's version).

Schedule 1

55. C.GEN and C.RO have asked that the onshore development is made a separate work. The applicant does not believe that it is necessary or appropriate to make this an identified 'work' as it is not in the nature of a single engineering construction.

56. HMH has proffered various additional words of drafting to provide more detail to this schedule. The applicant responds as follows:

- a. **a change has been made** to remove references to limits of deviation since these are now in article 5A;
- b. there is no need to give coordinates for the quay as these are given in schedule 8, and they are now being shown on the works plan as requested by the Marine Management Organisation;
- c. the highway works might not entirely be regarded as 'improvements' so the existing drafting is retained;

- d. the full extent of detail suggested for dredging and land reclamation repeats schedule 8 (deemed marine licence), but **a change has been made** to clarify that such work must be in accordance with Schedule 8;
- e. more detail need not be provided on the ecological mitigation works and the compensatory environmental habitat because the specification of these will be set out in the terrestrial and compensation EMMPs respectively and will be approved by Natural England.

Schedule 8 (deemed marine licence)

57. C.RO has asked that maintaining access to its development be an additional purpose for which maintenance dredging can be carried out. **A change has been made** to give effect to this.

58. ABP states that the DML is permissive and that dredge depths should be provided. **A change has been made** to add all missing figures. **A change has been made** to add a licence condition (now paragraph 24) so that the various dependencies under the licence are expressly specified, e.g. if the quay is built the compensation site must be provided.

59. The MMO wishes the marine EMMP and a vessel movement plan to be referred to in the DML, and so **a change has been made** to add what are now paragraphs 14 and 15 to give effect to this. The MMO wishes the dredge amounts to be maxima rather than approximate quantities. **A change has been made** to give effect to this. **A change has been made** to add further dredge and disposal conditions at paragraphs 33 to 37.

60. HMH has suggested various amendments. Rather than replace 'licence holder' with 'licensed undertaker' wherever it occurs given that the latter has been defined and not the former, **a change has been made** to replace the definition instead. The applicant has chosen to keep the coordinates in this schedule rather than move them to schedule 1. The activities are not all within the order limits (disposal of dredge arisings in particular) and so the amendment restricting the activities to those limits has not been made, but **a change has been made** to link the licence to the purposes of the DCO at paragraph 3, as suggested.

61. The Environment Agency has proposed 11 new conditions to be included in the DML. Versions of these have already been incorporated in the previous version at what are now paragraphs 25 to 30.

Schedule 9 (protective provisions)

Natural England

62. Natural England have suggested a wholesale replacement of the three provisions they previously had. **A change has been made** to accept the changes, except that the reference to the marine EMMP is in Schedule 8 (deemed marine licence) instead.

Humber Harbourmaster

63. HMH has proposed various amendments to the protective provisions applicable to him. The main addition is that the HMH should first approve anything that the MMO or the local planning authority must approve under the DML or requirements. While respecting the HMH's role in the Humber and that it may be appropriate for some details relevant to the HMH's role to be approved by

him, the applicant questions why such wholesale duplication is necessary and does not propose to make such changes at the present. Other changes proposed have been accepted and **changes have been made** for this purpose.

C.GEN

64. C.GEN Killingholme Limited has asked for a series of eight protective provisions to be added to this Schedule. The first two would guarantee C.GEN access to the railway running across the Order land, and require the applicant to pay compensation if this was not provided. The applicant cannot do this without further information, without limits and without any regard to other rail users. C.GEN is consulting on an application under the Planning Act 2008 for a gas/coal-fired power station and the preliminary environmental information states that a maximum of five half-trains would be needed per day (paragraph 3.2.2). While the applicant would easily be able to accommodate this, it is not a commitment, C.GEN has no rights to use the railway at present and has yet to develop its power station.

65. Instead, the applicant is in discussion with C.GEN and C.RO to appoint a train manager who will coordinate use of the railway by C.GEN, C.RO and Able with crossings of it by any of these parties. The train manager will be independent and will be subject to independent arbitration. No change is proposed to the DCO.

66. The next two provisions require unrestricted access for C.GEN to Rosper Road. This duplicates the points made earlier about street works and temporary stopping up of streets under articles 13 and 14, above, and the response is the same. No change is proposed to the DCO.

67. The fifth provision is an indemnity against any losses incurred by C.GEN by virtue of the authorised development. This is inappropriate for an Order of this sort, particularly for a company with intentions for its land that are still at a formative stage. If C.GEN suffers loss due to the authorised development, then it is free to seek remedies in the courts in the normal way without having an indemnity.

68. The sixth provision expresses that the DCO does not impose any liability on C.GEN. **A change has been made** to add this provision.

69. The seventh provision excludes article 4(2) (disapplication of drainage consent) for any watercourse crossing C.GEN land. The disapplication only applies to the authorised development and no reason is given why there should be an exclusion for C.GEN or what watercourse is involved. No change is made to the DCO.

70. The eighth provision applies the arbitration provision in the main body of the DCO to this Schedule. **A change has been made** to include this.

C.RO

71. C.RO ask for 19 protective provisions. The first two provisions are similar to HMM's proposal for all approvals by the Secretary of State, MMO or local authority to be approved by C.RO first, although in the case of tidal works this is only if they are within 500m of C.RO's port. The applicant does not envisage that there will be any such works, but in any event this is again a wholesale duplication of consents by other authorities without sufficient justification.

72. The next few provisions duplicate those of the HMH earlier in the Schedule, in respect of removal of works no longer being used or abandoned and safe operating procedures. It is for HMH to deal with such matters – if they were to apply to C.RO as well, then logically they should apply to the applicant in respect of C.RO's operations as well. **A change has been made**, however, to accommodate proposed paragraphs 42, 43(1) and 43(3) in C.RO's written summary of its case, not to interfere with its lighting or navigational aids.

73. In addition, **a change has been made** to Schedule 8 (deemed marine licence) (paragraph 13(2)) so that C.RO is consulted on the main marine EMMP that may affect its infrastructure.

74. The next few provisions are similar to those for C.GEN about the railway, Rosper Road, liability, indemnity, drainage and disputes, so similar considerations apply and no change has been made.

75. A provision entitled 'recovery of expenses' requires the applicant to pay C.RO for expenses incurred for various reasons. The applicant does not propose to include this provision in the order, although it is in discussion with C.RO to agree terms whereby it will make a contribution to any additional dredging costs incurred by C.RO. Such terms will be agreed in a separate document.

Network Rail

76. Network Rail proposes 14 protective provisions. Because the protective provisions are phrased as to apply to 'specified works', which are those relating to 'railway property', which in turn is owned by Network Rail, the provisions can be included whether or not the applicant acquires the railway crossing the Order land. They will only become effective if Network Rail retains ownership (except for the first 15 metres of the applicant's railway).

77. **A change has been made** to include the entire set of protective provisions except for:

- a. proposed paragraph 36(3), which would prevent the applicant from acquiring the railway – this power remains in the DCO for the meantime;
- b. those parts of proposed paragraph 45 where Network Rail seeks an indemnity from the applicant and where it passes on the losses of a train operator.

Phillips 66

78. Phillips 66 has proposed protective provisions for its pipelines. **A change has been made** to accept these.

National Grid

79. National Grid has proposed protective provisions for its electric line and gas pipelines. **A change has been made** to accept these. Although the applicant is not proposing any works to the electric line or gas pipelines, these provisions would cover such an eventuality.

E.ON

80. E.ON has proposed protective provisions for its inlet and outfall cooling water pipelines. **A change has been made** to accept some of these. Those that have not been accepted are

- a. in relation to the Anglian Water pipelines, the diversion of which are outside the scope of the DCO;
- b. approval of tidal works – instead paragraph 13(2) has been added to Schedule 8 (deemed marine licence) so that E.ON is consulted on the main marine EMMP that may affect its infrastructure; and
- c. sedimentation – this is dealt with by HMH in paragraph 18 of Schedule 9 and should be dealt with via a single mechanism for clarity: E.ON should direct any concerns via HMH.

81. Centrica has proposed a set of protective provisions to protect its cooling water pipelines and its condensate pipeline. **A change has been made** to include protective provisions, but for consistency these have been based on E.ON's provisions, which also protect cooling water pipelines. An additional provision about not using Centrica's access road has not been included, but as requested, Centrica are to become a consultee as part of the construction traffic and travel plan requirements so that this issue will be addressed.

82. Anglian Water has proposed a set of protective provisions at page 14 of its written representation, due to its brine and sludge mains, which need to be diverted. This will be done outside the powers of the DCO. Of their suggestions:

- a. the first is already a requirement (11), but Anglian Water has been added as a consultee;
- b. the second and third are legal requirements in any event and do not need to be the subject of additional protection;
- c. the fourth requires the applicant not to interfere with its apparatus on or off site and protect its ability to operate. **A change has been made** to incorporate a limited version of this provision – the applicant does not consider it appropriate for protection to extend off site, nor that it should have a positive duty to protect Anglian Water's apparatus.

Schedule 11 (requirements)

New requirements

83. C.GEN, C.RO and ABP have asked for a requirement to restrict the cargo that the quay can handle. **A change has been made** to insert such a requirement (numbered 3A), although it is not worded in the same way as proposed by those parties.

84. The Environment Agency has asked for 18 new requirements to be added. **A change has been made** to accept some of these, but others duplicate other requirements and provisions as follows:

- a. the first suggested requirement deals with contaminated land but this is already covered by requirement 12;
- b. the second suggested requirement deals with a foul water drainage strategy but this is already covered by requirement 11;

- c. the third suggested requirement deals with an environmental management plan, but this has been superseded by the three EMMPs;
- d. the fourth suggested requirement deals with monitoring the cooling water intakes and outfalls – this has been added;
- e. the fifth to tenth suggested requirements deal with piling – to ensure consistency this has been replaced by a reference to the deemed marine licence, where the same conditions apply but with the local planning authority taking the place of the MMO for any piling above high water mark;
- f. the eleventh requirement deals with sedimentation – this has been added.
- g. The twelfth suggested requirement deals with surface water drainage, but this is already covered by requirement 11.
- h. The thirteenth suggested requirement deals with floor levels of buildings in the context of flooding, and this has been added to requirement 26 with slightly different wording.
- i. The fourteenth and fifteenth suggested requirements deal with flood evacuation but this is already covered by requirement 26.
- j. The sixteenth and seventeenth suggested requirements deal with contaminants from the project and remediation and have been added as two new requirements.
- k. The eighteenth suggested requirement deals with sedimentation at Stone Creek on the north bank and this has been added as a new requirement.

Requirement 4 (detailed design approval)

85. C.GEN, C.RO ask that requirement 4 (detailed design approval) be redrafted to refer to particular plans, based on the Rookery South DCO. ABP has asked that reference be made to the drawings called 'planning application drawings' and that the 'envelope' should be in terms of assessment rather than implying a physical envelope only. HMM has also proposed amendments to refer to drawings in the requirement. **A change has been made** to this requirement to refer to specific plans.

Requirement 5 (provision of landscaping)

86. National Grid would like to be consulted on some aspects of landscaping. **A change has been made** to effect this.

Requirement 7 (trees)

87. National Grid asked that the local planning authority confirm in writing that they will be consulted on this requirement. Instead, **a change has been made** to make this explicit in the requirement.

Requirement 8 (highway access)

88. Centrica would like to be a consultee under this requirement. **A change has been made** to add them.

Requirement 11 (surface water drainage)

89. Centrica would also like to be consultee under this requirement. **A change has been made** to add them.

Requirement 14 (ecological mitigation)

90. Natural England propose replacing reference to plans in this requirement 14 with the three EMMPs proposed. **A change has been made** to refer to the compensation EMMP, since the terrestrial EMMP has already been introduced in Part 1 of Schedule 9, and the marine EMMP has already been introduced in paragraph 13 of Schedule 8.

91. ABP did not like the text 'reflecting the survey results', but no change has been made as (a) this is in the model requirement and (b) it has been approved by Natural England.

Requirement 16 (design of roads)

92. Centrica would like to be a consultee under this requirement. **A change has been made** to add this.

Requirement 17 (lighting)

93. Natural England would like to be consultee under this requirement. **A change has been made** to add this.

94. ABP have asked that construction-related lighting should be required to be removed at the end of construction. **A change has been made** to add this.

95. HMH have asked that installation is subject to any direction given by HMH or Trinity House. **A change has been made** to provide for this.

Requirements 18 (construction traffic) and 21 (travel plan)

96. As Centrica do not want their power station access road to be used by construction or operational traffic, they have asked to be a consultee under these requirements. **A change has been made** to provide for this.

Requirement 20 (control of emissions)

97. ABP and HMH ask that this include 'other pollutants'. No change has been made as this requirement is based on a series of model requirements, which in turn is based on the list of statutory nuisances at section 79 of the Environmental Protection Act 1990 (except noise, which is dealt with separately in the previous requirement). Other pollutants are not listed and in any event the term is likely to be too vague.

Requirement 26 (flood warning and evacuation plan)

98. Centrica: would like to be consultee under this requirement. No change has been made as this does not relate to how flooding will be dealt with in general but how those occupying the development will be evacuated.

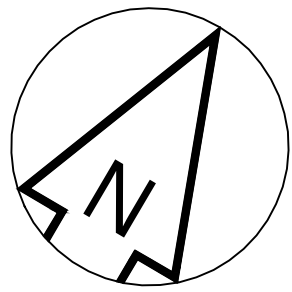
Requirement 29 (flood and sea defences)

99. The Environment Agency do not want this requirement, as it is responsible for this area. **A change has been made** to remove it.

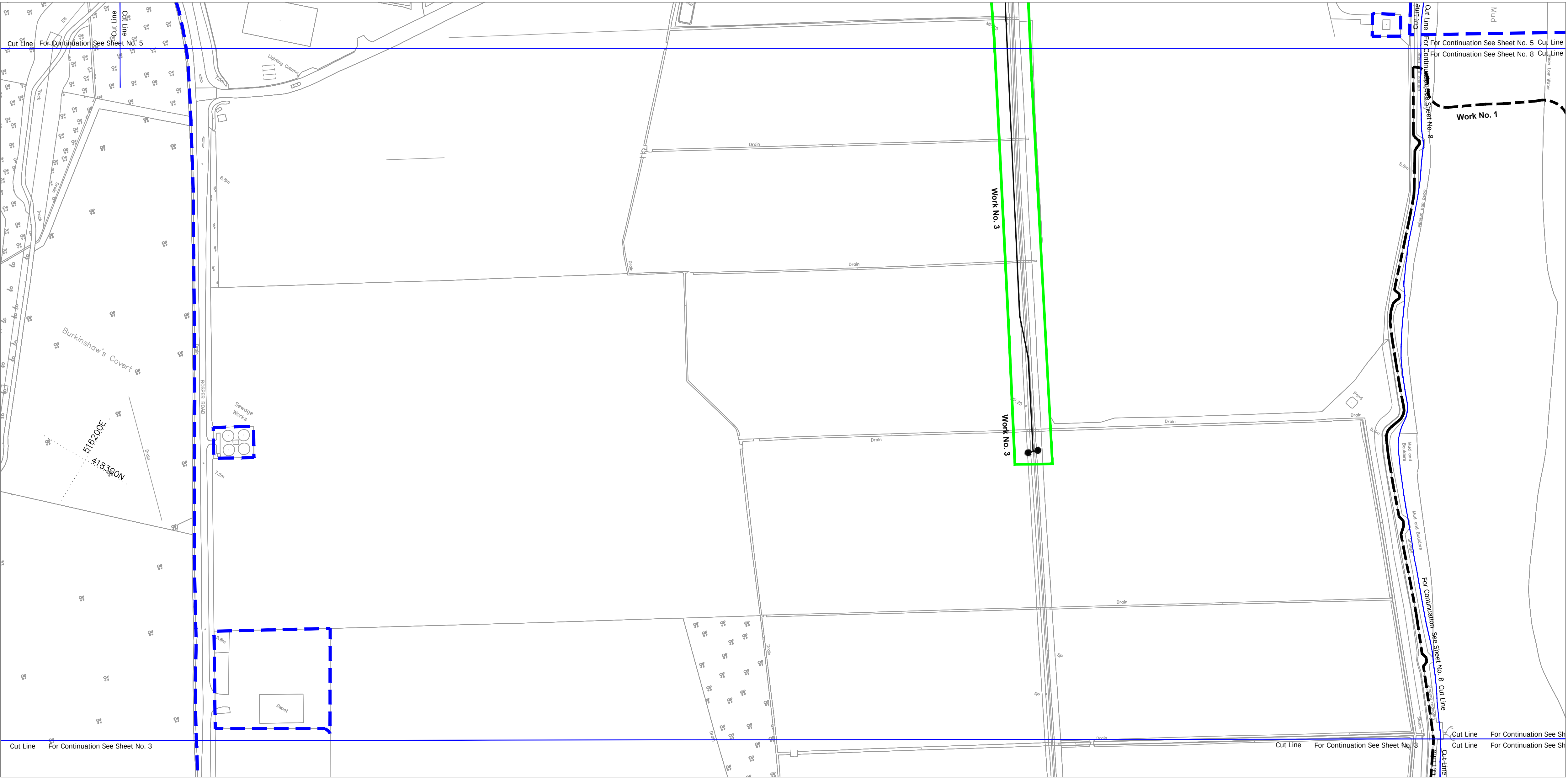
100. Centrica would like to be consultee under this requirement. No change has been made as the requirement has been removed.

 The logo for Able Marine Energy Park (amep) features a stylized circular graphic with concentric arcs in red and blue, resembling a target or a wave. Below the graphic, the text 'amep' is written in a bold, lowercase, sans-serif font. Underneath 'amep', the full name 'able marine energy park' is written in a smaller, lowercase, sans-serif font.	ABLE MARINE ENERGY PARK APPLICANT COMMENTS ON THE WRITTEN REPRESENTATIONS	AUGUST 2012

**APPENDIX WR1.3
Revised Plans**



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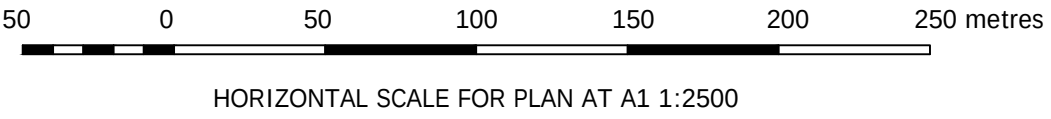


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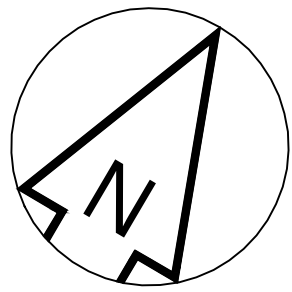
- ○ Commencement of Work
- ● Termination of Work
- — Limit of deviation for Work No.1
- — Limit of deviation for Work No.2
- — Limit of deviation for Work No.3
- — Limit within which the development and works may be carried out.
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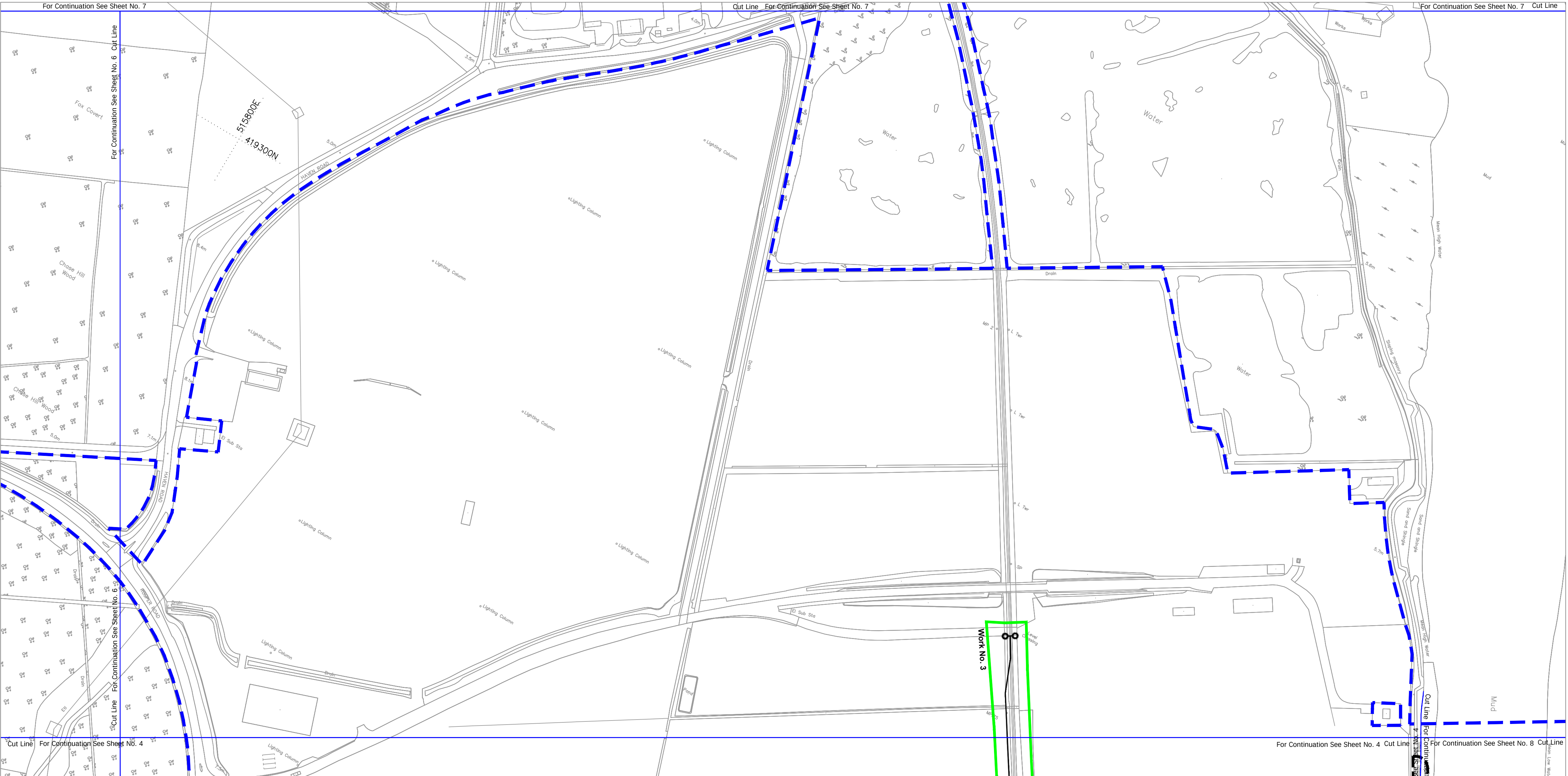
Works Plan



Works Plan

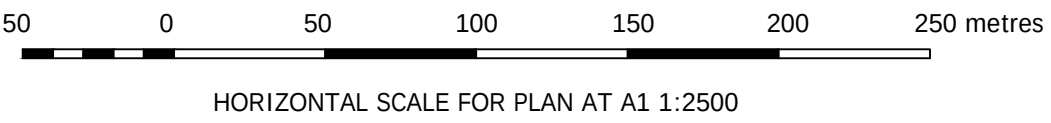


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Works Plan



KEY

- Commencement of Work
- Termination of Work
- Limit of deviation for Work No.1
- Limit of deviation for Work No.2
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- Centre Line of Work

	ABLE MARINE ENERGY PARK APPLICANT COMMENTS ON THE WRITTEN REPRESENTATIONS	AUGUST 2012

**APPENDIX WR9.1
Black & Veatch – Second Interim Design Report**



Cherry Cobb Sands Compensation Site

Second interim report on detailed modelling
August 2012



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1.1 PURPOSE OF REPORT

- 1.1.1 The Able Marine Energy Park (AMEP) Environmental Statement was submitted to the Infrastructure Planning Commission in December 2011. At the time of the submission, the applicant stated that further detailed modelling of the Compensation Site would be undertaken to understand the likely development of intertidal habitat within the site over time.
- 1.1.2 A first Interim report was prepared in June 2012. This examined two schemes that developed the Cherry Cobb Sands site as a single 100 ha managed realignment site with a single 250 m breach. This second report considers an alternative method of developing the same site in which around half of the site area will be developed as three Regulated Tidal Exchange (RTE) sites where the inflows and outflows of water are controlled to only permit shallow flooding. The other half of the site will be inundated through the breach and form an open managed realignment.
- 1.1.3 The suggestion of a RTE scheme at Cherry Cobb Sands instead of a conventional managed realignment was the key recommendation of the representations by The RSPB expert witness on managed realignment. The comments by the expert on the risk of a simple managed realignment scheme accreting and forming saltmarsh are accepted and were demonstrated in the First Interim Report.
- 1.1.4 A review of experience with RTE in Britain and Europe is included in Ref 7. This identified a few RTE sites in operation and in design and discussed various ways of managing such a site in an estuary with high sediment loadings like the Humber. Many of these approaches have been built into this report on developing an RTE at Cherry Cobb Sands. The review found little experience of the use of RTE in circumstances similar to conditions in the Humber but did identify a site in the Severn Estuary where a similar approach was being adopted to maximise the life of mudflat in a managed realignment area in a turbid estuary.
- 1.1.5 The plan layout of the site as presented in the Environmental Statement (Figure 28.1) is shown on Figure 1.
- 1.1.6 This report firstly builds on the information presented in Annex 32.5 of the Environmental Statement (Sedimentation, Erosion and Saltmarsh Growth). This annex considers observations made at the Paull Holme Strays and other Humber managed realignment sites to provide evidence on how the proposed site at Cherry Cobb Sands might develop. Since submission of the Environmental Statement a PhD thesis (Ref 1) submitted to Hull University has been reviewed and contains additional measurements of conditions at Paull Holme Strays during 2006 and 2007 2.5 to 4 years after it was first breached. The findings reported in the first interim report of June 2012 have been repeated in this report and updated following further consideration of sediment density at Paull Holme Strays.
- 1.1.7

- 1.1.8 This report includes the results and interpretation of hydrodynamic modelling of the site when partially developed as a RTE area. Predictions of erosion and accretion of this revised site at Cherry Cobb Sands site using the revised assumptions and a revised initial profile for the ground levels within the site immediately prior to breaching of the site. The approach to this modelling is discussed in section 4.1 of Annex 32.4 (Model testing of a 90 ha layout) and briefly summarised in section 3.1 of Annex 32.6 (Assessment of 110 ha layout).

1.2 *OBJECTIVES OF THE COMPENSATION SITE MODELLING*

- 1.2.1 The Compensation Site is required to meet five key objectives that are relevant to the geomorphology and modelling of the site. These are
- The site should provide a minimum of 100 ha of intertidal area. The area of the channel cut through the existing saltmarsh (around 2ha) to provide access for tidal waters to the breach is included within this total along with the 'footprint' area of the section of the bank that is removed to create the breach.
 - The site should provide the maximum possible area of sustainable mudflat with a target of 82 ha. If this target were to be achieved it would provide double the amount of mudflat lost as a result of the AMEP development on the south bank of the Humber.
 - The minimum requirement is that substantially in excess of 41 ha of sustainable mudflat should be created. This area is the anticipated loss of mudflat arising, both directly and indirectly from the AMEP development.
 - For the purposes of this assessment, mudflat is assumed to be intertidal areas below 2.5mAOD. Observations at the nearby Paull Holme Strays site reported in Annex 32.5 indicated that once levels within the site accrete to 2.5mAOD, significant saltmarsh growth starts to occur.
 - The amount of excavation within the Cherry Cobb Sands Site should approximately balance the amount of fill required to construct the surrounding flood defence embankment. This is to avoid the import of additional fill if excavation is too little or export of fill if the amount excavated is too great.

1.3 *ENLARGEMENT OF CHERRY COBB SANDS CREEK*

- 1.3.1 A second objective of the detailed modelling was to attempt to quantify the changes in size of Cherry Cobb Sands Creek that are predicted to occur as a result of the breaching of the Compensation Site. Annex 32.4 section 4.4 and Annex 32.6 section 3.3 both predict an increase in the size of the Cherry Cobb Sands Creek between the breach and the main low tide channel of the Humber because of increased ebb tidal flows. As flows in the section of Cherry Cobb Sands Creek to the north of the breach are expected to reduce following the breach, so it is predicted that the size of this part of the Creek will diminish.
- 1.3.2 Following submission of the Environmental Statement a request was received from the Marine Management Organisation to quantify the change in creek dimensions. This supported the desire of the Internal Drainage Boards for comfort that the introduction of the Compensation Site would not adversely affect the capacity of their outfalls into Stone Creek.

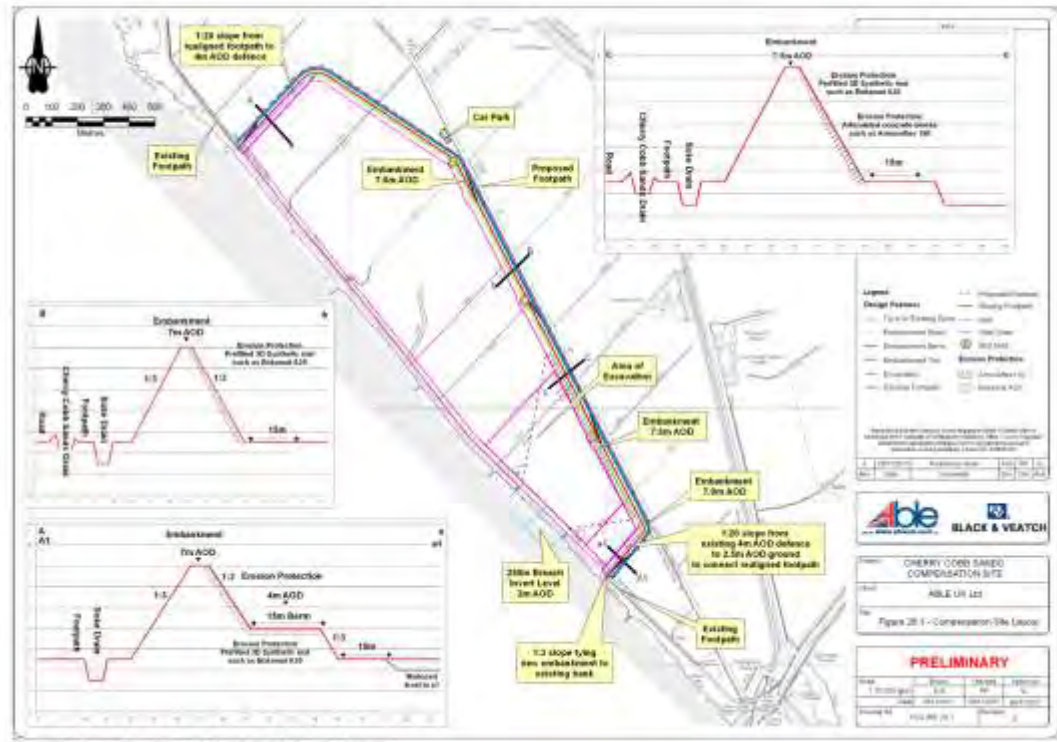


Figure 1 Compensation Site arrangement in Environmental Statement

2.1 SUMMARY OF INFORMATION FROM ANNEX 32.5

- 2.1.1 Annexes 32.4 and 32.5 summarise the information used in the preparation of the Environmental Statement from Paull Holme Strays and other operational managed realignment sites in the Humber (Welwick, Chowderness and Alkborough). Since there has been no relevant further information gathered from any of these sites apart from Paull Holme Strays, the information in Annex 32.5 about these sites is not repeated here.
- 2.1.2 For the studies of accretion and erosion the key information gathered from Paull Holme Strays was the measurements of siltation for the Environment Agency reported by Brown (Ref 2). Accretion after one year is plotted as a function of site level on Figure 2, copied from the results presented on Figure 19 of Annex 32.4. The monitoring was continued for five years and the ratio of accretion after five years compared to that after one year is compared in Figure 3, which is copied from Figure 20 of Annex 32.5.
- 2.1.3 Uncertainty bands are not easy to include in Figures 2 and 3. This is because the actual monitoring of siltation started six months after the site was breached so no formal measurement of initial ground levels was made at the 35 individual sites where siltation was monitored. In order to estimate initial levels, an observed strong correlation between bed level and accretion rate was used to estimate initial level. Sites with similar levels two years after breaching were grouped together and the results extrapolated back to estimate the initial level. The maximum and minimum limits shown on Figure 2 are taken from the range of ground levels included within each group.
- 2.1.4 In the original assessment no account was taken of the location within Paull Holme Strays of the siltation monitoring sites. Review of the monitoring report (Ref 2) shows that the lowest six sites (those in 2005 with a level below 2.6mAOD) and those on Figure 2 with estimated initial levels of 1.82 or 2.18 mAOD (monitoring sites 2.1, 2.2, 2.3, 3.1, 4.2 & 4.3) were all located around the landward edge of the Paull Holme Strays site at a considerable distance from the breach site. The location of these sites would strongly indicate that it is unlikely that any erosion took place at these sites because velocities close to the edge of the site are always likely to be too low to permit erosion.
- 2.1.5 It is a feature of the monitoring of this program for monitoring accretion within Paull Holme Strays that the majority of sites, whatever their level, are close to the landward edge of the site with those some distance from the edge also being a significant distance from the breaches. The site closest to the breach (3.4) is in excess of 200m from the breach.

2.2.1 In addition to the monitoring carried out during the first five years after the breaching of the Paull Holme Strays site, a postgraduate student at the University of Hull also monitored physical conditions at this managed realignment site as part of a PhD study. These observations are reported in the thesis submitted by Clapp (Ref 1). The observations covered a range of sediment and flow properties at the site and were measured during an 18 month period in 2006 and 2007 starting 2.5 years after the site was breached.

2.2.2 A wide range of measurements were undertaken. Those that provide the most significant additional information on the performance of the Paull Holme Strays site include:

- Measurement of accretion and erosion at an additional 31 sites,
- Measurement of the dry density of the settled sediment within the site,
- Measurement of tides and suspended sediment concentrations in the larger breach, and
- Measurements of the shear stress threshold for erosion.

Accretion and erosion measurements by Hull University

2.2.3 The measurements of accretion and erosion reported in chapter 4 of Ref 1 were made in a similar way to those carried out for the Environment Agency. The results were grouped into the same level bands as those chosen by the Environment Agency and the results compared for the period both sets of measurements were carried out. The results are summarised in Table 1 copied from Table 4.6 of Ref 1. The results from the two monitoring programs are very comparable especially within the height bands 2.0 to 2.6 mAOD where mudflat is most likely to be present.

2.2.4 The University monitoring is important in that it adds six points below 2.0 mAOD to the one monitored by the Environment Agency. If the single site in this group where erosion was measured by the University is removed from the analysis, the average accretion at the other sites was 175 mm and very similar to the single site monitored by the Environment Agency.

2.2.5 The low level sites monitored by the University were all within 200m of the breach so monitored an area not monitored by the Environment Agency. Interestingly at the majority of these sites the average accretion was similar to the single site monitored by the Environment Agency which was located on the other side of the managed realignment. The single low level site where erosion was measured by the University was immediately inside the breach where maximum velocities might be expected and erosion most likely to occur.

2.2.6 The other feature of interest in the siltation measurements is that accretion rates are consistently higher in winter months than summer months (Figure 4.4 of Ref 1), a feature also found in the Environment Agency monitoring.

Sediment dry density measurements by Hull University

- 2.2.7 The University also made numerous measurements of dry sediment density throughout the managed realignment. The results reported in section 6.1 of Ref 1 showed an average dry density of $1050 \pm 140 \text{ kg/m}^3$. This sediment dry density did not vary significantly around the site, but did vary seasonally (Table 6.2 of Ref 1) with a density of $1130 \pm 160 \text{ kg/m}^3$ in summer and $970 \pm 220 \text{ kg/m}^3$ in winter.
- 2.2.8 These measurements of dry density may be compared with the 500 kg/m^3 assumed in Table 4.1 of Annex 32.4 of the Environmental Statement and used in the calculation of accretion and erosion rates. In the light of this evidence of *in-situ* dry densities within a nearby Humber managed realignment site, a dry density of 1050 kg/m^3 will be used in the calculation of erosion and accretion volumes in the detailed design for Cherry Cobb Sands.
- 2.2.9 The sediment dry density measurements were made in the summer of 2006 and the following winter 3 to 3.5 years after the site was initially breached. These measurements of dry density implicitly include any consolidation of the settled sediment that occurred during the first three years after the site was breached.

Suspended sediment concentration measurements by Hull University

- 2.2.10 The University monitored suspended sediment concentrations in the main breach on six tides with different high tide levels, measured as water depth above the breach. The results are reported in Chapter 5 of Ref 1 and presented in Table 2, which is based on the individual measurements reported in Appendix 4 of Ref 1. All these measurements were made in the summer months May to September so may not have sampled winter conditions with their higher accretion rates.
- 2.2.11 Suspended sediment concentrations on the flood tide are generally higher than on the ebb tide in Table 2 which is consistent with the deposition of sediment within the site. These results also show that generally concentrations increase as high tide levels rise, which is consistent with higher velocities on larger tides entraining more sediment. However, neither of these two features applies to all the measurements which may be because of differences in wave activity that can change the amount of sediment in suspension or because measurements of suspended sediment are subject to uncertainty and are often found to vary over short timescales.
- 2.2.12 The sediment concentrations reported by Hull University are variable, but on large tides are higher than those assumed in section 4.1 of Annex 32.4 of the Environmental Statement. The measured difference in sediment concentration between flood and ebb tides is by contrast smaller than the 250 mg/l assumed in the settlement calculations, but as the measurements only reflect summer conditions, they may not be representative of the whole year.

Threshold of erosion measurements by Hull University

- 2.2.13 Four sediment cores were placed in a laboratory flume to try and measure the threshold for erosion of suspended sediment. The results are discussed in chapter 7 of Ref 1.

- 2.2.14 For the three sediment cores which had dry densities close to 1000 kg/m³, there was an increase in the suspended sediment concentration in the water column when the shear stress exceeded 0.63N/m². The highest shear stress measured over these cores without any increase in sediment concentration was 0.07N/m². This suggests the threshold for erosion of the sediment settled in Paull Holme Strays at a dry density of around 1000 kg/m³ lies between these two values.
- 2.2.15 The fourth sediment core which had the highest dry density of 1580 kg/m³ did not erode in the flume even when the shear stress in the flume reached 2.75N/m².

Table 1 *Comparison of Environment Agency and University siltation measurements (Table 4.6 of Ref 1)*

Elevation	University monitoring			Environment Agency monitoring	
	No of points	Average accretion (mm)	Range (mm)	No of points	Average accretion (mm)
<2.0	6	140±137	-34 – 329	1	186
>2.0-2.3	7	112±74	22 – 219	5	125±36
>2.3-2.6	6	81±32	55 – 135	10	95±27
>2.6-3.0	8	13±39	-69 – 41	11	43±45
>3.0-3.5	4	6±5	-1 – 11	8	11±4

± Value represents standard deviation of samples within each group.

Table 2 *Measurements of suspended solids concentrations in 2006/7*

HW level (m over breach)	Date	Flood tide concentration (mg/l)		Ebb tide concentration (mg/l)		Average difference between flood and ebb tides (mg/l)
		Average	Max	Average	Max	
0.48	11/5/2007	87	99	62	82	25
1.18	19/7/2006	184	271	204	284	-20
1.28	23/5/2006	328	470	214	268	114
1.48	16/8/2006	142	356	86	167	56
1.98	11/9/2007	268	455	202	300	66
2.78	11/9/2006	522	647	334	596	188

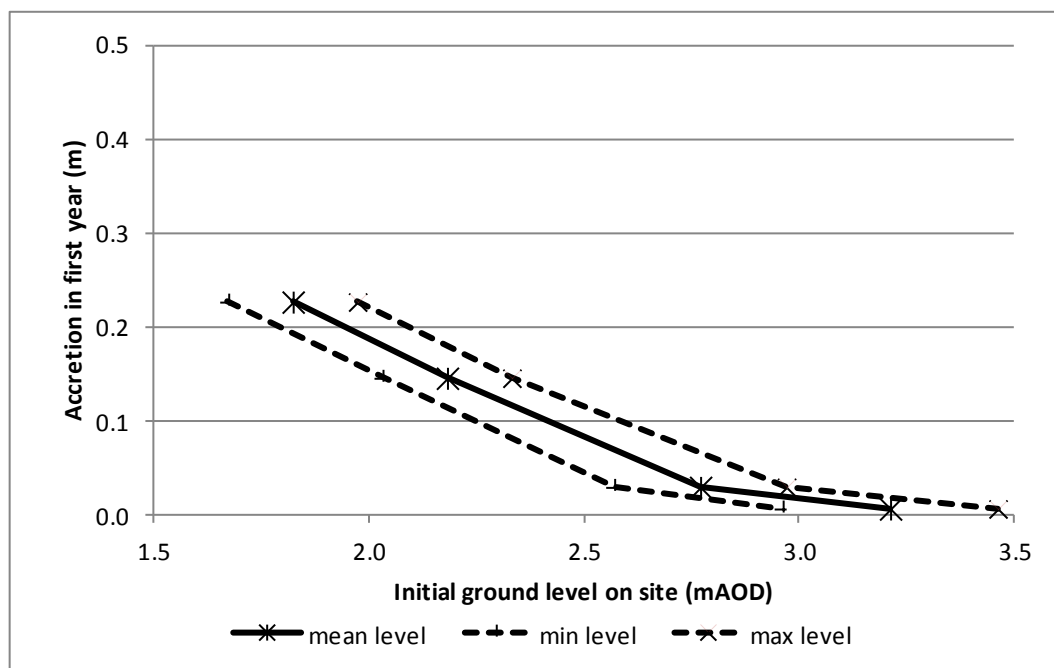


Figure 2 *Accretion after one year at Paull Holme Strays*

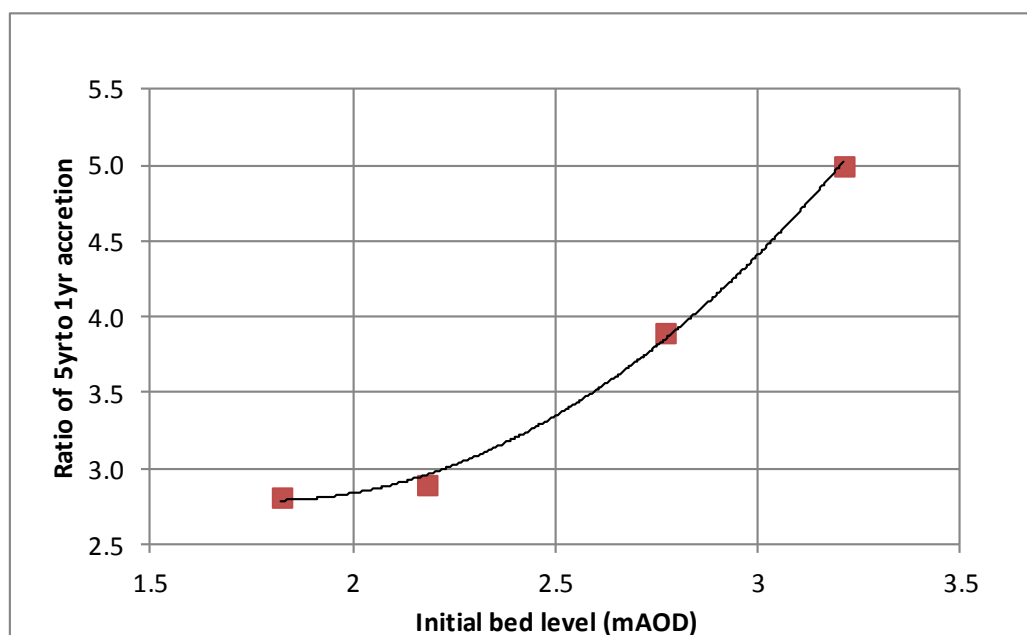


Figure 3 *Ratio of accretion over five years to one year at Paull Holme Strays*

2.3 PARAMETER VALUES ASSUMED FOR SILTATION MODELLING

2.3.1

In light of the additional information available from the Hull University monitoring, some changes to the assumed parameters used in the siltation modelling have been made in comparison with those adopted in section 4.1 of Annex 32.4 of the Environmental Statement. The parameters used in the original assessment are listed in Table 10 of Annex 32.4 are based on the values quoted in Ref 3 (Ormond and Roelvink, 2004) from the Humber strategy studies. These values are compared with those adopted for this assessment in Table 3. The values highlighted in bold have been changed for this assessment.

Table 3 Comparison of siltation parameters

Parameter	Value in Table 10 of Annex 32.4	Value in this assessment
Critical stress below which sedimentation occurs	0.2 N/m ²	0.2 N/m ²
Critical stress above which erosion occurs	0.5 N/m ²	0.5 N/m ²
Erosion rate constant	0.0001 kg/m ² s	0.0001 kg/m ² s
Bed density after deposition	500 kg/m ³	1050 kg/m³
Bed density of long term settled sediments	1500 kg/m ³	1500 kg/m ³
Typical sediment concentration in the water column	200 or 300 g/m ³	300 ± 60 g/m³

- 2.3.2 The critical erosion stresses for deposition and erosion and the erosion rate constant have not changed as there is no additional information that would support any change. The work by Hull University shows that the critical erosion stress of 0.5 N/m² adopted in the Environmental Statement is within the range identified by the measurements at Paull Holme Strays for sediments settled in Paull Holme Strays.
- 2.3.3 The major change in this assessment is that the (dry) bed density when sediment is deposited in the site has been increased from 500 to 1050 kg/m³ in light of the evidence from the Hull University monitoring. No change is made to the bed density of long term settled sediments. In this analysis these sediments are assumed to be those below the existing ground or bathymetry.
- 2.3.4 The change to the dry density of recently settled sediment has two effects. Firstly, the rate of accretion is approximately halved if the concentration of sediment in the water column remains unchanged, as 1.05 kg/m² of suspended sediment are required to raise bed levels by 0.001 m compared with the 0.5 kg/m² of sediment required in the original assessment following the assumptions of Annex 32.4. Secondly, the rate of erosion is reduced by a similar factor because erosion of a greater sediment mass is required to lower bed levels by 0.001 m in this assessment.
- 2.3.5 The second change adopted in this assessment is the assumption made about the concentration of suspended sediment available in Cherry Cobb Sands to accrete sediment. Previously a concentration between 200 and 300 g/m³ was assumed and found to cause accretion that slightly exceeded that measured at Paull Holme Strays in its first year of operation. The variation with level also closely followed the relationship found at Paull Holme Strays and shown in Figure 2.
- 2.3.6 The change in the assumed settled sediment density discussed above will reduce accretion rates unless the assumed sediment concentration in suspension is increased to give similar annual accretion. In the three years before the dry density measurements were made, there would also have been some consolidation of the settled sediment which will affect the assumption on settled sediment concentration.
- 2.3.7 An assumption that erosion is not an important consideration at Paull Holme Strays was also made because all the low level monitoring sites used by the Environment Agency were on the opposite side of the managed realignment site to the breach so velocities causing erosion are unlikely.

- 2.3.8 The effect of consolidation of sediment at Paull Holme Strays was assessed by considering the predicted settlement after each year and adding the predicted settlement in the following year taking account of the increased ground level, that is inundated to lesser depth and less frequently, but assuming no consolidation. The depth of settlement was predicted using the observed dry density of 1050 kg/m³ and various assumptions on the average concentration of suspended sediments. The results were compared with the measured accretion after three years. A suspended sediment concentration of 300 mg/l was found to lead to accretion rates in the absence of erosion that closely match the observed settlement rate at Paull Holme Strays in the first three years for initial ground levels below 2.3 mAOD as indicated on Figure 4.
- 2.3.9 The upper and lower limits for the Paull Holme Strays results shown on Figure 2, can be broadly represented in Figure 4 by assuming concentrations in the water column of 360 and 240 mg/l respectively; 60 mg/l above and below the value that represents average settlement rates.
- 2.3.10 For initial ground levels above 2.3 mAOD, the predictions in Figure 4 indicate greater accretion rates than observed at Paull Holme Strays. This suggests that at these higher initial ground levels the accretion model overestimates accretion rates and thus overestimate the rate at which saltmarsh develops.
- 2.3.11 The application of the 300mg/l sediment concentration for the accretion assessment implicitly assumes that this is the reduction in concentration between the flood and ebb tides. The summer measurements by Hull University in Table 2 reported a smaller difference between flood and ebb tide concentration than required to match the observed accretion rates. The differences may well be larger in winter and the observed average difference in concentration may not fully represent the difference in sediment flux. Overall it is considered precautionary to match the observed accretion rate rather than the relatively limited number of measured suspended sediment concentrations in the Paull Holme Strays breach.

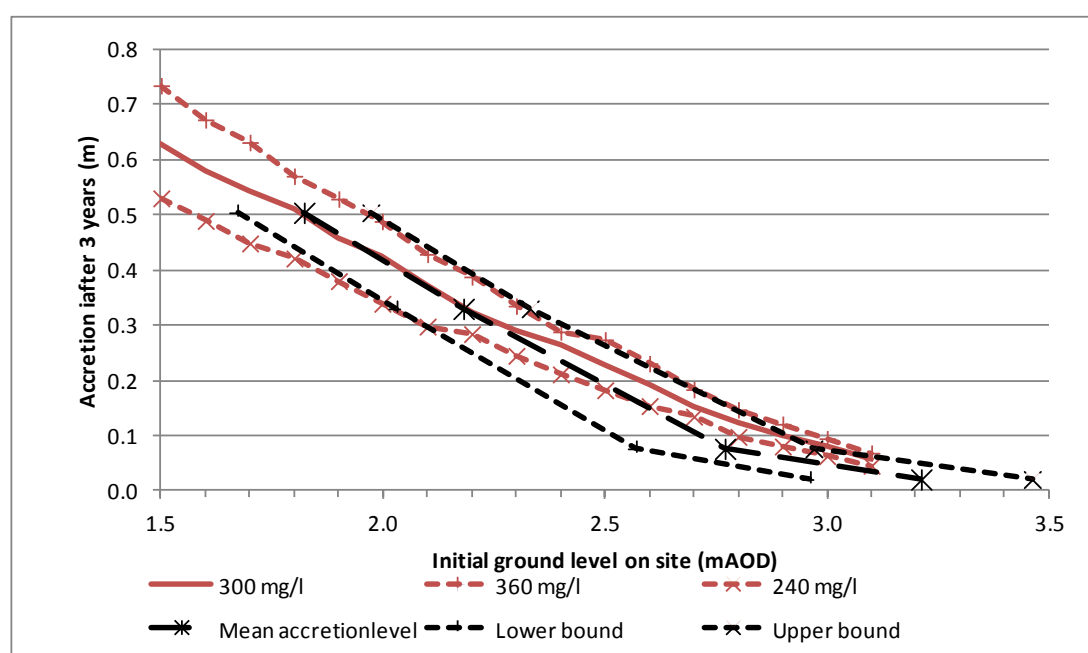


Figure 4 Comparison of assumed accretion with results for Paull Holme Strays

2.4 TIDE LEVELS AND FREQUENCIES

- 2.4.1 The siltation assessment was based on the same tides as used in the original assessment and reported in section 1.4 of Annex 32.4. The tidal conditions modelled are indicated in Table 4. The two lowest high water level conditions were not modelled as the inundation of the site is very limited and velocities are likely to be small so erosion is unlikely to be an issue. The contribution of these tides to accretion was included, though it is likely that the suspended sediment concentration will be much lower than normal.
- 2.4.2 High water levels modelled at Cherry Cobb Sands are slightly higher than those at Immingham by approximately 0.1m as indicated on Table 4. The difference is greatest on spring tides and least on neap tides. These modelled water levels have been used to assess siltation at the Cherry Cobb Sands site.
- 2.4.3 There are no regular measurements of water levels at the Paull Holme Strays managed realignment site which is about 7 km northwest of the Cherry Cobb Sands site. High water levels in the Humber increase up the estuary with predicted high water levels at King George Dock in east Hull being 0.2 m higher on mean neap tides and 0.3 m higher on mean spring tides than at Immingham (Ref 4). King George Dock is around twice the distance upstream of Immingham as Paull Holme Strays, so it is likely that high tide levels at Paull Holme Strays are 0.1 to 0.15 m higher than those at Immingham. This indicates that high water levels at Paull Holme Strays are probably within 0.1 m of those modelled for Cherry Cobb Sands. For this assessment high water levels at Cherry Cobb Sands and Paull Holme Strays have been assumed to be the same.

Table 4 *Model tides used in siltation assessment*

Range of HW level (mAOD)	Average frequency of occurrence (%)	Date and HW level of representative tide at Immingham (mAOD)	HW level within Cherry Cobb Sands site (mAOD)
<2.0	15	1.8 (not modelled)	1.85 (estimate)
2.0–2.5	26	2.3 (not modelled)	2.36 (estimate)
2.6 - 2.9	23	2.8 (am tide 18/5/10)	2.87
3.0 - 3.3	24	3.1 (am tide 16/5/10)	3.19
3.4 - 3.7	10	3.55 (pm tide 8/9/10)	3.65
3.8 - 4.1	2	3.85 (am tide 9/9/10)	3.96

3.1 INTRODUCTION

- 3.1.1 In a Regulated Tidal Exchange (RTE) scheme, the flow of water into a managed realignment area is controlled to manage the performance of the site and help it meet its design objectives. In the case of Cherry Cobb Sands, the key objective for the site is the development of 41 ha of sustainable mudflat. A RTE can help achieve this objective in a sediment laden estuary like the Humber by restricting the amount of sediment that enters the site each tide by limiting the volume of water that enters the site.
- 3.1.2 Like any managed realignment site, the habitat that develops in a RTE will depend on the site conditions especially the frequency of inundation that is achieved. In order to develop mudflat RSPB and Environment Agency (Ref 5) recommend that there are a minimum of 450 inundations a year. In addition, this guidance recommends one inundation should not last for more than a few tidal cycles and a site gradient of 1- 3%. The requirements for more than 450 inundations and greater than 1% gradient across the site limit the area within an RTE that could develop as mudflat as the number of inundations will reduce as ground levels rise.
- 3.1.3 For the RTEs at the Cherry Cobb Sands managed realignment site an initial arrangement that includes three separate RTE areas of around 16 ha is proposed to provide more than 41 ha of sustainable mudflat along with an area of mudflat within the remainder of the managed realignment site. The ground levels within each RTE are maintained below 2.5mAOD to ensure more than 450 inundations per year. The slopes across each site are in the range 1 in 1000 to 1 in 5000 do not meet the suggestions of Ref 5, though Ref 6 suggests that mudflat develops with a slope of 1 in 1000, and Ref 7 indicates that a level field has been proposed elsewhere to support mudflat development. However, our model testing of these sites has concentrated on the ability to drain the RTE each tide, which is an important objective of the slope suggestions.

3.2 SCHEME LAYOUT

- 3.2.1 This report presents an initial design to demonstrate how RTE at Cherry Cobb Sands could provide sustainable mudflat in the Humber. The layout proposed is shown in Figure 5. This layout has not been optimised to obtain maximum area of mudflat nor to minimise the potential risks of future siltation but to show a variety of ways in which an RTE could be developed, so that future optimisation and detailed design studies can provide the most appropriate solutions for this site.
- 3.2.2 Of the three RTE fields, Field 3 is assumed to act independently of the others and to be filled directly from Cherry Cobb Sands Creek by culverts under the fronting saltmarsh and the old sea wall that discharge into the managed realignment site as indicated on Figure 5. The main discharge from Field 3 is through culverts under the dividing wall into the managed realignment area that are protected by flap gates to prevent water entering this field through the outlet culvert. Some water can,

however, return directly to Cherry Cobb Sands Creek through the inlet culvert as it will not be protected by flap gates.

- 3.2.3 Fields 1 and 2 are connected by a weir at the northwest corner of the site. This allows the water that flows across Field 2 to drain out through Field 1 as indicated on Figure 5. Field 2 takes water from the managed realignment site through a culvert under the dividing wall within the managed realignment site. This inlet culvert would not have any flap gates so a proportion of the water in Field 2 can leave through the inlet culvert. The outflow from Field 1 is another culvert through the dividing wall which is protected by flap gates to prevent direct inflow to Field 1 from the managed realignment area.
- 3.2.4 The supply of water for Fields 1 and 2 is preferentially taken from the managed realignment area as the size of Cherry Cobb Sands creek decreases northward from Stone Creek. North of the proposed intake to Field 3 the size of the creek is too small to provide enough water to supply the RTE fields. The variation in creek dimensions shown on Figure 6, indicates that upstream of the proposed intake for Field 3, the cross section area is less than 25 m² which is unlikely to be sufficient to supply the water required to flood the RTE fields, especially at tide levels close to 2.5 mAOD as the height of the creek bank will prevent water coming over the top of Foul Holme Sand.
- 3.2.5 A 20 m wide creek, shown on Figure 7, is cut through the managed realignment site to carry the drainage from the three RTEs back through the breach into Cherry Cobb Sands Creek. This creek slopes 0.8 m through the managed realignment site with a design level of 0.7 mAOD as it passes through the breach. The drainage from Fields 1 and 3 shown on Figure 5 enters the head of the creek and the intention is that these drainage flows will maintain the creek.
- 3.2.6 Each RTE field slopes from the inlet to the outlet. For Fields 2 and 3 the slope across the field is 0.1 m while for Field 1 the slope is 0.3 m. Field 1 has a steeper slope because early model tests indicated this field was harder to drain. The colours on Figure 7 highlight the different contour levels within the site.
- 3.2.7 The surface area and volume characteristics of the RTE are illustrated in Figure 8. The surface area and volumes include the breach area. The site can store 1.36x10⁶ m³ at 3.5 mAOD within a surface area of 104.6 ha. At 2.5 mAOD the assumed lower limit for saltmarsh creation, the site area is 85.6 ha. The whole site is above the invert level of the creek as it passes through the breach so the whole 85.6 ha below 2.5 mAOD could be dry at low water, though in practice there may be some retained water within parts of the sites.

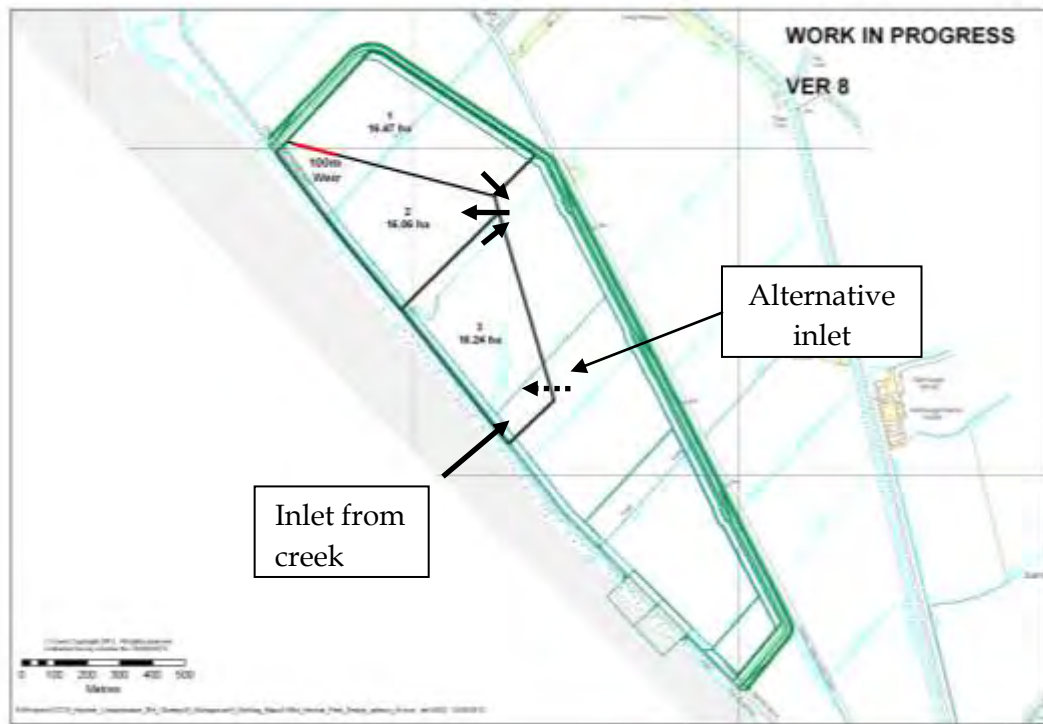


Figure 5 Proposed layout for Regulated Tidal Exchange scheme

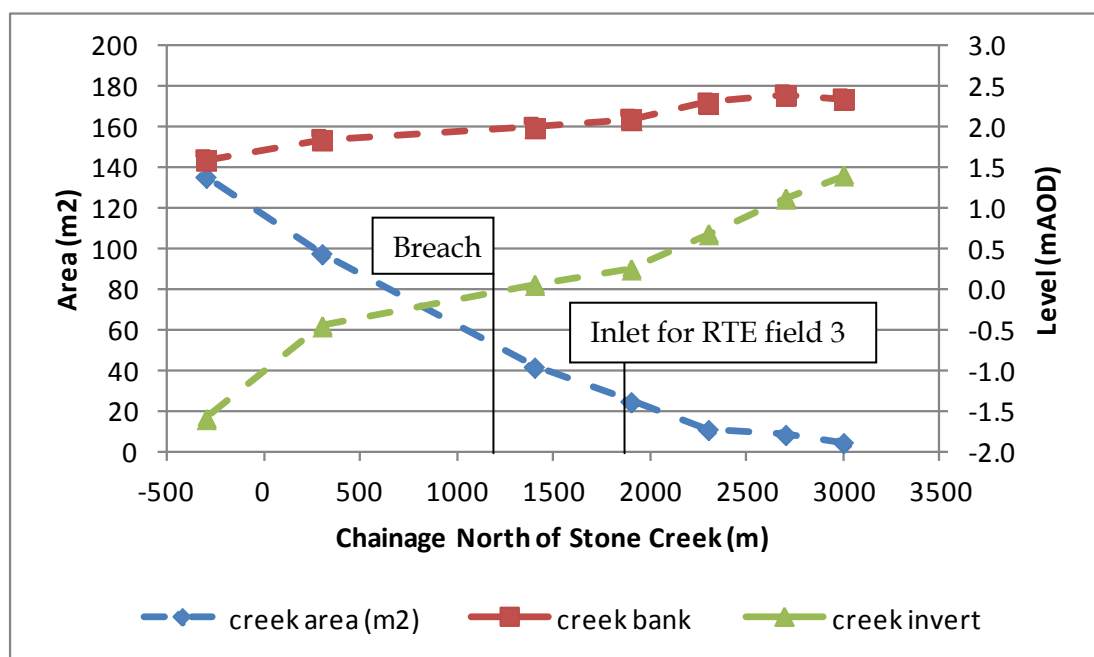


Figure 6 Dimensions of Cherry Cobb Sands Creek fronting the managed realignment site

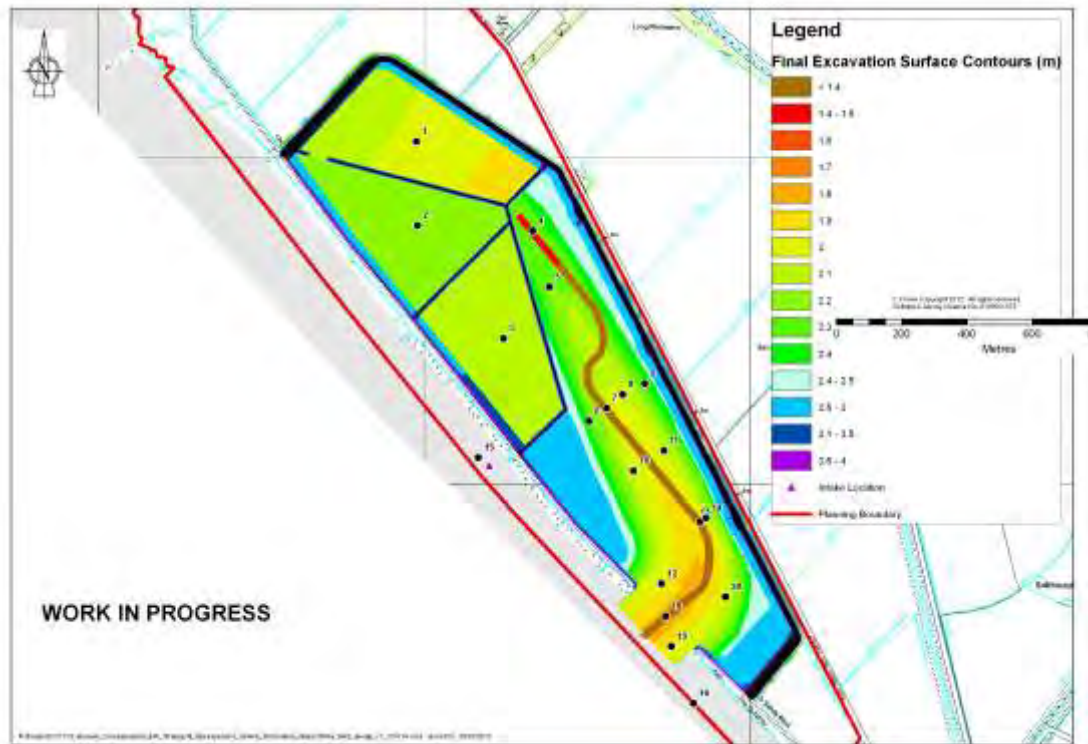


Figure 7 Proposed layout of Cherry Cobb Sands Regulated Tidal Exchange

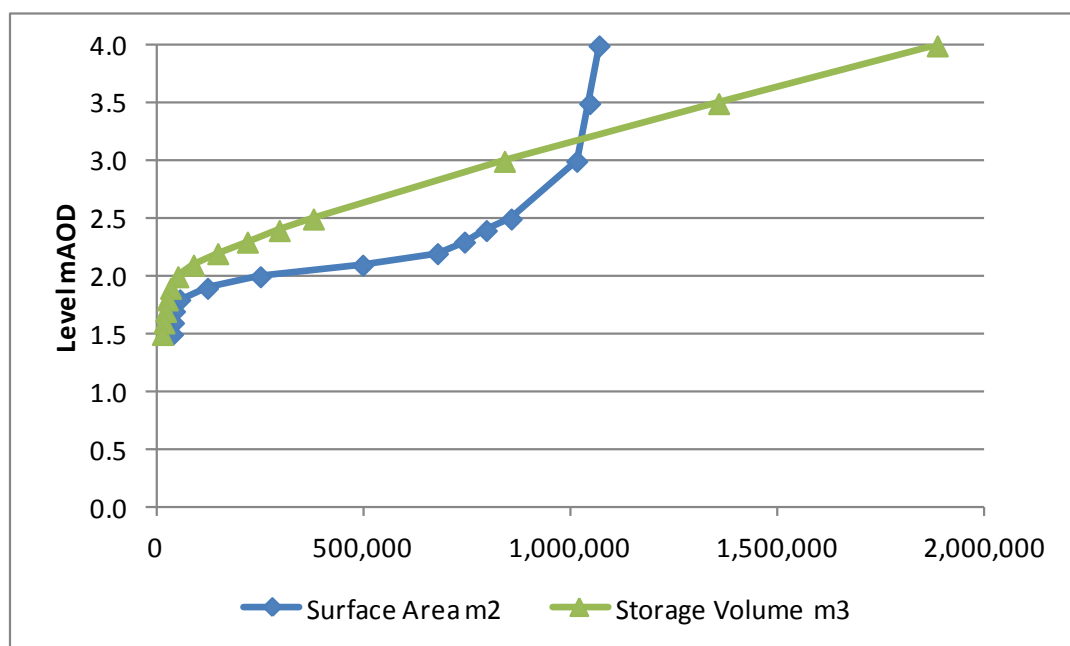


Figure 8 Surface area and volume characteristics of the Regulated Tidal Exchange

3.3 INLET AND OUTLET STRUCTURES

3.3.1

The operation of a RTE depends critically on the design of the inlet and outlet structures. The inlet is required to restrict the inflow to the field so that even on the highest tides it is only flooded to a shallow depth of around 0.3 m, This requires restricted flow during high spring tides, but an unrestricted inflow on the lowest tides that can flood the site so that the required number of inundations are achieved. These requirements led to the design of twin 1m wide box culverts as the inlet

works. At the outside end the flow through these culverts would be controlled by a fixed sluice gate. This sluice is the same width as the box culverts but is only open 0.45 m, while the remainder of the culvert is assumed to be 1.5 m high. The culverts are set at an invert level of 1.5m AOD so that as soon as the tide is high enough to inundate Field 3 (2.1 mAOD), the depth of water flowing through the culvert is more than 0.5 m deep to allow a reasonable flow on to the field. These culverts would not require flap gates to prevent reverse flow as reverse flow through these culverts would assist in drainage of the field at low tide.

- 3.3.2 The outlet culverts are larger than the inlet culverts because the depth of flow is normally quite shallow, so a wide culvert is needed to provide a reasonable outflow. Four 1.5 m wide box culverts are proposed as outlet structures for each RTE field. These would have their invert levels set at 1.5 mAOD, the invert of the creek adjacent to the outflow culverts. The height of these culverts is not critical but should be at least 0.7m to avoid restricting the outflow. Because of the large size of the outflow culverts, it will be necessary to provide them with flap gates to prevent inflow to the site on a rising tide and prevent a large volume of water entering the site.
- 3.3.3 During model development, it became apparent that drainage of each field through the outlet culverts required a considerable length of field edge acting as a weir that the water on the field could flow over to enter the outlet culvert. Within the model 230 m of field edge was used to drain Field 1 and 260 m for Field 3. These field edges represent the edges of small drainage creeks within the model.
- 3.3.4 The gap between Fields 2 and 1 was 100 m long to allow free flow between the two fields. The invert of the gap was set at the level of Field 2 which is upstream.

