



**ABLE MARINE ENERGY PARK
WESTERN RAIL DIVERSION
OPTIONS REPORT**

OCTOBER 2013

Able UK Ltd
Able House,
Billingham Reach Industrial Estate,
Teesside
TS23 1PX
Tel: 01642 806080 Fax: 01642 655655

	ABLE MARINE ENERGY PARK WESTERN RAIL DIVERSION: OPTIONS REPORT	OCT 2013
---	---	-----------------

APPROVAL & REVISION REGISTER

	NAME	SIGNATURE	DATE
Originator:	R Cram	RMC	15/10/13
Checked by:	N Etherington	NFE	15/10/13
Approved by:	P Stephenson	PMS	15/10/13

REVISION	COMMENTS	DATE
DRAFT	Issued to NR and ORR for comment	8/10/13
FINAL	Issued to Department for Transport	15/10/13

CONTENTS

EXECUTIVE SUMMARY	4
1 INTRODUCTION	7
1.1 Purpose of the Report	7
2 THE PLANNING PROCESS	10
2.1 The Natura 2000 Network	10
2.2 The Case for Derogation.....	10
3 BRIEF DESCRIPTION OF THE DEVELOPMENT	11
3.1 The Broad Aim Of The Project	11
3.2 Core Development Areas.....	11
3.3 Consultation on the Proposals	13
3.4 Impact of the Railway Through the Site.....	14
4 THE KEY CHARACTERISTIC OF THE AMEP PROJECT.....	17
4.1 The Scale of the Development.....	17
4.2 Manufacturing Clusters	20
4.3 Summary	24
5 SITE CONSTRAINTS TO ALTERNATIVE RAIL ALIGNMENTS.....	25
5.1 General	25
5.2 South	25
5.3 West	25
5.4 North	25
6 ALTERNATIVE SOLUTIONS.....	27
6.1 Alternative Scale of the Development.....	27
6.2 Diversion of the Killingholme Branch Line: 60 mph Line Speed	28
6.3 Diversion of the Killingholme Branch Line: 25 mph Line Speed	28
7 CONCLUSIONS	30
7.1 Summary Points	30

EXECUTIVE SUMMARY

1. The purpose of this document is to demonstrate that a diversion of the Killingholme Branch Line railway around the Able Marine Energy Park (AMEP) would not be reasonably practicable, in response to a letter from the Office of Rail Regulation to Able UK Ltd dated 24 September 2013.
2. The origin of the suggestion that the railway could be diverted in this way dates back to a meeting between Able and Network Rail (NR) held on 8 July 2010 and was confirmed in an e-mail sent following that meeting (McCormick to Cram/Hind at 13:23). In subsequent correspondence dated 11 September 2013, NR described the option as the '*most cost effective and most efficient*' proposal, although Able has seen no evidence that NR has considered the feasibility of the proposal beyond illustrating it on a various sketch plans (see for example figure 1.1). If they have done so, they have not shared any more detailed proposals with Able.
3. The context of this issue is that the railway is not currently used, and the Secretary of State for Transport has endorsed the report of the panel that examined the AMEP application, save for the issue of not jeopardising future use of the Killingholme Branch railway and also the effectiveness of the ecological compensation being proposed. In particular, the panel concluded that there are imperative reasons of overriding public importance that this project is realised, and, as they put it, one should '*maximise the potential of the site, not ... economise on it*'.
4. There are three main factors that mean that diverting the railway in the manner proposed would not be reasonably practicable: the available choices for the route, the viability on the project of doing so and the environmental effects of doing so - indeed, each on their own would render the proposal impractical.

Choice of route

5. In order to inform more detailed discussion, Able commissioned rail consultants Tata Steel Projects, a suitably qualified and experienced rail consultant, to consider what alignments would be feasible.
6. A plan of Able's proposal divided into the purposes it will be used for is shown at figure 3.1. For the railway to be diverted within land that is in, or would be in Able's ownership, would mean diverting it at the northern boundary of its proposed on-site mitigation area, along the east of Rosper Road and then re-joining the existing alignment to the north of the proposed heavy component manufacturing element of the park.
7. Even if the route were not restricted to the land in Able's application, it would suffer similar constraints. In particular, were the railway to be diverted to the west of Rosper Road, it would mean crossing Rosper Road twice, occupying land belonging to other parties along the western side of the road, mainly that of the Total Oil Refinery, and bisecting and essentially destroying a locally important wildlife site known as Burkinshaw's Covert.

8. Tata considered two options, one where trains could operate at 60mph and another with trains operating at 25mph, the difference being that the lower line speeds permit the use of smaller radii. Plans of the two options are shown at figure 6.1 and 6.2.
9. The railway will need to be around 250m from Rosper Road to allow vehicular traffic from Rosper Road to be able to cross the railway via a bridge, which immediately puts a large area of Able's proposed manufacturing facility on the 'wrong' side of the railway. The railway would also need to be crossed by other existing users of Station Road, who presently use a level crossing there. These users would either have to share one bridge with Able or require a second bridge to be constructed.
10. The application for the Able Marine Energy Park includes 158 hectares of onshore land for the manufacture of marine energy infrastructure components. 46 hectares are to the east of the existing railway line and 112 hectares are to the west.
11. With the 25mph option, the overall figure is reduced to c.96 hectares, and with the 60mph option, this is reduced further to c.64 hectares. Thus the usable area for manufacturing is very significantly reduced if the railway cannot be crossed in its present location, as the diverted alignment leaves too little of the site available to the east of any realignment for the manufacturing of heavy components.

Cost and Viability

12. In 2007 Able obtained prices for the construction of new sidings at Killingholme. Using those figures, allowing for inflation and a simple pro-rata approach, the direct construction cost of realigning the railway through the AMEP site is expected to be at least £2m for the 60mph option (with no significant benefit) and at least £5m for the 25mph option, assuming that there is no requirements for complex signalling. The cost of building one vehicular bridge over the railway is estimated to be £1.5 m and a second would cost the same again. Professional fees would add around 15 per cent to these sums.
13. However it is the indirect cost that would be far more significant, amounting to many millions more in lost revenue from heavy manufacturing. In short, the overall impact on the project is to significantly change its scale so that it is no longer be a viable project.
14. On the other hand the cost of providing four level crossings across the existing railway is expected to be significantly less, given the current and consented use of the track and will allow the requisite capacity on the site for heavy manufacturing.

Ecological considerations

15. Finally, the siting of a diverted railway is considerably constrained by ecological considerations, and in fact any feasible alignment is spatially constrained so as to avoid damaging habitat that enjoys significant legal protection.
16. To the south, the railway would have to avoid Able's proposed environmental mitigation area (known as mitigation area 'A'). To the north, the railway would have to avoid disturbing North Killingholme Haven Pits which is a SSSI and is also part of the European designated Humber Estuary Special Protection Area (SPA) and Special Area of Conservation (SAC). This would mean the engagement of new habitats issues that have not affected the application for AMEP to date.

Summary

17. The evidence shows that there is a very limited opportunity for a diversionary route through the AMEP site and none is reasonably practicable, due to such an alternatives direct and indirect cost impact.
18. The consequential effect on the AMEP project would be to reduce the land available for it considerably, raise further questions about its ecological impact and significantly increase its cost, thereby reducing the likelihood of it delivering a step change in the provision of offshore marine energy infrastructure in a deprived area of the country.

1 INTRODUCTION

1.1 PURPOSE OF THE REPORT

1.1.1 On 12 January 2012 the Infrastructure Planning Commission accepted an application made by Able Humber Ports Limited (AHPL, 'the Applicant') to construct a Marine Energy Park at Killingholme in North Lincolnshire. The Examination of the application was completed on 24 November 2012 and the Panel's report was submitted to the Secretary of State for Transport on 24 February 2013. Appendix D of the '*Panel's Findings and Recommendations to the Secretary of State*' ('the Panel's Report') contains the 'S127 Report' of the Examining Inspector on the compulsory acquisition of Network Rail land. That report concludes the following:

'In my judgement Network Rail has placed undue emphasis on the safety case. If it was prepared to grant one easement then I do not understand why it was not prepared to grant four, all operating as part of a single signalling/control system in a low-speed environment for both road and rail vehicles.

The fact that it was prepared to grant one easement I take as an admission that easements for level crossings per se are not an obstacle to the carrying on of the undertaking, as and when that recommences. This would still be the case in my view if KIL2 (Killingholme Loop passing through the site) were in fact to eventuate.'

1.1.2 A decision on whether or not to grant the application has since been deferred twice by the Secretary of State for Transport, firstly on 21 May 2013 and again on 26 July 2013.

