The Lake Lothing Third Crossing, Lowestoft Development Consent Order 201[*]

Document: SCC/LLTC/EX/61

Environmental Statement Volume 3 - Appendix 5A

Interim Code of Construction Practice – Clean

Revision 2

Planning Act 2008

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

Regulation Number: 5(2)(a)

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Contents

Acronyms

ABP	Associated British Ports
BPM	Best Practicable Means
CDM	Construction Design and Management Regulations
CMS	Construction Method Statements
CoCP	Construction Code of Practice
CoPA	Control of Pollution Act 1974
DCO	Development Consent Order
ECoW	Ecological Clerk of Works
ES	Environmental Statement
GAC	Generic Assessment Criteria
GI	Geotechnical Site Investigations
IAQM	Air Quality Management
NSR	Noise Sensitive Receptors
SCC	Suffolk County Council
SWMP	Site Waste Management Plans
WDC	Waveney District Council

1 Introduction

1.1 The Scheme

1.1.1 The scheme involves the construction, operation and maintenance of a new bascule bridge highway crossing linking the areas north and south of Lake Lothing in Lowestoft, hereafter referred to as the Lake Lothing Third Crossing ("the Scheme").

1.1.2 The Scheme would provide a new single-carriageway road crossing of Lake Lothing, consisting of a multi-span bridge with associated approach roads, and would comprise:

- an opening bascule bridge over the Port of Lowestoft, in Lake Lothing;
- on the north side of Lake Lothing, a bridge over Network Rail's East Suffolk Line, and a reinforced earth embankment joining that bridge, via a new roundabout junction, to the C970 Peto Way, between Rotterdam Road and Barnards Way; and
- on the south side of Lake Lothing, a bridge over the northern end of Riverside Road including the existing access to commercial property (Nexen Lift Trucks) and a reinforced earth embankment (following the alignment of Riverside Road) joining this bridge to a new roundabout junction with the B1531 Waveney Drive.

1.1.3 The Scheme would be approximately 1 kilometre long and would be able to accommodate all types of vehicular traffic as well as non-motorised users, such as cyclists and pedestrians.

1.1.4 The opening bascule bridge design would allow large vessels to continue to use the Port of Lowestoft.

1.1.5 A new control tower building would be located immediately to the south of Lake Lothing, on the west side of the new highway crossing, to facilitate the operation of the opening section of the new bascule bridge.

1.1.6 The Scheme would also entail the following changes to the existing highway network:

- the closure of Durban Road to vehicular traffic at its junction with Waveney Drive;
- the closure of Canning Road at its junction with Riverside Road, and the construction of a replacement road between Riverside Road and Canning Road to the west of the Registry Office; and
- a new access road from Waveney Drive west of Riverside Road, to provide access to property at Riverside Business Park;
- improvements to Kimberley Road at its junction with Kirkley Run; and
- part-signalisation of the junction of the B1531 Victoria Road / B1531 Waveney Drive with Kirkley Run;
- the provision of a pontoon for use by recreational vessels, located to the east of the new highway crossing, within the Inner Harbour of Lake Lothing; and

- works to facilitate the construction, operation and maintenance of the Scheme, including the installation of road drainage systems; landscaping and lighting; accommodation works for accesses to premises; the diversion and installation of utility services; and temporary construction sites and access routes.

1.1.7 The works required for the delivery of the Scheme are set out in Schedule 1 to the draft DCO (application document reference 3.1), where they are referred to as "the authorised development", with their key component parts being allocated reference numbers, which correspond to the layout of the numbered works as shown on the Works Plans (application document reference 2.4). The General Arrangement Plans (application document reference 2.2) illustrate the key features of the Scheme.

