The Sizewell C Project

8.11 Code of Construction Practice (CoCP) Clean version

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Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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CODE OF CONSTRUCTION PRACTICE

- Code of Construction Practice Part A: Project Wide Controls
- Code of Construction Practice Part B: Main Development Site
- Code of Construction Practice Part C: Off-site Associated Developments

CODE OF CONSTRUCTION PRACTICE PART A: PROJECT WIDE CONTROLS

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Executive Summary

This **Code of Construction Practice** (**CoCP**) forms part of the application for a Development Consent Order (DCO) for the Sizewell C Project.

The aim of this **CoCP** is to provide a clear and consistent approach to the control of Sizewell C construction activities on the main development site and the associated development sites, to minimise impacts on people and the environment.

Part A: **Project Wide Controls** of this **CoCP** sets out how construction activities will be managed and controlled in order to deliver many of the mitigation commitments arising from the construction stages of the Sizewell C Project. **Part B**: **Main Development Site** sets out the further measures relevant to the main development site and **Part C**: **Offsite Associated Developments** sets out those measures relevant to the off-site associated developments.

1 Introduction

1.1 Purpose of the Code of Construction Practice

1.1.1 This Code of Construction Practice (CoCP) forms part of the application for a Development Consent Order (DCO) for the Sizewell C Project. The DCO is an order made under the Planning Act 2008 specifying the details of the development consented and its location, and any requirements that must be met in implementing the consent.

1.1.2 SZC Co. will require all contractors to comply with all relevant legislative controls, construction health, safety and environmental standards and other relevant best practice methodologies.

1.1.3 The aim of this CoCP is to provide a clear and consistent approach to the control of Sizewell C construction activities on the main development site and associated development sites to maintain satisfactory levels of environmental protection, and limit disturbance from construction activities as far as reasonably practicable.

1.2 Structure of this CoCP

1.2.1 This CoCP comprises three documents:

- **Part A: Project Wide Controls** - sets out the purpose and scope of this CoCP, and the measures and procedures that are applicable across the Sizewell C Project. Part A would be applied across all SZC Co. construction works forming part of the Sizewell C Project.
- **Part B: Main Development Site** - sets out the specific controls that apply to the main development site, which supplement and refine the controls set out in Part A.
- **Part C: Offsite Associated Developments** - sets out the specific controls that apply to all the off-site associated development sites, which supplement and refine the controls set out in Part A.

1.2.2 The structure of this part of the CoCP is as follows:

- **Section 2 (Environmental Management: Policy and Principles)** - sets out the environmental policy and management principles which form the basis of environmental management systems to be implemented during construction.
- **Section 3 (Communication, Community and Stakeholder Engagement)** – sets out the approach SZC Co. would take when

communicating with the local community and stakeholders during construction.

- **Section 4 (Emergency Preparedness)** – sets out the measures that would be used to reduce the risk of emergency events and incidents during the course of construction.

1.2.3 Parts B and C of this CoCP detail the site-specific control measures that would be implemented to minimise and manage the impact from construction activities on people and the environment, as far as reasonably practicable, in relation to the following topics:

- General Requirements.
- Environmental Incident Controls.
- Noise and Vibration.
- Air Quality.
- Landscape and Visual.
- Terrestrial Ecology and Ornithology.
- Amenity and Recreation.
- Historic Environment.
- Soils and Agriculture.
- Geology and Land Quality.
- Groundwater and Surface Water.
- Marine Environment (Part B only).
- Materials and Waste Management.

2 Environmental Management: Policy and Principles

2.1 Introduction

2.1.1 This CoCP forms part of the management framework for ensuring control of construction activities to mitigate environmental effects through prevention and minimisation of potential construction impacts on the main development site and the off-site associated development sites.

2.1.2 **Parts A**, **B** and **C** of this CoCP collectively establish the principle environmental controls for the construction works, including:

- compliance with relevant environmental legislation;
- application of best practice guidance and industry standards;
- delivering environmental mitigation and management measures as identified within the **Environmental Statement** (Book 6); and
- monitoring, recording and reporting environmental performance, so as to demonstrate compliance with the relevant requirements.