1.1.3 On 28 August 2013 the Department for Transport (DfT) advised AHPL that whilst the Secretary of State was '*minded to approve*' the application, two matters prevented him from doing so at that time. One of the two reasons given was explained in paragraph 40 of his letter, which is reproduced below:

'40. The Secretary of State notes that during the examination the applicant reduced the extent of the compulsory acquisition powers sought over the Killingholme Branch railway which runs through the site of the project to four easements for level crossings. He notes the fact that Network Rail was prepared to grant one easement for a level crossing (referred to in the Examining Inspector's report at PR Appendix D). However, the Secretary of State attaches importance to the current policies of Network Rail and the ORR not to create new level crossings other than in exceptional circumstances. In particular, he is concerned that the creation of four new level crossings may hinder the future operation of the railway as well as create a safety hazard. The Secretary of State notes the Panel's conclusions (at PR 18.186-199) that the Order should authorise the compulsory acquisition of four easements for the purpose of creating level crossings, but seeks further assurances about the future operations of the Killingholme Branch railway. The Secretary of State accordingly invites the applicant to reconsider its proposals for access across the railway in consultation with Network Rail and the ORR for the purposes of providing assurance that the proposal will not prejudice the future operation of that railway.

Should this require a reduction in the number of level crossings, the applicant is asked to propose any consequential amendments to the Order, the plans and the book of reference, to confirm the required easements and powers required to enable the construction of those facilities', (underline added).

1.1.4 Further, at paragraph 6 of the DfT's letter the author states:

6. For the reasons explained at paragraphs 17 to 23 and 40 in this letter, the Secretary of State considers that he is not yet in a position to decide whether to accept the Panel's recommendation. He is, nevertheless, minded to agree with the Panel that he should make an Order granting development consent for the project, subject to receiving satisfactory evidence of the following: ...

(2) assurance from the applicant, having consulted with Network Rail and the Office of Rail Regulation ("ORR"), that the project will not jeopardise any future operations of the Killingholme Branch railway.

1.1.5 AHPL met and consulted with Network Rail on 9 September 2013, when they tabled a sketch plan showing a diversion of the Killingholme Branch Line to the west of the AMEP site, suggesting at the time that such a diversion could negate the requirements for level crossings without affecting the viability of the project. A copy of the sketch is included at Figure 1.1.

1.1.6 Similar proposals were suggested by NR in e-mails sent on 8 July 2010 (McCormick to Cram/Hind at 13:23), on 3 May 2012 (Stancliffe to Cram/Etherington at 16:24), and also in a sketch sent to the Applicant on 8 May 2012 (Stancliffe to Cram/Etherington/Stephenson at 11:53). Accordingly the Applicant considered the matter during the EIA process. The Applicant advised the Panel considering the application as follows, in a response to NR's Relevant Representation:

"The applicant has considered the option of diverting the railway around the site but has discounted it as there is no feasible alignment that would not result in a significant proportion of the site being 'cut-through' ", ('Applicants Comments on the Relevant Representations', June 2012).

1.1.7 Notwithstanding the above, NR wrote to the Applicant again on 11 September 2013 stating that, in their view:

'(t)he most cost effective and most efficient proposal is for Able to divert the current railway line around the southern boundary of the Able Marine Energy Park. Access to the Able manufacturing facility can be achieved with a conventional road bridge over the diverted railway and your operations can be conducted without any conflict with the railway operation', (Network Rail letter to Able, 11 September 2013).

1.1.8 It is assumed that the comments made in the letter were informed by the re-alignment shown in NR's sketch tabled at the meeting two days previously, and accordingly the Applicant responded in writing to NR the same day, as follows:

'It seems ... that by already identifying one solution as 'the most cost effective and most efficient' that NR are failing to approach the matter objectively, having a pre-determined decision yet to be justified by any

design or costing. Certainly the plan for an alternative rail alignment that your colleagues tabled at the meeting on 9th September had no regard whatsoever to the constraints of the site and, inter alia, routed the railway through a European Site and also directly adjacent to the public highway, thereby leaving no space for bridge approaches; in short it was not in the slightest credible. In the circumstances, what weight can possibly be given to assertions based upon such a poor understanding of AMEP?'

- 1.1.9 On 10 September 2013, the Applicant met and consulted with the Office of Rail Regulation following which the ORR wrote to the Applicant in the following terms:

'The first important principle to establish is that the preferred option would be to divert the existing Killingholme Branch to the perimeter of your site, so that it no longer bisects the area of your operations. This removes the need for the four proposed easements for new level crossings and the problem of how to establish suitable protection for foot crossings and remaining open crossings. The main matter to be agreed would be how to safely route traffic to and from your site.

ORR has not yet seen a suitable and sufficient account of why this might not be reasonably practicable', (ORR letter, 24 Septemehr 2013)

- 1.1.10 Notwithstanding the above, the Applicant notes that the Panel did make the following observation at paragraph 18.199 of their report:

'(t)he Panel notes the point made by NR in para 18.117 above that even acquiring the easements does not ensure that there will be level crossings, but believes that there must be scope for the applicant and NR to reach some sensible accommodation'.

- 1.1.11 The purpose of this report is to explain the impact of diverting the railway through the AMEP site, and to demonstrate its impact on the feasibility of the scheme and its specific objective of addressing the imperative need to develop a cluster of offshore wind manufacturing plants on the east coast of United Kingdom, and thereby regenerating a relatively deprived area of the country.

- 1.1.12 Of course, the benefit of any diversion of the track in its current 'mothballed' state is, on the face of it, negligible, since there are no trains using the track – meaning there would be a cost to mitigate a risk, but potentially no benefit to be gained. Furthermore, if an alternative alignment for the Killingholme Loop scheme is demonstrated to be: feasible; result is less environmental impact; cost less to implement; avoid passing through AMEP but still meet the same objectives of the 'Loop', then even the potential benefits of a western diversion are limited. The Applicant has procured a separate report from TATA Steel Projects ('Killingholme Port Rail Access Rail Access Feasibility Study', (September 2013) which demonstrates that such an alternative scheme exists for addressing any operational issues that might arise in the future on KIL1.

Following page: Figure 1.1: Sketch Tabled by NR at Consultation Meeting 9/9/13

MOTHBALLED TRACKBED OF GOXHILL BRANCH - section B-C is within Killingholme loop scheme 2