1.1.8 Plate 1 below provides a diagrammatic representation of the Scheme:

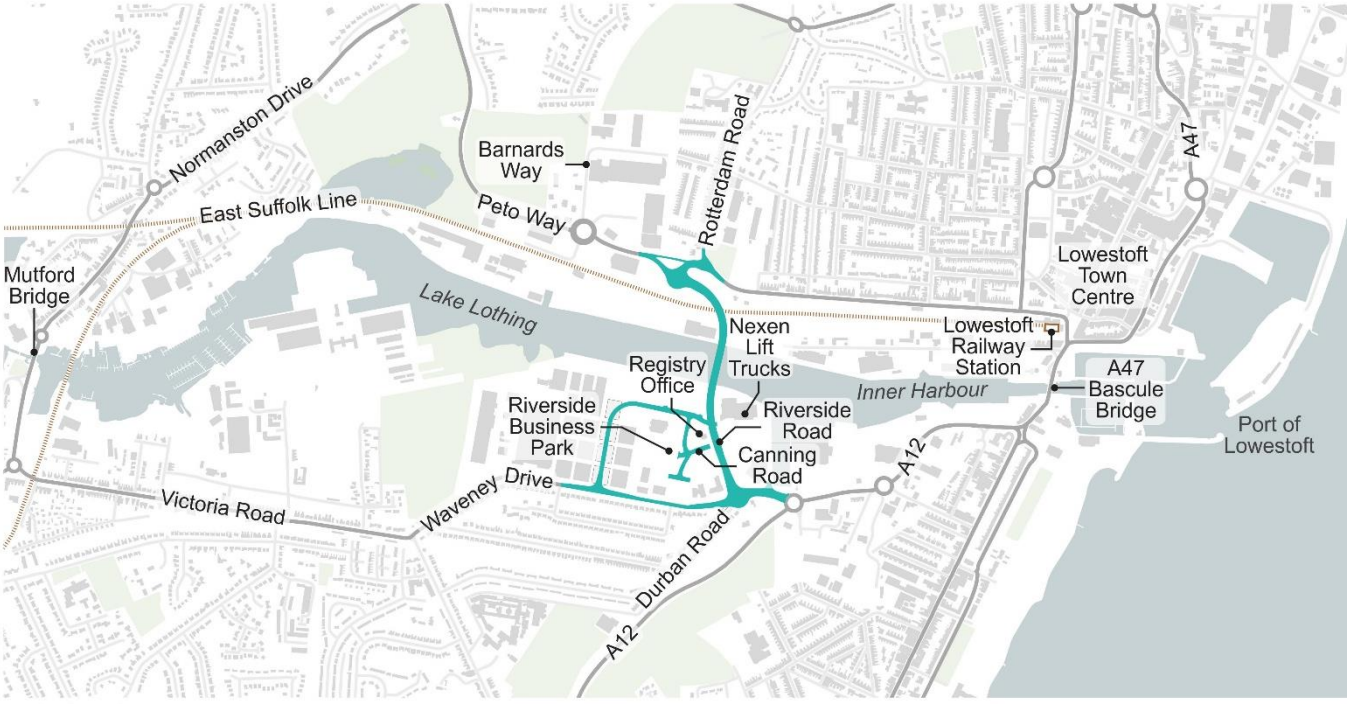

Plate 1: Location of the Scheme in Lowestoft

1.2 Purpose of this report

1.2.1 Requirement 4 of the dDCO requires the approval of a Code of Construction Practice (CoCP) by the county planning authority before the commencement of any part of the authorised development (as defined in the DCO). As set out in that requirement, any CoCP must be in accordance with the interim CoCP, which is this document.

1.2.2 It is updated from the interim CoCP submitted with the application (document reference 6.3/PINS document reference APP-163).

1.2.3 This interim CoCP includes:

- The context and underlying principles of environment management for the Scheme that the Contractor will be required to develop appropriate to the works, into any relevant CoCP;

- The principal obligations upon the appointed contractor for the construction of the Scheme. ;
- The guidelines to be used during construction and how they will be mandated and applied; and
- The details of, or references to, the construction phase mitigation measures for each relevant environmental topic assessed in the ES – and for which the CoCP will be the principal delivery mechanism.

1.2.4 The Applicant must appoint a main works contractor (the Contractor) to construct the Scheme. The Applicant will be responsible for supervising the detailed design to ensure it is in accordance with the parameters of the DCO and the commitments within this interim CoCP.

1.2.5 Following appointment, the Contractor will be responsible for producing CoCPs in phases appropriate to the planned works to be undertaken, that must be consulted upon with Waveney District Council and the Environment Agency and then approved by the county planning authority. A CoCP must provide greater detail and clarification on those matters relating to the detailed design and their construction methodology (and the mitigation measures that will therefore apply to this methodology) that cannot be finalised at this stage. As noted above, the production of any relevant CoCP is secured as a requirement of the DCO.

1.2.6 The interim CoCP acts as an environmental management system (EMS) framework, under which the construction of the Scheme must be undertaken to reduce possible impacts upon the environment. It sets out the high-level obligations that the Contractor must abide by and it is also a mechanism by which the construction-related mitigation identified in the ES is secured (noting that the DML, for example, also provides for this)

1.2.7 Any relevant CoCP must set out the Contractor's roles and responsibilities as well as methods of environmental controls that will be employed including:

- Training and briefing;
- Risk assessments and mitigation;
- stakeholder engagement; and
- monitoring to be undertaken during the construction of the Scheme.

1.2.8 A CoCP will apply to each part of the authorised development and must be in accordance with this interim CoCP. Compliance with an approved CoCP is a legal requirement of the DCO and any non-compliance would be a breach of the terms of the DCO. Suffolk County Council as county planning authority will be responsible for enforcing the Contractor's compliance with these requirements.

