

A63 Castle Street Improvement, Hull

Scheme Number: TR010016

7.3 Outline Environmental Management Plan

APFP Regulation 5(2)(a)

Planning Act 2008

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



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Infrastructure Planning

Planning Act 2008

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

**A63 (Castle Street Improvement, Hull)
Development Consent Order 20[]**

OUTLINE ENVIRONMENTAL MANAGEMENT PLAN

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A63 Castle Street Improvements, Hull Environmental Statement

Outline environmental management plan

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A63 Castle Street Improvement, Hull

Outline environmental management plan

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1. Introduction and background to the Scheme

1.1 Purpose of the Environmental Management Plan

1.1.1 The Environmental Management Plan (EMP) provides the framework for recording environmental risks, commitments and other environmental constraints and clearly identifies the structures and processes that will be used to manage and control these aspects. The EMP seeks to ensure compliance with relevant environmental legislation, government policy objectives and scheme specific environmental objectives. It also provides the mechanism for monitoring, reviewing and auditing environmental performance and compliance.

1.1.2 EMPs should be prepared and implemented for the purpose of managing the environmental effects of a specific scheme. The key aims are to:

- act as a continuous link and main reference document for environmental issues between the design, construction and the maintenance and operation stages of a scheme
- demonstrate how construction activities and supporting design will properly integrate the requirements of environmental legislation, policy, good practice and those of the environmental regulatory authorities and third parties
- record environmental risks and identify how they will be managed during the construction period
- record the objectives, commitments and mitigation measures to be implemented together with programme and date of achievement
- identify the key staff structures and responsibilities associated with the delivery of the scheme and environmental control and communication and training requirements as necessary
- describe the contractor's proposals for ensuring that the requirements of the environmental design are achieved, or are in the process of being achieved, during the contract period
- act as a vehicle for transferring key environmental information at handover to the body responsible for operational management. This will include details of the asset, short and long-term management requirements and any monitoring or other environmental commitments.
- provide a review, monitoring and audit mechanism to determine effectiveness of, and compliance with, environmental control measures and how any necessary corrective action will take place.

1.1.3 At the Preliminary design stage, the EMP will be in outline only. The purpose of the Outline Environmental Management Plan (OEMP) is to provide preliminary

environmental guidance on how to manage the environmental effects of the Scheme as identified within the Environmental Statement (ES) for the improvements. It will demonstrate how mitigation measures to reduce environmental impacts during the construction phase will be delivered and how compliance with environmental legislation has been reached.

- 1.1.4 The OEMP has been prepared as part of the preliminary design for the Scheme. Highways England's guidance for the development of EMPs is based on the Design Manual for Roads and Bridges (DMRB) Volume 11, Section 2, Interim Advice Note (IAN) 183/14 Environmental Management Plans¹ and IAN 182/14 Major Schemes: Enabling Handover into Operation and Maintenance². The guidance in IAN 183/14 takes into consideration Environmental Management Plans: Practitioner Best Practice Series, Volume 12 (IEMA, 2008) and BS EN ISO 14001: Environmental Management (BSI, 1996, as amended). It also takes cognisance of the Highways England Environmental Management Plan Structure version 2 (1 June 2017).
- 1.1.5 The OEMP sets out the approach that should be used by Balfour Beatty as the Principal Contractor to update the document to the full CEMP once the design and construction plans have been finalised at the Detailed Design stage. Procedures and mitigation measures summarised in this OEMP will be mandatory. This approach, where the Principal Contractor is responsible for preparing the CEMP, aims to ensure that all potential environmental impacts identified in the ES and at the Detailed Design stage are fully addressed and suitable mitigation measures implemented. The CEMP will provide full details of all documentation within the environmental management framework including method statements.
- 1.1.6 The CEMP will be managed alongside the Principal Contractor's generic and site-specific environmental management plan and systems, meeting ISO14001 requirements. The CEMP will be a live document and must be maintained and updated throughout the life of the Scheme by the Principal Contractor. Environmental mitigation measures identified must be followed by all parties.
- 1.1.7 The final version of the CEMP will be adopted and integrated into the Principal Contractor's overall Scheme Handover Environmental Management Plan (HEMP) and Construction Phase Health and Safety Plan. The indicative contents of a HEMP are detailed in Annex C of IAN 183/14.

1.2 Scheme description

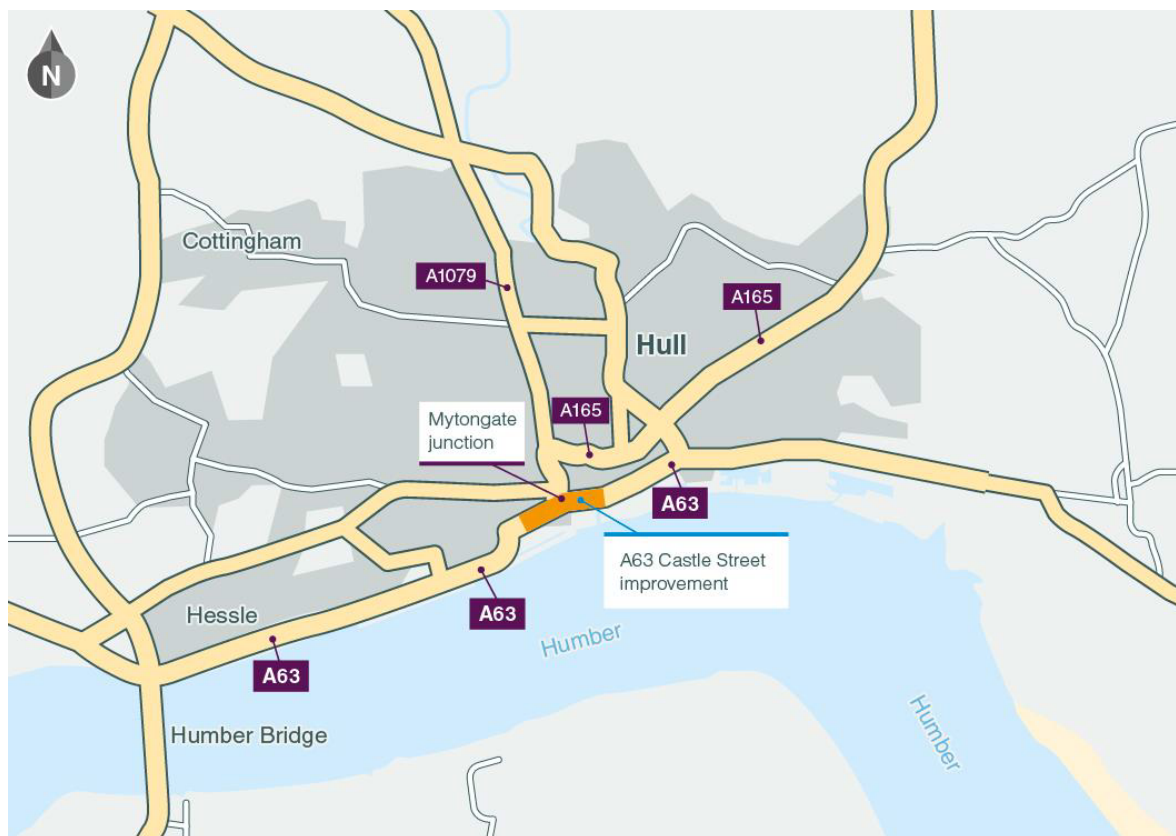
- 1.2.1 Highways England is proposing to improve approximately 1.5km of the A63 Castle Street in Hull (hereafter referred to as 'the Scheme') in East Yorkshire between

¹ <http://www.standardsforhighways.co.uk/ha/standards/ians/pdfs/ian183.pdf>

² <http://www.standardsforhighways.co.uk/ha/standards/ians/pdfs/ian182.pdf>

Ropery Street and the Market Place and Queen Street junctions. The route currently experiences congestion, particularly around Mytongate Junction. The Scheme location is shown at Figure 1.1.

Figure 1.1: Scheme location



- 1.2.2 The congestion is caused by restrictions to traffic flow at Mytongate Junction, three further signalised pedestrian crossings and from traffic turning and weaving to access side roads. Relieving the congestion would improve the currently poor journey times, and in turn improve access to the Port of Hull as well as access generally in the local area.
- 1.2.3 The signalised Mytongate Junction and other signalised pedestrian crossing facilities also have safety implications associated with pedestrians crossing the road at-grade. Pedestrians and vehicular travellers also experience safety issues from local traffic accessing side roads around Market Place, Humber Dock Street and Princes Dock Street and by weaving traffic entering and exiting the A63.
- 1.2.4 The Scheme proposes improvement works which include:
- lowering the level of the A63 into an underpass to create a grade separated junction at Mytongate
 - road widening to three lanes on a section of the eastbound carriageway
 - new pedestrian, cycle and disabled user bridges at Porter Street Bridge and Princes Quay Bridge

- removal of pedestrian crossings on the A63
- upgrading of an underpass between Market Place and High Street
- closure of some junctions with the A63 and restrictions of movements on side roads
- changes and enhancements to maintain access to all properties
- drainage works and service relocations
- setting out of replacement land for public open space
- works in Trinity Burial Ground
- dismantling of one Listed Building

1.2.5 A proposed construction programme, with details of the timings of works has been prepared by the Principal Contractor. Key programme dates, subject to DCO would be:

- Start of works on-site: March 2020
- Open to traffic: May 2025

1.3 Scheme objectives

1.3.1 The Scheme has the following objectives which align with the ES:

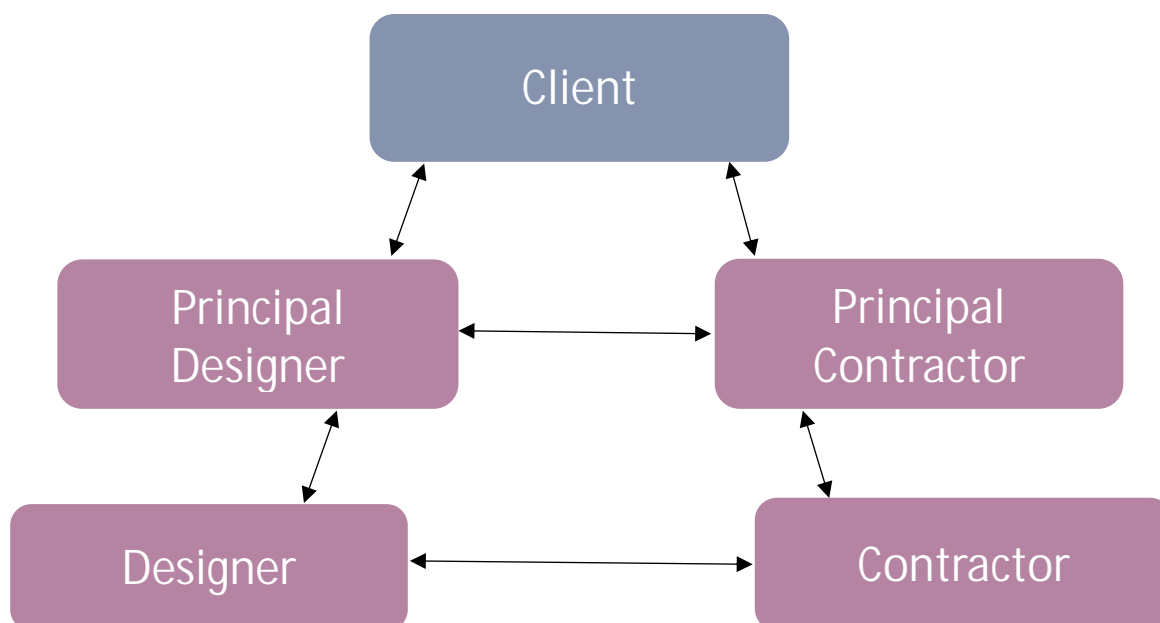
- Improved access to the Port of Hull
- Congestion relief
- Improved safety
- Improved connections between the city centre to the north and developments and tourist and recreational facilities to the south

2. Scheme team roles and responsibilities

2.1 Scheme management structure

2.1.1 The Scheme roles are structured in accordance with the Construction (Design and Management) (CDM) Regulations 2015³. Figure 2.1 illustrates how each role reports to the other and flow of information transfer.