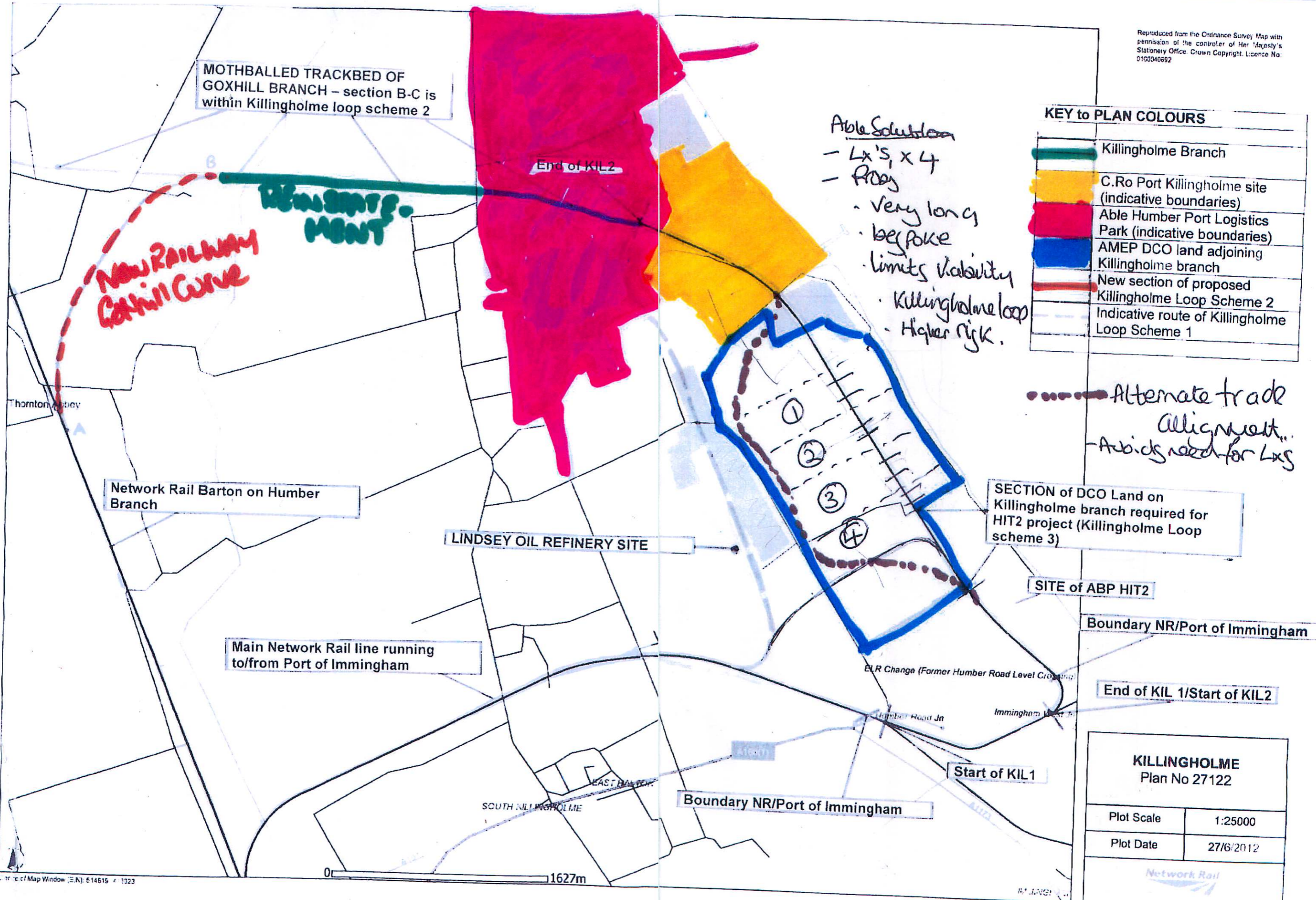
KEY to PLAN COLOURS

	Killingholme Branch
	C. Ro Port Killingholme site (indicative boundaries)
	Able Humber Port Logistics Park (indicative boundaries)
	AMEP DCO land adjoining Killingholme branch
	New section of proposed Killingholme Loop Scheme 2
	Indicative route of Killingholme Loop Scheme 1

Able Solution

- Lx's, x 4
- Frees
- very long
- be poked
- limits viability
- Killingholme loop
- Higher risk.

Alternate track alignment... Avoids need for Lx's



SECTION of DCO Land on Killingholme branch required for HIT2 project (Killingholme Loop scheme 3)

SITE of ABP HIT2

Boundary NR/Port of Immingham

End of KIL 1/Start of KIL 2

KILLINGHOLME
Plan No 27122

Plot Scale	1:25000
Plot Date	27/6/2012



2 THE PLANNING PROCESS

2.1 THE NATURA 2000 NETWORK

2.1.1 This development site lies between C.Ro Port (Killingholme) Ltd (formerly the Humber Sea Terminal) and the Port of Immingham. The boundary of the site lies partially within the Humber Estuary, which is protected under both national and European law, including the EC Habitats Directive (92/43/EEC). The estuary is part of the Natura 2000 network of nature conservation areas within the European Union that has been established to ensure the survival of Europe's most valuable species and habitats.

2.1.2 As the proposals for AMEP will, if consented, cause the loss of a significant area of estuary and intertidal mudflat which are specific features of the Natura 2000 network, it may only be lawfully consented if it is needed and:

- a) There are no alternative solutions that are less damaging to the Natura 2000 network, and
- b) The scheme must be carried out for imperative reasons of overriding public interest.

2.1.3 These tests constitute significant legal hurdles.

2.2 THE CASE FOR DEROGATION

Alternative Solutions

2.2.1 On this test the Examining Panel concluded that:

'(o)n balance the Panel considers that it has been sufficiently established that there are no alternative solutions that would secure the aims and objectives of the application while being less damaging to the Natura 2000 network', (paragraph 10.44 of the Panel's Report).

Imperative Reasons of Overriding Public Interest

2.2.2 On this test the Examining Panel concluded that:

'(t)he Panel considers that, taken together, there is strong evidence that the proposed development is indeed a unique opportunity to develop the South Humber Bank and exploit its proximity to the Humber deep water channel and the sites for North Sea wind-farms; and that the development has the potential to make a major contribution to employment and the economy while supporting sustainable development', (underline added, paragraph 10.44 of the Panel's Report).

3 BRIEF DESCRIPTION OF THE DEVELOPMENT

3.1 THE BROAD AIM OF THE PROJECT


3.1.1 The objective of AMEP is to provide a new and substantial manufacturing base for the offshore marine energy sector. Currently, this market is anticipated to be dominated by offshore wind energy with this sector expected to contribute significantly to a new secure, low carbon and balanced energy mix for the UK. The need for such specific development is attested to in Government policy, as set out in detail in Chapter 5 of the Environmental Statement (ES) submitted with the application.

3.1.2 As well as having quays to receive and export raw materials and products, the development will also provide facilities that are necessary for the manufacture and assembly of offshore generators, including offshore wind turbines (OWTs), which will be loaded onto installation vessels for direct transport to the offshore development site.

3.2 CORE DEVELOPMENT AREAS

3.2.1 A detailed description of the proposed development is included in Chapter 4 of the ES, but for ease of reference a brief summary is included below. Areas of the site are allocated various uses, and these core development areas are defined below and shown on Figure 3.1.

Area	Use
Ecological Mitigation Area A	The project will result in the loss of terrestrial roosting areas that are functionally linked to the Humber Estuary Special Protection Area (SPA) and therefore legally protected under the EC Habitats Directive. There is therefore an obligation on the Applicant to mitigate this impact in the first instance. In order to provide such mitigation, the applicant has agreed with Natural England to provide c. 48 ha of wet grassland within the development, close to the impact, at a location that has unobstructed access to the Estuary. This part of the development cannot be subject to any significant (generally understood to be an effect that is 'more than trivial') disturbance.
Quay	The quay is constructed on land reclaimed from the Estuary. For this particular development the quays provide storage and assembly areas for physically large and heavy components, see photograph below. They cannot therefore be used for any other purpose as their spatial extent is essential in the particular circumstances of this development.

Area	Use
	 <p>Port of Nyborg – Quay Use at a Construction Port</p>
<p>Heavy component Manufacturing Park</p>	<p>AMEP will provide a base for the manufacture of marine energy generators and related items. The particular mix of manufacturing facilities that will locate to the site cannot be fixed prior to the application. The manufacturing site is therefore based on the following indicative development proposal for the offshore wind sector:</p> <ul style="list-style-type: none"> • three nacelle factories producing a total of 600 units per year; • two tower factories producing a total of 400 units per year; • two blade factories producing a total of 1 200 units per year; • one foundation factory producing a total of 50 units per year. <p>As the manufactured goods are bulky (weighing several hundred tonnes) and, other than blades, cannot be stacked, the factory units require substantial external areas for storage of their finished product. These laydown areas are designed to be sufficient to ensure that manufacturing is never interrupted by the absence of available storage space.</p> <p>The physical size and weight of the manufactured</p>

Area	Use
	<p>components requires them to have access to a quay across nominally flat land (a natural feature of the AMEP site). Consequently this area is located in the immediate hinterland behind the quay. Figure 3.2 and 3.3 show typical transport solutions using Self Propelled Modulat Transporters (SPMTs).</p> <p>The principal components to be manufactured here are therefore:</p> <ul style="list-style-type: none"> • Nacelles 150-300T • Rotors 90-150T • Towers 200-400T • Blades 5-25T (60 m x 5 m) • Steel Foundations 600-800T
Supply Chain Park	<p>This area will be used for light manufacturing and does not therefore require direct access to the quay. Light goods manufactured in this area will be transported by normal delivery vehicles to factories located in the heavy component manufacturing area or transported to the quay for export.</p>
Overspill Storage Area	<p>The overspill storage area provides a buffer for storage of components and raw materials and thus takes account of uncertainty in the precise extent of storage to be provided on the site. This area is located adjacent to North Killingholme Haven Pits (NKHP).</p> <p>NKHP is part of the Humber Estuary SPA and Special Area of Conservation (SAC) and thus has protection under the EC Birds Directive and Habitats Directive respectively. NKHP is a key roost site for, <i>inter alia</i>, Black-tailed godwit at high tide, and can at times support the entire Humber population (c. 3 338 individuals, 5 year mean peak). NKHP has legal protection from disturbance arising from the construction and operation of any plan or project, and this includes AMEP (notably this would also include any 'plan or project' to develop a future Killingholme Loop along KIL2). Buffer areas around NKHP have been agreed with Natural England in order that the roost site remains undisturbed and these extend 200m from the site boundary.</p>

3.3 CONSULTATION ON THE PROPOSALS

3.3.1 The Applicant undertook formal consultation on the Indicative Masterplan in early 2011, following the procedures set down in Section 42 of the Planning Act 2008. In their response dated 14 March 2011, NR stated that they 'agree in principle to sell you (AHPL) the land in question (KIL2)', subject to a number of provisos.

3.3.2 On 6 October 2011, NR informed the applicant by e-mail that:

'(a)s agreed Network Rail has been undertaking industry consultation on the proposal to sell off a section of the Killingholme Branch to Able UK. Unfortunately the results of the work undertaken to date indicates that it will not be possible to sell off the branch, Able UK will be formally informed of Network Rails decision via the IPC process', (email: McCormick to Cram, 6/10/11 at 14:11).