1.2.9 Nothing in this interim CoCP precludes a CoCP that is produced by the Contractor and submitted to the county planning authority, from reflecting changes in construction methodologies to those presented in this interim CoCP.

1.2.10 However, if such amendments are proposed, the Contractor will be required to evidence alongside the submission of any relevant CoCP that the proposed method will not give rise to materially new or materially different environmental effects, having regard to the assessment criteria used in the ES to determine the significance of effects for the affected receptors.

1.2.11 Nothing in this CoCP precludes a CoCP being amended by the Contractor following its approval by the county planning authority to reflect any changes to construction methodology. However, where an amendment is sought to an approved CoCP, such amendments may only be approved provided that the Contractor has demonstrated that the proposed method will not give rise to materially new or materially different environmental effects, having regard to the assessment criteria used in the ES to determine the significant of effects for the affected receptors.

2 General Construction Information

2.1 Programme

2.1.1 Subject to development consent, it is anticipated construction of the Scheme would commence in late 2019 and take approximately two years to complete.

2.1.2 An outline programme, based upon a two-year construction period that shows the main construction activities from mobilisation through to Scheme opening is shown in Plate 5-2 in Chapter 5 of the ES.

2.2 Construction activities

2.2.1 Section 5.6 of the ES identifies the main construction activities that will be undertaken to construct the Scheme.

2.3 Construction hours

2.3.1 The core working hours for construction of the Scheme will be 07:00-19:00 on weekdays and 07:00-12:00 on Saturdays, with the exception of bridge construction works, with a one-hour mobilisation and demobilisation period before and after the working day. Limited non-disruptive work such as office and preparatory work will take place either side of these hours at the site compounds.

2.3.2 'Mobilisation' in this context means: the arrival and departure of the workforce at the site and movement to and from places of work (any relevant CoCP must require that if such vehicles are parked, engines shall be turned off and staff shall be considerate towards neighbours with no loud music or raised voices); general refuelling (from jerry cans only); site inspections and safety checks; site meetings (briefings and quiet inspections/walkovers); site clean-up (site housekeeping that does not require the use of plant); site maintenance; and low-key maintenance and safety checking of plant and machinery (provided this does not require or cause hammering or banging). It does not include lorry movements into and out of site.

2.3.3 The contractor must endeavour to undertake all noisy activities that are likely to lead to disturbance, specifically the use of the plant, within the core working hours. However, due to the nature of the surrounding land uses and the need to reduce as much as feasible any impact upon neighbours, some operations may require work outside of these core hours and will take place during the daily mobilisation/demobilisation period.

2.3.4 The Applicant proposes to seek section 61 consent from the environmental health officer at Waveney District Council for construction works; this will be the medium by which conditions attached to working outside of the core working hours is agreed.

2.4 Construction compounds

2.4.1 There will be three main construction compounds as shown on Figure 5.4 accompanying the ES.

2.4.2 A compound will be located on land to the east of Wickes and to the south of Denmark Road. Access to this compound will be via the existing gated entrance to the site.

2.4.3 A compound will be located on vacant land immediately to the south of Lake Lothing and bordered by the recently constructed SCC and Waveney District Council office to the south. Access to this compound will be via the existing Riverside Road, and once constructed, the New Access Road.

2.4.4 A further compound is also proposed on land to the immediate north of Lake Lothing. This will be located on ABP's operational port and on land presently used by Network Rail for storage adjacent to the East Suffolk Line. Access to this compound will be via Commercial Road.

2.4.5 The need for a wheel wash at the compounds must be considered by the Contractor and installed as appropriate.

2.4.6 A programme for the installation and removal of the compounds, must be provided by the Contractor in any relevant CoCP.

2.4.7 The layout of the compounds will need to meet the following requirements:

- At all times the contractor must be required to keep all the compounds safe and secure;
- Access must be maintained for port operations at all times along Commercial Road, alternative arrangements are subject to the protective provisions of the harbour authority. This access must allow all likely plant and vehicle movements to take place;
- Site lighting must be directed so as not to be intrusive to nearby property and businesses, or unnecessarily disturb wildlife.
- The orientation of the compound activities must be, as far as reasonably practicable, arranged to reduce environmental effects on adjacent land users.

2.5 Works in Lake Lothing

2.5.1 The Contractor must maintain the navigation channel at all times, except when possession of the entire channel or a restriction on navigation is required to facilitate construction (such as narrowing the vessel size that can pass through the area). Such occasions must be consulted upon in advance with the harbour authority, pursuant to article 20 of the DCO.

2.6 Access for Businesses and Residences

2.6.1 The Contractor must allow access for vehicles and non-motorised users from the public highway to NWES, Nexen Trucks, Motorlings, Northumbrian Water and affected residences during the construction of the Scheme, save for in exceptional circumstances. Parties must be notified in advance of any need to limit access, and for what duration.