3.4 TIDE CONDITIONS IN THE CHERRY COBB SANDS SITE

Tide levels within the site

- 3.4.1 Predicted tide levels during the modelled evening high spring tide of 8th September 2010 are illustrated in Figure 9. Tide curves are illustrated for Point 3 in the centre of RTE Field 3 and for Point 13 in the creek running through the centre of the open managed realignment and also at Point 16 in Cherry Cobb Sands Creek about 100 m downstream of the breach. The locations of all these points are shown on Figure 7.
- 3.4.2 The tide rises and falls first in the creek (Point 16) and then in the part of the open site closest to the breach (Point 13). High water levels are similar within the site and in the creek outside. The flood tide is much shorter than the ebb tide within Cherry Cobb Sands Creek and in the open managed realignment. There is a slight delay in the drainage of the site at about hour 22 on Figure 9 which is probably a result of flows backing up from Cherry Cobb Sands Creek which remains at its current dimensions in this model test.
- 3.4.3 Greater detail of how the tide is predicted to rise and fall in the centre of each RTE field is shown on Figure 10. The depth and level of flooding during this tide and also the time that each field is dry at the sampling point are given in Table 5. Field 3 is flooded most deeply and is dry for the shortest time. Field 2 fills first and then

spills into Field 1. As a result the depth of flooding in Field 2 is least of all the sites and the time it is dry is longest as indicated on Table 5. Figure 10 shows that water levels rise slowly in each RTE while water levels in the creek are higher than those in the field until the tide outside has fallen back to the water level in the RTE. After this the RTE starts to slowly drain down. Water depths within each RTE at the end of the ebb of the high spring tide are shown on Figure 11.

- 3.4.4 Predicted water levels within each RTE increase slightly as the tidal high water levels in Cherry Cobb Sands Creek outside rise as illustrated on Figure 12. Predicted water depths at the highest and lowest parts of each field are indicated. The response of Fields 1 and 3 to changes in the outside high water level are similar, though Field 3 always has higher water levels. The levels in Field 2 vary very little as outside tide levels change. This is because Field 2 also acts as a channel to convey water into Field 1 so its maximum level is controlled by the weir linking it to Field 1.

Table 5 *Water depths and levels in each RTE field during a high spring tide*

High spring tide conditions	Field 1	Field 2	Field 3
Max water level (mAOD)	2.20	2.27	2.30
Ground level at point (mAOD)	1.98	2.16	2.05
Max water depth at point (m)	0.22	0.11	0.25
Minimum water depth (m)	0.00	0.00	0.00
Time field is dry (hrs)	4.50	5.00	3.17

Velocities within the site

- 3.4.5 Velocities within the Compensation Site are illustrated for the same high spring tide at Points 3, 12 and 13 on Figure 13. The time of high tide is also marked to distinguish flood and ebb conditions. The locations of all these points are shown on Figure 7. Conditions within Cherry Cobb Sands Creek are considered in section 4.
- 3.4.6 In the creek through the open managed realignment site at Point 13, the flood tide velocities reach a maximum of 1.0 m/s. The ebb tide is more prolonged with a maximum velocity of 0.7 m/s. In the open managed realignment site at Point 12 near the entrance, the maximum flood tide velocity approaches 1.2 m/s and is greater than at Point 13. On the ebb tide the maximum velocity is only 0.6 m/s and this maximum is short lived as the site rapidly dries at this location.
- 3.4.7 Within Field 3 of the RTE the maximum velocity at Point 3 is predicted to remain below 0.2 m/s while the field floods and below 0.1 m/s as it drains.
- 3.4.8 Predicted velocity patterns across the site on the late flood tide close to the time of maximum velocity are illustrated on Figure 14. This figure also shows RTE Fields 2 and 3 being filled from their respective inlet works. At this time in the tide, RTE Field 1 remains almost dry as water has not yet arrived at the weir connecting Field 2 to Field 1. Predicted ebb tide velocities, close to the time of maximum ebb tide velocity are shown on Figure 15. This plot shows a time when the majority of the flow is confined within the creek through the managed realignment site. At this time, all the RTE fields are predicted to still have shallow flooding, though the

higher velocities in parts of each RTE indicate outflow through the outlets from Fields 3 and 1 and drainage across the weir between Fields 2 and 1.

Shear stresses within the site

- 3.4.9 Predicted shear stresses at Cherry Cobb Sands are illustrated on Figure 16 for the same high spring tide in the open managed realignment site at Points 8 and 12 and at Point 13 in the creek that runs through the site (see Figure 7 for locations).
- 3.4.10 Predicted shear stresses within the Compensation Site, like velocities, reduce with distance from the breach, with Point 8 having the lowest shear stress and Point 12 near the entrance the highest. For the majority of the time, shear stress is below the deposition threshold of 0.2 N/m^2 at Points 8 and 12 which are outside the creek running through the site (Table 3). Erosion occurs at all sites during the flood tide when shear stress exceeds the erosion threshold of 0.5 N/m^2 (Table 3).
- 3.4.11 At Points 8 and 12, the flood tide maximum shear stress is considerably greater than the ebb tide peak. At Point 13, which is within the creek running through the site, the maximum shear stress is also predicted on the flood tide. At this site unlike the others, a prolonged period is predicted when shear stress exceeded the erosion threshold during the ebb tide. This occurs after the remainder of the site has dried and is due to the outflow from the three RTE fields.

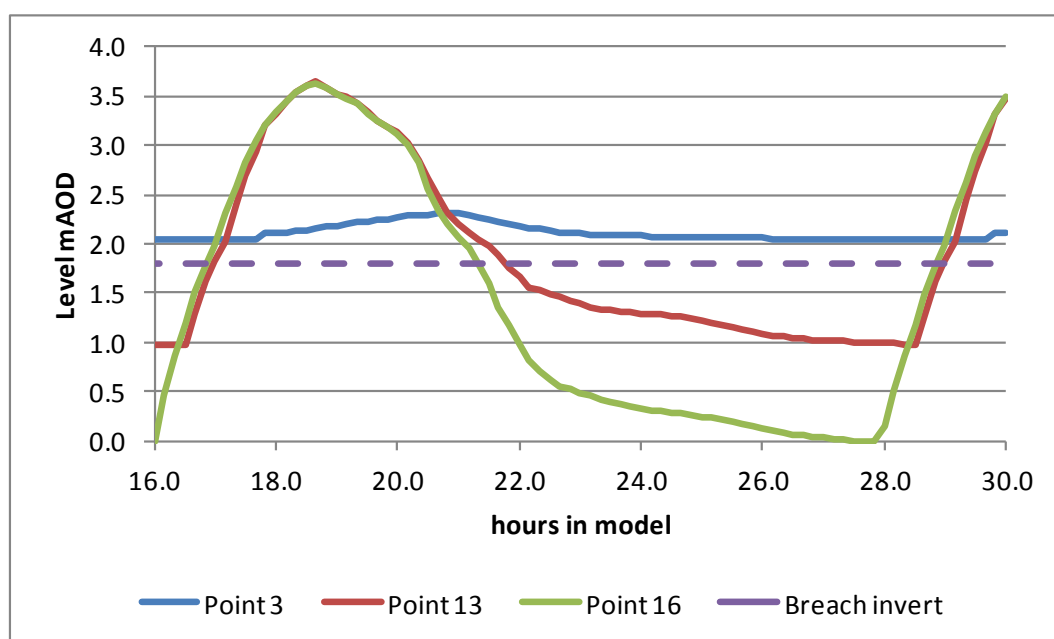


Figure 9 Tide levels in Cherry Cobb Sands on a high spring tide for RTE

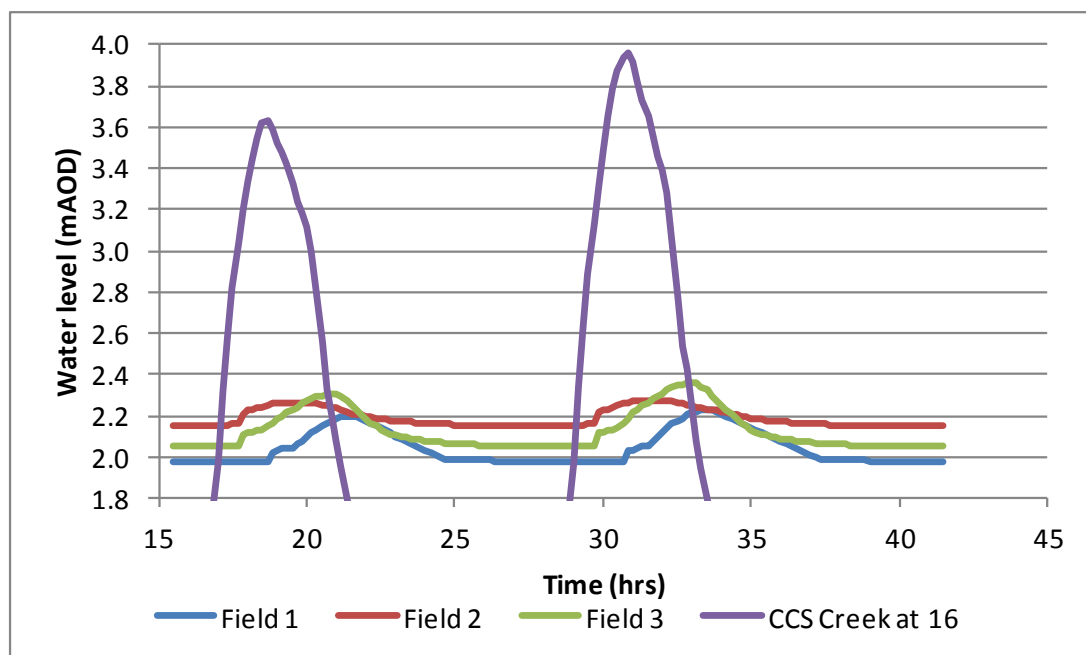


Figure 10 Tide levels within each RTE field on a high spring tide

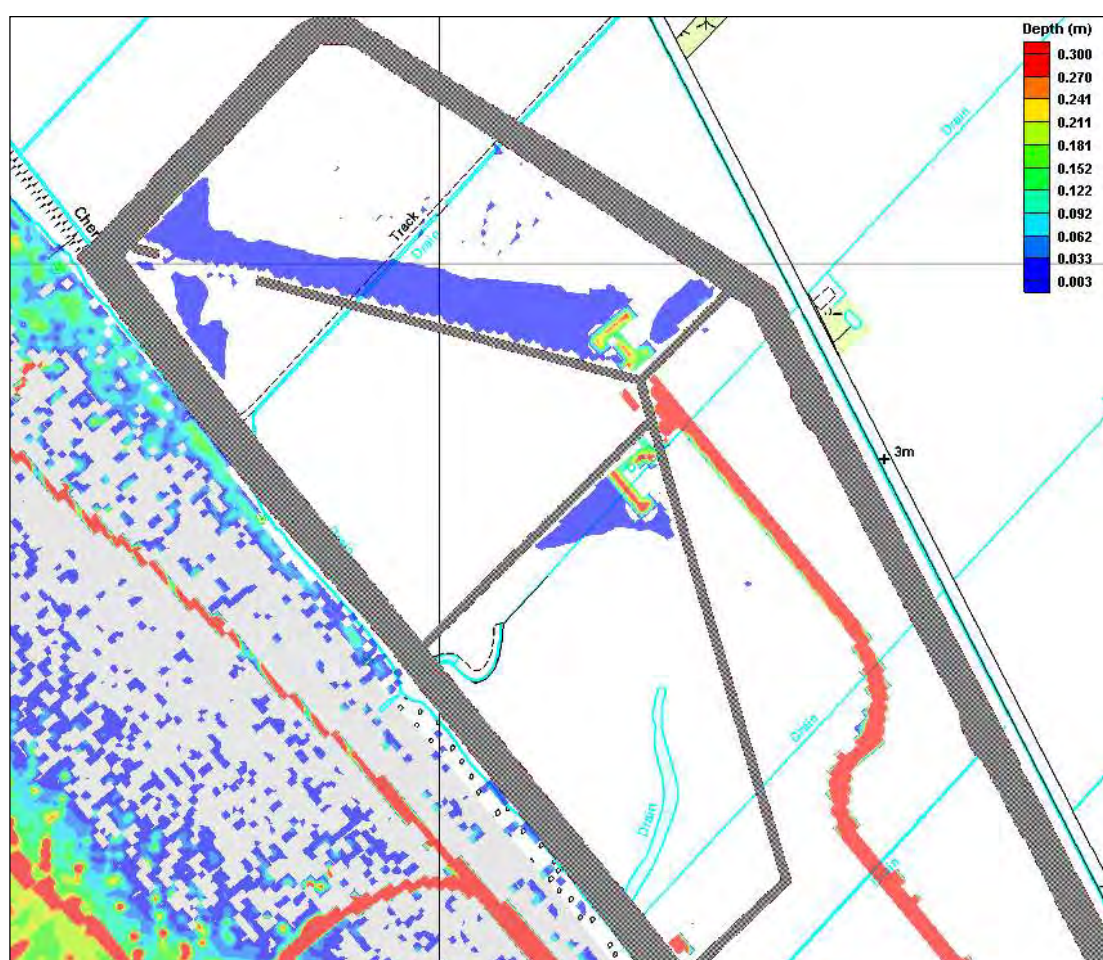


Figure 11 Water depths in RTE fields after drainage

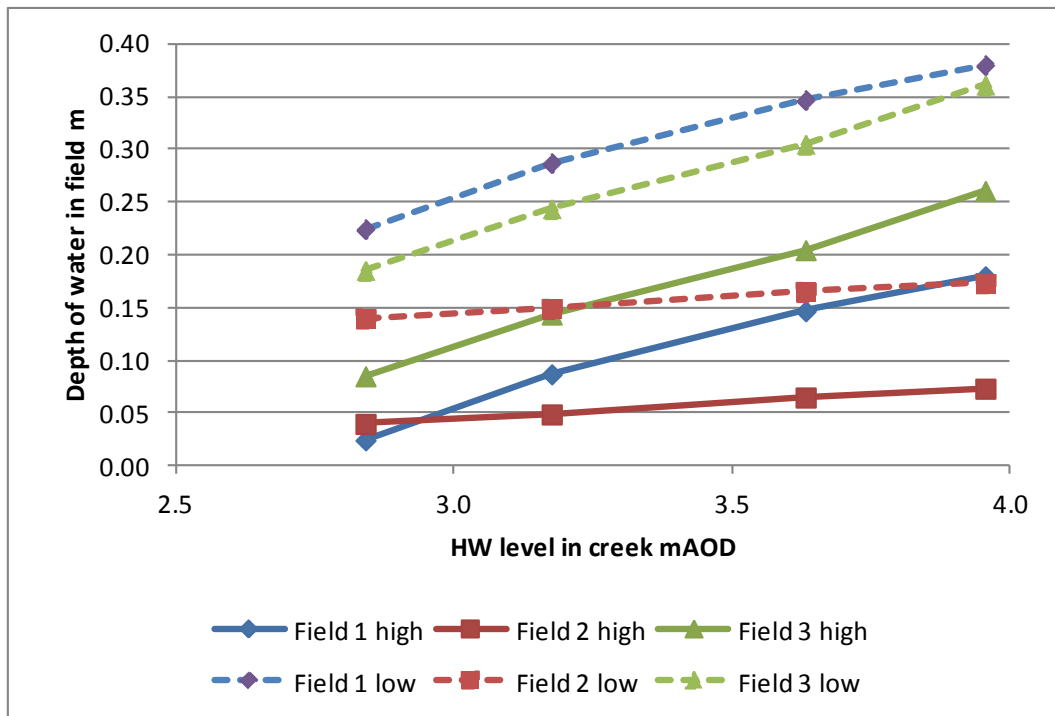


Figure 12 Water levels in each RTE as a function of high tide level outside

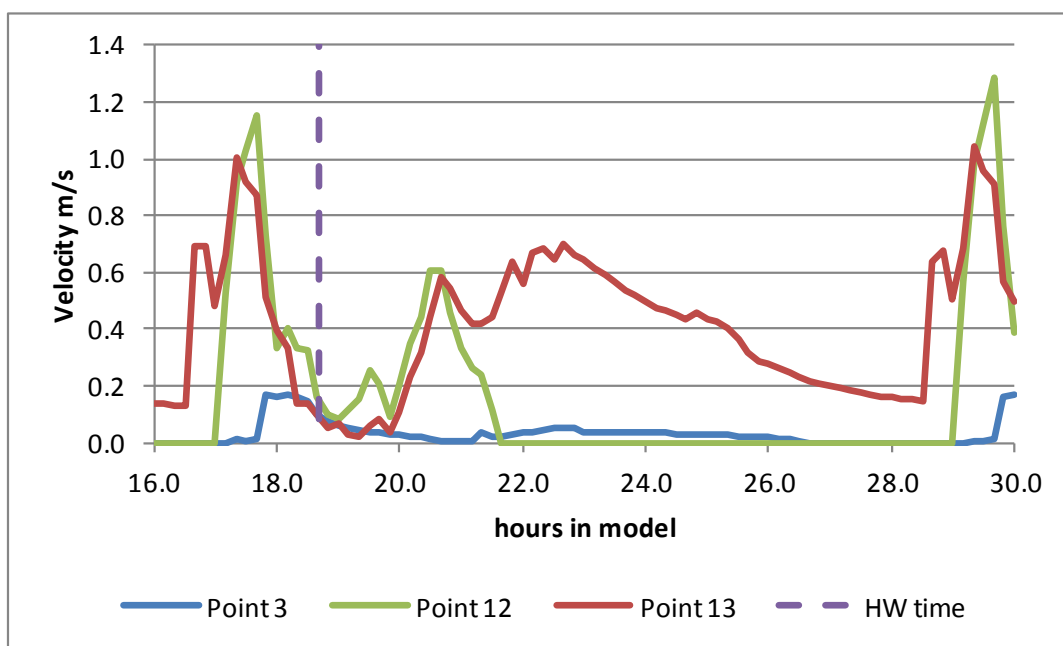


Figure 13 Velocities in Cherry Cobb Sands on a high spring tide for RTE

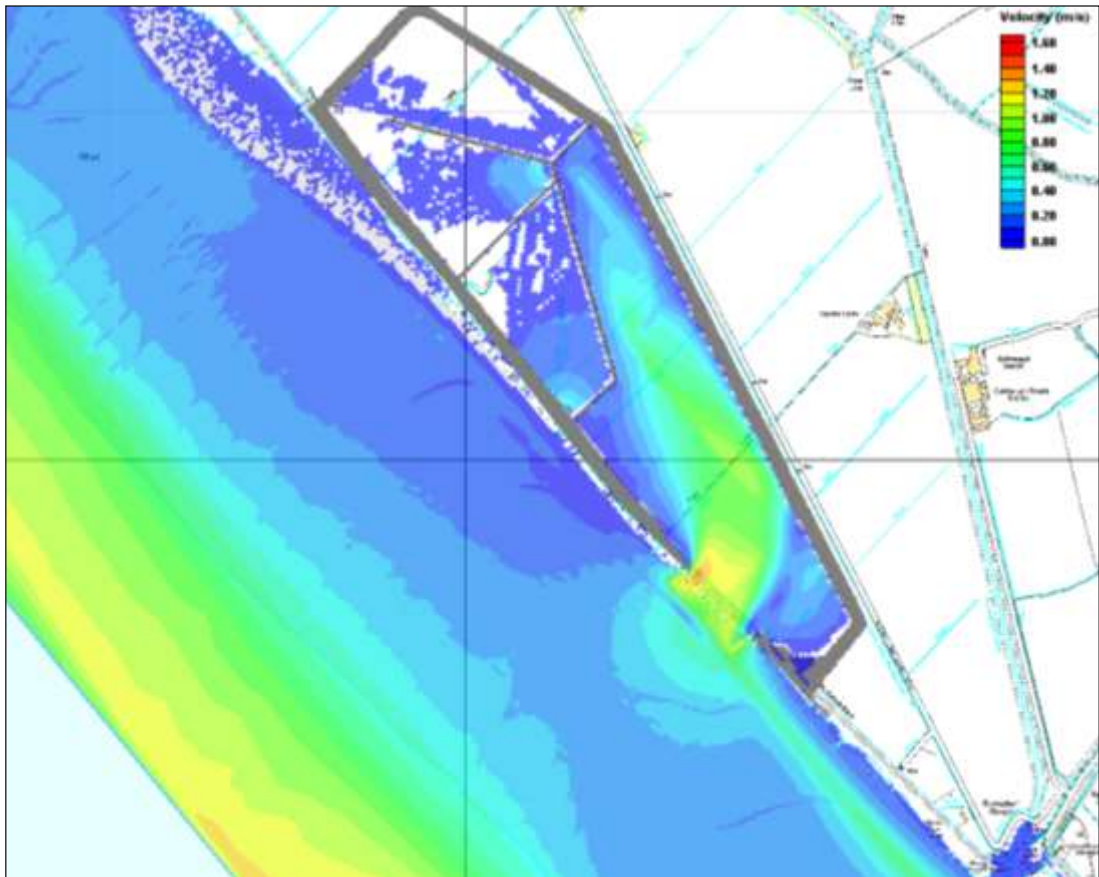


Figure 14 Compensation Site velocity patterns on the late flood tide for RTE

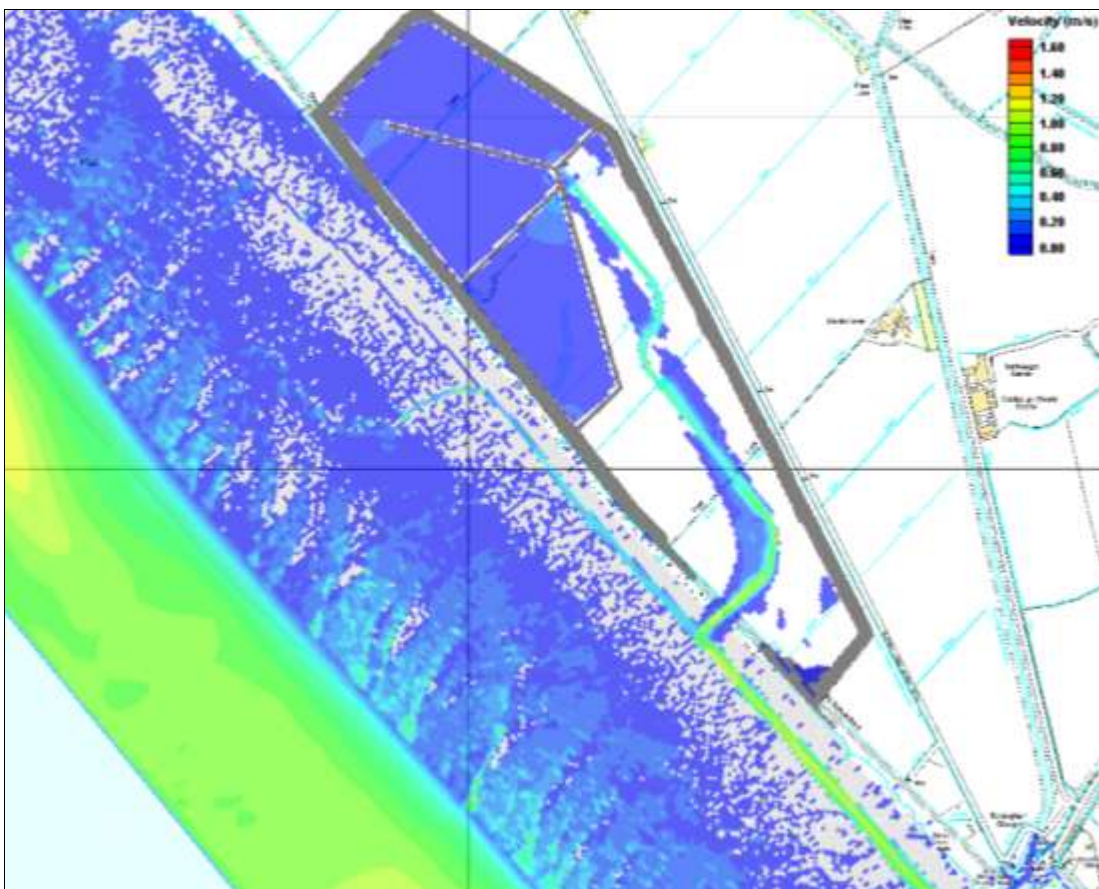


Figure 15 Compensation Site velocity patterns on the mid ebb tide for RTE

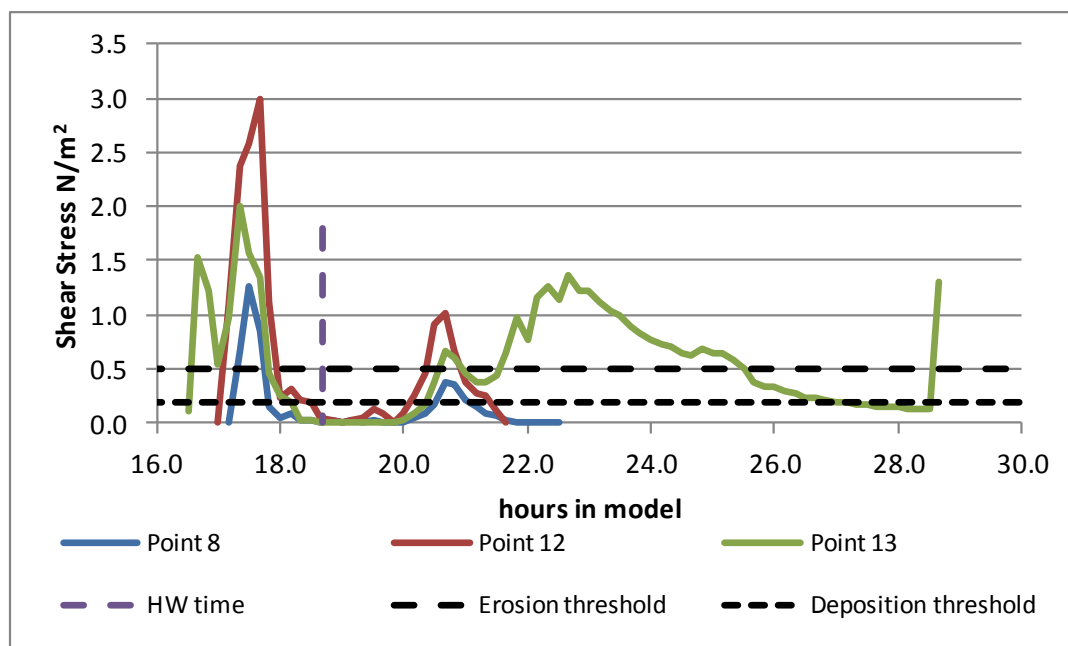


Figure 16 *Shear stress in Cherry Cobb Sands on a high spring tide for RTE*

3.5 SILTATION AND EROSION ASSESSMENT METHODOLOGY

Introduction

3.5.1 A siltation and erosion assessment was carried out at the 20 points shown on Figure 7 to understand the likely evolution of the site after breaching. At each site, it was considered that shear stresses were below the deposition threshold for a sufficient proportion of the time at high tide and during the ebb tide for the whole site to experience similar settlement to that at Paull Holme Strays described on Figure 2.

3.5.2 Of the 20 points considered, 10 were within the open managed realignment area, four within the creek through it, three within the RTE fields and three within Cherry Cobb Sands Creek.

Methodology within the managed realignment

3.5.3 Within the open managed realignment area, this accretion would be mitigated by erosion, occurring mainly during the flood tide. This would reduce the total siltation that occurred. Contours of annual siltation were prepared based on the initial ground level at each point in the site. This allowed a surface to be generated of the accretion that might occur within the Compensation Site in the absence of any erosion.

3.5.4 Erosion in the managed realignment area was estimated by considering the erosion that was predicted at each of the 20 points during the four modelled tides in Table 4, with annual erosion estimated by factoring up the erosion on an individual tide to take account of the number of tides of each range during the year. As in the earlier assessment reported in section 4 of Annex 32.4, the approach of Partheniades to the estimation of erosion was adopted using the factors set out in Table 3. As this erosion was primarily of the recently deposited sediments, the amount of erosion assumed a bed dry density of 1050 kg/m³ as indicated in Table 3.

- 3.5.5 At the majority of sites, annual erosion was predicted to be less than deposition so overall the ground level within the compensation site is expected to rise. At two points in the managed realignment site near the breach (Points 12 and 19) the annual erosion was predicted to exceed deposition and so erosion of the site is anticipated at these locations. At these sites, the annual erosion was assessed assuming that firstly all the accreted sediments were eroded and that the remaining erosion was of existing bed sediments that had a dry density of 1500 kg/m³ as indicated in Table 3.
- 3.5.6 The erosion estimates at each of the assessment points were plotted and contours of equal erosion drawn. These contours were subtracted from the anticipated accretion surface to determine the predicted ground level within the Compensation Site at the end of the first year. The resulting changes in bed level since breaching were multiplied by a factor of three to predict conditions after five years.
- 3.5.7 The factor of three used to convert the change after one year to the change after five years was determined by considering the ratio of accretion after five years to accretion after one year experienced at Paull Holme Strays and shown as Figure 3. This factor takes account of two processes, firstly that as ground levels rise, inundation will be slightly less frequent and shallower, so the rate of accretion will decrease even if other circumstances do not change. In addition, the extra weight of freshly deposited sediment and the gradual expulsion of water from previously accreted sediments will result in compaction of the sediment and gradually reduce their level. Both these factors are included in the ratio derived for Paull Holme Strays.
- 3.5.8 Where initial ground levels are below 2.2 mAOD, the ratio between accretion after five years and after one year should be less than 3.0, while for areas where initial ground levels are greater than 2.2 mAOD this ratio should be greater than 3.0. As the prime interest in the Compensation Site is in those areas remaining below 2.5 mAOD, it was considered that a factor of 3.0 was a reasonable compromise for this purpose.

Methodology within the creek through the managed realignment site

- 3.5.9 Within the creek passing through the managed realignment a similar methodology could have been applied however, it was noted that at all Points within the creek (Points 4, 7, 13 and 18) erosion of the original ground surface was predicted. Within the creek an alternative approach was developed where the creek was assumed to be wider than the 20 m assumed initially, and the width that would just prevent erosion of the creek bed calculated. This was done by finding the velocity reduction factor necessary to avoid erosion and using its reciprocal to estimate the increased width required to prevent erosion.
- 3.5.10 This methodology predicted that an initial creek width of 23.5 m was required to prevent erosion of the creek bed through the majority of the managed realignment area covered by Points 4, 7 and 13). At the breach (Point 18), a width of 28 m was predicted, and this width increased slightly as the creek passed through the fronting saltmarsh to join Cherry Cobb Sands Creek.

Methodology within the RTE areas

- 3.5.11 The assessment within each RTE was carried out in the same way as for the managed realignment areas, except that as shear stress was insufficient to cause erosion, only accretion was assumed to occur. Separate accretion calculations were carried out for the highest and lowest ground levels in each RTE field. As the same sediment concentration was assumed throughout all the RTE fields, this approach led to greater accretion at the low end of each field which reduced the effective slope across each field over five years.
- 3.5.12 In practice this approach is likely to be conservative as more sediment would be expected to settle near the inlet to each RTE than in more distant locations, so the predicted reduction in RTE slope is probably overestimated.

Methodology within Cherry Cobb Sands Creek

- 3.5.13 The assessment of the erosion and accretion within Cherry Cobb Sands Creek is considered separately in section 4.

3.6 PREDICTED GROUND SURFACE AFTER FIVE YEARS

- 3.6.1 The predicted ground surface of the Compensation Site after five years is shown on Figure 17. The surface area of the site, including the breach area after five years is compared with the initial surface area on Figure 18. The changes in area are indicated in Table 6. The accretion of the site reduces the area remaining below 2.5 mAOD from 86 to 66 ha. There are similar reductions (± 6 ha) in area at lower levels down to 2.0 mAOD. The area below 2.0 mAOD is predicted to increase partly because of the assumed widening of the creek and partly because of erosion of the saltmarsh area outside the breach. In practice the creek will initially be dug wider, so this increase will eventually affect the initial area.
- 3.6.2 Within the three RTE fields, accretion of 0.03 to 0.08 m is predicted at the high end of each field, while siltation of 0.09 to 0.14 m accretion is predicted at the low end. These predictions assume that there is the same concentration of sediment in the water column available for settlement throughout all fields giving greater accretion in areas of deeper water. This has the effect of reducing the slope across each field. In practice there is likely to be some reduction in concentration between inlet and outlet which would reduce the predicted reduction in slope.

Table 6 *Predicted change of RTE surface area over five years*

Level (mAOD)	Area after five years (ha)	Initial area (ha)	Difference (ha)
3.0	96.9	101.5	-4.6
2.5	65.7	85.7	-20.0
2.4	61.3	79.6	-18.3
2.2	43.7	67.8	-24.1
2.0	10.4	25.0	-14.6
1.8	8.4	5.6	+2.8

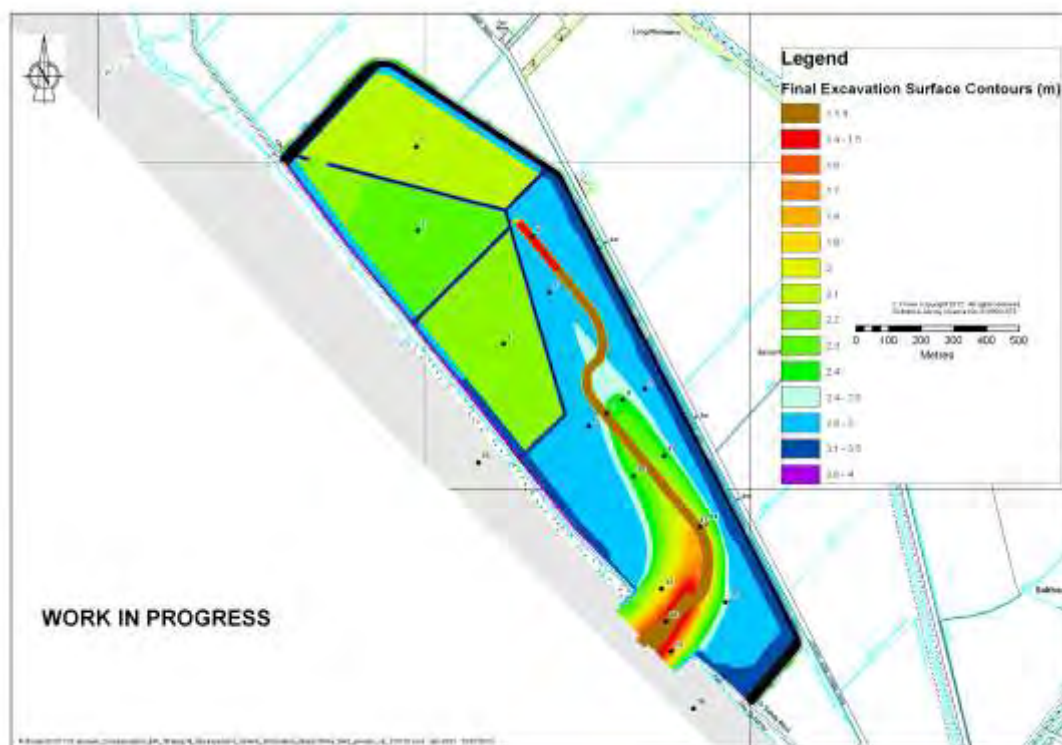


Figure 17 Predicted ground levels for RTE after five years

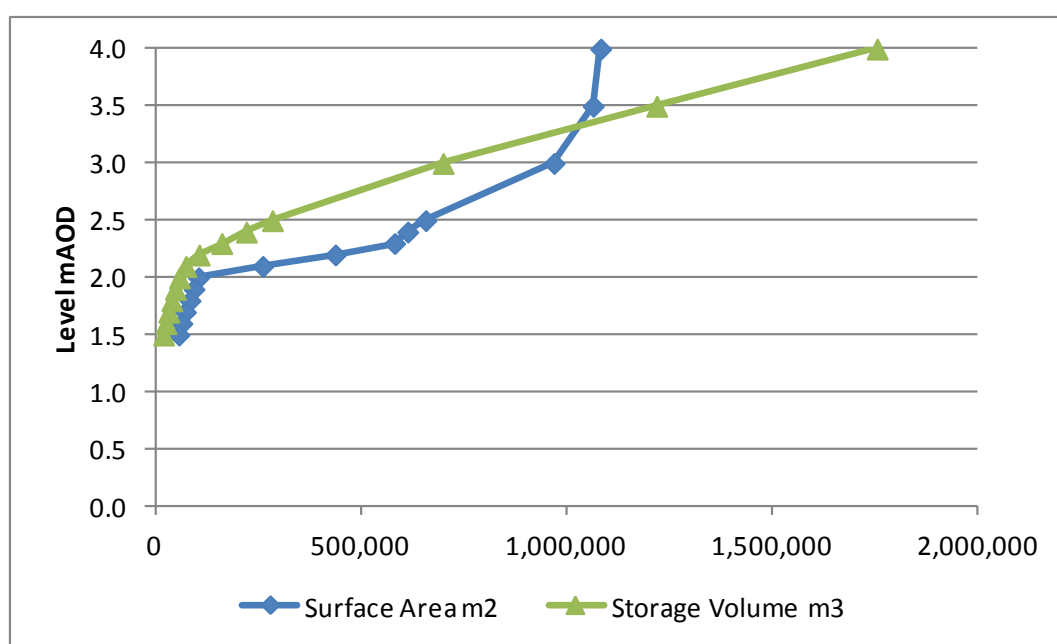


Figure 18 Surface area and volume of RTE after five years

4.1 INTRODUCTION

- 4.1.1 The Environmental Statement anticipated that the drainage flows from the Compensation Site would lead to erosion of Cherry Cobb Sands Creek and its enlargement over time. This was expected to mitigate for the adverse effects initially anticipated on the land drainage from Stone Creek. This potential enlargement was not quantified in the Environmental Statement. Representations from the Marine Management Organisation and the Internal Drainage Boards have requested that this effect be quantified.
- 4.1.2 The enlargement of a tidal creek depends on the balance of accretion and erosion due to tidal flows within the creek taking account of other factors such as occurrences of large fluvial flows down the creek following periods of high rainfall and possibly storm wave activity which can increase shear stresses substantially and also increase sediment concentrations which will preferentially settle out in any areas of low velocity.
- 4.1.3 Experience at Cherry Cobb Sands Creek, according to those responsible for land drainage, is that there is a tendency for sediment to accrete in the creek. Over time this has made drainage more difficult from the outfalls discharging to Stone Creek. In early 2008, following the large summer floods of 2007, the Environment Agency dredged the creek to increase its capacity as reported in Annex 32.1. However, the drainage representatives report the creek has returned to pre-dredge conditions and they are now planning further maintenance of this creek over the next five years to restore its capacity.

4.2 ASSESSMENT METHODOLOGY

- 4.2.1 The changes to Cherry Cobb Sands Creek are not solely determined by the flows and velocities in the creek immediately after the Compensation Site is breached. As the creek enlarges in response to the increased drainage flows, the larger creek will become a more preferred route for flooding the surrounding areas of Foul Holme Sand and also the Compensation Site during the flood tide because of the greater capacity and reduced friction losses associated with the enlarged creek. The creek is also likely to become a more preferred route for drainage from Foul Holme Sand and also the Compensation Site during the early part of the ebb tide while Foul Holme Sand is still inundated.
- 4.2.2 The response of the flows to the enlargement of Cherry Cobb Sands Creek is one factor that makes estimation of its future size uncertain. A second factor is that the enlarged shape of the creek is also uncertain depending on whether the bed or the sides of the creek are less resistant to erosion. The final shape of the creek is thus somewhat uncertain. In this assessment a possible future shape is suggested and then tested in the hydrodynamic model to consider the flows and velocities that arise and see if these produce characteristics that seem likely to be sustainable. The

final shape of the creek is likely to have a similar cross section area to that predicted but may well have a different width and depth from that predicted.

4.3 CHANGES TO CHERRY COBB SANDS CREEK

4.3.1 In Annex 32.6 Table 7 of the Environmental Assessment, an assessment of the likely erosion in Cherry Cobb Sands Creek for 90 and 110 ha Compensation Site designs tested in that Annex and Annex 32.4 was made. This table considered Points 15, 16 and 17 in the creek that are shown on Figure 19. With the reduction in the area of open managed realignment the changes in flows within Cherry Cobb Sands Creek are likely to be around half those previously expected. Accretion is still anticipated at Point 15 and erosion at Points 16 and 17 associated with the drainage flows from the open managed realignment area and the smaller drainage flows from the three RTE fields.

4.3.2 The dimension of Cherry Cobb Sands Creek increases towards its mouth as illustrated in Table 7 which shows the width, invert level and cross section area below a top level related to the level on Foul Holme Sand of the creek at Points 15 and 16 shown on Figure 7 and also Point 17 and a fourth location at the southern end of the creek close to its outfall into the Humber. All four points in the creek are shown on Figure 19. There is a large reduction in invert level downstream of Stone Creek accompanied by an increase in width and cross section area even though the level of the adjacent part of Foul Holme Sand reduces along the length of the creek.

Table 7 Baseline dimensions of Cherry Cobb Sands Creek

Location	Top level (mAOD)	Invert level mAOD	Width (m)	Cross section area (m ²)
Point 15	2.06	0.26	30	24.0
Point 16	1.95	-0.16	54	60.6
Point 17	1.04	-1.52	80	114.8
Downstream	1.00	-2.15	149	147.1

4.3.3 The revised creek dimensions tested in the model are set out in Table 8. At Point 15 the invert level has been raised to represent the siltation of Cherry Cobb Sands Creek anticipated north west or upstream of the breach. At this section no change in creek width is considered.

4.3.4 Downstream of the breach erosion and enlargement of the creek is expected. At Point 16 between the breach and Stone Creek, the width of the creek is increased on the west (Foul Holme Sand) side by 6 and its invert level is reduced by around 0.7 m. This section has the largest change in creek cross section area. Enlargement is expected on the west side because the dominant ebb flow from the Compensation Site is directed towards this bank of the creek and so expected to erode it in preference to the east bank.

4.3.5 Downstream of Stone Creek at Point 17 no change in the width of Cherry Cobb Sands creek is anticipated, but the invert level is assumed to drop by around 0.4 m. No change is assumed at the downstream end of the creek. The invert level along the creek provides a fall between the breach and the low water channel.

4.3.6

The existing shape of Cherry Cobb Sands Creek at the four points shown on Figure 19 is compared on Figure 20 with the anticipated changes in the creek as set out in Table 8. The distance scale indicates to a consistent scale except for the very wide downstream section how the creek currently increases in size and is expected to do so once the RTE fields and associated open managed realignment site are operational.

Table 8 *Estimated future dimensions of Cherry Cobb Sands Creek*

Location	Top level (mAOD)	Invert level mAOD	Width (m)	Cross section area (m ²)
Point 15	2.06	0.88	30	17.9
Point 16	1.95	-1.91	74	180.5
Point 17	1.04	-1.91	80	153.3
Downstream	1.00	-2.15	149	147.1

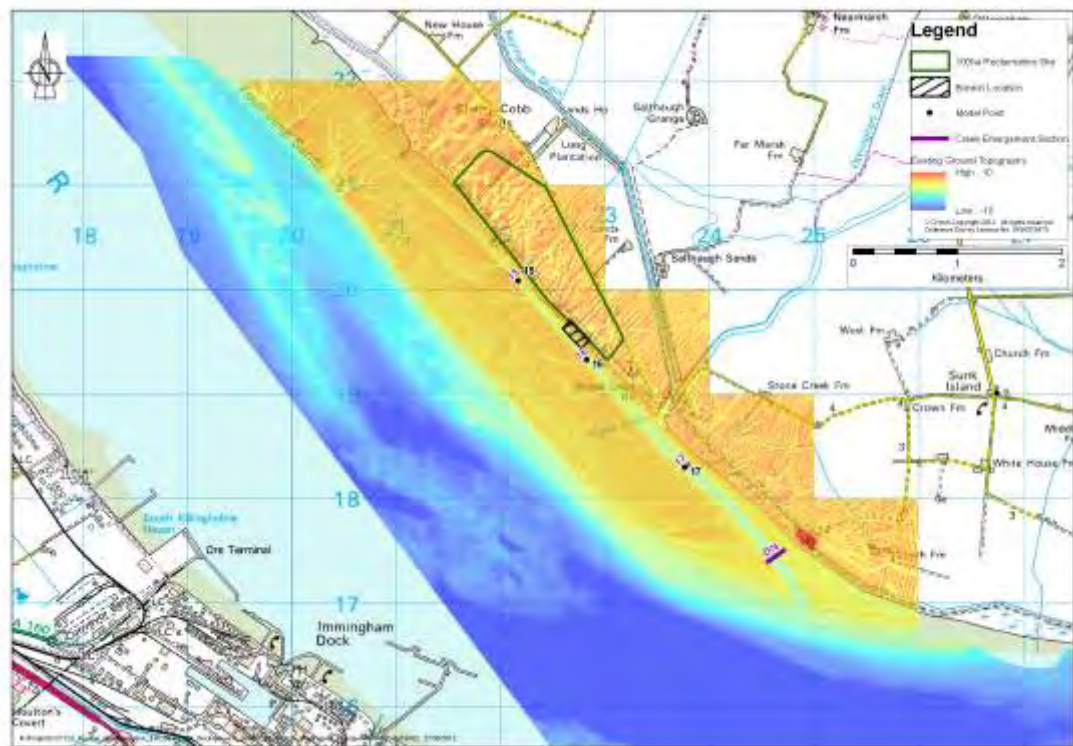
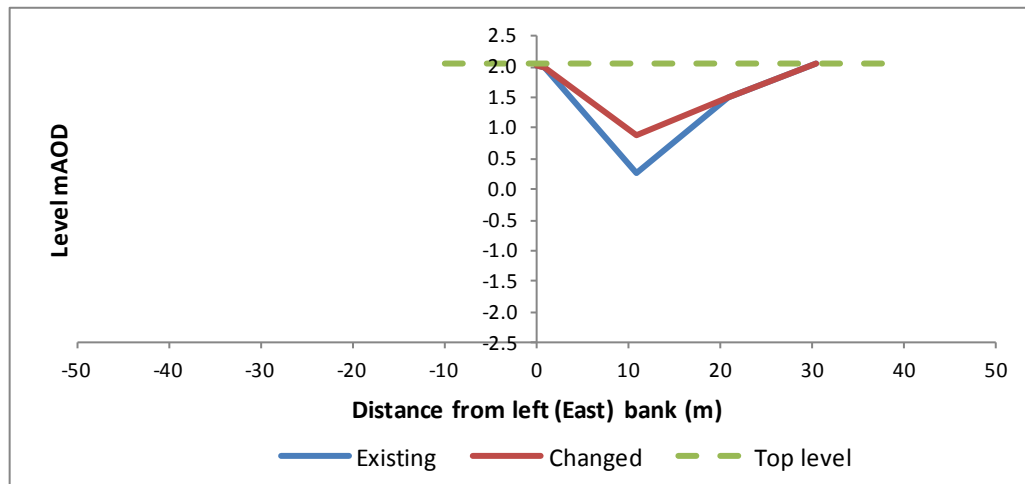
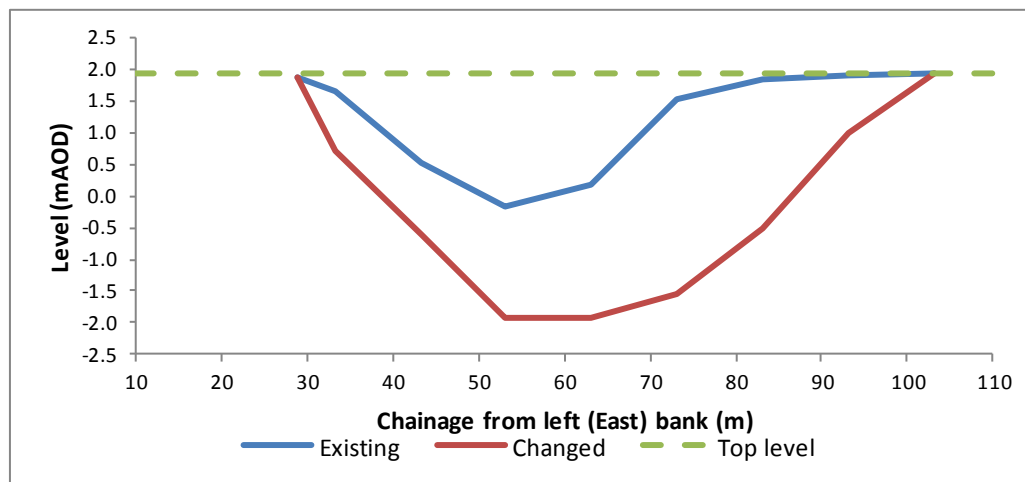


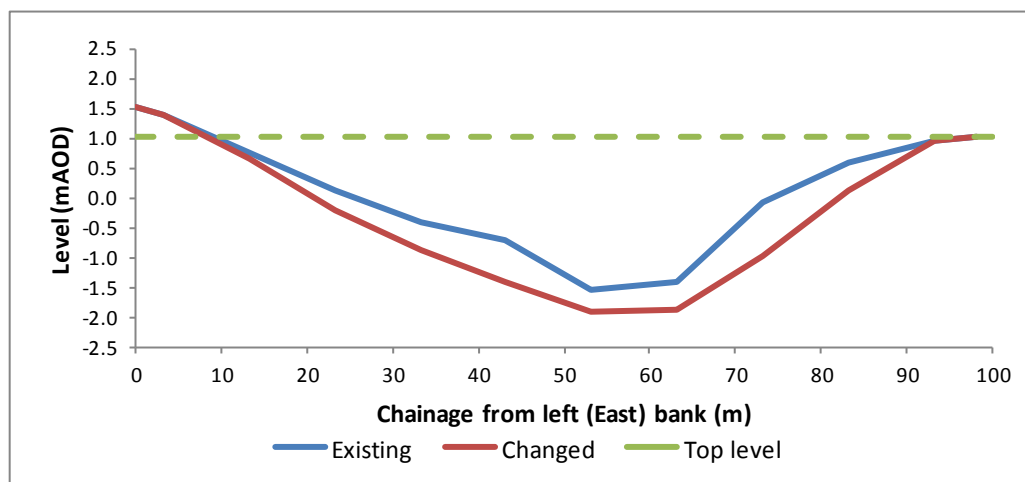
Figure 19 *Assessment points within Cherry Cobb Sands Creek*



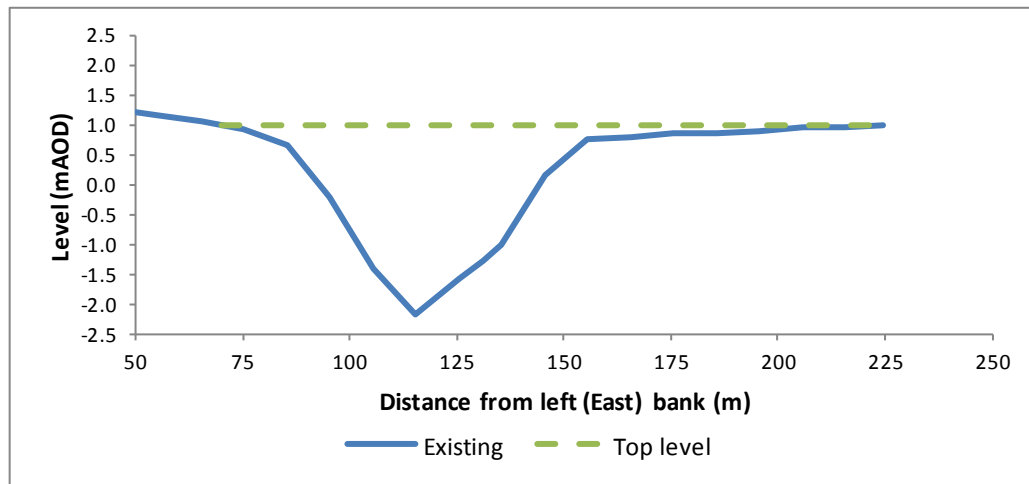
Section 15



Section 16



Section 17



D/s section (note change of distance scale)

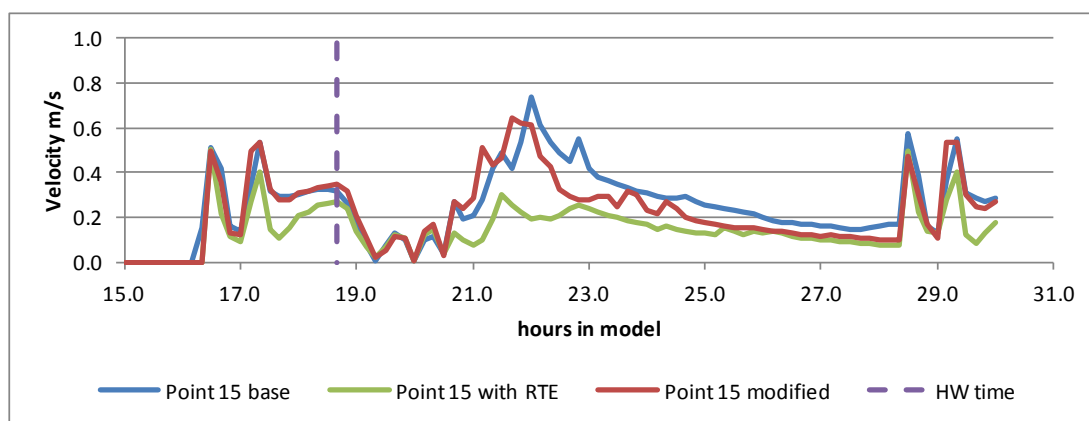
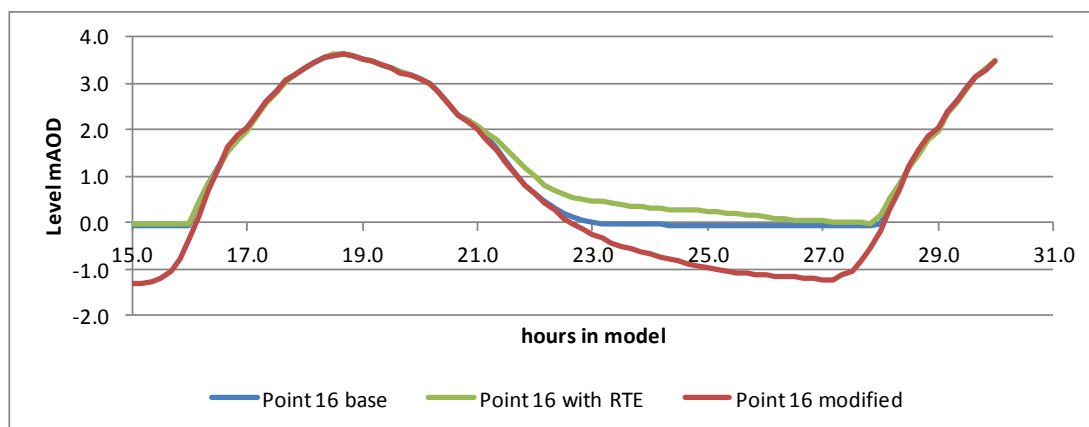
Figure 20 *Anticipated changes in Cherry Cobb Sands Creek due to RTE*

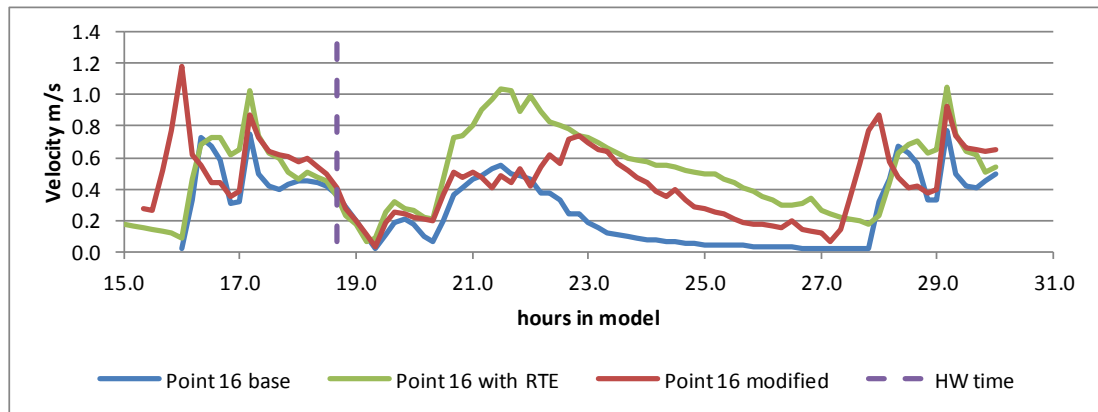
4.4 *CHANGES TO TIDES AND VELOCITIES IN CHERRY COBB SANDS CREEK*

- 4.4.1 The effects of the changes to the dimensions of Cherry Cobb Sands Creek on tide levels and velocities are shown for Points 15, 16 and 17 in Figure 21. This figure shows existing conditions, the immediate effect of the introduction of the Compensation Site before Cherry Cobb Sands Creek has had time to respond and the initially anticipated conditions after the creek has responded to the changes in flow associated with the discharge from the Compensation Site.
- 4.4.2 At Point 15 northwest of the breach, the operation of the Compensation Site reduces velocities. The majority of flow in the creek is diverted into the site on the flood tide, and on the ebb tide, the existing drainage is impeded by the outflow through the breach. The ebb tide level drops more slowly as a result of this impedance. The anticipated reduction in cross section at this site combined with the anticipated increase in cross section south east of the breach restores velocities and tide levels in this part of the creek to values similar to those found before the Compensation Site was commissioned.
- 4.4.3 Between the breach and Stone Creek at Point 16, the largest changes are anticipated as a result of the operation of the Compensation Site as illustrated on Figure 21. At Point 16, the fall of the tide is delayed by the presence of the outflow from the open managed realignment area, but because of the invert of the creek low water level is unable to reduce. Enlarging the creek prevents the delay in the fall of the ebb tide predicted immediately after the site is commissioned. The lower invert level in the creek leads to lower water levels in this part of the creek, though there remains some ebb flow in the creek until the flow reverses on the incoming tide.
- 4.4.4 At Point 16, velocities are predicted to increase markedly on the ebb tide before the creek starts to change. With the enlargement of the creek, velocities on the ebb tide reduce but not to velocities as low as those experienced in the existing condition. On the flood tide there is a small increase in velocity as the flooding tide flows up this enlarged channel.

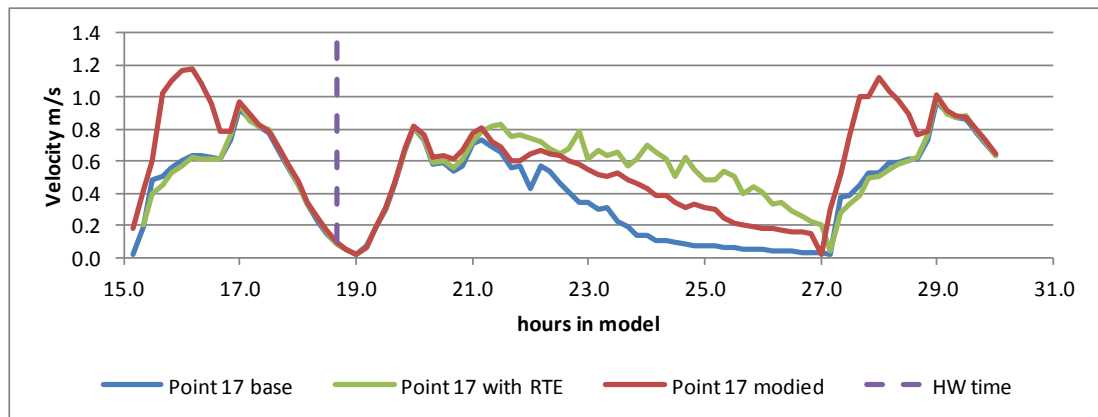
4.4.5 At Point 17, the changes arising from the introduction of the Compensation Site are less pronounced than those upstream of Stone Creek. The enlargement of the creek has the effect of increasing flows on the flood tide with notably larger velocities at this site as indicated on Figure 21. On the ebb tide the assumed enlargement of the creek helps ameliorate the increase in velocity resulting from drainage of the Compensation Site, but does not fully compensate for this change.

4.4.6 Plots of shear stress for the existing creek and for the changed creek are shown in Figure 22 for Points 16 and 17. Point 15 is not shown because the creek dried out for part of the ebb tide so the comparison is not valid. The maximum shear stress at both sites now occurs on the flood tide and is associated with tide returning up the larger creek. During the ebb tide at Point 17, shear stresses with the RTE in operation and the enlarged creek are very similar.



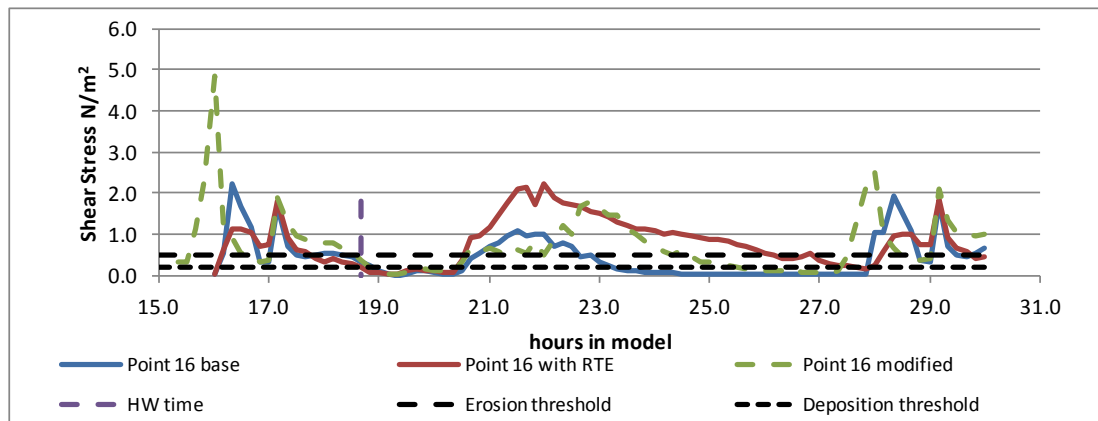


Point 16 velocity

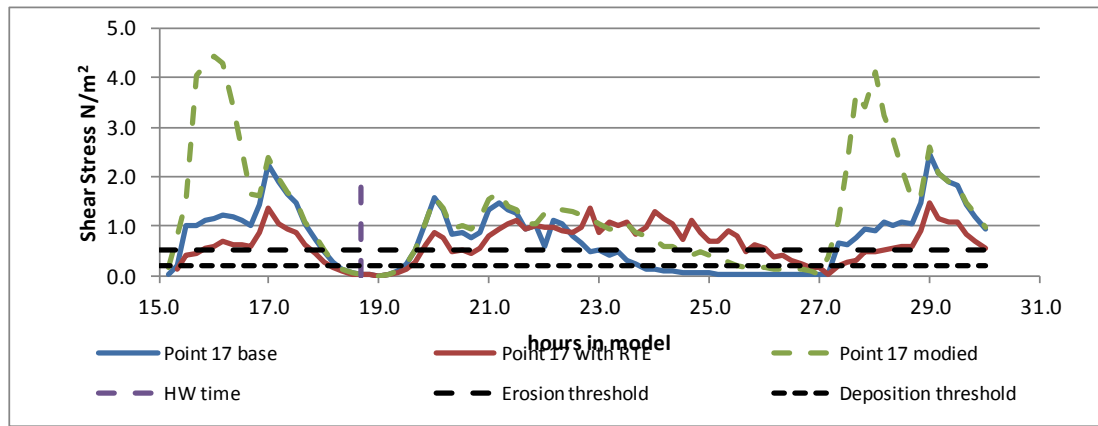


Point 17 Velocity

Figure 21 *Effects of creek dimensions on tide and velocities in Cherry Cobb Sands Creek*



Point 16



Point 17

Figure 22 Predicted shear stress in Cherry Cobb Sands Creek

5.1 INTRODUCTION

- 5.1.1 The predicted ground profile in both the RTEs and the remainder of the managed realignment site, as shown on Figure 17 was used to predict water levels, velocities, shear stresses and ground profiles after 10 years in exactly the same way as used for the predictions of conditions after five years.

5.2 TIDE CONDITIONS IN THE CHERRY COBB SANDS SITE

Tide levels within the site

- 5.2.1 The predicted tide levels after five years during the modelled evening high spring tide of 8th September 2010 are illustrated in Figure 23. Tide curves are illustrated for Point 3 in the centre of RTE Field 3 and for Point 13 in the creek running through the centre of the managed realignment and also at Point 16 in Cherry Cobb Sands Creek about 100 m downstream of the breach. The locations of all these points are shown on Figure 7.
- 5.2.2 The tide rises and falls first in the creek (Point 16) and then in the part of the site closest to the breach (Point 13). High water levels are similar within the site and in the creek outside. The flood tide is much shorter than the ebb tide within Cherry Cobb Sands Creek and in the managed realignment site. Compared with the tide levels immediately after breaching in Figure 9, those at Point 13 have dropped by around 0.3 m after five years at hour 22 because of the greater drainage available through the enlarged Cherry Cobb Sands Creek, where levels have dropped a similar amount.
- 5.2.3 Greater detail of how the tide is predicted to rise and fall in the centre of each RTE field is shown on Figure 24. The predicted depth and level of flooding during this tide and also the time that each field is at its minimum depth at the sampling point are reported in Table 9. The differences between individual RTE fields noted initially remain in these predictions of conditions after five years. At this time, the assumed accretion reduced the slope across each field which impairs the ability of the fields to drain and the model therefore predicts a minimum depth of water in each field of 0.01 m on all tides. Predicted water depths after five years within each RTE at the end of the ebb of the high spring tide are shown on Figure 25, which indicates the areas where predicted water depths exceed 0.003 m. Water is typically 0.01 m deep, though deeper in lower parts of each field.
- 5.2.4 Predicted water levels within each RTE increase slightly as the tidal high water level in Cherry Cobb Sands creek outside rise as illustrated on Figure 26. The responses of individual fields after five years remain similar to their initial response, though because the slope across each field has reduced, the range of maximum depths experienced has reduced from its initial value.

Table 9 *Water depths and levels in each RTE field during a high spring tide*

High spring tide conditions	Field 1	Field 2	Field 3
Max water level (mAOD)	2.27	2.34	2.41
Ground level at point (mAOD)	2.07	2.21	2.16
Max water depth at point (m)	0.19	0.12	0.24
Minimum water depth (m)	0.01	0.01	0.01
Time field is at minimum (hrs)	2.83	2.17	2.00

Velocities within the site

- 5.2.5 Predicted velocities within the Compensation Site after five years are illustrated for the same high spring tide at Point 3 in an RTE field, at Point 12 in the open managed realignment and at Point 13 in the creek through the site on Figure 27. The time of high tide is also marked to distinguish flood and ebb conditions.
- 5.2.6 Within the creek at Point 13, predicted velocities after five years have reduced to about 60 percent of their initial values. However, on the ebb tide there is an increase in peak velocity from 0.7 to 1.1 m/s at Point 13. This is linked to the 0.3 m reduction in tide level noted at Point 13, which reduces the water depth to 0.44 m after five years.
- 5.2.7 In the open managed realignment at Point 12, site velocities are predicted to significantly reduce to between 60 and 70 percent of their initial value after five years on both ebb and flood tides.
- 5.2.8 Within Field 3 of the RTE the velocity is predicted not to change significantly after five years compared with the initial predictions.
- 5.2.9 Predicted velocity patterns across the site on the late flood tide after five years are illustrated on Figure 28, though this pattern is not directly comparable with Figure 14 because of a 20 minute difference in timing. Predicted ebb tide velocities after five years, at the same time as reported initially in Figure 15 are shown on Figure 29.

Shear stresses within the site

- 5.2.10 Predicted shear stresses at Cherry Cobb Sands after five years are illustrated on Figure 30 for the same high spring tide at Points 12 and 13 within the Compensation Site. Shear stresses at Point 12 peak on the flood tide, but after five years have reduced from 3 to 1 N/m² because of the reduced tidal prism and velocities in the open managed realignment. The opposite has happened in the creek through the open managed realignment at Point 13, where maximum ebb tide shear stresses have increased from 1.3 to 3 N/m² because the lower tide level identified in Figure 23 at Point 13 causes the increase in velocity noted in Figure 27 at Point 13.