Figure 2.1: CDM roles and responsibilities



2.1.2 The responsibilities of each role are described as follows:

- **Client**

Make suitable arrangements for managing a project. This includes making sure:

- other duty holders are appointed
- sufficient time and resources are allocated
- relevant information is prepared and provided to other duty holders
- the Principal Designer and Principal Contractor carry out their duties
- welfare facilities are provided

³ <http://www.legislation.gov.uk/ukxi/2015/51/contents/made>

- **Principal Contractor**

Plan, manage, monitor and coordinate health and safety in the construction phase of a project. This includes:

- liaising with the client and Principal Designer
- preparing the construction phase plan
- organising cooperation between contractors and coordinating their work
- ensuring suitable site inductions are provided
- ensuring reasonable steps are taken to prevent unauthorised access;
- ensuring workers are consulted and engaged in securing their health and safety
- ensuring welfare facilities are provided

- **Principal Designer**

Plan, manage, monitor and coordinate health and safety in the pre-construction phase of a project. This includes:

- identifying, eliminating or controlling foreseeable risks
- ensuring designers carry out their duties

Prepare and provide relevant information to other duty holders

Provide relevant information to the Principal Contractor to help them plan, manage, monitor and coordinate health and safety in the construction phase. This includes supporting the production of the CEMP in accordance with IAN 183/14.

- **Designer**

When preparing or modifying designs, eliminate, reduce or control foreseeable risks that may arise during:

- construction
- maintenance and use of a building once it is built

Provide information to other members of the project team to help them fulfil their duties.

- **Contractor**

Plan, manage and monitor construction work under their control so that it is carried out without risks to health and safety. For projects involving more than one contractor, coordinate their activities with others in the project team

– in particular, comply with directions given to them by the Principal Designer or Principal Contractor. For single-contractor projects, prepare a construction phase plan.

2.1.3 Overseeing management of the Scheme will be directed by Highways England as the Client and any appointed Employer’s Agent for the Scheme. Highways England will delegate some site supervision roles such as the Engineering Clerk of Works and procure specialist consultants to supervise, monitor or check the Principal Contractor’s method statements and sensitive activities where required. The key Scheme roles for Highways England and the Principal Contractor are listed in Table 2.1. Individual names and contact details will be confirmed by Highways England and the Principal Contractor.

Table 2.1: Key roles and site contacts

Role	Stage	Contact and organisation	Telephone	Email
Client Highways England Project Manager	All	TBC	TBC	TBC
Principal Contractor Construction / Project Manager	5/6*	Balfour Beatty	TBC	TBC
Principal Contractor Environmental Manager	5/6	Balfour Beatty	TBC	TBC
Principal Contractor Environmental Clerk of Works	5/6	Balfour Beatty	TBC	TBC
Principal Contractor Environmental Specialists	5/6	Balfour Beatty	TBC	TBC
Community Liaison Officer	5/6	Balfour Beatty	TBC	TBC

* Major Projects lifecycle Stage 5 Construction preparation; Stage 6 Construction, commissioning and handover

2.2 Environmental management responsibilities

2.2.1 Highways England and delegated consultants acting on their behalf, Principal Contractor and subcontractors are all responsible for complying with the Scheme’s environmental policies, relevant environmental legislation and regulations. It is a requirement that all persons on site will be made aware of their duty of care to the environment and will be provided with sufficient training, supervision or instruction through Site Inductions, Toolbox Talks and specific method statements as necessary.

2.2.2 Responsibilities for the site environmental management will be delegated to key personnel by the Principal Contractor who will manage all reporting and monitoring of environmental mitigation during the contract period. Where required, environmental specialists will be consulted to provide advice on specific issues or site activities, in consultation with the Principal Contractor. The main environmental roles and responsibilities are shown in Table 2.2.

Table 2.2: Environmental management responsibilities

Role	Responsibilities
Highway England Project Manager	<ul style="list-style-type: none"> • Oversee implementation of whole Scheme and the individuals undertaking specific roles and duties. • To be reported to as per Contract requirements and internal organisation Environmental Management Systems (EMS). • Communicate scheme environment commitments and requirements to project teams and supply chain partners
Principal Contractor Construction / Project Manager	<ul style="list-style-type: none"> • Overall responsibility for environmental management on site. • Ensure appropriate resources are available to the Project team so environmental commitments can be met. • Ensure the CEMP and all associated policies and procedures are implemented during the works. • Check all suppliers and subcontractor have an environment management system, environment policy & sustainable procurement policy. • Measure and monitor supplier and sub contractor environmental improvements with Key Performance Indicators (KPIs).
Principal Contractor Environmental Manager	<ul style="list-style-type: none"> • Oversee the environmental components of the Scheme. • Act as main contact for all environmental issues on site. • Co-ordination of all environmental specialists to ensure compliance with the environmental requirements of the Works Information • Co-ordinating site environmental management compliance. • Ensure Scheme remains compliant with the CEMP, including compliance with environmental legislation, best practice, consents, commitments and objectives set. • Updating and reviewing the CEMP throughout the works. • Ensuring the Project team have sufficient environmental training and co-ordinate deliver of additional training/inductions/Toolbox Talks where required. • Liaison with regulatory bodies. • Reporting environmental near misses, incidents or supply chain partner innovations. • Carry out an environmental review of suppliers and sub contractors. • Review supplier and sub contractor environment management system arrangements and key policies.
Principal Contractor Environmental Clerk of Works	<ul style="list-style-type: none"> • Providing support to the Environmental Manager. • Provide site induction on environmental practices, toolbox talks, organise specialist surveys, and oversee monitoring and testing of materials as required. • Monitor Principal Contractor site environmental compliance, supervising works and construction activities on site, auditing/reviewing works and procedures including method statements as required.

Role	Responsibilities
	<ul style="list-style-type: none"> • Ensure hours of working meet accepted noise and vibration limits set in consultation with Environmental Health Officer (EHO). • Develop with Principal Contractor Site Health & Safety Officer, an Emergency Spillage Response Plan and associated protocols for incidents. • Ensure Environment Agency and other stakeholder requirements are implemented for consents and permits. • Recording and reporting the progress of environmental works. • Report any product or service environment non conformances.
Principal Contractor Environmental Specialists (Ecologist, Landscape Architect, Archaeologist, Noise/Air Quality Specialist, Material/Waste Management Specialist, Contaminated Land Specialist, Occupational Health Specialist, etc)	<ul style="list-style-type: none"> • Individual Environmental Specialists will be responsible for the inputs into the environmental assessment and final detailed designs. • Will provide support to the construction Project team in the form of pre-construction surveys, applications for licenses/consents, watching briefs and other specific issues such as protected species and landscape planting supervision. • Oversee mitigation throughout the Scheme. • Must have relevant highway experience relating to detailed design, construction and maintenance (DMRB Vol 0 Section 2 Part 1 GD 02/08). • Provide specialist advice and instruction to sub contractors and suppliers.
Community Liaison Officer	<ul style="list-style-type: none"> • Key liaison with all of the above and Highways England Public Liaison Officer. • Single contact point on site for the community and general public. • Maintain and develop Community Relations Strategy (CRS). • Maintain comment and enquiries log and disseminate identified comment for response and implementation of action.

3. Record of Environmental Actions and Commitments (REAC)

3.1 Introduction

3.1.1 Potential environmental impacts arising from the proposed construction work activities have been identified in the ES for the Scheme and are shown at Annex A: Environmental constraints plan. This covers the following topic areas:

- Air quality
- Noise and vibration
- Cultural heritage
- Landscape
- Ecology and nature conservation
- Road drainage and the water environment
- Geology and soils
- Materials
- People and communities
- Effects on all travellers

3.1.2 The EMP has the purpose of capturing and collating all available information on scheme specific environmental objectives, environmental risks, proposed mitigation and commitments made during Preliminary Design. These requirements will need to be transposed into a series of clear environmental actions to ensure that each action is fully considered.

3.1.3 To facilitate this, the CEMP should contain a Register of Environmental Actions and Commitments (REAC), an outline of which is shown at Annex B. The completed register will be included in the CEMP.

3.2 REAC requirements

3.2.1 In accordance with IAN 183/14 part 3, the REAC must include:

- Clear and specific description of the Action
- The objective of the Action
- How the Action is to be implemented/achieved

- The source of the Action, including references for source documentation
- Naming of the person responsible for the Action i.e. the Principal Contractor or Environmental Manager
- Achievement criteria and reporting requirements
- The project stage or date of implementation and/or achievement
- Details of any monitoring required, what should be monitored and how results should be used to effect necessary action
- Date and signature for completion of Action

3.2.2 The REAC is a working document and will be updated as the Scheme progresses. It will be finalised at the end of construction on completion of the Scheme where it will be incorporated into the HEMP, the main vehicle for passing essential environmental information to Highways England as the Client and to the body responsible for the future maintenance and operation of the Scheme.

4. Consents and permissions

4.1 Introduction

4.1.1 The Principal Contractor will comply with all relevant environmental legislation and regulations. A register of any relevant environmental legislation and good practice guidance will be compiled within the CEMP and updated by the Principal Contractor throughout the Scheme. This will include the scope and purpose of each piece of legislation, including any requirements for ensuring compliance throughout the works. A summary of key legislation, policies and strategies and best practice is provided at Annex C. Details of required permits and consents necessary for delivery will also be provided.

4.2 Consents, licenses and permitting

4.2.1 The Development Consent Order (DCO) under the Planning Act 2008 provides consent to construct the Scheme. This will be adhered to at all times.