2.6.2 The Contractor must, through the phasing of the delivery of the New Access Road, maintain access to premises in Riverside Business Park at all times.

2.7 Vehicle Movements

2.7.1 As identified in Chapter 5 of the ES, Heavy Goods Vehicle (HGV) movements associated with the construction of the Scheme are expected to peak at 108 two-way movements per day with these vehicles split across all three compounds.

2.7.2 The assessment of potential air quality, noise and traffic and transport impacts within the ES have all concluded that this magnitude of HGV movement is negligible and therefore did not warrant further assessment.

2.7.3 As part of any relevant CoCP, the Contractor must set out the process by which traffic management measures that will be applied during the course of the construction phase will be agreed with the highway authority.

2.8 Emergency planning

2.8.1 The Contractor must prepare and submit to the county planning authority as part of any CoCP, details of the emergency procedures and processes to be followed based upon the anticipated hazards and their construction operations. These emergency processes must include as a minimum:

- Notification procedures for the emergency services and relevant stakeholders such as ABP and Network Rail;
- Emergency measures in the event of flood;
- Procedures for dealing with fire hazards drawn up in consultation with the Suffolk Fire and Rescue Service; and
- Spill response procedures drawn up in consultation with the EA.

2.9 Staff and personnel

Training

2.9.1 The Contractor must include within any relevant CoCP, proposals for site induction for all staff and further training to ensure staff are fully aware of their responsibilities under an approved CoCP.

Communications

2.9.2 A stakeholder and community engagement plan must be put in place prior to construction commencing (as defined in the DCO). A communications officer must be in place throughout the construction phase to undertake engagement with residents, businesses and stakeholders. The communications officer will prepare the stakeholder and community engagement plan which will be developed in consultation with the county planning authority and Waveney District Council.

2.9.3 An engagement forum must also be created for businesses in proximity to the Scheme to attend to hear updates on the project and upcoming construction programme, and for them to share any concerns or important information, for example in relation to their planned business operations.

3 Air Quality

3.1 Introduction

3.1.1 The commitments relating to air quality within this interim CoCP have been drawn from the assessment of significant effects upon air quality which is included in Chapter 8 of the ES with additional detail within figures 8.1 to 8.21 and appendices 8A to 8G. Full details of the Contractor's mitigation measures for dealing with air quality impacts must be included in any relevant CoCP.

3.2 Mitigation

3.2.1 A number of mitigation measures are proposed; with reference to IAQM guidance, that are commensurate to the scale and nature of the construction activities.

3.2.2 The mitigation measures focus on controlling fugitive releases of construction phase dust and must be implemented by the contractor through any relevant CoCP. Such measures must include, but are not limited to:

- Dust generating activities (e.g. cutting, grinding and sawing) to be minimised and weather conditions considered prior to conducting potentially dust emitting activities;
- Fine material to not be stockpiled to an excessive height in order to prevent exposure to wind and/or dust nuisance;
- Roads and accesses to be kept clean;
- Where practicable, plant to be located away from site boundaries that are close to residential areas;
- Water to be used as a dust suppressant, where applicable;
- Drop heights from excavators to crushing plant to be kept to a minimum;
- Distances from crushing plant to stockpiles to be kept to the minimum practicable to control dust generation associated with the fall of materials;
- Skips to be securely covered;
- Soiling, seeding, planting or sealing of completed earthworks to be completed as soon as reasonably practicable following completion of earthworks;
- Dust suppression and the maintenance of the surface of access routes to be appropriate to avoid dust as far as practicable, taking into account the intended level of trafficking;
- Wheel wash facilities to minimise trackout of dust;
- Material to not be burnt on site; and
- Engines to be switched off when not in operation.

3.2.3 In submitting any relevant CoCP, the Contractor must stipulate the following to ensure the aforementioned mitigation is implemented effectively, continually monitored and updated accordingly:

1. Identification of a responsible environmental manager;
2. Notification procedures where potentially significant dust generating activities are required;
3. Mitigation measures for the control of dust in such locations; and
4. Management procedures to ensure issues are addressed should they be raised by the public.

3.3 Monitoring

3.3.1 Given the proximity of receptors considered sensitive to construction dust and the medium to high risk rating with respect to potential dust impacts, monitoring of dust and PM_{10} must be incorporated into the any relevant CoCP, focussing on particularly sensitive locations adjacent to likely construction activity areas.

3.3.2 Dust and PM_{10} monitoring for medium to high risk sites, as defined by IAQM, must include:

- Regular onsite and offsite inspection where receptors are nearby, to monitor dust, record inspection results, and make the log available to the local authority when requested;
- Increasing the frequency of site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry and/or windy conditions;
- Agreeing dust deposition and/or real-time continuous PM_{10} monitoring locations with the county planning authority in consultation with Waveney District Council, with baseline monitoring taking place at least three months before development commences (as defined in the DCO).