3.3.3 In its Written Representation dated 29 June 2012, NR stated:

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.

3.3.4 In seeking to negotiate a legal Agreement with the Applicant during the Examination, NR offered to permit the applicant the right to a single new level crossing for exceptional loads but that was insufficient to serve the needs of the site and the commercial terms demanded were considered unreasonable. Accordingly, the Applicant concluded that it had no alternative to the compulsory acquisition of easements in order to cross the railway land.

3.4 IMPACT OF THE RAILWAY THROUGH THE SITE

3.4.1 Development of the Indicative Masterplan has always had appropriate regard to the route of the Killingholme Branch line through the site and the indicative proposals took due account of the mothballed status of the track and any reasonably foreseeable use arising from existing rights and consented development. Specifically, in answer to the Question 29 of the Second Set of Examiner's Questions the Applicant provided the following explanation.

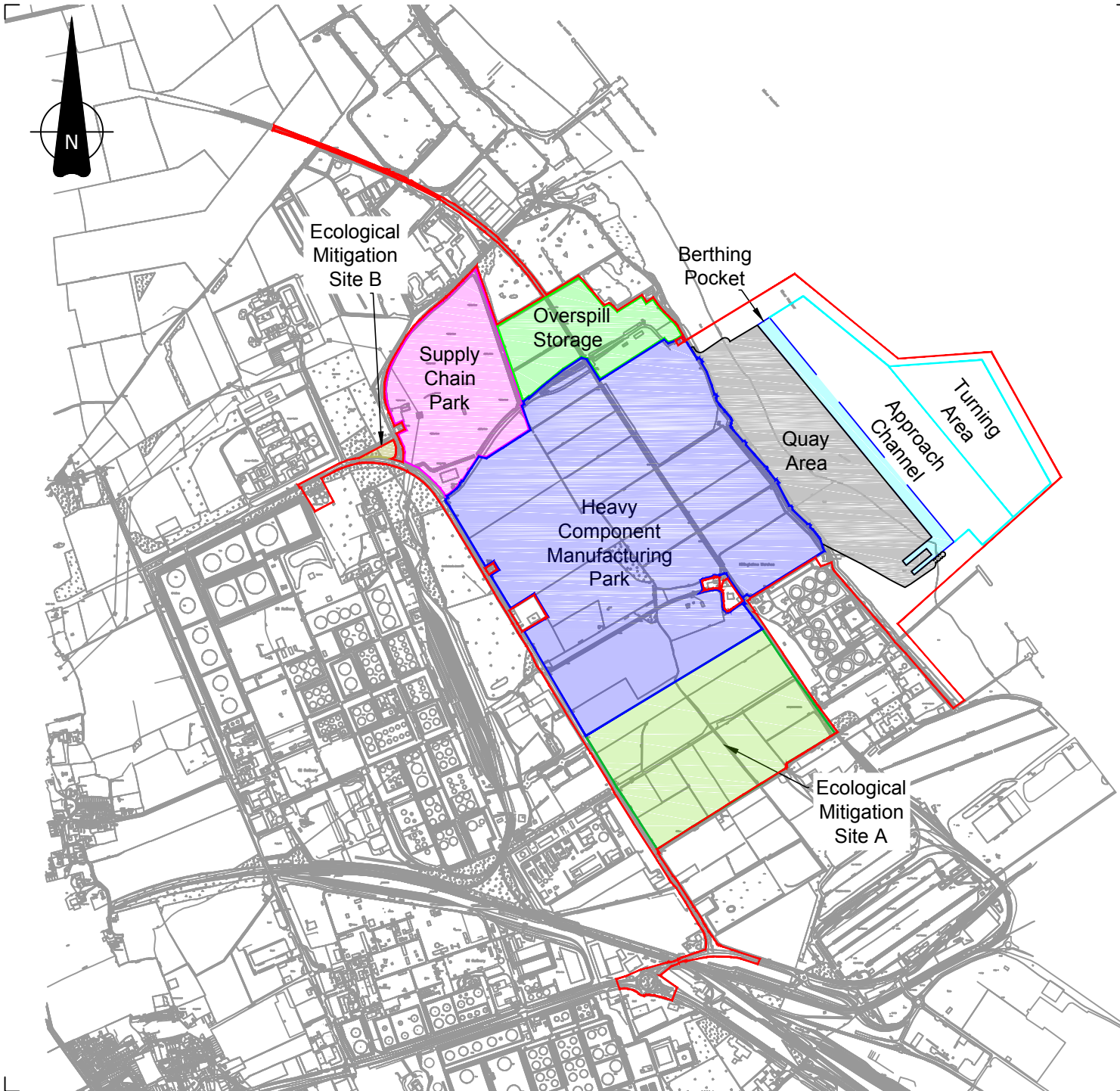
'6.4 In determining what alternatives are reasonably practicable, the applicant has considered what is possible and then made an assessment of what should be considered reasonable on a cost/benefit basis. Two possible options exist to ensure that the development can operate as a single coherent site: at grade (or level) crossings and grade separated (or bridge) crossings.

6.5 Bridge crossings will be substantially more costly to construct than level crossings, potentially incurring a cost penalty in the order of £5-10 million pounds. Network Rail has previously indicated that clearance of 6.4 m will be required between the track and the bridge soffit along this line and that a clearance of 4.5 m will be required between the track and the face of the bridge abutments. The bridge span would also have to allow for additional track for sidings and a culvert would be needed to allow for the continuation of a drainage ditch proposed along the eastern side of the rail corridor, as shown on the Indicative Masterplan. Spans of approximately 17 m might therefore be envisaged. Allowing for a span to depth ratio of 12-20 for the bridge deck results in an initial estimate of between 1.4 m for the abnormal load bridge and 0.85 m for the deck carrying only C&U vehicles.

6.6 *The bridge approach gradient would then need to be sufficiently shallow to be fit for the intended traffic. Those crossings that are intended to facilitate the movement of C&U vehicles and pedestrians would need an approach that was no greater than 5 per cent. A grade difference of (6.4 m (bridge clearance) + 0.85 m (deck thickness)) would therefore require an approach embankment of up to 148 m. Those crossings that are intended to facilitate the movement of abnormal loads being transported by SPMT vehicles would need an approach that was no greater than 2 per cent. A grade difference of (6.4 m (bridge clearance) + 1.4 m (deck thickness)) would therefore require an approach embankment of up to 390 m.'*

3.4.2 This is essentially the position that the Secretary of State has now asked the applicant to review against his requirement that the development of AMEP should not '*jeopardise any future operations of the Killingholme Branch railway*'.

3.4.3 However, whilst the development of AMEP should not '*jeopardise the future operations of the railway*', that is not understood to mean that the Applicant should make any direct or indirect financial contributions to developments proposed by others that include the use of the Killingholme Branch Line. The Applicant avers that any such future development proposals should be fully funded by their respective promoters (and therefore their beneficiaries). Thus, it is understood that the Secretary of State simply requires an assurance that the development of AMEP will not exclude the possibility of other parties developing the track in the future.



Key & Notes

Rev.	Date	Comments	Drn	Chk	App
A	01/10/2013	Preliminary Issue	JMH	RC	RC



ABLE UK Limited
 ABLE House
 Billingham Reach Industrial Estate
 Teesside, TS23 1PX
 United Kingdom
 Tel: +44(0)1642 806080
 Fax: +44(0)1642 655655

Project:	ABLE Marine Energy Park
Client:	ABLE UK Limited
Drawing Title:	AMEP Core Development Areas

FOR INFORMATION

Scale:	Drawn By	Checked By	Approved By
1:25,000 @A4	J Horsman	R Cram	R Cram
Date:	01/10/2013	01/10/2013	01/10/2013
Drawing No:	Figure 3.1		Revision: A



Figure 3.2: Offshore Wind Turbine Foundation



Figure 3.3: Offshore Wind Turbine Nacelle

4 THE KEY CHARACTERISTIC OF THE AMEP PROJECT

4.1 THE SCALE OF THE DEVELOPMENT

4.1.1 In seeking to understand whether alternative rail alignments are 'reasonably practicable' or not, the need for the overall scale of development needs to be understood. This is because the principal adverse impact of any rail realignment through the site is its effect on the scale of development proposed, and this will have an substantial indirect cost. Whilst the need for a development of the scale proposed is addressed extensively in Chapter 5 of the ES, for ease of reference, the key issues are repeated below.