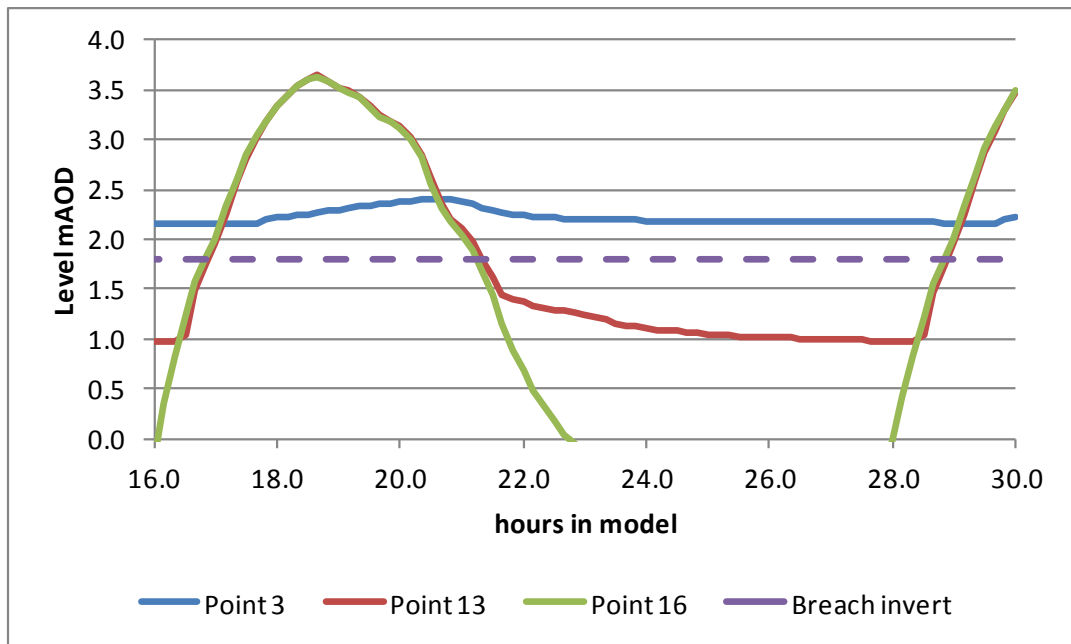


Figure 23 Tide levels in Cherry Cobb Sands RTE on a high spring tide after 5 years

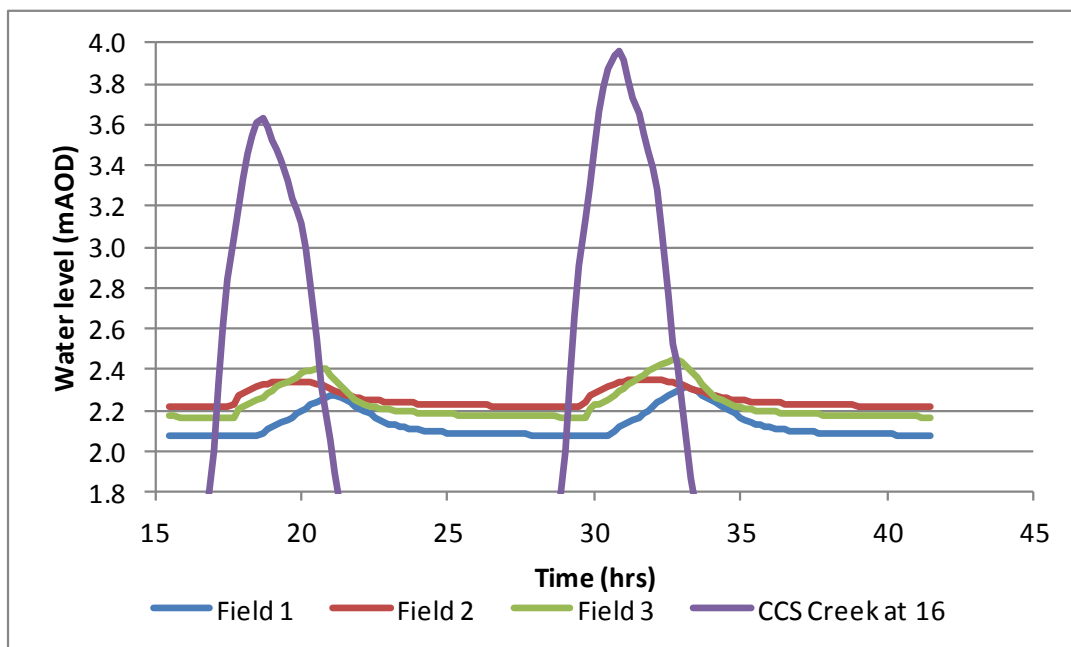


Figure 24 Tide levels within each RTE field on a high spring tide

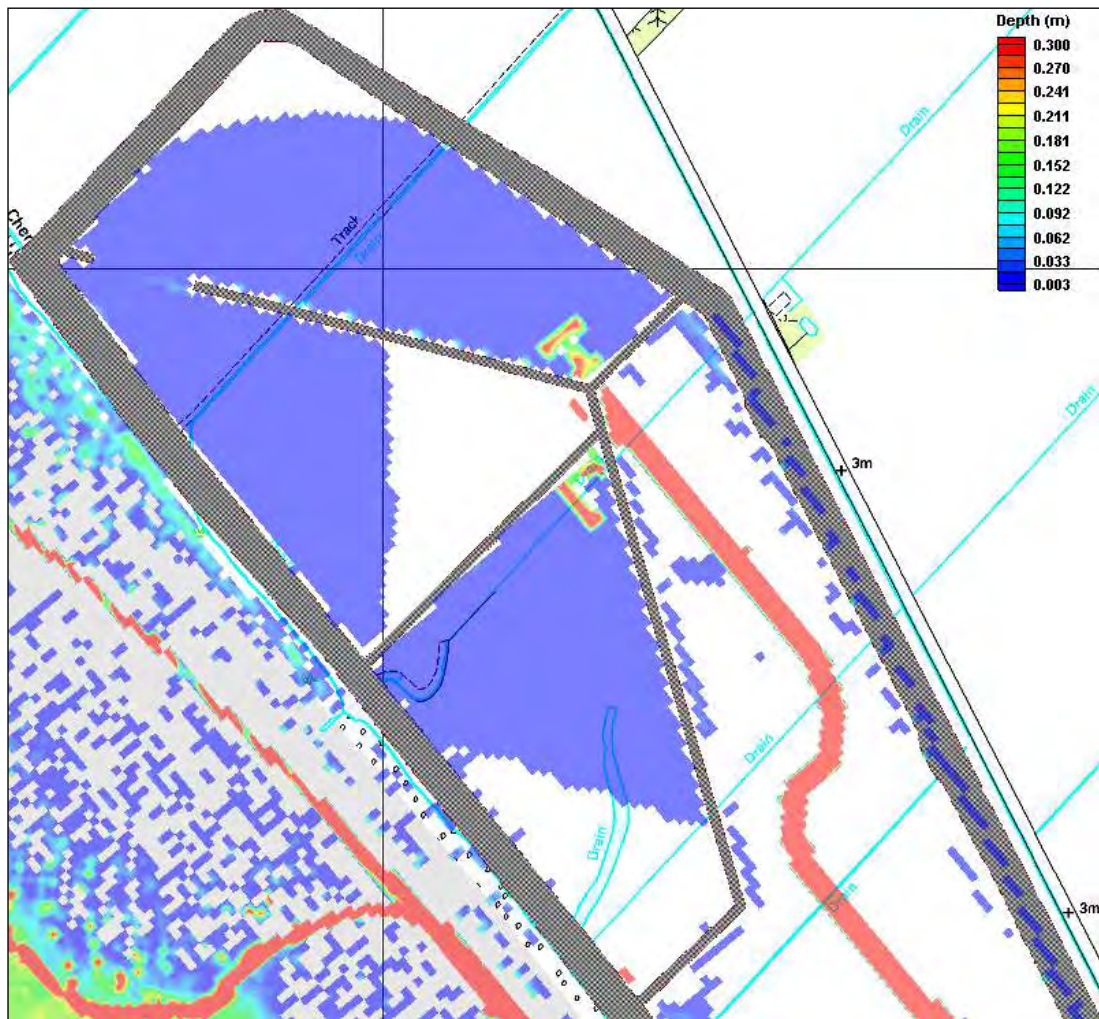


Figure 25 Water depths in RTE fields after drainage

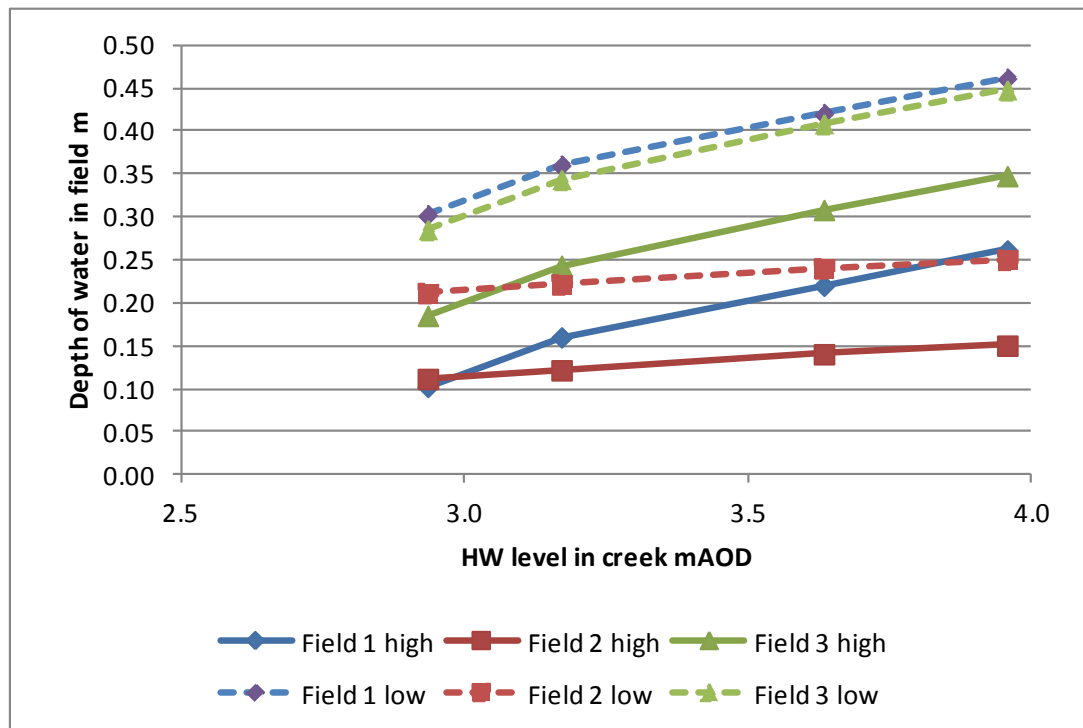


Figure 26 Water levels in each RTE as a function of high tide level outside

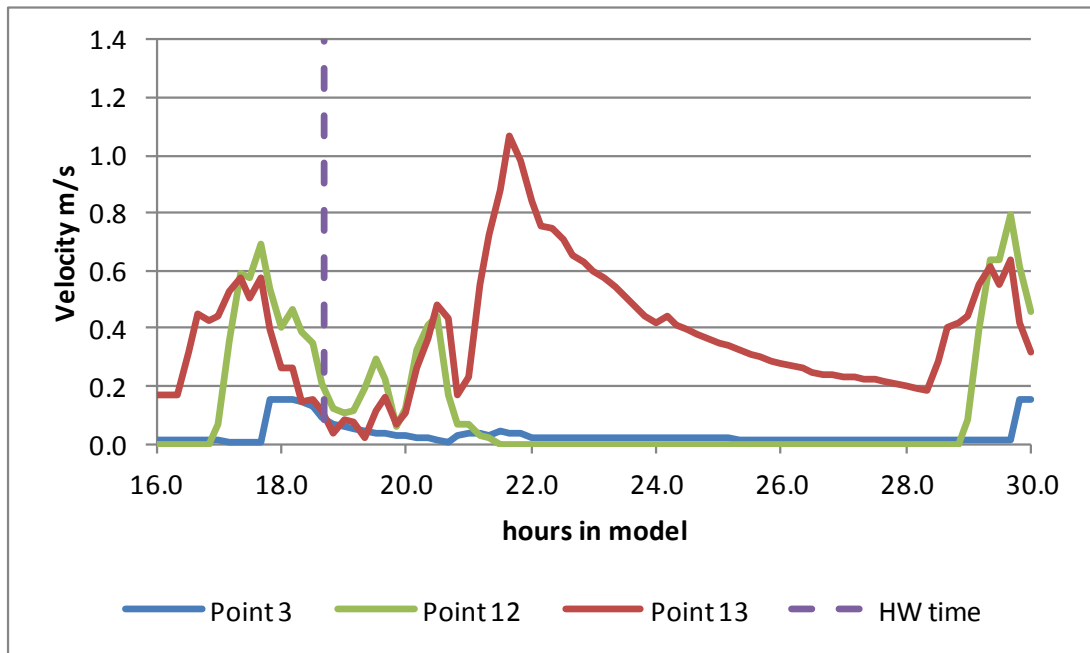


Figure 27 Velocities in Cherry Cobb Sands RTE on a high spring tide after 5 years

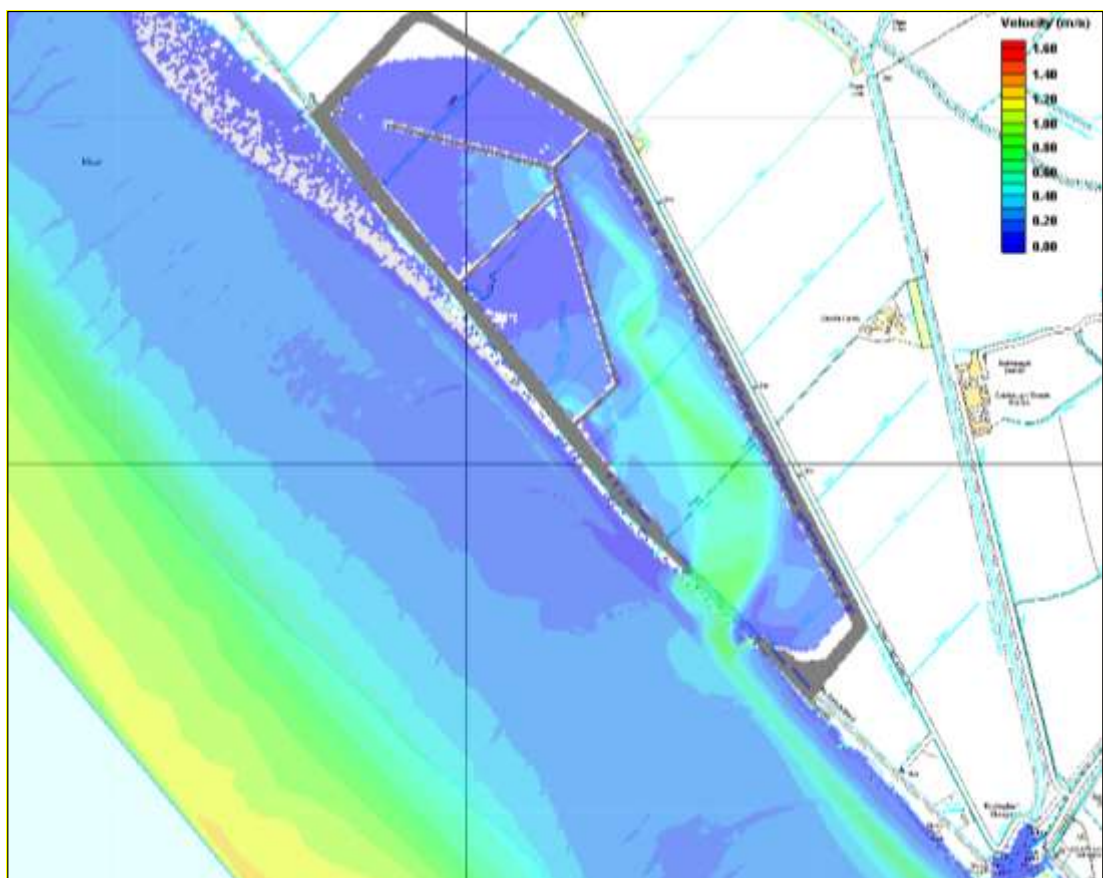


Figure 28 Compensation Site velocity patterns for RTE on the late flood tide after 5 years

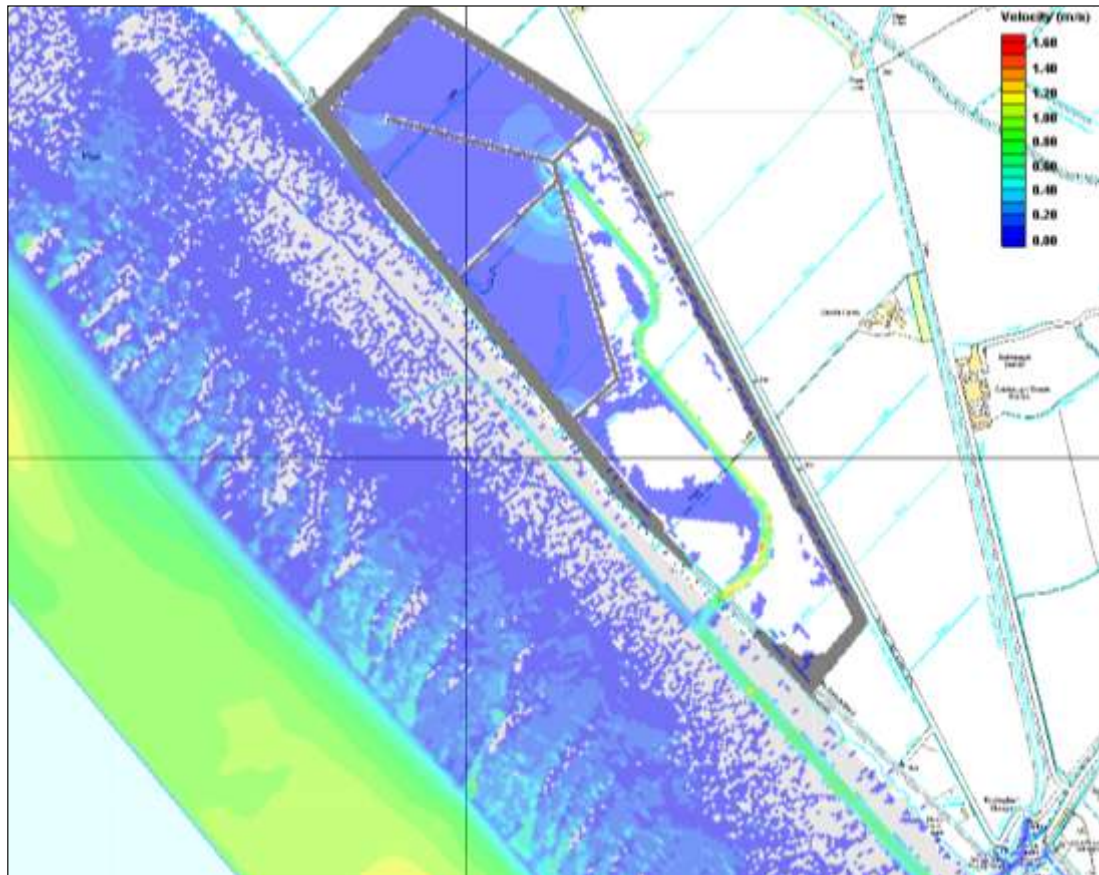


Figure 29 Compensation Site velocity patterns on the mid ebb tide after 5 years

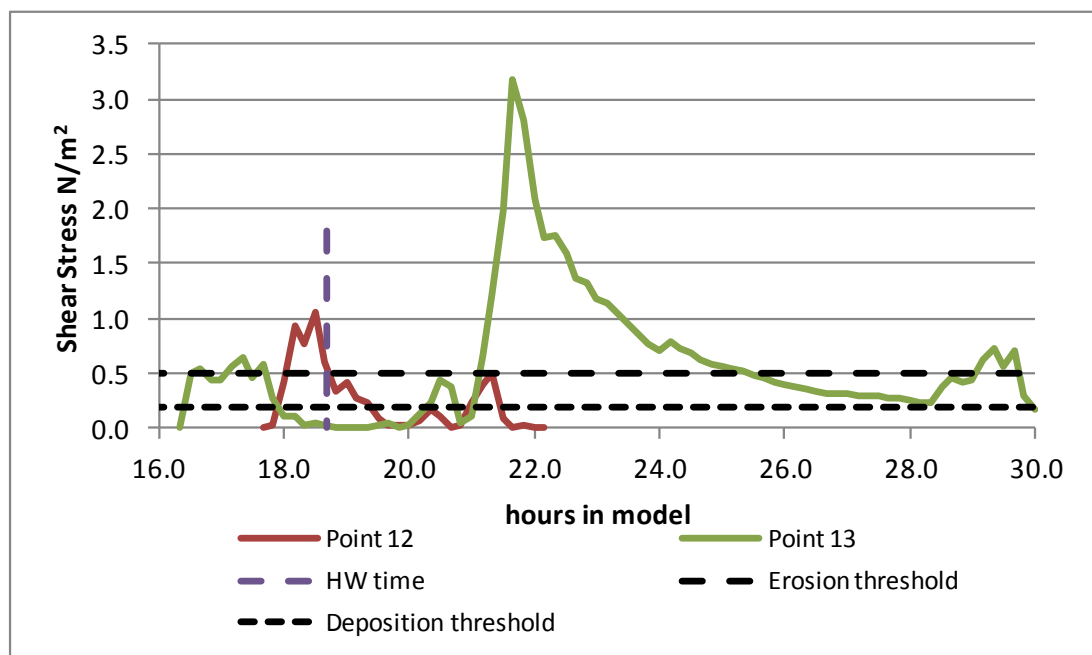


Figure 30 Shear stress in managed realignment on a high spring tide after 5 years

5.3 SILTATION AND EROSION ASSESSMENT

Accretion and erosion methodology

- 5.3.1 A siltation and erosion assessment was carried out at the 18 points shown on Figure 31 to understand the likely evolution of the site after breaching. The same sites were

used in the three RTE fields, in Cherry Cobb Sands Creek and in the creek running through the open managed realignment site. The remaining eight sites were in the open managed realignment. Five points within the open managed realignment where erosion initially was limited were excluded and three new points were added in areas that remained mudflat after five years to better define the erosion pattern within the mudflat area. The method of analysis was identical to that adopted for the first five years in section 3.5.

Predicted ground surface after ten years

- 5.3.2 The predicted ground surface of the RTE and managed realignment site after ten years is shown on Figure 31. The surface area of the site, including the breach area after ten years is compared with the surface area initially and after five years on Figure 32. The predicted changes in area are indicated in Table 10. The accretion of the site reduces the area remaining below 2.5 mAOD after ten years to 57 ha from the 66 ha remaining after five years.
- 5.3.3 Accretion within each RTE field between years five and ten is predicted to continue at a similar rate to that experienced in the first five years, continuing to reduce the slope across each field. This would impair drainage unless natural creeks developed or was mitigated by managed intervention. Ground levels in each RTE field are predicted to be in the range 2.1 to 2.3 mAOD. At rates of siltation experienced between years 5 and 10, it would take until beyond year 20 for ground levels in the highest RTE to reach 2.5 mAOD. RTE Field 3 is predicted to be the first to reach this level, with the other two fields reaching this level in the following 10 years.
- 5.3.4 The relatively small reduction in area below 2.5 mAOD predicted between years five and ten is because the area within the three RTE fields remains below 2.5 mAOD throughout this period. This is illustrated on Table 11 which shows that within the three RTE fields, the total area below 2.5 mAOD is predicted to only reduce by 1.5 ha from the initial value of 42.6 ha. The main reduction occurs in the open managed realignment which is predicted to reduce from 43 to 16 ha over ten years. This would indicate that after ten years there might be four distinct areas of mudflat remaining in the Compensation Site each having an area between 13 and 16 ha.

Table 10 *Predicted change in RTE surface area over ten years*

Level (mAOD)	After 10 years (ha)	After 5 years (ha)	Initial area (ha)
3.0	94.5	96.9	101.5
2.5	56.7	65.7	85.7
2.4	53.4	61.3	79.6
2.2	20.6	43.7	67.8
2.0	5.8	10.4	25.0
1.8	5.4	8.4	5.6

Table 11 Changes in area below 2.5 mAOD within the Compensation Site

Component	After 10 years (ha)	After 5 years (ha)	Initial area (ha)
RTE Field 1	14.2	14.4	14.7
RTE Field 2	13.2	13.5	13.8
RTE Field 3	13.7	14.2	14.2
Open Area	15.6	23.6	43.1
Total Area	56.7	65.7	85.7

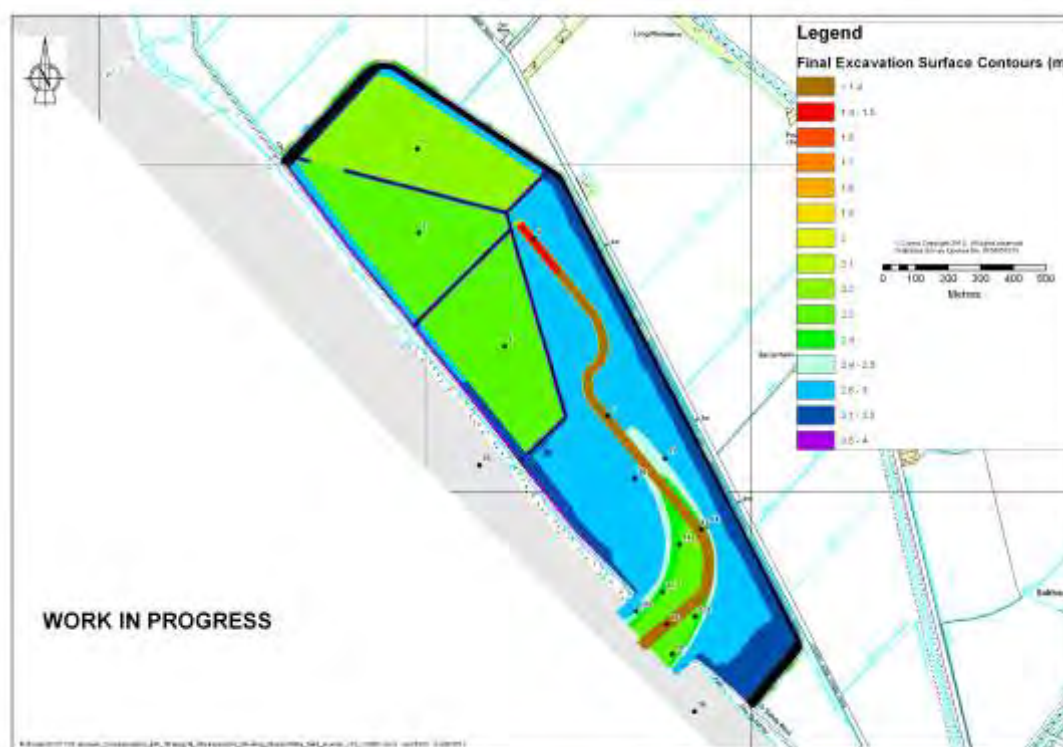


Figure 31 Predicted ground levels for RTE after ten years

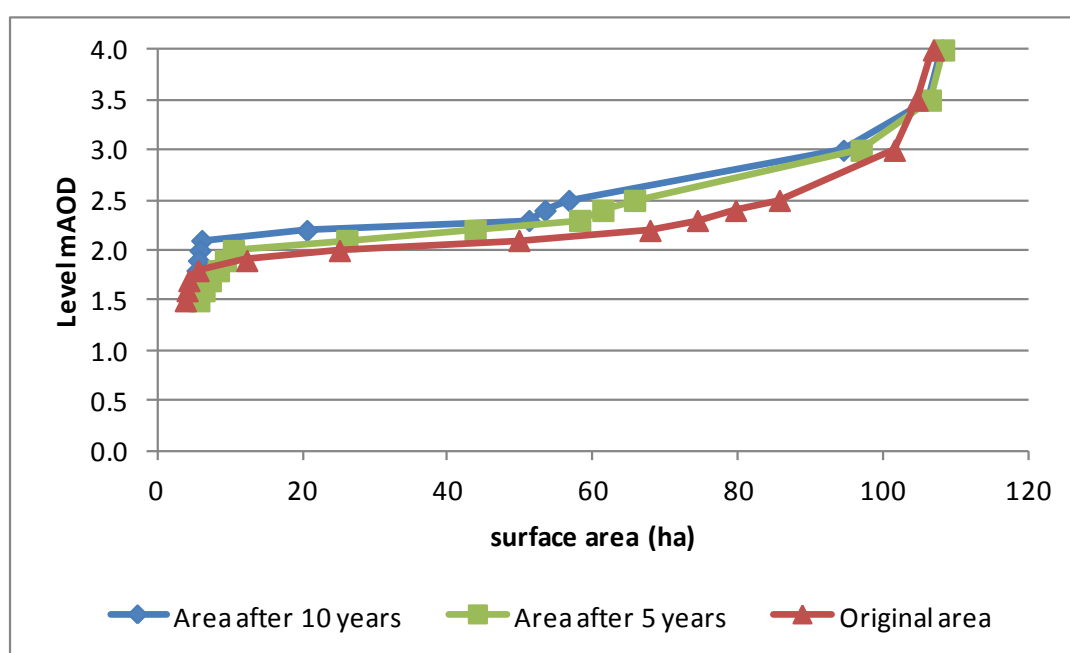


Figure 32 Surface area of RTE initially and after five and ten years

6.1 DEVELOPMENT OPTIONS

Introduction

- 6.1.1 The introduction of RTE areas into the design of the Cherry Cobb Sands Compensation Site provides a range of potential development options. The development tested in this report is intended to demonstrate the concept of the RTE approach, without optimising the design to maximise habitat and other benefits. Some of these potential changes are discussed in this section.

Intake location

- 6.1.2 In the model tests, the intake to RTE Field 3 was chosen to be from Cherry Cobb Sands Creek outside the Cherry Cobb Sands managed realignment area, while the intake to Field 2 was taken from a creek inside the site as shown on Figure 5. This was done to see if there was a difference in performance of the two intakes or a greater risk of siltation at one or the other.
- 6.1.3 The modelling showed that both intakes performed similarly for flooding the RTE areas. The creek within the site was found to have strong ebb currents and the shear stresses indicated that the creek seemed more likely to erode than accrete. The intake from Cherry Cobb Sands Creek was in an area where the size of the creek was decreasing quite rapidly, and the modelling of the creek suggested that accretion was likely once the Compensation Site was commissioned.
- 6.1.4 This indicated that it should be possible to take all the water to flood the RTE fields from the creek within the open managed realignment area, and this might be a preferable option from a geomorphology perspective. This approach is indicated as the alternative inlet on Figure 5. This approach would also have construction and environmental benefits as it would avoid the difficulties and probable environmental issues associated with construction of an intake from Cherry Cobb Sands Creek 100 m seaward of the existing flood defence across the foreshore.

Wet Roost sites

- 6.1.5 Habitat for black tailed godwits might be improved by provision of a shallow wet roost. Such an area would require prolonged shallow flooding so could not be counted as mudflat, so would need to be provided in addition to the RTE areas already considered. In other respects the requirements of minimising siltation and construction of inlet and outlet works would be fairly similar to an RTE.
- 6.1.6 Two potential sites for a 5 ha wet roost have been identified in areas that are likely to turn rapidly into saltmarsh and so not detract from the provision of mudflat. These potential sites are identified as areas A and B on Figure 33. Careful consideration will need to be given to site design and management to ensure saltmarsh does not form in this area. One possibility may be to flood it on a spring

tide and maintain it flooded for about 10 days than drain the water off before refilling on the following set of spring tides. Infrequent and shallow flooding will limit accretion and maximise the life of the site.

Provision of a fourth RTE

- 6.1.7 The performance of the RTE areas assessed in sections 3 and 5 of this report has shown that such areas have low siltation and should be capable of delivering mudflat habitat for more than 10 years subject to satisfactory management of the site. If the open managed realignment area is reduced in size even further, it would be possible to include a fourth RTE within the Compensation Site as indicated on Figure 34.
- 6.1.8 In this option, Fields 3 and 4 could be operated independently or be linked in the same way as Fields 1 and 2. Linking the fields would have the advantage that with an inflow into the southern end of Field 4, the outflow from both fields could be at the same location as the proposed outfall from Field 3 shown on Figure 5. This would ensure that all drainage from the RTE fields entered the head of the creek through the open managed realignment site.
- 6.1.9 The addition of a fourth RTE would reduce the open managed realignment area and although the additional RTE is sited in an area where accretion is predicted to be rapid, its presence would be likely to lead to some loss of mudflat within the open managed realignment area. In practice the effect may well diminish over time as the area where Field 4 is located is subject to fairly rapid accretion, so that the loss after 10 years would be much less than the initial loss. This suggests a scheme with a fourth RTE area may possibly provide more mudflat area after 10 years than the scheme tested in this report.

6.2 MANAGEMENT INTERVENTIONS

- 6.2.1 The introduction of RTE areas into the design of the Cherry Cobb Sands Compensation Site is likely to require greater management than required for a conventional managed realignment site that is left to develop naturally.
- 6.2.2 There is likely to be a need to adjust the operation of the structures to ensure they initially perform as intended and continue to do so as the separate RTE areas evolve. Site management might include measures to limit saltmarsh growth such as:
- Restricting discharge through the outlet pipes by closing one or more pipes temporarily or permanently to restrict drainage of the RTE.
 - Putting stoplogs in front of all outlet pipes on one of the RTE fields to maintain a minimum water level within a field for a temporary period if required.
 - Improving drainage within the RTE fields to ensure drainage continues to work correctly even if initial slopes change as a result of siltation.
- 6.2.3 These management options might be employed to increase or manage the wetness of the RTE to maximise the benefit for the target bird species, restrict the growth of saltmarsh or if needed kill off saltmarsh that had started to establish.

- 6.2.4 Measures to restrict siltation might include restricting or preventing inflow into one or more of the RTE fields on specific tides to minimise the rate of siltation. These measures might be beneficial if operational experience indicated that a large amount of sedimentation was occurring on a few storm tides.
- 6.2.5 Measures to restrict the rate of inflow might include providing higher weir levels where the inlet discharged into the site or by operating sluices on inlet pipes to restrict inflow. These operations would be expected to optimise the overall performance of the inlet rather than to be adjusted on individual tides. If the latter was required it would require automation of sluices, which is not envisaged.
- 6.2.6 The review of RTE sites in Ref 7 includes experience from existing sites and interventions already employed or proposed to manage the specific issues with RTE operation, especially in areas with high sediment loads.

6.3 ENVIRONMENTAL ISSUES

- 6.3.1 There are a number of environmental issues associated with the RTE scheme that have not been assessed in the Environmental Statement, which only assessed impacts from a traditional managed realignment design (ie breach). The construction of the RTE differs from the original design of the managed realignment site in that there will be a number of internal embankments constructed to form internal cells, with a number of inlet and outlet culverts allowing the water to flood and drain from the individual cells of the RTE. In addition to the internal culverts, in the scheme modelled in this report there would be a 100 m long culvert extending across the foreshore from the existing flood embankment to Cherry Cobb Sands Creek.
- 6.3.2 The environmental issues associated with the RTE scheme can be summarised as follows:
- The permanent presence of the internal embankments affecting landscape although this would be minor as they could only be viewed from the bird hides and will form part of the features of the site;
 - The amount of material required for culvert construction that will be imported to site resulting in the use of more natural resources and traffic movements;
 - The permanent loss of approximately 0.05 ha saltmarsh (100m x 5m) for the footprint of the culvert across the foreshore;
 - The temporary impact on approximately 0.03 ha (100m x 3m) of saltmarsh along the length of the culvert which will be used for working area and access by tracked vehicles. This can be partly mitigated by using matting or possibly shingle mattress;
 - Temporary disturbance to birds during construction;
 - Short term water quality impacts due to excavation of the intertidal area;
 - Damage or disruption to higher marsh / transitional habitat where tracked vehicles enter and leave the foreshore site;
 - Health and safety issues for workers on the foreshore;
 - Landscape issues associated with the construction and operation of a 100m culvert across the foreshore, although some of its length may eventually be buried.

6.3.3

These potential impacts will all require further consideration and assessment. However, in order to avoid the majority of these impacts, the design of the RTE can be amended as discussed in section 6.1 to draw all its water from within the Compensation Site and so avoid the effects highlighted above of constructing an intake culvert across the saltmarsh. The first two effects associated with landscape and construction access would remain but are likely to be relatively minor.

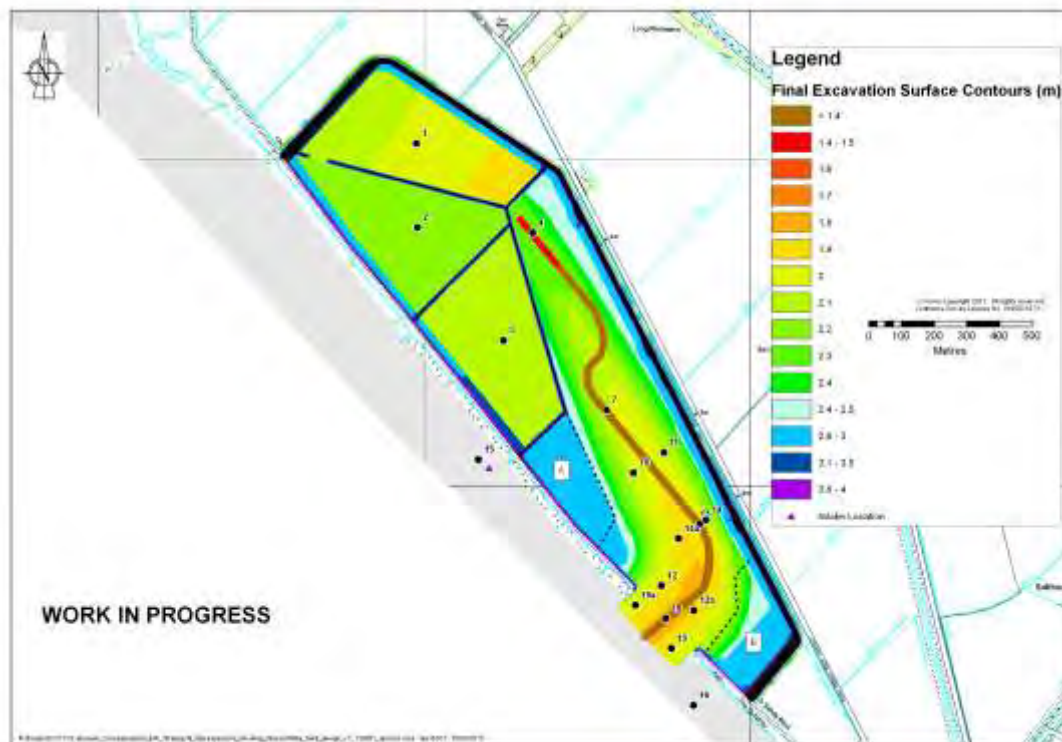


Figure 33 Potential wet roost areas within the Compensation Site



Figure 34 Layout for a possible fourth RTE site at Cherry Cobb Sands

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	ABLE MARINE ENERGY PARK APPLICANT COMMENTS ON THE WRITTEN REPRESENTATIONS	AUGUST 2012

**APPENDIX WR21.1
Managed Realignment & Regulated Tidal Exchange: Humber Estuary Scenario
Briefing Report**

the
INSTITUTE
of
ESTUARINE
and
COASTAL
STUDIES



**Managed Realignment and Regulated
Tidal Exchange: Humber Estuary
Scenario Briefing Report**

Report to Able UK Ltd

Institute of Estuarine and Coastal Studies
University of Hull

1st August 2012

Author(s): N Cutts

Report: SBB354-F-2012

**Institute of Estuarine & Coastal Studies
(IECS)**

The University of Hull
Cottingham Road
Hull
HU6 7RX
UK

Tel: +44 (0)1482 464120
Fax: +44 (0)1482 464130

E-mail: iecs@hull.ac.uk

Web site: <http://www.hull.ac.uk/iecs>

Able UK Ltd

Managed Realignment and Regulated Tidal Exchange: Humber Estuary Scenario Briefing Report

1st August 2012

Reference No: SBB354-F-2012

For and on behalf of the Institute of Estuarine and Coastal Studies	
Approved by:	Nick Cutts
Signed:	
Position:	Deputy Director, IECS
Date:	1 st August 2012

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We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

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1. INTRODUCTION & CONTEXT

1.1 The Concept & Application

The concept of Managed Realignment, the deliberate realignment of coastal defences, as a coastal management tool has been used in the UK for around 20 years, but with earlier experience in other countries e.g. USA. As a management tool, the technique has been used primarily to provide two key services; habitat compensation; and flood risk amelioration.

However, whilst there are also sound arguments for the use of the technique on economic grounds (e.g. in allowing a reduced standard of defence or reduced defence reach whilst maintaining or even enhancing flood assimilation), these provisions do not appear, at least publicly, to have been the main foci of the application of the technique, with habitat provision and enhancement and associated environmental improvements providing the main focus of the technique in the UK.

This has certainly been the case on the Humber Estuary, where a principle of 'no nett loss of habitat' has been developed and applied as one of the wider management aims for the Humber Estuary European Marine Site. This principle has therefore seen the application of the technique at a series of sites from the inner to outer estuary, with the majority of these sites being developed to provide compensation and/or mitigation for habitat loss elsewhere on the estuary. Habitat loss has been identified both as a direct effect of plans or projects within the estuary e.g. new defence alignments extending into the estuary, port development, or through coastal squeeze whereby the process of relative sea level rise in areas of hard, static flood defences leads to the effective loss of intertidal habitat over time, as the wider estuarine system is unable to respond to such a rise by moving further inland. However, other factors such as sediment supply and the wind-wave climate may also influence this loss in these circumstances (e.g. as postulated by Pontee, 2011).

Within the Humber Estuary system, whilst habitat provision and the associated environmental benefits have been the main objective from such schemes, the potential for flood assimilation has also been important, in particular on the upper Humber at the Alkborough site, where arguably this is the main management criteria of the development.

The provision of the technique on the Humber Estuary to date has therefore been one primarily viewed as an *environmental* management solution, as it has within the wider UK context (e.g. as described by Morris, 2012). However, as noted above, there are direct flood risk management attributes associated with the technique, as well as economic ones including the potential for the use of lower defence standards in areas where the technique has been deployed.

Furthermore, there has been a recent development of a wider viewpoint on the service delivery of such sites to include environmental benefits, through the concept of ecosystem services. This approach allows for the integration of a more holistic characterisation of the technique (and in particular the habitats provided), including the value of the site for a range of estuarine functions in addition to the simplistic habitat and waterbird metrics that tend to have been the underpinning of the approach in the past. This allows for a range of ecosystem functions to be included in the assessment of technique efficacy, including provision under Directives other than the prime Wildbirds and Habitats & Species Directives that have been the driver of the technique.

It is also possible that wider societal benefits can be factored into the appraisal of the delivery efficacy of a scheme, including issues relating to carbon capture, public utilisation and flood risk management. For instance saltmarsh acts as a carbon sink, and as such, the creation of new marsh contributes to national targets, whilst when fronting flood defence structures, saltmarsh can also provide additional protection and *in extremis*, allow for the reduction in the height, width or construction of the defence structure whilst maintaining the required standard of protection.

However, it should be noted that in many instances the primary objective of realignment schemes are in the provision of compensatory mudflat habitat, and as such, these additional services may be regarded only as minor attributes by Natural England. However it is emphasised that a range of intertidal habitats deliver ecosystem services, and as such, the establishment of a mosaic within a realignment site is not necessarily a poor conservation objective, particularly within the context of the Humber where saltmarsh has undergone considerable historical loss of area.

1.2 Experience on the Humber Estuary

As noted above, the technique has been applied at a number of sites around the Humber Estuary, primarily in relation to the provision of compensatory habitat, and thus for environmental rather than flood risk reasons. In particular, the technique has been used by the Environment Agency and Ports Industry to compensate for intertidal habitat lost through development plans. This has been in relation to the 'no nett loss of habitat' principle applied to the estuary by managers in relation to the Wildbirds and Habitats & Species Directives applying to the site.

In principle, this has required the realignment sites to fully compensate for habitat type and area lost through a development project, and with function delivery also to be similar via the location of the compensatory habitat in the general vicinity of the area lost (within broad estuary zonation requirements) e.g. the compensatory site to provide a habitat function capable of supporting an assemblage of waterfowl (and their key activities) similar to those which have been lost.

The first 'managed realignment' site within the Humber Estuary to become operational was Paull Holme Strays, located in the middle estuary, on the north bank, downstream of the city of Hull. This site has been operational now for almost 10 years and there are considerable data available regarding its ecological development (e.g. sediment type, height, intertidal invertebrate community, flora and avifauna). Data from the monitoring programme, as well as those from other similar programmes at other sites on the Humber have indicated that managed realignment sites develop very rapidly in terms of sedimentation, with rates of 30cm per annum recorded.

Biological development is more slow, but the data indicate that an invertebrate community of broadly similar composition to that outwith the site will develop over a number of years. The sites are also utilised by a number of waterbird species, both as a roost and foraging resource, although physical extent and enclosure can influence the former, and the latter aspect may not always directly replicate the areas outwith the site in terms of prey availability and carrying capacity.

Importantly, monitoring has shown that in addition to generally rapid accretion, saltmarsh communities will also swiftly develop. The Humber Estuary is considered to support

considerably less saltmarsh habitat than it should do in a natural situation, this brought about by the hard defence constraints prevalent around most of the estuary and associated land drainage and land claim. The provision of this habitat within a managed realignment area is therefore important in terms of the wider, natural ecosystem function of the Humber Estuary, although possibly at odds with the more specific condition requirements of a realignment scheme in relation to the principle of 'no nett loss of habitat', where intertidal mudflat is usually the main habitat loss and thus conservation aim of the realignment site.

However, more importantly for the ongoing application of the technique on the Humber Estuary, is the sustainability of the current managed realignment sites. The Humber is a highly turbid estuary, with a suspended sediment load in excess of 300mg/l and in some areas, this increasing to over 1g/l. This has meant that accretion rates in semi enclosed areas can be very high, often well in excess of 10cm per annum and sometimes around 30cm per annum.

In fact, this high turbidity contributed considerably to the current morphology of the estuary, as it allowed the gradual land claim of intertidal habitat over time, through a process known as *warping*. This process entailed the construction of bunds in the intertidal zone with the tide allowed to flood in through a gap in the bund. The water was then held within the bunded area and the sediment allowed to settle out, before the water was then again allowed back into the estuary. Through repetition of the process it was possible to build-up the elevation of the mud until around high water, when the gap was then closed, the soil improved, drained and farmed. The design of many of the realignment schemes on the Humber partially and inadvertently mimic such warping sites, but through the low energy conditions formed within them, provide a depositional environment for the sediment.

As a result of the high suspended sediment load and the enclosed nature of most of the managed realignment sites, monitoring has shown rapid but variable accretion within them. Mudflat elevation has increased and the sites have seen a rapid colonisation of saltmarsh flora. Such marsh habitat has intrinsic ecological value, but it is unlikely to offer the same ecological function to that of the intertidal mudflats that have been lost from the instatement of a plan or project (and that are to be compensated for by the provision of the managed realignment site).

There therefore remain questions relating to the current and recent application of the tool in the direct provision of compensatory intertidal habitat in areas of the Humber, particularly where the compensatory site is designed to directly offset loss of intertidal mudflat, is located in an area of high suspended sediment and is of a design where the retardation of the ebb phase within the site is likely to lead to the deposition of suspended material.

Given that the technique and its application on the Humber is relatively new (c. 10 years), then there are no long-term data available on the long-term development of such sites. Clearly there is a potential for the technique to be of value, not only for waterbirds, but for fish, invertebrates and saltmarsh function, as well as wider value in flood assimilation. However, the sustainability of the sites to provide such services has been questioned. Evidence to date has shown that whilst sites develop relatively quickly, they also feature rapid accretion and considerable saltmarsh development.

Experience from Paull Holme Strays and other sites has shown that in some areas of the managed realignment site, accretion can lead to a considerable elevation in mudflat height in

the lower energy areas and those towards the rear of the site less regularly inundated. Similarly, saltmarsh colonisation of the mudflat in these areas has frequently occurred, with successional development noted. As such, there is a probability that some areas within a managed realignment site will accrete and vegetate to the extent that they will not continue to deliver estuarine function over time without additional management intervention.

As such, the use of the technique, although still a valid management tool, raises several issues that require redress. Furthermore, at the moment, it would appear in the light of recent local planning considerations (e.g. Donna Nook), there is a lack of public support for the tool, based both around the perceived sustainability issue, but also with regard to current land prices and agricultural production needs. Underscoring all of these issues is the inertia required to convince a coastal community of the benefit of 'returning land to the sea'.

2. POTENTIAL MANAGEMENT SOLUTIONS

2.1 Background

As discussed above, managed realignment is now a widely used technique in flood defence management as compensation for habitat loss and habitat restoration, as well as for compensation of habitat loss from port development.

It is clear that site elevation, annual accretion rate and sediment characteristics will influence invertebrate community and saltmarsh vegetation development within these sites, which will affect function for other groups such as birds and fishes.

Where flood defence is the primary objective of the realignment site itself, any estuarine intertidal habitat which develops can be considered beneficial, and perhaps saltmarsh in particular when both the degree of historical habitat loss as well as energy absorption potential is considered.

However, it is often the case on the Humber that compensatory habitat is intended to replace mudflat habitat on a 'no nett loss' basis (e.g. as compensation sites) and for these sites to meet their management objectives over the longer term, then there are a number of challenges and/or issues that need to be addressed.

For instance, based on experience of the development of the Paull Holme Strays site as well as other more recent sites in the Humber, realignment areas with a high suspended sediment load in adjacent waters, are unlikely to develop into sustainable compensatory mudflat habitat in the long term.

As noted above, saltmarsh habitat has considerable functional value in its own right as a resource both for fish, some birds and in flood defence. However, whilst it is readily acknowledged that saltmarsh as a broad habitat type is under-represented within the Humber, particularly against a context of historical widespread loss primarily due to historical land-claim, the habitat does not appear to be difficult to create given new space. Furthermore, it has undergone a (semi-) natural expansion over the last couple of decades in both the upper and outer estuary (Cutts *et al.*, 2012). As such the development of this habitat within managed realignment sites is often at odds with a 'no nett loss' policy relating to intertidal mudflat, where such compensatory habitat is required.

Assuming such a policy of no nett loss is therefore adhered to for current and future developments, the challenge to estuary managers and developers is therefore not to create saltmarsh (as this would appear to be a relatively easy task on the Humber), but to create functional and sustainable mid shore intertidal mudflat.

As noted earlier in text, it is the presence of the very high suspended sediment load present throughout most of the Humber Estuary waters, together with the semi-enclosed and thus low energy nature of current realignment sites that produces this problem and challenge.

An obvious solution to the problem therefore relates to the minimisation of accretion in the realignment site, either by, or in combination with:

- restricting the amount of suspended sediment carried in waters entering the site;

- restricting the retention time of waters within the managed realignment site and thus the amount of sediment 'settling out';
- providing a higher energy environment within the site allowing wave and current action to remove sediment;
- provide a morphology within the site that naturally flushes the majority of sediment back out of the system.

Alternatively, there are other options which might assist in the long-term maintenance of mudflat function in a managed realignment site such as:

- provide conditions that restrict the development of saltmarsh flora;
- manage the site to remove sediment material as and when it develops to an elevation whereby natural mudflat function is detrimentally affected.

2.2 Regulated Tidal Exchange

The broad concept of regulated tidal exchange (RTE) has been employed both in the UK and worldwide for many years. However, the title covers a range of management options and designs and the following text expands on these briefly, primarily from a UK practice perspective.

Within the UK a number (c. 15-20) of relatively small RTE projects have been undertaken, with information on these (and European examples) provided on the OMReG web site.

RTE has been suggested as being of value for a number of managed realignment scenarios, but primarily it has been cited as a method whereby low-lying land designated for realignment can be increased in elevation through the regulated flooding of the site and gradual sediment build-up, ostensibly a 'warping' process. Environment Agency flood risk management guidance in relation to managed realignment has for many years identified the application of RTE schemes for specific management needs, and in particular, application where sediment needs to be accumulated to raise the elevation of the managed realignment site. However it should be noted that much of this advice appears to be aimed at addressing the specific problems associated with the viability of managed realignment sites in low lying areas. Siltation and associated accretion in these areas does not appear to generally have been identified as an issue for the Environment Agency at a national level, and indeed, actually appears to be a management aim at many sites, in order to maximise mudflat elevation within the site.

'Tidal exchange is a potentially valuable tool in two particular scenarios: where coastal defences are likely to remain in place for the foreseeable future; and as the first phase of a longer term realignment strategy where it is necessary to build up site levels in advance of Breach or Bank Realignment...' Environment Agency website accessed July 2012.

As such, within the UK many of the RTE schemes are effectively either some form of automated sluice structure (Self Regulating Tidegate SRT) or they operate with differential input and output elevations e.g. via different levels of pipework. However, most simplistically, they can be just a simple 'sill' which can be reduced or increased in height depending on the degree of retardation and tide height, with a separate exit spillway operated by a gravity discharge sluice at a lower return elevation.

More extensive projects have been implemented on the continent and again there has been variation in the project design at these sites, ranging from manual to Self Regulated Tide gates (SRTs), but also including differential inlet and outfall heights such as the Lippenbroek site on the Schelde. This pilot project utilises both an elevated sluice, together with a reduced bank crest sill, with a discharge via gravity sluice at a lower elevation (c. 3m difference). The site is primarily for flood storage, but with the aim to produce macro-tidal conditions similar to those present on the main estuary. The scheme is referred to as a Controlled Reduced Tide (CRT) scheme, primarily aimed at reducing the effect of extreme tides in the Schelde, but with additional objectives of providing new intertidal habitat. One issue identified with the site was that there is a period of 'stagnation' when water has entered the site via the high level sluice on the flood, but is unable to exit the site at a lower level as the ebb tide has not fallen sufficiently. This leads to a period of water retention within the site of around 5 hours on an average tide. In addition, it would appear that it has been necessary to modify the frequency of inundation to address siltation issues within the site, although reported annual rates would appear to have been considerably less than those seen on the Humber, and reflect the lower levels of turbidity seen in this area of the Schelde when compared to the Humber system.

The Lippenbroek site is a precursor to a considerably larger realignment (CRT) scheme on the Schelde Estuary, the Kruibeke (KBR) site. The KBR scheme is planned to produce around 300ha of intertidal mudflat and marsh as well as wet meadow and tidal alder marsh forest. The scheme is in the process of being implemented, so operational feedback is not yet available, however, it uses a series of multiple double-banked sluices that allow the tidal incursion and discharge to be fine-tuned (Plate 1), together with an area of lowered height bank crest that can overtop in extreme events.



Plate 1: One of the Kruibeke sluices during construction.

Regulated tidal exchange sites have also been implemented on the Weser Estuary. The Kleinensieler Plate site was a capital dredge compensation site and has been operational for

around 10 years and provides c. 60ha of intertidal habitat. It uses three silled breaches with two of these (of around 50m length each) adjacent to the estuary and a further breach on a side arm. Initially the sills were set at 0.5m below mean high water. However, the site is located in an area of the Weser with relatively high levels of suspended sediment and considerable accretion was recorded from the first two years of operation (between 1.0 and 1.5m in some areas), with monitoring indicating that between 60 and 70% of the available sediment load entering through the main braches was being retained within the site. As such, the sills were raised, with the main estuary sills positioned at mean high water and the side arm one at 0.2m below mean high water (OMReG website accessed July 2012). In addition to the increase in sill elevation and reduced inundation frequency, a considerable volume of sediment was removed, returning the site to its original elevation. OMReG report that following these remedial actions, the rate of sedimentation has considerably reduced, allowing a more characteristic infauna to develop. More recently, the Luneplate site has become operational on the Weser. This regulated tidal exchange realignment site was developed as part of a compensation package for the expansion of the Bremerhaven container terminal. The site covers 215ha with tidal entry via a culvert (sluice) with surge barrier. The culvert is positioned at around 4.5m below mean high water and consists of two large chambers of 13x8.5m and there is an additional artificial creek system that has been utilised connecting the estuary with the fronting wet grassland and marsh area of the site. Detailed information on the sedimentation process in the site is not available at the present, but on a site visit in 2010 this was not raised as a particular problem.

A form of regulated tidal exchange on the Steart Peninsula fed from Bridgwater Bay in the Severn Estuary in a managed realignment scenario is proposed as part of the Bristol Port Company compensation. According to the Environmental Statement (ABP Marine Environmental Research Ltd, 2011a), this scheme is designed to produce both mudflat (at least 20ha over the long term) and marsh habitat and it is understood that the development will utilise wider shallow creek systems within the site to deliver part of the mudflat habitat component. The creeks include channel loops to maximise flow, and will be approximately 60-70m wide at their largest, tapering to 10-30m in the upper reaches of the loops. The combined length of these channels will be almost 4km with a longitudinal slope from 2.4m ODN at their end to 1.9m ODN at the breach. Where possible, historical creeks systems have been incorporated into the design, and an additional dendritic system will be developed allowing wider inundation on spring tides. It would appear that given the width of the main creeks, these would be shallow shelving in cross section to increase flow speeds and reduce sediment accretion. Basic design details are given in Figures 1 & 2 (based on information from the Bristol Port Company planning application (ABP Marine Environmental Research, 2011a & b). Figure 1 shows the general design of the site including the large main creeks and the impoundment area, as well as other enhancement features such as pools and marsh edge effects. Figure 2 provides a schematic of the RTE site, including the cill, pipe and sluice features.



Figure 1: Design Overview of the Steart Managed Realignment Scheme (Source: ABP Marine Environmental Research, 2011a).

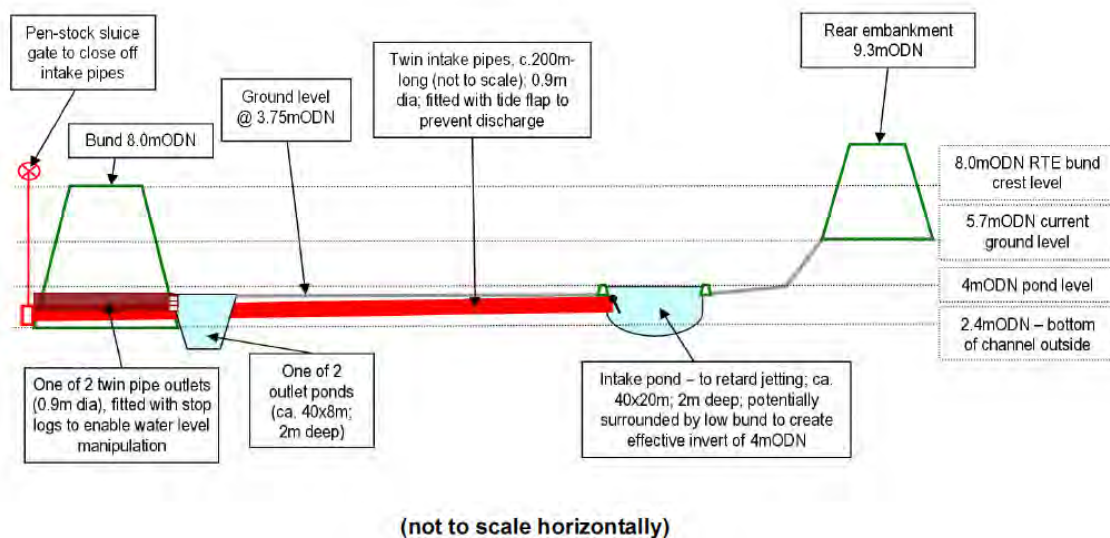


Figure 2: Schematic Cross Section of the Steart RTE Design Features (Source: ABP Marine Environmental Research, 2011b)

In addition, the scheme will incorporate a 13.5ha regulated tidal exchange area with a flat bed (e.g. a 1 to 3% slope using previous guidance) providing 11.2 ha of mudflat delimited by a bund and receiving tidal waters via pipes and a sluice which can be closed during high

suspended sediment events. The RTE site will be actively managed to limit saltmarsh growth, improve the habitat quality for wading birds and minimise mudflat accretion to maintain mudflat habitat for as long as practicable. The shallow flooding associated with an RTE is predicted to limit siltation rates to less than 20% of those experienced in the remainder of the managed realignment site, with the Environmental Statement (ABP Marine Environmental Research Ltd, 2011a) for the site indicating that parts of the main site might undergo an annual siltation of between 50-80cm, whilst within the RTE area, this might be 8cm to 14cm. The area will flood less frequently than the main realignment site (470 occasions per annum) but retain water for a longer over the tidal cycle (c. 1.5 hours on a spring tide) through retention by a low bund, with the potential for both retention time and inundation depth to be modified once operational. Sustained water-logging may reduce the potential for saltmarsh colonisation.

2.3 Tidal Retardation Potential

Section 2.1. and 2.2. have described the issues relating to the application of some form of regulated tidal exchange and provided examples of management solutions used elsewhere, together with any matters arising from their operation of relevance for the Humber scenario.

2.3.1 HOLDING BACK THE TIDE

The retardation of a flood tide entering a realignment site might reduce the amount of sediment material held in suspension and thus accretion potential. However, retardation can only occur over a limited period of the tidal cycle, perhaps only a maximum of around two hours up to and following high water (depending on site location and elevation).

Such a scheme if applied on the Humber would potentially face the problem identified at Lippenbroek in terms of a 'stagnation' period, as water would not be able to exit the site until midway through the ebb phase (depending on discharge elevation). Furthermore, given the asymmetry between ebb and flood duration on the Humber, this affect may be exacerbated. As such, it might be necessary to only allow inundation during the initial ebb phase in order to reduce the amount of time that the site is covered. This might have an added beneficial effect in that ebb volumes tend to carry a reduced sediment load.

There might be residual issues arising from such a process relating to the reduction in the actual inundation time within the main realignment site, which in turn may restrict the development of a characteristic infaunal community. Too little inundation time and frequency would both restrict the species able to use the intertidal resource and affect sediment conditions.

Furthermore, whilst it is likely that some settlement out of sediment would occur in a potential pre-entry 'settlement area' (see below) during the retardation period, some material would remain in suspension whilst some would presumably be resuspended and thus enter the main realignment area. As such, there would be a potential for longer-term accretion within the site still to occur, albeit potentially at a reduced rate than would occur without such a measure.

However, there would also be potential functional gains from this approach. For instance there is the potential that were an infaunal community to develop within the main realignment area, then due to the retardation of the tide, this area would be available during periods of tidal compression on the wider estuarine system, at least during spring phases. This would

allow feeding to continue whilst alternative 'natural areas were inundated. Roost provision would also be a potential gain at this phase of the tide, with high water roosts in general at a premium on the estuary. Only during the early ebb phase would the site commence inundation, a period where alternative estuarine sites will start to be uncovered naturally. As such, the technique has the potential to provide functional value for waterbirds during key periods of resource constraint on the main estuary.

2.3.2 RESTRICTING TIDAL INUNDATION

Less extensive tidal retardation schemes are in operation whereby simple sluice design only allows inundation at a certain tide level and examples of these are given in the previous sections.

Although the Humber Estuary is generally well mixed, there is a degree of stratification in suspended sediment levels with a substantially greater concentration of material close to the bed in most areas. As such, sluice systems have the potential to reduce the amount of sediment entering a scheme through restricted opening (elevation and temporal). However, they also need to be able to allow for the rapid discharge of the water from the system, in order to minimise the settlement time.

From examples elsewhere, basic sluice designs allowing for sill height modification have been reported as being successful to some extent, in that they allow inundation frequency to be managed both from a potential settlement event scenario, but also in terms of maintenance of ecological value within the site.

Such techniques are relatively cheap to operate and flexible, although it is questionable whether they would be able to address the twin pressure of reducing the very high siltation load issues present within the Humber whilst also maintaining a viable within site ecosystem.

2.3.3 REDUCING THE SEDIMENT LOAD

Whilst retardation and active flushing of the realignment scheme may reduce the time available for sediment accretion to occur within the site, the extremely high sediment load held within the middle estuary waters of the Humber might mean that additional measures are required to reduce load at the point of entry to the main site.

This could be achieved by a substantial but enclosed and sheltered 'settlement' area pre-entry to the main realignment area allowing sediment to settle out before entry into the main realignment site, together with a system to allow inundation of the main inner realignment area without resuspension of this material.

However, for such an approach to be sustainable, there would be a need for sufficient water energy/volume to be released back through the 'settlement area' to re-suspend material from the outer area and thus 'clean' it in advance of the next tide, otherwise capacity would be lost over time.

Clearly such a scheme would require considerable additional land, as well as detailed design and construction to ensure that manual removal of material would be unnecessary over the longer term.

2.3.4 RESUSPENDING/FLUSHING SEDIMENT WITHIN THE SITE

There are also potential options for within site design that may produce conditions that minimise accretion rates.

As noted earlier in text, the morphology of most realignment sites on the Humber (and elsewhere), produces a semi-enclosed embayment, often with only a small breach area to allow water to move in and out of the site. This design produces sheltered low energy conditions and a retarded discharge that allow sediment to fall out of suspension and accretion to occur. Such conditions do not generally occur on open mudflat systems within the estuary, as they tend to be largely stable within wider system dynamics. Certainly erosion and deposition cycles occur on open mudflats on a tidal seasonal, annual and longer cycle basis, but in general, such landforms tend to maintain their shape and function.

An obvious management response to provide a more sustainable realignment area would therefore be to replicate such conditions, developing more linear realignment features along the estuary, with a removal of existing defence structures and a reprofiling of the shore. This would allow natural processes such as current and wave action to reduce any settlement period and to allow for relatively rapid and aggressive resuspension. This is not to say that saltmarsh might develop along the upper shore, indeed this might be desirable, in that it would both provide protection of the defences from wave and current action, but would also allow for a natural morphological response of the mudflat over time in relation to relative sea level rise, and thus accommodate coastal squeeze issues for some time.

However, the potential for this type of realignment is largely unrealistic at least where large area compensation is required, as it would be expected that the logistics of land purchase over a large length of estuarine reach would be difficult e.g. for a site of the area of Paull Holme Strays, this would involve the use of an 8km reach to produce a 100m additional width to the mudflat. Furthermore, the cost of the removal of the existing defence alignment, construction of new back alignment and reprofiling of the area would be very high. There would also be issues relating to the reprofiling of the existing mudflat (and potentially saltmarsh) fronting habitat, in that existing upper mid to upper shore areas would need to be lowered to provide a gradual new low to high shore profile incorporating the realignment area. This would involve damage (at least in the short term) to the existing intertidal habitat, part of the Humber Estuary SAC designation, as well as to associated function e.g. birds, and thus potentially affecting the integrity of the Humber Estuary SPA designation.

As such, whilst the application of this technique may be applicable as a tool to address coastal squeeze issues and associated flood protection improvement works, it is unlikely to be applicable for large scale habitat compensation projects.

However, incorporation of methods to replicate natural resuspension processes within a larger scheme may have merit. As noted above, the Steart scheme includes a network of wide shallow channels within the site, which as it is understood, hoped to be self flushing, effectively providing a sustainable mudflat habitat. Such features have also developed (semi) naturally at other realignment sites in the Humber, whereby the process of water movement within the site, together with accretion, has produced channel and delta/pan features in the vicinity of the breach areas. For instance a relatively large area of mudflat remains uncolonised at Paull Holme Strays in the area behind the main breach, this area including the main drainage channel, but also a wider mudflat area. Whilst ultimately this

may accrete and narrow, it currently provides a well utilised and functional mudflat resource and has remained free of vegetation.

As such, the implementation of suitable creek system within a realignment site could be able to provide functional mudflat habitat if design allows the main creek system to be subject to sufficient inundation frequency as well as flow volumes. Tuning of the overall elevation and the front to back and cross-sectional slope of the creek system may provide conditions that allow mudflat invertebrate communities to develop (a requirement for regular inundation, low deposition, high resuspension and low slope, high surface area).

2.3.5 FLUSHING THE SYSTEM

System flushing is another potential management option. This could be achieved either through the retention of freshwater flow outwith the scheme and subsequent release through the site (not directly an RTE method), or through the retention of waters within the site (or part thereof).

Sediment flushing has been widely practiced and indeed used on the Humber as a management tool to maintain channel depths in creeks (e.g. Hessle Haven, Brough Haven). However, a reasonably large freshwater supply that can input into the scheme is required, as well as the ability to impound it (via a sluice) and store it, either through banking or provision of additional storage capacity on adjacent areas. However, such a release would be likely to affect only a small area of the scheme, and predominantly the main discharge channel, without remobilising material from the wider scheme area.

An alternative approach would be to impound water within the realignment site or in part of it, potentially around a spring tide period, and then allow it to be released. Release of water from throughout the site might only have a flushing affect around the outfall, whilst water retained perhaps in the upper elevation of the site might have a more widespread effect, although with a smaller water volume. However there is still the requirement for a point source discharge which would probably lead to scour being concentrated along existing creek systems rather than across the site as a whole.

Furthermore, this impoundment has the risk of producing elevated settlement during the retention period as well as ecological impacts. Retention could lead to water-logging of sediment and floral die-off. This might be desirable, in that saltmarsh colonisation would be addressed, however associated water quality issues from stagnation etc might be expected, if water were to be retained for sufficient time to have an effect on the vegetation. In turn, this might impact on the invertebrate community as well as producing odour, and would also remove much of the mudflat and marsh resource from avifaunal function during the impoundment period.

As such, in terms of water quality issues it might be anticipated that retention could only occur for a matter of several days during the summer months, but perhaps for a longer duration during the winter. However for associated ecological function, a longer term impoundment during the winter months would have the greatest impact.

3. SUMMARY

3.1 General Points

There are a large number of management options available within the general application of 'Managed Realignment' as a habitat compensation and flood risk management tool. These options reflect differing management objectives for individual sites, as well as the environmental conditions of the site's location.

However, based on emerging experience from the application of the managed realignment tool on the Humber, there are challenges in the creation of intertidal mudflat habitat that will be sustainable over the longer term.

These challenges largely relate to the presence of an extremely high suspended sediment load within the Humber waters, and associated potential for this to settle out and lead to sediment accretion within the embayment areas formed by the realignment.

However, experience from adjacent 'natural' intertidal areas within the estuary demonstrates that the process of ongoing deposition and mudflat accretion is not a problem in open estuarine locations, with natural processes leading to a relatively stable (within a dynamic system context) mudflat morphology over the longer term.

As such, it is necessary to design sites to allow the maximisation of natural sediment resuspension processes such as those resulting from wind and wave exposure as well as high flow velocities.

However, site elevation is also important, with evidence suggesting that in the Humber, marsh develops if a site is inundated less frequently than around 450 times a year. As such, it would be anticipated that site elevation for the promotion of mudflat habitat requires to be in areas inundated more frequently. Furthermore, this elevation would need to be maintained, either through the maximisation of resuspension processes as identified above, or through manual periodic removal.

It should however also be acknowledged that other habitat including saltmarsh has intrinsic value, and management objectives need to address wider issues of ecosystem function, historical losses and pragmatic management aims.

3.2 Regulated Tidal Exchange Application

A series of management options are available under the broad Regulated Tidal Exchange approach, which allow for potential management of accretion rates and wider ecological development, and these have been discussed earlier in text.

To date there is no experience of the technique on the Humber, and limited application within the UK and on the continent. Furthermore, where the technique has been applied, it has largely been used either in small scale developments where removal of existing defence alignments (breaching) are not possible, or in order to raise the interior level of a realignment site.

There is some experience of the technique in Europe, but again with limited application in relation to Humber needs. Of those schemes that do offer relevant experience, it would appear that in general, suspended sediment levels tend to be less than those experienced in

the Humber, and/or the sites have seen unexpectedly high levels of within site accretion. However, again based on the limited available data, it would appear that this issue has at least partially been addressed through modification to sill height and associated inundation frequency. More complex SRTs may allow for this inundation frequency to be further fine-tuned, and there are certainly a number of procedures that might be employed to further minimise the rate of sedimentation within the site.

For instance, by only allowing tidal ingress during the early ebb phase, the amount and length of time available for sediment to settle out is reduced. Alternatively, it may be possible to modify inundation frequency to only be over certain tide heights and not during periods of highest sediment suspension. However, where limited inundation occurs, then there is a likelihood of saltmarsh developing assuming propagules are available. As such, it may be necessary to incorporate additional management, for instance the use of upper shore water retention to limit saltmarsh development. If used together with some form of pre-entry settlement area, then it might be expected that loads would be considerably reduced, although this would require some form of process to allow the pre-entry settlement area to be regularly cleared.

