The Lake Lothing (Lowestoft) Third Crossing Order 201[*]

Document 7.8: Mitigation Route Map

Planning Act 2008

Infrastructure Planning

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

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Foreword

This Mitigation Route Map relates to an application ("the Application") submitted by Suffolk County Council ("the Applicant") to the Secretary of State (through the Planning Inspectorate) for a Development Consent Order ("DCO") under the Planning Act 2008.

If made by the Secretary of State, the DCO would grant development consent for the Applicant to construct, operate and maintain a new bascule bridge highway crossing, which would link the areas north and south of Lake Lothing in Lowestoft, and which is referred to in the Application as the Lake Lothing Third Crossing (or "the Scheme").

This Mitigation Route Map has been prepared in accordance with the requirements of section 37(3)(d) of the Planning Act 2008 and regulation 5(2)(q) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 ("the APFP Regulations"), and in compliance with relevant guidance.

Contents

Abbreviations

ABP	Associated British Ports
AIP	Approval in Principle
CCTV	Closed-circuit television
CftS	Case for the Scheme
CORE	Centre for Offshore Renewable Energy
DCC	Design Council CABE
DCO	Development Consent Order
DfT	Department for Transport
DGM	Design Guidance Manual
DMRB	Design Manual for Roads and Bridges
DR	Design Report
EIA	Environmental Impact Assessment
ES	Environmental Statement
GI	Ground Investigation
HGV	Heavy Goods Vehicle
ITS	Intelligent Transport Systems
LPA	Local Planning Authority
LTP	Local Transport Plan
NIDP	National Infrastructure Delivery Plan
NMU	Non-motorised user
NNNPS	National Policy Statement for National Networks
NSIP	Nationally Significant Infrastructure Project
OAIP	Outline Approval in Principle
OBC	Outline Business Case
PEIR	Preliminary Environmental Information Report
RSA	Road Safety Audit
SCC	Suffolk County Council
SEP	Strategic Economic Plan
SoS	Secretary of State
SRN	Strategic Road Network

SSP	Strategic Site Proposal
SuDS	Sustainable Drainage System
TA	Transport Assessment
TEN-T	Trans European Network–Transport
TUBA	Transport User Benefit Appraisal
VMS	Variable Message Sign
WDC	Waveney District Council

Tables

Figures

1 Introduction

1.1 Description of 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 ("NMUs"), 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 Figure 1 below provides a diagrammatic representation of the Scheme:

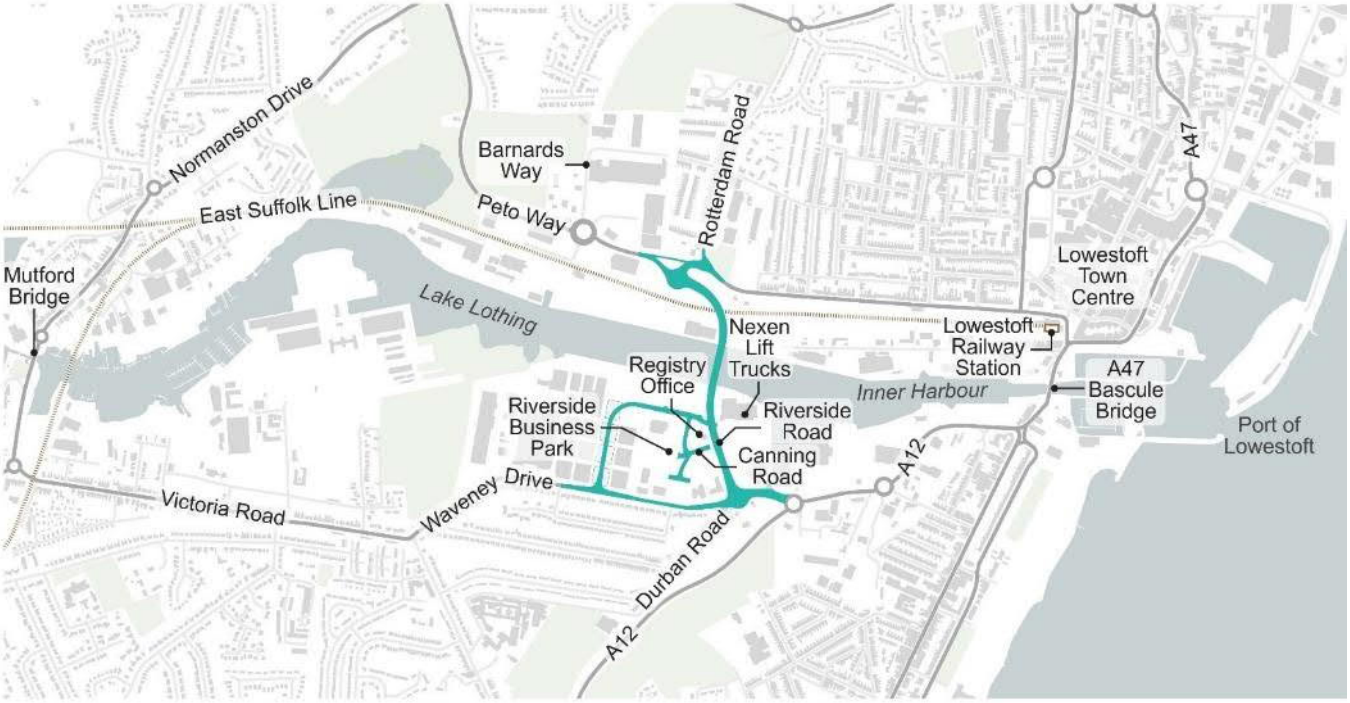

Figure 1: Location of the Scheme in Lowestoft

1.2 Background to the Scheme

1.2.1 The need for the Scheme is comprehensively documented in the Case for the Scheme ("CftS") (document reference 7.1). In brief, the Scheme is a response to longstanding issues of congestion and severance within Lowestoft, associated with the inadequacy of north to south links across Lake Lothing. This in turn creates constraints to sustainable development in the town.

1.2.2 Lake Lothing is a saltwater waterbody linking the North Sea to The Broads National Park on an east-west axis and therefore dividing Lowestoft north to south by a water feature of up to 200m wide.

1.2.1 This area has suffered greatly from the decline of shipbuilding and traditional industries, and is a key area for regeneration. The Scheme will support regeneration by improving access to the lake area and by relieving congestion in, and around, the town centre.

1.2.2 Currently, there are two road crossings of Lake Lothing; Mutford Bridge (a lifting bridge over the Mutford lock on the A1117) to the west and the A47 Bascule Bridge (a lifting bridge on the A47) to the east. Mutford Bridge is the responsibility of Suffolk County Council ("SCC") as the local highway authority, while the A47 Bascule Bridge, being on the Strategic Road Network ("SRN"), is the responsibility of Highways England. The bridges are separated by a distance of approximately 3km.

1.2.3 The A47 Bascule Bridge, one of few lifting bridges on the SRN, is a major obstacle for strategic traffic travelling on the A47 from the southeast to Great Yarmouth, as it regularly experiences congestion. This delay to journeys is exacerbated when the bridge needs to be raised for passing vessels or maintained. Both the Mutford Bridge and the A47 Bascule Bridge have limited facilities for cyclists and pedestrians.

1.2.4 Suffolk County Council is both the promoter and a statutory consultee as the local authority, hereby referred to as ("the Applicant") and ("SCC") respectively. These functions are kept separate to ensure appropriate management of the Scheme.

1.2.5 In 2015 the Applicant received funding to develop an Outline Business Case ("OBC") for a third crossing of Lake Lothing. Following a comprehensive options appraisal, a central alignment with a central lifting section was identified as the preferred option. It was this Scheme that subsequently secured funding from the Department for Transport, and a direction under section 35 of the Planning Act 2008 ("PA 2008") requiring the Applicant to apply for a Development Consent Order ("DCO") to deliver the Scheme.

1.3 Purpose of the document

1.3.1 This Mitigation Route Map has been prepared in order to demonstrate that the necessary environmental controls and mitigation measures for the Scheme have been identified and secured.

1.3.2 The purpose of the document is therefore to:

a) Provide an audit trail of controls and mitigation measures on which the

Environmental Statement (ES) (document reference 6.1), including related assessment documents, relies to avoid, reduce and/or offset impacts of the Scheme, and;

b) Set out the way in which they have been, or will be, translated into clear and enforceable controls; either via DCO Requirements (document reference 3.1), development consent obligations or other consent regimes.