2.1.3 Construction activities will be controlled through:

- DCO Requirements
- DCO Section 106 Obligations
- Deemed Marine Licence (including conditions)
- Other Permits, Licences and Consents as described in the **Schedule of Other Consents, Licences and Agreements** (Doc Ref. 5.11) [APP-153].

2.2 Requirement for Environmental Mitigation, Management and Monitoring

2.2.1 An Environmental Impact Assessment (EIA) has been carried out for the Sizewell C Project and an **Environmental Statement** prepared in accordance with the Infrastructure Planning (EIA) Regulations 2017 (Ref. 1.2). Through the assessment process, mitigation measures have been identified to prevent or minimise significant adverse construction effects.

2.2.2 There are three types of mitigation considered for the Sizewell C Project:

- Primary mitigation: This is often referred to as 'embedded mitigation', and includes modifications to the location or design of the development made during the pre-application phase that are an inherent part of the Sizewell C Project, become a fundamental part of the design for which consent is sought, and do not require additional action to be taken.
- Secondary mitigation: This is often referred to as 'additional mitigation' and includes actions that will require further activity in order to achieve the anticipated outcome.
- Tertiary mitigation: This will be required regardless of any EIA assessment, as it is imposed as a result of legislative requirements and/or standard sectoral practices. For example, applying emission controls to an industrial stack to meet the requirements of the Environmental Permitting (England and Wales) Regulations 2016/1154; or measures contained which are considered standard industry practice.

2.2.3 SZC Co. is committed to following best practice guidance and industry standards, as set out in this CoCP. This CoCP also requires a number of subsequent plans and documents to be prepared during the construction process, setting out further details of how additional mitigation measures would be applied during the construction phase. Where such details are set out, the CoCP details who would prepare such details, along with the securing mechanism proposed.

2.2.4 Where separate legislation, consents, permits and licences govern specific controls and mitigation measures, those measures have not been duplicated, but are listed in the **Schedule of Other Consents, Licences and Agreements** (Doc Ref. 5.11) [APP-153].

2.3 Environmental Management System

a) Overview

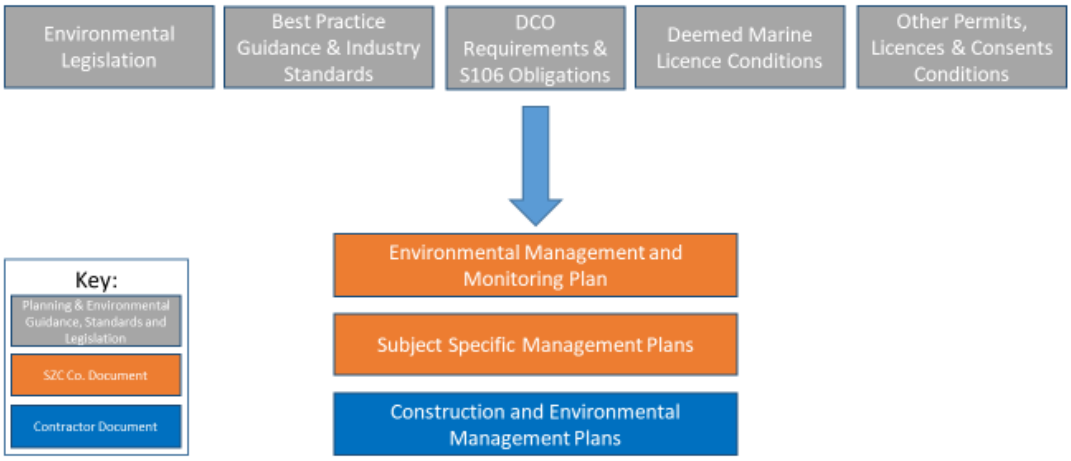
2.3.1 Best practice guidance encourages the establishment of an Environmental Management System (EMS). SZC Co. has developed and would construct the Sizewell C Project under an integrated environmental management system accredited to British Standard (BS) EN ISO 14001 (Ref. 1.2).