System flushing is another potential management option, either through the retention of water outwith the site (e.g. a freshwater flow), and subsequent release through the site, or through the retention of waters within the site (or part thereof). This latter approach however has the risk of elevated settlement during the retention period and the removal only on material within the main channels rather than the site as a whole. Furthermore, ecological impacts such as water-logging and stagnation etc might be expected, and whilst the die-off of vegetation may be desirable, the potential loss of invertebrate fauna and water quality issues may be undesirable. As such, it might be anticipated that retention could only occur for a matter of several days during the summer months, but perhaps for a longer duration during the winter.

3.3 Concluding Remarks

The ability of managed realignment as a technique to provide long-term compensatory mudflat habitat on the Humber Estuary has been discussed in recent years, with evidence of rapid rates of accretion within sites such as Paull Holme Strays (e.g. Mazik & Cutts, 2012). In particular, the high suspended sediment load present in much of the Humber Estuary provides a high potential accretion rate. This can occur in low energy environments where the load can settle out of suspension, with the current morphology of most sites providing conditions suitable for this to occur. As such, there has been a relatively rapid accretion of sediment noted at sites, and a development of saltmarsh communities in these sheltered, elevated areas.

As such, in order to meet any 'like for like' compensation requirement, there should be consideration of the longer term sustainability of the compensation in terms of habitat delivery. Methods to assist this have been discussed in text, but it should be acknowledged that it is unlikely that any alone will be the panacea. As such, it is likely that a combination of tools will be required to address the issue, and that these tools will require adaptation once in place, in order to fine tune their efficacy.

Parallel to this, there is a need to address the consenting requirements with regards compensatory habitat provision. For the most part, it is unlikely that compensatory habitat

will be a complete like for like match of habitat lost in terms of composition, as there are a series of complex drivers which will dictate such provision on an almost site for site basis. As such, it is suggested that a more functional approach to seeking compensatory habitat is pursued, whereby, more basic criteria are followed in order to deliver an area that provides a functioning estuarine ecosystem.

Furthermore, saltmarsh habitat has an intrinsic functional value which should be acknowledged, and is able to deliver a series of ecosystem services in its own right. Given that the Humber Estuary has lost a considerable area of such habitat historically, then development of such a habitat should not necessarily be treated as a disbenefit.

Finally there needs to be a more realistic and integrated approach to the topic of habitat loss, compensation and realignment provision. There will not always be suitable habitat present to provide compensation in the vicinity of the areas of habitat loss, or if they are available, then direct like for like compensation may not be possible. This needs to be addressed, with either an acknowledgement that the provision of a functional if not identical estuarine ecosystem in the same part of the estuary is acceptable, or an acceptance that in order to provide like for like habitat, provision may have to occur elsewhere within the estuary, and as such, without the same structural community components that are associated with the area lost. This appears to be the approach adopted in the current proposals for the Bristol Port Compensation in the Severn Estuary.

Associated with these issues, is the need for the consenting process and integration of compensatory schemes within the wider estuarine designation to be addressed more fully and pragmatically, and linked to this are issues associated with habitat provision sign-off whereby a habitat loss from a plan or project will effectively occur throughout the future, whilst the compensatory provision may have lost its functional value within a relatively short timescale.

Provision of better managed realignment design as discussed in this document will assist in addressing the above, but a more comprehensive change in management approach is also necessary. Ultimately, from a Humber perspective it is considered that there needs to be an increase in emphasis regarding the value of the technique for water management and flood risk reduction, together with an ongoing development of engineering techniques to allow more sustainable operation, with these twin aims providing a focus to counter the current issues surrounding biological compensation delivery and wider public acceptance.

4. REFERENCES

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Environment Agency: <http://evidence.environment-agency.gov.uk/FCERM/en/SC060065/MeasuresList/M6/M6T6.aspx> accessed July 2012.

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	ABLE MARINE ENERGY PARK APPLICANT COMMENTS ON THE WRITTEN REPRESENTATIONS	AUGUST 2012

**APPENDIX WR22.1
Great Crested Newts**

Date: 24 July 2012
Our ref: EPSM2012 – 4206 B (JG)
(NATIONALLY SIGNIFICANT
INFRASTRUCTURE PROJECT – NSIP)



Jonathan Monk
Able Marine UK Ltd

Sent by e-mail only

Customer Services
Wildlife Licensing
Natural England
First Floor
Temple Quay House
2 The Square
Bristol, BS1 6EB

T 0845 6014523
F 0845 6013438
E eps.mitigation@naturalengland.org.uk

Dear Mr Monk

DRAFT NSIP EPS MITIGATION LICENCE APPLICATION – RESUBMISSION

LEGISLATION: CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2010

NSIP SITE: ABLE MARINE ENERGY PARK, ROSPER ROAD, KILLINGHOME, IMMINGHAM,
NORTH LINCOLNSHIRE

EUROPEAN PROTECTED SPECIES: GREAT CRESTED NEWT (*Triturus cristatus*)

Thank you for your draft Great Crested Newt mitigation licence application in association with the above NSIP site, which was received in this office on the 12th June 2012. As you are aware, for NSIPs which require protected species licences, Natural England reviews draft licence applications before the development consent order (DCO) application is submitted to the Planning Inspectorate. Once content that the licence applications are of the required standard, we will issue a 'letter of comfort' to the developer which can be included in the application pack to the Planning Inspectorate. Such letters of comfort are designed to provide the Planning Inspectorate and the Secretary of State with confidence that the competent licensing authority is satisfied that a licence can be issued, subject to the DCO being granted by the Secretary of State. Following the granting of a DCO, the developer would then formally apply for the licences, based on the draft application already considered, which would then be issued without delay.

Prior to the latest resubmission, Natural England considered that the three licensing tests - Purpose, No Satisfactory Alternative (NSA) and Favourable Conservation Status (FCS) - would not be met should the application be formally submitted using the same information and the development is successful in achieving all necessary consents, as confirmed in Kathryn Murray's letter of 4th April 2012.

With regard to your resubmission, we have now completed our assessment and detail our decisions on the three licensing tests below, which as you are aware must all be 'met' before any licence can be issued. In relation to an application of this nature, our advice, if adhered to, will help you achieve the outcome required and enable a 'letter of comfort' to be issued for you to submit in respect of your application to the Planning Inspectorate.

Licensing decisions:

Reasoned Statement

Purpose test (Imperative Reasons of Overriding Public Interest (IROPI)) and No Satisfactory Alternative (NSA) test

Based on the information provided, Natural England considers that the Purpose and NSA tests would be met should the application be formally submitted using the same information and the development is successful in achieving all necessary consents. Please note that our assessment of these two tests is only relevant should the development in question achieve all the necessary consents it requires in order to proceed and any appropriate conditions or reserved matters are discharged.

If you wish to discuss any issues relating to these two tests with the EPS Adviser who assessed the draft Reasoned Statement, please contact John Gordon on [REDACTED] or by e-mail at [REDACTED]

Method Statement - Favourable Conservation Status (FCS) Test

The information and evidence currently provided within your draft method statement would not allow us to meet the FCS test. However, please see the enclosed FCS assessment report which indicates the areas of concern that need to be addressed in order to meet this licensing test. If there is any aspect of the FCS assessment report that is not clear to you and you wish to discuss it with the wildlife adviser who assessed the method statement, please contact Cressida Mansfield on [REDACTED] or by email at: [REDACTED].

An email identifying issues in advance is helpful as it will enable Cressida to review your queries in the context of the case before discussing them with you. Like all Wildlife Advisers, Cressida does not spend all of her time in the office so there may be a short delay before she can respond to you. Please be mindful that Cressida does not deal with issues relating to the Purpose and Satisfactory Alternatives tests. As detailed above, should you wish to discuss any issues surrounding these two tests please contact John Gordon using the details provided below.

We advise that you make the necessary changes to your application and re-submit the relevant documents following guidance in the attached annex. We will then review our decision/s based on the new information/evidence provided and issue a revised response within 30 working days of receipt.

Any letter of comfort issued following assessment of a re-submission (should the FCS test be met) will confirm that, on the basis of the species information and proposals provided, Natural England is satisfied that the licensing tests can be met subject to the DCO being granted. Should the DCO be granted then the mitigation licence application must be formally submitted to Natural England. At this stage any modifications to the timings of the proposed works, e.g. due to ecological requirements of the species concerned, must be made and agreed before a licence is issued; likewise if further survey is required this must also be undertaken and the method statement re-submitted for further assessment.

Please note that, as stated in the FCS assessment report, prior to any formal licence application submission, a legally binding agreement must be in place to ensure the long-term security of the receptor site and the adjoining woodland, and to ensure that the habitats are managed and maintained in the future. The assurances given regarding the intention to enter into such an agreement in the near future are sufficient at this stage but please be aware that Natural England will be unable to reach a satisfied decision on the FCS test for the formal submission (i.e. once the DCO is granted) in the absence of any such agreement. This agreement should be submitted with the formal licence application.

I hope that the information detailed within this letter and its enclosures have been helpful. However, should you have any queries then please do not hesitate to contact me.
Yours sincerely

[Redacted Signature]

Oliver Lowe
Group Co-ordinator - EPS Mitigation Licensing
E-mail: [Redacted Email Address]

Annex - Guidance for Providing Further Information or formally submitting the application.

Important note: When submitting your *formal application please mark correspondence 'NSIP EPSM2012-4206 – ABLE MARINE ENERGY PARK for the attention of Kathryn Murray and John Gordon'.*

Submitting Documents.

Documents must be sent to Customer Service Wildlife Licensing (postal and email address at the top of this letter).

Changes to Documents – Reasoned Statement and/or Method Statement.

Changes must be identified using one or more of the following methods:

- underline new text/strikeout deleted text;
- use different font colour;
- block-coloured text, or all the above.

Reasoned Statement

Overriding Public Interest or Public Health and Safety and/or No Satisfactory Alternative.

When submitting a revised Reasoned Statement please send us one copy on CD, or by e-mail if less than 5MB in size, or alternatively one paper copy of the complete, revised document. Please do not send the amended sections in isolation.

Method Statement

Favourable Conservation Status.

When submitting a revised Method Statement please send us one copy on CD, or by e-mail if less than 5MB in size, or alternatively three paper copies. The method statement should be submitted in its entirety including all figures, appendices, supporting documents. This document forms part of the licence; please do not send the amended sections in isolation.

Customer Feedback – EPS Mitigation Licensing

To help us improve our service please complete the following questionnaire and return to:

Customer Services Wildlife Licensing, Natural England, First Floor, Temple Quay House, 2 The Square, Bristol, BS1 6EB.

Fax: 0845 6013438 or email to wildlife@naturalengland.org.uk

<http://www.naturalengland.org.uk/ourwork/regulation/wildlife/default.aspx>



Natural England Reference Number (optional):	Please tick to indicate your role:	Consultant	☐
		Developer (Applicant/Licensee)	☐

1. How easy was it to get in contact with the Wildlife Management & Licensing team of Natural England?

Difficult (1)

☐

OK (2)

☐

Easy (3)

☐

Very Easy (4)

☐

If 1 please specify who you initially contacted in relation to your issue/enquiry?

2. Please tell us how aware you were (BEFORE you contacted us) of wildlife legislation and what it does/does not permit in relation to your enquiry?

Unaware (1)

☐

Very Limited Awareness (2)

☐

Partially Aware (3)

☐

Fully Aware (4)

☐

3. How would you rate the service provided by Natural England?

	<i>Poor</i> 1	<i>Fair</i> 2	<i>Good</i> 3	<i>Excellent</i> 4	<i>Not applicable</i>
Ease of completion of application	☐	☐	☐	☐	☐
Advice provided by telephone (if applicable)	☐	☐	☐	☐	☐
Our web site (if applicable)	☐	☐	☐	☐	☐
Clarity and usefulness of published guidance	☐	☐	☐	☐	☐
Helpfulness and politeness of staff	☐	☐	☐	☐	☐
Advice and clarity of explanations provided during Method Statement assessment	☐	☐	☐	☐	☐
Advice and clarity of explanations provided during Reasoned Statement assessment	☐	☐	☐	☐	☐
Speed of process	☐	☐	☐	☐	☐
Overall service	☐	☐	☐	☐	☐

If 1 or 2 to any of the above please specify why:

4. Was your issue/enquiry resolved by the activity authorised under licence or advice provided by us?

Fully

☐

Partially

☐

Unresolved

☐

If not fully resolved please state what you think could have been done instead (note legislation affects which actions can be licensed):

5. Was there a public reaction to any action taken under the licence or as a result of our advice?

Positive support

☐

No reaction

☐

Negative reaction

☐

6. Would you use a fully online licensing service if it could be made available in the future?

Definitely

☐

Possibly

☐

Unlikely

☐

No

☐

7. Do you have any further comments to make or suggestions for improving our service, if yes please specify (continue comments on an additional sheet if necessary). If you are happy to be contacted at a later date to explore possible improvement options, please tick this box ☐ and ensure your Natural England reference number is at the top of this page.

EUROPEAN PROTECTED SPECIES LICENSING CONSULTATION

For European Protected Species Licensing Team

GREAT CRESTED NEWTS

NATURAL
ENGLAND

Applicant / Ecologist:	Applicant: ABLE UK Ltd Ecologist: Duncan Painter		
Site name:	Able Marine Energy Park, Rosper Road, Killingholme, Immingham, North Lincs.		
Case reference number:	EPSM 2012-4206B (JG) -DRAFT		
Date application received by assessor:	24 th February 2012	Assessor's response deadline:	22 nd March 2012
Date re-submission received by assessor:	13 th June 2012	Assessor's response deadline:	10 th July 2012
Date modification received by assessor:		Assessor's response deadline:	

The Conservation of Habitats and Species Regulations 2010

The appropriate authority shall not grant a licence under regulation 53(9)(b) unless they are satisfied that actions authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

It should be noted that the comments provided on this form do not provide an exhaustive list of concerns that need to be addressed. The onus is on the applicant/ecologist to provide all details required for a full assessment. The method statement should be carefully checked to ensure that it follows the recommendations provided in the Great Crested Newt Mitigation Guidelines (2001). Deviations from the recommendations should be fully explained within the method statement. Please ensure the method statement, with accompanying documents, is re-submitted in its entirety.

Please see the following documents for further advice:

http://www.naturalengland.org.uk/Images/wmlq04_tcm6-4112.pdf
http://www.naturalengland.org.uk/Images/wlmsfaqs_tcm6-3859.pdf
http://www.naturalengland.org.uk/Images/wmlq05_tcm6-4115.pdf
http://www.naturalengland.org.uk/Images/WML-G11_tcm6-9930.pdf

1. Experience

Is the experience written in the application form and attached written references adequate for the proposed work?

Yes ☒ No ☐

- Experience will usually be taken as adequate if the ecologist has held or been named on a licence in the past three years for the same species and in relation to a project of a similar scale, methodology and mitigation.
- A licence to carry out survey work is not considered to be a similar licence.
- A new applicant must provide a description of their work experience with Great crested newts and include two written references, both of which must contain specific detail of the referees own experience with Great crested newts (including licence numbers) and their knowledge of relevant work carried out by the applicant. Please refer to document WMLG05 – link provided above.
- At least one of the written references must be from a person who held or been named on a licence in the past three years for the same species and in relation to a project of a similar scale, methodology and mitigation. Details of this licence must be provided.

If 'NO' please address the following:

n/a

2. Survey

Has an adequate and appropriate survey of the site been carried out in relation to the proposed objectives?

Yes ☐ No ☒

An adequate survey will include:

- *Details of the area and habitat that was surveyed;*
- *An appropriate scaled map(s) of:*
 - i) The area where the Great crested newts will be affected by the proposed work,*
 - ii) The proposed area where mitigation will occur (if applicable), and*
 - iii) Adjoining sites if part of a phased development or other Great crested newt mitigation licences are held in those areas;*
- *The survey methods used;*
- *The name/s of the surveyor/s who undertook the work;*
- *Dates and weather conditions when the surveys were carried out; and*
- *Clearly presented survey results (for each method used) cross-referenced to areas on the map(s).*

If 'NO' please address the following:

C1 - The 2006 Just Ecology survey report has been provided, however the map(s) accompanying the report were not included, and therefore the report is not very useful, since it is unclear which ponds are being referred to or where they are located. Please provide the relevant map(s).

C3.2 / C3.3 – As previously requested, please clarify if the drainage ditches within the site offer potential habitat for GCN? Are these freshwater habitats? If they are potentially suitable, further surveys may be required. Please provide a description of these features.

Map C3.2(a) – This map has not been amended to show the more recent (visual) survey results and continues to indicate ponds where survey access was not possible, when this is not the case, as a visual survey was completed. Please amend.

3. Impacts

Are the impacts of the development on the population fully described?

Yes ☐ No ☒

Impacts of the development on the Great crested newt population should be described as if taking place in the absence of mitigation:

- *Details of the areas and habitat types that will be lost to the development should be included;*
- *For phased developments impacts for all phases should be detailed (and a master plan provided as a separate document, please refer to WML-G11, link above); and*
- *The population must be considered in context of the local or regional population of Great crested newts.*

If 'NO' please address the following:

D5.2 indicates a total loss of 76ha of terrestrial habitat (24ha within 250m of the ponds), however D2 indicates 72.8ha will be lost (some of which is poor quality for great crested newts). Please clarify the areas of habitat loss and ensure all sections are consistent. It also helps if the text explains which of the habitats to be lost is likely to be of greatest value to the GCN population (based on distance from ponds and habitat quality).

4. Methodology

Is the proposed methodology of the work programme suitable to meet the stated objectives in the application form?

Yes ☒ No ☐

Suitable methodology will include:

- A clear description of the licensable operations e.g. capture and exclusion, translocation;
- Details of the proposed methods and techniques; and
- A detailed timetable of the proposed works pertaining to all licensable activities and mitigation, including disturbance /destruction of Great crested newt habitat. **This should be realistic and updated for any re-submission.**

The above must correspond with the details contained within the application form.

If 'NO' please address the following:

n/a

5. Mitigation

Is the mitigation proposed adequate with respect to the habitat which will be lost?

Yes ☐ No ☒

Adequate mitigation will include details of:

- Habitat creation, modification and/or restoration (including areas and habitat types);
- Post-development habitat management;
- Post-development habitat maintenance;
- Post-development population monitoring; and
- Details of any mechanism in place for ensuring delivery (e.g. a Section 106 agreement).

It will also include scaled drawings, plans and/or maps and photographs, as appropriate.

If 'NO' please address the following:

E3 – The table has been amended to provide 8.5ha of enhanced/created habitat >250m from the breeding ponds. This figure suggests additional habitat creation/enhancement compared to the previous submission, however it is not clear where this additional compensatory habitat is located. Please clarify.

E3 / E3.2 – The areas of grassland re-seeding are unaltered from the previous application, however an area of tarmac road which was previously indicated as being removed and re-seeded as grassland is now intended to be retained. Therefore the area of grassland re-seeding should be less. Please amend/clarify.

E6b – The timetable for monitoring needs to be amended to reflect the changes in the capture timings. Since translocation will not now occur until spring 2014, monitoring of the ponds can commence no earlier than 2015. Please amend.

Habitat Creation and Management Proposals (Management Plan)

The Management Plan currently lacks the necessary detail regarding the future *Management* of the created habitats. It is not necessary to repeat in this document information on the habitat creation proposals included in the Method Statement, rather this document should provide a clear, timetabled and agreed plan of how the created (and existing) habitats will be managed and who will take responsibility for this management. Please amend as necessary.

In particular please address the following specific points:

- The proposals to 'turn over' the soil in the arable field and seed it with species rich grassland fail to take account of the likely high levels of nutrients present in arable soil, and the likelihood of any seeded grassland becoming dominated by aggressive weed species such as thistles. The proposals appear unlikely to result in a species-rich meadow in the short-term.
- There is a provision for a margin of up to 5 metres of grassland around each pond to be left uncut

each year, however this suggests that a much narrower margin may be provided. Given that this margin will also be cut on a triennial basis, and the area will be subject to public access and disturbance, a minimum margin of 5 metres seems appropriate.

-No paths, viewing platforms etc are shown on the map, yet public access is described as being an essential component of the plans for the receptor area. Areas which will be intensively managed for public access (including amenity grassland (paths?) and viewing platforms) should be shown on the plans.

-The importance of public access is well communicated in the Management Plan, however proposals to manage the increased disturbance and potential risks of public access (e.g. introduction of fish, invasive species, damage to the habitats from walkers and dogs) are currently lacking. Please address this issue.

-Will the grass bunds (created from the pond excavations) be mown or left to grow rank. It would be preferable to leave these areas unmanaged to create a diversity of habitat types.

-The Management Plan indicates a buffer strip on the eastern boundary of Compartments 1 and 2 will be used to enable access to the existing LNR and will be dedicated as a public right of way. However Figure 1 indicates the buffer strip will shortly be developed for industrial purposes. Please clarify.

-The scrub/woodland area of the receptor site (Compartment 5a) is described as being managed in the same manner as the rest of the LNR. Since the current management regime for the LNR is unknown, it would be helpful to provide a summary of the management of this area.

Map E5.1 – As previously requested, please provide a map showing clearly the management proposals for the various habitats within the receptor site/adjacent habitats covered by the management plan.

6. Conclusion in respect of regulation 53(9)(b)

Satisfied ☐
Not satisfied ☒

Assessed by: Cressida Mansfield

Date: 23/06/2012

7. Additional Comments

All changes to the Method Statement (and appended documents) should be highlighted (e.g. by underlining or coloured text) in any resubmitted application. This is clearly specified on the Cover Sheet of the Method Statement and in the Initial Response letter issued in respect to the first application. For this re-submission, none of the changes were highlighted or marked in any way. This causes considerable difficulties in the assessment and slows the assessment process. It is also more likely to result in a further request for additional information before a 'satisfied' decision regarding the FCS test can be reached. Please ensure that all changes are highlighted on future applications and resubmissions, as failure to do so may result in a request to show the changes before the documents are assessed.

The points raised above must be addressed in a revised Method Statement before the favourable conservation status test (Regulation 53(9) (b)) can be met. Please read the comments carefully and address all of the issues raised. The resubmission should be presented in its entirety to include all maps, appendices, reports etc. All changes from the previously submitted documents must be clearly highlighted.

The comments below are for information, however they must be borne in mind for future applications.

Important –please note: As previously advised, some form of legally binding agreement is required to ensure the long-term security of the receptor site and the adjoining woodland, and ensure that the habitats are managed and maintained in the future. It is noted that there is an intention to enter into such an agreement in the coming weeks, and that this will ensure the future management of the receptor site. Natural England is therefore able to accept this assurance at this stage, in the

expectation that such an agreement will be in place prior to the formal submission of the final application. Please be aware that Natural England will be unable to reach a satisfied decision on the FCS test for the final submission in the absence of this agreement.

C4.2 – The survey results indicate torch surveys were only completed on 2 of the 6 visits to Ponds 14 and 18. This is contrary to the Great crested newt mitigation guidelines (GCNMG) which specify both Bottle trapping and torch surveys should be completed on all visits. Since the torch surveys appeared to provide significantly lower counts than bottle-trapping, the results are being accepted on this occasion, however this may not be the case for future applications, and any deviation from the GCNMG should always be explained.

C4.2 – The absence of eggs or larvae is taken to indicate this pond is not a breeding pond, however Natural England does not generally accept the absence of eggs as reliably indicating a pond does not support breeding. The pond is also described as having significant stands of *Phragmites*, which does not offer good material for egg-laying, therefore failing to locate eggs may be a result of eggs being laid on non-typical materials (e.g. dead vegetation, litter) rather than an absence of breeding. For the purposes of this application, the compensation is adequate and the status of this pond has not affected the assessment of the FCS test, however please be aware that further supporting evidence would be required if it were necessary to determine a pond did not support breeding great crested newts.

E4 – The capture proposals do not fully enclose the semi-improved grassland field to the east of the ponds with temporary amphibian fencing (TAF). Whilst the proposals are broadly appropriate, and the use of pitfall traps on the outside of the TAF currently proposed is likely to intercept newts during the trapping programme, it is generally worthwhile to enclose areas such as this to maximize the efficiency of the trapping programme and avoid continued captures beyond the 60 day minimum period specified.

E5.2 – Whilst not essential for this application, it would be good practice to include Pond 4 in the post-development monitoring plans. This new pond is within close proximity to the receptor site and may therefore become one of the ponds used by the metapopulation within the 6 year monitoring period.

Assessor's Licence Recommendations following a 'Satisfied' decision:

Number of Great crested newts to be licensed	
Licensable activities	☐ Capture ☐ Kill ☐ Transport ☐ Disturb ☐ Injure ☐ Damage/destroy a resting place ☐ Damage/destroy a breeding site
Licensable methods	☐ By hand ☐ Hand search ☐ Destructive search ☐ Bottle trapping ☐ Netting ☐ Draining down pond/s ☐ Night/torch searching ☐ Pitfall trapping ☐ Refugia ☐ Exclusion by permanent amphibian fencing ☐ Exclusion by permanent one-way amphibian fencing ☐ Exclusion by temporary amphibian fencing ☐ Exclusion by temporary one-way amphibian fencing ☐ Drift fencing
Period of Licence	From: To:
Compliance visit recommended?	☐ Yes ☒ No
Type of visit	☐ Telephone ☐ Visit
When? E.g. time period or dates.	

Justification for visit and brief details of requirements	

	ABLE MARINE ENERGY PARK APPLICANT COMMENTS ON THE WRITTEN REPRESENTATIONS	AUGUST 2012

**APPENDIX WR22.2
DTA's Report on Traffic Impacts**



AMEP Written Representations

Able Responses to Highways Issues

Report



AMEP Written Representations

Able Responses

Report

JMP Consultants Limited
Minerva House
East Parade
Leeds
LS1 5PS

T 0113 244 4347
F 0113 242 3753
E leeds@jmp.co.uk

www.jmp.co.uk

Job No. NEA1114

Report No. 1

Prepared by Daniel Moran

Verified Daniel Moran

Approved by Daniel Moran

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AMEP Written Representations

Able Responses

Report

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1 Introduction

- 1.1 On 12 January 2012 the Infrastructure Planning Commission ('IPC') accepted an application ('the application') that was submitted by Able Humber Ports Limited ('the applicant') for a development Consent Order ('DCO') to construct and operate a harbour capable of handling over 5 million tonnes of material per year together with associated works.
- 1.2 Examination of the application commenced on 25 May 2012.
- 1.3 This report responds to the highways issues raised within four written representations, as listed below:
 - Associated British Ports (ABP)
 - North East Lincolnshire Council (NELC)
 - Centrica
 - Conoco Phillips Ltd (CPL)
- 1.4 The majority of ABP's comments relate to the junction modelling inputs used in the Transport Assessment (TA), and the validity of the mitigation proposals identified at the Roper Road / Humber Road and Humber Road/A160/A1173 junctions. **Chapter 2** of this report responds to ABP's comments but, overall, the assessment within the TA is very robust. Responses to ABP's specific queries are also provided in **Appendix B**.
- 1.5 NELC required further clarification on a number of issues related to the assessment methodology and the Framework Travel Plan. Following a number of meetings with NELC and additional information provided, these issues have now been resolved, as detailed in **Chapter 3**
- 1.6 Centrica commented on issues relating to access, the impact of Able Marine Energy Park (AMEP) on the highway network and the implementation of mitigation measures. Responses to these comments are provided in **Chapter 4**.
- 1.7 Conoco requested details of any proposed access from Marsh Lane. A response to this is provided in **Chapter 5**.

2 Associated British Ports

Introduction

- 2.1 JMP has reviewed the written representation (WR) prepared by David Tucker Associates (DTA) on behalf of Associated British Ports (ABP). The following sections provide comments on the issues raised by DTA, section numbers correspond to the numbering system within the DTA WR.

Section 3

Method of Assessment

- 2.2 DTA has stated in paragraph 3.5.1 that a WebTag compliant TA has not been prepared by JMP. However, the scope of the TA was discussed and agreed with North Lincolnshire Council (NLC) and the Highways Agency (HA).
- 2.3 Originally, the intention was to use the HA's A160/A180 SATURN model (SATURN is a highway assignment model with additional facilities for matrix manipulation and demand estimation from traffic counts. It is usually used for district wide / strategic studies); however the update of the model by Pell Frischmann, the HA's consultant was delayed.
- 2.4 At a meeting with the HA Major Projects Team on 9 November 2010, it was identified that the SATURN model was unlikely to be complete until the end of February 2011 (validation of the base model by the end of November 2010 and project forecasts by mid February 2011). At the time, the application was scheduled to be submitted in May 2011, and awaiting the SATURN data would have resulted in consequential programme slippage of the EIA process and the statutory consultations. In particular, the TA would not have been progressed in time for critical stages of the programme, including the planned public consultation in February 2011. Therefore, it was agreed by all parties that the SATURN model would not be utilised, although the updated traffic surveys undertaken for it would be (and were) provided to JMP by the HA for use in the TA.

Future port growth

- 2.5 It was agreed during the scoping stage with North Lincolnshire Council (NLC) and the HA that no background or additional traffic growth should be applied to the assessments within the TA due to the significant number of committed developments to be included, which essentially acted as background traffic growth.
- 2.6 The assessment within the TA assumes the A160/A180 upgrade scheme being promoted by the HA will not be implemented, due to the uncertainty of the scheme during the scoping exercise. Accordingly, neither does the assessment include unrestrained growth for the Port of Immingham, as growth will be constrained unless the A160/A180 scheme is advanced. This is evidenced within the HA's Scheme Assessment Report (November 2009) which states that, ***'(f)ailure to carry out this improvement has the potential to cause development stagnation in the area'***, (paragraph 4.2)
- 2.7 The committed development flows included are significant. For ease of reference, a summary of the committed developments included in the assessment is provided in Table 1 below:

Table 1 Committed Developments

Applicant	Development	Planning Application Reference
Able UK Limited	Port and Logistics	PA/2009/0600
Able UK Limited	Able Humber Port Facility	PA/2007/0101
Drax	Heron Renewable Energy Plant	PA/2009/1269
Bioethanol Limited	Bioethanol Plant	PA/2010/0325
URSA Insulation SA	Glass Wool Manufacturing Plant	PA/2008/0988
HM Estates	Business Park	DC/1258/06/IMM
Helius Bio-Power / Fuel	Bioethanol Plant	DC/303/07/IMM
Vireol PLC	Bioethanol Plant	DC/202/08/WOL
Abengoa Bioenergy	Bioethanol Plant	DC/70/07/IMM
Magna Holdings	B1, B2 & B8 Industrial Development	DC/730/07/IMM

2.8 The total number of peak hour trips on the local highway network associated with arrivals and departures at the above developments the committed developments included in the assessment is identified below:

- Morning peak – **1682** arrivals, **385** departures
- Evening peak – **402** arrivals, **1591** departures

2.9 The committed development traffic flows were provided by Pell Frischmann, and also taken from the Heron Renewable Energy Plant (Drax) TA. The total committed development traffic flows on all arms of the Rosper Road/Humber Road junction are 613 in the morning peak and 568 in the evening peak. At the Humber Road/A160/A1173 (Manby Road) junction the committed development traffic flows included on all arms are 914 in the morning peak and 849 in the evening peak.

2.10 The traffic included in the assessment for the Drax site is for the construction period. Therefore, 364 vehicles in the morning peak and 364 vehicles in the evening peak will only be at the Rosper Road/Humber Road and Humber Road/A160/A1173 junctions for six months. This is the worst case in terms of the number of vehicles on the highway network throughout the 40 month construction period.

2.11 The number of additional vehicle trips included in the assessment over and above the surveyed traffic flows in 2010 is therefore significant, and the majority of the vehicle movements at the Rosper Road / Humber Road and Humber Road/A160 /A1173 junctions are temporary and will be on the network before AMEP is fully operational.

Safety Audits

2.12 Although a Stage 1 Road Safety Audit was not requested by the highway authorities for the submission of the planning application, this has now been undertaken for the three junctions that the applicant is proposing physical improvement measures to, to mitigate the impact of AMEP. The report has identified some minor issues at each of the junctions. JMP has undertaken a designer's response and amended the layouts as appropriate. This is provided in **Appendix A**.

Section 4.2 – Previous comments

- 2.13 The applicant's responses to the specific issues highlighted by ABP are provided in **Appendix B**.

Section 4.3 – A160 Improvements

- 2.14 It was agreed with the HA and NLC during the scoping exercise for the TA that due to the uncertainty of the A160/A180 upgrade scheme coming forward, JMP should not include it in any assessment.
- 2.15 However, the HA identified that any highway mitigation works proposed should not prejudice the A160 upgrade scheme, and should be within highway boundary.
- 2.16 In paragraph 4.3.7, DTA states that the purpose of the A160/A180 upgrade scheme is to protect the Port of Immingham. However, the A160/A180 is not for the sole benefit of the Port of Immingham, it is to support the growth of the South Humber Bank as a whole, as is clear in the Scheme Assessment Report prepared by the HA.

Section 4.4 – Traffic flow issues

Type of traffic

- 2.17 The default HGV percentage of ten was used in the junction assessment models as noted by DTA. Although it is agreed that the average HGV percentage on the local highway network is higher than ten percent, JMP does not consider this to be a significant issue, as the assessment included in the TA is considered to be a robust assessment for the following reasons:
- The amount of committed development traffic included in the assessment is significant. In particular 364 arrivals and 364 departures were included at the Rosper Road/Humber Road and Humber Road/A160/A1173 junctions for the Heron Renewable Energy Plant construction phase, which will only be on the highway network for a short period of time, and prior to the full operation of AMEP.
 - All AMEP traffic was distributed to the Rosper Road / Humber Road junction when, in practice there is likely to be some traffic using alternative routes.
 - All AMEP employees were assumed to drive to and from the site whereas, in practice there are likely to be some employees that will walk or cycle.
 - The trip generation was only reduced to take account of the minibus services that will operate at the site. No allowance was made for car sharing, which is likely to occur and will further reduce the number of car journeys to and from the site.
 - Additional flows to illustrate the sensitivity of any potential shift overlaps were included in the assessment. The additional vehicle movements were 225 arrivals in the morning peak and 178 departures in the evening peak. The methodology for this is described in the TA.
- 2.18 Therefore, JMP considers that any possible shortfall associated with the percentage of HGVs within the junction assessment models, is more than catered for with the inclusions listed above. This is further reinforced in **paragraphs 2.40-2.42** and **Table 2** later in this report.

Base flows

- 2.19 DTA reports a new traffic survey to the east of the Rosper Road / Humber Road junction, (undertaken in November 2011) and has compared the results of this with the data used in the junction assessments within the TA. DTA has not provided the full survey data for JMP to review so it is not possible to understand the full context.
- 2.20 The base traffic flows used in the JMP junction assessments are taken from the Manual Classified Count (MCC) surveys undertaken by Nationwide Data Collection (NDC) on Thursday 27th May 2010. This data was provided by the HA and used in the modelling work for the A160/A180 upgrade scheme (undertaken by Pell Frischmann) and was an agreed set of data to use in the TA. The data for Site G 'Rosper Road/Humber Road' is provided in **Appendix C** and a summary of the peak hour (0800-0900 and 1700-1800) traffic flows on Humber Road are identified below:
- The eastbound traffic flows are **504** in the morning peak and **246** in the evening peak.
 - The westbound traffic flows are **206** in the morning peak and **505** in the evening peak.
- 2.21 Additional data was used in the TA (ATC data from June 2010, also supplied by the HA and used in the modelling work for the A160/A180 upgrade) to identify peak hours across different sections of the Local and Strategic Road Network. The ATC data within the vicinity of the Rosper Road/Humber Road junction and the Humber Road/A160/A1173 junction is Site 8, and is located between the two junctions on Humber Road. The survey data is provided in **Appendix C**, and a summary of the peak hour traffic flows on Humber Road are identified below:
- The average eastbound traffic flows (taken from three surveyed days) are **501** in the morning peak and **271** in the evening peak.
 - The average westbound traffic flows are **333** in the morning peak and **622** in the evening peak.
- 2.22 The traffic movements from the two data sets used by JMP are broadly comparable, particularly in the morning peak. There is a slight difference in the evening peak figures; however traffic flows on the highway network within the vicinity of the port are susceptible to variations due to the pattern of arrivals / departures of ships at the Port of Immingham.
- 2.23 The eastbound traffic flows from the above data sources are broadly comparable to the eastbound traffic flows in the DTA surveys (taking into account the different location of the DTA survey, which is east of the Roper Road/Humber Road junction). However, the westbound traffic flows between the Rosper Road/Humber Road junction and the Humber Road/A160/A1173 junction are in the region of **425** in the morning peak and **800** in the evening peak, which are considerably higher than the MCC and ATC data provided by the HA and used within the TA.
- 2.24 Given the variations in traffic flow on the local highway network in the vicinity of the Port of Immingham, the variations in the 'peak hours', and the variations in the make-up of the traffic, JMP considers the assessments in the TA to be a reasonable representation of the baseline situation. Furthermore, due to the factors identified in **paragraph 2.16**, JMP consider that the assessments undertaken are very robust.

Committed development flows

- 2.25 In paragraphs 4.4.9 and 4.4.10 DTA identifies non-specific errors with the committed development flows. JMP cannot identify any errors with the committed development flows included within the junction assessments.

Growth at the Port of Immingham

- 2.26 DTA has derived growth figures for the Port of Immingham for future years of 2020 and 2030 of 30% and 59% respectively, from a base year of 2008. Table 5.2 'Forecast demand analysis for the Port of Immingham to 2020 (ABP)' from the Draft Port Masterplan 2010-2030 is used as the basis for the figures identified by DTA.
- 2.27 In the absence of the large number of committed developments that JMP were asked to include in the assessment within the TA, background traffic growth factors would have been applied to the surveyed base year flows to derive a future year scenario (2022 for a ten year assessment after the submission of the planning application in 2012). Traffic growth estimates would have been derived from TEMPRO for cars and the Road Traffic Forecasts (2011) for HGVs. For information, the growth factor for cars in Immingham on trunk roads is approximately 10%, and HGVs is approximately 22%, for the period 2012-2022.
- 2.28 The committed development traffic flows included in the JMP assessment represent between a 60-100% increase on the peak hour base year flows across the local highway network, including at junctions along Humber Road and the A160. This further reinforces why JMP was asked not to apply any additional traffic growth to the base year flows.

Section 4.5 – Revised traffic flow assessment

Base flows

- 2.29 JMP does not consider the difference in HGV percentage to be a significant factor given the very robust assessment as outline in **paragraph 2.17**.

Allowance for ABP surveys

- 2.30 JMP does not accept the need to add any additional flows onto the base flows used in the JMP assessment, for the reasons identified in **paragraphs 2.19 to 2.24**

Allowance for growth in the Port of Immingham

- 2.31 JMP does not agree that any growth in the Port of Immingham should be included in the assessment. It is not for the applicant to relieve existing congestion or to provide new capacity for the development of the Port of Immingham.
- 2.32 If the growth in port traffic was included in the assessment, together with the ABP survey adjustment and committed development traffic, existing junctions will be vastly over capacity. Accordingly, unless the A160/A180 scheme is implemented, the potential increase in port traffic postulated by DTA cannot feasibly be realised.

Committed developments

In paragraph 4.5.15, DTA questions the committed development flows assigned for the Drax site, but quotes 1,000 vehicles. JMP has included 364 arrivals and 364 departures for the proposed development, which was taken from the Drax TA (October 2009). Since this is construction traffic,

the impact of this will be for a short period, and the inclusion of this traffic serves as a sensitivity test, along with the previously identified factors in **paragraph 2.16**, which result in a robust assessment.

Section 4.6 – Re-assessment of Humber Road/Rosper Road

- 2.33 DTA has re-assessed the capacity of the Rosper Road/Humber Road junction using the adjustments to the traffic movements including a higher HGV percentage, higher base flows and an allowance for the growth in traffic associated with the Port of Immingham. The allowance for the growth in traffic associated with the Port of Immingham to 2020 is as follows:
- 362 PCUs in the morning peak; and
 - 415 PCUs in the evening peak
- 2.34 This represents a 30% increase on the movements in and out of the Port of Immingham, using the DTA traffic survey.
- 2.35 JMP does not agree with the need for DTA's assessment, for the reasons identified in the responses above.
- 2.36 In paragraph 4.6.2, DTA correctly identifies that the mitigation scheme included in the TA shows one lane approach from Humber Road west. The proposed mitigation scheme tested in the junction assessment within the TA has a two lane approach, which is the correct scheme. The committed highway scheme at the junction associated with the Able Logistics Park also has the two lane approach on Humber Road west

Section 4.7 – Reassessment of Humber Road/A160/A1173

- 2.37 DTA has re-assessed the capacity of the Humber Road/A160/A1173 junction using the adjustments to the traffic movements including a higher HGV percentage, higher base flows and an allowance for the growth in traffic associated with the Port of Immingham. The allowance for the growth in traffic associated with the Port of Immingham to 2020 is as follows:
- 305 PCUs in the morning peak; and
 - 317 PCUs in the evening peak
- 2.38 This represents a 30% increase on the movements in and out of the Port of Immingham, using the DTA traffic survey.
- 2.39 JMP does not agree with the need for DTA's assessment, for the reasons identified in the responses above.

Section 4.8 – Overall Implications of Development

- 2.40 DTA concludes that ***“significant and fundamental changes would be required to the two proposed mitigation schemes to overcome the capacity constraints.”*** (paragraph 4.8.2) For the reasons identified throughout this response, JMP does not agree with the statement.

2.41 Although it is not clear how the 'Overall Junction Assessment Flows' in Table 17 and Table 18 have been calculated by DTA, the additional number of PCUs (all movements) in the DTA assessment compared to the TA in the ES is as follows:

- Rosper Road/Humber Road
 - **1,000** in the morning peak; and
 - **1,500** in the evening peak
- Humber Road/A160/A1173
 - **1,000** in the morning peak; and
 - **1,900** in the evening peak

2.42 The base scenario that was used in the assessments within the TA was agreed with the highway authorities. The base flows being suggested by DTA are between **50%** and **97%** higher than the base flows used in the JMP assessments and, in JMP's opinion are completely unrealistic. The reason the junctions are over capacity in the DTA assessment is due to this significant increase in the assumed and very un-realistic base traffic, not due to AMEP traffic.

2.43 The only reasonable addition of PCUs to the assessment undertaken by JMP would be related to the percentage of HGVs. However, **Table 2** below shows how the allowance made for the short term construction traffic flows associated with the Heron Renewable Energy Plant (HREP) and the AMEP sensitivity flows associated with any shift overlaps almost accounts for the Rosper Road/Humber Road junction in the evening peak and the Humber Road/A160/A1173 junction in the morning peak, and significantly exceeds the difference in the other scenarios. This and the other points in **paragraph 2.17** reaffirm how robust the JMP assessment is.

Table 2 Allowance of junction assessment traffic

Data set	Description	Rosper Road / Humber Road		Humber Road / A160 / A1173	
		AM peak	PM peak	AM peak	PM peak
a	Allowance for higher HGV % (in the DTA assessment)	389	398	441	443
b	Short term HREP traffic	364	364	364	364
c	AMEP sensitivity flows	225	0	0	178
d	Total (b + c)	589	364	364	551
e	Difference (d – a)	+200	-34	-77	+108

2.44 The absolute impact (number of trips) of AMEP on the unrealistic base scenario that DTA is suggesting would be the same as the absolute impact shown in the TA. Any mitigation identified to ensure nil-detriment to this base scenario would not be realistic, and is therefore disregarded.

2.45 It should also be noted that the applicant is also committed to mitigation at other junctions within the vicinity of the Port of Immingham, associated with the Logistics Park, as follows:

A160 / Eastfield Road

2.46 Signals are already in place at this junction however further modifications are committed. An additional lane will be introduced to the Eastfield Road southbound approach. This will create one lane for right turning vehicles only, one lane for ahead and right and one lane for left turning only. Also, the stop line will be moved back and kerb line modified for the right turn manoeuvre into Eastfield Road south. This is to allow two streams of traffic turning right from Eastfield Road north.

A160 / Top Road / Habrough Road

2.47 The committed scheme for this junction is to increase the flare on the A160 west arm of the roundabout. At present there are two lanes on the approach to the roundabout and one lane on the exit. The committed scheme increases the carriageway width in order to provide three lanes on the approach; one for left turning traffic, one ahead and one for right turning traffic, and two lanes on the exit. The additional lane on the exit is approximately 100m long before reverted back to one lane.

A160 / 1077 Ulceby Road

2.48 The existing layout of this junction is a priority arrangement with a right turn pocket and a left filter from the A160 south to the A1077. The committed scheme upgrades this to a section of single lane dualling with measures to regularise the priority arrangement within the central reserve opening. This comprises of channelizing the central area to arrive at a priority arrangement and including a right turning pocket that is approximately 25m long.

A160 / A180

2.49 There is a committed scheme to upgrade the westbound merge arrange form a taper merge (type A) to a parallel merge (type B) (refer to DMRB 6.2.1 fig. 2/4.1). This will provide a longer weave section therefore increase the capacity of the junction.

2.50 It should also be noted that there are no other committed highway schemes associated with the committed developments included in the assessment, and therefore the applicant is the only party providing improvement schemes to the local and strategic highway network. **The applicant is committing a total contribution in terms of transport improvements in excess of £1 million.**

2.51 In response to paragraph 4.8.4 of DTA's report, the HA did not want an improvement scheme that proposed traffic signals as this would prejudice the A160 upgrade scheme.

Section 5 – General Cargo Port

2.52 Any future operation of the AMEP port facility would be subject to a further planning application which renders this section of DTA's report superfluous.

3 North East Lincolnshire Council (NELC)

Introduction

- 3.1 NELC's Written Representation contains answers to the Examiner's question No.'s 73 and 74, together with comments regarding traffic and air quality. The entire submission by NELC is reproduced below in italics, with the Applicant's comments inserted in plain type.

Q73 – Framework Travel Plan

The following comments have been agreed by North East Lincolnshire Council (NELC), The Highways Agency (HA) and North Lincolnshire Council (NLC):

It is considered that the submitted Framework Travel Plan (FTP) is a good foundation to work from. However, we have some concerns that the plan places a very high level of responsibility upon end occupiers rather than the developer to implement the plan. The following specific concerns have been identified:

1) There is a need to ensure that the proposed actions and measures for achieving objectives are identified within the Travel Plan and that these are reflected in the occupier travel plans and that measures identified are implemented in full.

Applicant's Comments

- 3.2 The FTP identifies this, but the approved FTP (in accordance with Requirement 21 of the draft DCO) can strengthen the commitment that each Occupier Travel Plan (OTP) will have in meeting the objectives in the FTP.

- 3.3 The implementation of OTPs, by tenants, which accord with the FTP, will be a necessary requirement of any DCO.

2) There is a need to ensure that targets are set from the first occupation of the development and set using the SMART principles. Occupier travel plan targets should be set in relation to the framework travel plan and include measures for monitoring and reporting on success against targets.

Applicant's Comments

- 3.4 The FTP has the trip generation for the whole site and each OTP will have appropriate trip generation targets as a proportion of the target for the whole site, which will need to be met and will be subject to review. The measures within the OTPs may be adapted as necessary, should targets not be met and NLC, NELC and the HA will be engaged in this on-going process. In the unlikely event that targets are consistently not met, further mitigation will be considered as necessary and in consultation with the relevant parties.

3) It is important to identify how Able will monitor the effectiveness of the Travel Plan, what will be monitored, how monitoring will be carried out (surveys) and who will be responsible for monitoring. As part of this we would like to see a revised Travel Plan being submitted to the relevant local authority either annually or every three years with any future Travel Plans to include a site audit of available infrastructure and future requirements.

Applicant's Comments

- 3.5 The FTP details that surveys will be carried out to monitor the effectiveness of the measures implemented. It is acknowledged that FTPs evolve over time to best suit the needs of the users of the development. Monitoring will ensure continual review and amendment as necessary. NLC, NELC and the HA will be involved in the review process which will be undertaken on an annual basis. A formal review and audit of the FTP will be instigated and agreed on a three yearly basis.

4) The Travel Plan identifies that accessing the site by public transport (mainly bus), walking and cycling will be challenging and we would expect Able to support the development and implementation of the 'International Gateways: Area wide Travel Plan.' This includes a variety of sustainable travel methods including upgrading infrastructure so as to provide adequate cycle links into the Gateway area and area-wide commitments to encouraging sustainable travel modes.

Applicant's Comments

- 3.6 The revised FTP will recognise the development and implementation of the 'International Gateways: Area Wide Travel Plan'.

5) The developer is passing a lot of responsibility onto the end users and in particular to delivering their own private bus services (which of course, the Councils would want to see the emphasis, in time, shift from private bus services for this development to public bus services for the wider area). As such it is imperative that this provision of dedicated bus services is 'forever' (or certainly for a long period of time) conditioned and/or secured via the s.106 agreement.

Applicant's Comments

- 3.7 Whilst end-users will have ultimate responsibility for their own Travel Plan initiatives – and it is recognised that is in their best corporate and operational interest – the applicant has the key co-ordinating role in the FTP's overall implementation.
- 3.8 The FTP includes 'Initiative 9', which states the Travel Plan Coordinator will hold discussions with public transport operators regarding the potential to provide public bus services for the development and the wider area.

Q74 – section 106

A1173 / Kiln Lane / North Moss Lane

Junction capacity analysis has identified that the junction of the A1173/Kiln Lane (referred to as A1173/North Moss Lane/Kiln Lane in the TA) will require a mitigation scheme to ensure the development results in nil detriment from the increased traffic flows. THE APPLICANT has agreed that the mitigation measures are required and the costs involved in this should be circa £50,000.

Applicant's Comments

- 3.9 The applicant acknowledged that a highway mitigation scheme is required at the A1173 / Kiln Lane / North Moss Lane junction, as identified in the TA. JMP provided an initial cost for the mitigation scheme at approximately £42k.

Contribution to A18/A180 Link Road

A contribution of £20,000 is sought from THE APPLICANT in recognition of the benefit which the A18/A180 link road will offer and the fact that it will help facilitate the development without more

onerous mitigation measures being necessary particularly in relation to the impact on the Immingham Air Quality Management Area (AQMA). This contribution was identified in the bid submission to the DfT and referred to in the South Humber Bank Transport Study.

Applicant's Comments

- 3.10 The applicant was not aware that NELC had committed them to a contribution towards the A18/A180 link but agrees to pay the sum in the event that AMEP is consented.

Cycleway Upgrade

As noted above the Travel Plan identifies that accessing the site by walking and cycling will be challenging. The potential to upgrade Manby Road, Immingham to provide cycle links is identified so as to ensure accessibility to the site by sustainable modes and to feed into overall strategic links. This would involve putting in a 2.5 metre wide shared path and a toucan crossing as indicated on the attached map. The total cost would be circa £275,000. It is calculated that on a pro rata basis there should be a contribution of £154,000 from the developers towards such a cycle/footway. This work would be up to the North Lincolnshire/North East Lincolnshire boundary and negotiations would need to continue with North Lincolnshire as to the carrying out of improvements on their side of the boundary. Additional funding would be sought for the remainder of the costs.

Applicant's Comments

- 3.11 It is recognised that accessing the site by either walking or cycling presents a number of challenges – not least in creating an actual demand for use. The appropriate survey work to identify this will be undertaken in conjunction with NLC and NELC.
- 3.12 The applicant – on the basis of need - will review data as it emerges. This process will be overseen by the Travel Plan Co-ordinator in conjunction with the occupiers and the FTP review group.

Routing Agreement

- 3.13 A routing agreement will be required to reduce any potential effect of the increase in traffic flows on Immingham AQMA.**

Applicant's Comments

- 3.14 The applicant is committed to seek to ensure that any HGV traffic (and associated deliveries) avoids the A1173. This will be monitored through both the construction and operational Traffic Management Plans.

Written Representations

North East Lincolnshire Council made representation on the proposal on 30 March 2012 which was duly acknowledged. Confirmation as an Interested Party was given on 1 May 2012. Subsequently negotiations have been ongoing with the applicants and our representations are updated as follows;

In terms of economic development in the area the broad support for this development which would strengthen the areas offer in terms of renewable off shore energy production is reiterated. This development has the potential to create a significant number of jobs for North East Lincolnshire

Council residents. It would also create opportunities for new and existing businesses involved in the supply chain. Any wind turbine manufacturing facilities developed in North Lincolnshire would positively support the growth of the operations and maintenance sector developing at Grimsby Port. The application would help to regenerate the local and wider area and the Council supports the proposal.

However the view remains that the implications of the development on the infrastructure of the area needs to be fully considered and in particularly we still require further clarification and assessment on various matters relating to transport and the designated Immingham Air Quality Management Area. These matters are from the submitted Transport Assessment and Travel Plan documents.

1) For shift systems there remains the need for clarification on any change in shift patterns which could have a significant impact on the robustness of the subsequent junction capacity assessment work. Negotiations are ongoing with the applicants.

Applicant's Comments

- 3.15 The applicant is committed to adopting a staggered shift pattern at the site, which the future tenants must adhere to. Staggered shift arrival and departure times will reduce the impact on the highway network and, crucially, enable employees to arrive and depart on time. Such an arrangement is in the best interests of both the Landlord and the tenants operating on the site as well as in mitigating traffic impacts.
- 3.16 Individual tenants operating from AMEP (within their individual Leases) will be bound by the FTP. The FTP is the appropriate method to deliver sustainable transport objectives for multi-occupancy and also recognises that it is set out in accordance with the Department of Transport publication Good Practice Guidelines: Delivering Travel Plans through the Planning Process (2009).
- 3.17 The HA and NLC have agreed to the proposed format and rationale of the travel plan. FTPs evolve over time to best suit the needs of the users of the development and monitoring will ensure continual review and amendment as necessary.

2) On trip distribution there remains the need for clarification regarding the process used to determine trip distribution and the large proportion of trips from the west. Negotiations are ongoing with the applicants.

Applicant's Comments

- 3.18 The original gravity model within the TA was agreed with the HA and NLC. Further to additional comments from NELC, a further sensitivity test was undertaken, which distributed a greater percentage of trips to and from the Grimsby area, and less from the M18 (west). This showed that the change in impact was not significant on the A1173 junctions in North East Lincolnshire. The improvement scheme originally proposed for the A1173/North Moss Lane/Kiln Lane remains adequate as mitigation.

3) In terms of the A18/A180 link road an assessment of the impact of the development on this committed scheme. Please refer to our response to questions.

Applicant's Comments

- 3.19 See response in Paragraph 2.18 above.

4) ***With regard to sustainable transport measures the need for a robust Travel Plan so that people accessing the site from North and North East Lincolnshire are able to do so using sustainable transport. Defined responsibilities and future monitoring are required. Please refer to our response to questions.***

Applicant's Comments

3.20 See responses in Paragraphs 3.2 – 3.8 above.

5) ***In terms of the A1173/Kings Road and Pelham Road Air Quality Management Area verification of the air quality results by an environmental specialist. Moreover the need for routing agreements. Please refer to our response to questions.***

Applicant's Comments

3.21 See response in Paragraph 3.14 above.

6) ***There remains the need for consideration of the conditions/Agreements required to cover highway and transport mitigation works. Please refer to our response to questions.***

Applicant's Comments

3.22 See responses in Paragraphs 3.9, 3.10 – 3.12 above.

4 Centrica

- 4.1 Centrica's Witten Representation includes a number of concerns with regard to traffic impact. Relevant parts of their WR are reproduced below in italics, with the Applicant's comments inserted in plain type.

Centrica is concerned that the increases in traffic that would result from the proposed development would create delays and queuing traffic on local roads, particularly as some roads in the area are all already at capacity. This would potentially delay or restrict access to the power station or Centrica's other assets in the area, including delaying the delivery of cargo from the CSL site on Station Road. Centrica required unrestricted access to these assets at all times in case of emergency or urgent maintenance. (Paragraph 1.11)

In addition, the significant volume of traffic generated by the proposed development may prejudice future development in the area, including the expansion of Centrica's assets, as local roads may not have sufficient capacity to cope with any cumulative impacts of traffic from the proposed development and any future developments combined. (Paragraph 1.15)

Applicant's Comments

- 4.2 JMP has assessed the impact of the proposed AMEP development within the Transport Assessment and Traffic and Transport chapter of the Environmental Statement.
- 4.3 The assessments include a significant amount of committed development traffic, which already places significant pressure on the local highway network. One of the committed developments is the applicant's Logistics Park, alongside which a series of highway improvement are proposed schemes to mitigate its impact.
- 4.4 The results of the assessment does show there will be a negative impact on the capacity of the local highway networks, particularly at the Rosper Road / Humber Road and Humber Road / A160 / A1173 Manby Road junctions. However, the applicant is proposing highway improvement schemes at these junctions (in addition to the A1173 / Kiln Lane / North Moss Lane junction) to ensure AMEP has a nil-detriment effect. This means the junctions will still operate as they would have done with the base traffic and committed development traffic.
- 4.5 The impact of AMEP will be monitored through the Framework Travel Plan (FTP) and further Occupier Travel Plans (OTP), which will include specific targets for peak hour trip generation, achieved through measures such as the mini-bus service that each occupier will be required to operate, car sharing and other sustainable modes. The travel planning process includes a mechanism for identifying further mitigation should targets not be met at the site, to ensure the impact on the local highway network is no worse than set out in the TA.
- 4.6 The impact shown in the TA includes a sensitivity test relating to the overlap of shift changeover times, so is a robust assessment. The assessment does include a reduction in vehicular trips on the network to take account of the minibus services that will operate, but it does not include any allowance for the likely car sharing that will occur, or any employees choosing to walk or cycle. Therefore JMP considers the assessment to be very robust in terms of impact on the local highway network.

- 4.7 Given that the applicant will improve the highway to avoid detriment to existing users and other planned development, the proposition that, ***'the significant volume of traffic generated by the proposed development may prejudice future development in the area, including the expansion of Centrica's assets'***, can be given no weight in the decision making process. Future developers will need to mitigate for the impact of their proposals in a similar fashion.

Centrica requests that the granting of a DCO for the proposed development is dependent on the above highway improvement works, and any other works deemed necessary by the Highways Agency and local highways authorities, being implemented prior to operations commencing on site. This will ensure that the necessary road and junction improvements necessary to accommodate the traffic generated by the proposed development are in place prior to development commencing and therefore ensuring sufficient capacity on local roads to accommodate the proposed development. (Paragraph 3.51)

Applicant's Comments

- 4.8 The applicant is discussing with the HA a phased implementation of improvement schemes, bearing in mind the time that it will take for full utilisation of the site and the potential for the Agency's own works to go ahead in the near future. Phasing will be dependent on trigger levels of employment on the site being reached.

Centrica also requests that traffic travelling to / from the proposed development is restricted from using Chase Hill Road. This will ensure that any queuing traffic will not back up to the access road to the power station and restrict access. (Paragraph 3.52)

Applicant's Comments

- 4.9 This is something that is out of the applicant's control as it would be impossible to enforce. However the junction capacity assessment at the Rosper Road/Humber Road junction shows that as a worst case, there could be a maximum queue of around 125 metres on Rosper Road in the evening peak, which would not impact on the operation of the Centrica access road.

In addition, it is also requested that the DCO restricts the amount of road based transport to the site to the levels stated in the TA and the Framework Travel Plan. Any abnormal loads (i.e. large turbine parts) should be delivered to the site by either rail or sea to reduce delays on local roads, many of which would not be suitable for this type of traffic. (Paragraph 3.53)

Applicant's Comments

- 4.10 The Framework Travel Plan has a peak hour trip generation target, which must be adhered to. Each occupier will have its own target, which will be an appropriate proportion of the overall site target.
- 4.11 It is not envisaged that there will be any abnormal loads to and from the site. Any abnormal loads identified will be notified to the highway authorities (NLC and the HA) in accordance with the correct procedures.

Able has a right across Centrica's access road to the power station in connection with its existing car storage operations in the area.

Whilst not specifically stated in any of the application documents, Centrica is still concerned that Able will seek to utilise this access road to access the proposed development.

Any use of this access road by Able in connection with the proposed development would be totally unacceptable. As stated above, Centrica requires unrestricted access 24 / 7 to the power station. Use of this access road by Able in connection with the proposed development would potentially prevent this. The road is not suitable for use by large numbers of vehicles.

In addition, there are a number of pipelines and services which either run alongside the road or under the road. This includes the pipeline to the Eon power station. This pipeline is made of fibreglass and is therefore susceptible to damage. As a result the access road has a 7 tonne weight restriction. The use of the road by HGV or large vehicles would therefore damage this pipeline and result in extremely costly repairs.

At the 21 June 2012 meeting it was discussed that Able might agree to extinguish its rights over this access road. Whilst this is not for consideration as part of the DCO application Centrica would welcome this. However, it is also requested that any DCO or CPO granted restricts Able's use of this access road. (Paragraph's 3.54 – 3.58)

Applicant's Comments

- 4.12 The applicant does not use the access road in connection with car storage activities.
- 4.13 The AMEP site cannot be accessed from the Centrica Access Road, so the issues raised above are completely superfluous and irrelevant to the DCO application.
- 4.14 However, to be clear, there is a legal agreement covering the applicant's rights over the access road referred to in the WR and Centrica cannot simply vary them unilaterally. Whilst JMP were not present at the meeting on 21 June 2012 referred to above, the applicant records that it is NOT TRUE that he '***discussed that Able might agree to extinguish its rights over this access road.***' To the contrary, the applicant made it clear at the meeting that a legal agreement was in place providing access, and actually tabled a copy of the agreement at the meeting, recording that both parties were bound by it. Even if it was said that the agreement could only be changed if both parties agreed to do it, it is difficult to understand how Centrica have reported that this amounted to a discussion about the applicant waving his rights over the access road.

5 Conoco Phillips Limited (CPL)

CPL comment

- 5.1** *In view of the intention that Rosper Road is to become the main feeder road to the development site, CPL would request details of any proposals that are to be made to the turning into Marsh lane, and any works relevant to highway improvements and other infrastructure to facilitate the development. (Paragraph 3.2)*

The applicant response

- 5.2** Marsh Lane will not be used as an access into AMEP.
- 5.3** One new access is being constructed into AMEP, which is likely to include a right turn ghost island. The existing access into Station Road will be improved. No other junction works are proposed.

Stage 1 Road Safety Audit – Designer’s Response



Able Marine Energy Park

Stage 1 Road Safety Audit Designer's
Response

Report



Able Marine Energy Park

Stage 1 Road Safety Audit Designer's Response

Report

JMP Consultants Limited
Minerva House
East Parade
Leeds
LS1 5PS

T 0113 244 4347
F 0113 242 3753
E leeds@jmp.co.uk

www.jmp.co.uk

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Able Marine Energy Park

Stage 1 Road Safety Audit Designer's Response

Report

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1 Introduction

Purpose of the Report

- 1.1 This report results from a Stage 1 Road Safety Audit carried out on the proposed improvement of three junctions to mitigate the impact of the Able Marine Energy Park (AMEP). As part of a Transport Assessment a number of junctions were identified as requiring measures to address the impact of development generated trips. The Stage 1 Road Safety Audit covered the three junctions identified in Table 1.1.

Table 1.1 Drawings Examined during the Audit

Drawing Number	Drawing Title
NEA1114/01 Rev A	Junction C Proposals for Humber Road/Rosper Road
NEA1114/02 Rev A	Junction E Proposals for A160/A1173/Humber Road
NEA1114/06 Rev A	Junction H Proposals for A1173/North Moss Lane/Kiln Lane

- 1.2 It should be noted that following the audit, an error was identified in that the incorrect mitigation scheme drawing was used during the audit for Junction C (Humber Road/Rosper Road). However, the only difference between NEA1114/01 Rev A and the scheme drawing that should have been used is the addition of a second approach lane on Humber Road West. The second lane was adopted from the committed highway layout associated with the Able Logistics Park. This layout was also subject to a Stage 1 Road Safety Audit, and no issues were identified. The report including the committed layout Drawing No. 60035746-P-010 is provided in **Appendix A**.
- 1.3 This report introduces the designer's response to problems identified and solutions recommended by the original Safety Audit Teams Stage 1 Safety Audit report.
- 1.4 In all cases, the problem number as allocated in the Audit Teams original report has been retained to facilitate cross referencing.
- 1.5 The audit was carried out by Mrs Rachel Fogg of JMP and Peter Hill of Peter Hill Design Services Limited.
- 1.6 The auditors had no involvement in the scheme design and a site visit was undertaken on Friday 22nd June 2010.
- 1.7 The weather was overcast, with intermittent rain during the audit. The road surface was wet.

2 Items raised in Stage 1 Audit

- 2.1 This section describes safety issues that were identified as part of the Stage 1 Safety Audit, and the designer's responses. The locations of the problems are shown on the plans included in **Appendix B** of this report.
- 2.2 The plans showing the updated mitigation proposals following the Stage 1 Road Safety Audit are provided in **Appendix C**.

Humber Road / Rosper Road (Traffic Signals)

- 2.3 Problem (Location 1) – Insufficient clearance causing risk of vehicle strikes

The width of all three islands provided within the carriageway to accommodate the new signal poles and signal heads are only 1m in width. Islands of this width will not provide the minimum clearance of 450mm required to the signal heads and this will increase the risk of vehicles striking the signal heads and damaging the signals and the vehicles.

Recommendation

The width of the islands should be increased to a minimum of 1350mm for a single signal head and 1850mm for a double signal head (wider islands will be required if yellow backing boards are also proposed) to ensure a minimum clearance of 450mm is provided to the signal heads from the kerb line.

Designer's response

The designer agrees with this recommendation, and the layout has been amended accordingly as shown in NEA1114/01 Rev D

- 2.4 Problem (location 2) – Side swipe collisions on double right turn movement

A double right turn movement is proposed from Rosper Road to Humber Road. However, the carriageway width on the Humber Road exit from the junction is only 6.2m, which may be too narrow to accommodate the swept paths of two large vehicles. This will increase the risk of side swipe collisions between large vehicles and increase the risk of vehicles over running the traffic island and striking the signal equipment.

Recommendation

The layout should be amended to ensure adequate width is provided on the exit from the junction for two large vehicles to undertake the right turn movement simultaneously.

Designer's response

The designer agrees with this recommendation, and the layout has been amended accordingly as shown in NEA1114/01 Rev D

2.5 Problem (location 3) – Head on collisions and kerb over running

Recommendation

The swept path of large vehicles should be checked to ensure they can safely undertake the left turns at the junction and the introduction of exit tapers should be provided to assist in this movement.

Designer's response

The designer has checked the swept path, and this is acceptable. Exit tapers have been included in the NEA1114/01 Rev D

2.6 Problem (location 4) – Side swipe due to confusion over lane destinations

The lane destination arrows are located too close to the stop lines and the first vehicle stopped at the junction will block them from view. This will increase the risk of side swipe collisions if following vehicles need to make late lane changes at the junction or are positioned in the incorrect lane.

Recommendation

The lane destination arrows should be shown a minimum of 20m from the stop lines.

Designer's response

The designer agrees with this recommendation, and the layout has been amended accordingly as shown in NEA1114/01 Rev D

2.7 Problem (location 5) – Collisions due to unsighted signal heads

The signal heads are only offset from the stop lines by 1m, which will make it difficult for the first vehicle to see the signal aspect and may result in confusion over when it is safe to proceed through the junction. This will increase the risk of collisions occurring at the junction.

Recommendation

The distance between the stop line and the primary signal head should be increased to 2.5m minimum at all of the stop lines at the junction.

Designer's response

The designer agrees with this recommendation, and the layout has been amended accordingly as shown in NEA1114/01 Rev D

2.8 Problem (location 6) – Increased risk of vehicle strikes with street furniture

The layout of the junction shows that a new traffic island is proposed between the ahead lane and the right turning lane on the eastern side of the junction. However, the staging indicates there is no need to provide this traffic island as the ahead movement and right turn run together in the same

stage and the right turn is never separately signalled. The provision of unnecessary traffic islands and street furniture within the carriageway introduces an additional hazard that is at risk of being struck by vehicles.

Recommendation

The traffic island between the right turn lane and the ahead lane should be removed.

Designer's response

The designer agrees with this recommendation, and the layout has been amended accordingly as shown in NEA1114/01 Rev D

2.9 Problem (Location 7) – Vehicle strikes to islands and loss of control

The lane widths past the traffic islands on the eastern side of the junction are only 3m wide, with the ahead lane potentially even narrower than 3m – scaling approximately 2.9m from the drawing. The junction is heavily used by large HGVs, and the narrow lane widths will increase the risk of vehicles striking the islands, or signal equipment, and causing loss of control type conflicts.

Recommendation

The lane widths through the junction should be increased to 3.5m to provide additional space for large vehicles that are using this route.

Designer's response

The designer agrees with this recommendation, and the layout has been amended accordingly as shown in NEA1114/01 Rev D

2.10 Problem (Location 8) – Kerb strike and loss of control collisions

The alignment of the kerb line at the western extent of the works, where it ties back into the existing kerb line has a kink on the southern side as it moves over abruptly northwards to tie into the existing kerbs. This sharp change of direction into the carriageway will increase the risk of vehicles striking the kerb line at this location and the driver losing control of the vehicle.

Recommendation

The alignment of the kerb line should be smoothed out so there are no sharp changes in the kerb line as it re-joins the existing alignment at the tie-in point.

Designer's response

The designer agrees with this recommendation, and the layout has been amended accordingly as shown in NEA1114/01 Rev D

2.11 Problem (Location 9) – Additional delay / frustration

The location of the traffic islands appear to be set back from the junction by some distance with the space across the junction being almost 40m in length. This will increase the length of the intergreens required at the junction and reduce the capacity of the junction, which may cause drivers additional delay and frustration, and potentially leading to drivers proceeding into the junction at the start of the red phase and thus increasing the risk of collisions with vehicles from the opposing phase.

Recommendation

The layout of the junction should be made as compact as possible, by moving the islands in towards the junction, to reduce this delay/frustration and potential subsequent dangerous behaviour.

Designer's response

The designer does not agree with this recommendation. The junction design accommodates HGV movements. A reduction in the stop line distance is not feasible. Therefore, no action has been taken.

A160 / A1173 / Humber Road (Roundabout)

2.12 Problem (Location 10) – Risk due to unnecessary construction works

The proposed introduction of an additional lane on the north eastern arm of the roundabout to provide a two lane entry 8m wide is considered unnecessary following the site visit. The existing single lane entry is currently 8m wide and vehicles, including HGV traffic, were observed using the entry as a two lane entry even though lane markings are not currently present on site. Undertaking construction work on the highway, which is potentially not necessary, will increase the risk (to vehicles and construction personnel) of collisions as a result of the works and traffic management necessary to undertake these.