4 Nature Conservation

4.1 Proposed mitigation

4.1.1 The commitments relating to nature conservation within this interim CoCP have been drawn from the assessment of significant effects upon ecological resources which is included in Chapter 11 of the ES with additional detail within figures 11.1 to 11.6 and appendices 11A to 11G.

4.1.2 The following mitigation measures must be undertaken for protected species likely to be affected by the Scheme and included in any relevant CoCP.

4.2 Ecological Clerk of Works

4.2.1 An Ecological Clerk of Works specialist ecologist, or similarly competent person (referred to as ECoW in this section) must be appointed to be responsible for overseeing on-site ecological mitigation and ensuring that measures in any relevant CoCP are implemented.

4.2.2 The ECoW will report to the Contractor.

4.3 Terrestrial Ecology

Bats

4.3.1 Pre-construction surveys must be undertaken on any building that is suitable to support roosting bats and which would be likely to be disturbed during construction. Surveys would seek to confirm that bats have not taken occupation in these structures since the surveys that informed the ES following which the Ecological Clerk of Works (EcoW) (see Chapter 11 of the ES) will advise as to the most appropriate course of action to ensure legislative compliance.

4.3.2 To minimise the risk of effects on foraging and commuting bats, the use of artificial lighting during construction must be kept to a minimum. Where temporary artificial lighting is used, only the immediate area of works shall be illuminated by using as sharp an angle of lighting as possible and avoiding light being directed at, or close to adjacent vegetation. Shields or hoods shall be used to control or restrict the area to be lit. The ECoW shall advise on all temporary lighting proposals prior to installation.

Breeding birds

4.3.3 In order to minimise the risk of disturbing breeding birds, the removal of suitable nesting material will normally be undertaken outside of the typical bird breeding season (March to July inclusive). If tree and vegetation removal is needed during this period, the vegetation shall be checked prior to removal for the presence of nests by the ECoW. If nests that are in use are present, it may be necessary to delay work in immediate proximity the nest until the young have fledged.

4.3.4 A watching brief for the presence of black redstart and peregrine must be maintained as appropriate during the construction period by the ECoW. Should black redstart or peregrine be present and being disturbed by the construction of the Scheme, the ECoW will advise appropriate action in the interests of its protection.

Reptiles

4.3.5 During the construction phase, vegetation clearance of all habitat suitable for reptiles must be undertaken as follows:

- Reptiles shall be excluded from the proposed works area through habitat manipulation and natural refugia removal;
- Habitat manipulation shall involve strimming the vegetation within the works area prior to commencement of works to reduce the vegetation to a sward height that would encourage reptiles to move offsite and into adjacent areas. This shall be undertaken when reptiles are active, i.e. between mid-April to mid-October when the temperature is at least 12˚C;
- The strimming shall cut vegetation to a height of approximately 150mm to avoid affecting reptiles that may be present. Strimming shall be completed in phases. All clearance works shall be carried out using hand tools; and
- These works shall all be supervised by the ECoW.

4.3.6 Areas of habitat creation for reptiles must be provided within land as shown in the Landscaping Plans (Application Document Reference 2.8).

4.3.7 The creation of this habitat must include artificial hibernation sites (hibernacula) created using site won materials, such as felled timber, brash, tree roots and inert rubble. These materials may be covered in soil and grass so as not conflict with the aesthetics of landscaping proposals. Hibernacula will be located away from the footpath/cycle lane within the landscaped area so as to minimise risk of disturbance.

4.3.8 Areas of exposed substrate must be included within the landscape design of the Scheme for the benefit of reptiles

Terrestrial Invertebrates

4.3.9 The land required for construction purposes only which supports habitat for the five-banded weevil-wasp (see Figure 5.6) must be reinstated post-construction to be suitable for use by this species.

Hedgehogs

4.3.10 The ECoW will maintain a watching brief during vegetation clearance to protect individual hedgehogs should they be present.

Invasive Species

4.3.11 Any relevant CoCP must include measures to control invasive species, which will detail the measures to control Japanese knotweed within that part of the authorised development and measures to minimise the risk of its spread, in line with the guidance recommended by the Environment Agency.

4.3.12 Any relevant CoCP must also include measures for the disposal of any cleared Japanese knotweed as this is treated as controlled waste.

4.3.13 Measures to restrict the spread of wakame during the construction of the Scheme must be included within any relevant CoCP.

4.4 Marine ecology

4.4.1 Mitigation measures must be included within any relevant CoCP to control the spread of invasive species, including non-native benthic invertebrate species that were recorded during the Benthic survey undertaken in April 2018 (PINS Document Reference APP-188). The non-native benthic invertebrate species identified are the tube worm *Hydroides ezoensis*, the *bryozoan bugula neritina* and the barnacle *austrominius modestus*, in addition to the non-native mollusc *Theora* [lubrica].