1.3.3 This Mitigation Route Map is not proposed to have any formal status, but it is submitted to help both the Examining Authority and interested parties understand how and where mitigation relied on by the ES is to be secured. It is proposed that this document is kept 'live' by updating it throughout the examination process to ensure it captures all relevant issues, providing certainty that the DCO and ES are consistent.

1.4 Structure of the document

1.4.1 The environmental considerations are included in Table 1 of this document.

1.4.2 The table is divided into specific topics, as presented in the Environmental Statement (Application Document Reference: 6.1). Each topic refers to the relevant chapter of the ES, where detailed information is provided.

1.4.3 The table consists of 4 separate columns including:

- *Column 1* – A reference number assigned to an issue(s) and the proposed means of mitigation.
- *Column 2* – Summarises the potential issue(s) arising from the Scheme and provides proposed mitigation, monitoring or measure to prevent, offset and minimise the Scheme as explained in the relevant chapters of the ES.
- *Column 3* – Specifies at what point of the Scheme, the mitigation or measure shall be implemented.
- *Column 4* – It explains how the mitigation or measure is secured within the application for Development Consent Order.

1.4.4 Where the table indicates that measures are secured by inclusion in the interim Code of Construction Practice (CoCP) (Appendix 5A to the Environmental Statement, document reference 6.2), reference should be made to Requirement 4 of the draft DCO (document reference 3.1) and the interim CoCP itself, which set out that the full CoCP must be approved prior to construction commencing and that the full CoCP must be produced in accordance with the interim CoCP.

Table 1-1 – Mitigation Measures

Reference Number *(Column 1)*	**Mitigation, monitoring or measure to prevent, offset and minimise impacts** *(Column 2)*	**Point of Implementation** *(Column 3)*	**How the mitigation is secured** *(Column 4)*
	Air Quality *Environmental Statement; Chapter 8*		
AQ1	Fugitive releases of construction phase dust including particulates such as PM_{10}. Measures including but 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 possible, 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;	Construction phase	Interim CoCP.

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	• 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.		
AQ2	To ensure the mitigation measures in AQ1 are implemented effectively, continually monitored and updated accordingly: • Appointing a responsible environmental manager; • Notification procedures (significant dust generating activities) and method statements for the control of dust and complaint receipt; and	Construction phase	Interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	• Management procedures to ensure issues are addressed should they be raised by the public or other complainant.		
AQ3	Monitoring of dust and PM_{10} monitoring for medium to high risk sites will be implemented and shall 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 construction works commence.	Construction phase	Interim CoCP
	Cultural Heritage *Environmental Statement; Chapter 9*		

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
CH1	The mitigation measures are set out in a Written Scheme of Investigation (WSI) for Future Mitigation and Recording (Appendix 9F of the Environmental Statement) and include: preservation of archaeological, built heritage and historic landscape assets in-situ; investigations such as geophysical survey, trial trenching, shovel test pitting, controlled site stripping, building recording A preservation by record of heritage assets involving part or all of the following: topographic survey, excavation and recording, detailed measurement, mapping and photographic recording of heritage assets and their setting; and interpretation and dissemination of information gathered as a result of any of the above to ensure that knowledge of heritage assets of local, regional, national or international significance is preserved or enhanced.	Prior to construction/during construction of relevant works	Mitigation measures included within WSI compliance with which is secured through a DCO Requirement
CH2	Trial pits that are excavated as part of any further ground investigation shall be subject to the mitigation measures set out in Appendix B of the Environmental Statement; Written Scheme of Investigation on Trial Pits and Trenches.	Prior to construction/during construction of relevant works	Mitigation measures included within WSI compliance with which is secured through a DCO Requirement
	Townscape and Visual Impact Assessment *Environmental Statement Chapter 10*		
TVIA1	The Scheme has been designed to provide an enhancement of the crossing of Lake Lothing and setting of the surrounding townscape	Prior construction of relevant works	Quality of design secured through Design Guidance Manual, compliance with