Recommendation

The existing carriageway should be cleared of debris that has built up in the outside of the offside lane and the existing single lane entry should be remarked as a two lane entry with 4m wide lanes.

Designer's response

The designer agrees with this recommendation, and the layout has been amended accordingly as shown in NEA1114/02 Rev C

2.13 Problem (Location 11) – Inconsistent pedestrian facilities

The proposed realignment of the existing kerbing of the north eastern splitter island to provide a two lane entry will require a new flush dropped kerbs to be provided and associated tactile paving to meet with current safety standards for a pedestrian crossing. This will then introduce an inconsistency at the junction as this would be the only dropped crossing that meets current safety standards. Pedestrians may then expect to find tactile paving at all the pedestrian crossings around the junction to warn them where the edge of the carriageway is and inadvertently walk into the carriageway, thus increasing the risk of collision with passing vehicles.

Recommendation

Flush dropped kerbs and tactile paving should be provided at all pedestrian crossings at the junction to meet with current safety standards.

Designer's response

Although the design will now not include a realignment of existing kerbing, with no inconsistency in pedestrian crossing facilities, in order to encourage people to walk to and from the site, flush dropped kerb and tactile paving will be introduced at the crossings at the roundabout, to meet with current safety standards. This is shown in NEA1114/02 Rev C

A1173 / North Moss Lane / Kiln Lane (Roundabout)

2.14 Problem (Location 12) – Side swipe collisions on approaches

The proposed lane widths on both the eastern and western arms of the junction are only 3.0 wide around the entry radii, which will result in large HGVs either over running the inside kerb line or encroaching into the offside lane increasing the risk of side swipe collisions with other vehicles.

Recommendation

The lane widths should be increased to ensure that the swept path of a large HGV can be accommodated within each entry lane.

Designer's response

The designer agrees with this recommendation, and the layout has been amended accordingly as shown in NEA1114/03 Rev B

2.15 Problem (Location 13) – Overshoot collisions on circulatory carriageway

The increased width of the eastern and western entry arms to the roundabout will enable vehicles to enter the roundabout at a greater speed, thus increasing the risk of vehicles overshooting the giveway road markings and colliding with vehicles on the circulating carriageway.

Recommendation

The entry path deflection should be checked on each entry that is to be widened to ensure that it meets with the design standards and vehicles cannot enter the roundabout on a vehicle path that is greater than a 100m radius.

Designer's response

The designer agrees with this recommendation, and the layout has been amended accordingly as shown in NEA1114/03 Rev B

2.16 Problem (Location 14) – Kerb strike and loss of control of vehicle

The kerb alignment of the eastern approach has a kink at the tie-in point with the roundabout. This kink will increase the risk of vehicles striking the kerb line and losing control of the vehicle at this point.

Recommendation

The kink should be removed from the layout and a smooth kerb alignment should be provided on the approach to the roundabout and at the tie-in with the existing kerb alignment.

Designer's response

The designer agrees with this recommendation, and the layout has been amended accordingly as shown in NEA1114/03 Rev B

2.17 Problem (Location 15) – Side swipe on circulatory carriageway

The central road markings on the western arm direct vehicles in the nearside lane into the offside lane at the entry point to the roundabout. This will increase the risk of side swipe collisions on the circulatory carriageway at this location.

Recommendation

The central road markings should be amended at the end of the approach to direct vehicles further to the left (on entry to the roundabout) to provide sufficient space for vehicles in the offside lane to continue around them once on the circulatory carriageway.

Designer's response

The designer agrees with this recommendation, and the layout has been amended accordingly as shown in NEA1114/03 Rev B

2.18 Problem (Location 16) – Side swipe collisions on circulatory carriageway and exits

The circulatory carriageway is only 6m wide on the western side and 7m wide on the northern side which is insufficient width for two lanes of traffic to safely negotiate the roundabout side by side. Also, all the roundabout exits are only a single lane exit. The provision of two lane entries on the eastern and western entries will increase the risk of side swipe collisions occurring at the exits and on the circulatory carriageway in these locations.

Recommendation

Additional lane destination arrows and lane markings should be provided on both of the two lane approaches. On the eastern approach (Kiln Lane), the nearside lane should be marked for the A1173 west and the offside lane marked for the A1173 north. Ahead only arrows should be used on this approach to prevent vehicles turning right onto the circulatory carriageway after the splitter island. On the western approach, the nearside lane should have left only arrows and marked for the A1173 north and the offside lane should have ahead only arrows and marked for Kiln Lane. Circulatory lane markings should also be provided on the southern and north western sides of the roundabout to help vehicles remain in the correct lanes.

Designer's response

The designer agrees with this recommendation, and the layout has been amended accordingly as shown in NEA1114/03 Rev B

Appendix A

A160 Killingholme Port Access Stage 1 Road Safety Audit

Job No	Report No	Issue no	Report Name	Page
NEA1114	1	2	Able Marine Energy Park Stage 1 Road Safety Audit	A1

A160 Killingholme Humber Port Access, Stage 1 Road Safety Audit



Prepared by:

Robert Major
Senior Engineer

Approved by:

Stuart Kay
Principal Engineer

A160 Killingholme Humber Port Access, Stage 1 Road Safety Audit

Rev No	Comments	Date
-	Draft Issue	12/03/10
A	Final Issue	17/03/10

1st Floor, One Trinity Gardens, Quayside, Newcastle-upon-Tyne. NE1 2HF
Telephone: 0191 224 6500 Website: <http://www.aecom.com>

Job No: 60035746

Reference: 060.010

Date Created: 12/03/10

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Site Description	2
Items Resulting from the Stage 1 Road Safety Audit	3
The Audit Team Statement	8
Appendix A – Documents Submitted to the Audit Team.....	9

Introduction

This report results from a Stage 1 Road Safety Audit carried out on the improvement of five junctions between the A160 and the A180 (T) and the Humber Port. The audit was carried out at the request of the Design Organisation: AECOM on behalf of Able UK Ltd.

The report indicates each of the problems identified together with recommendations to solve or mitigate them, the Audit Team Statement and a schedule of documents reviewed.

The members of the Audit Team were:

- Stuart Kay
Principal Engineer, AECOM
- Robert Major
Senior Engineer, AECOM

There were no other personnel involved in this audit.

The audit took place at AECOM's Newcastle office during March 2010. The audit comprised an examination of the documents provided by the designers (see Appendix A). In addition to examining the documents supplied, the Audit Team visited the sites of the proposed measures on Friday 5th March 2010. Weather conditions during the site visit were cold / sunny with a dry highway surface.

The terms of reference of the audit are as described in Road Safety Audit Standard HD 19/03 in the Design Manual for Roads and Bridges (DMRB). The advice issued in the DMRB applies to trunk road and motorway highway improvement schemes. However, it has been used in this report to define the scope of this audit.

The team has examined and reported only on the road safety implications of the measures as presented and has not specifically examined or verified the compliance of the designs to any other criteria.

No departures from standards have been notified to the Audit Team on the proposals.

All traffic sign and road marking diagram number references are made to The Traffic Signs Regulations and General Directions, 2002 (TSRGD) as amended.

Site Description

The purpose of the scheme is to enhance the route along the Humber Road A160, from the A180 (T), to accommodate the additional traffic generated by the proposed storage facility at Killingholme which is part of the Humber Port complex.

The A160 is a single carriageway from the A180 (T), at the western extents of the scheme, until its junction with Top Road / Habrough Road where it becomes a dual carriageway. At its junction with the A1173 it again becomes a single carriageway until it reaches Rosper Road which is the eastern limits of the scheme. The surrounding environment, through which the A160 passes, is predominantly rural with occasional commercial / industrial development

Humber Road (A160) carries a very high proportion of heavy goods traffic which includes vehicles registered outside of the UK. There is a system of street lighting on the route although this was not observed during the hours of darkness. There are limited facilities for pedestrians on Humber Road and its associated junctions and there appears to be no demand for such as observed during the site visit. There are also no facilities for cyclists. Parking on the route is regulated either by the use of 24 hour Waiting or Clearway restrictions.

Weather conditions during the site visit on Friday the 5th March 2010 were cold and sunny with a dry highway surface. The audit was undertaken during the hours of 13:00 to 15:30.

Scheme Objectives:

The proposed development is a port related storage facility located at Killingholme, on the Humber Estuary, in North Lincolnshire. As part of a Transport Assessment a number of junctions were identified as requiring measures to address the impact of development generated trips. This scheme covers the five junctions which have been identified for improvement including;

- A180 (T) / A160 – Merge Improvement / Westbound Entry Slip Road Widening;
- A160 / A1077 Ulceby Road – Localised junction widening to major road to provide right-turn reservoir;
- A160 / Habrough Road / Top Road Roundabout - Widening of the A160 carriageway, on the approach to and exit from the roundabout, on the western arm;
- A160 Humber Road / Eastfield Road – Carriageway widening to Eastfield Road (north of A160) to provide dedicated left-turn lane into Humber Road; and
- A160 Humber Road / Rosper Road – Installation of traffic signals on a three arm priority junction.

Capabilities on project:
Transportation

Items Resulting from the Stage 1 Road Safety Audit

Details of the following items were not submitted for auditing; therefore no specific problems have been identified at this stage:

- Plans showing highway boundaries, access to properties, public rights of way, footpaths and land uses.
- Typical cross sections for new roads and widening schemes.
- Departures and Relaxations from design standards and the Designer's reasons for the Departures and relaxations.
- Speed survey data if available.
- Accident data for the current 3 years period.
- Information on any local circumstances such as adverse weather conditions, land uses such as schools and old people's homes (existing and proposed) and access for emergency vehicles.
- Location of major services.
- Lighting proposals.
- Traffic Signal layout proposals.

The following Problems have been identified from the documents submitted;

GENERAL:

No problems

THE ALIGNMENT:

Problem: 1

Location: Westbound entry slip road to the A180 (T) from the A160.

Drawing: 52409/P/004

Summary: Proposed kerb alignment not consistent with vehicle movement.

Description:

The proposed kerb alignment does not consist of transition curves between straight lengths of kerb to reflect the actual movement / path of vehicles on the carriageway. This may result in highway users over-correcting their movement while travelling along the carriageway and coming into conflict with traffic on the main carriageway.

Recommendation:

Provide suitable transition curves to the kerb alignment at this location.

Capabilities on project:
Transportation

THE JUNCTIONS:

Problem: 2

Location: Proposed central reserve on A160 at junction with Ulceby Road A1077.

Drawing: 52409-P-011

Summary: Inadequate right-turn facility from Ulceby Road to A160.

Description:

The proposed right-turn facility is inadequate in terms of its length and the angle at which vehicles are required to stop in relation to the main carriageway. The length of the reservoir is not of sufficient length to fully accommodate a Heavy Goods Articulated vehicle. This may result in the rear of a long vehicle protruding into the main carriageway while the driver waits to complete the right-turn manoeuvre. This may potentially result in conflict between right-turning vehicles and traffic on the main carriageway. Also the acute angle at which a driver, in a vehicle within the right-turn facility, views the main carriageway may result in this being restricted and potentially lead to drivers emerging from the right-turn reservoir and coming into conflict with vehicles on the main carriageway.

Recommendation:

Amend the design of the central reserve right-turn reservoir to accommodate large vehicles wholly within it and allow a clear view of approaching traffic on the main carriageway.

Problem: 3

Location: Proposed central reserve on A160 at junction with Ulceby Road A1077.

Drawing: 52409-P-011

Summary: Inadequate right-turn facility from A160 into Ulceby Road.

Description:

The right-turn reservoir is of insufficient length to accommodate two long vehicles wholly with it and the entry taper / deceleration lane is too short to allow a motorist to safely reduce the vehicle's speed.

Capabilities on project:
Transportation

Recommendation:

Amend the design of the central reserve right-turn reservoir to accommodate two large vehicles wholly within it and extend the entry taper / deceleration lane to accommodate the safe deceleration of a vehicle entering the right-turn reservoir.

Problem: 4

Location: A160 at Ulceby Road junction

Drawing: 52409-P-011

Summary: Inadequate provision for vehicles leaving and entering the A160

Description:

Within the proposed design of the junction there does not appear to be any provision for vehicles to decelerate off or accelerate onto the A160. This may potentially lead to rear-shunt type accidents due to the differential speed of vehicles particularly the relatively high proportion of HGV's in the traffic's composition.

Recommendation:

Amend the design of the junction to accommodate acceleration and deceleration lanes onto and off the A160.

Problem: 5

Location: The proposed kerblines adjacent to the left-turn from Ulceby Road to the A160.

Drawing: 52409-P-011

Summary: Inadequate kerb radius for left-turn manoeuvre.

Description:

It was observed during the site visit that large vehicles were overrunning the verge to carry out the left-turn manoeuvre. It would appear from the proposed design that this occurrence will be exacerbated by the reduction in the kerb radius at this location and the introduction of a kerbed central island on the A160. This may potentially lead to vehicles being unable to complete the left-turn at the junction and consequently coming into conflict with vehicles on the main carriageway.

Capabilities on project:
Transportation

Recommendation:

Amend the design of the kerbline to safely allow vehicles to expedite the left-turn.

Problem: 7

Location: Eastfield Road northside of A160

Drawing: 52409-P-002

Summary: Poor delineation of carriageway space.

Description:

The drawing indicates that the carriageway on the approach to the stop-line, used by vehicles either travelling into Eastfield Road southside or turning right into the A160, to the traffic signals is to be divided into two traffic lanes each of approximately 3metres in width with both of which signed for right-turning traffic. This lane width is too narrow to safely accommodate two large vehicles at the stop-line and in particular allow them to simultaneously turn-right in a safe manner. This may potentially lead to vehicle to vehicle conflict in the form of side impact shunt-type incidents.

Recommendation:

Remove lane marking to create one approach to stop-line.

Problem: 8

Location: Eastfield Road, northside of A160, east side verge

Drawing: 52409-P-002

Summary: Protection of embankment in the highway verge.

Description:

There is a watercourse in the highway verge approximately 2metres below the level of the adjacent carriageway. This may lead to errant vehicles, which leave the carriageway, entering the watercourse and creating a potential danger to motorists. Widening of Eastfield Road brings the carriageway closer to the watercourse.

Capabilities on project:
Transportation

Recommendation:

Provide a vehicle restraint in this highway verge, of sufficient length to help to prevent vehicles entering the watercourse

NON-MOTORISED USER PROVISION:

Problem: 9

Location: The eastbound approach and westbound exit of the western arm of the A160 at it's junction with Habrough Road.

Drawing: 52409-P-003

Summary: Inadequate provision for NMU's.

Description:

There is an existing NMU crossing of the A160, immediately west of the roundabout, linked to a shared highway. It would appear from the drawing that provision has not been made to assist NMU's cross the carriageway or provide warning to motorists of the potential hazard. This may potentially result in conflict between vehicles and NMU's at this location

Recommendation:

Provide dropped kerbs, buff coloured tactile paving; "Look Left" / "Look Right" road markings, as appropriate, to diagram number 1029 to each NMU crossing location: And erect hazard warning signs to diagrams numbered 562 "Other danger ahead" and 563 "Pedestrians crossing" on the westbound approach to the junction.

ROAD SIGNS, CARRIAGEWAY MARKINGS AND STREET LIGHTING:

No Comments

Capabilities on project:
Transportation

The Audit Team Statement

I certify that this Road Safety Audit has been carried out in accordance with Road Safety Audit Standard HD 19/03 of the Design Manual for Roads and Bridges.

We certify that we have examined the drawings and documents listed in Appendix A to this Road Safety Audit Report. The Road Safety Audit has been carried out with the sole purpose of identifying any feature within the proposals that could be removed or modified in order to improve the safety of the scheme. The problems identified have been recorded in this report together with associated recommendations for safety improvements which should be considered for implementation.

No one on the Audit Team has been involved with the design of the measures proposed.

ROAD SAFETY AUDIT TEAM LEADER:

Name: Stuart Kay, IEng AMICE MCIHT MSoRSA

Position: Principal Engineer

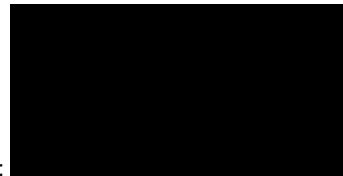
Organisation:

AECOM

Address:

First Floor,
One Trinity Gardens,
Quayside,
Newcastle-upon-Tyne
NE1 2HF

Signed:



Date: 17/03/10.....

ROAD SAFETY AUDIT TEAM MEMBER:

Name: Robert Major, I Eng FIHE

Position: Senior Engineer

Organisation:

AECOM

Address:

First Floor,
One Trinity Gardens,
Quayside,
Newcastle-upon-Tyne
NE1 2HF

Enquiries regarding this Road Safety Audit should be made to the Audit Team Leader at the above address or email RoadSafety@AECOM.com

Capabilities on project:
Transportation

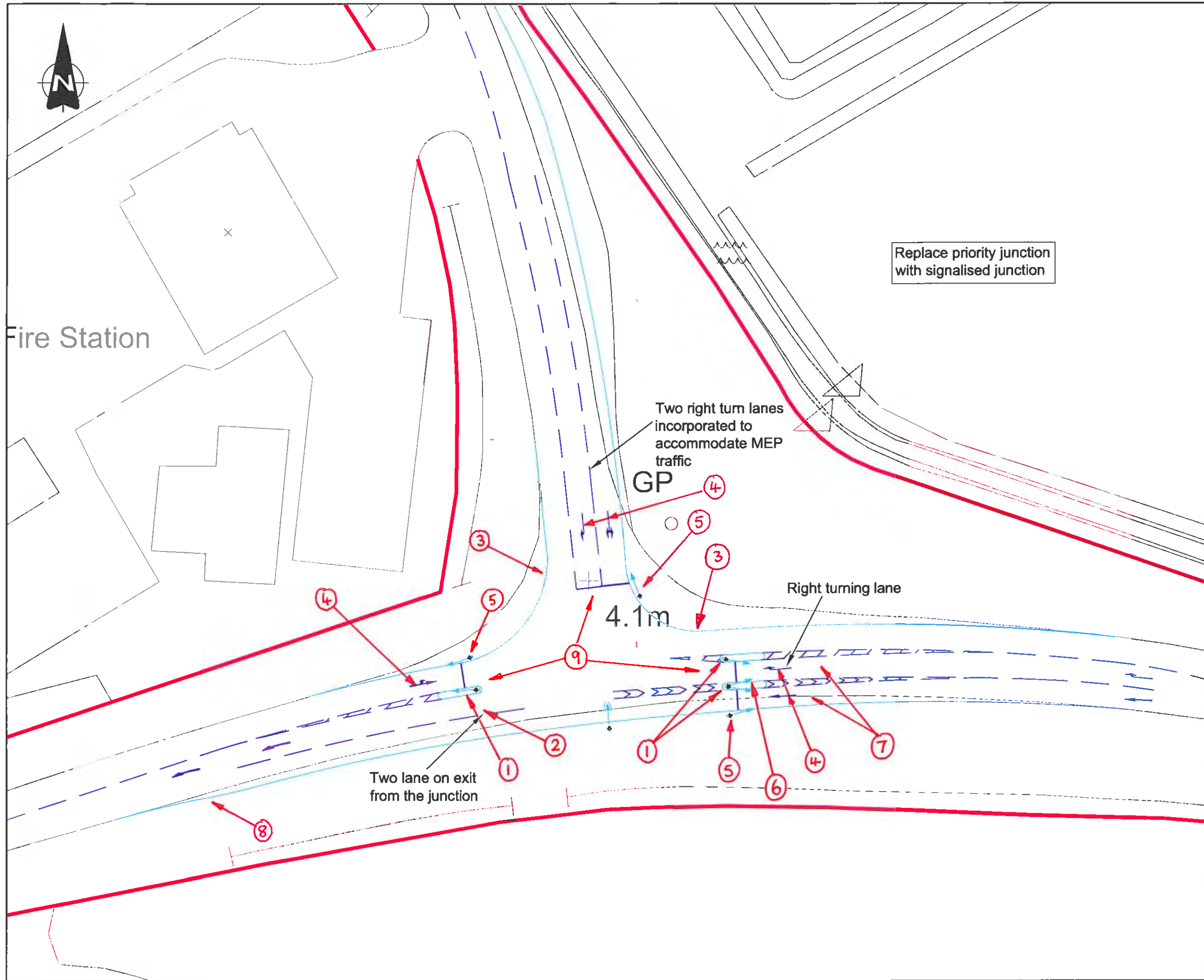
Appendix A – Documents Submitted to the Audit Team

The following documents were submitted as part of the Road Safety Audit:

Document No.	Rev.	Description	Date
52409-P-004	-	Proposed Junction Improvements A160 / A180(T)	20/9/07
52409-P-0011	-	Proposed Highway Layout, A160-A1077 Ucleby Road Junction	7/09
52409-P-003	Rev B	Proposed Roundabout Layout	2/3/10
52409-P-002	Rev A	Proposed Signalised Junction Scheme	14/3/10
52409-P-010	-	Proposed Junction Improvements Rosper Road / Humber Road	23/7/09
	-	Road Safety Audit Brief	3/3/10

Location of issues identified during the Road Safety Audit

Page	Job No	Report No	Issue no	Report Name
B2	NEA3049	1	2	Immingham Marine Energy Park Stage 1 Road Safety Audit



Key

- Road markings
- Proposed kerb line
- Approximate highway boundary

A	11/07/11	Delete left turn filter	RAB	DM

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Able UK

Marina Energy Park

Junction C
Proposal for Humber Road / Rosper Road

RAB	DM	
A3	Mar 2011	1:500
DRAFT	NEA1114/01	A



Unit 1

5.6m

A 160

Introduce
additional
lane

A 160

Key

-  Road markings
-  Proposed kerb line
-  Approximate highway boundary

A	11/07/11	Amend mitigation proposal	RAB	DM

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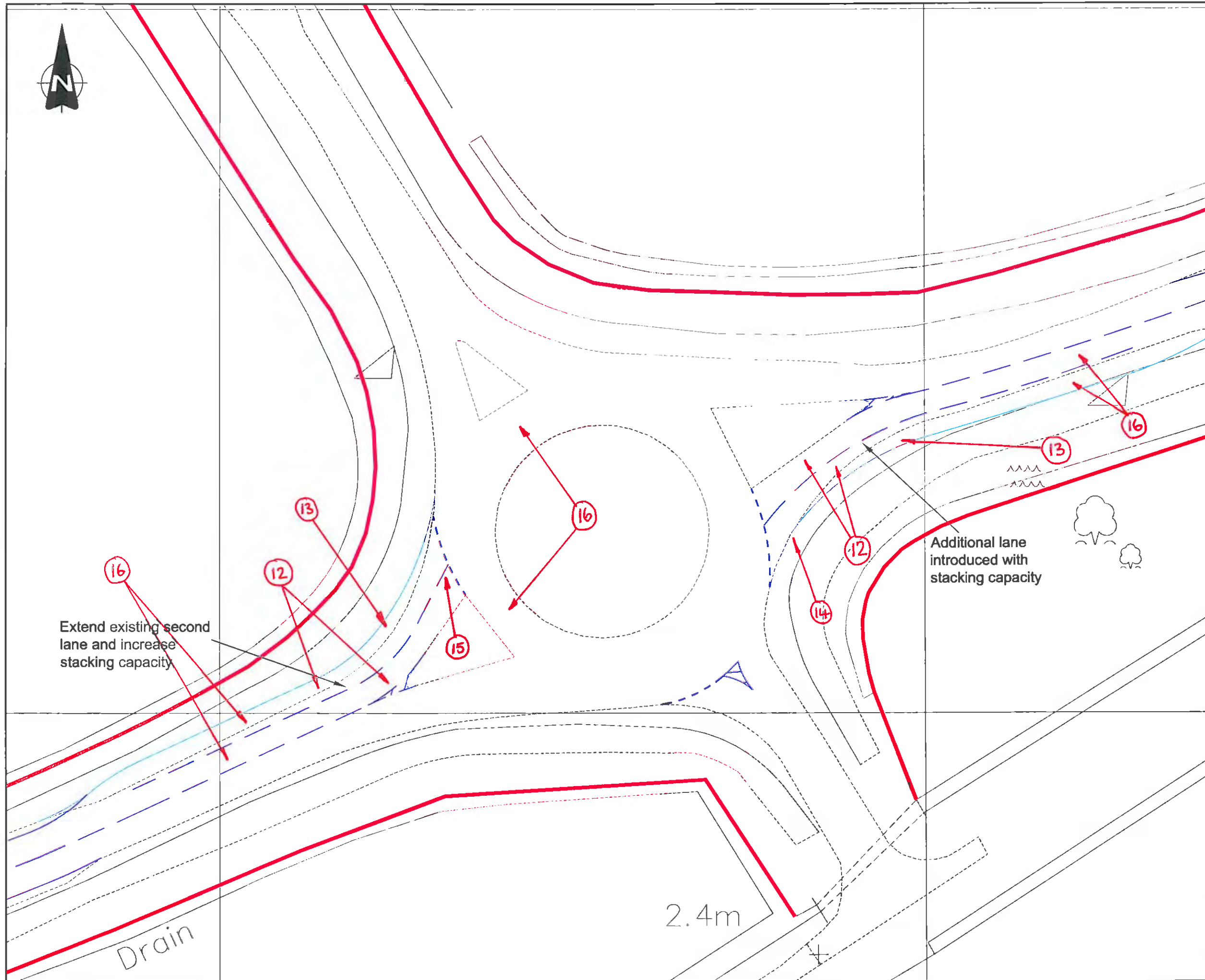


Able UK

Marine Energy Park

Junction E
Proposal for A160 / A1173 / Humber Road

RAB	DM	
A3	Apr 2011	1:500
DRAFT	NEA1114/02	A



Key

- Road markings
- Proposed kerb line
- Approximate highway boundary

A	11/07/11	Delete mitigation on A1173 north	RAB	DM

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Able UK

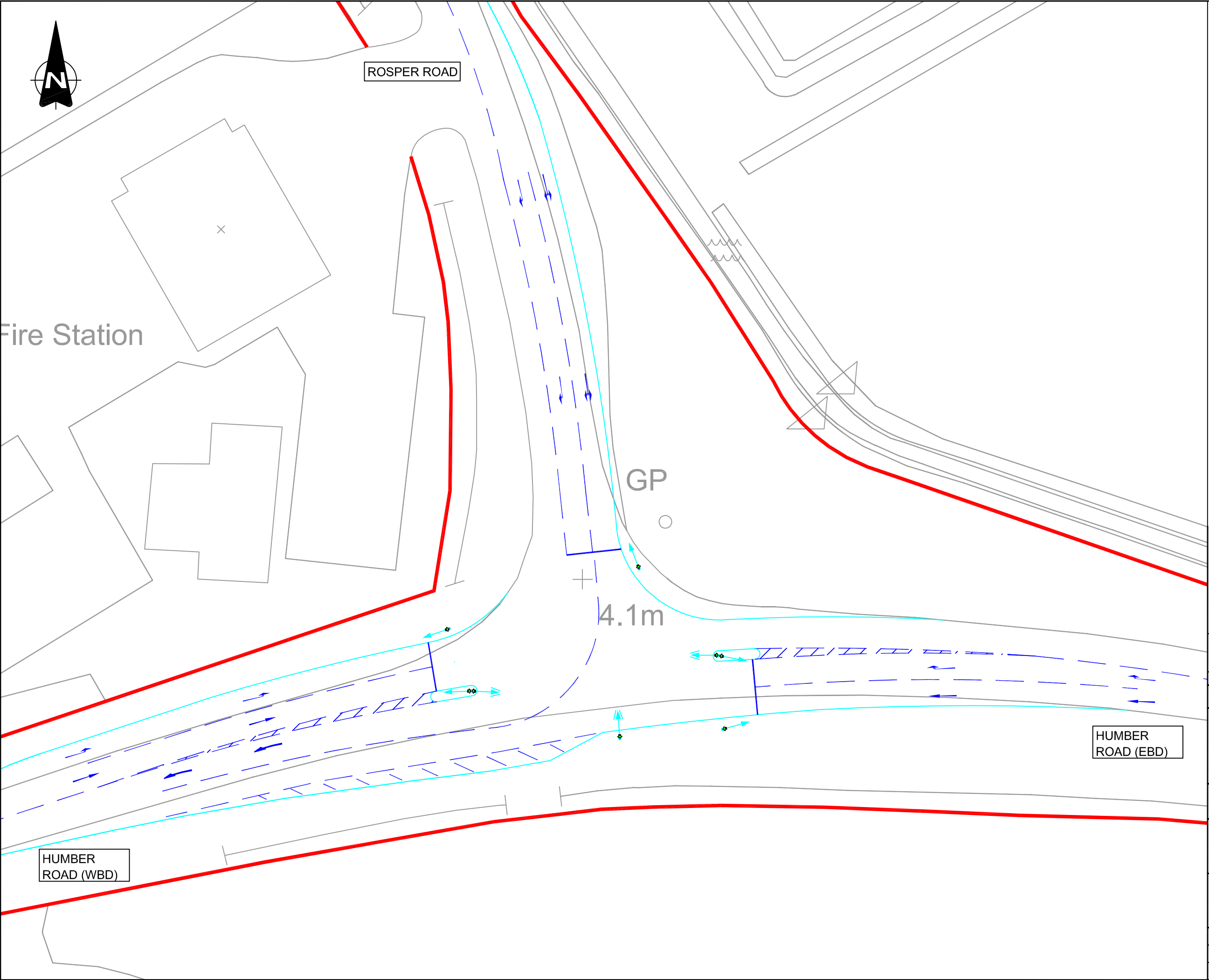
Marine Energy Park

Junction H
Proposal for A1173 / North Moss Lane / Kiln Lane

RAB	DM	
A3	Mar 2011	1:500
DRAFT	NEA1114/06	A

Updated highway mitigation plans

Job No	Report No	Issue no	Report Name	Page
NEA1114	1	2	Able Marine Energy Park Stage 1 Road Safety Audit	B3



Key

- Road markings
- Proposed kerb line
- Approximate highway boundary

D	24/07/12	Updated as per audit comments	MW	DM	
C	17/07/12	Revised layout	RAB	DM	
B	28/07/11	Updated lane layout	MW	DM	
A	11/07/11	Delete left turn filter	RAB	DM	
Rev.	Date	Revision details	Drawn	Checked	Approved

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JMP

Marine Energy Park
114, Chatterbox
Marine Energy Park
NEA1 1AB

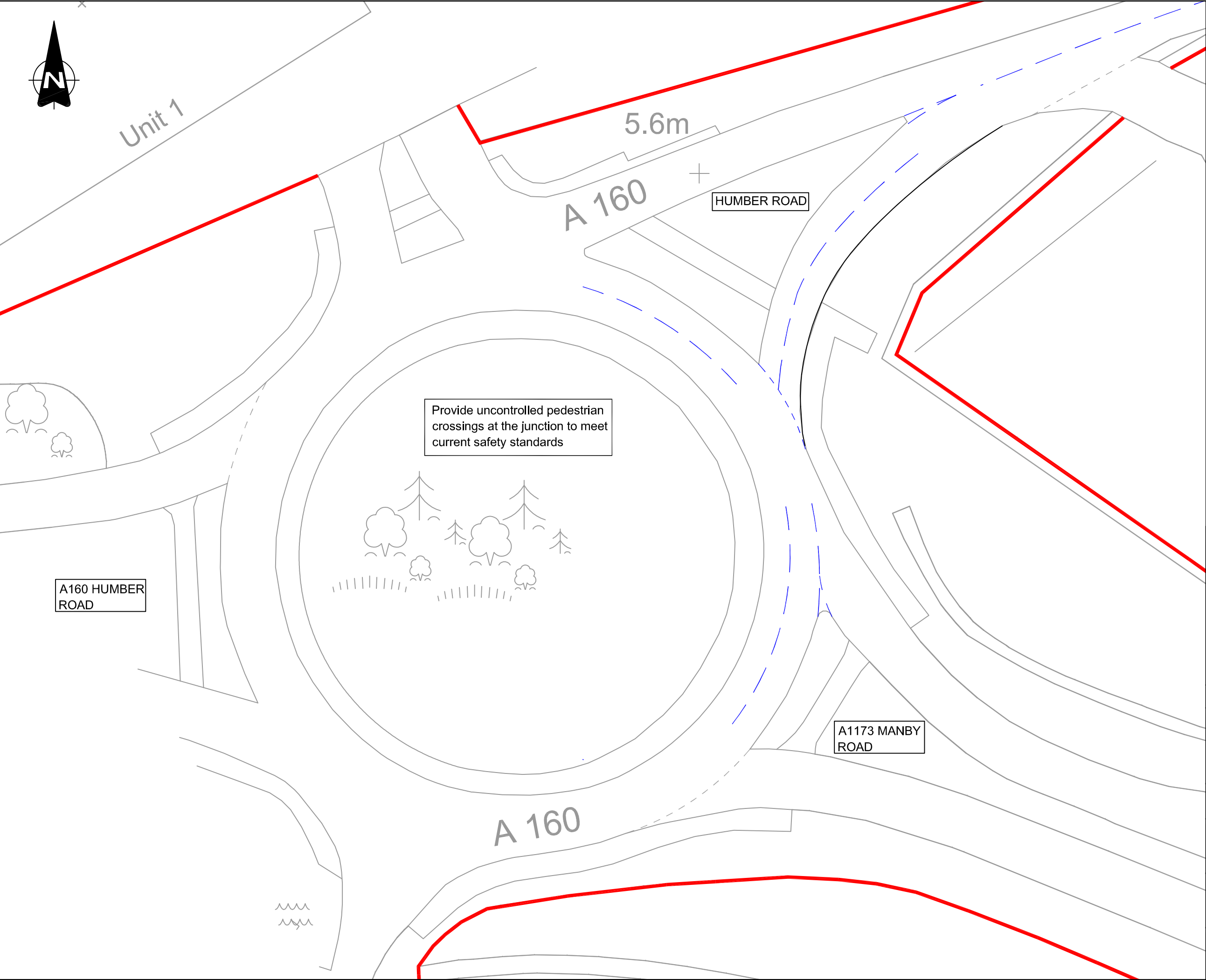
T: 0191 228 4000
F: 0191 228 4001
E: enquiries@jmp.co.uk
W: www.jmp.co.uk

Client	Able UK

Project	Marine Energy Park

Title	Junction C Proposal for Humber Road / Rosper Road

Drawn	RAB	Checked	DM	Approved	
Original.dwg, sbe	A3	Date	Mar 2011	Scale	1:500
Drawing Status	INFORMATION	Drawing Number	NEA1114/01	Rev.	D



Key

- Road markings
- Proposed kerb line
- Approximate highway boundary

C	25/07/12	Updated as per audit comments	MW	DM
B	17/07/12	Revised layout	RAB	DM
A	11/07/11	Amend mitigation proposal	RAB	DM

Rev.	Date	Revision details	Drawn	Checked	Approved

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**JMP**

Registration Number:
115 549990
Incorporated in England
0201 3301
T: 0181 208 4380
F: 0181 208 4301
E: enquiries@jmp.co.uk
W: www.jmp.co.uk

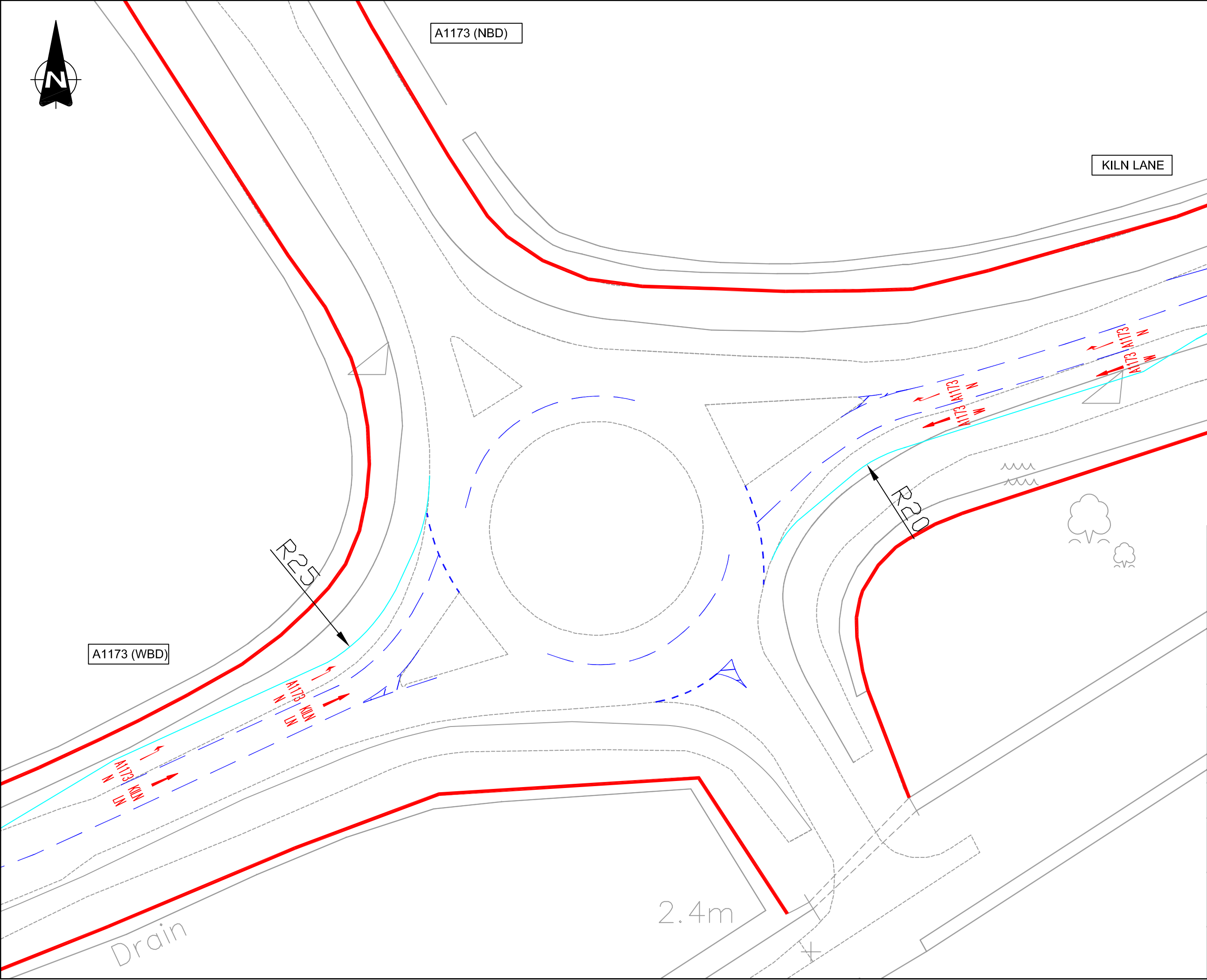
Client
Able UK

Project
Marine Energy Park

Title
Junction E
Proposal for A160 / A1173 / Humber Road

Drawn	RAB	Checked	DM	Approved	
Original drawing site	A3	Date	Apr 2011	Scale	1:500

Drawing Status	INFORMATION	Drawing Number	NEA1114/02	Rev.	C



Key

Road markings

Proposed kerb line

Approximate highway boundary

B

24/07/11

Updated as per audit comments

MW

DM

A

11/07/11

Delete mitigation on A1173 north

RAB

DM

Rev

Date

Revision details

Drawn

Checked

Approved

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JMP

0120 3 258 4000

01151 258 5021

01603 258 5021

01603 258 5021

0120 3 258 4000

01151 258 5021

01603 258 5021

01603 258 5021

Client

Able UK

Project

Marine Energy Park

Title

Junction H
Proposal for A1173 / North Moss Lane / Kiln Lane

Drawn

RAB

Checked

DM

Approved

Original dwg. size

A3

Date

Mar 2011

Scale

1:500

Drawing Status

DRAFT

Drawing Number

NEA1114/06

Rev

B

Specific comments from ABP – JMP responses

Paragraph 1.1

- 5.4 The reference to the Biomass plant should have been removed from the final version of the TA, as there is no longer a proposal for this part of the proposed development.

Paragraph 2.1

- 5.5 JMP has interrogated the accident data provided by NLC and NELC to extract any involving HGVs or vulnerable users.
- 5.6 A summary is provided in Table 1 below.

Table 1 HGV and vulnerable user accident summary

Area	Type	Total	Slight	Serious	fatal	Unknown
North Lincolnshire	Cycle	1	1	0	0	0
	Horse	1	1	0	0	0
	HGV	19	14	2	0	3
	All accidents	59	45	14	0	0
North East Lincolnshire	Cycle	7	7	0	0	0
	HGV	20	17	2	1	0
	All accidents	77	66	10	1	0

- 5.7 In terms of the accidents involving vulnerable users, the severity was slight in each incidence. In terms of the accidents involving HGVs, (which does include some accidents with LGVs), the percentage of the total accidents in each district is 32% for North Lincolnshire and 26% for North East Lincolnshire.
- 5.8 Taking account of the average percentage of HGVs on the highway networks within each district (using the morning peak base + committed development traffic), the percentages of accidents involving HGVs are 31% for North Lincolnshire and 20% for North East Lincolnshire, as shown in Table 2 and Table 3 below. Whether this difference is statistically significant is not known.

Table 2 Average HGV percentage in North Lincolnshire

Road Name	Location	AM peak hour	
		All traffic - Base + CD	HGV %age
M180	West of M180 J5	5000	23%
A15	North of M180 J5	2768	7%
A18	South of M180 J5	2447	6%
A160	South of K	2137	38%
A1077 Ulceby Rd	West of K	305	31%
A160	Between K and D	2199	40%
A160	Between D and L	1805	47%
A160	Between L and E	1284	40%
Humber Rd	Between E and C	1303	48%

Road Name	Location	AM peak hour	
		All traffic - Base + CD	HGV %age
Rosper Rd	North of C	624	38%
Humber Rd	East of C	886	59%
A1173	North of A	1281	23%
Average Percentage HGV			31%

Table 3 Average HGV percentage in North East Lincolnshire

Road Name	Location	AM peak hour	
		All traffic - Base + CD	HGV %age
A180	East of M180 J5	4567	25%
A1173	South of E	1281	23%
Manby Rd	South of A	350	14%
A1173	East of A	1297	21%
A1173	North of G	1297	21%
A1173	Between G and H	1277	14%
North Moss Lane	East of H	1288	30%
A1173	Between H and I	2179	16%
A180	Between I and J	3361	10%
Average Percentage HGV			20%

Paragraphs 2.2.2 – 2.3

5.9 From the comparison shown between the DTA ATC flows and the flows taken from Table 4.2 of the JMP TA, the morning peak is comparable, with a more significant difference during the evening peak hour. However, DTA has incorrectly identified the westbound base flow from Table 4.2. The westbound traffic flow is 559, not 302.

5.10 JMP has recreated the table with the corrected traffic flow:

Table 4 Comparison of flows on Humber Road

Time period	JMP Flows taken from Table 4.2			DTA ATC flows			Difference (JMP minus DTA) Flow		
	E/b	W/b	Two-way	E/b	W/b	Two-way	E/b	W/b	Two-way
0800-0900	504	217	721	438	315	753	+66	-98	-32
1700-1800	246	559	805	317	649	966	-71	-90	-161

- 5.11 As Table 4 shows, the morning peak has a negligible difference in traffic flows. The two-way traffic flows are 161 vehicles more in DTA's data for the evening peak; however this could be explained by daily/hourly fluctuations in traffic flow, which is more prevalent at a port location, due to the tidal patterns.
- 5.12 The traffic data used in the JMP TA was provided by Pell Frischmann on behalf of the Highways Agency (HA). It was agreed by North Lincolnshire Council (NLC) and the HA that this data (used for the modelling of the A160 upgrade scheme) should be used in the assessment.

Paragraphs 3.1-3.5

- 5.13 It was agreed during the scoping stage with NLC and the HA that no background traffic growth should be applied to the assessments within the TA due to the significant number of committed developments to be included, which essentially act as background traffic growth.
- 5.14 Figure 4.4 does not show base + committed development flows; the committed development flows included are significant. For information a summary of the committed developments included in the assessment is provided in Table 5 below:

Table 5 Committed Developments

Applicant	Development	Planning Application Reference	Status
Able UK Limited	Port and Logistics	PA/2009/0600	Not yet consented
Able UK Limited	Able Humber Port Facility	PA/2007/0101	
Drax	Heron Renewable Energy Plant	PA/2009/1269	To be started by 2016
Bioethanol Limited	Bioethanol Plant	PA/2010/0325	Lapsed
URSA Insulation SA	Glass Wool Manufacturing Plant	PA/2008/0988	Lapsed, new consent applied for
HM Estates	Business Park	DC/1258/06/IMM	
Helius Bio-Power / Fuel	Bioethanol Plant	DC/303/07/IMM	
Vireol PLC	Bioethanol Plant	DC/202/08/WOL	
Abengoa Bioenergy	Bioethanol Plant	DC/70/07/IMM	
Magna Holdings	B1, B2 & B8 Industrial Development	DC/730/07/IMM	

- 5.15 The total number of peak hour trips on the local highway network associated with the committed developments included in the assessment is identified below:
- Morning peak – 1682 arrivals, 385 departures
 - Evening peak – 402 arrivals, 1591 departures

- 5.16 The committed development traffic flows were provided by Pell Frischmann and also taken from the Heron Renewable Energy Plant (Drax) TA. The total committed development traffic flows on all arms of the Rosper Road / Humber Road junction are 613 in the morning peak and 568 in the evening peak. At the Humber Road/A160/A1173 (Manby Road) junction, the committed development traffic flows included on all arms are 914 in the morning peak and 849 in the evening peak.
- 5.17 The traffic included in the assessment for the Drax site is for the construction period. Therefore, 364 vehicles in the morning peak and 364 vehicles in the evening peak will only be at the Rosper Road/Humber Road and Humber Road/A160/A1173 junctions for six months. This is the worst case in terms of the number of vehicles on the highway network throughout the 40 month construction period.
- 5.18 The number of additional vehicle trips included in the assessment over and above the surveyed traffic flows in 2010 is therefore significant, and the majority of the vehicle movements at the Rosper Road / Humber Road and Humber Road/A160 /A1173 junctions are temporary and will be on the network before AMEP is fully operational.

Paragraph 4.1

- 5.19 The parking ratio calculations identified in the spreadsheet in Appendix J of the TA are based upon initial estimates from the applicant. However, this was superseded by the figures identified in the text of the TA using the correct NLC parking standards. The numbers in Appendix J should have been deleted.

Paragraph 5.1

- 5.20 The construction peak was identified using information provided by Able UK at the time of writing the TA. This was the anticipated peak at the time of undertaking the assessment. The construction impact is considerably less than the operational phase, so there is no benefit in changes to the assessment here as the operational illustrates a worst case.

Paragraphs 5.2 – 5.3

- 5.21 Following the initial derivation of predicted employee numbers at MEP, some further work was undertaken as identified in the socio-economic chapter within the PEIR, which shows a lower number of employees than the previously estimated 5,300 (using English Partnership data). The revised number of 4,100; is considered more realistic; it is industry specific and has been derived from Yorkshire Forward data. Therefore, the employee numbers in the spreadsheet in Appendix J are correct, and are a slight overestimation on the revised figure.

Paragraphs 5.4 – 5.6

- 5.22 The mode splits in Table 6.2 of the TA were from the 'All Modes' Journey to Work data that was originally used in the assessment, rather than 'Car Driver', which it was subsequently amended to. The update to Table 6.2 with the correct percentages was an omission. As the assessment uses a robust case of assuming everyone would drive, the slight differences in mode percentages would not change the results.
- 5.23 The minibus calculations are based on reasonable assumptions of how many employees might use the service. Each tenant will be obliged to operate a given number of minibuses, which will be linked to the future travel plan targets. However, the operation of the minibus services will evolve

over time and a co-ordinated approach between all tenants will see the most efficient use of each resource, dependant on demand. Until it is known exactly where employees live, more in-depth details of the arrangements cannot be identified. The details given are a reasonable estimate, and not in any way unrealistic.

Paragraph 5.7

- 5.24 The applicant is committed to adopting a staggered shift pattern at the site, which the future Tenants must adhere to. Staggered shift arrival and departure times will reduce the impact on the highway network and, crucially, enable employees to arrive and depart on time. Such an arrangement is in the best interests of both the landlord and the tenants operating on the site, as well as in mitigating traffic impacts.
- 5.25 Individual tenants operating from AMEP (within their individual Leases) will be bound by a 'Framework Travel Plan (FTP)'. The FTP is the appropriate method to deliver sustainable transport objectives and is set out in accordance with the Department of Transport publication Good Practice Guidelines: Delivering Travel Plans through the Planning Process (2009). Furthermore it is noted, and agreed, that where appropriate the FTP has referred to the guidance within North Lincolnshire's (NLC): A Guide to Travel Planning (2006).
- 5.26 The Highways Agency (HA) and NLC have agreed to the proposed format and rationale of the FTP. FTPs evolve over time to best suit the needs of the users of the development and NELC welcomes the fact that monitoring will ensure continual review and amendment as necessary.

Paragraph 6.1

- 5.27 Refer to the applicant's response to Examiner's question 48(b).

Paragraphs 6.2 - 6.4

- 5.28 Although the figures derived for a worst case scenario with all deliveries arriving and departing by road have not been included in the junction assessments, JMP does not consider that an additional four two-way HGV movements per hour will change the junction capacity assessment results.

Paragraphs 7.1 – 7.2

- 5.29 In order to satisfy NLC and the HA that a robust approach has been used for the assessment of AMEP impact on the highway network, a sensitivity test was undertaken to show what might happen to the traffic flows if some of the arrivals and departures from the shift stagger time were to overlap.
- 5.30 The TA concluded that the sensitivity test flows at the Rosper Road / Humber Road and A160 / A1173 junctions are higher than the highest 'Base + MEP flows' network peak flows. Therefore, to ensure a robust assessment, the sensitivity test flows were taken account of in the junction capacity assessments for the two junctions, by adding on 255 MEP arrivals to the 8am-9am assessment and 178 departures to the 5pm-6pm assessment.
- 5.31 The adjusted link flows are shown in Table 6 and Table 7 below:

Table 6 Adjusted flows for sensitivity test 8am-9am

Link	Base flows, committed development and MEP flows after netting off and Travel Plan reductions	Adjusted MEP arrivals	Adjusted Total
A160 west of junction with A1173 – E/B	894	145	1039
A1173 south of junction with A160 – N/B	847	80	927
Humber Road east of junction with A160 – E/B	1054	225	1279
Rosper Road south of access – N/B	829	225	1054

Table 7 Adjusted flows for sensitivity test 5pm-6pm

Link	Base flows, committed development and MEP flows after netting off and Travel Plan reductions	Adjusted MEP arrivals	Adjusted Total
Rosper Road south of access – S/B	749	178	927
Humber Road east of junction with A160 – W/B	1068	178	1246
A160 west of junction with A1173 – W/B	880	114	994
A1173 south of junction with A160 – S/B	829	64	893

Paragraph 7.3

- 5.32 A Stage 1 Road Safety Audit has now been undertaken for the three junctions that Able UK is proposing physical mitigation measures. The report has identified some minor issues at each of the junctions. JMP has undertaken a designer's response and has amended the layouts as appropriate. This is provided in **Appendix A**.

Paragraphs 8.1 – 8.3

- 5.33 Details of the shuttle bus cannot be identified at this stage as it is unknown who will use the service, and where they will live. Once recruitment begins, each occupier will be required to develop an appropriate minibus service three months prior to first occupation. Targets within the individual occupier Travel Plans, which are linked to the overall trip generation of the site will need to be met for the number of single occupied vehicle trips during the peak hours and, if these are consistently not met, further mitigation will be required.



Appendix C

Agreed Traffic data

Job No	Report No	Issue no	Report Name	Page
NEA1114	1	1	AMEP Written Representations	A27

SITE: G

DATE: 27/05/2010

LOCATION: A160 Humber Road / Rosper Road

DAY: THURSDAY

TIME	CAR	LGV	OGV1	A to C OGV2	PSV	MCL	PCL	TOT
07:00	2	0	2	1	0	0	0	5
07:15	3	2	1	2	0	0	0	8
07:30	3	2	1	2	0	0	0	8
07:45	21	3	0	3	0	1	0	28
H/TOT	29	7	4	8	0	1	0	49
08:00	6	2	1	6	0	0	0	15
08:15	4	0	0	3	0	0	0	7
08:30	2	1	1	2	0	0	0	6
08:45	13	3	0	2	0	0	0	18
H/TOT	25	6	2	13	0	0	0	46
09:00	1	1	1	3	0	0	0	6
09:15	1	4	2	2	0	0	0	9
09:30	0	1	0	3	0	0	0	4
09:45	2	1	0	0	0	0	0	3
H/TOT	4	7	3	8	0	0	0	22
10:00	1	5	2	3	0	0	0	11
10:15	0	3	3	1	0	0	0	7
10:30	2	5	1	6	0	0	0	14
10:45	5	2	2	7	0	0	0	16
H/TOT	8	15	8	17	0	0	0	48
11:00	4	2	0	4	0	0	0	10
11:15	1	3	3	7	0	0	0	14
11:30	2	0	1	6	0	0	0	9
11:45	3	0	1	5	0	0	0	9
H/TOT	10	5	5	22	0	0	0	42
12:00	2	2	1	5	0	0	0	10
12:15	1	1	1	8	0	0	0	11
12:30	5	0	1	10	0	0	0	16
12:45	2	2	1	4	0	0	0	9
H/TOT	10	5	4	27	0	0	0	46

SITE: G

DATE: 27/05/2010

LOCATION: A160 Humber Road / Rosper Road

DAY: THURSDAY

TIME	CAR	LGV	OGV1	A to C OGV2	PSV	MCL	PCL	TOT
13:00	3	2	0	2	0	0	0	7
13:15	7	2	1	8	0	0	0	18
13:30	3	1	0	8	0	0	0	12
13:45	4	4	2	3	0	0	0	13
H/TOT	17	9	3	21	0	0	0	50
14:00	4	1	2	4	0	0	0	11
14:15	1	2	2	3	0	0	0	8
14:30	4	3	1	1	0	0	0	9
14:45	5	1	0	3	0	0	0	9
H/TOT	14	7	5	11	0	0	0	37
15:00	2	0	1	7	0	0	0	10
15:15	2	1	0	5	0	0	0	8
15:30	2	2	2	5	0	0	0	11
15:45	3	0	1	4	0	0	0	8
H/TOT	9	3	4	21	0	0	0	37
16:00	2	2	0	4	0	0	0	8
16:15	7	0	2	0	0	0	0	9
16:30	7	1	2	4	0	0	0	14
16:45	2	1	2	2	0	0	0	7
H/TOT	18	4	6	10	0	0	0	38
17:00	5	0	1	3	0	0	0	9
17:15	0	0	1	3	0	0	0	4
17:30	9	1	0	1	0	0	0	11
17:45	4	0	0	5	0	0	0	9
H/TOT	18	1	2	12	0	0	0	33
18:00	1	0	0	1	0	0	0	2
18:15	2	0	1	3	0	0	0	6
18:30	0	1	0	3	0	0	0	4
18:45	1	1	0	0	0	0	0	2
H/TOT	4	2	1	7	0	0	0	14
P/TOT	166	71	47	177	0	1	0	462

SITE: G

DATE: 27/05/2010

LOCATION: A160 Humber Road / Rosper Road

DAY: THURSDAY

TIME	CAR	LGV	OGV1	A to B OGV2	PSV	MCL	PCL	TOT
07:00	8	1	0	12	0	0	0	21
07:15	9	3	0	4	0	0	0	16
07:30	12	1	0	4	0	0	0	17
07:45	9	2	0	3	0	0	0	14
H/TOT	38	7	0	23	0	0	0	68
08:00	10	1	3	4	0	0	0	18
08:15	6	4	0	5	0	0	0	15
08:30	6	5	3	11	0	0	0	25
08:45	7	4	4	9	0	0	0	24
H/TOT	29	14	10	29	0	0	0	82
09:00	6	4	1	8	0	0	0	19
09:15	5	3	2	4	0	0	0	14
09:30	9	5	4	8	0	0	0	26
09:45	7	1	5	4	0	0	0	17
H/TOT	27	13	12	24	0	0	0	76
10:00	5	7	2	8	0	0	0	22
10:15	8	4	0	8	0	0	0	20
10:30	8	8	4	11	0	0	0	31
10:45	7	5	2	14	0	0	0	28
H/TOT	28	24	8	41	0	0	0	101
11:00	5	8	2	5	0	0	0	20
11:15	5	6	3	7	0	0	0	21
11:30	7	5	2	9	0	0	0	23
11:45	18	10	1	7	0	0	2	38
H/TOT	35	29	8	28	0	0	2	102
12:00	25	6	1	2	0	0	0	34
12:15	8	5	3	9	0	1	0	26
12:30	7	6	1	6	0	0	0	20
12:45	11	7	5	6	0	0	0	29
H/TOT	51	24	10	23	0	1	0	109

SITE: G

DATE: 27/05/2010

LOCATION: A160 Humber Road / Rosper Road

DAY: THURSDAY

TIME	CAR	LGV	OGV1	A to B OGV2	PSV	MCL	PCL	TOT
13:00	11	5	5	11	1	0	0	33
13:15	7	5	1	7	0	0	0	20
13:30	8	2	2	9	0	0	0	21
13:45	12	3	7	9	0	0	0	31
H/TOT	38	15	15	36	1	0	0	105
14:00	16	5	1	6	0	0	0	28
14:15	7	5	4	7	0	0	0	23
14:30	11	4	2	8	0	0	0	25
14:45	10	6	5	10	0	0	0	31
H/TOT	44	20	12	31	0	0	0	107
15:00	18	9	3	6	0	1	0	37
15:15	12	3	1	6	0	0	0	22
15:30	18	5	1	14	0	1	0	39
15:45	42	13	3	9	0	0	0	67
H/TOT	90	30	8	35	0	2	0	165
16:00	70	7	3	9	0	1	0	90
16:15	28	5	5	12	0	0	1	51
16:30	66	7	5	13	0	1	1	93
16:45	42	3	7	9	0	0	0	61
H/TOT	206	22	20	43	0	2	2	295
17:00	48	1	3	8	0	0	0	60
17:15	32	5	5	7	0	0	0	49
17:30	26	0	6	9	0	0	0	41
17:45	40	4	3	8	0	1	0	56
H/TOT	146	10	17	32	0	1	0	206
18:00	52	3	4	11	1	1	0	72
18:15	11	3	6	6	0	0	1	27
18:30	7	0	2	13	0	0	0	22
18:45	12	1	5	10	0	0	0	28
H/TOT	82	7	17	40	1	1	1	149
P/TOT	814	215	137	385	2	7	5	1565

SITE: G

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	CAR	LGV	OGV1	B to A OGV2	PSV	MCL	PCL	TOT
07:00	59	6	15	5	0	0	0	85
07:15	95	12	5	9	0	1	1	123
07:30	122	14	7	9	0	5	0	157
07:45	102	7	6	4	0	1	1	121
H/TOT	378	39	33	27	0	7	2	486
08:00	36	7	9	6	0	0	1	59
08:15	47	6	9	8	0	0	0	70
08:30	21	5	5	12	0	0	0	43
08:45	25	5	4	9	0	0	0	43
H/TOT	129	23	27	35	0	0	1	215
09:00	8	4	3	8	0	0	0	23
09:15	11	4	8	12	0	0	0	35
09:30	17	8	4	7	0	0	0	36
09:45	9	2	4	10	0	0	0	25
H/TOT	45	18	19	37	0	0	0	119
10:00	5	7	5	7	0	0	0	24
10:15	8	2	3	11	0	0	0	24
10:30	12	7	5	5	0	0	0	29
10:45	4	7	2	6	0	0	0	19
H/TOT	29	23	15	29	0	0	0	96
11:00	8	3	0	8	0	0	0	19
11:15	8	5	3	6	1	0	0	23
11:30	11	8	3	7	0	0	0	29
11:45	6	5	1	9	0	0	0	21
H/TOT	33	21	7	30	1	0	0	92
12:00	11	1	2	8	0	0	0	22
12:15	9	7	1	3	0	0	0	20
12:30	11	6	1	8	0	0	0	26
12:45	8	3	7	7	0	1	0	26
H/TOT	39	17	11	26	0	1	0	94



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DAY: THURSDAY

TIME	CAR	LGV	OGV1	B to A OGV2	PSV	MCL	PCL	TOT
13:00	7	1	2	13	0	0	0	23
13:15	11	0	3	6	0	0	0	20
13:30	13	2	3	7	0	0	0	25
13:45	11	1	5	7	0	0	0	24
H/TOT	42	4	13	33	0	0	0	92
14:00	9	3	5	6	0	0	0	23
14:15	14	6	2	8	0	0	0	30
14:30	6	2	2	10	0	0	0	20
14:45	11	4	3	9	0	0	0	27
H/TOT	40	15	12	33	0	0	0	100
15:00	4	2	1	12	0	0	0	19
15:15	5	3	1	17	0	0	0	26
15:30	3	1	3	20	0	0	0	27
15:45	7	4	2	9	0	0	0	22
H/TOT	19	10	7	58	0	0	0	94
16:00	9	2	3	4	0	0	0	18
16:15	7	1	1	10	0	0	0	19
16:30	7	0	1	13	0	0	0	21
16:45	10	1	2	5	0	0	0	18
H/TOT	33	4	7	32	0	0	0	76
17:00	8	1	1	8	0	0	0	18
17:15	4	0	2	8	0	0	0	14
17:30	12	2	2	13	0	0	1	30
17:45	4	2	1	8	0	0	0	15
H/TOT	28	5	6	37	0	0	1	77
18:00	5	1	1	4	0	0	0	11
18:15	3	0	1	13	0	0	0	17
18:30	6	1	0	7	0	1	0	15
18:45	4	1	0	9	0	0	0	14
H/TOT	18	3	2	33	0	1	0	57
P/TOT	833	182	159	410	1	9	4	1598



SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	CAR	LGV	OGV1	B to C OGV2	PSV	MCL	PCL	TOT
07:00	21	5	5	10	0	0	0	41
07:15	34	4	9	21	0	1	0	69
07:30	49	12	6	17	0	1	0	85
07:45	55	12	8	26	0	1	0	102
H/TOT	159	33	28	74	0	3	0	297
08:00	30	9	7	25	0	0	0	71
08:15	30	5	7	21	0	0	0	63
08:30	41	8	9	29	0	0	0	87
08:45	37	8	4	18	0	1	0	68
H/TOT	138	30	27	93	0	1	0	289
09:00	12	8	5	18	0	0	0	43
09:15	12	6	6	20	0	0	0	44
09:30	10	4	7	16	0	0	0	37
09:45	6	7	6	28	0	0	0	47
H/TOT	40	25	24	82	0	0	0	171
10:00	9	6	3	23	0	0	0	41
10:15	7	8	5	21	0	0	0	41
10:30	9	9	5	19	0	0	0	42
10:45	9	2	5	28	0	0	0	44
H/TOT	34	25	18	91	0	0	0	168
11:00	5	2	3	32	0	0	0	42
11:15	5	5	2	21	0	0	0	33
11:30	7	2	2	21	0	0	0	32
11:45	6	4	1	16	0	0	0	27
H/TOT	23	13	8	90	0	0	0	134
12:00	2	4	5	21	0	0	0	32
12:15	4	5	5	17	0	0	0	31
12:30	10	4	7	22	0	0	0	43
12:45	6	2	4	21	0	0	0	33
H/TOT	22	15	21	81	0	0	0	139



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DAY: THURSDAY

TIME	CAR	LGV	OGV1	B to C OGV2	PSV	MCL	PCL	TOT
13:00	18	5	2	33	0	0	0	58
13:15	15	4	1	29	0	1	0	50
13:30	24	5	4	52	0	0	0	85
13:45	7	1	5	37	0	0	0	50
H/TOT	64	15	12	151	0	1	0	243
14:00	11	3	6	31	0	0	0	51
14:15	6	1	4	37	0	0	0	48
14:30	8	6	3	38	0	0	0	55
14:45	7	7	6	33	0	1	0	54
H/TOT	32	17	19	139	0	1	0	208
15:00	6	3	5	36	0	0	0	50
15:15	7	8	2	39	0	0	0	56
15:30	12	2	6	24	0	0	0	44
15:45	9	2	3	25	0	0	0	39
H/TOT	34	15	16	124	0	0	0	189
16:00	6	5	3	21	0	0	0	35
16:15	13	4	6	20	0	0	0	43
16:30	22	4	3	18	0	0	0	47
16:45	10	3	1	31	0	0	0	45
H/TOT	51	16	13	90	0	0	0	170
17:00	5	1	1	26	0	0	0	33
17:15	18	3	3	21	0	0	0	45
17:30	25	2	2	24	0	0	0	53
17:45	15	1	3	19	0	0	0	38
H/TOT	63	7	9	90	0	0	0	169
18:00	1	1	0	17	0	0	0	19
18:15	8	0	0	19	0	0	0	27
18:30	8	1	1	12	0	0	0	22
18:45	3	1	1	17	0	0	0	22
H/TOT	20	3	2	65	0	0	0	90
P/TOT	680	214	197	1170	0	6	0	2267

SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	CAR	LGV	OGV1	C to B OGV2	PSV	MCL	PCL	TOT
07:00	14	1	1	30	0	0	1	47
07:15	1	0	2	41	0	0	0	44
07:30	6	5	1	25	0	0	0	37
07:45	3	1	3	27	0	0	0	34
H/TOT	24	7	7	123	0	0	1	162
08:00	2	1	3	19	0	0	0	25
08:15	7	4	2	21	0	0	0	34
08:30	3	3	3	19	0	0	0	28
08:45	3	3	6	25	0	0	0	37
H/TOT	15	11	14	84	0	0	0	124
09:00	7	4	3	31	0	0	0	45
09:15	5	3	2	15	0	0	0	25
09:30	10	7	6	21	0	0	0	44
09:45	4	4	3	18	0	0	0	29
H/TOT	26	18	14	85	0	0	0	143
10:00	2	6	7	25	0	0	0	40
10:15	6	4	1	27	0	0	0	38
10:30	5	8	5	30	0	0	0	48
10:45	4	6	6	26	0	1	0	43
H/TOT	17	24	19	108	0	1	0	169
11:00	7	5	4	27	0	0	0	43
11:15	10	6	3	25	0	0	0	44
11:30	4	8	7	20	0	0	0	39
11:45	5	6	5	31	0	0	0	47
H/TOT	26	25	19	103	0	0	0	173
12:00	16	1	6	21	0	0	0	44
12:15	18	7	3	26	0	0	0	54
12:30	9	5	5	13	0	0	0	32
12:45	10	6	10	21	0	1	0	48
H/TOT	53	19	24	81	0	1	0	178



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SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	CAR	LGV	OGV1	C to B OGV2	PSV	MCL	PCL	TOT
13:00	7	4	4	20	0	0	0	35
13:15	9	2	2	18	0	0	0	31
13:30	13	3	6	24	0	0	0	46
13:45	20	6	5	35	0	0	1	67
H/TOT	49	15	17	97	0	0	1	179
14:00	16	4	7	21	0	0	0	48
14:15	12	2	6	23	0	0	0	43
14:30	12	2	7	27	0	0	0	48
14:45	17	9	6	31	0	1	0	64
H/TOT	57	17	26	102	0	1	0	203
15:00	18	5	8	39	0	0	0	70
15:15	11	6	3	37	0	0	0	57
15:30	21	7	8	22	0	0	0	58
15:45	32	9	3	28	0	0	1	73
H/TOT	82	27	22	126	0	0	1	258
16:00	48	7	8	26	0	0	0	89
16:15	28	10	8	30	0	1	0	77
16:30	41	5	5	25	0	1	0	77
16:45	26	4	5	19	0	0	0	54
H/TOT	143	26	26	100	0	2	0	297
17:00	81	4	5	28	0	2	0	120
17:15	24	5	7	31	0	2	0	69
17:30	37	2	5	20	0	0	0	64
17:45	32	1	3	19	0	1	0	56
H/TOT	174	12	20	98	0	5	0	309
18:00	30	4	3	16	0	0	0	53
18:15	9	3	4	20	0	0	0	36
18:30	6	4	6	23	0	0	0	39
18:45	6	1	8	27	0	1	0	43
H/TOT	51	12	21	86	0	1	0	171
P/TOT	717	213	229	1193	0	11	3	2366



SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	CAR	LGV	OGV1	C to A OGV2	PSV	MCL	PCL	TOT
07:00	0	1	0	2	0	0	0	3
07:15	1	0	2	1	0	0	0	4
07:30	0	1	0	1	0	0	0	2
07:45	1	0	0	3	0	0	0	4
H/TOT	2	2	2	7	0	0	0	13
08:00	5	2	2	1	0	0	0	10
08:15	1	0	4	4	0	0	0	9
08:30	0	0	3	3	0	0	0	6
08:45	2	0	3	2	0	0	0	7
H/TOT	8	2	12	10	0	0	0	32
09:00	0	0	1	3	0	0	0	4
09:15	1	0	0	2	0	0	0	3
09:30	0	4	1	5	0	0	0	10
09:45	0	5	3	2	0	0	0	10
H/TOT	1	9	5	12	0	0	0	27
10:00	2	1	4	2	0	0	0	9
10:15	31	2	5	3	0	0	0	41
10:30	9	3	0	2	0	0	0	14
10:45	32	3	2	4	0	0	0	41
H/TOT	74	9	11	11	0	0	0	105
11:00	20	4	2	6	0	0	0	32
11:15	17	2	1	3	0	0	0	23
11:30	6	1	0	7	0	0	0	14
11:45	26	2	1	4	0	0	0	33
H/TOT	69	9	4	20	0	0	0	102
12:00	21	1	0	4	0	0	0	26
12:15	22	4	0	8	0	0	0	34
12:30	20	2	2	5	0	0	0	29
12:45	3	3	0	6	0	0	0	12
H/TOT	66	10	2	23	0	0	0	101