2.3.2 SZC Co. would be compliant with, and maintain, ISO 14001 accreditation throughout the construction phase of the Sizewell C Project. Accreditation would be periodically audited by accredited external bodies in line with ISO 14001 procedures.

2.3.3 The integrated environmental management system will provide the framework for ensuring environmental control, and will be the primary mechanism by which environmental requirements would be delivered on the Sizewell C main development site and the off-site associated development sites. A full description of the mitigation on which the ES relies is set out within the **Mitigation Route Map** (Doc Ref. 8.12) [APP-616] and the **Mitigation Route Map Addendum** (Doc Ref. 8.12Ad).

2.3.4 All contractors would be required to ensure compliance with **Parts A**, **B** and **C** of this CoCP and other environmental controls, which will be detailed in subject specific management plans (SSMPs) for specific sites and works. SZC Co. will require all contractors to prepare Construction Environmental Management Plans (CEMPs) which respond to the requirements set out in the SZC Co. SSMPs, including any sensitive receptors, or pathways identified for the main development site and associated development sites. **Plate 2.1** illustrates the general arrangements of the EMS for Sizewell C.

Plate 2.1: Sizewell C Project Environmental management system



b) Construction Environmental Management Plans (CEMP)

2.3.5 Contractors will use the SSMP's and other project requirements provided to them to produce their CEMP. The CEMP will contain a description of their work activities and the appropriate risk assessment and mitigation associated with the activities. The CEMP will show how the contractor intends to implement the associated environmental management measures therefore demonstrating compliance with the requirements of the DCO (including this CoCP), and related permits, consents and licences.

2.3.6 The contractor must then set out in detail, using the methods and measures identified in their CEMP, how they intend to manage their work compliantly

in the lower tier method statements and risk assessments for separate tasks they undertake.

2.3.7 The contractors should also seek to identify and implement any further mitigation that is reasonable and practicable that could further reduce the impacts of the Sizewell C Project on people and the environment.

2.3.8 In this way, the requirements placed on SZC Co. feed through into all works on site as applicable. The documents will be produced, reviewed and approved by SZC Co. prior to work commencing and where appropriate shall be subject to an ongoing process of review.

c) Monitoring and Reporting

2.3.9 Scheduled monitoring or environmental performance and formal compliance auditing will be conducted throughout the duration of the construction of Sizewell C, and will be set out in the SSMPs. This will enable the overall effectiveness of established environmental measures, and compliance procedures to be assessed and allow areas of underperformance to be identified so that corrective actions can be taken to strengthen environmental safeguards or improve outcomes.

2.3.10 The contractors will prepare environmental monitoring reports for SZC Co. in line with SZC Co.'s requirements, which are expected to include a summary of environmental issues and actions during the period to ensure compliance with this CoCP and other environmental requirements, including details of incidents and associated investigations and corrective actions, and environmental inductions and awareness training provided during the period.

2.3.11 In addition, event-based checks will be conducted by the contractors following any significant event such as a period of heavy rainfall, high winds, receipt of an environmental complaint, issue of a non-compliance report, or any exceedance in monitoring results. Event-based checks shall be recorded on a separate inspection form detailing the reasons, observations, findings, and outcomes of the inspection which should then be recorded and actions closed out.

d) Code of Construction Practice

2.3.12 SZC Co. and its contractors will have to comply with this CoCP as a requirement of the DCO. The details within this CoCP will be included in the relevant SSMPs which are live documents which may change with the project to include further requirements related to the current work activities, or changes to include relevant legislative controls, construction health,

safety and environmental standards and other relevant best practice methodologies.

e) Related Environmental Management Plans

2.3.13 A number of related management plans have been included within the DCO application and set out proposed mitigation for the Sizewell C Project. These are proposed to be secured by Section 106 Obligations. These documents include:

- **Traffic Incident Management Plan** (Doc Ref. 8.6) [APP-607].
- **Construction Traffic Management Plan** (Doc Ref. 8.7) [APP-608].
- **Construction Worker Travel Plan** (Doc Ref. 8.8) [APP-609].