4.2.2 Prior to start of the construction phase, all additional necessary consents, licenses/permits and exemptions which are not encompassed by the DCO will be obtained. A Register of Consents, Licences and Exemptions will be maintained and kept up to date by the Principal Contractor. The register will include details of Project team members with responsibility for obtaining licences/permits, together with a programme for obtaining them, dates valid to/from (if relevant) and any notification requirements (e.g. on completion of works or in the event of a breach of consent/licence conditions).

4.2.3 The Principal Contractor will be required to obtain and implement all permits, consents and licences necessary during the construction phase. The Principal Contractor will need to manage the submission and approval of those required prior to the commencement of any site works. Table 4.1 provides an anticipated list which will need to be reviewed and updated, as required, as the Scheme progresses.

Table 4.1: Permits, consents and licences

Type of licence / consent / permit	Issuing authority	Requirement	Summary of condition
Assessment of Impacts on European Sites: EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora) and the Conservation of Habitats and Species Regulations 2017.	Natural England Marine Management Organisation	Consent must be obtained before construction works can commence	Consent not received yet.

Type of licence / consent / permit	Issuing authority	Requirement	Summary of condition
Site of Special Scientific Interest Consent: Wildlife and Countryside Act 1981 regulation 28E	Natural England	Consent must be obtained before construction works can commence	Consent received on 28/08/15 for design at that time. Consent not requested yet for Princes Quay Bridge.
Marine Licence: Marine and Coastal Access Act 2009	Marine Management Organisation	Consent must be obtained before construction works can commence	Consent not received yet.
Flood Risk Activity	Environment Agency	Permit required if work is carried out on or near a main river, on or near a flood defence structure, in a flood plain, or near a flood defence.	Permit is required to do any regulated flood risk activities such as activity within 16m of sea defence structure.
Environmental Permit: Environmental Permitting (England and Wales) Regulations 2010	Environment Agency	An environmental permit is required for any discharge of liquid of waste water into surface water. This includes underpass discharge to the Humber estuary, plus any construction dewatering lasting more than 3 consecutive months. (shorter term discharges exempt if Regulatory Position Statement (RPS) conditions are adhered to).	A method statement is required to minimise the risk of pollution. There are a number of RPS conditions that must be adhered to, relating to source of water, water quality and potential impact on receiving water course. A bespoke permit will be required if RPS conditions cannot be complied with.
Transfer licence for construction dewatering: The Water Abstraction and Impounding (Exemptions) Regulations 2017	Environment Agency	Groundwater abstraction for construction dewatering purposes now requires a transfer licence, unless the dewatering programme is short-term (<6 months) and abstraction volumes for the site as a whole are small, as detailed in the regulations. A transfer licence is a groundwater abstraction licence that assumes that the water is discharged back to the	Dewatering design details will be required before the licensing process can commence. A Groundwater Investigation Consent (GIC) is likely to be required to drill and test the dewatering system as part of the licensing process.

Type of licence / consent / permit	Issuing authority	Requirement	Summary of condition
		environment with no intervening use.	
Waste Water Consent: Water Industry Act 1991 Section 118	Relevant sewage undertaker	Consent is required to discharge to the public sewer	Consent is required to discharge effluent into the public sewer
Ordinary Watercourse Consent: Land Drainage Act 1991 Flood and Water Management Act 2010	Hull City Council / Environment Agency / British Waterways Marina Ltd / other dock/marina operators	Consent is required to discharge into docks/marinas and ordinary watercourses	Requirements to be confirmed.
Noise: Control of Pollution Act 1974 Section 61	Hull City Council Environmental Health Officer	The Contractor is to consult Hull City Council in advance of start date of construction Consultation required to agree hours of working, mitigation measures and any specific noise and vibration limits	During consultation for the ES, Hull City Council expressed a preference to reach an informal agreement with the Contractor without a Section 61. However, this allows Hull City Council to serve a Section 60 notice if noise or vibration is considered excessive. The Section 60 would impose restrictions on the work for the control of noise and vibration.
Waste Carrier registration and waste transfer notes	Environment Agency	Principal Contractor to ensure their selected waste carrier is registered (upper tier) through the Environment Agency and up-to-date waste transfer notes / edoc completed	Waste carriers to carry, collect and transport waste under their 'duty of care' obligations. All waste transfer notes / edoc completed in accordance with the Waste (England and Wales) Regulations 2011.
Environmental Permit: Environmental Permitting (England and Wales) Regulations 2010 - environmental permits and exemptions for the treatment, handling and disposal of waste	Environment Agency	Principal Contractor to ensure that appropriate environmental permits or exemptions in place for the handling, treatment and disposal of waste	Waste management facilities receiving waste streams must hold and comply with the correct permit or appropriate exemption to accept or manage a particular waste.
Licensed contractor under the Control of Asbestos Regulations (CAR) 2012	Health and Safety Executive	Principal Contractor to ensure that works which require the removal of asbestos containing material is undertaken by an appropriately licenced contractor. As required	Effective controls to be in place to control potential risks, as required under the CAR and notification given to the HSE for any licenced and

Type of licence / consent / permit	Issuing authority	Requirement	Summary of condition
			notifiable non-licensed works.
Hazardous Waste Regulations 2005 Consignment Note	n/a	A completed consignment note must accompany hazardous waste removed	The producer/holder of the waste must complete a consignment note before hazardous waste is removed and be completed in full by the waste consignor, carrier and consignee The registered exempt or permitted waste facility receiving hazardous waste must report 'returns' to the Environment Agency
Faculties: Care of Churches and Ecclesiastical Jurisdiction Measure 1991 and the Faculty Jurisdiction Rules 2015	Chancellor for the Diocese	For consecrated sites, a Faculty is required for undertaking works within the burial ground, including the exhumation and reburial of remains.	Where a Faculty is granted, directions (i.e. conditions) will apply and a Completion of Works Certificate must be submitted with 4 weeks of completion of the works
Licence under Burial Act 1857 Section 25, as amended by the Church of England (Miscellaneous Provisions) Measure 2014	Secretary of State for Justice	For non-consecrated sites (e.g. area outside of existing burial ground boundary), a Ministry of Justice licence is required for the exhumation and reburial of remains.	Where a Ministry of Justice licence is granted, conditions will apply (e.g. attention to decency, screening of the remains from public view).
Listed Building Consent: Planning (Listed Buildings and Conservation Areas) Act 1990	Secretary of State	3/4 consents required for Earl de Grey public house and Humber Dock. 1/2 consents required for monitoring equipment on Castle Buildings and Warehouse No. 6.	Earl de Grey public house – consent required in advance of dismantling; Humber Dock – consent required for alteration of northern dock wall during construction of Prince Quay Bridge Humber Dock – consent required for re-siting of the Spurn Lightship Castle Buildings and Warehouse No 6 – consent required for vibration monitoring equipment
Scheduled Monument Consent: Ancient Monuments and	Secretary of State	1 consent required for Beverley Gate and archaeological	Beverley Gate – consent will be required in the event of

Type of licence / consent / permit	Issuing authority	Requirement	Summary of condition
Archaeological Areas Act 1979		remains only if service and utility diversions are within the boundary of the Scheduled Monument.	any service and utility diversions excavations with the boundary of the Scheduled Monument.

5. Environmental asset data and as built drawings

5.1 Introduction

5.1.1 This section confirms submission arrangements for providing environmental asset data as built drawings to Environmental Information System (EnvIS) co-ordinators covering the lifespan of the EMP in line with the requirements of IAN 84/10⁴.

5.2 EnvIS

5.2.1 EnvIS environmental inventory provides Highways England and service providers with an accurate and consistent approach to the recording of environmental data, within the strategic road network. For each environmental element, data is captured that relates to the element's classification, status, geographic location and other specific details such as the intended Highways England environmental objective(s).

5.2.2 The interaction of EnvIS with the Highways England's environmental management processes provides an integrated environmental management framework for the management of environmental impacts, compliance with environmental legislation and continual improvement of Highways England's environmental performance. EnvIS is an integral part of this framework and provides the structure for implementing Highways England environmental objectives into decision making processes and enables the recording of key data about the Highways England network which can be used to monitor and report/review environmental performance and policy.

Collection of EnvIS data

5.2.3 The Principal Contractor is responsible for identifying, recording, updating and auditing the EnvIS data on an ongoing process. This should be stored in the Principal Contractor's own system, as-and-when elements are identified, removed, or implemented as part of the Scheme improvements.

Submission of EnvIS data

5.2.4 EnvIS data is submitted in accordance with the interface file specifications set out in IAN 84/10, part 4. The Principal Contractor should ensure that the data is in a compatible format to enable supply of data to the ongoing maintenance contractor.

5.2.5 EnvIS data for the Detailed Design stage will have been submitted for all elements associated with the planning and design of the Scheme. This will have updated

⁴ <http://www.standardsforhighways.co.uk/ha/standards/ians/pdfs/ian84pt1.pdf>

previous data arising from the Preliminary Design including any survey information / data that has already been provided e.g. species surveys.

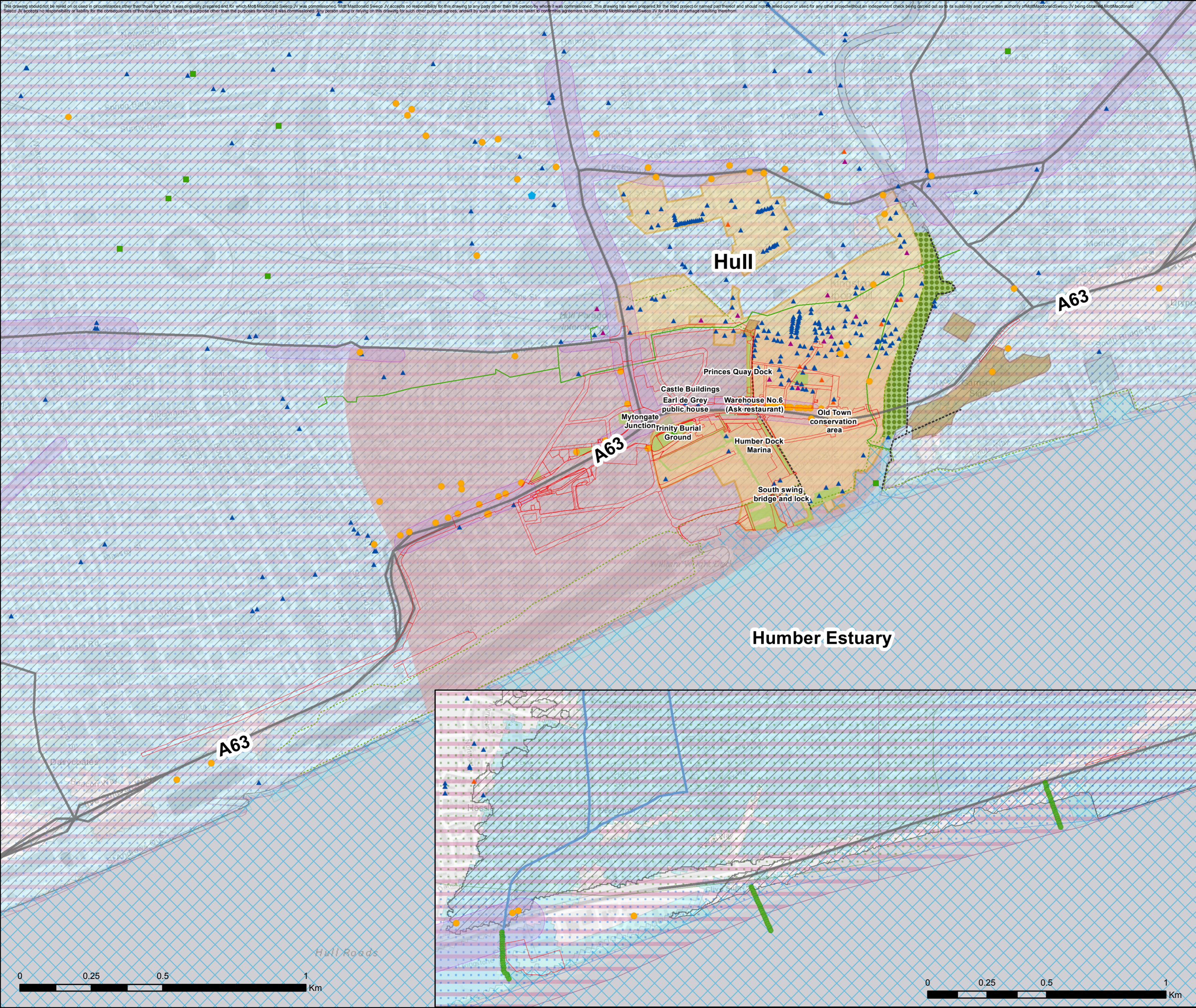
- 5.2.6 Towards the end of the construction phase of the Scheme and prior to handover, EnvIS data detailing the completion of the Scheme will be collected by the Principal Contractor and submitted. The data will detail all elements associated with the construction of the Scheme and planned environmental management actions that are required to be undertaken by the Network Management Agent as part of operating and maintaining the Network Area.