The Products

4.1.2 One reason that AMEP is needed is that Europe must develop large capacity offshore wind turbines to make the delivery of sufficient offshore wind turbine capacity feasible and thus reduce the environmental impacts associated with manufacturing, deployment and maintenance. In other words fewer turbines will be needed if the units are 'scaled up'. These larger turbines will need to be manufactured at portside locations. Other marine energy components are also likely to need manufacturing facilities at UK ports but development of those products is much less advanced and the current investment focus is on offshore wind. Developing such manufacturing and installation facilities in the UK also enhances the nation's security of energy supply, and reduces the need to import bulk fuels from overseas.

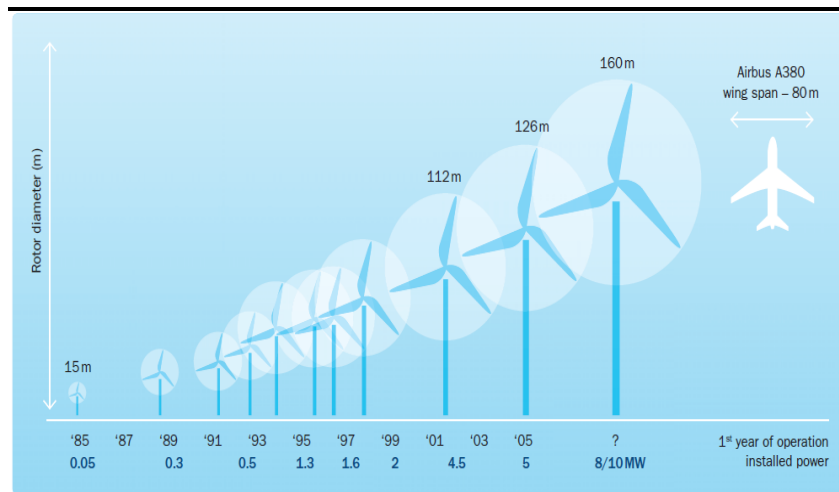
4.1.3 All of the principal components of an Offshore Wind Turbine (OWT) will need a portside manufacturing site. It is important that the nacelle, tower and blades are delivered to the wind farm at the same time and, ideally, by the same vessel. In the future it may be practical to significantly reduce operating costs by fully completing assembly of these components on-shore. Consequently the best strategic solution is to co-locate the manufacturing plants with a construction port.

4.1.4 Table 4.1 shows how the size and weight of turbine components will increase with increased generating power. Development to date is illustrated in Figure 4.1

Table 4.1 Growing Scale of Current and Future Turbines

	3-4 MW		5-6 MW		8-10 MW	
	Mass (tonnes)	Dimensions (metres)	Mass (tonnes)	Dimensions (metres)	Mass (tonnes)	Dimensions (metres)
Nacelle and hub	180	13x4x4	400	15x8x8	500-700	16x9x9
Blade (3 per turbine)	20	50x5x3	25	65x7x3.5	30	75x8x4
Tower	250	80x5x5	300	85x6x6	500	100x7x7

Figure 4.1 Size Evolution of Wind Turbines over Time



Source: (EWETP, 2008)

New Manufacturing Facilities

4.1.5 Given the substantial reliance by the UK on future low carbon energy production from offshore wind, and the very limited production capacity in Europe as a whole, it is imperative that the UK provides suitable manufacturing sites, both in scale and location, for the sector to expand. There is however no overall Government strategy for the identification of such sites, beyond the issue by DECC of a UK Offshore Wind Ports Prospectus in 2009. The allocation of such sites is entirely market led. Nevertheless, stated Government policy, as set out in the Renewable Energy Strategy, is to maximise the economic benefits for the UK. Government policy is clear: at a speech to the CBI in October 2010, the Prime Minister announced support for the offshore wind sector saying:

*'(w)e need thousands of offshore turbines in the next decade and beyond yet **neither the factories nor these large port sites currently exist. And that, understandably, is putting off private investors.** So we're stepping in. To help secure private sector investment in this technology, we're providing up to €67.22 million to meet the needs of offshore wind infrastructure at our ports. And to help move things forward, the Crown Estate will also work with interested ports and manufacturers to realise the potential of their sites. It's a triple win. It will help secure our energy supplies, protect our planet and the Carbon Trust says it could create 70,000 job', (DECC, press release 2010/111, emphasis added).*

Overall Site Requirements

4.1.6 The land requirements for manufacturing facilities for offshore wind components are influenced by the rate of installation offshore. Experience gained in the last decade conclusively shows that the offshore installation process is extremely weather dependent with many projects delayed due to adverse weather conditions, either heavy swells or high winds. One of the principal reasons for this is that, whilst foundation structures can be installed in a range of airflow conditions and wind force, nacelles and blades require

relatively still air; in particular, the assembly of the blades requires nearly calm weather. This means that installation rates are unpredictable and seasonally dependent, with the majority of installation campaigns for the superstructures planned between late spring and early autumn. This gives rise to an extreme stockpiling of towers, blades and nacelles and foundations in order to exploit good weather periods during which there is very intensive installation or servicing work. Accordingly, the components of OWTs need to be stockpiled at AMEP to enable the factories to maintain constant rates of production.

4.1.7 To develop a significant offshore wind manufacturing sector in the UK, the country must provide port sites for the industry that enable it to grow and compete for investment on a European and even a world stage. In 'UK Ports for the Offshore Wind Industry: Time to Act' (DECC, 2009), it is stated that:

'(a) number of wind turbine manufacturers have stated clearly that they would not choose to establish turbine assembly facilities in the UK unless there were also sources of supply of key components also in UK. In terms of value added, the component manufacturing facilities also are much more significant than simply turbine assembly. This means that the UK needs to establish a key component supply base in parallel to attracting turbine manufacturers to set up an assembly plant in the UK.

*A number of turbine manufacturers have a strategy to establish on a **single new coastal site** their own turbine assembly facilities alongside key component manufacturing facilities. Depending on the range of products and scale of operations, these could employ up to 5,000 people on each site.*

The requirements for such sites are:

- **Located on North Sea** or English Channel to enable export to Continental projects as well as supplying to UK offshore projects;
- **Up to 500 hectares** of flat area for factory and product storage;
- **Direct access to dedicated high load bearing deep water quayside** (minimum 500m length); and
- **Ease of landside logistics and access to skilled workforce.'**

Port Facilities

4.1.8 In 2010, The Crown Estate published 'A Guide to an Offshore Wind Farm'. This document provides useful data on, amongst other things, the requirements for construction ports serving the offshore wind energy sector. Chapter 5 of that report considers the requirements for installation and commissioning and provides a brief specification for a construction port to be used for the pre-assembly of around one hundred 3 MW turbine components per year. The report states that:

'Construction port¹ requirements are typically:

- *At least 8 hectares suitable for lay down and pre assembly of product;*

¹ In the context of AMEP, a "construction port" needs to be understood as a single 200-300m quay with associated land to the rear.

- *Quayside of length 200–300m length with high load bearing capacity and adjacent access;*
- *Water access to accommodate vessels up to 140m length, 45m beam and 6m draft with no tidal or other access restrictions;*
- *Overhead clearance to sea of 100m minimum (to allow vertical shipment of towers);*
- *Sites with greater weather restrictions or for larger scale construction may require an additional lay-down area, up to 30 hectares'.*

4.1.9 In summary, the Crown Estate estimates that, if the UK is to maximise the economic opportunity of the emerging offshore wind sector, eleven ports will be required along the east coast of Britain by 2020. This amounts to a total quay requirement of 2,200-3,300 m. The report states that:

'Failure to make construction ports available will affect the commercial attractiveness of projects as well as making achievement of 2020 targets dependent on Continental ports. Apart from the loss of economic activity in the UK, Continental ports may well be encouraged to support their own national projects as a priority over UK projects.'

4.2 MANUFACTURING CLUSTERS

4.2.1 In 2008 the British Wind Energy Association commissioned Bain and Company to report on the potential development options in relation to wind energy. Their report, 'Employment Opportunities and Challenges in the Context of Rapid Industry Growth', assessed three possible scenarios:

The static case – This scenario assumes failure to achieve leadership in offshore development and the absence of manufacturing within the UK that would lead to significant imports and limited exports. By 2020, this scenario would lead to wind capacity of 22 GW, cumulative investment of £19 billion and 23 000 jobs. Design and manufacturing would remain at its current level, i.e. covering 15 per cent of the UK market for offshore turbines.

Solid Progress This scenario assumes clear political support for wind energy, market leadership in offshore development, the UK becoming self-supplying, and achieving a limited degree of export in knowledge-related activities such as technical consulting and offshore operations. By 2020, this scenario would lead to wind capacity of 27 GW. This scenario would generate cumulative investment of £26 billion and 36 000 jobs. Design and manufacturing would cover 35 percent of the UK's offshore turbine market along with a limited amount of export.