2.3.14 Where the specific details of the proposed mitigation are yet to be determined, SZC Co. has committed to prepare further details, which will be approved by either SZC Co., or by another appropriate authority, such as East Suffolk Council (ESC) or Suffolk County Council (SCC), and where relevant in consultation with other stakeholders.

3 Communication, Community and Stakeholder Engagement

3.1 Provision of Information to Local Communities

3.1.1 SZC Co. has established several methods for providing information to local residents, occupiers, businesses, and other parties who may be affected by, or interested in, the development proposals.

3.1.2 SZC Co. has taken a flexible approach to public engagement using various methods to engage those interested in Sizewell C. These have proved effective in developing two-way dialogue between SZC Co. and local communities.

3.1.3 SZC Co. will continue to provide the local communities and stakeholders with information relating to:

- the phasing of works at multiple sites and information on the types of construction activity associated with each phase at multiple locations;
- activities that may be 'out of the ordinary' – that is, events that take place on an irregular or infrequent basis, such as the delivery of an Abnormal Indivisible Load or particularly noisy activity; and
- information about jobs, training, skills, education initiatives, the Community Fund, community safety and housing (including letting out of accommodation for workers).

3.1.4 The process set out in this section provides an overview of how SZC Co. will continue with the existing methods of engagement, which are well established and well known to many local communities. The process set out in this section may be updated from time to time and any changes would be agreed in writing with ESC.

3.1.5 The engagement methods proposed include:

- community newsletters;
- community forum;
- parish council/town council briefings;
- 'drop-in' sessions;
- notice boards;

- targeted mailings;
- public meetings; and
- the Sizewell C Project website.

3.1.6 SZC Co. will review the community engagement strategy to assess levels of awareness, timeliness and utility. SZC Co. expects that as the construction of Sizewell C evolves over time, reviews and changes may be required to ensure that the approach reflects the nature and intensity of works undertaken on site.

a) Community Newsletters

3.1.7 Regular newsletters will be prepared with relevant information on the Sizewell C Project, including progress and other issues of interest such as periods of increased activity, employment, and environmental information.

3.1.8 SZC Co. will produce a regular newsletter for the duration of the construction of Sizewell C and the operation of the associated development sites.

3.1.9 The newsletter will be emailed to those within a 10 mile radius of Sizewell C main development site and adjoining parishes to the off-site associated development sites.

b) Community and Stakeholder Liaison

3.1.10 SZC Co. will co-ordinate a series of regular communication meetings with key stakeholders and local communities. This will use existing groups that have been established as part of the pre-application consultation undertaken during the preparation of the DCO application.

3.1.11 These will include a Sizewell C community forum, which may be reconstituted into a main development site forum and an off-site associated developments forum.

3.1.12 The purpose of the community and stakeholder liaison is to exchange information and enable dialogue between SZC Co. and the local community during construction.

3.1.13 Meetings with the local community are expected to be held locally on a monthly basis for the first six months following the commencement of construction of the development. Following this period, the frequency of meetings will be reviewed and subsequent meetings will be held as required and on a frequency of not less than a quarterly basis.

3.1.14 Minutes and information provided as part of this process will be published on the Sizewell C website.

c) Parish/Town Council Engagement

3.1.15 The existing parish/town council structure provides an opportunity for SZC Co. to engage with communities on the construction of Sizewell C and the associated development sites. SZC Co. will, where invited, use these existing meetings to engage parish/town councils in advance of significant work being undertaken. This will help community leaders to understand the activity that is planned. It will facilitate dialogue between community leaders and SZC Co. on the most appropriate methods for engaging communities.