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	through the form, aesthetics and landmark nature of the proposed bridge structure. The design has followed a 'marine tech' theme. A development of the rolling bascule bridge has led to a striking design, as has been recognised by CABE. Design for the control tower is aimed at complementing the existing buildings within the townscape setting, ensuring that this does not detract from the design of the main bridge; and landscape design (see Figure 5.7 of the ES) has encompassed the tie-in for the northern approach with the existing townscape through the proposed formation of public open space associated with links for Non-Motorised Users (NMUs) and Denmark Road, tree planting and areas of seating.		which is secured through a DCO Requirement
	Nature Conservation *Environmental Statement; Chapter 11*		
NC1	Reptiles. To ensure that individual reptiles are not affected during the works, precautionary measures shall be undertaken and shall ensure that reptiles will be excluded from the proposed works area through habitat manipulation and natural refugia removal. Habitat manipulation involves 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	During construction of relevant works	Interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	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), strimming cuts vegetation to a height of approximately 150mm to avoid reptiles present and shall be completed in phases ensuring that all clearance works shall be carried out using hand tools; and the works are supervised by Ecological Clerk of Works (ECoW).		
NC2	To support mitigation measures specified in NC1, areas of habitat creation for reptiles shall be provided within the land. This will 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 shall be located away from the footpath/cycle lane so as to minimise risk of disturbance.	During construction of relevant works	Creation secured through Landscaping Plans, compliance with which is secured through DCO Requirements. Construction methods secured through Interim CoCP.
NC3	Areas of exposed substrate explained in NC1 and NC2 shall be included within the landscape design of the Scheme for the benefit of reptiles. In combination with provision of a structurally varied vegetation, this will help to provide a mosaic of habitats suitable for use by reptiles.	Construction phase	Interim CoCP
NC4	Bats. Pre-construction surveys shall be undertaken on any building with the potential for roosting bats that could be disturbed during construction	Prior to construction of relevant works	Interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	to ascertain whether they have colonised since the surveys that have informed the ES.		
NC5	To minimise the risk of effects on foraging and commuting bats, the use of artificial lighting during construction will be kept to a minimum. Where temporary artificial lighting is used, only the immediate area of works shall be illuminated by using as sharp a downward angle of lighting as possible and avoid light being directed at, or close to adjacent vegetation. Shields or hoods shall be used to control or restrict lightspill outside the area to be lit. Specialist advice from the EoCW shall be sought on all temporary lighting proposals prior to installation.	During construction	Interim CoCP
NC6	Breeding birds. In order to minimise the risk of disturbing breeding birds, the removal of woody vegetation will be undertaken outside of the breeding season (typically March to July inclusive) wherever practical. If tree and vegetation removal has to take place within this period, the vegetation will be checked prior to removal for the presence of nests by an appropriately experienced ecologist. If nests that are in use are present, it may be necessary to delay work in immediate proximity to the nest until the young have fledged.	Prior to construction of relevant works	Interim CoCP
NC7	A watching brief shall be maintained during the vegetation clearance works to protect individual hedgehogs that may be present.	During construction	Interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
NC8	Marine mammals. Construction methods will follow the Statutory Nature Conservation Agency (SNCA) protocol (a document produced by Natural England, The Countryside Council for Wales and the JNCC) for minimising the risk of injury to marine mammals including harbour porpoise from piling noise.	During construction	Interim CoCP
NC9	Black redstart. A watching brief for the presence of the species will be maintained throughout the construction period by the ECoW. Should black redstart be present, specialist advice from ECoW shall be sought to take agree an appropriate action in the interests of its protection.	During construction	Interim CoCP
NC10	Peregrine. The ECoW will maintain a watching brief to ensure that no adverse effects occur to peregrine	During construction	Interim CoCP
NC11	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.	Post-construction	Interim CoCP
NC12	Control measures shall be implemented within the full CoCP to prevent the spread of the non-native mollusc *Theora Lubrica.*	Prior construction and during construction	Interim CoCP
NC13	Schedule 9 Invasive Species. The CoCP shall include measures to control Japanese knotweed within the Order limits and measures to minimise the risk of its spread, in line with the guidance recommended by the	Prior construction and during construction	Interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	Environment Agency. Details of the specific measures to be implemented will be specified in the full CoCP. Measures to restrict the spread of Wakame during the construction of the Scheme shall be included within the full CoCP		
	Geology, Soils and Contamination *ES, Chapter 12*		
GSC1	General Construction. The Scheme shall adhere to pollution prevention guidance and best practice during the construction works.	During construction	Interim CoCP
GSC2	Geology and soils. Good working practices and housekeeping during construction such as sealing or covering stockpiles of contaminated soils and treating water removed from excavations prior to discharge shall be undertaken to reduce the environmental risks.	During construction	Interim CoCP
GSC3	Piling for the Scheme must carried out utilising the conventional method to include: • temporarily casing the upper portion (6 to 10m depth) of ground (and then excavating through bentonite slurry) 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	During construction	Interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	necessary) and allowing transfer to appropriately licensed waste disposal facilities. • positive hydrostatic pressure of the concrete to prevent voids and pathways being created along the soil/ concrete interface		
GSC4	Silt pollution. The silt pollution caused by working within Lake Lothing shall be minimised by keeping water out of the works area using appropriate isolation techniques, such as cofferdams, pile jackets, by-pass channels, silt curtains or the use of special excavation plant.	During construction	Interim CoCP
GSC5	Water removed from any excavations shall be disposed of in accordance with Environment Agency requirements.	During construction	Interim CoCP
GSC6	During construction, any soil stockpiles shall be located away from Lake Lothing and shall be sealed and if necessary covered to minimise runoff during heavy rainfall.	During construction	Interim CoCP.
GSC7	The Contractor will develop method statements and risk assessments for the various construction activities to manage risks to human health.	Prior construction and during construction	Interim CoCP
GSC8	The Contractor must include in the full CoCP (where not required for specific apparatus pursuant to the DCO) measures to mitigate potential impacts from ground conditions on the proposed infrastructure, such as chemical resistant water pipes.	Prior construction of relevant works	Interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
GSC9	A suitable drainage system shall be incorporated into the proposed scheme to mitigate to acceptable levels the risk of contamination that could arise from traffic emissions entering the water environment (see ES, Chapter 17 Water Environment).	During construction	Drainage Strategy DCO Requirement requires Scheme surface water design to be in accordance with this strategy.
GSC10	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 its full CoCP for approval, the Contractor should set out if its construction methodology requires (or if it does not, why not): • 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 an inert subsoil and topsoil capping with a geotextile membrane within landscaping areas to break the pathway between the contaminants and the receptors.		
GSC10	Structures such as concrete foundations shall be designed accordingly so that onsite infrastructure shall not be impacted by the geology and soils	Construction phase	Interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	during the operational phase, such as introducing new contamination pathways through piled foundations.		Specific assets may also be protected through DCO Protective Provisions
	Noise and Vibration *ES, Chapter 13*		
NV1	The Contractor shall implement and control noise emissions from the construction site through the following measures: • 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. These requirements will be addressed as part of wider communications through the stakeholder and community engagement plan; • 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;	During construction	Interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	• Prediction of noise levels from these activities following methods given in BS 5228-1; • Identification, in consultation with WDC, of appropriate hours of working and construction noise limits; • An assessment of predicted impacts against the agreed construction noise limits; • Identification of appropriate noise mitigation measures; and • Noise monitoring and reporting procedures.		
NV2	Noise mitigation measures shall include the implementation of Best Practicable Means (BPM). These shall be finalised in detailed design as part of a noise and vibration management plan : • 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; • A construction hoarding around the noise generating activity up to a height of at least 2.4m should this significantly attenuate the noise level;	During construction	Interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	• 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 possible, 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		