The Dynamic case - This scenario, assumes strong political support and recognition of the UK as the global centre of

expertise in offshore development with the development of manufacturing clusters that allow the UK to become self-supplying and a significant exporter of both knowledge and components. This scenario would generate a cumulative investment of £39 billion and generate 57 000 jobs. Design and manufacturing would cover 70 percent of the UK market for offshore turbines and would be exporting a similar volume to continental Europe.

- 4.2.2 The clear conclusion of the analysis by Bain and Company is that manufacturing clusters that enable the efficient production of offshore components are an essential element of a thriving offshore wind industry. Examples of such clustering are already emerging at Bremerhaven and Cuxhaven in Germany

Alternative Clustering Scenarios

- 4.2.3 In paragraph 3.1.8 it was noted that a manufacturing cluster would require 'up to 500 hectares of flat area'. To examine this particular requirement in more detail, two indicative clustering scenarios have been developed by an independent consultant, BVG Associates, to identify the total land and quayside requirements of each.
- 4.2.4 The indicative scenarios include a range of assumptions on facility sizes, buffer storage space, goods handling zones and the commercial considerations of both the turbine manufacturers and their supply chain.

Facility Size

- 4.2.5 In order to understand the land requirements of a future production cluster, it is necessary to estimate the size of manufacturing facilities capable of producing larger components, in far greater quantities, than anything that currently exists. The factory footprints included in the scenarios are based on a study of existing facilities and discussions with key players in the industry about their future plans and their understanding of how facility sizes are expected to grow.
- 4.2.6 One key factor influencing the footprint of manufacturing facilities is the need for large areas of storage space to balance steady production rates with the peaks and troughs (mainly weather related) of installation activity. It is possible to stack blades in their handling frames up to three high and it is also possible to store towers vertically if the ground is sufficiently engineered to support the concentrated loads.
- 4.2.7 The reasonable estimate of land take for manufacturing facilities is set out in *Table 4.2*.

Table 4.2 Manufacturing Facility Building and Plot Areas

For 1GW/yr of output (200/5MW turbines):	Site area (ha)	Building area (m ²)
Nacelle and hub	10-15	5 000-10 000
Blade (3 per turbine)	20-25	25 000-30 000
Tower	20-25	15 000-20 000
Supply chain (4 units)	12-16	4x(5 000-6 000)

Description of Indicative Scenarios

4.2.8 The indicative scenarios (ISs) assessed are described below:

IS A

4.2.9 In this case a single large offshore wind turbine manufacturer is located on a site alongside a proportion of its supply chain. The site produces around 400 nacelles a year, of which 75 percent are installed with towers and blades directly from the same site with the remaining 25 percent exported to other construction ports.

4.2.10 This scenario has been developed to represent the minimum scale of a viable cluster surrounding a large offshore wind turbine manufacturer. The site would comprise 7 factories and produce around 30 per cent of the main OWT components needed for UK waters. Factories included in this scenario are:

- a single 2 GW per year nacelle assembly;
- an in-house 1 GW blade facility;
- independent 1 GW tower facility;
- independent 2 GW generator manufacturer;
- independent 2 GW slewing ring manufacturer;
- independent 3 GW castings facility; and
- independent 3 GW composite component manufacturer.

4.2.11 Companies supplying all the key sub-components and components are represented on the site, but it is assumed that every supply company exports a share of its capacity to customers elsewhere and that the turbine manufacturer dual sources all components using imported units to supplement on-site production. Monopile production takes place at a combined tower/foundation facility, but no next-generation foundation production has been included and it is assumed that if required they are manufactured elsewhere and delivered directly to the wind farm sites.

4.2.12 This scenario requires a total land area of approximately 150 ha, as set out in *Table 4.3* below.

Table 4.3 *Alternative A: Land Area Requirement*

Activity	Land area
Main component manufacture	70ha
Sub-component manufacture	33ha
Construction	33ha
Import/export	20ha

4.2.13 In terms of quayside, this alternative allows for two construction berths, two export/import berths and two support berths giving a total quayside length of 960 - 1200 m. Such an arrangement offers a ratio of quayside length to installed capacity of 640 - 800 m per GW. It is estimated that around three such sites would be required in the UK.

IS B

4.2.14 This scenario co-locates two nacelle manufacturers, along with a proportion of their supply chain. The site produces a total of around 700 nacelles of which 500 are installed with towers and blades directly from the site and 200 are exported to other construction ports.

4.2.15 The site would comprise 12 factories and produce around 70 per cent of the main OWT components needed for UK waters. Factories included in this scenario are:

- two nacelle manufacturers assembling a total of 3.5 GW/year;
- two blade facilities manufacturing 2 GW/year;
- two independent tower facilities manufacturing a total of 2 GW/year equivalent;
- two independent generator manufacturers producing a total of 3.5 GW/year equivalent;
- independent slewing ring manufacturer producing a total of 3 GW/year equivalent;
- independent castings foundry and heavy fabrications facility producing a total of 2.5 GW/year equivalent; and
- two on-site suppliers of composite components producing a total of 3 GW/year equivalent.

4.2.16 This alternative requires a total land area of approximately 280 ha, as shown in the *Table 4.4* below.

Table 4.4 Alternative B Land Area requirement

Activity	Land area
Main component manufacture	155ha
Sub-component manufacture	44ha
Construction	55ha
Import/export	25ha

4.2.17 In terms of quayside, the design allows for four construction berths, three export/import berths and two lay berths giving a total quayside length of 1 440 – 1800 m. Such an arrangement offers an improved ratio of quayside length to installed capacity of approximately 580 -720 m per GW. It is estimated that an additional 150 ha site would be required to serve the UK market alone, in addition to a site that is the equivalent of IS B.

4.3 SUMMARY

4.3.1 The key characteristic for a Marine Energy Park that aims to enable a significant manufacturing cluster to develop, is a substantial land parcel ideally it should be at least 150 ha. This area needs to be flat to enable the transportation of large and very heavy components from their place of manufacture to a waterside frontage and to enable cranes to operate throughout the site. The waterside frontage must have either an existing heavy-duty quay, or, alternatively the land must be appropriately designated for marine development under local planning policies.

4.3.2 To meet the identified need established in the national renewable energy action plan; to address longer term national and European policy for a zero carbon energy industry, and to promote growth in its manufacturing sector, the UK needs to establish one or more MEPs. Such facilities, if sufficiently large and located in a commercially advantageous position, have the capacity to attract significant private sector investment. The urgency and scale of the need justifies the development of a large site at this time. This will not however preclude the need for further significant development at other ports in the future.

5 SITE CONSTRAINTS TO ALTERNATIVE RAIL ALIGNMENTS

5.1 GENERAL

5.1.1 The constraints to any feasible rail realignment are shown in Figure 3.1 and explained in appropriate detail below.

5.2 SOUTH

Mitigation Area A

5.2.1 Because of the legal protection enjoyed by birds on the Humber Estuary, the applicant is under a legal obligation to mitigate the disturbance to birds currently using the application site. To this end the Applicant has agreed with Natural England the size of mitigation area required and its location (Mitigation Area A). The plot has a central 'core area' of 16.7 ha which is protected from disturbance at all times by a 150m buffer that is in the control of the applicant. Accordingly, the applicant can guarantee the core area will be substantially undisturbed by anthropogenic activity. The existing rail line marks the eastern edge of this buffer. In short therefore the rail realignment cannot be routed through any of the plot set aside as it would introduce disturbance to an area that the Applicant is obliged to protect from disturbance.

5.2.2 The spatial extent of the core area (16.7 ha), the requirement to provide the core area with a 150m buffer and the requirement the plot to be proximate to the Estuary, means that there is no other part of the site that can reasonably be used for this purpose.

5.3 WEST

Rosper Road

5.3.1 Rosper Road is part of the local highway network, along which all traffic will arrive and depart from AMEP. The Total Oil Refinery owns the land to the west of Rosper Road. Adjacent to AMEP, from Station Road northwards, the Refinery site is identified in the North Lincolnshire Local Plan as a Site of Importance for Nature Conservation and is a wood known as Burkinshaw's Covert. Any rail realignment must therefore be routed to the east of Rosper Road and given that the purpose of the realignment is to avoid the need for level crossings, the realigned track must be sufficiently distant from Rosper Road to allow for bridge approaches to be formed at reasonable gradients for normal road traffic to pass over the new track. Taking into account the evidence provided by the Applicant during the Examination, (reproduced in paragraph 2.4.1 above), a separation distance between Rosper Road and the realigned track of 250 m is considered appropriate.