764 / IMMINGHAM
MAY 2010
MANUAL CLASSIFIED COUNT

SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	CAR	LGV	OGV1	C to A OGV2	PSV	MCL	PCL	TOT
13:00	27	0	1	5	0	0	0	33
13:15	33	2	0	5	0	0	0	40
13:30	8	2	0	7	0	0	0	17
13:45	40	0	0	3	0	0	0	43
H/TOT	108	4	1	20	0	0	0	133
14:00	20	3	0	8	0	0	0	31
14:15	9	1	2	4	0	0	0	16
14:30	12	3	0	2	0	0	0	17
14:45	14	1	2	2	0	0	0	19
H/TOT	55	8	4	16	0	0	0	83
15:00	26	3	0	3	0	0	0	32
15:15	18	0	4	3	0	0	0	25
15:30	1	2	4	7	0	0	0	14
15:45	28	1	0	3	0	0	0	32
H/TOT	73	6	8	16	0	0	0	103
16:00	38	1	3	8	0	1	0	51
16:15	30	0	0	4	0	0	0	34
16:30	39	4	2	0	0	0	0	45
16:45	45	1	1	2	0	0	0	49
H/TOT	152	6	6	14	0	1	0	179
17:00	24	4	3	5	0	1	0	37
17:15	44	3	0	3	0	0	0	50
17:30	28	1	1	4	0	0	0	34
17:45	31	1	2	2	0	1	1	38
H/TOT	127	9	6	14	0	2	1	159
18:00	13	0	1	3	0	0	0	17
18:15	20	0	0	3	0	0	0	23
18:30	8	0	1	3	0	0	0	12
18:45	2	0	1	2	0	0	0	5
H/TOT	43	0	3	11	0	0	0	57
P/TOT	778	74	64	174	0	3	1	1094



764 / IMMINGHAM
MAY 2010
MANUAL CLASSIFIED COUNT

SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	TO ARM A							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	59	7	15	7	0	0	0	88
07:15	96	12	7	10	0	1	1	127
07:30	122	15	7	10	0	5	0	159
07:45	103	7	6	7	0	1	1	125
H/TOT	380	41	35	34	0	7	2	499
08:00	41	9	11	7	0	0	1	69
08:15	48	6	13	12	0	0	0	79
08:30	21	5	8	15	0	0	0	49
08:45	27	5	7	11	0	0	0	50
H/TOT	137	25	39	45	0	0	1	247
09:00	8	4	4	11	0	0	0	27
09:15	12	4	8	14	0	0	0	38
09:30	17	12	5	12	0	0	0	46
09:45	9	7	7	12	0	0	0	35
H/TOT	46	27	24	49	0	0	0	146
10:00	7	8	9	9	0	0	0	33
10:15	39	4	8	14	0	0	0	65
10:30	21	10	5	7	0	0	0	43
10:45	36	10	4	10	0	0	0	60
H/TOT	103	32	26	40	0	0	0	201
11:00	28	7	2	14	0	0	0	51
11:15	25	7	4	9	1	0	0	46
11:30	17	9	3	14	0	0	0	43
11:45	32	7	2	13	0	0	0	54
H/TOT	102	30	11	50	1	0	0	194
12:00	32	2	2	12	0	0	0	48
12:15	31	11	1	11	0	0	0	54
12:30	31	8	3	13	0	0	0	55
12:45	11	6	7	13	0	1	0	38
H/TOT	105	27	13	49	0	1	0	195



764 / IMMINGHAM
MAY 2010
MANUAL CLASSIFIED COUNT

SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	TO ARM A							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
13:00	34	1	3	18	0	0	0	56
13:15	44	2	3	11	0	0	0	60
13:30	21	4	3	14	0	0	0	42
13:45	51	1	5	10	0	0	0	67
H/TOT	150	8	14	53	0	0	0	225
14:00	29	6	5	14	0	0	0	54
14:15	23	7	4	12	0	0	0	46
14:30	18	5	2	12	0	0	0	37
14:45	25	5	5	11	0	0	0	46
H/TOT	95	23	16	49	0	0	0	183
15:00	30	5	1	15	0	0	0	51
15:15	23	3	5	20	0	0	0	51
15:30	4	3	7	27	0	0	0	41
15:45	35	5	2	12	0	0	0	54
H/TOT	92	16	15	74	0	0	0	197
16:00	47	3	6	12	0	1	0	69
16:15	37	1	1	14	0	0	0	53
16:30	46	4	3	13	0	0	0	66
16:45	55	2	3	7	0	0	0	67
H/TOT	185	10	13	46	0	1	0	255
17:00	32	5	4	13	0	1	0	55
17:15	48	3	2	11	0	0	0	64
17:30	40	3	3	17	0	0	1	64
17:45	35	3	3	10	0	1	1	53
H/TOT	155	14	12	51	0	2	2	236
18:00	18	1	2	7	0	0	0	28
18:15	23	0	1	16	0	0	0	40
18:30	14	1	1	10	0	1	0	27
18:45	6	1	1	11	0	0	0	19
H/TOT	61	3	5	44	0	1	0	114
P/TOT	1611	256	223	584	1	12	5	2692



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MAY 2010
MANUAL CLASSIFIED COUNT

SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	FROM ARM A							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	10	1	2	13	0	0	0	26
07:15	12	5	1	6	0	0	0	24
07:30	15	3	1	6	0	0	0	25
07:45	30	5	0	6	0	1	0	42
H/TOT	67	14	4	31	0	1	0	117
08:00	16	3	4	10	0	0	0	33
08:15	10	4	0	8	0	0	0	22
08:30	8	6	4	13	0	0	0	31
08:45	20	7	4	11	0	0	0	42
H/TOT	54	20	12	42	0	0	0	128
09:00	7	5	2	11	0	0	0	25
09:15	6	7	4	6	0	0	0	23
09:30	9	6	4	11	0	0	0	30
09:45	9	2	5	4	0	0	0	20
H/TOT	31	20	15	32	0	0	0	98
10:00	6	12	4	11	0	0	0	33
10:15	8	7	3	9	0	0	0	27
10:30	10	13	5	17	0	0	0	45
10:45	12	7	4	21	0	0	0	44
H/TOT	36	39	16	58	0	0	0	149
11:00	9	10	2	9	0	0	0	30
11:15	6	9	6	14	0	0	0	35
11:30	9	5	3	15	0	0	0	32
11:45	21	10	2	12	0	0	2	47
H/TOT	45	34	13	50	0	0	2	144
12:00	27	8	2	7	0	0	0	44
12:15	9	6	4	17	0	1	0	37
12:30	12	6	2	16	0	0	0	36
12:45	13	9	6	10	0	0	0	38
H/TOT	61	29	14	50	0	1	0	155



764 / IMMINGHAM
MAY 2010
MANUAL CLASSIFIED COUNT

SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	FROM ARM A							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
13:00	14	7	5	13	1	0	0	40
13:15	14	7	2	15	0	0	0	38
13:30	11	3	2	17	0	0	0	33
13:45	16	7	9	12	0	0	0	44
H/TOT	55	24	18	57	1	0	0	155
14:00	20	6	3	10	0	0	0	39
14:15	8	7	6	10	0	0	0	31
14:30	15	7	3	9	0	0	0	34
14:45	15	7	5	13	0	0	0	40
H/TOT	58	27	17	42	0	0	0	144
15:00	20	9	4	13	0	1	0	47
15:15	14	4	1	11	0	0	0	30
15:30	20	7	3	19	0	1	0	50
15:45	45	13	4	13	0	0	0	75
H/TOT	99	33	12	56	0	2	0	202
16:00	72	9	3	13	0	1	0	98
16:15	35	5	7	12	0	0	1	60
16:30	73	8	7	17	0	1	1	107
16:45	44	4	9	11	0	0	0	68
H/TOT	224	26	26	53	0	2	2	333
17:00	53	1	4	11	0	0	0	69
17:15	32	5	6	10	0	0	0	53
17:30	35	1	6	10	0	0	0	52
17:45	44	4	3	13	0	1	0	65
H/TOT	164	11	19	44	0	1	0	239
18:00	53	3	4	12	1	1	0	74
18:15	13	3	7	9	0	0	1	33
18:30	7	1	2	16	0	0	0	26
18:45	13	2	5	10	0	0	0	30
H/TOT	86	9	18	47	1	1	1	163
P/TOT	980	286	184	562	2	8	5	2027



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MAY 2010
MANUAL CLASSIFIED COUNT

SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	TO ARM B							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	22	2	1	42	0	0	1	68
07:15	10	3	2	45	0	0	0	60
07:30	18	6	1	29	0	0	0	54
07:45	12	3	3	30	0	0	0	48
H/TOT	62	14	7	146	0	0	1	230
08:00	12	2	6	23	0	0	0	43
08:15	13	8	2	26	0	0	0	49
08:30	9	8	6	30	0	0	0	53
08:45	10	7	10	34	0	0	0	61
H/TOT	44	25	24	113	0	0	0	206
09:00	13	8	4	39	0	0	0	64
09:15	10	6	4	19	0	0	0	39
09:30	19	12	10	29	0	0	0	70
09:45	11	5	8	22	0	0	0	46
H/TOT	53	31	26	109	0	0	0	219
10:00	7	13	9	33	0	0	0	62
10:15	14	8	1	35	0	0	0	58
10:30	13	16	9	41	0	0	0	79
10:45	11	11	8	40	0	1	0	71
H/TOT	45	48	27	149	0	1	0	270
11:00	12	13	6	32	0	0	0	63
11:15	15	12	6	32	0	0	0	65
11:30	11	13	9	29	0	0	0	62
11:45	23	16	6	38	0	0	2	85
H/TOT	61	54	27	131	0	0	2	275
12:00	41	7	7	23	0	0	0	78
12:15	26	12	6	35	0	1	0	80
12:30	16	11	6	19	0	0	0	52
12:45	21	13	15	27	0	1	0	77
H/TOT	104	43	34	104	0	2	0	287



764 / IMMINGHAM
MAY 2010
MANUAL CLASSIFIED COUNT

SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	TO ARM B							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
13:00	18	9	9	31	1	0	0	68
13:15	16	7	3	25	0	0	0	51
13:30	21	5	8	33	0	0	0	67
13:45	32	9	12	44	0	0	1	98
H/TOT	87	30	32	133	1	0	1	284
14:00	32	9	8	27	0	0	0	76
14:15	19	7	10	30	0	0	0	66
14:30	23	6	9	35	0	0	0	73
14:45	27	15	11	41	0	1	0	95
H/TOT	101	37	38	133	0	1	0	310
15:00	36	14	11	45	0	1	0	107
15:15	23	9	4	43	0	0	0	79
15:30	39	12	9	36	0	1	0	97
15:45	74	22	6	37	0	0	1	140
H/TOT	172	57	30	161	0	2	1	423
16:00	118	14	11	35	0	1	0	179
16:15	56	15	13	42	0	1	1	128
16:30	107	12	10	38	0	2	1	170
16:45	68	7	12	28	0	0	0	115
H/TOT	349	48	46	143	0	4	2	592
17:00	129	5	8	36	0	2	0	180
17:15	56	10	12	38	0	2	0	118
17:30	63	2	11	29	0	0	0	105
17:45	72	5	6	27	0	2	0	112
H/TOT	320	22	37	130	0	6	0	515
18:00	82	7	7	27	1	1	0	125
18:15	20	6	10	26	0	0	1	63
18:30	13	4	8	36	0	0	0	61
18:45	18	2	13	37	0	1	0	71
H/TOT	133	19	38	126	1	2	1	320
P/TOT	1531	428	366	1578	2	18	8	3931



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MAY 2010
MANUAL CLASSIFIED COUNT

SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	FROM ARM B							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	80	11	20	15	0	0	0	126
07:15	129	16	14	30	0	2	1	192
07:30	171	26	13	26	0	6	0	242
07:45	157	19	14	30	0	2	1	223
H/TOT	537	72	61	101	0	10	2	783
08:00	66	16	16	31	0	0	1	130
08:15	77	11	16	29	0	0	0	133
08:30	62	13	14	41	0	0	0	130
08:45	62	13	8	27	0	1	0	111
H/TOT	267	53	54	128	0	1	1	504
09:00	20	12	8	26	0	0	0	66
09:15	23	10	14	32	0	0	0	79
09:30	27	12	11	23	0	0	0	73
09:45	15	9	10	38	0	0	0	72
H/TOT	85	43	43	119	0	0	0	290
10:00	14	13	8	30	0	0	0	65
10:15	15	10	8	32	0	0	0	65
10:30	21	16	10	24	0	0	0	71
10:45	13	9	7	34	0	0	0	63
H/TOT	63	48	33	120	0	0	0	264
11:00	13	5	3	40	0	0	0	61
11:15	13	10	5	27	1	0	0	56
11:30	18	10	5	28	0	0	0	61
11:45	12	9	2	25	0	0	0	48
H/TOT	56	34	15	120	1	0	0	226
12:00	13	5	7	29	0	0	0	54
12:15	13	12	6	20	0	0	0	51
12:30	21	10	8	30	0	0	0	69
12:45	14	5	11	28	0	1	0	59
H/TOT	61	32	32	107	0	1	0	233



764 / IMMINGHAM
MAY 2010
MANUAL CLASSIFIED COUNT

SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	FROM ARM B							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
13:00	25	6	4	46	0	0	0	81
13:15	26	4	4	35	0	1	0	70
13:30	37	7	7	59	0	0	0	110
13:45	18	2	10	44	0	0	0	74
H/TOT	106	19	25	184	0	1	0	335
14:00	20	6	11	37	0	0	0	74
14:15	20	7	6	45	0	0	0	78
14:30	14	8	5	48	0	0	0	75
14:45	18	11	9	42	0	1	0	81
H/TOT	72	32	31	172	0	1	0	308
15:00	10	5	6	48	0	0	0	69
15:15	12	11	3	56	0	0	0	82
15:30	15	3	9	44	0	0	0	71
15:45	16	6	5	34	0	0	0	61
H/TOT	53	25	23	182	0	0	0	283
16:00	15	7	6	25	0	0	0	53
16:15	20	5	7	30	0	0	0	62
16:30	29	4	4	31	0	0	0	68
16:45	20	4	3	36	0	0	0	63
H/TOT	84	20	20	122	0	0	0	246
17:00	13	2	2	34	0	0	0	51
17:15	22	3	5	29	0	0	0	59
17:30	37	4	4	37	0	0	1	83
17:45	19	3	4	27	0	0	0	53
H/TOT	91	12	15	127	0	0	1	246
18:00	6	2	1	21	0	0	0	30
18:15	11	0	1	32	0	0	0	44
18:30	14	2	1	19	0	1	0	37
18:45	7	2	1	26	0	0	0	36
H/TOT	38	6	4	98	0	1	0	147
P/TOT	1513	396	356	1580	1	15	4	3865



764 / IMMINGHAM
MAY 2010
MANUAL CLASSIFIED COUNT

SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	TO ARM C							TOT
CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
07:00	23	5	7	11	0	0	0	46
07:15	37	6	10	23	0	1	0	77
07:30	52	14	7	19	0	1	0	93
07:45	76	15	8	29	0	2	0	130
H/TOT	188	40	32	82	0	4	0	346
08:00	36	11	8	31	0	0	0	86
08:15	34	5	7	24	0	0	0	70
08:30	43	9	10	31	0	0	0	93
08:45	50	11	4	20	0	1	0	86
H/TOT	163	36	29	106	0	1	0	335
09:00	13	9	6	21	0	0	0	49
09:15	13	10	8	22	0	0	0	53
09:30	10	5	7	19	0	0	0	41
09:45	8	8	6	28	0	0	0	50
H/TOT	44	32	27	90	0	0	0	193
10:00	10	11	5	26	0	0	0	52
10:15	7	11	8	22	0	0	0	48
10:30	11	14	6	25	0	0	0	56
10:45	14	4	7	35	0	0	0	60
H/TOT	42	40	26	108	0	0	0	216
11:00	9	4	3	36	0	0	0	52
11:15	6	8	5	28	0	0	0	47
11:30	9	2	3	27	0	0	0	41
11:45	9	4	2	21	0	0	0	36
H/TOT	33	18	13	112	0	0	0	176
12:00	4	6	6	26	0	0	0	42
12:15	5	6	6	25	0	0	0	42
12:30	15	4	8	32	0	0	0	59
12:45	8	4	5	25	0	0	0	42
H/TOT	32	20	25	108	0	0	0	185



764 / IMMINGHAM
MAY 2010
MANUAL CLASSIFIED COUNT

SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	TO ARM C							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
13:00	21	7	2	35	0	0	0	65
13:15	22	6	2	37	0	1	0	68
13:30	27	6	4	60	0	0	0	97
13:45	11	5	7	40	0	0	0	63
H/TOT	81	24	15	172	0	1	0	293
14:00	15	4	8	35	0	0	0	62
14:15	7	3	6	40	0	0	0	56
14:30	12	9	4	39	0	0	0	64
14:45	12	8	6	36	0	1	0	63
H/TOT	46	24	24	150	0	1	0	245
15:00	8	3	6	43	0	0	0	60
15:15	9	9	2	44	0	0	0	64
15:30	14	4	8	29	0	0	0	55
15:45	12	2	4	29	0	0	0	47
H/TOT	43	18	20	145	0	0	0	226
16:00	8	7	3	25	0	0	0	43
16:15	20	4	8	20	0	0	0	52
16:30	29	5	5	22	0	0	0	61
16:45	12	4	3	33	0	0	0	52
H/TOT	69	20	19	100	0	0	0	208
17:00	10	1	2	29	0	0	0	42
17:15	18	3	4	24	0	0	0	49
17:30	34	3	2	25	0	0	0	64
17:45	19	1	3	24	0	0	0	47
H/TOT	81	8	11	102	0	0	0	202
18:00	2	1	0	18	0	0	0	21
18:15	10	0	1	22	0	0	0	33
18:30	8	2	1	15	0	0	0	26
18:45	4	2	1	17	0	0	0	24
H/TOT	24	5	3	72	0	0	0	104
P/TOT	846	285	244	1347	0	7	0	2729



764 / IMMINGHAM
MAY 2010
MANUAL CLASSIFIED COUNT

SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	FROM ARM C							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	14	2	1	32	0	0	1	50
07:15	2	0	4	42	0	0	0	48
07:30	6	6	1	26	0	0	0	39
07:45	4	1	3	30	0	0	0	38
H/TOT	26	9	9	130	0	0	1	175
08:00	7	3	5	20	0	0	0	35
08:15	8	4	6	25	0	0	0	43
08:30	3	3	6	22	0	0	0	34
08:45	5	3	9	27	0	0	0	44
H/TOT	23	13	26	94	0	0	0	156
09:00	7	4	4	34	0	0	0	49
09:15	6	3	2	17	0	0	0	28
09:30	10	11	7	26	0	0	0	54
09:45	4	9	6	20	0	0	0	39
H/TOT	27	27	19	97	0	0	0	170
10:00	4	7	11	27	0	0	0	49
10:15	37	6	6	30	0	0	0	79
10:30	14	11	5	32	0	0	0	62
10:45	36	9	8	30	0	1	0	84
H/TOT	91	33	30	119	0	1	0	274
11:00	27	9	6	33	0	0	0	75
11:15	27	8	4	28	0	0	0	67
11:30	10	9	7	27	0	0	0	53
11:45	31	8	6	35	0	0	0	80
H/TOT	95	34	23	123	0	0	0	275
12:00	37	2	6	25	0	0	0	70
12:15	40	11	3	34	0	0	0	88
12:30	29	7	7	18	0	0	0	61
12:45	13	9	10	27	0	1	0	60
H/TOT	119	29	26	104	0	1	0	279



764 / IMMINGHAM
MAY 2010
MANUAL CLASSIFIED COUNT

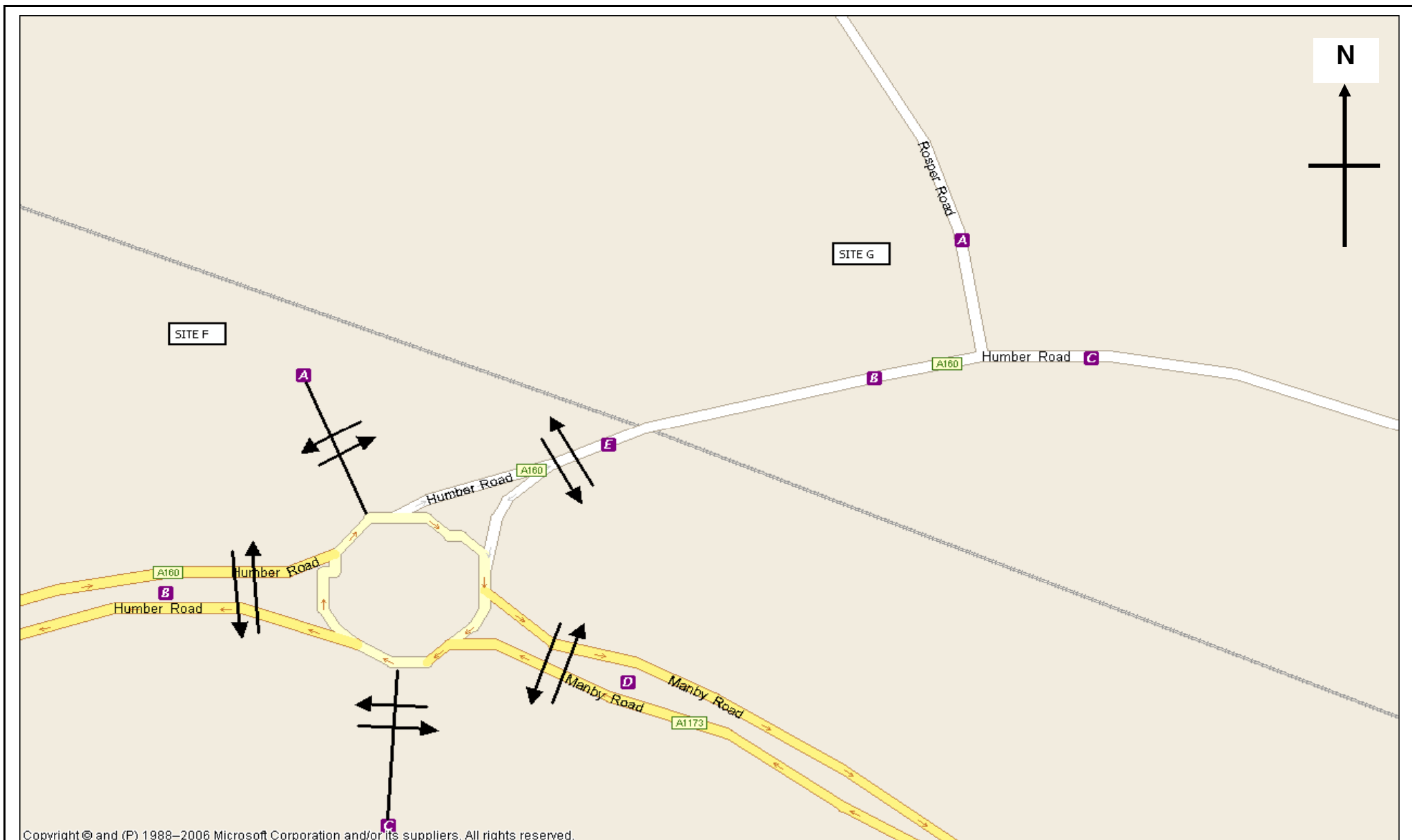
SITE: 0

DATE: 27/05/2010

LOCATION: 0

DAY: THURSDAY

TIME	FROM ARM C							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
13:00	34	4	5	25	0	0	0	68
13:15	42	4	2	23	0	0	0	71
13:30	21	5	6	31	0	0	0	63
13:45	60	6	5	38	0	0	1	110
H/TOT	157	19	18	117	0	0	1	312
14:00	36	7	7	29	0	0	0	79
14:15	21	3	8	27	0	0	0	59
14:30	24	5	7	29	0	0	0	65
14:45	31	10	8	33	0	1	0	83
H/TOT	112	25	30	118	0	1	0	286
15:00	44	8	8	42	0	0	0	102
15:15	29	6	7	40	0	0	0	82
15:30	22	9	12	29	0	0	0	72
15:45	60	10	3	31	0	0	1	105
H/TOT	155	33	30	142	0	0	1	361
16:00	86	8	11	34	0	1	0	140
16:15	58	10	8	34	0	1	0	111
16:30	80	9	7	25	0	1	0	122
16:45	71	5	6	21	0	0	0	103
H/TOT	295	32	32	114	0	3	0	476
17:00	105	8	8	33	0	3	0	157
17:15	68	8	7	34	0	2	0	119
17:30	65	3	6	24	0	0	0	98
17:45	63	2	5	21	0	2	1	94
H/TOT	301	21	26	112	0	7	1	468
18:00	43	4	4	19	0	0	0	70
18:15	29	3	4	23	0	0	0	59
18:30	14	4	7	26	0	0	0	51
18:45	8	1	9	29	0	1	0	48
H/TOT	94	12	24	97	0	1	0	228
P/TOT	1495	287	293	1367	0	14	4	3460



	Site / Location: G - A160 Humber Road / Rosper Road	Project No: 764	Drawing No: 764-07	Drawn By: FF
	Survey Date: Thursday 27th May 2010	Project Name: Immingham		
	Survey Times: 0700 - 1900	Drawing Title: Site Layout and Observed Movements		

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Sat, 12 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	30	0	4	0	3	0	0	0	2	10	9	1	1	0	0	0	0	0	0	37.6	40.7
0100	29	0	11	0	2	0	0	0	1	8	6	1	0	0	0	0	0	0	0	41.7	48.1
0200	28	0	11	0	1	1	0	0	0	5	9	1	0	0	0	0	0	0	0	38.4	44.3
0300	46	1	28	0	0	0	0	0	2	9	6	0	0	0	0	0	0	0	0	40.2	45.6
0400	49	1	17	0	5	0	0	0	1	11	14	0	0	0	0	0	0	0	0	36.9	43.2
0500	164	2	111	0	11	0	0	0	2	17	20	0	1	2	1.2	0	0	0	0	40.3	45.9
0600	196	6	105	1	18	1	0	0	5	20	39	1	0	1	0.5	0	0	0	0	37.3	44.1
0700	253	4	161	0	23	1	0	1	2	21	39	0	1	0	0	0	0	0	0	35.3	40.3
0800	197	5	89	1	28	0	1	0	3	38	31	1	0	1	0.5	0	0	0	0	35.5	40.9
0900	142	3	54	1	11	1	0	0	1	32	34	2	3	0	0	0	0	0	0	35.7	41.2
1000	115	1	49	0	9	1	0	1	0	27	27	0	0	1	0.9	0	0	0	0	35.9	41.4
1100	80	1	34	0	4	1	0	0	0	23	16	0	1	0	0	0	0	0	0	37.6	44.3
1200	115	1	46	1	11	0	0	0	4	27	25	0	0	0	0	0	0	0	0	37	44.1
1300	99	4	46	1	5	0	0	1	0	21	21	0	0	0	0	0	0	0	0	36.7	45.2
1400	103	2	58	0	7	1	0	0	3	22	10	0	0	0	0	0	0	0	0	35.6	42.7
1500	67	1	27	0	7	0	0	0	1	21	10	0	0	1	1.5	0	0	0	0	37.4	42.9
1600	57	1	18	0	2	0	0	0	1	26	8	0	1	0	0	0	0	0	0	37.8	41.4
1700	93	3	51	0	3	2	0	0	2	21	10	0	1	3	3.2	1	1.1	0	0	39.2	48.8
1800	50	1	36	1	3	1	0	0	1	2	5	0	0	0	0	0	0	0	0	39.6	46.5
1900	44	0	28	1	0	1	0	0	0	8	6	0	0	0	0	0	0	0	0	39.8	46.8
2000	20	0	8	0	3	0	0	2	0	5	2	0	0	0	0	0	0	0	0	39.8	44.7
2100	60	2	49	1	2	0	0	0	0	4	2	0	0	0	0	0	0	0	0	40.2	46.3
2200	38	1	28	2	1	0	0	0	0	2	4	0	0	1	2.6	1	2.6	0	0	39.3	45.6
2300	25	1	16	0	2	1	0	0	0	2	3	0	0	0	0	0	0	0	0	41.7	45.2
07-19	1371	27	669	5	113	8	1	3	18	281	236	3	7	6	0.4	1	0.1	0	0	36.4	42.9
06-22	1691	35	859	8	136	10	1	5	23	318	285	4	7	7	0.4	1	0.1	0	0	36.8	43.4
06-00	1754	37	903	10	139	11	1	5	23	322	292	4	7	8	0.5	2	0.1	0	0	36.9	43.6
00-00	2100	41	1085	10	161	12	1	5	31	382	356	7	9	10	0.5	2	0.1	0	0	37.4	44.1

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Sun, 13 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	18	0	7	0	1	0	0	0	2	6	2	0	0	0	0	0	0	0	0	38.6	45.2
0100	16	0	7	0	3	1	0	0	0	4	1	0	0	0	0	0	0	0	0	39.6	43.2
0200	6	0	3	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	39.5	-
0300	7	0	4	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	37.7	-
0400	17	1	7	0	2	0	0	0	0	6	1	0	0	0	0	0	0	0	0	37.1	44.7
0500	119	2	105	0	6	1	0	0	0	5	0	0	0	1	0.8	1	0.8	0	0	42.3	47.6
0600	123	5	97	1	2	0	0	0	0	8	10	0	0	1	0.8	0	0	0	0	37.7	44.3
0700	196	1	151	0	13	0	0	0	2	18	11	0	0	0	0	0	0	0	0	37.2	43.8
0800	88	0	61	0	9	0	0	0	0	9	9	0	0	1	1.1	0	0	0	0	39.6	47
0900	64	2	34	0	4	0	0	0	1	15	8	0	0	0	0	0	0	0	0	36.1	44.5
1000	77	1	38	0	11	0	0	0	0	17	9	1	0	0	0	0	0	0	0	38.4	44.1
1100	77	2	54	0	8	0	0	0	1	10	2	0	0	0	0	0	0	0	0	39.4	45
1200	83	0	42	0	13	0	0	0	3	23	2	0	0	1	1.2	0	0	0	0	39	45
1300	115	4	63	0	13	1	0	0	6	25	3	0	0	0	0	0	0	0	0	39.5	46.8
1400	86	1	41	0	20	0	0	0	3	16	5	0	0	0	0	0	0	0	0	38.5	45.2
1500	78	0	32	2	13	1	0	0	1	21	8	0	0	0	0	0	0	0	0	40	48.1
1600	76	0	33	2	8	1	0	0	4	20	8	0	0	0	0	0	0	0	0	37.7	44.1
1700	117	2	74	2	17	1	0	0	3	12	6	0	0	0	0	0	0	0	0	38.3	46.1
1800	84	2	52	0	12	0	0	0	5	8	5	0	0	0	0	0	0	0	0	38.9	45.6
1900	52	1	34	0	5	1	0	0	1	10	0	0	0	0	0	0	0	0	0	38.5	44.7
2000	39	0	20	0	5	0	0	0	2	6	6	0	0	0	0	0	0	0	0	37.4	41.8
2100	51	2	38	0	1	1	0	0	1	7	1	0	0	0	0	0	0	0	0	38.7	43.4
2200	44	0	34	0	2	0	0	0	2	4	2	0	0	1	2.3	0	0	0	0	39.4	46.1
2300	32	0	15	0	5	3	0	0	1	5	3	0	0	0	0	0	0	0	0	38.8	43.8
07-19	1141	15	675	6	141	4	0	0	29	194	76	1	0	2	0.2	0	0	0	0	38.5	45.6
06-22	1406	23	864	7	154	6	0	0	33	225	93	1	0	3	0.2	0	0	0	0	38.4	45.4
06-00	1482	23	913	7	161	9	0	0	36	234	98	1	0	4	0.3	0	0	0	0	38.4	45.4
00-00	1665	26	1046	7	175	12	0	0	39	257	102	1	0	5	0.3	1	0.1	0	0	38.7	45.6

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Mon, 14 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	29	1	12	0	6	2	0	0	1	4	3	0	0	0	0	0	0	0	0	38.1	43.4
0100	26	1	12	0	9	1	0	0	0	3	0	0	0	0	0	0	0	0	0	39.8	44.5
0200	31	0	7	0	18	2	0	0	1	3	0	0	0	0	0	0	0	0	0	36.7	44.3
0300	59	0	23	0	28	1	0	0	1	5	1	0	0	0	0	0	0	0	0	38.3	45
0400	177	3	47	0	93	12	1	0	2	15	4	0	0	0	0	0	0	0	0	36.3	43.6
0500	349	8	209	1	82	11	1	0	8	20	6	1	2	0	0	0	0	0	0	37.1	43.6
0600	390	3	224	0	67	5	5	1	15	51	18	0	1	1	0.3	0	0	0	0	35.3	41.6
0700	893	10	684	2	68	9	21	0	13	59	23	3	1	0	0	0	0	0	0	31.3	36.2
0800	464	2	309	4	52	3	18	1	9	45	21	0	0	0	0	0	0	0	0	33.7	39.4
0900	363	4	188	2	56	8	9	0	6	49	40	0	1	0	0	0	0	0	0	34.4	39.4
1000	327	2	144	3	38	5	19	0	10	66	37	1	2	0	0	0	0	0	0	34.4	39.4
1100	280	0	123	1	39	6	14	0	14	56	27	0	0	0	0	0	0	0	0	34	40
1200	336	1	160	0	37	2	9	0	8	77	37	3	2	0	0	0	0	0	0	34.9	40.9
1300	341	2	167	1	35	4	16	3	7	64	39	0	3	0	0	0	0	0	0	35.2	40
1400	303	5	141	4	38	5	3	0	7	54	42	1	3	0	0	0	0	0	0	35.7	40.7
1500	332	3	136	0	45	5	4	0	4	70	60	2	3	3	0.9	3	0.9	3	0.9	35.9	40.7
1600	236	2	112	1	23	3	1	0	9	41	40	3	1	0	0	0	0	0	0	34.9	40.3
1700	258	6	140	1	19	1	1	0	3	43	39	2	3	1	0.4	0	0	0	0	35.3	41.4
1800	157	4	57	1	13	3	0	0	5	41	31	0	2	0	0	0	0	0	0	35.5	40
1900	127	1	55	1	8	2	0	0	4	24	31	1	0	0	0	0	0	0	0	35.8	39.6
2000	64	0	20	0	3	1	0	0	2	21	16	0	1	0	0	0	0	0	0	34.9	40.7
2100	86	5	36	1	6	2	0	0	0	19	16	0	1	0	0	0	0	0	0	35.8	42.3
2200	53	0	24	0	4	0	0	0	3	16	6	0	0	0	0	0	0	0	0	36	42.1
2300	24	0	8	0	3	0	0	0	1	5	7	0	0	0	0	0	0	0	0	36.7	42.5
07-19	4290	41	2361	20	463	54	115	4	95	665	436	15	21	4	0.1	3	0.1	3	0.1	34.1	39.6
06-22	4957	50	2696	22	547	64	120	5	116	780	517	16	24	5	0.1	3	0.1	3	0.1	34.3	39.8
06-00	5034	50	2728	22	554	64	120	5	120	801	530	16	24	5	0.1	3	0.1	3	0.1	34.3	40
00-00	5705	63	3038	23	790	93	122	5	133	851	544	17	26	5	0.1	3	0.1	3	0.1	34.6	40.7

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Tue, 15 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	32	1	5	0	2	3	0	0	1	14	6	0	0	0	0	0	0	0	0	37.8	42.1
0100	26	0	8	0	1	0	0	0	1	9	7	0	0	0	0	0	0	0	0	38.9	42.7
0200	43	0	14	0	4	1	0	0	0	9	15	0	0	0	0	0	0	0	0	37.4	44.5
0300	43	0	16	0	8	2	0	0	1	11	5	0	0	0	0	0	0	0	0	38.3	42.9
0400	114	2	48	0	21	5	2	0	3	17	16	0	0	0	0	0	0	0	0	35.9	43.8
0500	335	6	200	0	35	13	1	0	10	42	23	2	3	0	0	0	0	0	0	37.4	43.2
0600	401	6	239	1	35	4	2	0	15	64	33	0	2	0	0	0	0	0	0	35.5	41.6
0700	820	15	611	4	55	7	3	1	20	54	48	1	1	0	0	0	0	0	0	31.1	35.3
0800	552	2	373	3	55	5	3	0	3	63	44	1	0	0	0	0	0	0	0	32.6	37.8
0900	311	1	160	0	34	5	3	0	11	46	48	2	1	0	0	0	0	0	0	33.5	39.1
1000	308	2	133	1	40	4	8	0	13	59	46	1	1	0	0	0	0	0	0	33.3	39.1
1100	288	0	122	2	42	9	3	2	13	65	27	1	2	0	0	0	0	0	0	32.9	38
1200	291	2	126	1	40	9	3	1	9	52	44	1	3	5	1.7	5	1.7	5	1.7	33.9	38
1300	376	5	184	3	44	8	4	0	12	70	41	3	2	0	0	0	0	0	0	32.6	39.6
1400	373	1	165	3	35	7	1	0	12	94	52	1	2	0	0	0	0	0	0	34.8	40.9
1500	303	3	127	0	36	6	1	1	11	64	53	0	1	0	0	0	0	0	0	34.6	40.5
1600	297	4	155	2	27	4	0	1	7	47	43	3	4	0	0	0	0	0	0	32.4	40
1700	285	7	160	0	12	4	1	0	5	46	43	3	4	0	0	0	0	0	0	34.2	40.9
1800	176	1	66	0	14	3	1	0	11	38	40	0	2	1	0.6	0	0	0	0	35.4	41.6
1900	146	1	60	0	8	5	1	0	3	35	31	0	2	0	0	0	0	0	0	35.8	41.2
2000	76	0	18	0	5	1	1	0	0	32	19	0	0	0	0	0	0	0	0	38	42.5
2100	87	6	38	0	3	2	0	0	0	24	14	0	0	0	0	0	0	0	0	39	46.3
2200	58	1	25	0	2	1	0	0	3	15	11	0	0	0	0	0	0	0	0	39.1	45.6
2300	44	0	13	0	1	1	0	0	2	17	10	0	0	0	0	0	0	0	0	40.3	43.8
07-19	4380	43	2382	19	434	71	31	6	127	698	529	17	23	6	0.1	5	0.1	5	0.1	33.1	38.9
06-22	5090	56	2737	20	485	83	35	6	145	853	626	17	27	6	0.1	5	0.1	5	0.1	33.5	39.4
06-00	5192	57	2775	20	488	85	35	6	150	885	647	17	27	6	0.1	5	0.1	5	0.1	33.6	39.6
00-00	5785	66	3066	20	559	109	38	6	166	987	719	19	30	6	0.1	5	0.1	5	0.1	34	40

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Wed, 16 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	41	1	9	0	4	1	0	0	3	13	10	0	0	0	0	0	0	0	0	39.9	46.1
0100	45	1	9	0	3	3	1	0	1	16	11	0	0	0	0	0	0	0	0	39.9	44.1
0200	41	0	11	0	3	0	0	0	2	16	8	1	0	1	2.4	0	0	0	0	39	47.6
0300	38	0	14	0	8	3	0	0	0	8	5	0	0	0	0	0	0	0	0	39.1	46.1
0400	108	0	47	0	27	6	0	0	3	14	11	0	0	0	0	0	0	0	0	37.7	44.1
0500	319	7	199	1	36	6	2	0	8	45	15	0	0	1	0.3	0	0	0	0	37.6	44.5
0600	388	11	212	0	41	6	1	0	11	59	45	1	1	0	0	0	0	0	0	33.9	38.7
0700	850	11	650	5	62	8	5	1	8	60	39	1	0	0	0	0	0	0	0	30.4	35.3
0800	486	3	295	1	51	4	5	1	10	70	46	0	0	0	0	0	0	0	0	32.7	38.3
0900	301	2	143	2	44	4	6	0	8	56	35	0	1	0	0	0	0	0	0	33	38.5
1000	297	4	133	0	41	4	3	0	15	54	39	3	1	0	0	0	0	0	0	33.5	38.9
1100	256	1	104	0	42	4	4	1	11	46	37	3	3	0	0	0	0	0	0	33.9	40
1200	306	2	149	1	24	3	2	0	14	66	39	1	5	0	0	0	0	0	0	33.4	38.5
1300	383	6	184	1	34	4	4	2	25	73	45	3	2	0	0	0	0	0	0	33.9	39.8
1400	372	5	153	1	58	3	1	1	9	81	56	1	3	0	0	0	0	0	0	34.4	40.5
1500	318	2	156	1	27	3	1	0	13	59	53	1	2	0	0	0	0	0	0	35	40.9
1600	276	2	144	2	28	7	2	0	6	46	34	3	2	0	0	0	0	0	0	33.3	39.4
1700	271	5	157	1	15	3	0	0	3	50	33	3	1	0	0	0	0	0	0	35	40.3
1800	180	3	77	0	18	2	0	0	6	41	29	1	3	1	0.6	1	0.6	0	0	35.1	40.7
1900	178	3	82	0	15	3	0	1	6	39	29	0	0	0	0	0	0	0	0	35.7	42.1
2000	85	1	31	2	8	2	1	1	1	23	15	0	0	0	0	0	0	0	0	30	39.8
2100	134	3	96	0	11	3	1	0	2	10	8	0	0	0	0	0	0	0	0	16.1	20.1
2200	60	0	26	0	2	2	0	0	0	16	11	1	2	0	0	0	0	0	0	34.4	40
2300	37	0	8	0	7	5	0	1	1	11	4	0	0	0	0	0	0	0	0	39.2	45.2
07-19	4296	46	2345	15	444	49	33	6	128	702	485	20	23	1	0	1	0	0	0	33.1	38.9
06-22	5081	64	2766	17	519	63	36	8	148	833	582	21	24	1	0	1	0	0	0	32.8	38.9
06-00	5178	64	2800	17	528	70	36	9	149	860	597	22	26	1	0	1	0	0	0	32.9	39.1
00-00	5770	73	3089	18	609	89	39	9	166	972	657	23	26	3	0.1	1	0	0	0	33.4	40

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Thu, 17 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	50	0	13	0	6	2	0	0	1	12	16	0	0	1	2	0	0	0	0	42.4	49.4
0100	59	0	19	1	10	2	0	0	1	13	13	0	0	0	0	0	0	0	0	39.4	45
0200	31	0	11	0	5	0	1	0	0	11	3	0	0	1	3.2	0	0	0	0	39.5	44.3
0300	35	0	15	0	6	1	0	0	4	7	2	0	0	0	0	0	0	0	0	39.6	44.5
0400	115	2	47	1	31	4	1	0	3	19	6	0	1	0	0	0	0	0	0	37.8	43.8
0500	303	9	177	3	41	10	1	0	9	33	20	0	0	0	0	0	0	0	0	36.8	43.6
0600	406	12	240	1	44	4	7	0	10	50	36	0	2	1	0.2	0	0	0	0	34.6	40
0700	809	13	621	1	61	7	2	2	12	61	28	1	0	0	0	0	0	0	0	32.1	36.9
0800	541	5	330	1	63	11	0	0	11	66	52	2	0	0	0	0	0	0	0	32.2	38.9
0900	261	1	123	0	34	5	4	0	11	44	37	1	1	0	0	0	0	0	0	35.4	41.2
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	1611	19	1074	2	158	23	6	2	34	171	117	4	1	0	0	0	0	0	0	32.6	38.5
06-22	2017	31	1314	3	202	27	13	2	44	221	153	4	3	1	0	0	0	0	0	33	38.7
06-00	2017	31	1314	3	202	27	13	2	44	221	153	4	3	1	0	0	0	0	0	33	38.7
00-00	2610	42	1596	8	301	46	16	2	62	316	213	4	4	3	0.1	0	0	0	0	34.2	40.7

Site 8
 Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
 Direction East

790 / Immingham
 June 2010
 Automatic Traffic Count

Fri, 18 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Virtual Day (7)

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	29	0	7	0	3	1	0	0	1	8	7	0	0	0	0.5	0	0	0	0	39.5	46.3
0100	29	0	9	0	4	1	0	0	1	8	5	0	0	0	0	0	0	0	0	39.9	45
0200	26	0	8	0	5	1	0	0	0	6	5	0	0	0	1.1	0	0	0	0	38.2	45.4
0300	33	0	14	0	7	1	0	0	1	6	3	0	0	0	0	0	0	0	0	39	45.6
0400	83	1	30	0	26	4	1	0	2	12	7	0	0	0	0	0	0	0	0	36.9	43.8
0500	227	5	143	1	30	6	1	0	5	23	12	0	1	1	0.3	0	0.1	0	0	37.9	44.5
0600	272	6	160	1	30	3	2	0	8	36	26	0	1	1	0.2	0	0	0	0	35.3	41.4
0700	546	8	411	2	40	5	4	1	8	39	27	1	0	0	0	0	0	0	0	31.8	36.7
0800	333	2	208	1	37	3	4	0	5	42	29	1	0	0	0.1	0	0	0	0	33.2	39.4
0900	206	2	100	1	26	3	3	0	5	35	29	1	1	0	0	0	0	0	0	34.3	40
1000	161	1	71	1	20	2	4	0	5	32	23	1	1	0	0.1	0	0	0	0	34.3	39.6
1100	140	1	62	0	19	3	3	0	6	29	16	1	1	0	0	0	0	0	0	34.4	40.5
1200	162	1	75	0	18	2	2	0	5	35	21	1	1	1	0.5	1	0.4	1	0.4	34.7	40.5
1300	188	3	92	1	19	2	3	1	7	36	21	1	1	0	0	0	0	0	0	34.6	40.9
1400	177	2	80	1	23	2	1	0	5	38	24	0	1	0	0	0	0	0	0	35.2	40.9
1500	157	1	68	0	18	2	1	0	4	34	26	0	1	1	0.4	0	0.3	0	0.3	35.7	41.4
1600	135	1	66	1	13	2	0	0	4	26	19	1	1	0	0	0	0	0	0	34	40.7
1700	146	3	83	1	9	2	0	0	2	25	19	1	1	1	0.4	0	0.1	0	0	35.6	42.1
1800	92	2	41	0	9	1	0	0	4	19	16	0	1	0	0.3	0	0.2	0	0	36.1	42.5
1900	78	1	37	0	5	2	0	0	2	17	14	0	0	0	0	0	0	0	0	36.4	42.1
2000	41	0	14	0	3	1	0	0	1	12	8	0	0	0	0	0	0	0	0	34.9	42.1
2100	60	3	37	0	3	1	0	0	0	9	6	0	0	0	0	0	0	0	0	31.1	42.7
2200	36	0	20	0	2	0	0	0	1	8	5	0	0	0	0.8	0	0.4	0	0	37.4	45
2300	23	0	9	0	3	1	0	0	1	6	4	0	0	0	0	0	0	0	0	39.5	45.2
07-19	2441	27	1358	10	250	30	27	3	62	387	268	9	11	3	0.1	1	0.1	1	0	33.9	40
06-22	2892	37	1605	11	292	36	29	4	73	461	322	9	12	3	0.1	1	0	1	0	34.1	40.3
06-00	2951	37	1633	11	296	38	29	4	75	475	331	9	12	4	0.1	2	0.1	1	0	34.2	40.5
00-00	3376	44	1846	12	371	52	31	4	85	538	370	10	14	5	0.1	2	0.1	1	0	34.7	41.2

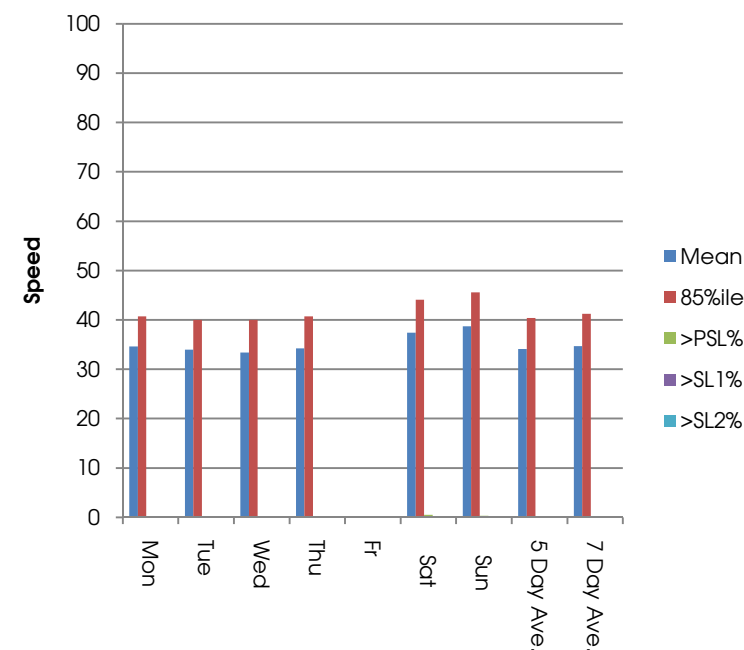
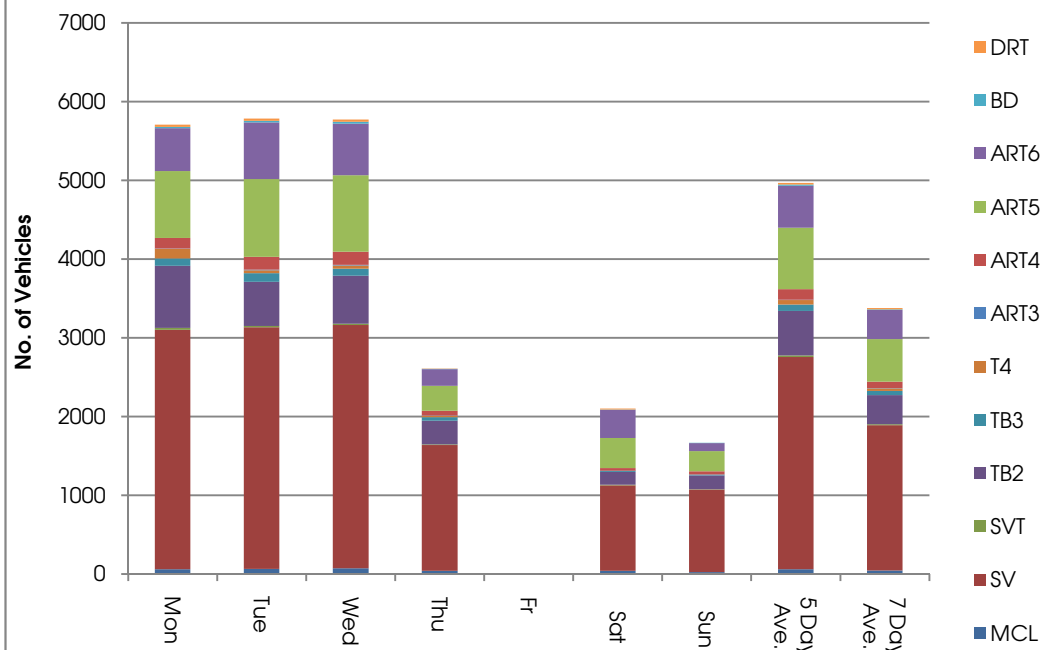
Site 8
 Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
 Direction East

790 / Immingham
 June 2010
 Automatic Traffic Count

Virtual Week (1)

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
Mon	5705	63	3038	23	790	93	122	5	133	851	544	17	26	5	0.1	3	0.1	3	0.1	34.6	40.7
Tue	5785	66	3066	20	559	109	38	6	166	987	719	19	30	6	0.1	5	0.1	5	0.1	34	40
Wed	5770	73	3089	18	609	89	39	9	166	972	657	23	26	3	0.1	1	0	0	0	33.4	40
Thu	2610	42	1596	8	301	46	16	2	62	316	213	4	4	3	0.1	0	0	0	0	34.2	40.7
Fri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
I Sat	2100	41	1085	10	161	12	1	5	31	382	356	7	9	10	0.5	2	0.1	0	0	37.4	44.1
I Sun	1665	26	1046	7	175	12	0	0	39	257	102	1	0	5	0.3	1	0.1	0	0	38.7	45.6
5 Day Ave.	4968	61	2697	17	565	84	54	6	132	782	533	16	22	4	0.1	2	0.0	2	0.0	34.1	40.4
7 Day Ave.	3376	44	1846	12	371	52	31	4	85	538	370	10	14	5	0.1	2	0.1	1	0.0	34.7	41.2
--	23635	311	12920	86	2595	361	216	27	597	3765	2591	71	95	32	0.1	12	0.1	8	0.0	34.7	41.2

Summary Graphs



Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Sat, 12 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	30	0	0	0	0	0	1	7	15	6	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	29	0	0	0	0	0	1	4	5	11	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	28	0	0	0	0	0	3	2	10	9	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	46	0	0	0	0	0	3	6	12	17	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	49	0	0	1	0	1	5	12	13	11	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	164	0	0	0	0	0	10	21	53	47	23	6	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	196	0	0	2	0	1	21	55	48	42	21	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	253	0	0	1	0	4	29	90	84	31	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	197	0	0	0	0	3	34	59	61	23	15	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	142	0	0	0	0	0	26	38	42	29	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	115	0	0	0	1	1	19	30	41	14	5	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	80	0	0	0	0	0	8	23	21	17	6	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	115	0	0	0	0	4	13	25	36	24	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	99	0	0	1	2	0	14	25	29	12	12	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	103	0	2	0	1	2	13	29	26	22	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	67	0	0	0	0	1	9	13	17	21	3	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	57	0	0	0	0	1	3	14	19	17	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	93	0	0	1	2	3	8	12	29	16	11	5	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	50	0	0	1	0	1	2	8	10	15	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	44	0	0	0	0	0	2	8	14	9	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	20	0	0	0	0	1	0	3	5	8	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	60	0	0	0	1	0	2	6	21	17	9	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	38	0	0	0	0	2	5	5	8	9	5	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	25	0	0	0	0	0	1	0	6	12	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	1371	0	2	4	6	20	178	366	415	241	101	25	7	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	1691	0	2	6	7	22	203	438	503	317	141	37	8	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	1754	0	2	6	7	24	209	443	517	338	151	40	9	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	2100	0	2	7	7	25	232	495	625	439	194	53	11	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Sun, 13 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	18	0	0	0	0	0	3	4	4	3	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	16	0	0	0	0	0	0	3	7	4	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	6	0	0	0	0	0	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	7	0	0	0	0	0	1	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	17	0	0	0	1	0	1	6	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	119	0	0	0	0	0	1	14	26	42	25	9	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	123	0	0	1	3	3	11	18	42	28	13	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	196	0	0	0	0	2	21	52	59	37	18	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	88	0	0	0	0	0	8	17	20	24	11	7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	64	0	0	1	3	1	8	13	20	9	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	77	0	0	0	0	1	11	11	27	16	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	77	0	0	0	2	0	5	15	14	28	6	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	83	0	0	0	0	0	6	18	22	24	11	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	115	0	0	0	1	1	6	21	32	28	20	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	86	0	0	0	0	1	3	24	25	19	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	78	0	0	0	0	1	7	12	19	19	12	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	76	0	0	0	0	1	6	21	22	15	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	117	0	0	0	1	2	15	20	35	22	13	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	84	0	0	0	0	2	12	12	19	23	9	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	52	0	0	0	0	0	5	8	21	11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	39	0	0	0	0	0	5	6	17	9	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	51	0	0	1	0	0	2	7	18	18	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	44	0	0	0	0	0	6	7	12	9	6	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	32	0	0	0	0	0	3	5	11	9	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	1141	0	0	1	7	12	108	236	314	264	136	56	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	1406	0	0	3	10	15	131	275	412	330	159	61	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	1482	0	0	3	10	15	140	287	435	348	168	65	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	1665	0	0	3	11	15	147	316	479	403	201	75	10	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Mon, 14 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	29	0	0	0	0	0	4	4	11	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	26	0	0	0	0	0	1	5	6	10	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	31	0	0	0	2	0	2	7	10	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	59	0	0	0	0	1	5	14	15	14	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	177	0	0	1	0	4	35	36	41	47	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	349	0	0	1	0	8	49	69	111	72	28	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	390	0	0	2	1	13	66	113	108	64	21	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	893	0	1	10	11	54	278	330	176	21	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	464	0	0	2	9	19	92	159	117	48	15	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	363	0	0	0	5	15	53	116	125	38	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	327	2	2	0	1	12	55	89	118	34	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	280	0	0	3	7	2	60	86	75	31	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	336	0	0	0	1	11	55	99	102	58	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	341	0	0	0	2	11	40	106	129	40	12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	303	0	0	0	0	9	40	74	123	48	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	332	0	0	0	4	14	49	89	111	42	14	6	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
1600	236	0	0	0	0	15	32	55	96	30	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	258	0	0	1	1	11	44	61	84	41	12	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	157	0	0	0	2	5	23	39	62	18	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	127	0	0	0	0	2	12	37	58	14	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	64	0	0	0	0	3	10	18	21	10	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	86	0	0	3	0	3	17	9	30	15	5	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	53	0	0	0	0	1	13	6	22	5	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	24	0	0	0	0	0	6	2	8	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	4290	2	3	16	43	178	821	1303	1318	449	122	28	3	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
06-22	4957	2	3	21	44	199	926	1480	1535	552	151	34	5	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
06-00	5034	2	3	21	44	200	945	1488	1565	561	157	36	7	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
00-00	5705	2	3	23	46	213	1041	1623	1759	715	215	52	8	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Tue, 15 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	32	0	0	0	0	0	4	4	12	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	26	0	0	0	0	1	1	2	11	9	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	43	0	0	0	0	0	6	8	15	8	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	43	0	0	0	0	2	2	6	14	13	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	114	0	0	1	0	1	25	30	26	17	10	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	335	0	0	0	0	7	39	55	126	73	24	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	401	0	0	0	1	8	71	112	127	55	21	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	820	0	0	2	3	58	254	356	125	18	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	552	0	0	1	9	37	115	217	124	40	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	311	0	0	0	3	15	56	124	75	28	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	308	0	0	1	8	13	48	122	85	27	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	288	0	0	0	2	19	58	118	73	13	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	291	0	0	2	8	16	56	106	76	18	4	0	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0
1300	376	0	2	5	12	36	74	95	100	37	11	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	373	0	0	1	9	23	46	98	129	42	17	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	303	0	0	0	2	20	50	78	97	39	16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	297	0	0	6	6	38	69	54	76	36	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	285	0	0	4	6	19	45	72	84	39	11	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	176	0	0	0	1	11	25	46	54	26	12	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	146	0	0	0	3	5	18	34	50	26	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	76	0	0	0	0	1	5	16	32	15	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	87	0	1	2	0	0	4	11	30	24	9	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	58	0	0	0	0	2	3	7	21	14	9	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	44	0	0	0	0	0	1	5	18	14	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	4380	0	2	22	69	305	896	1486	1098	363	109	21	3	1	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0
06-22	5090	0	3	24	73	319	994	1659	1337	483	152	34	6	1	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0
06-00	5192	0	3	24	73	321	998	1671	1376	511	163	37	9	1	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0
00-00	5785	0	3	25	73	332	1075	1776	1580	642	210	52	11	1	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Wed, 16 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	41	0	0	0	0	0	2	2	18	12	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	45	0	0	0	0	0	1	6	15	17	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	41	0	0	0	0	1	4	7	12	9	4	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	38	0	0	0	0	0	3	8	9	10	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	108	0	0	0	2	1	13	18	29	35	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	319	0	0	1	4	4	34	70	85	78	26	15	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	388	0	0	0	6	8	80	146	102	36	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	850	0	0	8	21	83	272	322	114	25	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	486	0	2	7	4	25	104	179	119	30	11	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	301	0	3	1	10	14	49	129	60	28	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	297	0	0	0	10	18	46	100	87	28	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	256	0	0	1	6	11	42	84	73	31	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	306	0	0	0	10	10	49	120	87	27	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	383	0	0	0	6	24	60	123	112	48	8	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	372	0	2	0	4	27	50	113	116	49	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	318	0	0	1	4	22	45	72	100	58	10	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	276	0	0	2	10	17	50	72	96	21	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	271	0	0	1	3	8	42	74	96	32	13	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	180	0	0	1	0	12	24	44	69	20	9	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	178	0	0	0	4	9	20	34	69	31	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	85	0	3	6	6	14	12	12	19	9	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	134	0	14	59	40	5	2	10	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	60	0	1	0	3	3	5	18	20	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	37	0	0	0	0	0	1	11	11	7	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	4296	0	7	22	88	271	833	1432	1129	397	94	19	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	5081	0	24	87	144	307	947	1634	1322	474	111	25	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	5178	0	25	87	147	310	953	1663	1353	486	119	28	6	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	5770	0	25	88	153	316	1010	1774	1521	647	175	50	8	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Thu, 17 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	50	0	0	0	0	0	1	6	16	9	11	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	59	0	0	0	0	0	4	10	18	17	5	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	31	0	0	0	0	1	3	3	8	11	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	35	0	0	0	0	0	5	3	7	15	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	115	0	0	1	0	0	9	22	38	34	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	303	0	0	2	1	16	33	62	91	66	23	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	406	0	0	0	2	17	77	109	139	44	13	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	809	0	0	2	9	51	213	313	178	34	8	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	541	0	0	7	27	59	102	156	128	44	13	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	261	0	0	0	0	10	39	73	87	37	9	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	1611	0	0	9	36	120	354	542	393	115	30	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	2017	0	0	9	38	137	431	651	532	159	43	13	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	2017	0	0	9	38	137	431	651	532	159	43	13	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	2610	0	0	12	39	154	486	757	710	311	97	34	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Fri, 18 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction East

790 / Immingham
June 2010
Automatic Traffic Count

Virtual Day (7)

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	29	0	0	0	0	0	2	4	11	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	29	0	0	0	0	0	1	4	9	10	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	26	0	0	0	0	0	3	4	8	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	33	0	0	0	0	0	3	5	9	10	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	83	0	0	1	0	1	13	18	21	21	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	227	0	0	1	1	5	24	42	70	54	21	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	272	0	0	1	2	7	47	79	81	38	14	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	546	0	0	3	6	36	152	209	105	24	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	333	0	0	2	7	20	65	112	81	30	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	206	0	0	0	3	8	33	70	58	24	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	161	0	0	0	3	6	26	50	51	17	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	140	0	0	1	2	5	25	47	37	17	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	162	0	0	0	3	6	26	53	46	22	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	188	0	0	1	3	10	28	53	57	24	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	177	0	1	0	2	9	22	48	60	26	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	157	0	0	0	1	8	23	38	49	26	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	135	0	0	1	2	10	23	31	44	17	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	146	0	0	1	2	6	22	34	47	21	9	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	92	0	0	0	0	4	12	21	31	15	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	78	0	0	0	1	2	8	17	30	13	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	41	0	0	1	1	3	5	8	13	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	60	0	2	9	6	1	4	6	15	11	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	36	0	0	0	0	1	5	6	12	6	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	23	0	0	0	0	0	2	3	8	7	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	2441	0	2	11	36	129	456	766	667	261	85	23	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	2892	0	5	21	45	143	519	877	806	331	108	29	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	2951	0	5	21	46	144	525	886	825	343	114	31	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	3376	0	5	23	47	151	570	963	953	451	156	45	8	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

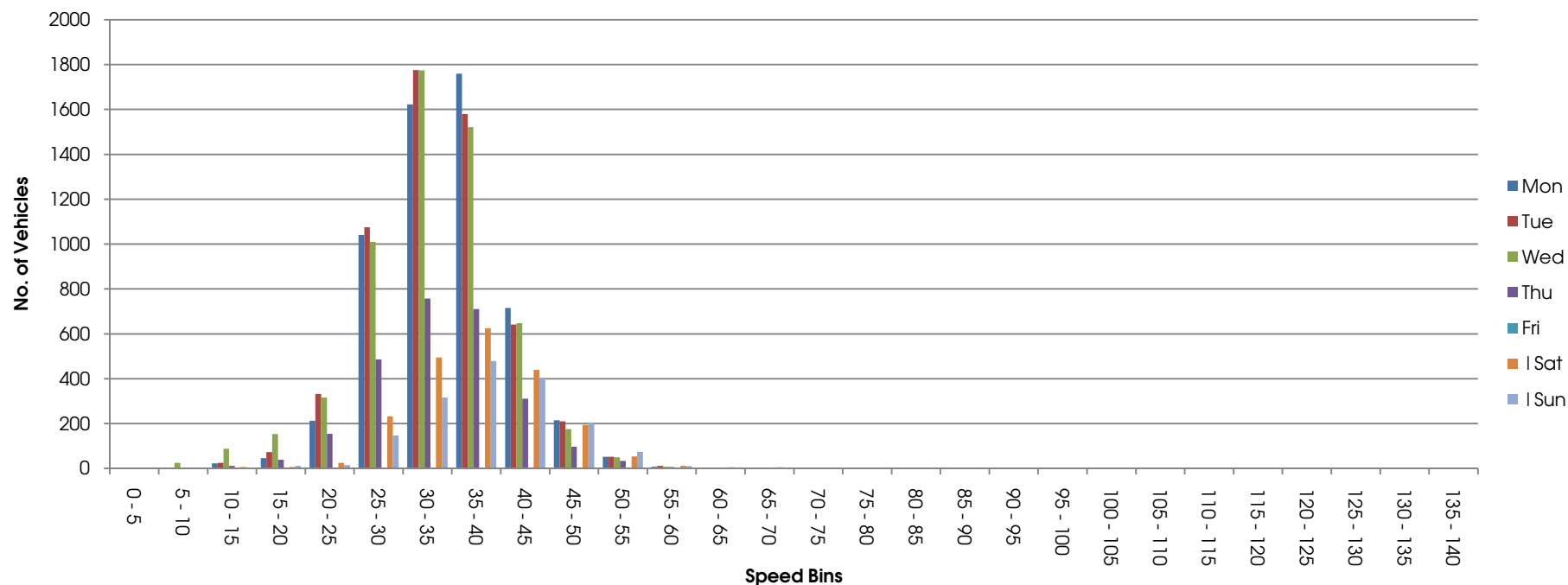
Site 8
 Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
 Direction East

790 / Immingham
 June 2010
 Automatic Traffic Count

Virtual Week (1)

Time	Total	Speed Bins (mph)																												
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140	
Mon	5705	2	3	23	46	213	1041	1623	1759	715	215	52	8	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
Tue	5785	0	3	25	73	332	1075	1776	1580	642	210	52	11	1	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0
Wed	5770	0	25	88	153	316	1010	1774	1521	647	175	50	8	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thu	2610	0	0	12	39	154	486	757	710	311	97	34	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
! Sat	2100	0	2	7	7	25	232	495	625	439	194	53	11	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
! Sun	1665	0	0	3	11	15	147	316	479	403	201	75	10	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Day Ave.	4968	1	8	37	78	254	903	1483	1393	579	174	47	9	2	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0
7 Day Ave.	3376	0	5	23	47	151	570	963	953	451	156	45	8	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
--	23635	2	33	158	329	1055	3991	6741	6674	3157	1092	316	55	16	7	1	0	3	0	0	0	0	0	3	0	2	0	0	0	0

Summary Graphs



EASTBOUND

Time	Mon		Tues		Wed		Average
	All veh	HGV	All veh	HGV	All veh	HGV	
0000	29		8	32	21	41	26
0100	26		3	26	17	45	28
0200	31		4	43	24	41	26
0300	59		7	43	17	38	13
0400	177		21	114	36	108	28
0500	349		34	335	75	319	68
0600	390		85	401	112	388	115
0601	893		95	820	123	850	108
0800	464		76	552	110	486	127
0900	363		95	311	105	301	99
1000	327		113	308	118	297	108
1100	280		97	288	107	256	95
1200	336		122	291	106	306	119
1300	341		113	376	123	383	145
1400	303		103	373	158	372	147
1500	332		134	303	129	318	125
1600	236		90	297	98	276	86
1700	258		85	285	94	271	86
1800	157		77	176	89	180	76
1900	127		59	146	69	178	75
2000	64		39	76	51	85	40
2100	86		35	87	38	134	20
2200	53		25	58	29	60	27
2300	24		13	44	29	37	17

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction West

790 / Immingham
June 2010
Automatic Traffic Count

Sat, 12 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	39	0	23	0	6	4	0	0	0	3	3	0	0	0	0	0	0	0	0	38.3	43.6
0100	46	0	26	0	5	4	0	0	1	1	9	0	0	0	0	0	0	0	0	37	43.2
0200	51	0	39	0	2	3	0	0	0	4	3	0	0	0	0	0	0	0	0	40.9	50.3
0300	48	1	33	0	4	4	0	0	0	2	4	0	0	0	0	0	0	0	0	39	46.8
0400	56	3	34	0	6	2	0	0	0	2	9	0	0	0	0	0	0	0	0	36.9	41.2
0500	117	4	78	0	11	1	0	0	0	5	17	0	1	0	0	0	0	0	0	37.5	43.8
0600	196	2	151	0	13	0	0	1	2	6	21	0	0	0	0	0	0	0	0	35.3	40.5
0700	185	1	113	1	31	4	0	0	3	15	17	0	0	0	0	0	0	0	0	32.6	41.4
0800	181	1	118	2	22	2	0	1	5	12	18	0	0	0	0	0	0	0	0	34.3	40
0900	148	1	61	0	31	5	1	0	3	17	28	1	0	0	0	0	0	0	0	33.9	40.9
1000	153	1	71	1	36	5	0	0	3	5	31	0	0	2	1.3	1	0.7	0	0	34	42.9
1100	121	1	57	1	24	4	0	1	1	11	20	1	0	0	0	0	0	0	0	33.8	43.6
1200	144	5	82	0	22	1	0	0	4	7	23	0	0	0	0	0	0	0	0	36.6	45.4
1300	159	2	110	0	20	2	1	0	3	6	13	1	1	0	0	0	0	0	0	35.8	45
1400	127	1	90	1	16	3	0	0	0	6	10	0	0	0	0	0	0	0	0	32.1	41.8
1500	115	2	79	0	18	0	0	0	0	3	13	0	0	0	0	0	0	0	0	37	43.8
1600	97	0	67	0	9	1	0	0	2	3	14	0	1	1	1	1	1	0	0	34.2	42.3
1700	135	0	103	0	16	0	0	0	0	4	12	0	0	0	0	0	0	0	0	35.9	44.7
1800	73	2	48	2	9	1	0	0	0	3	8	0	0	1	1.4	0	0	0	0	38.9	49
1900	54	2	40	1	1	0	0	0	0	1	9	0	0	0	0	0	0	0	0	39	51.4
2000	57	2	46	0	3	0	0	0	0	0	6	0	0	2	3.5	0	0	0	0	42.6	50.6
2100	47	1	30	1	4	0	0	0	0	4	7	0	0	0	0	0	0	0	0	39.2	49.4
2200	42	4	29	0	3	0	0	0	0	1	5	0	0	1	2.4	0	0	0	0	38.6	46.8
2300	26	0	20	0	1	0	0	0	0	0	5	0	0	0	0	0	0	0	0	41.9	49.4
07-19	1638	17	999	8	254	28	2	2	24	92	207	3	2	4	0.2	2	0.1	0	0	34.7	43.2
06-22	1992	24	1266	10	275	28	2	3	26	103	250	3	2	6	0.3	2	0.1	0	0	35.2	43.8
06-00	2060	28	1315	10	279	28	2	3	26	104	260	3	2	7	0.3	2	0.1	0	0	35.4	43.8
00-00	2417	36	1548	10	313	46	2	3	27	121	305	3	3	7	0.3	2	0.1	0	0	35.8	44.1