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	• Where possible, the use of mains electricity rather than generators.		
NV3	Where works are necessary outside standard hours, the use of silenced equipment and plant is proposed, or temporary barriers installed in order to reduce noise at NSR below BS 5228-1 threshold values where practicable.	During construction	Interim CoCP
	Materials *ES, Chapter 14*		
M1	The Contractor will be required to dispose of waste in accordance with the waste hierarchy, which is to consider waste management in the following order: prevention; preparing for reuse; recycling; other recovery, including energy recovery; and disposal.	During construction	Interim CoCP
M2	To follow waste management as set out in M1, the Contractor will consider how to deliver the Scheme through reduced raw materials costs; reduced waste destined for landfill; reduced waste disposal costs; and meeting of the legislative requirements.	During construction	Interim CoCP
M3	Material will be met from the following in order of priority: on site reuse/recycled; off-site reuse/recycled; and new materials.	During construction	Interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
M4	The material shall be segregated by 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.	During construction	Interim CoCP
	Private Assets *ES, Chapter 15*		
PA1	Associated British Ports (ABP). The navigation channel shall be maintained at all times, except when a possession of the entire channel or a restriction on navigation is required to facilitate construction. Such occasions will be notified in advance with ABP. The access shall be maintained for port operations at all times, except by agreement with ABP. This access will allow all likely plant and vehicle movements to take place.	During construction	DCO Requirement DCO Protective Provisions
PA2	Network Rail A clearance of 4.98m over the East Suffolk Line has been agreed with Network Rail and is provided for within the Reference Design. The Contractor must not restrict use of the East Suffolk at all times, except when possession of the line is required to facilitate construction of the bridge over it. Such possession must be notified in advance to Network Rail. There may be a need for an infrequent possession of the railway line	During construction and during operation	DCO Protective Provisions and interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	during the operational phase for maintenance of the Scheme, though these will be rare occasions and agreed with Network Rail in advance.		
PA3	Access to businesses Access from the public highway to Nexen Trucks, Motorlings and affected residences to be maintained during the construction of the Scheme.	During construction	Interim CoCP
PA4	Utility and statutory undertakers. There are statutory undertakers within the Order limits whose services will need to be diverted during the construction of the Scheme. Protective Provisions are included in the DCO such that the affected undertakers are able to secure the diversions on the terms they require.	During construction	DCO Protective Provisions
	Socio-Economics including Recreation *ES, Chapter 16*		
SER1	Procurement. Embedded mitigation for the Scheme, will be provided through SCC's Social Value and Sustainable Procurement Policy (SPP). The Contractor shall be required to adhere to these requirements. Similarly the contract shall be assessed in accordance with Procurement Policy Note (PPN) 09/16 which is a government policy for the procurement of public works such as the Scheme.	During construction	The Applicant's status as a public body means that the relevant procurement policies apply to it,