3.1.16 SZC Co. will inform local authorities when attending parish/town council meetings.

d) Notice Boards

3.1.17 Where parish/town councils use notice boards, SZC Co. will supply information, such as a 'look ahead' included as **Appendix A** of this statement, to the parish/town councils so that it can be displayed on the boards to help keep the community informed.

e) Presentations

3.1.18 SZC Co. offers a talks service to groups interested in finding out more about the company, the nuclear industry, and Sizewell C. Requests for a representative should be made to the general enquiries email address and, where possible, an SZC Co. representative will be made available to present and answer questions on the topics that are of interest to the group.

3.1.19 SZC Co. is committed to being open and transparent and will continue to offer a talk service during the build of the Sizewell C Project.

f) Advanced Notice of Works

3.1.20 For noisy or disruptive works, advance notice of such works will be given. This will also include the movement of Abnormal Indivisible Loads on local roads due to Sizewell C activity. This will involve targeted communications to local residents, business occupiers and relevant authorities. This will normally take place at least one week before the planned works were due to take place.

3.1.21 Communications will be focused on the residents directly neighbouring the sites. Each communication will contain contact details for enquiries or further information.

g) Project Website and Twitter

3.1.22 The Sizewell C Project website, www.sizewellc.co.uk would be regularly updated to include newsletters and minutes from the fora.

3.1.23 The website would evolve and grow as the Sizewell C Project progresses, and it will be developed to improve the flow of information to people wishing to know more about jobs, skills, opportunities and forthcoming construction work.

3.1.24 SZC Co.'s Twitter feed will be updated frequently to give the latest information about the Sizewell C Project to followers. The Sizewell C Project can be followed using the following Twitter handle @SizewellC[1].

h) Engaging the Media

3.1.25 SZC Co. will continue to engage local and national media, helping to keep communities informed about Sizewell C. For example, the radio may be used as a means of informing residents about work being undertaken on the highway, helping them to plan their journeys.

3.1.26 Press releases will be posted on the Sizewell C Project website.

3.1.27 Where appropriate SZC Co. will liaise with relevant authorities before engaging the media.

i) Managing Enquiries and Complaints

3.1.28 DCO requirements will require SZC Co. and its contractors to manage the construction activity in order to reduce impacts. For example, there are requirements which limit noise, control dust, and manage construction traffic. SZC Co. will seek to minimise the number of complaints arising by ensuring its contractors comply with these requirements and obligations. In the event that a complaint does arise, SZC Co. will respond in ways that are both helpful and achievable. This includes:

- promoting clear contact information for written and telephone enquiries/complaints;
- a free phone number;

[1] This may be updated from time to time and interested parties shall be notified of any such updates.

- response times which are proportionate to the significance of the enquiry/complaint, with information on the actions taken to resolve complaints provided; and
- a commitment from SZC Co. to a considerate, informed response.

3.1.29 SZC Co. will respond promptly to local residents making contact. SZC Co. recognises that Sizewell C Project construction activities may be significant for the community. If complaints are made, SZC Co. will take appropriate action to address the cause of the concern and will give feedback to residents to explain what action has been taken. If action cannot be taken for some reason, SZC Co. will attempt to identify alternative mechanisms for addressing residents' concerns. A response to complaints raised will be provided within ten working days. Where the complaint is received in writing and a return address is provided, written responses will be supplied.

3.1.30 If a contractor working on SZC Co.'s behalf receives an enquiry or complaint, they will be instructed to route the enquiry or complaint through the SZC Co. channels described in this CoCP.

j) Contacting SZC Co. about SZC

3.1.31 Residents will be able to contact SZC Co. via:

- email communications can be sent to info@sizewellc.co.uk[2]; and
- a 24-hour free telephone hotline.

k) General Enquiries

3.1.32 General enquiries are regarded as requests for information or clarification of an issue.

3.1.33 SZC Co. will acknowledge receipt of the enquiry immediately if the enquiry is made in person, by email, or by telephone. If the enquirer has expressed a preference for a written acknowledgement and a return address has been provided, then SCZ Co. will acknowledge receipt of the enquiry by letter.