4.4.2 In any relevant CoCP, the contractor must commit to following the Statutory Nature Conservation Agency protocol (a document produced by Natural England, The Countryside Council for Wales and the JNCC) for minimising the risk of injury to marine mammals from piling noise to prevent adverse effects.

4.4.3 It is noted that the European eel (Anguilla Anguilla) was recorded during marine surveys, however mitigation measures in relation to this species are secured through the DML (namely soft start piling).

5 Geology, Soils and Contamination

5.1 Piling Methodology

5.1.1 Permanent works piling for the Scheme must be carried out utilising a conventional method to include, but not limited to:

- placing steel casing in the upper portions of ground to provide support followed by drilling or augering within the casing to the required pile base level, utilising either a bentonite slurry or polymer to ensure stability of the pile bore and to minimise the risk of contaminants migrating downwards during excavation;
- bringing all arisings including any potentially contaminated soils to the surface (and placing them on an impermeable membrane, if necessary) and allowing transfer to appropriately licensed waste disposal facilities; and
- providing positive hydrostatic pressure of the concrete to prevent voids and pathways being created along the soil/ concrete interface.

5.2 Mitigation

5.2.1 The Scheme will adhere to pollution prevention guidance and best practice during the construction phase which will be incorporated into and managed via any relevant CoCP.

5.2.2 The Contractor must maintain a watching brief during the works (excavation and piling in particular) to identify any unforeseen potential contamination.

5.2.3 The Contractor must ensure that any CoCP reflects good working practices and housekeeping during construction such as sealing or covering stockpiles of contaminated soils and dredged sediment.

Site Users and Adjacent Site Users including Construction Workers

5.2.4 The Contractor will develop method statements and risk assessments for the various construction activities to manage risks to human health. These documents must include provision for:

- Use of appropriate PPE for construction workers;
- Good hygiene practice including wearing gloves and washing hands before eating, drinking or smoking following working with potentially contaminated soils or water; and
- Damping down during periods of dry weather to reduce dust generation.

5.2.5 Due to the presence of asbestos within the made ground, a potential contaminant linkage through inhalation of dust is likely to be present. In addition, slightly elevated lead, polyaromatic hydrocarbons and pH were identified in the soils although these are minor exceedances. In presenting any relevant CoCP for approval, the Contractor should set out in its construction methodology, requirements of (or if there are none, why not):

- the need for further assessment of the locations where asbestos was recorded and if necessary excavation of those areas if they are to be located in landscaping areas; and/or
- placement of subsoil and topsoil capping with a geotextile membrane within landscaping areas to break the pathway between the contaminants and the receptors.

5.2.6 Guidance should be sought from the county planning authority about the publication of locations of asbestos or other contaminated material which could be considered sensitive information, before preparing a relevant CoCP.

5.2.7 Notwithstanding the testing which may be required in Paragraph 5.2.5 the Contractor will undertake testing of all excavated soils. The Generic Assessment Criteria (GAC) will be used to identify their suitability for re-use on site.

5.2.8 All site won topsoil, or topsoil brought to site, will be tested prior to use as required by BS3882.

Infrastructure

5.2.9 The Contractor must include in any relevant CoCP, where relevant, having regard to information on ground conditions, measures to mitigate potential impacts from ground conditions on the proposed infrastructure, such as chemical resistant water pipes.

5.2.10 Structures such as concrete foundations shall be designed accordingly so that onsite infrastructure shall not be impacted by the geology and soils during the operational phase, such as introducing new contamination pathways through piled foundations.[1]

[1] This paragraph was within the ES and has been included in this CoCP

6 Noise and Vibration

6.1 Introduction

6.1.1 The contractor must, as far as reasonably practicable, seek to control and limit unacceptable noise and vibration when undertaking construction and demolition activities. Full details of mitigation measures will be included in an application for a section 61 consent from the environmental health officer.

6.1.2 The commitments relating to noise and vibration within this interim CoCP have been drawn from the assessment of significant effects upon noise and vibration which is included in Chapter 13 of the ES with additional detail within Figures 13.1 to 13.4 and appendices 13A to 13D.

6.2 Mitigation

6.2.1 The Contractor must include the following measures in its application for a section 61 consent:

- Arrangements for communicating construction details, and likely noisy activities, with local communities and residents, including points of contact and initiatives that could include one or more of leaflet drops, posters, public meetings, exhibitions and guided site visits.
- Detailed methodologies for each construction activity (to the extent that they are relevant to the control of noise);
- Detailed timescales for each phase of construction (to the extent that they are relevant to the control of noise);
- Identification of the construction activities likely to generate the highest levels of noise, based on working areas;
- Prediction of noise levels from these activities following methods given in BS 5228-1;
- Proposed working hours, where they may differ from the core hours that have already been assessed – see paragraph 2.3);
- An assessment of predicted impacts;
- Identification of appropriate noise mitigation measures; and
- Noise monitoring and reporting procedures.