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	PPN 09/16 requires the following material considerations to form part of the appointment of contractors: quality of approach, supply chain, cost, employment/skills, health & safety, and outcome benefits.		
SER2	Supply Chain. SCC shall require tendering contractors to detail how they will engage local suppliers and labour. This shall include the requirement for a supplier event where local suppliers will be able to meet the contractor to discuss its sub-contracting requirements.	Prior construction	The Applicant's status as a public body means that the relevant procurement policies apply to it,
SER3	Employment and Skills. SCC shall require bidders to detail what their commitment to skills/training will be and how it shall be continued down the supply chain. This shall follow government guidance within PPN 14/15 i.e. include information on the number of apprenticeships the contractor shall create and community initiatives they shall implement.	Prior construction	The Applicant's status as a public body means that the relevant procurement policies apply to it,
SER4	Pontoon. A pontoon shall be provided to allow recreational vessels to moor should they need to wait for a bridge opening. This pontoon constitutes essential embedded mitigation that has been provided following consultation with the Navigation Working Group.	During construction and operational phases	DCO Requirement
	Road Drainage and the Water Environment *ES, Chapter 17*		

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
RWD1	Embedded mitigation: • Provision of vegetated ponds which remove hydrocarbons, soluble metals, sediment and sediment-bound pollutants from road drainage discharges whilst attenuating flow; • Other flow attenuation systems; • Lined ponds to prevent historic ground contamination from polluting the water within the ponds; • Oil interceptors included for all outfalls; and • Three penstocks to cater for accidental spillage scenarios	During construction	Drainage Strategy DCO Requirement requires Scheme surface water design to be in accordance with this strategy.
RWD2	For the construction of the pontoon capital dredging will be required within a region of Lake Lothing which is not currently subject to maintenance dredging, although it is within the area for which ABP has a licence to dredge. This will mobilise previously undisturbed sediments; the level of contaminants associated with the sediment in the region of the pontoon is consistent with that of regularly dredged sediments. Removed sediment will be disposed of at sea in line with the current practice for dredged sediments at this site and subject to approval by the MMO through the operation of the DML.	Construction phase	Deemed Marine Licence