5.4 NORTH

North Killingholme Haven Pits

5.4.1 NKHP is part of the Humber Estuary SPA and SAC and thus has protection under the EC Birds Directive and Habitats Directive respectively. NKHP is a key roost site for, *inter alia*, black-tailed godwit at high tide, and can at times support the entire Humber population (c. 3 338 individuals, 5 year mean peak). NKHP has legal protection from disturbance arising from the construction or operation of any plan or project, and this includes AMEP



**ABLE MARINE ENERGY PARK
RESPONSE TO DEPARTMENT FOR
TRANSPORT 'MINDED TO APPROVE' LETTER**

OCT 2013

(notably this would also include any 'plan or project' to develop a future Killingholme Loop along KIL2). Buffer areas around NKHP have been agreed with Natural England in order that the roost site remains undisturbed and these extend 200m from the site boundary. At this stage it must therefore be assumed that any works to realign the railway should avoid encroaching on the buffer, and this limits the northern extent of the any realignment.

6 ALTERNATIVE SOLUTIONS

6.1 ALTERNATIVE SCALE OF THE DEVELOPMENT

6.1.1 The applicant set out its case for the scale of the development in Chapter 6 of the Environmental Statement and in associated appendices. In commenting on this, the Panel reported the following to the Secretary of State.

'Scale of development

18.154 The Panel has considered the possible question of whether the scale of the development has been justified. If, for example, the manufacturing area could be significantly smaller then it might be capable of being developed on the east of the railway line, possibly obviating any compulsory acquisition of assets or rights from NR. If the quay could also be smaller then the triangle site owned by ABP might be excluded, thus removing the conflict relating to the proposed WDJ.

18.155 The Panel has come to the view, however, that it can only deal with the application before it, in its totality (acknowledging the changes that have taken place in the course of the examination). It is not for the Panel to consider amendments to the scheme or a recalculation of the requirements based on the applicant's assumptions or any other assumptions. The Panel considers that on balance the applicant's assumptions and calculations are reasonable. The applicant has not stated, nor is it obliged to state, the commercial calculations behind it. But the objective of the proposed development is clear: to create a quay and supporting manufacturing area which is capable of supplying a very large part of the potential offshore wind requirements in the North Sea – to maximise the potential of the site, not to economise on it.

18.156 Thus the justification for each parcel has to relate to the scheme as put forward by the applicant, and whose overall case the Panel accepts.

The specific characteristics of the site

18.157 The proposed development put forward by the applicant is based on the maximum quay length supported by an essentially regular shaped area of associated development behind it, given the constraints of existing major land uses adjacent, with access to the road network by the shortest and most direct routes [ES Chapter 4, APP059].

18.158 The Panel considers that this is a logical approach which seeks to make the most efficient use of the site. There is no reason to conclude that any parcel of land has been added gratuitously to the land sought', (underline added).

6.1.2 Meanwhile the Secretary of State noted the significant benefits that would arise from the scale of AMEP, as noted below

'Social and economic significance of the project

24. The Secretary of State notes the strong support expressed for the project by the local MPs, the two Lincolnshire local authorities and the LEP because of the key role the project would play in regenerating the Humber region. He notes in particular the applicant's unchallenged estimate of

possibly 9,000 new jobs as a result of implementing the project; North Lincolnshire Council's view of this as a "transformational" project of critical significance to its economic strategy for the area; and the LEP's view of the project as a uniquely promising opportunity for the region (PR 11.1-6, 11.11-13). While recognising that Associated British Ports ("ABP") did not share this view of the project's significance, the Secretary of State agrees with the Panel that in deciding the Order application, significant weight should be given to the strong local support for the scheme because of its likely socio-economic potential and associated benefits (PR 11.8-10, 11.14).'

6.1.3 Thus, it is quite evident that any solution that adversely affects the potential scale of the development would go to the heart of the reason it has been consented and would be incompatible with the overall objectives of the Project. Specifically, any alternative that reduced the area available for heavy component manufacturing would result in fewer of the major OWT components being manufactured on the site, yet this is the specific need being addressed, so the adverse impact of a reduced scale of development would be significant.

6.1.4 In addition however, the financial viability of the scheme as a whole is predicated on attracting heavy manufacturing to the site. Any reduction in the area available for heavy manufacturing has a very significant indirect financial impact by reducing future revenue.

6.2 DIVERSION OF THE KILLINGHOLME BRANCH LINE: 60 MPH LINE SPEED

Rail Alignment

6.2.1 A suitable rail alignment that respects the constraints of the site and that would be suitable for a line speed of 60 mph has been developed by TATA Steel Projects, and is shown in Figure 6.1.

Impact on Heavy Component Manufacturing Area

6.2.2 Given the objective of the rail diversion is to negate any requirement for heavy load crossings, the impact of this option results in the area available for heavy component manufacturing being reduced from around 158 ha to just less than 64 ha.

Impact of Project Viability

6.2.3 The significant capital cost to the developer is the quay. The cost of the quay is essentially recovered from tenants on the Manufacturing Park who need direct access to, and use of, that feature. The applicant is certain that the significantly reduced area available for heavy component manufacturing would be insufficient to justify the investment in the quay rendering the project unviable.

6.3 DIVERSION OF THE KILLINGHOLME BRANCH LINE: 25 MPH LINE SPEED

Rail Alignment

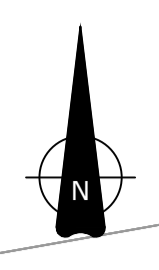
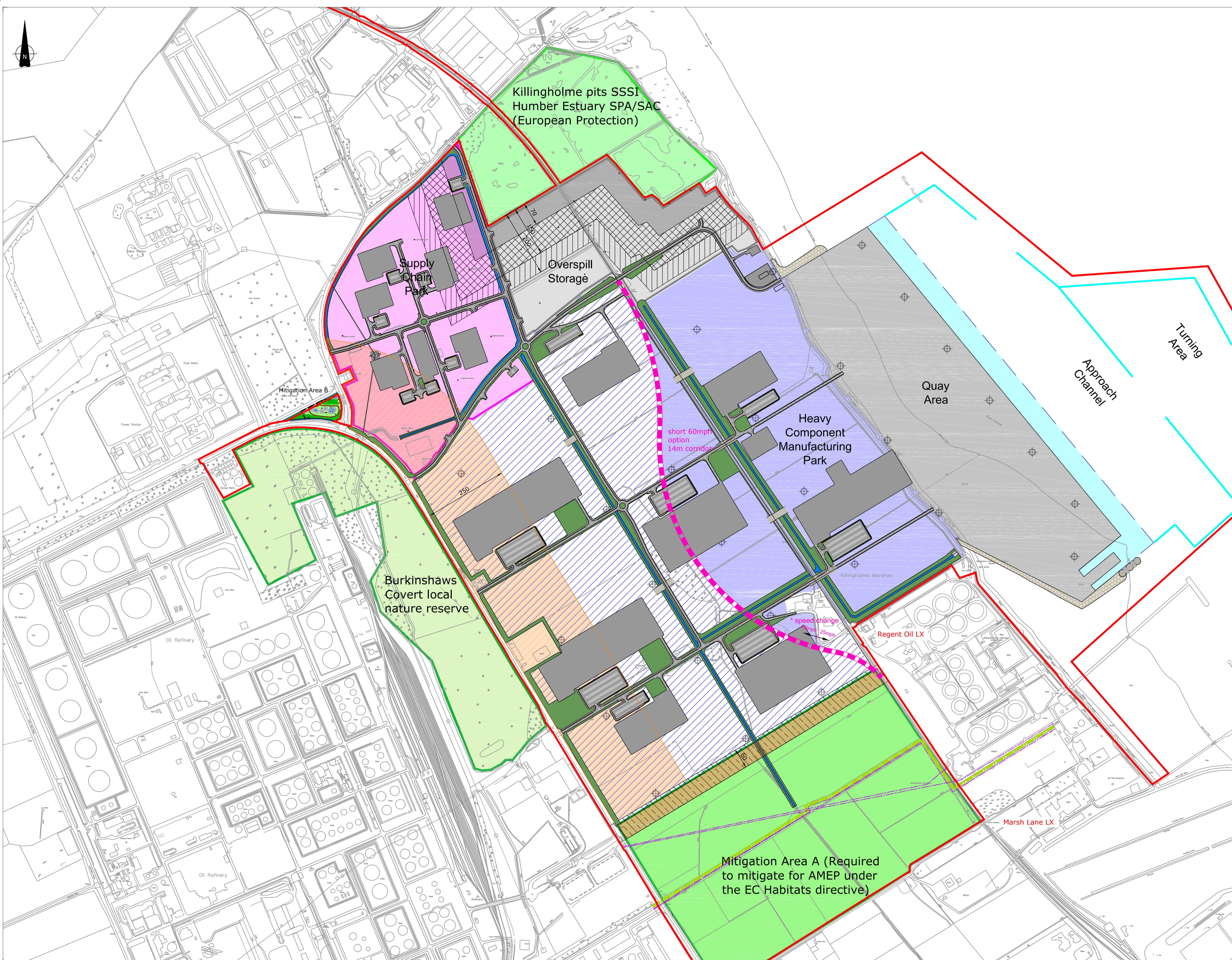
6.3.1 A suitable rail alignment that respects the constraints of the site and that would be suitable for a line speed of 25mph has been developed by TATA Steel Projects and is shown in Figure 6.2.