6.2.2 Appropriate noise mitigation measures will include the implementation of Best Practicable Means (BPM). Typical practices defined as BPM that could be implemented during construction that will be fully detailed as appropriate and/or relevant in an application for a section 61 consent include:

- Provision of contact details for a site representative so that noise and vibration complaints arising from construction works are dealt with pro-actively and that subsequent resolutions are communicated to the complainant;

- Careful planning of construction activities and selection of plant to reduce noise emissions;
- Acoustic hoarding to a specification appropriate to the construction methodology utilised;
- Locating static noisy plant in use as far away from NSRs as is feasible for the particular activity;
- Using suitable equipment and ensuring such equipment is properly maintained and operated by trained staff;
- Using silenced equipment where reasonably practicable, in particular silenced power generators if night-time power generation is required for site security or lighting;
- Ensuring that vehicles and mobile plant are well maintained such that loose body fittings or exhausts do not rattle or vibrate;
- Engine compartments should be closed when equipment is in use and the resonance of body panels and cover plates reduced through the addition of suitable dampening materials;
- Ensuring plant machinery is turned off when not in use;
- Ensuring that vehicles do not park or queue for long periods outside NSRs with engines running unnecessarily;
- Generators and water pumps required for 24-hour operation should be silenced and/or screened as appropriate;
- Crane spindles, pulley wheels, telescopic sections and moving parts of working platforms should be adequately lubricated in order to prevent undue screeching and squealing; and
- Where reasonably practicable, the use of mains electricity rather than generators.

6.2.3 In addition, the application for a section 61 consent must, where works are necessary outside core hours, consider the use of silenced equipment and plant, or temporary barriers installed in order to reduce noise at NSRs to below BS 5228-1 threshold values, where reasonably practicable.

7 Materials

7.1.1 The Government removed the statutory requirement of implementing Site Waste Management Plans (SWMP) in October 2013. However, the use of a SWMP is still considered good practice to ensure that demolition and construction wastes are dealt with in an appropriate manner and in accordance with the 'waste hierarchy' and the Contractor will prepare a SWMP as part of any relevant CoCP.

7.1.2 In preparing any relevant CoCP, the Contractor must consider how to deliver the Scheme through:

- reduced raw materials costs;
- reduced waste destined for landfill;
- reduced waste disposal costs; and
- meeting legislative requirements.

7.1.3 Material supply will be met from the following in order of priority:

- on site reuse / recycled;
- off-site reuse / recycled; and
- new materials.

7.1.4 The Contractor must segregate recyclable waste materials at source and provide suitable storage on site within the construction compounds where wood, metal, plastic and contaminated packaging can be source segregated to maximise the opportunity for reducing the amount of waste that needs to be disposed of.

8 The Water Environment

8.1 Introduction

8.1.1 The commitments relating to the water environment within this interim CoCP have been drawn from the assessment of significant effects upon the water environment which is included in Chapter 17 of the ES with additional detail within figures 17.1 to 17.3 and appendices 17A to 17C.

8.1.2 Alongside this interim CoCP, it is important to note that the DCO includes a Deemed Marine Licence, with associated conditions. A construction method statement must be submitted to the MMO, after consultation with the Environment Agency for approval.

8.1.3 Additionally, the Environment Agency benefits from Protective Provisions which require the Applicant to seek approval from the Environment Agency for works affecting the marine environment.

8.1.4 As such it is considered that the resolution of detailed methodologies in the water environment and necessary mitigation measures are best resolved using those approval processes to minimise overlapping/duplicating approval processes.

Mitigation

8.1.5 The Contractor must include within any relevant CoCP and implement standard good practice pollution prevention measures in construction. This must include, unless not relevant to the Contractor's construction methodology:

- Oil absorbent booms to be installed where necessary and appropriate and to be regularly inspected and maintained;
- Temporary cut-off drains to be used uphill and downhill of the working areas to prevent clean run-off entering and dirty water leaving the working area without appropriate treatment;
- Surface water drains to be protected to prevent the migration of soils/sediment into the drains / water bodies;
- Sediment-laden water generated on site to be appropriately treated before discharge. This will include consideration of the following; silt fences, silt traps, filter bunds, settlement ponds and/or proprietary units such as a 'siltbuster';
- Contaminated soils to be sealed or covered;f
- Provision of temporary barriers (for example a straw bale wall lined with silt fencing; protected surface water drains);
- Control and treatment measures to be regularly inspected to ensure they are working effectively;
- Local weather forecasts will be monitored and works scheduled accordingly. In particular, earthworks and in-lake works to not be programmed and will be stopped during storm events;