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
RWD3	Standard good practice pollution prevention measures must be implemented in construction. This must include, unless not relevant to the Contractor's construction methodology; • Installation of oil absorbent booms, as appropriate, on the surface watercourses immediately downstream of the works area, which shall be regularly inspected and maintained; • temporary cut-off drains shall be used uphill and downhill of the working areas to prevent clean runoff entering and dirty water leaving the working area without appropriate treatment; • vegetated buffer strips shall be maintained adjacent to all watercourses where possible; sediment laden water generated on site shall be appropriately treated before discharge (this may be through the use of silt fences, silt traps, filter bunds, settlement ponds and/or proprietary units such as a 'siltbuster'); • control and treatment measures shall be regularly inspected to ensure they are working effectively; local weather forecasts shall be monitored and works scheduled accordingly, in particular earthworks and in-stream works shall be stopped during storm events; • emergency response plans will be developed and spill kits made available on site;	Prior to construction	Interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	• Stockpiling, oil storage and refuelling areas to be located at least 10m from watercourses identified in Figure 17.3 of the ES, and at a greater distance where possible; • fuels and potentially hazardous construction materials will 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 will generally be on hardstandings, where reasonably practical, with appropriate cut-off drainage and located away from watercourses.		
RWD4	In addition to mitigation measures listed in RWD6, the following shall be implemented through CoCP: • Drip trays shall be used during any emergency maintenance/ in the event of plant breakdown and spill kits to be available on site; • construction plant shall be checked regularly for oil and fuel leaks, particularly when construction works are undertaken in or near the existing site waterbodies; waste fuels and other fluid contaminants shall be collected in leak-proof containers prior to removal from site to an approved recycling processing facility. • Sewage generated from site welfare facilities shall be disposed of appropriately. This may be by discharge to the foul sewer or by collection in septic tank for disposal off site. • A programme of water quality monitoring on Lake Lothing, upstream and downstream of the working corridor shall be	During construction	Interim CoCP

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*	Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
	implemented throughout the construction phase, beginning at least 6 months prior to construction.		
	Flood Risk *ES, Chapter 18*		
FR1	In order to avoid an increase in surface water runoff above the greenfield runoff rate from the Scheme site during the operational phase the attenuation of surface water will be provided by a combination of buried tanks and ponds. A Drainage Strategy (see EAS, Appendix 5A) has been prepared for the Scheme that provides details of the attenuation required as part of the Scheme.	Operational phase	Drainage Strategy DCO Requirement requires Scheme surface water design to be in accordance with this strategy.
FR2	Embedded mitigation in the form of removable walls to the cofferdam will be employed that will sacrificially flood the cofferdam in the event of a flood event exceeding the height of the quay wall. This would lead to a negligible loss of storage within Lake Lothing during such an event	During construction	Interim CoCP
	Traffic and Transport *ES, Chapter 19*		

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*		Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
T1	It is noted that the Scheme is likely to have some temporary impacts on the local road network especially during construction phase, however it is also noted that once in operation, the Scheme is considered to be a mitigation for existing traffic problems within Lowestoft as it will open up a third crossing of the Lake offering a wider variety of route choice and thereby reducing traffic on existing routes. The implementation of the Scheme will therefore reduce congestion in the town, provide greater journey time reliability for public transport, and increase connectivity for pedestrians and cyclists. The Scheme will act to reduce congestion on the local network including Mutford Bridge and the A47 Bascule Bridge.		During construction and operational phases	The Scheme itself.
T2	The TA identifies the following junction improvements required as a result of the Scheme:		During construction phase and operational phases	DCO Requirement
	Junction 7 – B1531 Victoria Road / B1531 Waveney Drive / Kirkley Run Mini Roundabout	• Advanced traffic signal on Waveney Drive arm in 2022 • Full signalisation in 2037 if proven necessary following monitoring.		
	Junction 8a, 8b and 8c – A12 Tom Crisp Way / Blackheath Road signalised junction	• Introduction of MOVA urban traffic control system in 2022, and further monitoring		

Reference Number *(Column 1)*	Mitigation, monitoring or measure to prevent, offset and minimise impacts *(Column 2)*		Point of Implementation *(Column 3)*	How the mitigation is secured *(Column 4)*
		of junction performance following this.		
	Junction 14 – A1117 Normanston Drive / A1117 Peto Way roundabout	• Minor geometric improvements to Peto Way to provide additional entry capacity.		
	Junction 21 – A1117 Millennium Way / B1074 Somerleyton Road Signalised Junction	• Additional entry lane on Somerleyton Road in 2037, if proven necessary following monitoring.		