Impact on Heavy Component Manufacturing Area

- 6.3.2 Given, again, that the objective of the rail diversion is to negate any requirement for heavy load crossings, the impact of this option results in the area available for heavy component manufacturing being reduced to around 96 ha, or two-thirds of its current extent. The site would support a significantly smaller cluster than that shown in the Indicative Masterplan. However, the size of the quay would not be expected to reduce in the same ratio and would probably be no smaller, refer to paragraph 4.2.13.

Impact of Project Viability

- 6.3.3 The income generated by the smaller cluster of heavy manufacturing would be much reduced compared to the existing proposal (a one-third reduction), yet the capital costs of development would be very similar. Accordingly the loss of revenue would render the project un-viable.



Key & Notes

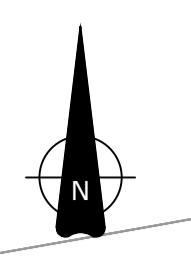
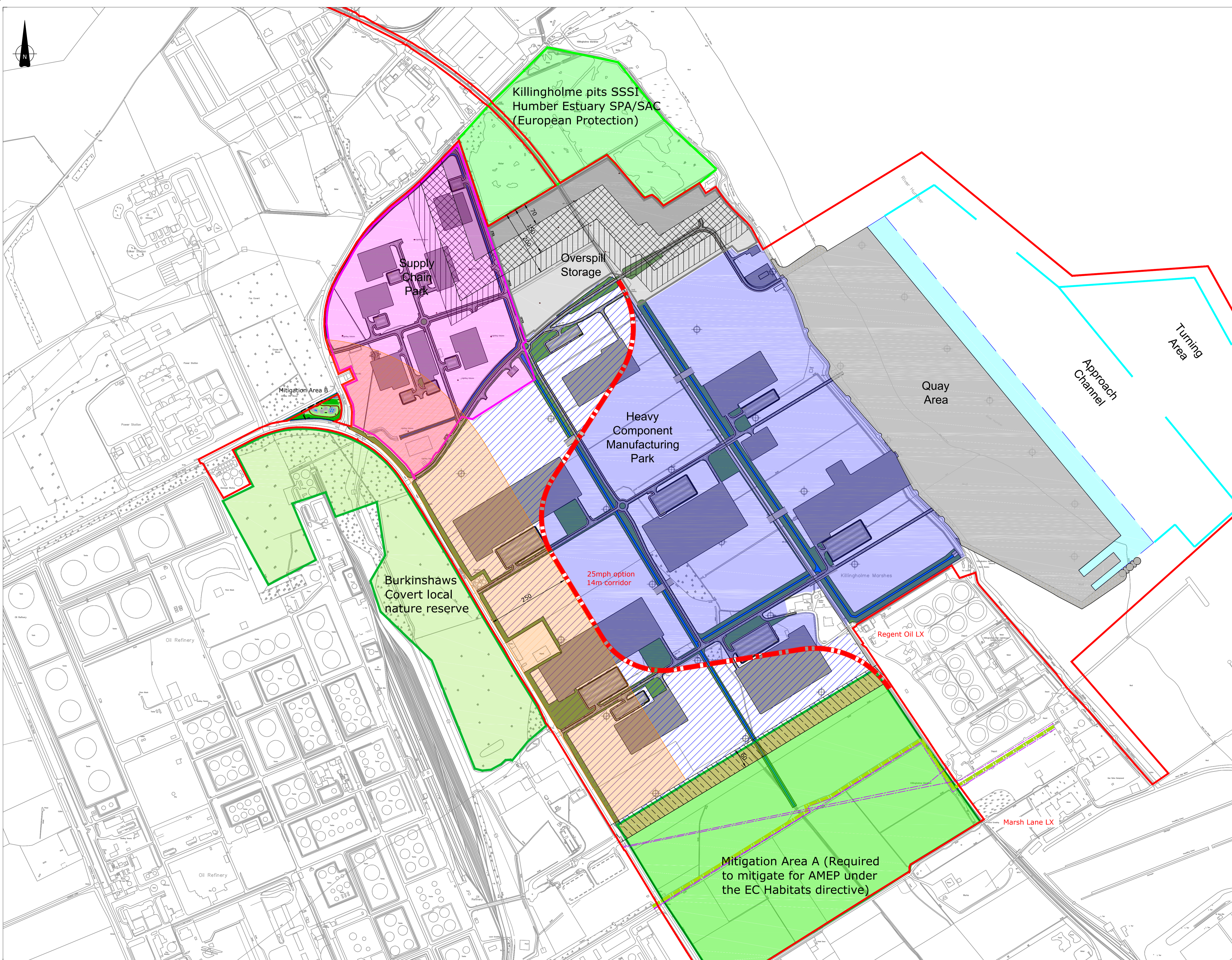
- Length of road required to enable suitable gradient to pass over railway via bridge
- Heavy component manufacturing park. Area = 63.88 ha
- Heavy component manufacturing park area lost = 91.27 ha

Rev.	Date	Comments	Prep.	Chk.	App.
A	24/09/2013	Preliminary Issue	JHL		



Project:	ABLE Seaton Port
Client:	ABLE UK Limited
Drawing Title:	Fig. 6.1 Rail Realignment Through AMEP - 60MPH Option

PRELIMINARY			
Scale:	1:5,000 (B1)	Drawn By:	J. Hopman
Date:	24/09/2013	Checked By:	
Drawing No:	AME-006-00021	Revision:	A



Key & Notes

- Length of road required to enable suitable gradient to pass over railway via bridge
- Heavy component manufacturing park. Area = 95.8 ha
- Heavy component manufacturing park area lost = 58.9 ha

Rev: A	Date: 24/09/2013	Description: Preliminary Issue	Prep: JHL	Chk: CJK	App: App
--------	------------------	--------------------------------	-----------	----------	----------

ABLE UK Limited
ABLE House
Bilingham Road Industrial Estate
Toscoffe, TS23 2JF
United Kingdom
Tel: +44(0)1642 806880
Fax: +44(0)1642 635635

Project:	ABLE Seaton Port
Client:	ABLE UK Limited
Drawing Title:	Fig. 6.2 Rail Realignment Through AMEP - 25MPH Option

PRELIMINARY			
Scale:	1:5,000 (B1)	Drawn By:	J. Hopman
Date:	24/09/2013	Checked By:	
Drawing No:	AME-006-00020	Revision:	A

7 CONCLUSIONS

7.1 SUMMARY POINTS

7.1.1 The key characteristic of the project is its sheer scale. In this respect the Panel observed that:

'the objective of the proposed development is clear: to create a quay and supporting manufacturing area which is capable of supplying a very large part of the potential offshore wind requirements in the North Sea – to maximise the potential of the site, not to economise on it'.

7.1.2 Alternative solutions that significantly impact on the scale of the development proposed will have a significant adverse effect on the socio-economic benefits of the project and also on the revenue that is ultimately needed to fund it.

7.1.3 Options to divert the Killingholme Branch Line through the AMEP site are significantly constrained by three physical features:

- a) Ecological Mitigation Area A – the size and location of this plot has been agreed with Natural England and is required to comply with the EC Birds and Habitats Directives;
- b) Rosper Road, and
- c) North Killingholme Haven Pits - NKHP is part of the Humber Estuary SPA and SAC and thus has protection under the EC Birds Directive and Habitats Directive respectively. NKHP is a key roost site for, *inter alia*, Black-tailed godwit at high tide, and can at times support the entire Humber population (c. 3 338 individuals, 5 year mean peak). NKHP has legal protection from disturbance arising from the construction or operation of any plan or project, and this includes AMEP.

7.1.4 The Applicant considered diverting the existing rail alignment through the site during the EIA process but discounted it, as it could not deliver the benefit of avoiding the need to cross the line at grade without having significant adverse impact on the scale of the development and its financial viability.

7.1.5 The applicant considered the alternative of grade separated crossings during the EIA process but discounted them because, in the particular circumstances of this case, they were not reasonably practicable. The applicant reported this to the Examining Panel.

7.1.6 Two options for alternative rail alignments have been illustrated in this report, which divert the existing track westwards, but stay within the application boundary. Both have a significant impact on the scale of the development and also consequently on its financial viability. In consequence, a western diversion of the rail alignment is not considered a feasible solution within the context of the AMEP application.