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction West

790 / Immingham
June 2010
Automatic Traffic Count

Sun, 13 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	22	0	11	0	0	0	0	0	0	2	9	0	0	0	0	0	0	0	0	39.4	46.1
0100	23	0	16	0	1	1	0	0	0	2	3	0	0	0	0	0	0	0	0	33.2	39.4
0200	8	0	5	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	38.3	-
0300	36	0	29	0	0	0	0	0	0	2	5	0	0	0	0	0	0	0	0	38.6	43.8
0400	17	0	7	0	1	0	0	0	0	2	7	0	0	0	0	0	0	0	0	38.6	40.3
0500	64	1	52	0	2	0	0	0	0	4	5	0	0	0	0	0	0	0	0	37.4	44.5
0600	106	4	71	1	7	1	0	0	0	7	14	0	1	2	1.9	0	0	0	0	36.5	45.4
0700	74	1	51	0	2	0	0	0	0	7	13	0	0	0	0	0	0	0	0	32.9	41.8
0800	61	0	35	2	0	0	0	0	1	4	19	0	0	1	1.6	1	1.6	0	0	33.2	40.7
0900	54	1	30	0	4	0	0	0	0	1	18	0	0	0	0	0	0	0	0	36.3	45
1000	75	1	48	0	6	1	0	0	1	1	16	0	1	0	0	0	0	0	0	33.7	38.9
1100	76	1	50	0	4	1	0	0	0	4	16	0	0	1	1.3	0	0	0	0	36.9	47
1200	98	1	69	0	7	1	0	0	0	3	17	0	0	1	1	0	0	0	0	34.3	40.3
1300	136	0	97	0	6	0	0	0	0	7	26	0	0	0	0	0	0	0	0	36.5	45
1400	125	0	89	0	7	0	0	0	0	4	25	0	0	0	0	0	0	0	0	36.6	44.3
1500	115	0	73	1	7	1	0	0	2	8	23	0	0	1	0.9	1	0.9	0	0	35.1	42.7
1600	132	1	95	2	5	0	0	0	1	8	20	0	0	2	1.5	0	0	0	0	36.9	44.7
1700	156	3	117	0	7	1	0	0	0	4	23	1	0	2	1.3	2	1.3	0	0	35.4	42.7
1800	109	2	80	0	4	1	0	0	1	4	17	0	0	0	0	0	0	0	0	36.8	44.7
1900	66	2	49	0	2	0	0	0	0	2	10	1	0	0	0	0	0	0	0	39	48.1
2000	49	0	35	0	1	1	0	0	0	5	7	0	0	0	0	0	0	0	0	33.8	43.6
2100	42	3	30	0	1	0	0	0	0	1	7	0	0	0	0	0	0	0	0	38	47.4
2200	48	2	36	0	1	1	0	0	0	1	7	0	0	0	0	0	0	0	0	37.6	45.2
2300	41	1	28	0	0	0	0	0	0	3	9	0	0	0	0	0	0	0	0	37.6	47.6
07-19	1211	11	834	5	59	6	0	0	6	55	233	1	1	8	0.7	4	0.3	0	0	35.6	43.4
06-22	1474	20	1019	6	70	8	0	0	6	70	271	2	2	10	0.7	4	0.3	0	0	35.8	44.3
06-00	1563	23	1083	6	71	9	0	0	6	74	287	2	2	10	0.6	4	0.3	0	0	35.9	44.3
00-00	1733	24	1203	6	75	10	0	0	6	88	317	2	2	10	0.6	4	0.2	0	0	36.1	44.3

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction West

790 / Immingham
June 2010
Automatic Traffic Count

Mon, 14 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	24	0	14	0	3	1	0	0	0	0	6	0	0	0	0	0	0	0	0	39.7	45.6
0100	33	0	14	0	1	0	0	0	0	4	13	0	1	0	0	0	0	0	0	37.8	42.9
0200	48	0	19	0	0	0	0	0	0	7	22	0	0	0	0	0	0	0	0	34.7	38.9
0300	51	0	26	0	2	1	0	0	0	10	11	1	0	0	0	0	0	0	0	32.2	40.9
0400	159	0	89	0	1	2	0	0	0	13	54	0	0	1	0.6	0	0	0	0	35.4	42.5
0500	319	1	240	0	7	1	2	0	0	9	55	1	3	0	0	0	0	0	0	34	38.7
0600	377	5	261	1	12	3	3	0	3	24	63	2	0	0	0	0	0	0	0	31.7	38.5
0700	323	6	209	0	8	2	11	0	1	16	64	3	3	0	0	0	0	0	0	31.1	37.1
0800	362	0	253	0	18	2	9	0	4	17	54	2	3	0	0	0	0	0	0	32.2	36.5
0900	351	3	230	0	34	5	11	1	6	13	47	0	1	0	0	0	0	0	0	31.7	37.6
1000	315	1	184	0	32	3	13	0	7	19	54	2	0	0	0	0	0	0	0	32.7	38.3
1100	350	1	235	0	38	4	10	0	0	16	45	1	0	0	0	0	0	0	0	32.8	36.9
1200	368	0	231	1	37	1	5	0	5	15	72	0	1	0	0	0	0	0	0	32.6	38.3
1300	400	3	267	1	35	3	13	3	5	17	52	1	0	0	0	0	0	0	0	31.6	36.5
1400	391	2	234	1	38	4	9	1	6	22	70	4	0	1	0.3	0	0	0	0	32.1	37.4
1500	390	2	242	0	46	6	1	1	4	23	62	2	1	0	0	0	0	0	0	31	37.8
1600	762	6	567	2	53	4	3	0	2	29	92	2	2	1	0.1	1	0.1	0	0	29.9	36.2
1700	622	10	462	1	35	6	1	0	5	17	82	3	0	5	0.8	5	0.8	0	0	31.4	36.7
1800	434	4	327	0	29	8	2	0	5	12	46	1	0	0	0	0	0	0	0	32.6	39.1
1900	243	0	159	2	17	3	2	0	4	17	38	1	0	0	0	0	0	0	0	31.8	39.6
2000	132	2	87	0	13	2	0	0	3	8	17	0	0	0	0	0	0	0	0	32.9	37.1
2100	108	3	73	0	6	1	0	0	1	9	15	0	0	1	0.9	1	0.9	0	0	36.3	43.8
2200	80	0	60	0	2	1	0	0	0	1	16	0	0	0	0	0	0	0	0	37.5	45.2
2300	61	2	43	0	4	0	0	0	0	3	9	0	0	0	0	0	0	0	0	38.4	46.1
07-19	5068	38	3441	6	403	48	88	6	50	216	740	21	11	7	0.1	6	0.1	0	0	31.6	37.1
06-22	5928	48	4021	9	451	57	93	6	61	274	873	24	11	8	0.1	7	0.1	0	0	31.7	37.6
06-00	6069	50	4124	9	457	58	93	6	61	278	898	24	11	8	0.1	7	0.1	0	0	31.9	37.8
00-00	6703	51	4526	9	471	63	95	6	61	321	1059	26	15	9	0.1	7	0.1	0	0	32.2	38.3

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction West

790 / Immingham
June 2010
Automatic Traffic Count

Tue, 15 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	40	1	24	0	4	0	0	0	0	4	7	0	0	0	0	0	0	0	0	40.1	46.3
0100	47	0	29	0	5	0	0	0	0	2	11	0	0	1	2.1	0	0	0	0	38.2	47.6
0200	38	1	21	0	4	0	1	0	0	6	5	0	0	1	2.6	0	0	0	0	36.8	43.8
0300	54	1	29	0	3	1	0	0	0	9	11	0	0	1	1.9	0	0	0	0	36	44.1
0400	114	0	86	0	3	4	1	0	1	0	19	0	0	0	0	0	0	0	0	37.2	43.4
0500	191	4	141	0	7	2	0	0	0	3	29	2	3	0	0	0	0	0	0	35.4	40.3
0600	351	1	272	1	3	6	4	0	6	11	43	2	2	0	0	0	0	0	0	33.1	38.9
0700	315	3	218	0	20	4	2	0	6	19	40	1	2	0	0	0	0	0	0	30.5	36.5
0800	358	1	233	0	27	6	4	0	6	11	68	2	0	0	0	0	0	0	0	30.9	35.8
0900	259	1	152	0	26	4	1	1	10	14	48	1	1	0	0	0	0	0	0	30.9	36.5
1000	275	2	152	0	31	3	1	0	5	18	60	1	2	0	0	0	0	0	0	31.1	36.7
1100	281	2	165	3	29	4	3	0	5	11	59	0	0	6	2.1	0	0	0	0	31.9	37.1
1200	303	0	179	0	34	0	3	1	9	23	53	1	0	1	0.3	0	0	0	0	31.3	36.7
1300	349	2	206	3	39	7	3	0	8	17	61	2	1	0	0	0	0	0	0	31.2	38.5
1400	354	2	199	1	39	4	2	0	10	25	66	3	3	0	0	0	0	0	0	32.1	37.4
1500	462	4	279	0	39	3	2	1	5	33	93	3	0	0	0	0	0	0	0	32	38
1600	639	5	437	0	53	6	4	0	8	25	97	3	1	0	0	0	0	0	0	30.8	35.6
1700	604	11	411	1	46	9	2	0	12	22	85	3	2	0	0	0	0	0	0	31.1	36.5
1800	394	7	232	0	42	4	0	0	3	28	76	0	2	0	0	0	0	0	0	32.2	38
1900	219	1	109	0	28	3	1	0	3	22	52	0	0	0	0	0	0	0	0	32.4	39.4
2000	163	0	97	0	20	3	2	0	2	9	29	1	0	0	0	0	0	0	0	34.1	42.5
2100	115	1	68	0	8	1	2	0	0	14	21	0	0	1	0.9	0	0	0	0	36.5	44.5
2200	98	2	64	0	2	1	2	0	2	6	19	0	0	0	0	0	0	0	0	35.2	42.7
2300	68	1	41	1	0	0	0	0	2	10	13	0	0	0	0	0	0	0	0	39.9	45.2
07-19	4593	40	2863	8	425	54	27	3	87	246	806	20	14	7	0.2	0	0	0	0	31.3	36.9
06-22	5441	43	3409	9	484	67	36	3	98	302	951	23	16	8	0.1	0	0	0	0	31.7	37.6
06-00	5607	46	3514	10	486	68	38	3	102	318	983	23	16	8	0.1	0	0	0	0	31.8	37.8
00-00	6091	53	3844	10	512	75	40	3	103	342	1065	25	19	11	0.2	0	0	0	0	32.2	38.5

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction West

790 / Immingham
June 2010
Automatic Traffic Count

Wed, 16 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	40	0	21	0	2	0	0	0	0	2	15	0	0	0	0	0	0	0	0	40.3	49.4
0100	51	0	21	0	5	1	0	0	1	7	16	0	0	0	0	0	0	0	0	39.9	45.9
0200	63	2	27	0	6	5	0	0	1	4	18	0	0	0	0	0	0	0	0	37.1	42.1
0300	40	0	13	0	7	1	0	0	0	6	13	0	0	0	0	0	0	0	0	36.8	46.3
0400	126	0	79	1	6	3	0	0	1	6	29	0	1	2	1.6	0	0	0	0	38.2	45.2
0500	223	2	177	1	2	2	0	0	0	6	31	2	0	1	0.4	0	0	0	0	35.4	42.5
0600	283	5	194	0	11	1	4	0	6	13	48	0	1	1	0.4	0	0	0	0	33.7	40.3
0700	297	3	193	3	6	2	4	1	5	10	63	4	3	3	1	3	1	3	1	32.3	37.1
0800	280	1	149	1	19	4	2	1	5	20	76	1	1	0	0	0	0	0	0	30.4	36.5
0900	287	0	157	2	32	0	2	0	6	17	69	2	0	0	0	0	0	0	0	31.4	37.8
1000	243	2	114	1	34	3	5	0	3	15	60	4	2	1	0.4	0	0	0	0	30.8	36
1100	257	4	145	1	31	7	1	0	2	11	54	1	0	3	1.2	2	0.8	0	0	33.2	37.8
1200	296	2	171	2	35	3	2	0	4	16	59	1	1	0	0	0	0	0	0	32.5	37.6
1300	293	3	165	1	32	2	4	1	10	16	59	0	0	0	0	0	0	0	0	32.6	38.5
1400	358	5	188	1	39	5	2	0	3	26	83	4	2	0	0	0	0	0	0	31.2	38
1500	433	2	247	1	49	5	1	0	7	26	88	4	3	0	0	0	0	0	0	32.4	38
1600	648	7	427	1	54	6	2	1	3	29	112	4	2	0	0	0	0	0	0	30.7	36
1700	640	9	446	4	37	8	3	0	8	29	92	3	1	0	0	0	0	0	0	31.1	36.7
1800	346	3	192	0	42	7	3	0	9	23	66	0	1	0	0	0	0	0	0	32.1	38.5
1900	230	7	109	0	36	5	1	0	7	16	48	0	1	0	0	0	0	0	0	34.8	43.2
2000	104	0	57	0	12	4	0	1	6	5	19	0	0	0	0	0	0	0	0	32	38.9
2100	149	6	110	1	9	1	0	2	4	3	13	0	0	0	0	0	0	0	0	26.5	31.3
2200	103	3	61	0	5	1	0	0	0	3	30	0	0	0	0	0	0	0	0	32	38.9
2300	62	1	36	0	2	2	0	0	0	3	18	0	0	1	1.6	0	0	0	0	38.1	46.5
07-19	4378	41	2594	18	410	52	31	4	65	238	881	28	16	7	0.2	5	0.1	3	0.1	31.6	37.6
06-22	5144	59	3064	19	478	63	36	7	88	275	1009	28	18	8	0.2	5	0.1	3	0.1	31.7	37.8
06-00	5309	63	3161	19	485	66	36	7	88	281	1057	28	18	9	0.2	5	0.1	3	0.1	31.8	37.8
00-00	5852	67	3499	21	513	78	36	7	91	312	1179	30	19	12	0.2	5	0.1	3	0.1	32.3	38.5

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction West

790 / Immingham
June 2010
Automatic Traffic Count

Thu, 17 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	49	1	20	0	0	2	0	0	0	6	20	0	0	0	0	0	0	0	0	37.6	43.4
0100	59	1	25	0	3	0	0	0	0	11	19	0	0	0	0	0	0	0	0	38.9	45.9
0200	48	0	17	0	5	1	0	0	0	11	14	0	0	1	2.1	0	0	0	0	37.8	43.4
0300	42	0	20	0	5	0	1	0	0	4	12	0	0	0	0	0	0	0	0	34.2	46.3
0400	124	0	77	0	3	3	0	0	0	12	29	0	0	0	0	0	0	0	0	35.7	42.7
0500	227	5	139	0	2	6	2	0	1	16	55	0	1	0	0	0	0	0	0	35.1	42.7
0600	305	3	202	0	13	3	4	0	3	11	59	4	3	0	0	0	0	0	0	33.6	39.6
0700	316	2	188	0	17	5	4	2	3	17	70	5	3	2	0.6	1	0.3	1	0.3	31.7	38.9
0800	329	2	211	1	17	7	0	0	1	19	65	3	3	0	0	0	0	0	0	32.9	38
0900	247	0	122	1	24	3	0	2	6	22	62	3	2	0	0	0	0	0	0	33.2	37.8
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	892	4	521	2	58	15	4	4	10	58	197	11	8	2	0.2	1	0.1	1	0.1	32.5	38.3
06-22	1197	7	723	2	71	18	8	4	13	69	256	15	11	2	0.2	1	0.1	1	0.1	32.8	38.9
06-00	1197	7	723	2	71	18	8	4	13	69	256	15	11	2	0.2	1	0.1	1	0.1	32.8	38.9
00-00	1746	14	1021	2	89	30	11	4	14	129	405	15	12	3	0.2	1	0.1	1	0.1	33.8	40.5

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction West

790 / Immingham
June 2010
Automatic Traffic Count

Fri, 18 June 2010

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction West

790 / Immingham
June 2010
Automatic Traffic Count

Virtual Day (7)

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	31	0	16	0	2	1	0	0	0	2	9	0	0	0	0	0	0	0	0	39.1	46.3
0100	37	0	19	0	3	1	0	0	0	4	10	0	0	0	0.4	0	0	0	0	38	45.4
0200	37	0	18	0	2	1	0	0	0	5	9	0	0	0	0.8	0	0	0	0	37.5	44.3
0300	39	0	21	0	3	1	0	0	0	5	8	0	0	0	0.4	0	0	0	0	36	45.4
0400	85	0	53	0	3	2	0	0	0	5	21	0	0	0	0.5	0	0	0	0	36.6	43.2
0500	163	2	118	0	4	2	1	0	0	6	27	1	1	0	0.1	0	0	0	0	35.3	41.6
0600	231	3	164	0	8	2	2	0	3	10	35	1	1	0	0.2	0	0	0	0	33.5	39.6
0700	216	2	139	1	12	2	3	0	3	12	38	2	2	1	0.3	1	0.3	1	0.3	31.6	38
0800	224	1	143	1	15	3	2	0	3	12	43	1	1	0	0.1	0	0.1	0	0	32	36.9
0900	192	1	107	0	22	2	2	1	4	12	39	1	1	0	0	0	0	0	0	32.2	37.8
1000	152	1	81	0	20	2	3	0	3	8	32	1	1	0	0.3	0	0.1	0	0	32.1	38.3
1100	155	1	93	1	18	3	2	0	1	8	28	0	0	1	0.9	0	0.2	0	0	33.1	38.3
1200	173	1	105	0	19	1	1	0	3	9	32	0	0	0	0.2	0	0	0	0	32.9	38.9
1300	191	1	121	1	19	2	3	1	4	9	30	1	0	0	0	0	0	0	0	32.7	39.1
1400	194	1	114	1	20	2	2	0	3	12	36	2	1	0	0.1	0	0	0	0	32.3	38.5
1500	216	1	131	0	23	2	1	0	3	13	40	1	1	0	0.1	0	0.1	0	0	32.5	38.7
1600	325	3	228	1	25	2	1	0	2	13	48	1	1	1	0.2	0	0.1	0	0	31	36.9
1700	308	5	220	1	20	3	1	0	4	11	42	1	0	1	0.3	1	0.3	0	0	31.8	37.6
1800	194	3	126	0	18	3	1	0	3	10	30	0	0	0	0.1	0	0	0	0	33	39.8
1900	116	2	67	0	12	2	1	0	2	8	22	0	0	0	0	0	0	0	0	33.9	42.1
2000	72	1	46	0	7	1	0	0	2	4	11	0	0	0	0.4	0	0	0	0	34.3	41.8
2100	66	2	44	0	4	0	0	0	1	4	9	0	0	0	0.4	0	0.2	0	0	33.6	43.2
2200	53	2	36	0	2	1	0	0	0	2	11	0	0	0	0.3	0	0	0	0	35.5	44.3
2300	37	1	24	0	1	0	0	0	0	3	8	0	0	0	0.4	0	0	0	0	38.9	47.6
07-19	2540	22	1607	7	230	29	22	3	35	129	438	12	7	5	0.2	3	0.1	1	0	32.1	38.3
06-22	3025	29	1929	8	261	34	25	3	42	156	516	14	9	6	0.2	3	0.1	1	0	32.4	38.7
06-00	3115	31	1989	8	264	35	25	3	42	161	534	14	9	6	0.2	3	0.1	1	0	32.5	38.9
00-00	3506	35	2234	8	282	43	26	3	43	188	619	14	10	7	0.2	3	0.1	1	0	33	39.6

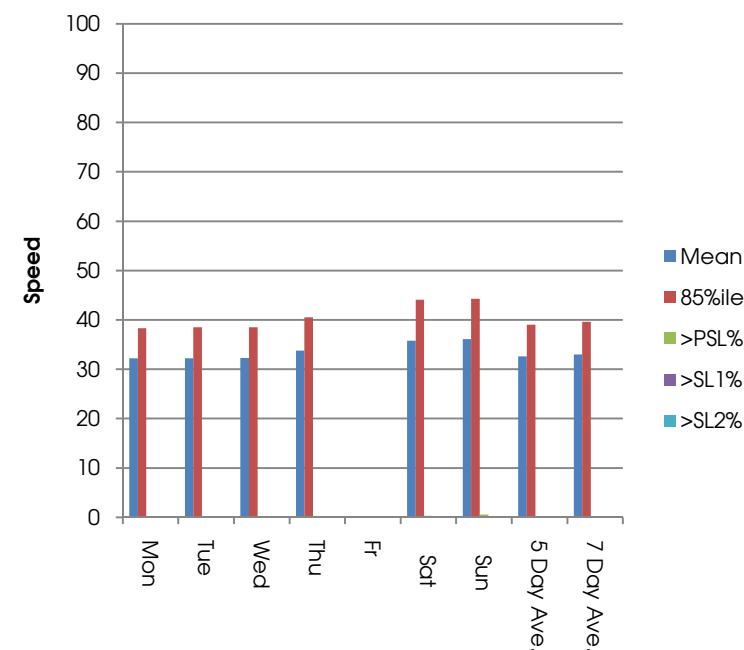
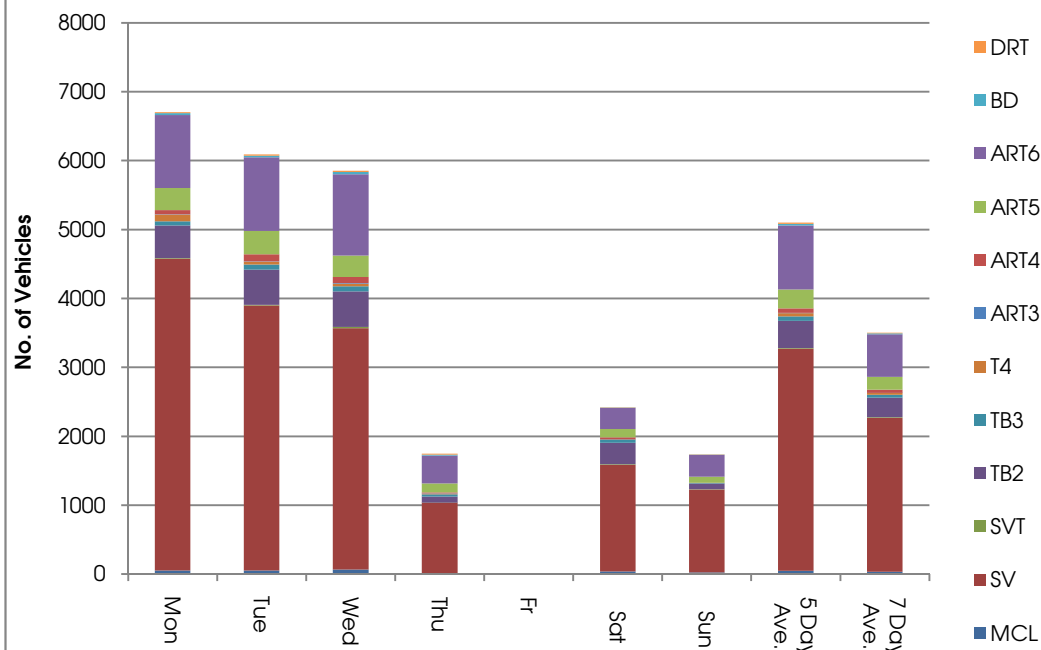
Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction West

790 / Immingham
June 2010
Automatic Traffic Count

Virtual Week (1)

Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
Mon	6703	51	4526	9	471	63	95	6	61	321	1059	26	15	9	0.1	7	0.1	0	0	32.2	38.3
Tue	6091	53	3844	10	512	75	40	3	103	342	1065	25	19	11	0.2	0	0	0	0	32.2	38.5
Wed	5852	67	3499	21	513	78	36	7	91	312	1179	30	19	12	0.2	5	0.1	3	0.1	32.3	38.5
Thu	1746	14	1021	2	89	30	11	4	14	129	405	15	12	3	0.2	1	0.1	1	0.1	33.8	40.5
Fri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
I Sat	2417	36	1548	10	313	46	2	3	27	121	305	3	3	7	0.3	2	0.1	0	0	35.8	44.1
I Sun	1733	24	1203	6	75	10	0	0	6	88	317	2	2	10	0.6	4	0.2	0	0	36.1	44.3
5 Day Ave.	5098	46	3223	11	396	62	46	5	67	276	927	24	16	9	0.2	3	0.1	1	0.0	32.6	39.0
7 Day Ave.	3506	35	2234	8	282	43	26	3	43	188	619	14	10	7	0.2	3	0.1	1	0.0	33.0	39.6
--	24542	245	15641	58	1973	302	184	23	302	1313	4330	101	70	52	0.2	19	0.1	4	0.0	33.0	39.6

Summary Graphs



Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction West

790 / Immingham
June 2010
Automatic Traffic Count

Sat, 12 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	39	0	0	0	0	0	5	5	16	7	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	46	0	0	0	0	2	6	6	15	13	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	51	0	0	0	0	1	2	8	17	8	6	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	48	0	0	0	0	4	4	4	14	11	7	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	56	0	0	0	0	1	3	19	21	9	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	117	0	1	0	1	2	12	20	39	29	8	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	196	0	0	3	3	12	11	54	79	19	12	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	185	0	0	3	12	27	23	57	24	22	13	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	181	0	0	0	1	10	36	48	56	21	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	148	0	0	0	9	11	28	27	45	16	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	153	0	0	0	9	19	25	32	32	22	9	3	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	121	0	0	1	7	8	29	30	19	13	8	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	144	0	0	1	1	10	16	30	44	17	15	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	159	0	0	1	3	3	42	24	39	23	19	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	127	0	0	3	11	6	32	39	13	17	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	115	0	0	0	1	1	21	18	32	25	15	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	97	0	0	0	3	2	30	27	15	11	4	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	135	0	0	0	0	6	31	30	30	18	12	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	73	0	0	0	0	2	15	12	11	14	9	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	54	0	0	1	1	1	7	6	14	8	7	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	57	0	0	0	0	0	2	9	16	7	9	9	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	47	0	0	1	0	0	6	9	8	8	9	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	42	0	0	0	0	1	4	9	15	3	6	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	26	0	0	0	0	0	1	5	4	4	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	1638	0	0	9	57	105	328	374	360	219	129	41	12	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	1992	0	0	14	61	118	354	452	477	261	166	65	18	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	2060	0	0	14	61	119	359	466	496	268	181	70	19	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	2417	0	1	14	62	129	391	528	618	345	210	82	30	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Site 8
 Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
 Direction West

790 / Immingham
 June 2010
 Automatic Traffic Count

Sun, 13 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	22	0	0	0	0	1	1	5	7	3	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	23	0	0	0	3	1	4	6	6	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	8	0	0	0	0	0	2	0	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	36	0	0	0	1	1	2	3	10	15	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	17	0	0	0	1	0	0	5	7	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	64	0	0	0	0	2	7	16	19	10	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	106	0	0	3	5	4	9	19	36	12	10	6	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	74	0	0	0	4	12	11	17	11	15	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	61	0	0	0	2	5	15	21	7	8	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	54	0	0	1	3	3	7	11	10	11	4	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	75	0	0	0	3	4	14	15	30	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	76	0	0	1	3	3	11	12	19	9	14	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	98	0	0	0	3	8	19	19	28	16	2	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	136	0	0	0	3	4	15	39	36	19	16	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	125	0	0	0	3	7	16	20	42	21	11	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	115	0	0	0	4	12	12	28	30	17	7	3	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	132	0	0	0	4	3	20	23	38	27	10	5	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	156	0	0	0	5	7	34	31	42	17	8	9	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	109	0	0	0	1	8	15	23	23	24	7	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	66	0	0	1	1	2	5	14	13	12	9	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	49	0	0	0	4	4	12	9	8	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	42	0	0	1	1	2	4	6	12	6	7	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	48	0	0	0	0	2	8	9	9	11	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	41	0	0	0	2	0	7	6	10	7	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	1211	0	0	2	38	76	189	259	316	192	84	36	11	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	1474	0	0	7	49	88	219	307	385	228	116	48	17	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	1563	0	0	7	51	90	234	322	404	246	127	54	18	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	1733	0	0	7	56	95	250	357	456	278	136	66	22	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction West

790 / Immingham
June 2010
Automatic Traffic Count

Mon, 14 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	24	0	0	0	0	1	2	2	8	5	4	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	33	0	0	0	0	0	2	10	13	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	48	0	0	0	1	4	1	17	19	5	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	51	0	0	1	3	7	9	9	12	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	159	0	0	0	8	6	25	26	50	35	7	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	319	0	0	0	13	9	66	53	149	11	15	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	377	0	2	2	11	60	66	112	80	36	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	323	0	0	1	22	23	80	103	79	12	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	362	0	0	0	11	19	72	159	88	9	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	351	0	0	4	6	51	60	120	83	22	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	315	0	0	0	11	26	47	117	85	25	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	350	0	1	0	1	17	65	156	88	16	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	368	0	0	0	13	16	82	141	81	29	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	400	0	0	1	19	29	83	156	85	23	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	391	0	0	1	11	44	81	118	109	15	7	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	390	0	0	1	28	44	91	109	82	29	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	762	0	2	8	47	96	236	233	85	49	2	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	622	0	0	4	26	50	167	237	103	23	4	3	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	434	0	0	2	23	40	92	130	89	34	16	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	243	0	0	0	19	26	51	65	47	26	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	132	0	0	0	2	12	24	42	42	7	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	108	0	0	0	1	5	15	25	31	21	8	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	80	0	0	0	1	3	11	17	20	13	10	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	61	0	0	0	0	3	1	18	16	9	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	5068	0	3	22	218	455	1156	1779	1057	286	59	22	4	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	5928	0	5	24	251	558	1312	2023	1257	376	77	32	5	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	6069	0	5	24	252	564	1324	2058	1293	398	98	38	7	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	6703	0	5	25	277	591	1429	2175	1544	465	130	42	11	1	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction West

790 / Immingham
June 2010
Automatic Traffic Count

Tue, 15 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	40	0	0	0	0	0	1	8	10	11	8	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	47	0	0	0	0	6	1	9	14	7	6	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	38	0	0	0	0	3	4	12	5	8	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	54	0	0	0	2	5	6	12	7	14	6	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	114	0	0	0	3	4	10	15	45	23	9	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	191	0	0	2	2	17	15	37	85	21	5	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	351	0	0	1	8	26	50	132	113	15	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	315	0	0	1	19	27	100	99	57	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	358	0	0	0	23	35	51	181	60	4	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	259	0	0	0	17	25	54	95	55	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	275	0	0	3	15	25	64	96	56	13	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	281	0	1	0	18	22	64	111	42	13	0	4	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	303	0	0	0	18	20	79	108	63	8	3	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	349	1	1	15	21	37	60	94	85	28	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	354	0	0	0	11	26	85	131	72	19	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	462	0	0	3	16	32	105	157	114	30	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	639	0	0	1	24	61	197	233	87	24	9	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	604	0	0	0	30	58	166	210	97	33	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	394	0	0	1	16	45	74	143	82	21	5	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	219	0	0	0	18	32	35	31	75	18	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	163	0	0	4	11	9	26	28	42	29	11	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	115	0	0	0	2	4	13	33	34	12	11	4	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	98	0	0	1	1	3	13	34	24	11	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	68	0	0	0	0	2	2	7	28	17	8	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	4593	1	2	24	228	413	1099	1658	870	216	46	24	5	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	5441	1	2	29	267	484	1223	1882	1134	290	80	33	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	5607	1	2	30	268	489	1238	1923	1186	318	95	40	9	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	6091	1	2	32	275	524	1275	2016	1352	402	134	55	12	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Site 8
 Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
 Direction West

790 / Immingham
 June 2010
 Automatic Traffic Count

Wed, 16 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	40	0	0	1	0	1	0	8	13	6	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	51	0	0	0	0	1	2	6	18	14	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	63	0	0	0	1	3	9	5	27	11	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	40	0	0	0	3	2	2	8	13	3	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	126	0	0	0	4	5	4	27	34	31	12	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	223	0	0	6	11	13	8	53	78	29	19	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	283	0	0	5	7	16	35	101	72	33	12	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	297	0	0	7	15	20	54	106	81	9	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
0800	280	0	0	0	20	35	61	96	59	8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	287	0	0	0	15	43	51	84	77	15	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	243	0	0	1	19	18	56	95	40	10	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	257	0	0	1	10	21	36	88	78	14	3	1	2	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	296	0	0	1	8	18	63	116	68	18	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	293	0	0	0	15	24	56	80	88	25	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	358	0	0	2	23	40	77	110	76	22	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	433	0	1	6	24	18	71	169	109	24	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	648	0	0	4	33	45	202	232	101	20	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	640	0	0	3	28	68	157	231	111	30	8	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	346	0	0	0	21	32	75	103	78	23	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	230	0	0	0	15	16	34	50	54	39	14	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	104	0	0	0	4	16	20	29	20	12	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	149	0	0	4	5	53	55	21	8	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	103	1	1	4	3	11	15	28	25	10	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	62	0	0	0	3	0	6	10	21	9	9	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	4378	0	1	25	231	382	959	1510	966	218	56	18	5	2	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0
06-22	5144	0	1	34	262	483	1103	1711	1120	304	86	24	8	3	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0
06-00	5309	1	2	38	268	494	1124	1749	1166	323	98	27	10	4	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0
00-00	5852	1	2	45	287	519	1149	1856	1349	417	149	52	14	6	1	2	0	0	0	0	0	0	0	0	3	0	0	0	0

Site 8
 Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
 Direction West

790 / Immingham
 June 2010
 Automatic Traffic Count

Thu, 17 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	49	0	0	0	1	1	1	11	21	9	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	59	0	0	0	0	4	3	7	21	12	8	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	48	0	0	0	1	2	2	11	13	15	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	42	0	0	0	4	8	3	6	8	5	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	124	0	0	0	6	12	11	30	29	21	7	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	227	0	0	0	16	17	14	55	60	46	15	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	305	0	0	0	21	26	18	101	100	27	10	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	316	0	0	2	22	47	41	103	70	26	3	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0800	329	0	0	0	8	25	53	117	102	23	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	247	0	0	0	9	16	44	82	68	20	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	892	0	0	2	39	88	138	302	240	69	11	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
06-22	1197	0	0	2	60	114	156	403	340	96	21	3	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
06-00	1197	0	0	2	60	114	156	403	340	96	21	3	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
00-00	1746	0	0	2	88	158	190	523	492	204	63	19	4	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0

Site 8
 Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
 Direction West

790 / Immingham
 June 2010
 Automatic Traffic Count

Fri, 18 June 2010

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Site 8
Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
Direction West

790 / Immingham
June 2010
Automatic Traffic Count

Virtual Day (7)

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
0000	31	0	0	0	0	1	1	6	11	6	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100	37	0	0	0	0	2	3	6	12	7	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200	37	0	0	0	0	2	3	8	12	7	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300	39	0	0	0	2	4	4	6	9	8	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400	85	0	0	0	3	4	8	17	27	17	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500	163	0	0	1	6	9	17	33	61	21	10	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600	231	0	0	2	8	21	27	74	69	20	8	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700	216	0	0	2	13	22	44	69	46	13	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800	224	0	0	0	9	18	41	89	53	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900	192	0	0	1	8	21	35	60	48	14	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000	152	0	0	1	8	13	29	51	35	11	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100	155	0	0	0	6	10	29	57	35	9	4	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200	173	0	0	0	6	10	37	59	41	13	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	191	0	0	2	9	14	37	56	48	17	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	194	0	0	1	8	18	42	60	45	13	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	216	0	0	1	10	15	43	69	52	18	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	325	0	0	2	16	30	98	107	47	19	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	308	0	0	1	13	27	79	106	55	17	6	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1800	194	0	0	0	9	18	39	59	40	17	7	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900	116	0	0	0	8	11	19	24	29	15	6	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000	72	0	0	1	3	6	12	17	18	9	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100	66	0	0	1	1	9	13	13	13	7	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	53	0	0	1	1	3	7	14	13	7	5	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300	37	0	0	0	1	1	2	7	11	7	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-19	2540	0	1	12	116	217	553	840	544	171	55	20	5	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
06-22	3025	0	1	16	136	264	624	968	673	222	78	29	8	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
06-00	3115	0	1	16	137	267	634	989	698	236	89	33	9	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
00-00	3506	0	1	18	149	288	669	1065	830	302	117	45	13	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0

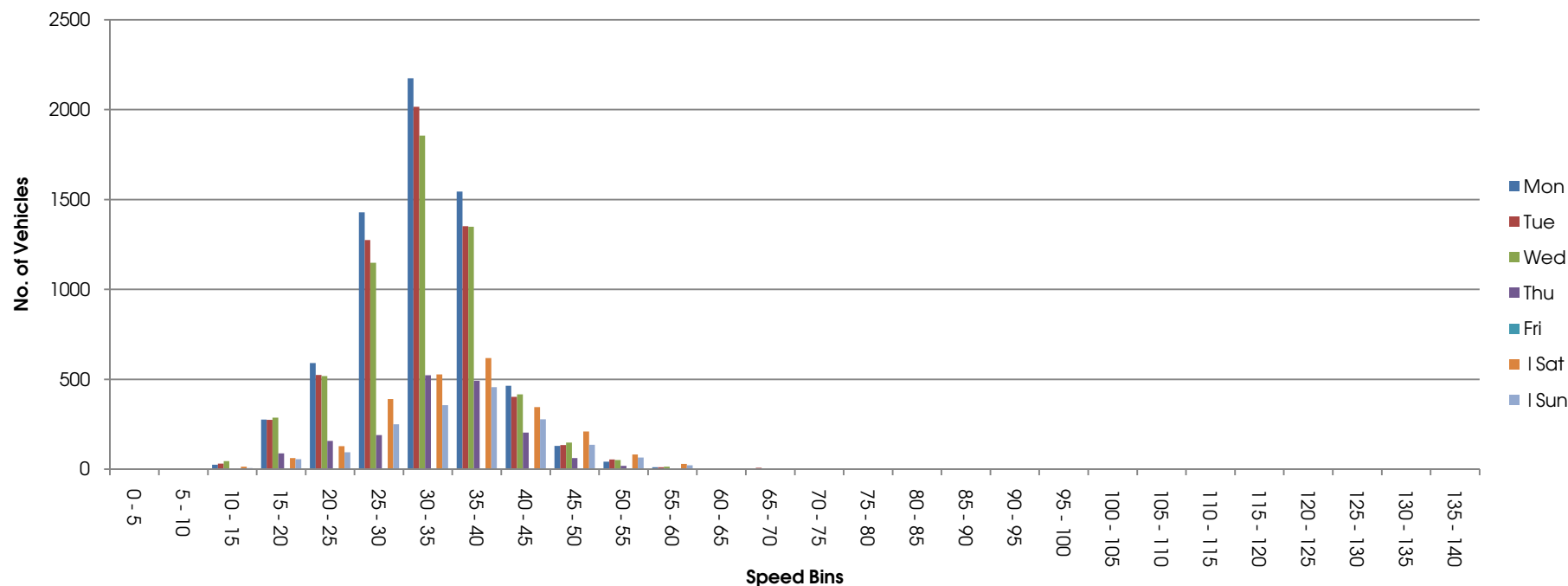
Site 8
 Location Humber Road, Att - Direction Sign, OSGR: TA 17224 16695
 Direction West

790 / Immingham
 June 2010
 Automatic Traffic Count

Virtual Week (1)

Time	Total	Speed Bins (mph)																											
		0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55	55 - 60	60 - 65	65 - 70	70 - 75	75 - 80	80 - 85	85 - 90	90 - 95	95 - 100	100 - 105	105 - 110	110 - 115	115 - 120	120 - 125	125 - 130	130 - 135	135 - 140
Mon	6703	0	5	25	277	591	1429	2175	1544	465	130	42	11	1	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0
Tue	6091	1	2	32	275	524	1275	2016	1352	402	134	55	12	2	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wed	5852	1	2	45	287	519	1149	1856	1349	417	149	52	14	6	1	2	0	0	0	0	0	0	0	0	3	0	0	0	0
Thu	1746	0	0	2	88	158	190	523	492	204	63	19	4	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Fri	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
! Sat	2417	0	1	14	62	129	391	528	618	345	210	82	30	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
! Sun	1733	0	0	7	56	95	250	357	456	278	136	66	22	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0
5 Day Ave.	5098	1	2	26	232	448	1011	1643	1184	372	119	42	10	3	3	2	0	0	0	0	0	0	0	0	1	0	0	0	0
7 Day Ave.	3506	0	1	18	149	288	669	1065	830	302	117	45	13	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
--	24542	2	10	125	1045	2016	4684	7455	5811	2111	822	316	93	19	19	10	0	1	0	0	0	0	0	0	3	0	0	0	0

Summary Graphs



WESTBOUND

Time	Mon		Tues		Wed		Average
	All veh	HGV	All veh	HGV	All veh	HGV	
0000	24	6	40		11	40	17
0100	33	17	47		13	51	24
0200	48	29	38		11	63	23
0300	51	21	54		20	40	19
0400	159	67	114		20	126	36
0500	319	64	191		32	223	37
0600	377	90	351		60	283	67
0700	323	81	315		65	297	79
0800	362	75	358		85	280	102
0900	351	67	259		73	287	92
1000	315	80	275		83	243	78
1100	350	61	281		75	257	67
1200	368	92	303		86	296	79
1300	400	77	349		86	293	86
1400	391	99	354	101	358	112	
1500	390	90	462	132	433	121	
1600	762	123	639	130	648	145	
1700	622	104	604	119	640	129	622
1800	434	63	394	107	346	98	
1900	243	59	219	77	230	71	
2000	132	28	163	40	104	31	
2100	108	25	115	35	149	22	
2200	80	17	98	27	103	33	
2300	61	12	68	25	62	21	



	ABLE MARINE ENERGY PARK APPLICANT COMMENTS ON THE WRITTEN REPRESENTATIONS	AUGUST 2012

**APPENDIX WR22.3
Railways**



The Able Marine Energy Park Development Consent Order

Reid Rail Comment on Written Representations

by

Network Rail,

Associated British Ports,

C.GEN Killingholme Limited and

C.RO Ports Killingholme Limited

Introduction

This report has been prepared by David Reid, a chartered civil engineer with 45 years experience of all aspects of railways including construction operation and maintenance, with the assistance of and contributions from:-

David Spaven a rail freight specialist with some 35 years experience in the rail freight and intermodal sectors in marketing, business management and specialist consultancy,

Julien Worth with over 30 years experience in rail freight including director metals for BR trainload freight, and marketing director for EWS.

John Jordan with 40 years experience in the management and operation of public transport and specialist consultancy and the construction of major transport infrastructure requiring authorising powers by Acts of Parliament and statutory instruments, including major rail projects.

We have examined the rail related sections of the written representations from

- Network Rail;
- ABP;
- C.RO and;
- C.GEN.

including the comment by Geldard Consulting and the Royal Haskoning Logistics Study

We understand that it is Able's intention to enter into agreements with all the above parties to ensure that the aspirations and future strategies are not precluded by the Able proposals for the Able Marine Energy Park.

Able have clearly stated that their use of the railway will be limited to a maximum of two trains per day although it is anticipated that a reasonable number of that number may not be required in the early days of the park's operation. The section of the railway that lies within the land controlled by Able and intended for use for AMEP, is currently not used, except perhaps very occasionally – the last commercial train to cross the line was in 2007.

On this basis the rail issues within the application documents were presented on the merits of an unused existing facility being put to some little use in the future. This level of presented information has led to the concerns presented within the various representations.

Prior to submitting the application, discussions with Network Rail revealed that adding two trains per day would have very little if any impact on the capacity of the network and despite the protestations of ABP to the contrary, Network Rail are aware of the traffic within the ABP controlled sections of track and rightly or wrongly assumed that Network Rail's opinion, as the national railway authority was of value.

Further ABP's own figures presented in its representations make it clear that two trains per day can be accommodated.

Able have a need to cross the existing railway route through its land with large heavy loads that will not be easily accommodated on grade separated crossings (bridges) because of the size of the loads and the potential gradients associated with grade separated crossings. With the proposed use there will not be any difficulty in permitting the loads to cross the railway at grade providing that the crossing facilities are suitably designed, to protect the integrity of the railway route and are properly controlled to protect the railway users and the site traffic.

Able is willing to enter into such agreements as the various affected parties require to protect the existing rights of access over the railway and to protect the aspiration of ABP and the stated strategy of Network Rail to reopen the Killingholme Loop to whatever standard is required, stated by Network Rail to be 60 miles per hour. We make further comment on this later. This on the basis that Able's interest in the loop, which it understands could potentially be advantageous to it for its future rail traffic.

Able is willing to take steps now to assure ABP, Network Rail, C.RO and C.GEN that the railway will always be available for the required use, at times to be agreed, and which will in any case be dictated by the timing of the available paths allocated over the national network.

The NR proposals to reinstate the Killingholme Loop as a NR owned and managed 60 mph railway to allow through running into the Port of Immingham strongly suggests that the current Killingholme branch will be incorporated and similarly upgraded to full NR group Standards, given the indicative costs, which we understand to be up to £40M.

NR suggests in their study that this will allow merry-go-round operation to be introduced. It will also provide resilience for the current rail access into the Port of Immingham as a diversionary route in emergencies. At the present time a simple points or equipment failure on the Humber Commercial Railway would close down rail access to / from the Port

These statements are correct. However part of the merry go round operation will be in the control of ABP, unless of course Network Rail intend to take back this section



into its ownership and control to ensure the rights of access of all other parties currently Able, C.RO and C.GEN.

Able included the section of track in the proposed CPO for reasons of completeness, as it would have remained a very short section of track in the control of Network Rail trapped between track owned by ABP and track owned by Able. Able has no need for this length of track and is willing to exclude it from the CPO enabling the construction and free use of the HIT turn back facility.

ABP

There is no arguing with the point that Immingham is the single most important generator of rail traffic in the UK, and a high proportion of it passes over the critical KIL1 section - the west dock running line.

The suggestion that the tonnage will increase further is soundly based, both in terms of Generators seeking to move more of their coal imports through Immingham and the advent of biomass, which has a markedly lower calorific value compared to coal and thus requires more trains to generate a given quantity of power. It follows that the 'HIT Turnback capacity expansion scheme is justified and is very likely to come to fruition.

We understand that Able has no need for this section of track and is willing to exclude it from the CPO.

Despite that it is Network Rail adopted strategy, as stated in its national Freight Utilisation Strategy and in the regional Route Utilisation Strategy, the case for the Killingholme Loop is not yet made.

Geldard Consulting

There is an element of repetition and overlap within the ABP representation and we will not comment again on the points covered above. Christopher Geldard's evidence is, in general, reasonable and measured. The one speculative part is Sec 2. There is no valid basis for determining the mix of cargoes at a future General Cargo Port, which may or may not be the same as ABP's, and there is no such thing as 'normally accepted mode split' for each traffic type'.

Considerable detail is advanced to argue that rail traffic from AMEP (and a subsequent general port on the site) could not be accommodated on the existing congested Killingholme 1 ABP rail route from Immingham West Junction to Humber Road Junction.

It is difficult to get a clear understanding of the relationship of the various rail throughput and capacity figures quoted – 10,000 services in 2011 which equates to 200 services per week against 666 train moves per week for existing and planned train services in 2013 with 690 current capacity (in 3.5 and 3.6); and potential new traffic flows involving 96+ trains per week (in 6.2)

The underlying conclusion must be that it is ABP's own short-to-medium term (existing and potential) rail traffics which pose the real challenge to capacity between Immingham West Junction and Humber Road Junction.

Relative to the ABP rail demand, the projected AMEP rail demand (up to two train paths needed daily, but averaged rail throughput of just two trains weekly) is insignificant in terms of ABP rail route capacity issues.

With regard to the longer term, in 3.21 to 3.24 Geldard Consulting postulates the Able development becoming a general cargo port generating a demand for 254 train paths per week – which clearly could not be accommodated as additional traffic on ABP's main rail access route. In any event the proposed use of the AMEP site precludes this possibility.

While its assumptions about rail mode share for specified commodities (based on industry experience) seem reasonable, the basis for assumption of the total annual tonnages in each commodity sector is not clear.

It would also appear that Geldard has not considered the possibility that some of this traffic would be captured from ABP at Immingham, i.e. some flows would use a different rail access route (the Killingholme branch) from the Able port to Immingham West Junction, but thereafter would simply take up the path previously used, i.e. they would not actually add to the capacity problem on the ABP rail route to Humber Road Junction.

What he uses (8.21 Table 4) is not unreasonable for most bulk commodity groups but is wrong in respect of petroleum products. Rail market share is substantially less than 50% overall and even then only applies to product ex refinery - what comes over the dock would, in all probability, be crude which would be piped into the refineries and forwarded by rail (or road) from there. It would not, therefore, pass by rail from the Able facility and over the ABP lines, so 12 paths per week can be deducted.

In the case of LoLo containers, 26 per train is a worst case scenario and the average is unlikely to be as low as this. A reasonable average might be 35 each way, equating to about 1500 trains a year and 60 per week. Furthermore, containers into the Humber are on short sea routes or feeders from deep sea ports such as Rotterdam. The onward land movement is relatively short distance and rail would struggle to get a 30% market share - 10% would be a good result, thereby reducing the number of container trains to 20 per week.

Similarly, a rail market share of cars of 20% is unrealistically high and 10% would again be a good result - the number of car trains thus comes down to 13 per week. It's worth noting that the current rail market share for containers and cars at Humber ports is zero.

The combined effect of these points is to reduce CG's 254 trains per week to around 170.

CRO Ports

The points made about HMG policy concerning development of rail freight and links to ports are valid, however there is no current traffic. We understand that Able has no intention of reducing the rights of access currently enjoyed by C.RO and indeed is happy to enter into an agreement and indeed has been trying to meet and discuss with C.RO to reach an understanding of its needs and aspirations and to assure it that access will not be unreasonably restricted in the future.

In a number of places, considerable emphasis is given to the importance of C.RO having direct connection to the national regulated network of Network Rail – carefully glossing over the fact that (unless and until the Killingholme Loop is built) any trains to or from C.RO must travel over private ABP tracks to reach the NR system at Humber Road Junction (having initially travelled over NR metals from C.RO to the NR/ABP boundary in the vicinity of HIT).

As C.RO is a ro-ro (as opposed to lo-lo (container)) port, the practical opportunities for any rail share of ferry traffic are not clear, and the C.RO submission is very vague in this respect and consists of much un-evidenced assertion – with the lack of information on origins and destinations, projected rail mode share etc which it criticises in the Able documents. Indeed, unlike the latter, C.RO do not even identify any specific commodities for rail transport.

Reference is made to C.RO having two existing railheads, but their location, capability and past traffic record and anticipated future demand are not explained – presumably one is the former 'Admiralty Sidings'.

C.GEN

Many of the C.RO arguments are replicated in this document, often word for word – notably the importance of direct access to NR's national rail network, again conveniently glossing over the need for trains to travel also over already congested private ABP metals.

Reference is made to rail being a fundamental part of the power station supply chain, but where evidence is supplied on traffic origins in the case of coal, pet coke and biomass) it is for an extremely short haul (from Immingham Docks) which may well not suit rail freight economics in comparison with the commercial viability conveyors and/or an internal lorry shuttle over private 'haul roads' – see review later of Royal Haskoning Logistics Study.

We understand that Able is willing to enter into the necessary agreements to clarify how 'open access' to the acquired railway would be protected (including provision for traffic growth).

25.45.2 refers to Able's lack of experience of operating 'main line railway facilities' and its lack of a safety case for operating this railway – but it is stretching the point to suggest this is a main line railway. ABP and other dock operators around Britain have developed expertise to manage and operate rail infrastructure, in some cases deploying specialist sub-contractors such as Victa Rail Freight to deliver such services. In principle there appears to be no reason why Able could not do the same. There are well established statutory requirements for safety regimes for non-NR railways (through the RSSB?)

C.GEN criticises the lack of an operational control plan for the "relatively heavy use" of the railway by C.GEN, C.RO, Able Logistics Park and AMEP – but there is little evidence for such a level of use, just two projected trains a day for Able and arguably debatable projections for rail movements between Immingham Docks and C.GEN's power station (see later). C.GEN state that "no signalling proposal is provided", but it would be premature to expect much detail in this area at this stage, since the unknown level of traffic could involve anything from the most basic 'yard working' through 'one train working' to other more sophisticated forms of train control if justified by higher traffic levels.

Royal Haskoning Logistics Study

2.1.1 assumes that all coal arrives by rail at the power station, but also implies that it will all be imported via Immingham Docks – meaning a very short (2-mile) rail haul. There is no evidence that this has been compared for operational efficiency and financial viability with alternatives such as conveyors and/or an internal lorry shuttle over private 'haul roads'.

2.3 states that a Class 66 is 21.4m long, but Table 4 states 19.1m (the correct figure is 21.4).

Section 3 assumes the same coal storage requirement within Immingham Docks whether the coal is imported through Immingham or another GB port or is sourced from domestic GB sources – would ABP agree to store bulk coal from a competitor port – have they?

For 4,000 tonnes of coal daily, Section 4 projects a rail movement (of half-trains or full trains) of just two miles from Immingham Docks to the C.GEN power station, with two sets of wagons, a main line loco and a shunting loco dedicated to the contract. Nowhere are the economics of such an operation compared with non-rail alternatives.

The 15 minutes allowed for rail transit between HIT and the power station depends on the creation of a facing connection from HIT to the westbound Killingholme branch. This is part of the HIT turn back Scheme, which NR and ABP have been progressing, and explains the inclusion of the facing connection in the network Rail Proposals for the turn back facility for the HIT. There is further comment after that section of the Network Rail representations.

Tables 4.2 and 4.3 do not appear to make time provision within the locomotive diagram for the return leg from the power station to Immingham Docks with empty coal wagons.

Tables 4.1, 4.2 and 4.3 incorporate some double counting in the time required for shunting and waiting at the C.GEN site – not allowing for main line loco / shunting loco moves which happen at the same time, rather than sequentially. In other words, for this element of the diagram only, Royal Haskoning is allocating too much time.

In 2.1.2, 2.1.3, 5 and 6 appear to assume that virtually all primary and secondary fuels and waste products move by rail despite

1. some, such as liquid sulphur (120t per day), involving small volumes by rail standards,
2. the only identified origin (for coal, pet coke and biomass) being the extremely short haul from Immingham Docks,
3. some, e.g. slag, involving very low bulk densities which, other things being equal, are less likely to suit rail,
4. some, e.g. limestone, liquid sulphur, limestone and slag, having no identified origins/destinations which would allow one to judge whether or not they would suit rail economics, (or indeed if the origins / destinations of trainloads of these commodities actually possess rail connections and loading / unloading facilities) and
5. some commodities, e.g. slag and liquid sulphur, which involve very poor utilisation of the length of container trains – and for which the alternative of bulk rail wagons has evidently not been properly considered.

Network Rail

In 3.1.3 Answers to Questions, it is stated that “Network Rail is duty bound by the conditions in the Network Licence 1 to take into account the future requirements of ABP. If HIT2 Head Shunt Extension cannot go forward then the new £70m biomass handling facility it is proposed to serve will not be able to proceed as the Killingholme branch, in its current form, has insufficient capacity for the trains required to serve it.”

In 3.1.3 Answers to Questions, it is stated that “Network Rail considers it important for the confidence of other potential users of the railway line that the railway through the AMEP site is in the overall control of Network Rail. *In the absence of clarity on ‘open access’ etc from Able/AMEP, this is a reasonable point* – but can be contrasted with the current and ongoing requirement to utilise ABP metals to reach the national network at Humber Road Junction.

In 1.2 Written Representation, NR states that the DCO “would force the closure of operation [sic] railway” – this is surely a misrepresentation, as Able/AMEP want to take over the railway, but not close it.

In 1.3 Written Representation, it is stated that “As a matter of policy, Network Rail will not permit the introduction of new level crossings on the rail network”. This appears to conflict with the regulatory provision for level crossings in “exceptional circumstances”– and a currently low-speed, freight-only railway is the kind of operation which could provide such circumstances.

However, a future 60mph through route over the Killingholme Loop would be less likely to provide the exceptional circumstances to justify additional level crossings – and the latter would, as NR state, limit the capacity of the network [if train control was based on speed restrictions, in the absence of Automatic Half Barriers or equivalent].

The reinstated section between a new south facing Goxhill Junction and the present buffer stops at Killingholme is barely 5.5 km. it is questionable if laden freight trains would be able to utilise a 60 mph railway, given typical acceleration and braking distances and typical freight locomotive performance / power, and especially for starts from rest for a signal check at Goxhill and beyond Killingholme in either direction. The journey time over a distance of 5.5km at 60mph is only 6 minutes less than that at 20mph. Since train pathing on the national network and between passenger trains at Goxhill are unlikely to require the full capacity of the Killingholme loop, it is difficult to see the advantage of constructing the line and paying for 60mph as opposed to 20mph.

The line also passes through a Site of Special Scientific Interest (SSSI) known as the North Killingholme Haven Pits which forms part of the Humber Estuary Special Protected Area SPA, proposed to be increased in area. This site is also designated as a Special Area of Conservation and is a Ramsar site. (Ramsar sites are wetlands of international importance designated under the Ramsar Convention.). It regularly supports internationally important numbers of waterfowl in winter and nationally important breeding populations in summer.

It is not clear to us that heavily laden freight trains travelling at speeds of the order of 60mph will be appropriate through this SSSI.

It is not clear from the NR draft appraisal report we have been supplied with, whether the new south facing Goxhill Junction and track / signalling proposals would permit continuous 60 mph running

Secondly, the Network Rail Railway would be continuous from Goxhill Junction, through Able's development to the existing end on junction with ABP owned railway, Unless Network Rail intend to take the ABP section back into public ownership.

Some Identified Inconsistencies

Inconsistencies of the objectors' representations are as follows:

- (i) the importance attached to Killingholme branch potential rail users having direct connection to the national regulated network of Network Rail – where in fact any such trains must travel over private ABP tracks to reach the NR system at Humber Road Junction
- (ii) lack of rigour in the methodology used to justify claimed rail volumes to/from C.GEN, and the absence of any rail volume/commodity detail in the case of C.RO
- (iii) claiming that projected rail volumes from the Able/AMEP developments are incompatible with capacity constraints on the congested ABP rail access route between Immingham West Junction and Humber Road Junction, when in fact the figures supplied by Geldard Consulting on behalf of ABP show that it is ABP's own projected short to medium term traffic flows which represent a very much bigger threat to capacity
- (iv) in Geldard Consulting's projection of possible rail volumes from an Able general cargo port, an evident failure to consider the possibility that some of this port traffic would be captured from ABP at Immingham, i.e. it would not add to the capacity problem on the ABP rail route to Humber Road Junction.

CONCLUSION

It is our understanding Able intends to become the 'facility owner' and will meet the ORR requirements for access to a regulated facility.

As an absolute minimum, Able will give C.GEN and C.RO guaranteed access rights over the existing route and facilitate the HIT Turnback scheme.

Regarding the Killingholme Loop re-opening, given that its function would be to

- (a) provide enhanced / alternative rail access.
- (b) serve a number of potential developments on the loop itself,

Of course the construction of the Killingholme loop is a number of years away – and may of course never come to fruition at all. However provided the necessary agreements are put in place, crossing the currently disused Killingholme branch on the level as envisaged is acceptable until the Killingholme Loop comes to fruition. We understand that at that time, when the details of the final proposal are fully developed, Able is willing to enter into further agreements regarding the required operation of the facility.

Appendix 1

Reid Rail Comment on the ABP Representations

This appendix contains extracts from the ABP representations with Reid Rail comment inserted as appropriate.

Railway Transport

9.1 The assessment is vague and ambiguous, giving little indication of what is proposed and why. Rail concerns are of particular importance to ABP because of Immingham Port's established use of the existing railway network, contributing 25% of the UK's rail freight (likely to increase with future cargo movements).

9.2 Concerns include:-

(a) Proposed compulsory acquisition of part of the railway within the ownership of Network Rail would restrict the future passage of commercial rail traffic serving the local industrial community and would jeopardise delivery of the "Killingholme Loop";

Reid Rail Comment

Not necessarily the case if the necessary agreements are put in place to protect the future as yet unknown needs of ABP and others for access to the national rail network.

(b) Proposed compulsory purchase would frustrate ABP's project, under negotiation with Network Rail, to improve rail capacity at Immingham Port by means of the HIT headshunt;

Reid Rail Comment

Able do not require the section of track required for the headshunt. It was included for completeness and to avoid the situation where a very small section of the track would remain with Network Rail trapped between that owned by ABP and that owned by Able.

(c) No consideration appears to have been given to potential future rail use and the detrimental impact on current and future rail users in consequence of the additional movements generated by the AMEP on an already congested local railway network.

9.3 There is almost complete lack of detail regarding rail use in support of the project, exacerbated by the poor project definition and ambiguous scope.

Geldard Consulting Report

3.3 As a minimum, it would be expected that the strategy for the use of rail and the associated environmental benefits would be assessed. Detail of traffic types, volumes, planned services, origins and destinations as well as pathing and proposed operations would normally need to be provided. Significantly, the AMEP Master Plan fails to show any details of on-site rail facilities.

3.4 Based on the above it is impossible to assess proposed rail use, indeed it is questionable with this cavalier approach to the use of rail, as to whether the applicant has a genuine desire to use the rail option.

Reid Rail Comment

Able intend to generate a facility for the long term. The proposed use as a facility for the manufacture of offshore wind turbines requires the stated two trains per week as a likely maximum. This will make little or no impact on the rail network capacity within the dock and externally on the national network.

Rail Capacity

3.5 Linking to the lack of information on the applicant's use of rail is the serious matter of capacity. All rail services to the applicant's facility must pass through the Port of Immingham on the west dock running line (KIL1), infrastructure which is owned and operated by ABP. This part of the port rail infrastructure is critical to deliver the supplies of the Nation's fuel. In 2011 over 10,000 services transported in excess of 14m tonnes of cargo along this rail infrastructure. During the next 12 months continued increases are expected.

3.6 Detailed capacity calculations have been undertaken. Using the current infrastructure and with planned new services, it is expected that the west dock running line will, in 2013 be required to accommodate 666 train moves per week. This is dangerously close to the calculated line capacity of 690 moves per week.

Reid Rail Comment

Any future demand generated by the future use of the facility will need to be treated on its merits and the capacity issues prevailing at that time (likely to be different to the present capacity). Should the network not be capable of accommodating the train paths required at that time, then as in all proposals to use rail transport, the capacity will have to be improved or the freight generated by this initiative by Able will have to be carried by road.

3.7 Tables 1 and 2 at paragraphs 6.1.4 and 6.1.5 in these written representations quantify the volumes of train traffic and freight carried on the west dock running line (KIL1). It illustrates the importance of this infrastructure. The Port of Immingham is the UK's largest source of railfreight traffic and provides 25% of the UK total. The impact on ABP of the compulsory purchase of the Killingholme Branch Line

3.8 The compulsory purchase of the Killingholme Branch Line would put at risk the HIT headshunt and the Killingholme Loop.

3.9 ABP is currently in an advanced stage of finalising the implementation plan for the £7m HIT headshunt project which is an essential part of ABP's new £70million pound biomass import facility. Overall the facility comprises ship discharge, conveyor movement to a bespoke storage facility and conveyor movement to an automated rail outloader. This facility is planned to handle over 3m tonnes per annum of sustainable, renewable fuel for the electricity supply industry. The HIT headshunt is an essential part of the biomass facility as well as delivering a more flexible rail operation for both biomass and coal trains being operated at HIT.

3.10 The project involves ABP entering into a long lease of land owned by Network Rail, adjacent to the north side of Killingholme Line between Marsh Farm Crossing and Regent Crossing, a distance of 700m. This land is included as part of the applicant's proposed compulsory acquisition of Network Rail's operational land, see appendix 5.

3.11 The project design involves the slewing of the original Killingholme Line to allow the installation of two new lines between Marsh Farm Crossing and Regent Crossing. There will be a headshunt to the south of Regent Crossing and a new bridge to replace the crossing at Marsh Farm Lane. Switches will be installed and new signalling will link with existing systems.

3.12 The project is due to move into the construction phase later this year. All design is completed, and terms agreed. A Basic Services Agreement with Network Rail and agreements relating to the new bridge are completed. Supplier contracts have been entered into.

3.13 ABP objects to the compulsory acquisition of this part of Network Rail's operational land, which acquisition is not in the public interest. An examination of the CPO plan reveals that there is no justification for the acquisition by Able of the route of the headshunt, as it serves no identifiable purpose within the AMEP proposal.

Reid Rail Comment

It is understood that Able do not require the section of track required for the headshunt. It was included for completeness and to avoid the situation where a very small section of the track would remain with Network Rail trapped between that owned by ABP and that owned by Able.

3.14 The Killingholme Loop is a project of strategic significance which provides rail access to all new and existing businesses within the South Humberside development area, see appendix 2. It was evaluated under Network Rail's Guide to Railway Investment Projects (GRIP) process during 2007 as a partnership between ABP, Network Rail and North Lincolnshire Council.

3.15 The aims of the project are to relieve rail congestion within the Port of Immingham, to open up the area of the South Humber Bank for industrial development with rail access whilst at the same time, increasing rail capacity for other rail users in the area. Network Rail identified a number of key benefits including improved access and more efficient and resilient operations for all users of rail services.

3.16 The Killingholme Loop involves the creation of a "merry-go-round" facility. This allows trains to access the Port of Immingham and other development areas within the South Humber Bank on a continuous loop and depart without the need for any form of run-round or shunting operation. This would speed up all rail operations and greatly increase capacity. 3.17 Four routes were considered and the preferred route is shown as Option 2b in the plan at Appendix 2. This route extends to the northwest beyond the applicant's DCO boundary on the old track-bed towards Goxhill. Thereafter the route adopts a new alignment to the southwest linking with the Barton Branch Line to the north of Thornton Abbey.

3.18 The Killingholme Loop completed its evaluation in 2008 when it reached GRIP 4, Single Option Development which "develops the selected single option to the point of engineering scope freeze and in sufficient detail to allow finalisation of the business case and scheduling of resources". At that time it was not considered viable.

3.19 However, circumstances are now very different and, given the increasing demand for railfreight this project may soon be affordable and approved.

3.20 The Killingholme Loop would be a significant rail enhancement. However it would be dependent on access to the Killingholme Branch Line. The compulsory acquisition of Network Rail's operational land would be incompatible with this project to the serious detriment of all commercial users of the railway network operating along this part of the south bank of the Humber and the wider public interest in sustainable freight transport and regeneration of the North East.

Reid Rail Comment

It is understood that Able are willing to discuss how this aspiration for the reopening of the Killingholme loop might be procured in the future while at the same time protecting the necessary operations required for the manufacture of offshore wind turbines

Section 2 - A General Cargo Port

3.21 In the second section of this assessment I have addressed the possible alternative use of the applicant's port facility. Using ABP's extensive experience of port operations in the Humber area it has been possible to identify the types of traffic and likely volumes that could be generated through a general cargo port of the scale and design submitted by the applicant.

3.22 For the purposes of assessing the impact of a general cargo port, a mix of cargoes including bulks, petrochemicals and unitised cargoes can be assumed. Berth occupancy and the Associated amount of land typically required to store each type of cargo has been considered in order to estimate volumes of general cargo that AMEP could handle.

3.23 To convert these volumes to train paths I have applied normally accepted mode split percentages for each traffic type and industry averages for tonnage and units per train. The result of this exercise shows a demand for 254 train paths per week.

Reid Rail Comment

What is "normally accepted mode split?" Figures used in this analysis are at best conjecture and are not substantiated

3.24 The capacity statistics provided in paragraph 6.4.2 and the current levels of congestion show that it is impossible to accommodate this significant additional rail traffic on the Port of Immingham rail infrastructure.

3.25 The Killingholme Loop could provide rail capacity and direct access to the applicant's facilities, whilst a further attraction of constructing the loop is that it would provide in-built resilience into the network in the Immingham area in the event of an incident. Thus if a part of the loop were to become unserviceable (for example due to a bridge-strike, a derailment or terrorist activity), access would be automatically safeguarded using the remainder of the loop. However, as already noted, the compulsory acquisition of Network Rail's land would jeopardise delivery of this rail improvement.

Reid Rail Comment

Accepted that the reopening of the Killingholme loop line to join the network at Goxhill will in the future provide a possible solution to the perceived congestion that will arise within the port, but there are other alternative solutions that could provide the additional capacity. The most appropriate option will be better assessed when the actual demand is imminent and the financing is available with a sensible business case justify the expenditure.

Able's proposals do not necessarily preclude the reopening of the loop.

Network Rails aspiration for a 60 mile per hour track will be difficult to achieve with the existing proposal because of the layout of the loop itself, the tightness of the curves and the number of junctions that will be required of all parties with an aspiration for access and the traffic flows that are being predicted. Serious thought is required regarding the logistics of the proposal unless the ABP traffic is all that is being considered.

RAIL POLICY AND INDUSTRY STRUCTURE

4.1 Department for Transport Command Paper - Reforming our Railways, April 2012

In the recently published Command Paper, Reforming our Railways the DfT made the following statements concerning railfreight:

4.1.1 The rail network transports approximately 90 million tonnes of goods per year. It is of strategic importance - rail delivers over a quarter of containerised food, clothes and white goods and delivers nearly all the coal for the nation's electricity generation. Rail freight has expanded by 60% over the last decade and expects to grow by a further 30% in five years from 2014.