5.3 As built drawings

- 5.3.1 A series of Preliminary Design Drawings were submitted as part of the application process for the DCO for the Scheme. Relevant drawings include the Scheme General Arrangement Plans (document reference TR010016/APP/2.2) and Drainage Engineering Drawings (document reference TR010016/APP/2.7).
- 5.3.2 Further Detailed Design drawings will be produced as the Scheme progresses. Additional drawings will be required to include the contractor's compounds, material storage, and temporary security/health and safety. As built drawings including the evaluation of change register identifying changes to the drawings as part of the change control process, will be provided by the Principal Contractor as part of the EnvIS process prior to handover.

Annex A: Environmental constraints plan

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Key to symbols

- Scheme site boundary
- River
- Air Quality**
 - Hull Air Quality Management Area
 - Human health receptor
 - PCM Links
- Noise**
 - Noise Important Area
- Cultural Heritage**
 - Conservation Area
 - Scheduled Monuments
 - Grade I Listed Building
 - Grade II Listed Building
 - Grade II* Listed Building
- Landscape and Ecology**
 - Urban green spaces (Hull Local Plan)
 - Green network (Hull Local Plan)
 - Public rights of way
 - The Trans Pennine Trail - Cycling
 - The Trans Pennine Trail - Walking
 - Humber Estuary - SSSI, SAC, SPA, Ramsar
 - Non-statutory designated sites (ecology)
- Road Drainage and the Water Environment**
 - Source Protection Zones
 - Zone III - Total Catchment
 - Aquifer Designation Bedrock - typology
 - Principal Aquifer
 - Groundwater Abstractions
 - Areas Benefiting from Flood Defences
 - Flood Zone 2
 - Flood Zone 3

P02	31/07/2018	Key Changes	WF	AS	AS
P01.1	28/06/2018	Boundary Amendments	WF	AS	AS
Rev	Date	Amendment Details	Drw'n	Chk'd	App'd

Mott MacDonald Sweco

Client **highways england**

Drawing Status **SHARED** Suitability **S4**

Project Title **A63 CASTLE STREET IMPROVEMENTS, HULL**

Drawing Title **VOLUME 2 FIGURE 2.4 ENVIRONMENTAL CONSTRAINTS**

Scale	1:20,000	Designed	--	Drawn	WF	Checked	AS	Approved	AS
Original Size	A3	Date	--	Date	16/07/2018	Date	16/07/2018	Date	16/07/2018

Drawing Number	HE PIN	Originator	Volume	Project Ref. No.
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		DR	LE	P02
			000017	
			Number	



Annex B: Register of Environmental Actions and Commitments (REAC)

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
Air Quality (AQ)										
AQ1	CH6	-	-	Minimise the release of dust and vehicle/plant emissions which may impact upon air quality.	<ul style="list-style-type: none"> Best practice methodologies to be implemented and outlined in the CEMP¹ to control the generation of dust and vehicle/plant emissions. 	Mitigation measures included in the CEMP	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	C	Signature: Date:
AQ2	CH6 A	-	-	Traffic pollutant complaints procedure	<ul style="list-style-type: none"> Keep a detailed log of any air quality complaints and include measures taken by contractor to address complaints. 	<p>Name and contact information of the person(s) accountable for air quality displayed on the site boundary</p> <p>During operation, detailed under Part IV of the Environment Act 1995, it is the responsibility of the Local Authority to periodically review air quality within its area and to declare and Air Quality Management Area (AQMA) and to develop and Air Quality Action Plan where air quality objectives are exceeded. Any complaints of traffic-related pollution are therefore the responsibility of the Local Authority to investigate.</p>	<p>Contractual responsibilities between Highways England and the Principal Contractor.</p> <p>Local Authority</p>	Contractor – recording of complaints Local Authority for investigation of complaints	C, O	Signature: Date:
Noise and Vibration (NV)										
NV1	CH7	-	-	The control of noise and vibration arising from the works and compounds to minimise disturbance in community.	<ul style="list-style-type: none"> Best practicable means for the control of noise and vibration to applied as a matter of course and as described in Section 79(9) of the Environmental Protection Act 1990, to reduce noise to a minimum shall be employed at all times. Procedures for noise control and the assessment of site noise shall be in accordance with BS 5228, Part 1:2009+A1:2014. Contractor requirements are set out in the Appendix 1/9 'Control of Noise and Vibration'. 	<p>Mitigation measures included in the CEMP</p> <p>Consultation with HCC Principal Environmental Health Officer with public relations managed throughout the Construction Phase.</p> <p>Noise insulation and temporary rehousing to be offered to those meeting the criteria set out in Annex E.4 of BS 5228 Part 1 2009+A1:2014</p>	<p>Contractual responsibilities between Highways England and the Principal Contractor.</p> <p>Local Authority</p>	Contractor	C, O	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
					<ul style="list-style-type: none"> • Measures would be set out in the CEMP to control potential noise impacts from site traffic. This may include the following: <ul style="list-style-type: none"> - Vehicles should not wait or queue up with engines running on the site or on the public highway - Manage deliveries to prevent queuing of site traffic at access points and the need for vehicles to reverse - Use of adjustable or directional audible vehicle-reversing alarms or use of alternative warning systems, e.g. white noise alarms • Other, more specific forms of construction mitigation are as follows: <ul style="list-style-type: none"> - The A63 remains in use throughout the works in order that its capacity is maximised. - Temporary acoustic barrier fencing to be provided along the northern carriageway edge between the Myton Centre and William Booth House when construction activities are programmed to occur along in this section of the Scheme. - Monitoring of phases would be conducted in order to verify that noise levels associated with traffic flows during construction do not cause significant adverse effects at noise sensitive receptors. - Proactive communication with local residents, businesses and road users to address their concerns and opinions on the traffic management (TM) phasing. - Safe access and egress would be maintained to all businesses and residential properties. Emergency routes to be available throughout the 					

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
					<p>Scheme construction programme of works at all times.</p> <ul style="list-style-type: none"> - Every effort would be made to ensure that there are no late removals of the TM after overnight lane closures. The overnight closures required are discussed below. - A minimum of 2 weeks prior notice to be given to occupiers of affected properties via letter drop and press release. - Noise mitigation measures may include procurement of low noise plant options, time restrictions on certain noisy activities, temporary noise barriers and tool box briefings to operatives on quite working. 					
NV2	CH7	-	-	Control of road traffic noise due to the application of temporary diversion routes during the construction phase	<ul style="list-style-type: none"> • Consideration should be given to vary the diversion routes to minimise the duration of potential disturbance in individual areas. 	<p>Minimise increases in noise of 1 dB or more from traffic on diversion routes and to not exceed 40 days in any 6-month period</p> <p>Consultation with HCC Principal Environmental Health Officer with public relations managed throughout the Construction Phase.</p>	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	C	Signature: Date:
NV3	CH7	-	-	Mitigation of road traffic noise affecting properties qualifying for noise insulation under the Noise Insulation Regulations 1975	<ul style="list-style-type: none"> • Operational noise impacts would be mitigated by the treatment of the new carriageway and slip roads with a thin layer of stone mastic asphalt (thin surface course). • Assessment and provision of noise insulation for all qualifying properties 	<p>Any dwellings at which the predicted level of road traffic noise is found to satisfy the criteria for sound insulation measures in accordance with the Noise Insulation Regulations 1975 will be offered either sound insulation measures or a grant instead.</p>	Assess by calculation within 6 months after Scheme opening	Highways England	O	Signature: Date:
Cultural Heritage (CH)										