- Emergency response plans to be developed and spill kits made available on site;
- Stockpiling, oil storage and refuelling areas to be located at least 10m from watercourses identified in Figure 17.3, and at a greater distance where possible;
- Fuels and potentially hazardous construction materials to be stored in bunds that have areas with external cut-off drainage; fuel will be stored in double skinned tanks with 110% capacity;
- Fuelling and lubrication of construction vehicles and plant to generally be on hardstandings, where reasonably practical, with appropriate cut-off drainage and located away from the lake edge. In the event of plant breakdown, drip trays to be used during any emergency maintenance and spill kits will be available on site;
- Construction plant to be checked regularly for oil and fuel leaks;
- Waste fuels and other fluid contaminants to be collected in suitable containers prior to removal from site to an approved processing facility and treated in accordance with the waste hierarchy; and
- Sewage generated from site welfare facilities to be disposed of appropriately. This may be by discharge to the foul sewer, subject to agreement, or by collection in septic tank for disposal off site;
- Contaminated soils to be sealed or covered;

8.1.6 Measures such as the use of a silt curtain must be implemented for the cofferdam installation periods to trap sediments. To reduce sediment input into the waterbody when seawater is removed from the cofferdam area, sediment filter systems must be required to be used to filter the pumped water, for example using proprietary units such as a 'siltbuster'. The precise method will be designed by the Contractor during the detailed design and agreed with the MMO and Environment Agency through their respective approval processes, as relevant.

8.1.7 The sediment will then be removed and evaluated for contamination and then, where necessary, transported off-site or disposed of at sea. The filter system will have screens/'fish friendly' pumps to prevent fish entering the pumped system; alternatively—, an electrofishing exercise could be undertaken – this will be determined by the Contractor in detailed design. Fish remaining within the cofferdam area will be isolated and returned to Lake Lothing. The chosen methods for this will be agreed with the MMO and Environment Agency through their respective approval processes, as relevant.

8.1.8 A programme of adaptive water quality monitoring on Lake Lothing, upstream and downstream of the working corridor, must be implemented by the Contractor throughout the construction phase, beginning at least six months prior to commencing any in-water construction works, in order to ascertain the impacts, if any, of construction of the Scheme. The monitoring parameters, frequency and locations will be agreed with the Environment Agency through their protective provisions, prior to in-water construction works commencing.

9 Flood Risk

9.1 Introduction

9.1.1 The Contractor must prepare a flood management plan to form part of a relevant CoCP, that must include:

- A list of important contacts, including Floodline, building services, suppliers and evacuation contacts for staff;
- A description or map showing locations of key property, protective materials and service shut-off points;
- Basic strategies for protecting property, preventing business disruption and assisting recovery; and
- Checklists of procedures that can be quickly accessed by staff during a flood.

Preparation

9.1.2 The FRA has identified the main flood risks to the site and potential consequences of flooding. The Contractor's site management team must ensure they are familiar with the contents of the FRA and understand the potential flooding that may occur. This information must also be used, as appropriate, to ensure all site personnel are aware of the risks associated with flooding through site notices, inductions and toolbox talks. Lone working or night staff in particular will be made aware of the risks.

9.1.3 Prior to commencement of construction (as defined in the DCO), discussions will take place with the county planning authority to determine evacuation routes and locations for storage of evacuated plant and equipment. A plan showing evacuation routes and temporary plant and equipment storage sites will be displayed on site.

9.1.4 A detailed review of buildings and equipment on site must be completed by the Contractor to ascertain what may cause a hazard in the event of flooding. Care will be taken with any equipment that could potentially contaminate the flood water such as fuel or chemicals. In developing the flood management plan consideration will be given to the following:

- Plant/vehicles/equipment that can be removed from the site in the event of a flood warning being received;
- Potential for any equipment to be raised above the tidal level and/or anchored down to prevent floating (noting some element of risk remains);
- Other measures that lower floating probability, opening doors in cabins to allow flood water in for example.

9.1.5 These measures and any other measures in the flood management plan must be implemented in advance and all personnel on site will be made aware. Where appropriate, site personnel will sign up to the EA Flood Warning service to receive flood warnings. Tidal forecasts will also be monitored for advance warning of high tidal events. The site management team must ensure sufficient numbers of people are signed up to receive warnings to allow for rapid dissemination to all staff. The

team will familiarise themselves with the flood warning types, what they mean and appropriate advice to follow.

Construction

9.1.6 During the construction phase of the Scheme, the Contractor will ensure that the mitigation measures identified in the FRA are adhered to, or adopt an alternative solution which achieves the equivalent requirements for a negligible net loss of storage within Lake Lothing during a flood event.