4.1.2 The Government recognises the valuable wider benefits that railfreight delivers and the need to give it certainty over its future. To support railfreight:

- Government will consider further investment in the Strategic Freight Network (SFN), both to help make best use of the existing network and by increasing its freight capability, to leverage private sector investment in freight growth;
- Government is continuing to provide support through the mode shift revenue support scheme to shift freight from road to rail where there are overall environmental and social benefits from doing so;
- Government will provide a clear planning policy framework to support further private sector investment in railfreight terminals and rail-connected distribution parks, including Strategic Rail Freight Interchanges(SRFIs) to support growth;
- Network Rail will work with the industry to safeguard strategic freight capacity and to facilitate strategic investment in SRFIs. It has also appointed a Freight Director to provide a single interface for freight in a world of greater devolution within Network Rail; and
- The ORR plans to give the freight industry early assurance over the level of access charges, by setting a cap on these in June 2012.

Reid Rail Comment

Agreed

4.2 The Office of Rail Regulation (ORR)

4.2.1 The ORR is independent of central government and of the industry but accountable to Parliament and the courts for the achievement of certain objectives set out in UK and European law. It is the independent economic and safety regulator for Britain's railways.

Reid Rail Comment

Agreed

4.3 Network Rail

4.3.1 Network Rail owns and operates the heavy rail infrastructure of Great Britain including the 20,000 miles of railway tracks, 40,000 tunnels and bridges, signals, level crossings and most of the 25,000 stations although it only operates the 17 largest and busiest.

4.3.2 Network Rail is also responsible for the maintenance, repair and renewal of the infrastructure. In 2010/11 it invested £2.2bn in renewals and £1.7bn in network enhancements.

4.3.3 Network Rail currently has around 35,000 employees and is structured into 10 Routes each with a Route Managing Director responsible for day to day operations. Immingham falls within the London North Eastern Route with head offices in York.

4.3.4 Network Rail has recently strengthened its Freight Team. A Freight Director has been appointed to provide more strategic direction for freight and his head office team has also been strengthened. Based at each of the Routes is a Route Freight Manager who with his team deals with more local freight issues.

4.3.5 Network Rail is also responsible for the planning and development of the rail network. Key to this are the policy documents, the Route Utilisation Strategies (RUS) which cover each of the 10 Routes. In addition, a Freight RUS is also published, the last being in March 2007. This included plans for the Killingholme Loop. Also of key significance is the development of the Strategic Freight Network. This is a dynamic exercise involving most key partners in the industry and looks in a coordinated way at where to prioritise investment in network enhancements.

4.3.6 The following matters which affect Network Rail are also of direct concern to ABP:

- The compulsory acquisition of Network Rail land
- The change of status from national network to private sidings.
- The approval of rail infrastructure including crossings, switches, track and signals.

Reid Rail Comment

Agreed

4.4 Freight Operating Companies

4.4.1 The Freight Operating Companies (FOCs) provide locomotives and wagons that together are defined as a “train”. FOCs are privately owned organisations operating in direct competition with each other. Currently six FOCs are operating in the UK with four providing the majority of open market services. These are DB Schenker (formally English Welsh & Scottish Railways (EWS) - now part of Deutsche Bahn the German National Railway), Freightliner, GB Railfreight (Part of Eurotunnel) and Direct Rail Services (Part of Nuclear Decommissioning Authority). The others are Colas Rail and Mendip Rail.

4.4.2 The FOCs operate in a wide range of markets including Intermodal (containers, both deep sea and domestic), coal (both ESI and industrial), bulk material (aggregate, iron ore, chemicals, petroleum) and steel (finished and scrap).

4.4.3 The FOCs negotiate access charges with Network Rail for access to the national rail network and also agree access charges and handling rates with the operators of rail connected facilities and terminals.

4.4.4 Most services are negotiated with customers on a contract basis whereby the customer will effectively hire the train to operate on a set route for an agreed period of time. A small number of services are operated on a shared or spot basis wherein a number of customers can purchase irregular and less-than-trainload use of a service.

Reid Rail Comment

Agreed

4.5 Facility Owners (Ports, Terminals and Sidings)

4.5.1 A facility owner is the licensed operator of a rail connected facility such as a port, terminal or siding. The facility owner will provide services to the FOCs accessing the facility to load or discharge cargo on their trains. It is also responsible for the maintenance and operation of the facility rail network. Access for FOCs to a facility is agreed through a regulated Facility Access Contract which specifies the services that are available.

4.5.2 The facility owner must control access of FOCs and is responsible for allocating capacity. When total capacity is reached the facility owner must be able to demonstrate that a transparent and non-discriminatory allocation policy has been applied with all the FOCs.

4.5.3 The facility owner is also responsible for the safe movement of trains within the facility and also may be responsible for the operation of terminals. Most of these procedures are contained in Methods of Work which are agreed with all visiting FOCs.

Reid Rail Comment

Agreed

4.6 Conclusions on Rail Policy and Industry Structure

4.6.1 The Government is a firm supporter of railfreight as demonstrated in Policy Statements and its ongoing funding for both the infrastructure enhancements and revenue grants. Road congestion and environmental considerations are clear drivers for this policy.

4.6.2 The ORR has a pivotal role in regulating the activities of Network Rail and also in policing the licensed users of the rail network.

4.6.3 Network Rail continues to make good progress and has been highly supportive of freight over recent years. Investments continue in the Strategic Freight Network and the Freight Team is well regarded by the industry.

4.6.4 The FOCs continue to compete strongly and generally provide high levels of service. New markets are being developed and increased innovation in terms of equipment and services are being provided.

4.6.5 Overall the railfreight market is well structured, supported by Government policy and continues to grow despite the current economic conditions.

Reid Rail Comment

Agreed

5. RAIL INFRASTRUCTURE IN AND AROUND THE PORT OF IMMINGHAM

5.1 Network Rail

5.1.1 The main access to the Immingham area is from the west via Wrawby Junction at Barnetby where three lines carrying freight converge. To the west the main line runs to Scunthorpe (Tata Steel, formerly Corus and before that British Steel) and onward to the three power stations at Drax, Ferrybridge and Eggborough. The second line, recently reopened to freight, is the Brigg Line giving access to power stations at West Burton and Cottam. The third option is the Lincoln Line which carries large volumes of petroleum products from the Immingham refineries to Kingsbury in the West Midlands. See plan at Appendix 1.

5.1.2 The line between Wrawby Junction and Brocklesby Junction, close to the entrance to the Port of Immingham, is a three track railway although in years gone by a fourth track was available. Network Rail are known to be monitoring this route because of traffic pressure and should additional capacity be required then the reintroduction of the fourth track could be initiated.

5.1.3 To the north of Ulceby is the Barton Line which runs north past Thornton Abbey and Goxhill. This line is significant in the context of the Killingholme Loop, see paragraph 7.5 below.

5.1.4 Much of the signalling in the area is controlled from Barnetby however there are three signal boxes situated on the Port of Immingham which control the movement of trains in the port area, see below paragraph 5.2.4 below. One of Network Rail's major long term plans is to modernise all the signalling in South Humberside and move control to York.

Reid Rail Comment

Agreed

5.2 ABP Immingham

5.2.1 Immingham has a one hundred year history as a port with significant involvement in rail. Over the years the port has developed and with it the rail infrastructure has been continually modified. Resulting from the privatisation of British Transport Docks Board and British Rail the responsibility for the rail infrastructure and operations has shifted to ABP.

5.2.2 As can be seen from the plan at Appendix 4 the main connection to Network Rail is at the entrance to the port at Humber Road Junction. From this point traffic travels through the port estate on land and track owned by ABP. For rail services to the western part of the port including the Humber International Terminal (HIT), the Tata ore and coal terminals (IBT), the Simon Storage terminal as well as out of the port on the Killingholme Line, trains must pass along the west dock running line (KIL1), a facility owned and controlled by ABP.

5.2.3 This two track railway as shown on the plans at Appendix 3 and 4 is by far the most congested part of the port rail network and in recent years ABP has made significant investments in this infrastructure. This includes the installation of bi-directional signalling which provides increased flexibility in the use of the parallel running lines.

5.2.4 The movement of trains is controlled by ABP in conjunction with Network Rail staff who man the three signal boxes; one at Reception Sidings for trains entering the port and the oil refineries, one at Immingham West for trains entering HIT, the Tata terminals, Simon Storage and the Killingholme Line and one at Immingham East for east dock traffic. The two western signal boxes are shown on Appendix 4.

Reid Rail Comment

Agreed

5.3 The Killingholme Line

5.3.1 The Killingholme Line runs past the HIT terminal in a north westerly direction to a point beyond Admiralty Sidings at C.RO Ports. From this point the track was lifted in the 1950s and only the track-bed now remains as far as the junction with the Barton Line.

5.3.2 The Killingholme Line is relevant because:

The line is Part of Network Rail's operational railway, see Network Rail representation No 35

ABP is about to construct an improved headshunt facility for HIT on Network Rail land adjoining the Killingholme Line, see paragraph 7.4 C.RO Ports have a regulated connection agreement for their connection at Admiralty Sidings, see C.RO representation No 54

C.GEN have indicated a need to be able to transport solid fuel by rail to their planned power station adjacent to the Killingholme Line, see C.GEN representation No 53 The Killingholme Line is an integral part of the planned Killingholme Loop, see paragraph 7.5

5.4 Conclusions on Rail Infrastructure

5.4.1 General access to the port area from the west is much improved with three options being available on the main network beyond Wrawby Junction. This provides diversionary route capacity in the event of failure on any of the lines.

5.4.2 The rail infrastructure within the Port of Immingham is limited when considering the volumes and variety of traffic being serviced directly from the Port. The management of resources and the maximisation of capacity is a constant challenge.

5.4.3 The Killingholme Line is a vital link to facilities beyond AMEP including CRO Ports (HST) and CGEN.

5.4.4 From a strategic perspective the option of establishing the Killingholme Loop is a significant opportunity for all users of rail in the Immingham area, not just ABP.

Reid Rail Comment

Yes. However as stated above there are alternatives and options to be considered when the issues are clearer.

6. PORT OF IMMINGHAM RAIL TRAFFIC

6.1 Current traffic flows

6.1.1 The scale of rail operations at the Port of Immingham is illustrated in Table 1 below which shows the number of trains operated by each of the three FOCs servicing the Port of Immingham during 2011. As can be seen the total number of services operated equated to 13,325 trains.

6.1.2 Coal comprises by far the greatest volume and this is imported through two major terminals. Coal for the electricity supply industry is handled through the HIT facility which can accommodate ships carrying in excess of 130,000 tonnes. The terminal uses two rail mounted slewing cranes discharging in excess of 1,500 tonnes per hour. Fully automated landside operations, include two stacker reclaimers, segregated coal stacking areas capable of holding 1m tonnes, conveyor systems and rapid loading rail bunkers. Given these facilities the operation provides a high quality service to its customers.

6.1.3 The IBT facility owned and operated by Tata has a further dedicated deep water berth and similarly automated land side operations handling iron ore and coal required by Tata for their major steel producing facility at Scunthorpe

Trains operated 1 st January to 31 st December 2011	
Terminal Location	Total
Immingham West - Access from west dock running line (KIL1)	
Humber International Terminal	4,880
Immingham B.S.C. Ore Terminal	2,988
Immingham Bulk Terminal Cp1	999
Immingham Mineral/Henderson Quay	50
Immingham Simon Storage	622
Total	9,539
Immingham West - Access from centre dock running line (BRI2)	
Eastgate Material Handling (A2)	23
Eastgate Material Handling (RR1)	1,043
Eastgate Material Handling (NCB1)	1,142
Eastgate Material Handling (B3 / RR7)	775
Immingham C.P.L	289
Immingham Reception Sidings	104
Immingham Dock Nordic	224
Total	3,600
Immingham East - Access from east dock running line (BRI2)	
Immingham Ridley's Sidings	3
Immingham Storage W Tml	103
Immingham Texaco	77
Immingham Transit Quay	3
Total	186
Port of Immingham Grand Total	13,325

6.1.4 These representations only concentrate on rail traffic within the Port of Immingham on the western rail infrastructure.

6.1.5 The following table shows the breakdown of volume statistics the West Dock for 2011:

West dock volumes 2011

Table 2

Terminal	Traffic type	Volume Tonnes 2011	Trains per week	Services 2011
HIT	ESI Coal	7,320,000	187	4,880
IBT	Iron Ore	5,378,400	115	2,988
IBT	Coal	1,275,444	38	998
Simon Storage	Liquid bulk	933,000	24	622
Henderson Quay	Aluminium slabs	16,500	2	50
Mineral Quay	Train stabling	Nil	8	Nil
TOTALS		14,923,344	374	9,538

Tables 1 and 2 quantify the volumes of train traffic and freight carried on the west dock running line (KIL1) and illustrate the importance of this infrastructure. The Port of Immingham is the UK's largest source of railfreight traffic and provides 25% of the UK total.

Reid Rail Comment

Agreed

6.2 Planned new ABP traffic flows

6.2.1 ABP is working with various organisations to increase the use of the port and move cargo inland by rail. These include:

- Biomass for Aire Valley power stations c3m tonnes, 72 trains per week
- Petrochemicals for the ABP owned site within the DCO boundary.
- Biomass for Centrica Power Station, Brigg, c1m tonnes, 24 trains per week.

ABP is also in discussions with all the major UK coal fired power generators, who are considering conversion of their power stations to co-firing, about the possibility of importing significant quantities of biomass through the Port of Immingham.

6.2.2 A further factor is the likely impact of proposed changes in access charges paid by FOCs to Network Rail. A significant premium on access charges is being proposed by the ORR for ESI coal. Because access charges are distance related this will increase the attractiveness of the ports that are closest to the coal fired power stations. Immingham is perfectly placed for the five big Aire and Trent Valley stations. This will drive additional ESI coal volumes through the Port of Immingham, using existing Port infrastructure.

Reid Rail Comment

Experience shows that all ports, like all other commercial organisations, are constantly negotiating with potential customers and no doubt some of these aspirations of ABP might indeed be realised, and if not then others perhaps will take their place. However the time to discuss options is when they are affordable and likely to generate a business case at which time the real requirements will be clearer and the options can be properly appraised.

6.3 Non-Port of Immingham traffic, current and future

6.3.1 In addition to the volumes of Port of Immingham traffic, consideration must be given to regular non-Port of Immingham traffic moving through the port to access the Killingholme Line. The relevant representation submitted by C.RO clearly states the need to safeguard their connection to the line for possible future rail use and C.GEN has also intimated the need to maintain the connection to their site for the use of rail to transport solid fuel to their proposed power station.

Reid Rail Comment

Agreed and dealt with separately in the Reid Rail Comment on the C.RO representation

6.4 Capacity issues

6.4.1 Table 3 shows both the number of services per week that occupy the busy section of the Port's infrastructure and also, based on actual experience, the number of train moves associated with these services. In some cases this also includes the involvement of a shunting locomotive that has to pass along the line to effect the shunting operation. The volumes are based on current volumes plus contracted biomass planned at 12 trains per day.

Weekly movements on the West Dock Running Line (KIL1)

Table 3

ABP Terminal	Base Traffic (services per week)	Total Moves (incl. shunting etc.)	Comment (see glossary for explanation of terms)
HIT	174	348	Round trip (move in and out)
IBT	80	200	Round trip plus 40 moves to/from TMD
Simon Storage	15	60	Round trip plus light loco/08 shunt loco moves, all services
Mineral Quay	8	50	Round trip, light loco plus additional use for stabling
Henderson Quay	2	8	Round trip plus shunting requirements
TOTALS	279	666	Equivalent average 4.6 moves per hour

6.4.2 Projected moves per week and capacity

As can be seen from Table 3 above the projected moves along the West dock running line (KIL1) is expected to be in the region of **666 moves per week**. The total working capacity of the Killingholme running line is calculated to be **690 moves per week**.

On present and contracted new levels of usage the projected number of movements is dangerously close to the capacity of the line. This fact is confirmed by the views of the terminal operators, the Person-in-Charge (PIC) and ABP rail managers involved in the day-to-day operating of the port rail network.

6.5 Conclusions on Port of Immingham Rail Traffic

6.5.1 Statistics demonstrate the scale and intensity of the rail operations at the Port of Immingham. Indications are that this level will increase; with existing users opting for the growing use of biomass and preferred shorter coal haul, there are likely to be further increases in volume derived from ABP's existing port infrastructure at Immingham.

6.5.2 In addition to the overall increase in volume a further factor may also impact on train movements. Where biomass is used to replace coal at the power stations there is likely to be an increase in train movements. This is because of the lower density of biomass compared to coal (in practice, it requires three trains carrying biomass to carry the equivalent "burn value" of two trains of coal).

6.5.3 The statistics indicate the degree of pressure that 666 trains will impose on the west dock running line. The capacity of 690 trains renders a general cargo port on the DCO land incompatible with the present operation of the Port of Immingham and inconsistent with the Government's sustainability objectives. Furthermore the planned development for the HIT headshunt (see paragraph 7.4) and the requirements for the Killingholme Loop (see paragraph 7.5) are therefore vital elements in maintaining the efficient operation of the Immingham rail network and continuing to meet the UK's need for sustainable and renewable fuel supplies.

SECTION 1 REVIEW – THE ASSESSED SCHEME

7.1 Introduction

7.1.1 This section of the representation considers the rail aspects of the proposed development as presented by the applicant in the Environmental Statement and the Transport Assessment.

7.1.2 Overall it is extremely difficult to assess the plans for the use of rail as presented in the application as so little information has been provided.

7.1.3 With regard to the compulsory purchase of the Killingholme Branch Line there are several key aspects of this proposal that are significantly detrimental to ABP and the public interest.

7.2. Overall lack of detail relating to the use of rail in support of the Project

7.2.1 There is an acute lack of detail relating to the use of rail in support of the project as presented in both the ES and TA documentation. The proposal contains no assessment of how and why the project will make use of railfreight and what little information is contained is vague and ambiguous offering no serious evaluation of the rail transport option.

7.2.2 There is no indication of the overall strategy for the use of railfreight in preference to road. This should include how the use of railfreight will impact on road usage and what environmental benefits are to be achieved.

7.2.3 Table 15.5 in the ES is the only guide to the volumes and types of traffic that will be transported by rail. For the rail traffic indicated it is difficult to understand how these volumes have been determined, other than as an arbitrary split of traffic by mode percentage. There are manifest inaccuracies regarding these basic matters: as an example, turbine blades in the volumes indicated cannot be transported by rail on the route to and through the Port of Immingham due to their “out-of-gauge” dimensions.

7.2.4 No information has been provided for planned rail services. Such information should include traffic characteristics, frequency of services, origin and destination details, proposed operations, pathing arrangements and equipment requirements. It would have been expected that the applicant would have at least held preliminary discussions with FOCs to consider the rail requirements - we understand that no such discussions have taken place.

Reid Rail Comment

Why consult with FOCs regarding traffic conjectured by others? FOCs are contracted to haul freight and do not normally generate the need although they obviously assist in the promotion of rail freight options. Have C.GEN. and C.RO discussed their proposed traffic requirements with any FOCs. If not then consultation with FOCs by Able will generate no additional information.

7.2.5 There appears to be no provision on the AMEP Master Plan for rail facilities. As a minimum this should include details of working sidings, cargo handling areas and equipment, headshunt and stabling lines. It would be expected that if the use of rail was a genuine requirement for this project then at least some of the infrastructure that is essential to actually operate a railway would be shown on the Master Plan.

Reid Rail Comment

Two train loads per week hardly justifies such an analysis especially on a currently disused line with only aspirational traffic conjectured for the future. These issues can easily be addressed if and when the demand arises.

Able are willing to discuss any of these issues with all parties and to achieve suitable arrangements for genuine traffic demand.

7.2.6 Based on the above it is impossible to assess proposed rail use, indeed it is highly questionable as to whether the applicant has a genuine desire to use the rail option.

7.3. Volumes and Capacity

7.3.1. The applicant states it will run an average of 2 trains per day and it also rather surprisingly states that Network Rail indicates that this can be accommodated on the two access routes.

7.3.2. In fact, Network Rail are not in a position to indicate path availability on both the west dock running line (KIL1) and hence, the Killingholme Branch Line (KIL2). This is because the west dock running line (KIL1) is not owned by Network Rail but is part of ABP's Immingham rail facility. It is on ABP land, is ABP's infrastructure and is controlled by ABP not Network Rail.

Reid Rail Comment

The figures provided in the tables above indicate that there will be 690 – 666 = 24 train paths. Two trains per day demand from Able will equate to 14 trains per week, leaving a further 10 trains paths available. Is it the intention of ABP to preclude access for Able trains to the national network over track under it ownership or are there other conjectured train loads that are not disclosed?

7.3.3. As detailed above a capacity study, undertaken for ABP, shows that the most congested part of Immingham Dock rail infrastructure is the west dock running line (KIL1), which leads directly to the Killingholme Line. All trains passing to the Killingholme Line must pass along this route. Serious congestion regularly occurs in this area of the port rail infrastructure and at this stage ABP cannot give any certainty over paths for trains not operating from the Port of Immingham for the reasons set out in section 6.4 of this WR.

7.3.4. It is fully acknowledged that under the terms of The Railways Infrastructure (Access and Management) Regulations 2005 access cannot be denied by ABP if capacity exists. However as the route is already classed as congested it requires a capacity analysis to be undertaken when considering any non-Port of Immingham use.

7.4. The CPO of the Killingholme Branch Line - The HIT Headshunt

7.4.1. ABP is currently completing arrangements for a £7m rail infrastructure development to the north-west of the main coal terminal at HIT on Network Rail land which is included in the applicant's compulsory purchase plans. The development is being undertaken to provide additional rail capacity which will link to

new handling facilities for the importation of biomass, the low-emission sustainable replacement fuel for power stations.

7.4.2. The Immingham biomass project is a major ABP funded development directed to help the shift from fossil fuels and to increase the use of sustainable biomass. It is a project which ABP has already contracted to provide and is an all too rare example of the private sector contributing to the implementation of Government policies on sustainability and the use of rail transport.

7.4.3. The main investment entails specialised ship discharge facilities which in turn deliver the biomass onto a covered conveyor system leading to bespoke storage facilities. From this point the biomass is transferred using a second conveyor system to large hoppers in readiness for train loading. As with the automated coal loaders at HIT, the biomass is loaded from above into continuously slow moving (0.5mph) bulk wagons using sophisticated measuring equipment. A train can be loaded in around 20 minutes

7.4.4. The new facility will improve loading speeds for up to 12 additional biomass trains per day. However this can only be achieved through the construction of an extended headshunt which allows automated train loading, as well as providing less congestion on the west dock running line (KIL1) and quicker turn-round prior to trains departing.

7.4.5. The project involves ABP entering into a long lease of land owned by Network Rail, adjacent to the north side of Killingholme Line between Marsh Farm Crossing and Regent Crossing, a distance of 700m. This land is included as part of the applicant's proposed compulsory acquisition of Network Rail's operational land, see Appendix 5

7.4.6. The project design provides continued use of the original Killingholme Line which is slued to allow the installation of two new lines between Marsh Farm Crossing and Regent Crossing. There will be a headshunt to the south of Regent Crossing and a new bridge to replace the crossing at Marsh Farm Lane which leads to facilities owned by Conoco Phillips. Switches will be installed to give access to the Killingholme Line and HIT adjacent to the new loading facility. New signalling will link with existing systems.

7.4.7. The project is due to move into the construction phase later this year. All design is completed, terms are agreed, a Basic Services Agreement with Network Rail is completed and an Asset Protection Agreement is due for signature. Agreements with Conoco Phillips relating to the new bridge are completed and supplier contracts have been entered into.

7.4.8. ABP objects to the compulsory acquisition of this part of Network Rail's operational land which would have a serious impact on ABP and other users of rail. An inspection of the CPO plan demonstrates that there can be no justification for the acquisition by Able of the route of the headshunt, as it serves no identifiable purpose within the AMEP proposal.

Reid Rail Comment

The Able proposal as stated above does not preclude the headshunt.

The CPO of the Killingholme Branch Line - The Killingholme Loop

7.5.1. Between 2007 and 2008 ABP, in partnership with Network Rail and North Lincolnshire Council, evaluated this significant rail enhancement. The aims of this project are threefold:

- to relieve rail congestion within the Port of Immingham,
- to open up the area of the South Humber Bank for industrial development with rail
- access,
- whilst, at the same time, increasing rail capacity for other rail users in the area.

This project was included in Network Rail's Freight Route Utilisation Strategy published in March 2007 and which highlights network improvements and enhancements which are considered to be important in satisfying planned demands for railfreight.

7.5.2. This would be achieved through the creation of a "merry-go-round" facility to allow trains to access the Port of Immingham and other non-ABP development areas within the South Humber Bank, on a continuous loop and depart without the need for any form of run-round or shunting operation. This would speed up all rail operations and greatly increase capacity. This track layout is commonly used at power stations such as West Burton, Drax and Cottam.

7.5.3. Network Rail identified a number of key benefits including:

- Direct access to and from the Killingholme Line (KIL2) without the need to traverse the dock railway.
- Providing rail access to the designated development area of the South Humber Bank.
- Declared interest from developers in the Killingholme area.
- Improved coal and biomass operations at HIT.
- Improved access to the Tata ore and coal terminals.
- Incorporating regulating loops to accommodate "out of course" train movements.

7.5.4. Four routes were considered and the preferred route 2b is shown in the plan at Appendix 2. This route extends to the northwest beyond the applicant's DCO boundary on the old trackbed towards Goxhill. Soon after Manor House Farm the

route leaves the old track-bed on a new alignment to the southwest and linking with the Barton Branch Line to the north of Thornton Abbey.

7.5.5. The Killingholme Loop was evaluated under Network Rail's Guide to Railway Investment Projects (GRIP) process during 2007. In February 2008 it reached GRIP 4, Single Option Development which "develops the selected single option to the point of engineering scope freeze and in sufficient detail to allow finalisation of the business case and scheduling of resources".

7.5.6. At the time the business case did not match investment criteria and the project was not considered viable. Circumstances are now very different as has recently been highlighted in discussions between ABP and Network Rail and given the increasing demand for railfreight this project may well be implemented at some time in the near future

7.5.7. The Killingholme Loop would be a significant rail enhancement that would however be wholly dependent on access to the Killingholme Branch Line. The compulsory acquisition of Network Rail's operational land would be incompatible with this project to the serious detriment of all commercial users of the railway network operating along this part of the south bank of the Humber and the wider public interest in sustainable freight transport and regeneration of the North East.

Reid Rail Comment

It is understood that there was, and to the best of our knowledge still is no business case for this proposal.

The Able proposal as stated above does not preclude the Killingholme loop subject to discussion to protect the requirements of Able in safely operating its proposals to assist in the government ambition for renewable energy by manufacturing offshore wind turbines.

7.6. Other Rail issues

7.6.1. Rail Crossings - There are considerable requirement differences when considering crossings on private sidings and crossings on Network Rail infrastructure. Full details are available in the ORR publication Level Crossings: A guide for managers, designers and operators, Railway Safety Publication 7, December 2011. In short, my view is that the applicant is seeking to avoid the full cost of providing rail crossings within the application boundary by operating the Killingholme Branch Line as a private siding, without any regard to the implications on the national rail network or other users of the network in the area.

Reid Rail Comment

The Able proposal is for the operation of level crossing under a fully developed safety case satisfactory to the Rail Regulator and to provide access as required over its track by agreement, by operating the track as private siding and in the future, should the Killingholme Loop become a fully justified proposal, to cooperate with its development and to permit access over track in its control with potential users by agreement.

7.6.2. Travel to work - The applicant has indicated a low demand for travel to work by rail. I concur with this view.

7.7 Conclusions on Stage 1 Review - The Assessed Scheme

7.7.1. The application is devoid of any meaningful data on the intended use of rail. For this reason it is essential that the applicant provides appropriate data before this element of the application can be adequately assessed.

7.7.2. The ABP plans for the HIT headshunt pose serious concerns. This £7m investment to provide rail facilities to service significant volumes of biomass is a key part of an overall project valued at circa £70millions and is clearly at risk if the compulsory purchase progresses as proposed. ABP objects to this unjustified proposal.

7.7.3. The Killingholme Loop would be a rail development of strategic significance for the area. Previous work on the project in 2007/8 illustrated the benefit of this rail enhancement, not just to the Port of Immingham but other developments within the South Humber Bank.

7.7.4. The importance of safeguarding the route of the Killingholme Line for the benefit of all and to maintain its public ownership makes the CPO unacceptable.

8. SECTION 2 REVIEW - IMPACT OF A GENERAL CARGO PORT

8.1 Introduction

8.1.1 This application has been assessed on the basis of very narrow assumptions for the use of the port, being a port to service the renewable marine energy sector.

8.1.2 Many of the assumptions adopted in the application are either unsubstantiated or conflict with other elements of the assessment. Examples include employee numbers, requirements for car parking, assumptions on the use of rail. Furthermore the draft DCO allows for the site to be used as a "General Cargo Port" as detailed in the WR prepared by Adams Hendry.

8.1.3 The ES acknowledges this in saying at Para 4.10.1 that there will be "...an overriding requirement to maintain the quay rather than decommission it". It notes that "In the event that demand for port space by the off-shore energy sector reduces in the future, the quay will find other uses related to the import and export of goods".

8.1.4 However, the Transport Assessment and associated ES chapter give no assessment of the likely impact of such a use. Further analysis of the environmental impacts of a general cargo port and, in particular, the impacts on the rail network must be provided before it can be

concluded that the proposals are acceptable. Indeed, on the basis of the current information provided in the applicant's ES, I fail to see how the ExA's consideration of this proposal can in fact proceed.

8.2 Potential Alternative Uses

8.2.1 ABP, based on considerable local knowledge and recognising the scale of the applicant's proposed operation has evaluated various cargo types that it believes AMEP could handle were it to operate as a general cargo port. This evaluation includes consideration of ship sizes, cargo-carrying capacity, berth occupancy and the amount of back-up land required to store cargo. This information is shown at Table 4 below.

Alternative Port Use

Table 4

Cargo type	Units	Amount	Terrestrial land-take / ha	Modal split: rail	Modal split: road	Under 200 m LOA?	Maximum cargo parcel size	Ship discharge/load time (ie berth occupancy per ship) / hours	No. ship visits per year	No. of ship days (24 hrs) per year quay access required
Petroleum products	Tonnes	1,000,000	5	50%	50%	Yes	35,000	12	28.6	14.3
Bulk coal	Tonnes	3,000,000	16.1	90%	10%	Yes	40,000	48	75	150
Bulk biomass	Tonnes	2,000,000	2	90%	10%	Yes	47,000	84	42.6	149.1
Agribulks	Tonnes	500,000	5	0%	100%	Yes	35,000	72	14.3	42.9
Other bulks	Tonnes	500,000	3	10%	90%	Yes	35,000	48	14.3	28.6
Breakbulk/general	Tonnes	500,000	5	10%	90%	Yes	20,000	120	25	125
Unit load: RORO	No. trailers	200,000	8	0	100%	Yes	150 in, 150 out	12	666.7	333.4
Unit load: LOLO	No. boxes	350,000	10.9	30%	70%	Yes	400 in, 400 out	24	437.5	437.5
Cars	No. cars	400,000	60.7	20%	80%	Yes	1500	12	266.7	133.4
Total			115.7							1414.2

Total yearly Able quayage availability (6 berths of 200 m each @365 days each) = 2190 cargo-handling days per year.

Basis 1414.2 days of cargo handling capacity required per year, berth occupancy = 65%

8.2.2 This information assumes the port becomes a genuine mixed cargo port accommodating all the traffic types and volumes as shown. Clearly this is a theoretical calculation but importantly it shows the scale of operations that could be undertaken and, from that, the impact on inland traffic flows, both by road and rail can be evaluated.

8.2.3 Using this data including the likely mode split, which is currently typical for UK traffic, it is possible to convert these volumes into likely train numbers as shown in Table 5. Train lengths, wagon numbers and payload per commodity have been used to determine typical weights/units per train.

Traffic to rail for alternative port use

Table 5

Cargo type	Units	Amount	Rail %	Tonnes/units per train	Trains per year ¹	Paths per week ²
Petroleum products	Tonnes	1,000,000	50%	1672	299	12
Bulk coal	Tonnes	3,000,000	90%	1500	1800	72
Bulk biomass	Tonnes	2,000,000	90%	1210	1488	60
Other bulks	Tonnes	500,000	10%	1500	33	1
Breakbulk/general	Tonnes	500,000	10%	1000	50	2
Unit load: LOTO	No. boxes ³	350,000	30%	26 each way	2019	81
Cars	No. cars	400,000	20%	120	667	27
Totals					6356	255

Notes 1 50 working weeks per year
2 2 paths per service
3 intermodal trains loaded in both directions

8.3 Impact on Rail

8.3.1 As can be seen table 5 the scenario of mixed traffic and modal split creates the requirement for a significant number of additional paths per week. It should be noted that the basis of this calculation is of two paths per train i.e. 1 in and 1 out.

8.3.2 As has already been stated all rail traffic to the applicant's site must pass through the Port of Immingham along the west dock running line (KIL1) along with all ABP traffic from the west side of Port.

8.3.3 To gauge the pressure on the west dock running line (KIL1) resulting from the Port of Immingham's current traffic and contracted growth as shown in Table 3, the Port's existing infrastructure, as well as railfreight originating from AMEP (if not restricted from becoming a general cargo port), it is necessary to add together the projected rail traffic from all sources. Doing so suggests a total of 920 train movement along KIL1, in respect of which it is estimated that 255 movements are to/from AMEP.

8.3.4 An increase in rail traffic along the west dock running line in excess of 30% would be impossible to accommodate.

8.4 The Killingholme Loop

8.4.1 The Killingholme Loop was originally designed as a single track railway with passing loops and with the option for bi-directional signalling. It would therefore be capable of providing both entry and exit routes from the applicant's site and away from the port.

8.4.2 A further attraction of constructing the Killingholme Loop is that it would provide in-built resilience into the network in the Immingham area in the event of an incident. Thus, if the loop were to become blocked (for example due to a bridge-strike, a derailment or terrorist activity), access would be automatically safeguarded using the remainder of the loop. When it is borne in mind that around 25% of the UK's railfreight originates from the Port of Immingham, the provision of in-built resilience for the benefit of all rail users in the Immingham area is highly advisable.

8.4.3 There is a clear difficulty for the port rail infrastructure to accommodate the likely levels of rail traffic from the applicant's site in the alternate use scenario. Any proposal for a use that contemplates or will need the use of rail must first be comprehensively assessed and any authorisation granted cannot be so granted unless there is a specific requirement imposed upon the applicant to fund the Killingholme Loop as "remote rail works" for Network Rail as part of their planning conditions.

8.5 Conclusions on Section 2 Review – impact of a General Cargo Port

8.5.1 The current application fails to restrict the types of cargo using AMEP at any time after it is constructed. This will have far-reaching implications in terms of use of the existing rail infrastructure in the Immingham area, for the reasons explained above. This issue must be addressed.

8.5.2 The initial assessment based on probable volumes across the applicant's quay indicates substantial potential tonnages. When converted to actual train loads and path requirements it is clear that the Immingham Port rail infrastructure would not be capable of accommodating this volume of traffic.

Reid Rail Comment

This is conjectured and of little assistance. As previously stated these issues are better discussed when the better developed scenarios are available.

Appendix 2

Reid Rail Comment on the Network Rail Representations

This appendix contains extracts from the Network Rail representations with Reid Rail comment inserted as appropriate.

Answers to questions raised by the Examining authority

1. *Qu 62: Would Network Rail explain further why it contests the validity or applicability of s.47(1) of the draft DCO to the effect that the proposed modification would constitute a minor modification for the purposes of Part 4 of the Railways Act (RA2005), given that :-*

- (a) *S.34(2) of the RA2005 gives the power to determine that a closure is a minor modification to the Secretary of State for Transport who would make the Order; and (or alternatively)*
- (b) *S. 35 of the RA2005 relates to the impacts on passengers and stations?*

NR response:

- 1.2 Network Rail does not dispute that s.34(3) provides that the Secretary of State may make a determination that a closure is a minor modification nor that section 35 relates to the provision of passenger services. However, as mentioned in paragraph 14 of the Relevant Representation, the closure of the Killingholme Branch Line should not be treated as a minor modification because it does not come within the definition of section 35. The clear intention of the minor modification process as set out in RA2005, is that it relates to passenger services where a closure of that part of the network does not cause disruption to the travelling public.
- 1.3 The section of the network that is proposed to be subject to article 47(1) of the draft DCO is part of the Killingholme Branch Line ("KIL2"). KIL2 is operational railway, used for the transport of freight and in respect of which there are existing connection agreements with C.Gen Killingholme Limited ("CPK") and Associated British Ports ("ABP"). As referred to in paragraph 14 of the Relevant Representation, Network Rail is required to obtain Network Change authorisation in order to effect the closure of the line. Network Change is a requirement of the Network Code. The Network Code is a common set of contractually binding rules and industry procedures that apply to all parties who have a contractual right of access to the track owned and operated by Network Rail. Appeals from decisions made under the Network Code can be made through the industry's "Access Disputes" procedure which can ultimately lead to determination by the Office of Rail Regulation ("the ORR"). The purpose of Network Change is to protect the

access beneficiaries (i.e. the Network Rail customers using the network, in this case CPK and ABP) from the closure of part of the network without being given an opportunity to put forward their case regarding the use of that part of the Network. A detailed explanation of the Network Change procedure is set out in paragraphs 3.3 and 3.4 of the Written Representation. For the purpose of this response, it is significant to note that, in the event of a dispute as to whether a Network Change should be made, the matter can be referred to the ORR for determination.

- 1.4 Network Rail contests the validity and applicability of s.47(1) of the draft DCO on the basis that sections 34 and 35 of RA2005 are not intended to apply to the closure of parts of the network bearing the characteristics of KIL2; i.e. network that is subject to existing contractual obligations for the provision of access to the network and for the running of freight operations. The proposed effect of s.47 is to undermine the regulatory framework applicable to the closure of KIL2, in applying an inappropriate closure process to that part of the network. Network Rail is extremely concerned about the wider implications that might arise from setting a precedent of this nature.

Reid Rail Comment

Is closure an issue? It is our understanding that Able do not intend to close the branch, but on the contrary it intends to enter into agreements with parties that want access to the network which necessitate crossing Able's land and track.

2. *Qu 63: With specific reference to section 12.3 of its Relevant Representation, what Protective Provisions would Network Rail consider appropriate if the proposed development were to be approved, with or without the acquisition of Network Rail Land through the development site?*

NR response:

- 2.1 We refer to section 4 of the Written Representation and Annex 1 to the Written Representation (draft protective provisions).

Reid Rail Comment

It is understood that Able are willing to enter into agreements to protect whatever rights exist for all parties in relation to the Killingholme loop. Network Rail's and the national interests will be protected.

3. *Qu 64: With specific reference to Sections 7 and 8 of its Relevant Representation, would Network Rail clarify whether it would still now object to the acquisition of its land even if C.RO (formerly Humber Sea Terminal) were to give consent?*

NR response

- 3.1 Network Rail would continue to object to the acquisition of its land if C.RO (or, as defined above CPK) were to consent to that acquisition for the following reasons:
- 3.1.1 The compulsory acquisition of plots numbers: 02008, 03013, 03014, 03015, 04004, 04013, 04014, 04024, 04025, 05023 to 05028 and 07001 ("the Land") would prevent Network Rail from developing the network as identified in The Route Utilisation Strategy for Freight (March 2007) ("RUS 2007"). RUS 2007 refers to a gap in capacity on the west side of the Port of Immingham and identifies the Killingholme Loop Project as a means to deal with this deficiency. This began as a

scheme to build a new section of railway from the Killingholme Branch to the Lindsey Oil Refinery (Scheme 1 under Killingholme Loop) and has since developed to include two additional schemes that are related to improving capacity for train paths on the west side of the Port of Immingham to all new developments on land at this location and also to the Humber International Terminal 2 (HIT2).

- 3.1.2 The "HIT2 Head Shunt Extension" is the third of the schemes identified under the Killingholme Loop proposals, and is described in detail by reference to Annex 2, parts 1, 2 and 3 to the Written Representation. It is proposed that HIT2 Head Shunt Extension is taken forward in Control Period 4 2009 to 2014 ("CP4"). As demonstrated by the area shown edged red on Plan No. 27122 (Annex 2 to the Written Representation), the HIT2 Head Shunt Extension involves development on the Land, and the proposed compulsory purchase therefore jeopardizes the scheme.
- 3.1.3 ABP and Network Rail are in advanced discussions concerning the HIT2 Head Shunt Extension. The scheme includes proposals to slue the Killingholme Branch and provide new sidings on the Land for increasing rail capacity for servicing the Port of Immingham. The requirement for increased capacity is connected with the development of renewable energy plant at the Port of Immingham, which will increase the demand on the railway in that area. Network Rail is duty bound by the conditions of the Network Licence 1 to take into account the future requirements of ABP. If HIT2 Head Shunt Extension cannot go forward then the new £70m biomass handling facility it is proposed to serve will not be able to proceed as the Killingholme branch, in its current form, has insufficient capacity for the trains required to serve it.
- 3.1.4 Based on Licence conditions 1.4 and 1.5, as operator of the Railway Infrastructure, Network Rail considers it important for the confidence of other potential users of the railway line that the railway through the AMEP site is in the overall control of Network Rail. This is because Network Rail is aware of development planning of renewable energy plant in the area and considers an increase in demand on the network, likely.

Reid Rail Comment

It is understood that Network Rail is now offering a lease of the section of track to Able.

4. *Qu 65: The Route Utilisation Strategy for Freight, published in March 2007, identifies the Killingholme Loop as a project for Control Period 4 (2009 to 2014).*

Is this still Network Rail's intention, or has the place of the Killingholme Loop project in the overall programme changed or slipped?

Network Rail response

- 4.1 The Killingholme Loop project, as identified in RUS 2007, covers 3 different schemes all of which are related to improving capacity for train paths on the west side of the Port of Immingham and in particular to the Humber International Terminal 2 (HIT2) coal and proposed biomass handling facilities, as referred to in the response to Qu 64 above. The requirement to increase capacity is due to lack of capacity for trains on the section of the Killingholme Branch known as KIL1. The RUS 2007 recommended scheme was to provide access between the Lindsey Oil refinery and the Killingholme Branch (Gap 10.7 in the Freight RUS Mar 2007) ("Scheme 1"). This Scheme 1 is shown for identification purposes by the dotted red line on Plan No 27122 (Annex 2 to the Written Representation). Scheme 1 has been evaluated and discounted. However, the RUS 2007 also states that further options have been developed since consultation on that document and as a development of the work on Scheme 1, two further options have been identified as Killingholme Loop schemes. These are: :
- 4.1.1 Scheme 2. The provision of a new railway line which would run west from the Port of Immingham via the existing Killingholme Branch and then over a combination of the mothballed track-bed between the points marked B and C, and a new section of railway shown by blue line on Plan No 27122 (Annex 2 to the Written Representation). This would join into the Network Rail line known as the Barton on Humber branch.
- 4.1.2 Scheme 3. The HIT2 Head Shunt Extension, which is described in Network Rail's response to 'Question 64', and shown in detail in the Functional Specification and Plan at Annex 1 to this Written Representation.
- 4.2 The proposals in paragraph 4.1.1 have been discounted for the current time on the basis that the rail capacity requirements of the Port of Immingham can be met through less costly developments such as those described in paragraph 4.1.2. However, it is important to note that Network Rail considers it strategically important to retain the capability to be able to implement these proposals in the long term. This is due to the potential for further substantial changes in demand for train services in this South Humber Location, following the development of sites used for port related activities and that may require the distribution of imported goods by rail. These sites are on the South Bank of the Humber, and include the continued expansion of biomass traffic to the Port of Immingham, the Able Humber Port Logistics park and also the CPK and C.Gen

Reid Rail Comment

It is understood that Able are willing to enter into agreements to protect whatever rights exist for all parties in relation to the Killingholme loop. Network Rail's and the national interests will be protected.

5. *Qu 66: Has Network Rail undertaken preliminary or detailed planning for the Killingholme Loop project? Is Network Rail in a position to say whether this scheme would require all or primarily the existing alignment towards Goxhill, or a partial new alignment that might affect the proposed development?*

NR response:

- 5.1 A preliminary study was undertaken which evaluated various options in the period June to November 2007. As set out in the response to question 65, the results of that preliminary study are that the preferred option for progressing in CP4 is the HIT2 Head Shunt Extension. In addition, it is considered strategically important to protect the option to use the mothballed track towards Goxhill (Scheme 2). A copy of the study entitled "Killingholme/Goxhill/HIT Track Enhancements" is attached at Annex 6. This followed on from the work that discounted the original Scheme 1 for the Killingholme Loop specified in the RUS 2007.
- 5.2 Plan No 22174 (Annex 1, Part 2) shows the HIT2 Head Shunt Extension, on which the boundary of the Land has been superimposed by green hatch. Scheme 3 is the subject of detailed planning and requires the land identified on the Plans submitted with the Proposed DCO as Plot Nos. 02008 and 03015. It can be seen from Plan No 22174 and the associated signalling diagram that the scheme includes what is called a "facing connection" onto the Killingholme Branch. This will enable trains from HIT2 to be able to run westwards from the terminal and hence through the Land. The inclusion of the "facing connection" indicates that ABP realistically anticipate running trains westwards from HIT2,

and are at this stage prepared to invest in the infrastructure that would facilitate this.

Reid Rail Comment

The facing connection could indeed be forward planning to be used if the Killingholme loop becomes a viable option. Equally it could simply be an additional shunting facility. There are options for the reopening of the loop. It is understood that the original study determined that there was no business case for the loop at

that time. As stated above it could be to facilitate trains from HIT to C.GEN to avoid additional shunting arrangements

Written Representation

1. Introduction

- 1.1 Network Rail does not object in principle to the development proposed by the Able Marine Energy Park draft Development Consent Order ("the proposed DCO").
- 1.2 Network Rail does, however, object to the compulsory acquisition of operational railway land, and to the effect of section 47 of the proposed DCO which would force the closure of operation railway and circumvent the regulatory procedure required for such a closure.

Reid Rail Comment

The compulsory purchase does not mean the closure of the line. ABP own a section of the track which effectively isolates this section of the network, but there is an understanding and agreement that the line will be available for all parties that have access rights or that obtain access rights.

It is understood that Able are willing to enter into similar agreements as necessary.

- 1.3 Network Rail also objects to the design element in the scheme which requires new level crossings to provide access from the proposed manufacturing sites, to the proposed wharf. Network Rail considers these level crossings should either be replaced by bridge crossings or the scheme should be re-designed. As a matter of policy, Network Rail will not permit the introduction of new level crossings on the rail network.

Reid Rail Comment

The policy of not introducing new level crossings on the network is understandable because of the number of road traffic accidents when errant road vehicle drivers use level crossings inappropriately and against the traffic signs and signals.

The use of level crossings in this case will be by regulated yard traffic and regulated trains controlled under a suitable safety case developed to satisfy the Rail Regulator and controlled by satisfactorily trained competent personnel as is the

case in many of these types of establishments and in ports in particular presents a much lower risk.

New level crossings are opened on the network when circumstances dictate and appropriate safe working procedures are put in place. For example the Stirling - Alloa line reopened in May 2008 to passenger service and coal to Longannet power station in Kincardine.

- 1.4 Network Rail owns the rail infrastructure of Great Britain; it operates that rail infrastructure pursuant to a network licence ("the Network Licence") granted under section 8 of the Railways Act 1993 ("the 1993 Act"). A copy of the Network Licence is at Annex 3 to this Written Representation. Its duties under the Network Licence are enforceable by the Office of Rail Regulation ("the ORR"), and are described in paragraphs 3 and 4 of the Relevant Representation. In sum, Network Rail is responsible for the maintenance and repair of rail infrastructure, as well as the renewal of track, stations, signalling and electrical control equipment for the enhancement of the network. Train services, and freight operators on the network are operated by companies to which Network Rail grants rights to use the railway in the form of contracts approved by the ORR.
- 1.5 In addition, an over-arching contractual framework applies to Network Rail and all users of the network in the form of the "Network Code". The Network Code incorporates conditions approved by the ORR which, amongst other things, provide procedures for dealing with changes to the network including closures. The Network Code seeks to ensure that all users of railway infrastructure are properly consulted and protected prior to any change, including closure, of the Network. A copy of Part G (Network Change) of the Network Code is at Annex 4 to this Written Representation.

Reid Rail Comment

It is understood that Able is willing to address all of the requirements of the ORR and Network Rail in effecting the changeover from a disconnected part of the national network to a private siding including the necessary network change if it is appropriate.

- 1.6 The activities of Network Rail as network operator are regulated by the ORR under the Network Licence. The ORR itself is under a general duty imposed by section 4(1) of the 1993 Act to exercise those regulatory functions in a manner which it considers best calculated to, amongst other things:
- 1.6.1 to promote improvements in railway service performance;
 - 1.6.2 to protect the interests of users of railway services;
 - 1.6.3 to promote the use of the rail network in Great Britain for the carriage of passengers and goods, and the development of that railway network, to the greatest extent that it considers economically practicable;
 - 1.6.4 to contribute to the development of an integrated system of transport of passengers and goods;
 - 1.6.5 to contribute to the achievement of sustainable development;
 - 1.6.6 to promote efficiency and economy on the part of persons providing railway services;
 - 1.6.7 to promote competition in the provision of railway services for the benefit of users of railway services;
 - 1.6.8 to promote measures designed to facilitate the making by passengers of journeys which involve use of the services of more than one passenger service operator;
 - 1.6.9 to impose on the operators of railway services the minimum restrictions which are consistent with the performance of its functions that are not safety functions;
 - 1.6.10 to enable persons providing railway services to plan the future of their businesses with a reasonable degree of assurance.
 - 1.6.11 By virtue of section 4(3) of the 1993 Act, the ORR is also required to take into account the need to protect all persons from dangers arising from the operation of the railways.
- 1.7 Network Rail considers as absolutely necessary, that the Secretary of State confers protection on Network Rail to safeguard the continued safe, economic and efficient operation of its railway undertaking and to ensure that any works to be carried out in the vicinity of the network are carried out in accordance with Railway Group Standards and are of the required specification so as not to jeopardize the safety of the operational network.



Reid Rail Comment

Agreed

2. Compulsory acquisition of operational land

Land belonging to statutory undertakers

- 2.1 Article 29 of the proposed DCO would confer the power on the Applicant to compulsorily acquire the land identified on the Land Plans submitted with the Application as plots numbers: 02008, 03013, 03014, 03015, 04004, 04013, 04014, 04024, 04025, 05023 to 05028 and 07001 ("the Land"). This impacts significantly on the railway network at Killingholme, specifically the Killingholme branch line known as KIL2. KIL2 is operational railway which services the Port of Immingham, and Humber International Terminal 2 (HIT2). Both Associated British Ports ("ABP") and C.RO Ports Killingholme Limited ("CPK") benefit from existing connection agreements to KIL2, and have submitted Relevant Representations to the Application.
- 2.2 The effect of article if the proposed DCO were made in its current form, would be to confer unfettered compulsory purchase powers of acquisition over operational railway and the Promoter would accordingly be able to acquire and take possession of operational railway infrastructure.
- 2.3 Network Rail's position, as a statutory undertaker, is protected by sections 127 and 128 of the Planning Act 2008. Section 127 provides that a DCO is not to be made or confirmed so as to authorise the compulsory acquisition of a statutory undertakers' operational land in respect of which a representation has not been withdrawn, except in relation to land which the Secretary of State has certified (i) can be purchased and not replaced without serious detriment to the carrying on of the undertaking, or (ii) if purchased it can be replaced by other land belonging to, or available for acquisition by, the undertakers without serious detriment to the carrying on of the undertaking.
- 2.4 The Statement of Reasons submitted with the Application fails to recognise that the proposed DCO includes the compulsory acquisition of operational railway land. For the reasons set out in this section 2, Network Rail strongly disagrees that to compulsorily acquire the Land, thus removing operational land (and thus network) from Network Rail's undertaking, satisfies the test set out in paragraph 2.3 above.
- 2.5 The existing use of KIL2 is referred to in paragraph 2.1. Route Utilisation Strategy 2007 ("RUS 2007") identifies significant development of KIL2 in order to accommodate the anticipated increase in demand in this area for freight transportation. The following paragraphs 2.6 to 2.9 set out a detailed explanation of this future development.

- 2.6 CPK has an existing connection to KIL2 dated 11.08.1958 that has been inherited from its predecessors in title to the CPK Site. This Agreement is not in a modern format, but follows the same principles as any new Connection Agreement whereby CPK pays Network Rail an annual sum to maintain the points that form the physical connection between the sidings on CPK's site and their junction with the Killingholme Branch. CPK continue to pay to have the connection maintained as they may want to use this in the future in conjunction with rail services to their port facilities. As such, Network Rail is contractually obliged to maintain this connection. Agreements of this nature may be terminated by either party, but such action is only taken by Network Rail if there is no prospect of any future rail use in connection with this agreement. This is in accordance with Network Rail's duty under the Network Licence (Condition 1) to facilitate rail freight services and access to the rail network. Network Rail's actions in enforcing such termination provisions are governed by the Network Code referred to in paragraph 1.3
- 2.7 We refer to the Relevant Representation submitted by ABP to the proposed DCO. ABP state that the *"proposed compulsory acquisition of part of the railway track within the ownership of Network Rail would restrict the future passage of commercial rail traffic serving the local industrial community"*. Network Rail fully supports ABP in this aspect of its Representation. The Port of Immingham is Britain's largest bulk goods port and the largest generator of rail freight traffic onto the British rail network. As such the port and the rail network serving it are of national strategic importance both in terms of their current and future capability. Network Rail asserts that it is essential that the capability of the network around the Port of Immingham is preserved in its entirety under Network Rail's control as operator of the national rail infrastructure.
- 2.8 The volume and nature of the goods transported from the Port by rail have changed significantly in recent years. Within the last decade imported coal traffic has reached unprecedented levels as a result of the decline of the domestic coal industry. Further significant changes are predicted as a result of UK energy policy, in particular the replacement of existing coal volume by biomass⁴. Biomass is a bulkier commodity that will demand greater rail capacity than any coal for which it will be a substitute. Statistics suggest that for the same calorific value of energy production, the transportation of biomass utilises 1.6 trains for 1 train for the transportation of coal⁵. The proposals of the Killingholme Loop Scheme 2 are a vital strategic option to provide a solution to increasing train paths out of the Port, in the event that biomass traffic to power stations increases. To eliminate this option would damage the national interest

in being contradictory to national energy policy. It would be directly contradictory to Network Rail's duties under the Network Licence.

- 2.9 The HIT2 Head Shunt Extension is proposed by ABP with a view to improving rail access so as to facilitate increased rail capacity to HIT2 and permit the construction of ABP's proposed £70m biomass handling facility. As shown on Plan No 27122 (annex 2), this scheme includes Network Rail land (currently the subject of lease negotiations) to be used for the head shunt. It is proposed that the adjoining section of the Killingholme Branch will be sluiced to allow the construction of this head shunt. The compulsory acquisition of the Land, as is sought in the proposed DCO, would cut across the HIT2 Head Shunt Extension. As a direct effect of this, the biomass handling facility could not be built.
- 2.10 Network Rail has been approached by C.GEN Killingholme ("C.GEN") regarding proposals to transport solid fuel to a proposed 470 MWe gas-fired electricity generation station by rail. This requires the construction of new sidings on their land and a connection agreement relating to those sidings with Network Rail, as well as an agreement with Network Rail for the number of train paths they require between their site and the HIT2 facility.
- 2.11 Together with article 47 of the proposed DCO, the effect of article 29 would be to close part of the railway to the exclusion of Network Rail and existing operators. There are severe disruptive and safety implications of such a power being exercised, and such a precedent being set. Network Rail are very concerned that the draft DCO should not be made in this form.
- 2.12 We have sight of a letter of application by the Applicants to the Secretary of State, for a certificate under section 127 of the Planning Act. In that letter, the Applicants make the following argument:
- 2.12.1 the track and track bed which is the subject of the proposed compulsory acquisition powers is a dead end at the north end;
- 2.12.2 the line is not used by passenger trains and has "more or less" fallen out of use for freight trains;
- 2.12.3 the effect of the Promoter's proposals in the proposed DCO would "simply be to move [the connection point which is the subject of the existing connection agreement between Network Rail and C.R.O Ports Killingholme Limited (CPK)] southwards to the southern point of the Order land."
- 2.13 Network Rail does not agree with the Promoter that the statutory protection for this part of the railway network should be withheld. We refer to the existing use of KIL2, and the extensive future use proposals set out in this section 2. In

addition, we refer to paragraph 12 of the Relevant Representation and would expand as follows:

- 2.13.1 The track is a dead end at the north end but as has been shown elsewhere in this Written Representation the mothballed railway track-bed running west could be utilised in order to increase rail capacity from the Port of Immingham (Scheme 2 of the Killingholme Loop proposals).
 - 2.13.2 In any event, all of the track is still part of the rail network as defined by the Sectional Appendix which is an industry wide document that shows which railway lines are available for use under Network Rail's control.
 - 2.13.3 Network Rail consider it a breach of its duties under the Network Licence were they not to safeguard such a secure and economic means of supply of bulk fuel to a significant part of the UK electricity generation industry, such as is the potential in KIL2. The proposed biomass plan described in detail in paragraph 2.9 is anticipated to generate an additional 24 trains per day onto the south end of the Killingholme Branch. This project is planned to be open in 2013. The compulsory acquisition of the Land would mean that network is not available for the increased demand resulting from this development and others like it.
 - 2.13.4 In addition, it is inaccurate to call this part of the network "disused". Records show the last commercial traffic was in 2007 with use by Network Rail trains in 2011. It is maintained by Network Rail as part of the Network as, in the absence of Network Change to remove it from the Sectional Appendix, Network Rail is contractually committed to provide access to an operator over the railway line on demand.
- 2.14 In sum, as submitted in paragraph 12.2 of the Relevant Representation, Network Rail does not agree that the test in section 127 of the Planning Act 2008 can be satisfied in respect of the Land. In support of this point, Network Rail relies on the issues stated in this section 2 and in addition would refer to the Relevant Representations submitted on behalf of CPK, C.GEN and ABP to the Application, all of which object to the proposed compulsory acquisition of the existing connection.
- 2.15 Network Rail maintains in any event that, unless agreement is reached with the Applicant regarding the use of the Land, it will not be in a position to withdraw its representation to the Application, and that the matter should be referred to Special Parliamentary Procedure in accordance with section 128 of the Planning Act 2008.

Protective Provisions

- 2.16 We refer to paragraph 12.3 of the Relevant Representation. In all infrastructure projects where work has been required to alter the railway network, agreement has been reached with the applicant in question for works to be carried out, and access has been agreed to the altered rail network, without the need for the compulsory purchase of operational railway land. In respect of such projects, provisions for the protection of Network Rail are included, the effect of which is generally to authorise the grant of specific rights to the promoters whilst conferring upon Network Rail a suitable degree of operational control and supervision. Network Rail considers such provisions vital for the protection of its ability to deliver on its duties under the Network Licence. Such provisions are typically included within orders granted pursuant to the Transport and Works Act 1992, for example, The Nottingham Express Transit System Order 2009 and The London Underground (Victoria Station Upgrade) Order 2009. Network Rail expects that the proposed the Rookery South (Resource Recovery Facility) Order will include these provisions when it is eventually made.
- 2.17 Network Rail maintain that without any agreement or qualification on the exercise of unfettered compulsory purchase powers as proposed in the DCO the following consequences would arise:
- 2.17.1 Network Rail would not be able to operate the severed KIL2 which would result in the loss of protection to both CPK and ABP as existing freight customers and the port and freight train operators in terms of future development of rail freight traffic from Immingham. This would in turn place Network Rail in breach of its obligations under the Network Licence to *"secure the operation and maintenance of the network and the improvement, enhancement and development of the network.... so as to satisfy the reasonable requirements of persons providing services relating to railways and funders...in respect of the quality and capability of the network, and the facilitation of railway service performance in respect of services for the carriage of passengers and goods by railway operating on the network."*⁶
- 2.17.2 The contractual right of both CPK and ABP to connect into the main railway network via a connection point on the Killingholme branch line would be frustrated through Network Rail's inability to fulfil its part of the agreement to connect CPK with the wider national network.
- 2.17.3 The future use of KIL2 for the carriage of goods, including potential arrangements with ABP, would be frustrated as referred to in paragraphs 2.8 to 2.10.

- 2.17.4 The contractual right of ABP to connect into the south end of the Killingholme branch would be frustrated though Network Rails inability to fulfil its part of the agreement to connect ABP with this part of the network.
- 2.18 The proposed DCO is materially deficient in that it does not contain protective provisions expressed to be for the protection of Network Rail. Draft protective provisions for the protection of Network Rail's undertaking are at Annex 5 to this Written Representation.

Reid Rail Comment

It is understood that Able is willing to enter into an agreement with Network Rail to protect Network Rail's position, that Network Rail have previously indicated willingness to sell the branch to Able and have very recently offered a lease.

3. **The effect of Article 47 of the draft DCO**

- 3.1 We refer to paragraphs 13 and 14 of the Relevant Representation.
- 3.2 As referred to in paragraph 14 of the Relevant Representation, the correct procedure for the closure of the Killingholme branch line is to obtain authorisation pursuant to Network Change.
- 3.3 The Network Change procedure is set out in the Network Code (Part G) which Network Rail is obliged to comply with in its operations. A copy of Part G of the Network Code is at Annex 3. The Code is clear that Network Rail must consider whether Network Change will apply before any decision is made regarding changes which are likely to have a material effect on the operation of the Network, and specifically that *"closures of lines which are not covered by the statutory procedures are Network Changes"*. It is absolutely clear on the face of the Code that the closure of this part of the Network requires Network Change. All Network Changes are required to be implemented by Network Rail. The procedure is set out in paragraph 3.4 below.
- 3.4 Under the Network Code (Part G) Network Rail is required to write to all parties who have a contractual right to use the network explaining the nature and purpose of proposals for material changes to the infrastructure and to consult them for their views. Network Rail has to engage with these parties to resolve any questions and objections which they may raise in response to the proposal. Network Rail has to secure the consultees' agreement to the changes and may not impose them whilst any objection is outstanding. If a consultee does not feel that Network Rail has applied the Network Code (Part G) satisfactorily they may use the "Access Dispute" procedure to challenge Network Rail's decisions or actions which may eventually lead to an appeal to the ORR for a final determination.
- 3.5 The proposal to deem to removal of operational railway a minor modification not only bypasses the rights of CPK and ABP who have the benefit of agreement with respect to this part of the network, under the Network Code to object to the closure of the railway, but also applies an inappropriate procedure to the closure in clear undermining of the regulatory framework applicable to the railway.

Reid Rail Comment

No comment

4. Safety

- 4.1 As explained in section 1 of this Written Representation, Network Rail is under a duty to ensure the safety of the Network. This duty is enforceable by the ORR, which is required by statute to ensure the safety of the railway. The Environmental Statement describes the construction of level crossings as part of the proposed works (paragraph 4.4.48). Network Rail objects strongly to this proposal which is contrary to the ORR's clear message that the rail industry is seeking to close level crossings across the Network. In illustration of this point, we cite the following extract from the ORR's policy on level crossings:

"Level crossings are the single biggest source of railway catastrophic risk....We seek to influence dutyholders and others to reduce risk at Britain's level crossings. We do this through a variety of means ranging from advice to formal enforcement action..... Risk control should, where practicable, be achieved through the elimination of level crossings in favour of bridges, underpasses or diversions. Where elimination is not possible, we aim to ensure that duty holders reduce risk so far as is reasonably practicable and in accordance with the principles of protection.

Reid Rail Comment

Risk needs to be properly assessed, and the risk in a yard operated railway with only specific yard traffic accessing the level crossings in a properly controlled environment with a suitable safety case present very much lower risks than on public roads with a great number of errant drivers not respecting the traffic signs and traffic control stop lights and barriers.

Appendix 3

Reid Rail Comment on the C.GEN Representations

This appendix contains extracts from the C.GEN representations with Reid Rail comment inserted as appropriate.

Principal Issue 3: *The scope and scale of the proposal* and Principal Issue 8: *Impacts on*

Network Rail

5.1 The Application makes provision for the compulsory acquisition of the Killingholme Branch Line (the "Railway") by which C.GEN will be able to connect to the wider national railway network. C.GEN objects to the proposed acquisition of the Railway by Able because that would unreasonably and unnecessarily prejudice C.GEN's own project. C.GEN proposes to transport solid fuel for the C.GEN Project along the Railway, as well as waste and other materials. A direct connection to Network Rail's network is essential to C.GEN's future operations. This will require the construction of new sidings and the negotiation of connection and access agreements with Network Rail. Discussions between C.GEN and Network Rail are ongoing. Those discussions relate not only to the need for connection and access arrangements, but also the availability of train paths.

Reid Rail Comment

It is understood that Able has been trying to negotiate with C.GEN on this matter. C/GEN does not have direct access to the National Rail Network except to the short detached section separated from the national network by the ABP owned tracks. C.GEN will also need to negotiate with ABP. Able does not intend to block access and the crossings of the railway within its land will not cause extensive delay. Train times will be known in advance as the train paths allocated over the national network will determine arrival and departure times. So forward planning will be simple.

5.2 C.GEN would thus be directly and adversely affected by the proposed privatisation of the Railway and/or any restriction upon its use or the manner of its operation. It has considerable concerns about the operational impacts on its future use of the Railway if compulsory acquisition proceeds.

5.3 C.GEN considers that Able has carried out insufficient consultation about AMEP, and in particular in relation to the Railway. If it had carried out consultation properly, it would have been aware of the concerns of C.GEN (and others) in relation to the Railway, and importantly, it would also have been aware of C.GEN's proposals for the future use of the Railway. Instead, Able has proceeded on the basis that it will acquire the Railway because it wishes to accommodate AMEP. As a result, its Application (including the Environmental Statement) fails to take account of future requirements for train movements on the Railway, and growth in those movements. Able does not know whether, in light of C.GEN's requirements for use (and those of others), it can manage any potential conflict between use of the Railway and operation of AMEP. In this respect, C.GEN submits that Able cannot show (and the Secretary of State cannot be satisfied) that AMEP can safely and effectively operate

whilst allowing continued and future use of the Railway, whether it remains in the ownership of Network Rail or not.

5.4 C.GEN can show a reasonably foreseeable need for rail access. However, Able has not consulted C.GEN. Able has not shown for what purpose related to AMEP it needs to use the Railway, and furthermore it has not shown why it is necessary to acquire the Railway. Its proposals are driven entirely by its own - unexplained - priorities, without regard to existing and future use of part of the Network, the use of which by others is supported and encouraged by Government policy, and in particular the Overarching National Policy Statement for Energy (EN-1) and the National Policy Statement for Fossil Fuel Generating Infrastructure (EN-2) .

5.5 In conclusion therefore:

5.5.1 Able has failed properly to justify its proposal to compulsorily acquire the Railway;

5.5.2 Applying the statutory tests under the Planning Act 2008, Able has failed to establish that the acquisition is required for AMEP, and has not made a compelling case in the public interest for the acquisition;

5.5.3 There is a complete absence of detail on what alternatives Able has considered, if any, and why these are not possible. In particular, the feasibility of level crossings at the site should have been explored, as well as any other potential variations to the design of AMEP;

5.5.4 C.GEN has reasonably foreseeable requirements for rail access; and

5.5.5 There are a number of genuine operational concerns, not least that C.GEN would be required to depend on rights in contract against Able to obtain and maintain a connection and to allow it to use the Railway when Able wished to cross it for the purposes of AMEP.

5.6 The effect of any acquisition will be that although Able does not apparently need to use the Railway for the purposes of AMEP (other than to cross it), existing and potential users of a national, regulated railway asset (where there is a reasonable prospect of such use) are deprived of their ability to use that asset simply because it is considered to be an obstacle to a proposed private development. It is not acceptable, appropriate or in the public interest for part of the national railway network to be privatised to benefit one person's narrow private interests to the detriment of the wider public interest..

Reid Rail Comment

It is understood that Able has been trying to negotiate with C.GEN on this matter. C/GEN does not have direct access to the National Rail Network except to the short detached section separated from the National network by the ABP owned tracks. C.GEN will also need to negotiate with ABP. Able does not intend to block access and the crossings of the railway within its land will not cause extensive delay. Trail



times will be known in advance as the train paths allocated over the national network will determine arrival and departure times. So forward planning will be simple.

Appendix 4

Reid Rail Comment on the C.RO Representations

This appendix contains extracts from the C.RO representations with Reid Rail comment inserted as appropriate.

Principal Issue 3: *The scope and scale of the proposal* and Principal Issue 8: *Impacts on*

Network Rail

6.1 C.RO's primary concern with the scope and scale of AMEP relates principally to the proposed compulsory acquisition and privatisation of the Killingholme Branch Line (the "Railway"), which connects CPK to the wider national railway network (the "Network"). C.RO considers that:

6.1.1 Able has failed properly to justify its proposal to compulsorily acquire the Railway;

6.1.2 Applying the statutory tests under the Planning Act 2008, Able has failed to establish that the acquisition is required for AMEP, and has not made a compelling case in the public interest for the acquisition;

6.1.3 There is a complete absence of detail on what alternatives Able has considered, if any, and why these are not possible. In particular, the feasibility of level crossings at the site should have been explored, as well as any other potential variations to the design of AMEP;

6.1.4 C.RO has reasonably foreseeable requirements for rail access; and

6.1.5 There are a number of genuine operational concerns, not least that C.RO would be required to depend on rights in contract against Able to obtain and maintain a connection and to allow it to use the Railway when Able wished to cross it for the purposes of AMEP.

6.2 The effect of any acquisition will be that although Able does not apparently need to use the Railway for the purposes of AMEP (other than to cross it), existing and potential users of a national, regulated railway asset (where there is a reasonable prospect of such use) are deprived of their ability to use that asset simply because it is considered to be an obstacle to a proposed private development. It is not acceptable, appropriate or in the public interest for part of the national railway network serving a statutory harbour which is a statutory undertaking to be privatised to benefit one person's narrow private interests to the detriment of the wider public interest. This is the more so where C.RO is already an operational facility with an existing connection to the network.

Reid Rail Comment

It is understood that Able has been trying to negotiate on this matter. C.RO does not have direct access to the National Rail Network except to the short detached section separated from the National network by the ABP owned tracks. C.RO will also need to negotiate with ABP. Able does not intend to block access and the crossings of the railway within its land will not cause extensive delay. Train times



will be known in advance as the train paths allocated over the national network will determine arrival and departure times. So forward planning will be simple.