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
CH1	CH8	-	-	Preservation by record of archaeological remains.	<ul style="list-style-type: none"> Undertake archaeological investigation of the archaeological trench on Princes Dock Street in line with the Archaeological Project Design. The archaeological investigation will be monitored by the Local Authority Archaeological Advisor (Humber Archaeology Partnership on behalf of HCC). A report will be produced for the results of the mitigation; the work may also feed into the final publication on the Scheme; these will require approval from the Local Authority Archaeological Advisor. 	Appointment of an archaeological subcontractor to undertake the agreed works.	Contractual responsibilities between Highways England, the Principal Contractor and the Principal Designer.	Historic England chosen Heritage Specialist.	P, C Reporting may continue into the operation phase.	Signature: Date:
CH2	CH8	-	-	Preservation by record of archaeological remains.	<ul style="list-style-type: none"> Undertake archaeological investigation of the Trinity Burial Ground in line with the Archaeological Project Design (see Volume 3, Appendix 8.7). The archaeological investigation will be monitored by the Local Authority Archaeological Advisor (Humber Archaeology Partnership on behalf of HCC). A report will be produced for the results of the mitigation; the work may also feed into the final publication on the Scheme; these will require approval from the Local Authority Archaeological Advisor. 	Appointment of an archaeological subcontractor to undertake the agreed works.	Contractual responsibilities between Highways England, the Principal Contractor and the Principal Designer.	Historic England chosen Heritage Specialist.	P, C Reporting may continue into the operation phase.	Signature: Date:
CH3	CH8	-	-	Preservation by record of archaeological remains.	<ul style="list-style-type: none"> Undertake archaeological watching brief during the construction of Princes Quay Bridge (see Volume 3, Appendix 8.8). The archaeological watching brief will be monitored by the Local Authority Archaeological Advisor (Humber Archaeology Partnership on behalf of HCC). A report will be produced for the results of the mitigation; the work may also feed into the final publication on the Scheme; these will require approval from the Local Authority Archaeological Advisor. 	Appointment of an archaeological subcontractor to undertake the agreed works.	Contractual responsibilities between Highways England, the Principal Contractor and the Principal Designer.	Historic England chosen Heritage Specialist.	P, C Reporting may continue into the Operation Phase.	Signature: Date:
CH4	CH8	-	-	Preservation by record of archaeological remains.	<ul style="list-style-type: none"> Produce Archaeological Project Design¹ (APD) and to cover archaeological watching brief during the mains works and Old Town Accommodation works. Undertake 	Consultation with the Local Authority Archaeological Advisor. Production of an APD.	Contractual responsibilities between Highways	Historic England chosen	P, C	Signature:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
					<p>archaeological watching brief as outlined in the APD.</p> <ul style="list-style-type: none"> The APD will be approved and archaeological watching brief will be monitored by the Local Authority Archaeological Advisor (Humber Archaeology Partnership on behalf of HCC). A report will be produced for the results of the mitigation; the work may also feed into the final publication on the Scheme; these will require approval from the Local Authority Archaeological Advisor. 	Appointment of an archaeological subcontractor to undertake the agreed works.	England, the Principal Contractor and the Principal Designer.	Heritage Specialist.	Reporting may continue into the Operation Phase.	Date:
CH5	CH8	-	-	Preservation by record of built heritage remains	<ul style="list-style-type: none"> Produce APD to cover archaeological recording the Earl de Grey Public House in advance of and during demolition. Undertake archaeological recording in line with the APD. The APD will be approved and archaeological watching brief will be monitored by the Local Authority Archaeological Advisor (Humber Archaeology Partnership on behalf of HCC). A report will be produced for the results of the mitigation; the work may also feed into the final publication on the Project; these will require approval from the Local Authority Archaeological Advisor. 	<p>Consultation with the Local Authority Archaeological Advisor. Production of an APD.</p> <p>Appointment of an archaeological subcontractor to undertake the agreed works.</p>	Contractual responsibilities between Highways England, the Principal Contractor and the Principal Designer.	Historic England chosen Heritage Specialist.	<p>P, C</p> <p>Reporting may continue into the Operation Phase.</p>	<p>Signature:</p> <p>Date:</p>
Landscape (L)										
L1	CH9	-	-	To limit visual intrusion and impacts upon townscape character during construction	<ul style="list-style-type: none"> Reduction of visual intrusion and impacts upon the townscape throughout construction. This should include but not be limited to: <ul style="list-style-type: none"> a well-managed and tidy site. limited stockpiles of materials and deliveries on an as needed basis wherever possible. large-scale construction plant to be positioned in the least visually intrusive 	Daily site audits.	To be implemented by the Principal Contractor.	Contractor	C	<p>Signature:</p> <p>Date:</p>

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
					<p>locations within construction compounds as far as practicable.</p> <ul style="list-style-type: none"> - welfare units, temporary site offices, plant and hoarding in a colour that would aid integration with the surrounding townscape where possible. - tree felling to be carried out in stages as required to maintain existing visual screening of the highway for as long as practicable. - limited use of lighting wherever possible to restrict night time impacts. 					
L2	CH9			Limit impacts upon existing trees and vegetation	<ul style="list-style-type: none"> • Works should be undertaken to limit impacts upon existing vegetation on site. Full details are presented in the Arboricultural Implications Assessment¹ (AIA) and Arboricultural Method Statement¹ (AMS). Tasks would include but are by no means limited to: <ul style="list-style-type: none"> - Prevent damage to roots, stem and branches of existing trees to be retained, as detailed in AIA and AMS. - Provide tree protection fencing in line with BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations. - Follow prohibitions applied within the area enclosed by the Tree Protection Fencing - as detailed in the AIA and AMS. • Any changes in circumstance in relation to trees on site to be agreed with Scheme Arboriculturalist in the first instance prior to works. • Environmental Clerk of Works to be cognisant of Arboricultural requirements and report any failures to implement actions of AIA and AMS to Scheme Arboriculturalist. 	<p>Prevention of damage to any vegetation to be retained in line with the AMS.</p> <p>Prevention of damage to existing trees and vegetation on adjoining private land during fencing or hoarding works e.g on the highway boundary south of Staples to the north east of Mytongate Junction in line with the AMS.</p>	To be implemented by the Principal Contractor.	Contractor and Scheme Arboriculturalist	C	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
L3	CH9			To limit visual intrusion and impacts upon townscape character during operation	<ul style="list-style-type: none"> Works should be undertaken to reduce visual intrusion and impacts upon the landscape as a whole throughout operation by the implementation of the landscape design in accordance with detailed hard and soft landscape proposals, the environmental masterplan, and the CEMP. 	Successfully implement Environmental Masterplan design in line with the CEMP – supervision and review of planting works.	Soft landscape works to be undertaken by Contractor.	Contractor and Scheme Landscape Architect	O	Signature: Date:
L4	CH9	-	-	To limit visual intrusion and impacts upon townscape character during operation	<ul style="list-style-type: none"> Landscape works undertaken should be maintained to ensure successful establishment of the proposed landscape design. Maintenance should be undertaken in accordance with the Landscape and Ecology Management Plan¹ (LEMP) to ensure the establishment and continued growth of new plant stock to ensure proposed mitigation planting meets its objectives as presented in the Environmental Masterplan. 	Successful management of landscape planting in line with Environmental Masterplan design, and LEMP - monitoring and reporting of defects.	Management throughout Aftercare period.	Contractor and Scheme Landscape Architect	O	Signature: Date:
L5	CH9	-	-	To ensure transfer of maintenance responsibilities for the soft estate of the Scheme after handover.	<ul style="list-style-type: none"> Landscape works and improvements undertaken during the Scheme have been maintained during the Aftercare period and arrangements needs to be made for their continued upkeep after handover to HCC. HCC should be made aware of their responsibilities for the landscaped elements of the Scheme (including hard and soft landscaping adjacent to the A63 highway and the underpass, the replacement public open space at the Myton Centre, works to Trinity Burial Ground including the maintenance of paths and historic features such as monuments) in accordance with the HEMP. 	Successful completion of the Handover Environmental Management Plan ¹ (HEMP) and subsequent monitoring and reporting arrangements.	Maintenance after handover in accordance with the HEMP.	Contractor and Scheme Landscape Architect	O	Signature: Date:
L6	CH9	-	-	To ensure protection of existing trees	<ul style="list-style-type: none"> Ensure that hoardings to the Arco site compound are removed and/or moved at handover to enable tree and shrub landscape proposals to be implemented along the boundary with the A63. 	Successful management of landscape planting in line with Environmental Masterplan design, and LEMP (to be produced) - monitoring and reporting of defects.	Management throughout Aftercare period and at handover.	Contractor and Scheme Landscape Architect	O	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
						Successful completion of the HEMP and subsequent monitoring and reporting arrangements.				
Ecology and Nature Conservation (E)										
E1	CH10			To prevent airborne dust, noise, vibration and pollutant pollution and sedimentation from entering the Humber Estuary and harm to marine fauna during piling into Humber Dock Marina.	<ul style="list-style-type: none"> • Best practice methodologies to be implemented and outlined in the CEMP to control pollutants. May include silt curtain. • The dock gates would be closed during piling to control and contain silt and sediment and absorb noise and vibration from entering the Humber Estuary. • Trained marine fauna ecologists would act as observers to check that the dock area and up to 500m beyond the dock gates is clear of marine animals. • A soft start-up of machinery to disperse any potential fish, birds or mammals present in the dock. 	<p>Mitigation measures included in the CEMP</p> <p>Appointment of trained marine fauna ecologist.</p> <p>Production of a Marine Mammal Mitigation Plan¹ (MMMP) as specified by JNCC, 2010.</p> <p>Production of a Noise and Vibration Management Plan¹ (NVMP).</p>	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor and marine ecologists	P, C	Signature: Date:
E2	CH10			To protect trees and flora in Trinity Burial Ground and trees around site	<ul style="list-style-type: none"> • Works should be undertaken to limit impacts upon existing vegetation on site. Full details are presented in AIA and AMS. Tasks would include but are by no means limited to: <ul style="list-style-type: none"> - Prevent damage to roots, stem and branches of existing trees to be retained, as detailed in AIA and AMS. - Provide tree protection fencing in line with BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations. - Follow prohibitions applied within the area enclosed by the Tree Protection Fencing - as detailed in the AIA and AMS. • Any changes in circumstance in relation to trees on site to be agreed with Scheme Arboriculturalist in the first instance prior to works. Environmental Clerk of Works to be cognisant of Arboricultural requirements and 	Prevention of damage to any vegetation to be retained in line with the AMS and noted in the LEMP.	To be implemented by the Principal Contractor.	Contractor and Scheme Arboriculturalist	C	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
					<p>report any failures to implement actions of AIA and AMS to Scheme Arboriculturalist.</p> <ul style="list-style-type: none"> Lighting during construction to directed away from remaining trees. 					
E3	CH10			Minimise the release of dust, noise, vibration and point pollution which may impact upon all other habitats	<ul style="list-style-type: none"> Standard pollution prevention measures will be used in site compounds and working areas to mitigate pollution incidents before contaminants could reach the Humber Estuary. The Scheme would retain the existing highway gullies. In addition, new water collection features would be introduced to collect surface water run-off from impermeable areas as attenuation for the additional flow rates. This would restrict surface water flows to the existing flow rates to the public sewer network, Princes Dock and the Humber Dock. Concrete mixing and washing areas would be located more than 10m from waterbodies. Wash water would not be discharged to the water environment and would be disposed of appropriately. Disposal of excavated material and trimmed excess pile and wall material would be described, documented and disposed of in accordance with relevant statutory instrument and guidance with chemical analysis being undertaken where appropriate. Best practice methodologies to be implemented and outlined in the CEMP to control pollutants. 	Mitigation measures included in the CEMP	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	C	Signature: Date:
E4	CH10			To retain some habitat for invertebrates	<ul style="list-style-type: none"> Site Compounds – Wellington Street Island Wharf, Neptune Street and Livingstone Road, a small amount of ephemeral/short perennial habitat is to be left undisturbed in a corner of each compound. 	Mitigation measures included in the CEMP	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P, C	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
E5	CH10	-	-	To limit impacts to wildlife during vegetation clearance	<ul style="list-style-type: none"> An Ecological Clerk of Works (ECoW) to be present prior to vegetation clearance to search the area where vegetation is to be removed first and move any fauna to safety. Clearance of potential nesting habitat outside breeding season (in particular for bats and birds). Destruction of nests would be avoided by sensitive timing of works. At site compounds Wellington Street Island Wharf and Livingstone Road, mitigation should include that trenches should be covered at night to prevent grey seal/otter from falling in, or trenches should include an earth ramp to allow them to climb out. At night lighting should be directed away from the Humber. 	Mitigation measures included in the CEMP	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor and scheme ecologist	P, C	Signature: Date:
E6	CH10			To prevent unexpected harm to bats.	<ul style="list-style-type: none"> Precautionary avoidance measures are to include that demolition of the Earl de Grey public house and trees in Trinity Burial Ground SNCI would be overseen by a bat licensed ECoW. Trees would be felled sectionally and sections searched by ECoW or left overnight for bats to exit before removal from site. Lighting at night to be directed away from linear features and the use of hoods to reduce light spill in Trinity Burial Ground. 	Mitigation measures included in the CEMP	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor and scheme ecologist	P, C	Signature: Date:
E7	CH10			To prevent the spread of invasive non-native species.	<ul style="list-style-type: none"> Invasive Species have been identified on site i.e. Cotoneaster (Market Place junction and A63 and Queen Street junction); False acacia (land south of Mytongate Junction). Trees/plants are to be removed and the arisings and topsoil in these areas to be treated as controlled waste. To be disposed of at a suitably licensed or permitted disposal facility. 	CEMP and biosecurity method statements.	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P	Signature: Date:

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E8	CH10			Compensatory measures for loss of bat habitat	<ul style="list-style-type: none"> • Compensation includes the erection of bat boxes on the remaining trees in Trinity Burial Ground SNCI. • Compensation includes that the larger native trees are to be replanted on the verges at either side of the A63 around Trinity Burial Ground and the Myton Centre. The large height of the trees would provide habitat 'hop-overs' for bats and reduce collisions with traffic. 	Successful implementation of the Environmental Masterplan design in line with the CEMP – supervision and review of planting works.	To be undertaken by Contractor.	Contractor and Scheme ecologist	O	Signature: Date:
Road Drainage and the Water Environment (W)										
W1	CH11	-	-	To limit effects as a result of storage of materials.	<ul style="list-style-type: none"> • Where possible, storage compounds (for the storage of construction materials or temporary stockpiling of excavated materials) would be located away from surface watercourses and drains. • Drums and barrels would be stored in a designated, bund-shielded, safe area within the site compound. • All drums and barrels would be properly labelled and fitted with flow control taps. • All fuel, oil and chemicals would be stored in accordance with the requirements of the Control of Pollution (Oil Storage) Regulations 2001. • Construction plant would be refuelled in designated areas on an impermeable surface, away from drains and watercourses. If any refuelling does need to take place in other areas of the site, a prescribed safe method would be used. An emergency spill plan would be generated and spill kits would be available at appropriate locations. • Other construction best practice approaches would also be adopted, such as covering of stockpiles to avoid the mobilisation of soils, and taking care when working near existing sewers or above ground sewer diversions to 	Mitigation measures included in the CEMP Water quality monitoring plan to be carried out once agreed with Environment Agency	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	C	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
					avoid damage. The CEMP would also include an erosion prevention and sediment control plan, with the aim of minimising erosion by reducing disturbance, and stabilising exposed materials.					
W2	CH11			To limit impacts of reduced flows due to earthworks and increased infiltration	<ul style="list-style-type: none"> Temporary pumping arrangements within CEMP to discharge flood waters to sewer or surface waters subject to relevant permits / consents, only compliant water to be discharged to Humber Estuary, the River Hull, Humber, Albert, Railway, and Princes Dock or Fleet Drain, non-compliant water collected and discharged off-site. Any discharges to docks / marinas would require consent from Marine Management Organisation (MMO), dock operators and the Environment Agency. 	Mitigation measures included in the CEMP	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	C	Signature: Date:
W3	CH11			To limit impacts of increased flows due to construction dewatering	<ul style="list-style-type: none"> Temporary pumping arrangements within CEMP to discharge flood waters to sewer or surface waters subject to relevant permits / consents, only compliant water to be discharged to Humber Estuary, the River Hull, Humber, Albert, Railway, and Princes Dock or Fleet Drain, non-compliant water collected and discharged off-site. Any discharges to docks/marinas would require consent from MMO, dock operators and the Environment Agency. 	Mitigation measures included in the CEMP	Contractual responsibilities between Highways England and the Principal Contractor	Contractor	C	Signature: Date:
W4	CH11			To limit impacts of increased suspended solids and reduction in water quality because of earthworks, construction dewatering, plant and vehicle washing, etc	<ul style="list-style-type: none"> Mitigation by best practice methods implemented through the CEMP, including the use of SuDS to reduce surface water runoff rates and appropriate pollution and silt control. Consents / permits to be obtained for construction dewatering – only compliant water to be discharged to Humber Estuary or other surface water bodies, non-compliant water collected and discharged off-site. Any discharges to docks / marinas 	<p>Mitigation measures included in the CEMP. This would include an Erosion Prevention and Sediment Control Plan¹ (EPSCP), with the aim of minimising erosion by reducing disturbance, and stabilising exposed materials.</p> <p>Water quality monitoring reporting to be agreed with Environment Agency.</p>	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P, C	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
					<p>would require consent from MMO, dock operator and Environment Agency.</p> <ul style="list-style-type: none"> Contaminated land classed as hazardous waste to be removed from site and disposed of at licensed facility. Temporary drainage arrangements including closed drainage systems, oil separators and settlement tanks will be put in place to capture site runoff and to remove oils, chemicals and suspended solids that may be mobilised during construction. Monitoring plan to include water quality sampling prior to, during and after construction (to be agreed with Environment Agency). <p>Other construction best practice approaches would also be adopted, such as covering of stockpiles to avoid the mobilisation of soils, and taking care when working near existing sewers or above ground temporary sewer diversions to avoid damage. The CEMP would also include an erosion prevention and sediment control plan, with the aim of minimising erosion by reducing disturbance, and stabilising exposed materials.</p>					
W5	CH11			To limit impacts of changes in flood flow routes due to alteration of ground elevations	<ul style="list-style-type: none"> CEMP to include emergency procedures to evacuate construction footprint in the event of extreme flooding. Procedures to account for all sources of flooding including tidal, pluvial and fluvial flooding. Temporary pumping arrangements within CEMP to discharge flood waters to sewer or surface waters subject to permit / consent, only compliant water to be discharged to Humber Estuary, the River Hull, Humber, Albert, Railway, and Princes Dock or Fleet Drain, non-compliant water collected and discharged off-site. 	Mitigation measures included in the CEMP	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	C	Signature: Date:
W6	CH11			To limit impacts of pollution due to	<ul style="list-style-type: none"> Proper use of bunding, spill kits, emergency clean up and evacuation procedures 	Mitigation measures included in the CEMP	Contractual responsibilities	Contractor	P, C	Signature:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
				accidental spillages of oils, fuels, chemicals, concrete, cement or admixtures, etc	<p>through adherence to best practice approaches.</p> <ul style="list-style-type: none"> Monitoring plan to include water quality sampling prior to, during and after construction (to be agreed with Environment Agency). Temporary drainage arrangements including closed drainage systems, oil separators and settlement tanks will be put in place to capture site runoff and to remove oils, chemicals and suspended solids that may be mobilised during construction. Drums and barrels would be stored in a designated, bund-shielded, safe area within the site compound. All fuel, oil and chemicals would be stored in accordance with the requirements of the Control of Pollution (Oil Storage) Regulations 2001. Construction plant would be refuelled in designated areas on an impermeable surface, away from drains and watercourses. If any refuelling does need to take place in other areas of the site, a prescribed safe method would be used. An emergency spill plan would be generated and spill kits would be available at appropriate locations. Other construction best practice approaches would also be adopted, such as covering of stockpiles to avoid the mobilisation of soils, and taking care when working near existing sewers or above ground temporary sewer diversions to avoid damage. The CEMP would also include an erosion prevention and sediment control plan, with the aim of minimising erosion by reducing disturbance, and stabilising exposed materials. 	Water quality monitoring reporting to be agreed with Environment Agency.	between Highways England and the Principal Contractor.			Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
W7	CH11			To limit impacts of changes to groundwater level or flow as a result of construction	<ul style="list-style-type: none"> Excavation design and piling design to mitigate groundwater dewatering and mounding risks. Groundwater monitoring plan to include water level monitoring prior to, during and after construction (to be agreed with Environment Agency). Movement assessments will assess and mitigate settlement risks at nearby buildings. Dewatering only to be undertaken with appropriate consents / permits in place: only compliant water to be discharged to Humber Estuary, the River Hull, Humber, Albert, Railway, and Princes Dock or Fleet Drain, non-compliant water collected and discharged off-site. Any discharges to docks/marinas would require consent from MMO, dock operator and Environment Agency. 	<p>Mitigation measures included in the CEMP</p> <p>Water quality monitoring reporting to be agreed with Environment Agency.</p> <p>Consents / permits for dewatering: dewatering design details will be required before the licensing process can commence. A Groundwater Investigation Consent (GIC) is likely to be required to drill and test the dewatering system as part of the licensing process.</p>	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P, C	Signature: Date:
W8	CH11			To limit impacts of additional saline intrusion during construction dewatering	<ul style="list-style-type: none"> Excavation design to minimise dewatering and therefore drawdown risks, and hence the risk of inducing additional saline intrusion. Groundwater monitoring plan¹ (GMP) to include water quality sampling prior to, during and after construction (to be agreed with Environment Agency). 	<p>Mitigation measures included in the CEMP</p> <p>Water quality monitoring reporting to be agreed with Environment Agency.</p>	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P, C	Signature: Date:
W9	CH11			To limit the deterioration of groundwater quality as a result of mobilisation of contamination and generation of suspended solids through ground disturbance, Creation of new contamination pathways between	<ul style="list-style-type: none"> Selection of appropriate construction methodology (including piling) to minimise ground disturbance, generation of suspended solids and the potential for down-drag of contaminants. Foundation Works Risk Assessment to ensure appropriate foundation solutions are designed and undertaken to minimise risks. Shallow soils should not be reused, but stockpiled separately onsite, and subject to additional analysis. Known contaminated soils to be excavated segregated, stored appropriately and disposed or treated off- 	<p>Mitigation measures included in the CEMP</p> <p>Water quality monitoring reporting to be agreed with Environment Agency.</p> <p>Consents/permits for dewatering: dewatering design details will be required before the licensing process can commence. A Groundwater Investigation Consent (GIC) is likely to be required to drill and test the</p>	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P, C	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
				the surface superficial deposits and Chalk, and direct contact with construction materials.	<p>site. Best practice methodologies will be implemented to ensure any potential cause or spread of contamination is mitigated during construction.</p> <ul style="list-style-type: none"> GMP to include water quality sampling prior to, during and after construction (to be agreed with Environment Agency). Known preferential pathways, such as the large diameter chalk borehole LDBH02 to be removed or backfilled prior to adjacent construction works. Construction techniques (including excavation) to be selected to minimise ground disturbance, generation of suspended soils and the potential for down-drag of contaminants. Construction compounds will be covered by hardstanding and have closed drainage system. A specialist contractor will be required for the excavation of the burial ground, together with a detailed CEMP to avoid contaminant mitigation due to ground disturbance. Potentially contaminated water (from dewatering) would be disposed of appropriately and with the necessary consents/permits in place: only compliant water to be discharged to Humber Estuary or other surface water bodies, non-compliant water collected and discharged off-site. Any discharges to docks/marinas would require consent from MMO, dock operator and Environment Agency. 	dewatering system as part of the licensing process.				
W10	CH 11			To limit impacts of pollution on Humber Dock marina as a result of the construction of piled foundations	<ul style="list-style-type: none"> Proper use of bunding, spill kits, emergency clean up and evacuation procedures through adherence to best practice approaches. Measures to contain disturbed silt and sediment as a result of piling activities to be implemented, e.g., silt curtains. 	<p>Mitigation measures included in the CEMP</p> <p>Water quality monitoring reporting to be agreed with Environment Agency and MMO.</p> <p>Marine Licence to be obtained from MMO.</p>	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P, C	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
				for Princes Quay bridge	<ul style="list-style-type: none"> Monitoring plan to include water quality sampling prior to, during and after construction (to be agreed with Environment Agency and MMO). 					
W11	CH11			To limit impacts of construction on access for maintenance of Environment Agency flood defences	<ul style="list-style-type: none"> No materials or plant to be stored within 16m of flood defences in order to allow access for maintenance of flood defence assets by Environment Agency 	Mitigation measures included in the CEMP	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P, C	Signature: Date:
W12	CH11			To limit impacts of flooding on construction workers, plant and materials	<ul style="list-style-type: none"> EA flood warning service to be subscribed to throughout construction. If flood alert or flood warning received, information to be shared with relevant personnel. Flood evacuation plan to be prepared for temporary site compounds and to include provision for safe evacuation of personnel and protection or removal of plant or sensitive material likely to be mobilised during a flood. Any sensitive temporary structures to be constructed in a flood resilient fashion, where appropriate. 	Mitigation measures included in the CEMP	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P, C	Signature: Date:
Geology and Soils (G)										
G1	CH12	-	-	Prevent settlement of sections of new highway or adjacent land due to consolidation of underlying soils.	<ul style="list-style-type: none"> No increase beyond the existing load (e.g. lightweight fill or foamed concrete used where increases in ground level is required to avoid inducing settlement) or ground improvement measures. Provide adequate groundwater cut off to limit dewatering requirements. Monitor groundwater levels during dewatering/ excavation works to limit consequences. If drawdown of groundwater reaches a level where settlement may occur, activities suspended to allow groundwater to return to background levels. 	Design criteria stipulated by the Detailed Design and monitoring requirements in place during construction.	Contractual responsibilities between Highways England and the Designer and the Principal Contractor.	Contractor	P, C	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
G2	CH12	-	-	Prevent heave of the ground surrounding the active construction area caused by jet grouting or ground improvement measures.	<ul style="list-style-type: none"> During jet grouting or ground improvement measures, the ground level will be monitored for signs of heave. If detectable levels of heave are recorded, operations to be revised to ensure no further ground movements occurred. 	Design criteria stipulated by the Detailed Design and monitoring requirements in place during construction.	Contractual responsibilities between Highways England and the Designer and the Principal Contractor.	Contractor	C	Signature: Date:
G3	CH12	-	-	Prevent new or existing development being put at risk from land instability	<ul style="list-style-type: none"> Design includes a robust proposal for construction of the underpass to limit movement and deflections of the walls of the underpass. 	Design criteria stipulated by the Detailed Design.	Contractual responsibilities between Highways England and the Designer and the Principal Contractor.	Contractor	P	Signature: Date:
G4	CH12	-	-	Reduce risk of encountering and detonating unexploded ordnance	<ul style="list-style-type: none"> Adhere to safe systems of work in accordance with Explosive Ordnance Safety and Awareness briefings. In areas of medium risk (or above), earthworks/piling to be carried out under supervision of specialist Explosive Ordnance Disposal (EOD), with use of magnetometer surveys and targeting of suspected anomalies, where necessary. 	Mitigation measures included in the CEMP	Contractual responsibilities between Highways England and the Designer and the Principal Contractor.	Contractor	C	Signature: Date:
G5	CH12	-	-	Prevent exposure to soils containing elevated concentrations of contaminants	<ul style="list-style-type: none"> Site workers to use appropriate Personal Protection Equipment (PPE) and safe systems of work as outlined in the CEMP. This will include how contaminated materials are to be managed (Materials Management Plan¹ (MMP)), stored and disposed of to mitigate exposure (e.g. vehicle loads to be covered, roads to be kept clean, damping down of stockpiles to prevent airborne release of contaminants). Validation sampling to verify excavated material meets specific criteria to ensure it is 	Mitigation measures included in the CEMP and MMP.	Contractual responsibilities between Highways England and the Designer and the Principal Contractor.	Contractor	C	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
					<p>suitable for reuse or nominated treatment/disposal route.</p> <ul style="list-style-type: none"> Material from hotspot areas to be excavated and segregated and stored appropriately prior to off-site disposal / treatment. Adoption of dynamic risk assessments to identify remedial actions should unforeseen contamination be encountered during future ground investigation or construction. Adoption of Trinity Burial Ground clearance methodology. 					
G6	CH12	-	-	Prevent exposure to asbestos fibres in localised areas of Made Ground	<ul style="list-style-type: none"> Site workers to use appropriate PPE and safe systems of work as outlined in the CEMP. This will include how contaminated materials are to be managed (MMP), stored and disposed of to mitigate exposure (e.g. vehicle loads to be covered, roads to be kept clean, damping down of stockpiles to prevent airborne release of contaminants). Adherence to Control of Asbestos Regulations. Use of dust suppression systems to ensure any potential for fibre release is minimised. Made ground materials to be subject to asbestos screening as part of validation analysis prior to reuse or disposal. 	Mitigation measures included in the CEMP and MMP.	Contractual responsibilities between Highways England and the Designer and the Principal Contractor.	Contractor	C	Signature: Date:
G7	CH12	-	-	Prevent increased leaching of contaminants from soils	<ul style="list-style-type: none"> No re-use of impacts soils without appropriate treatment to ensure they are suitable for reuse without presenting a risk to controlled waters. Controlled stockpile management. Minimise areas of exposed excavation as far as practical. 	Mitigation measures included in the CEMP and MMP.	Contractual responsibilities between Highways England and the Designer and the Principal Contractor.	Contractor	C	Signature: Date:
G8	CH12	-	-	Reduce risks associated with the release and migration of	<ul style="list-style-type: none"> Adoption of controlled work areas, use of intrinsically safe equipment, PPE, gas monitoring and suitable siting of any mobile 	Design criteria stipulated by the Detailed Design and mitigation measures included in the CEMP.	Contractual responsibilities between Highways	C	A	Signature:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
				ground gas from the ground/groundwater	<p>offices, stores or welfare units as appropriate.</p> <ul style="list-style-type: none"> Ground gas protection measures should be installed (where appropriate) in accordance with UK guidance. Any drainage vents and chambers will also require consideration of ground gas protection/venting. 		England and the Designer and the Principal Contractor.			Date:
G9	CH12	-	-	Management of hazardous waste	<ul style="list-style-type: none"> Validation sampling to verify the waste classification of materials requiring disposal (using the Environment Agency's Technical Guidance WM3: Waste Classification). This would include further Waste Acceptance Criteria analysis to determine suitability for material disposal. 	Mitigation measures included in the CEMP and Site Waste Management Plan ¹ (SWMP).	Contractual responsibilities between Highways England and the Principal Contractor.	C	C	Signature: Date:
G10	CH12	-	-	Prevent the release of contaminants within groundwater/ run-off which may impact local water quality	<ul style="list-style-type: none"> Piling methodology to be selected to minimise the potential for down-drag of contaminants and should be designed to minimise the potential for piles to act as a continuing vertical pathway for contaminants in groundwater during operation. A Foundation Works Risk Assessment¹ (FWRA) to be undertaken in accordance with Environment Agency guidance to ensure appropriate foundation solutions are designed and undertaken to mitigate risks to controlled waters. Best practice methodologies to be implemented and outlined in CEMP to control discharges to drains and run-off. Only compliant discharges to sewer or surface water via consent/permit. 	Design criteria stipulated by the Detailed Design and mitigation measures included in the CEMP.	Contractual responsibilities between Highways England and the Designer and the Principal Contractor.	Contractor	P and C	Signature: Date:
G11	CH12	-	-	Prevent direct contact of buried services and structures with aggressive contaminants in soils	<ul style="list-style-type: none"> Selection of design of service ducts and materials in consideration of ground conditions where impacted soils are present. All concrete to be specified in accordance with the recommendations published within Concrete in Aggressive Ground, Special 	Design criteria stipulated by the Detailed Design.	Contractual responsibilities between Highways England and the Designer and the	Contractor	P	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
					Digest 1:2005, Third edition BRE Construction Division.		Principal Contractor.			
Materials (M)										
M1	CH13	-	-	Reduce the depletion of natural resources (i.e. use of materials for earthworks including aggregates, sheet piling)	<ul style="list-style-type: none"> Optimise material efficiency (e.g. use of standardised components/pre-fabricated materials, avoid use of hazardous materials) Prioritise use of secondary or recycled materials, with consideration of appropriate Environment Agency/Waste and Resources Action Programme (WRAP) Quality Protocols and regulatory position statement. Responsible sourcing of materials through the use of frameworks such as BES 6001:2014 Adopt Design out Waste principles in accordance with WRAP best practice guidance and employ appropriate design control methods. Development and use of a Materials Logistics Plan¹ (MLP) in accordance with WRAP best practice guidance to manage material procurement, delivery, storage, handling use and disposal. Development of SWMP to support MLP. Best practice methodologies to be implemented during maintenance activities such as asphalt re-surfacing. 	MLP, SWMP.	Contractual responsibilities between Highways England and the Designer and the Principal Contractor.	Contractor	A	Signature: Date:
M2	CH13			Reduce energy/fuel consumption (embodied carbon) and climate change through manufacture of materials.	<ul style="list-style-type: none"> Prioritise use of secondary or recycled materials. Responsible sourcing of materials through the use of frameworks such as BES 6001:2014. Employ Carbon Emission Calculator Tool / or similar methodology to monitor total carbon emission of materials against Key Performance Indicators (KPIs). 	MLP, SWMP, CEMP	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	A	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
M3	CH13			Minimise the release of contaminants to air (dust), land or the water environment and generation of noise due to handling/movement of materials and waste (including transport)	<ul style="list-style-type: none"> Best practice methodologies to be implemented and outlined in the CEMP to control the generation of dust, noise, discharges to land, drains and run-off. Consider alternate options to road transport (e.g. feasibility assessment of using pumping of grout / slurry waste where possible to reduce vehicle movements for the Scheme and material handling). Minimise distance for pumping of materials/slurry waste to as short a distance as possible to minimise the risk of blockages and line failures and avoid the need for booster pumps. 	CEMP, MLP, SWMP	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P and C	Signature: Date:
M4	CH13			Reduce demand on handling capacity of regional waste management and disposal facilities	<ul style="list-style-type: none"> On-site treatment of slurry / waste prior to removal from site to reduce volumes and difficulty in handling saturated excavation material. Promote re-use, recycling or recovery of materials either on or off-site. Management of subcontractors to ensure they adhere to appropriate waste minimisation procedures. Undertaking appropriate environmental validation to identify if subsoil is suitable for reuse (or nominated treatment/disposal route) and maximising reuse of excavated materials in accordance with CL:AIRE Definition of Waste (CDEW) Code of Practice. Identify potential for re-use of CDEW at exempted or permitted sites subject to suitability (e.g. use as a landfill capping material). Minimise volumes of hazardous waste generated (e.g. rotary drying of slurry in preference to lime treatment, excavation of any hotspots of soil contamination, 	SWMP, MMP	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	A	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
					<p>segregation and ensuring arisings are stored appropriately prior to treatment; treatment off road planings for re-use in accordance with regulatory position statement).</p> <ul style="list-style-type: none"> Using soil improvement techniques to enhance soil engineering properties to increase potential for material to be re-used. Waste segregation on-site (including plastics, timber, steel, hazardous, general waste etc). Use of KPIs to monitor progress of the Scheme including total waste volumes sent to or diverted from landfill. Use of Materials Management Plan (MMP) to manage the use, treatment and placement of excavated materials (including re-use on/offsite or disposal). 					
M5	CH13			Reduce energy/fuel consumption (transport carbon emissions) and climate change through plant use and transportation of materials and waste	<ul style="list-style-type: none"> Prioritise use of local suppliers Consider alternate options to road transport (e.g. feasibility assessment of using pumping of grout / slurry waste where possible to reduce vehicle movements for the Scheme and material handling). Minimise distance for pumping of materials/slurry waste to as short a distance as possible to minimise the risk of blockages and line failures and avoid the need for booster pumps. Promote re-use of materials on-site (e.g. retention of topsoil). Employ Carbon Emissions Calculation Tool / or similar methodology to monitor total carbon emission of materials against KPIs. 	MLP, SWMP	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	A	Signature: Date:
People and Communities (PC)										
PC1	CH14	-	-	To minimise the impacts of construction on	<ul style="list-style-type: none"> Land use during construction period should be minimised on community land including, 	CEMP to identify how land use during construction has been minimised.	Contractual responsibilities between	Contractor	P, C	Signature:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
				communities and people during the construction period	for example, areas of recreation and publicly accessible open space.		Highways England and the Principal Contractor.			Date:
PC2	CH14	-	-	To minimise and mitigate the impacts of construction on economic development	<ul style="list-style-type: none"> The construction period may be able to help meet local demand for construction labour. Job Centres and local economic development officers may be able to support the recruitment of local workers. 	Direct communication with local Job Centre Plus and recruitment agencies.	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P, C	Signature: Date:
PC3	CH14	-	-	To mitigate the impacts of construction on communities and people during the construction period.	<ul style="list-style-type: none"> The Community Relations Strategy¹ (CRS) should include the following measures to be followed: <ul style="list-style-type: none"> The CRS external and public communication would be the responsibility of the Principal Contractor Project Manager. Communication with the general public would be maintained prior to and during all construction works and would be channelled through a single Communications Officer. The CRS would be delivered in accordance with the Considerate Constructors Scheme and this may include: <ul style="list-style-type: none"> Letter drops Community meetings Public Exhibitions Publishing articles/documents Liaison with the media A complaints procedure should be established, including a 24-hour contact telephone number to be made available for the use of local residents, businesses and other sections of the community. 	<p>Publication of mitigation measures contained in the CEMP in the CRS.</p> <p>Considerate Constructors accreditation attained.</p> <p>Establishment of a 24 hour complaints procedure.</p>	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P, C	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
PC4	CH14			To ensure workers health and safety	Standard of workers accommodation and facilities to meet statutory requirements ensuring safety and security of workers and the public, following Health and Safety Executive Guidelines.	Workers accommodation and facilities to meet statutory requirements.	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P, C	Signature:
Effects on All Travellers (T)										
T1	CH15	-	-	Communication and consideration of the general public.	<ul style="list-style-type: none"> The CRS should be followed to manage and maintain communication with the general public prior to and during construction works. The Scheme would also be delivered in accordance with the Considerate Constructors Scheme, and would ensure that local residents, businesses and other sections of the community are kept informed about the Scheme. This would include local road users and NMUs. 	Production of a CRS.	Contractual responsibilities between Highways England and the Principal Contractor.	Contractor	P, C	Signature: Date:
T2	CH15	-	-	Limiting driver stress and effect of construction on drivers	<ul style="list-style-type: none"> Traffic management would be the main measure for minimising effects upon vehicle travellers during the construction period. All diversion routes and road closures would be sign posted clearly, to minimise driver stress derived from driver frustration and route uncertainty. 	Production of a Traffic and Transport Management Plan ¹ (TTMP).	Contractual responsibilities between Highways England and the design consultant and construction contractors.	Contractor	P, C	Signature: Date:
T3	CH15	-	-	Effects of construction upon NMUs	<ul style="list-style-type: none"> Footways either side of the A63 would be closed during construction. Diversions would be implemented throughout construction allowing for east to west movements for NMUs. The diversion routes would alter phase by phase as NMU provisions are installed and would be clearly signed. A temporary at-grade road crossing is anticipated to be provided close to the existing Porter Street crossing, which would 	Mitigation measures included in the CEMP.	Contractual responsibilities between Highways England and the design consultant and the Principal Contractor.	Contractor	P, C	Signature: Date:

Ref	ES ref.	DCO ref.	Works info. ref.	Objective	Action (including any monitoring required)	Achievement criteria and reporting requirements (if applicable)	How the Action is to be implemented	Responsible person (s)	When P = Pre-construction C = Construction O = Operation A = All	Completion record
					<p>be closed once the new pedestrian, cycle and disabled user bridge at Porter Street has been opened.</p> <ul style="list-style-type: none"> To the east of Mytongate Junction, existing signalised crossings close to Humber Dock Street and at Market Place would be maintained until Phase 3, whilst improvements would be made to High Street for NMUs during Phase 0. A free 'shuttle bus' service would also be provided during construction, and this would pick up and drop of NMUs at predetermined locations either side of the A63 and would also include wheelchair access facilities. Mitigate the potential for construction noise and dust during works which could temporarily reduce the quality of journeys for pedestrians and cyclists. 					

¹ The following documents will be produced to support the Construction Environmental Management Plan (CEMP) as follows:

- Archaeological Project Design (APD)
- Arboricultural Implications Assessment (AIA)
- Arboricultural Method Statement (AMS)
- Landscape and Ecology Management Plan (LEMP)
- Handover Environmental Management Plan (HEMP)
- Marine Mammal Mitigation Plan (MMMP)
- Groundwater Monitoring Plan (GMP)
- Erosion Prevention and Sediment Control Plan (EPSCP)
- Noise and Vibration Management Plan (NWMP)
- Materials Management Plan (MMP)
- Site Waste Management Plan (SWMP)
- Foundation Works Risk Assessment (FWRA)
- Materials Logistics Plan (MLP)
- Community Relations Strategy (CRS)
- Traffic and Transport Management Plan (TTMP)

Annex C: Key legislation, policies and strategies and best practice

Environmental legislation, policies and strategies, and best practice documents of relevance, are highlighted below:

- Air Quality (England) Regulations 2000 (as amended) and the Air Quality (England) (Amendment) Regulations (as amended)
- Air Quality Standards Regulations 2010 (as amended)
- Ancient Monuments and Archaeological Areas Act 1979
- British Standard 4428 'Code of Practice for General Landscape Operations' 1989
- British Standard 5228 'Code of Practice for noise and vibration control on construction and open sites – Part 1: Noise' 2009 amended 2014
- British Standard 5228 'Code of Practice for noise and vibration control on construction and open sites – Part 2: Vibration' 2009
- British Standard 5837 'Trees in relation to design, demolition and construction – Recommendations' 2012.
- Burial Act 1857 Section 25, as amended by the Church of England (Miscellaneous Provisions) Measure 2014
- Care of Churches and Ecclesiastical Jurisdiction Measure 1991
- CL:AIRE Definition of Waste Code of Practice
- Climate Change Act 2008
- Conservation of Habitats and Species Regulations 2010 (as amended)
- Construction (Design and Management) Regulations 2015
- Construction Industry Research and Information Association (CIRIA) (2010) Environmental Good Practice on Site 3rd Edition
- Contaminated Land (England) Regulations 2006 (as amended)
- Control of Asbestos Regulations 2012
- Control of Noise at Work Regulations 2005
- Control of Pesticides Regulations 1986
- Control of Pollution Act 1974 Sections 60 & 61

- Control of Pollution (Oil Storage) Regulations 2001
- Control of Substances Hazardous to Health Regulations 2002 (as amended)
- Controlled Waste (England and Wales) Regulations 2012 (as amended)
- Countryside and Rights of Way Act 2000
- Energy Performance of Buildings Directive (EPBD) 2003 (and amendments)
- Environment Act 1995 Chapter 25
- Environmental Agency Regulatory Position Statement 178 2014 (as amended)
- Environmental Noise (England) Regulations 2006 (as amended)
- Environmental Permitting (England and Wales) Regulations 2016 (as amended)
- Environmental Protection Act Part III (1990) Sections 79, 80 & 82
- Environmental Protection Act (1990) Sections 59 & 59ZA (supplemented by the Contaminated Land (England) (amendment) Regulations 2012)
- Faculty Jurisdiction Rules 2015
- Flood and Water Management Act 2010
- Hazardous Waste (England and Wales) Regulations 2005 (as amended)
- Highways Act 1980
- Land Drainage Act 1991
- Landfill (England and Wales) Regulations 2002 (as amended)
- Marine and Coastal Access Act 2009
- National Planning Policy Framework (NPPF) 2012 (England only)
- Natural Environment and Rural Communities Act 2006
- Planning and Compulsory Purchase Act, 2004
- Planning Act 2008
- Planning (Listed Buildings and Conservation Areas) Act 1990 (as amended)
- Pollution Prevention and Control Act 1999 (as amended)
- Site Waste Management Plan Regulations 2008

- Trade Effluent (Prescribed Processes and Substances) Regulations 1989 (as amended)
- Water Abstraction and Impounding (Exemptions) Regulations 2017
- Waste Electric and Electronic Equipment Regulations 2013
- Water Act 2014
- Water Industry Act 1991
- Waste (England and Wales) Regulations 2011 (as amended)
- Water Resources Act 1991
- Wildlife and Countryside Act 1981
- WRAP Design out Waste principles