3.1.34 SZC Co. will respond to general enquiries within ten working days, in a format appropriate for the enquirer. If further time is required to supply more detailed information, then this will be clearly identified in the response,

[2] This may be updated from time to time and interested parties shall be notified of any such updates.

along with an indicative time by which this additional information will be provided.

3.1.35 On rare occasions, information that cannot be provided in writing because of security or other restrictions will be identified, and SZC Co. will seek a reasonably practicable means of answering a query on these subjects, without compromising these restrictions.

l) Complaints

i. Acknowledging a complaint

3.1.36 A 24-hour hotline will provide means of receiving and addressing complaints related to construction activity and the construction workforce. The 24-hour hotline will be publicised on the internet and locally in locations such as site hoarding, site entrances, and if appropriate in the local newspaper.

3.1.37 All complaints received by SZC Co. will be logged, with the details of the complaint and contact details of the complainant recorded. The complaint shall be acknowledged in writing, by email, or by telephone, within a reasonable period after the complaint has been made, but within two working days. The acknowledgement will contain details of the next steps to be taken.

ii. Investigating a complaint.

3.1.38 All complaints will be considered by SZC Co. and complaints would be investigated where this is considered necessary and appropriate.

3.1.39 Where a complaint is investigated further, the scope of the investigation will depend on the nature of the complaint and will include as appropriate:

- identification of activities which may have given rise to or contributed to the complaint;
- sharing information with Sizewell B if the complaint is potentially linked to their activities;
- review of any relevant monitoring data (e.g. noise, air quality, Heavy Goods Vehicle movements) against prescribed limits;
- assessment of whether there has been any breach of any planning control;
- review of relevant management plans and procedures and instructions e.g. the Worker Code of Conduct;

- identification of corrective in the even that a breach has occurred, to prevent any breach occurring in the future; and
- consideration of measures that could be taken, if any, to help remedy the complaint in circumstances where there has been no breach of planning control.

3.1.40 In the event of a complaint where the activity could represent a direct risk to health and safety, the environment or security, SZC Co. will take appropriate action immediately, including giving consideration to a suspension of activities.

iii. Responding to a complaint

3.1.41 SZC Co. will respond to all complaints as soon as reasonably practicable acknowledging receipt of the complaint, and informing the complainant of the proposed next steps.

3.1.42 The findings of an investigation will be provided to the complainant within a reasonable timeframe, which will not normally exceed ten working days of the complaint being received. However, there may be circumstances where more detailed investigations require a longer timeframe and in such circumstances, the complainant shall be informed of the ongoing investigation.

3.1.43 The response to the complainant will summarise the results of the investigation, and any measures or corrective action taken. The response will be reciprocated in the form the complaint was received. Where the complaint is received in writing, and a return address is provided, written responses will be supplied.

3.1.44 All complaints are recorded and monitored through the 'Tractivity' database used by SZC Co. and personal data will be processed in accordance with SZC Co.'s privacy notice.

m) Liaising with Relevant Authorities

3.1.45 SZC Co. will take responsibility for handling all enquiries and complaints about Sizewell C and will promote appropriate methods for making contact.

3.1.46 Complainants may also contact the relevant local authority and other statutory bodies e.g. the Environment Agency. Complaints will then be directed to SZC Co. to resolve complaints directly with the complainant.

3.1.47 ESC may also respond where it has overall responsibility e.g. for environmental health issues arising from construction activity and/or if there

is a potential breach of a planning control, for instance in relation to noise, air quality, or light pollution.

3.1.48 SCC may also respond where it has overall responsibility e.g. for the local road network and public rights of way.

3.1.49 The Environment Agency may also respond in the event of any breaches of legislation to control environmental pollution or in relation to flood risk. SZC Co., and a single point of contact from each of the above authorities, will liaise to review complaints and enquiries, this will help authorities to respond promptly and accurately. SZC Co. will monitor, record and provide information on complaints monthly to relevant authorities via the communications teams.

4 Incidents and Emergencies

4.1 Overview

4.1.1 SZC Co. operates its activities in accordance with the Health and Safety at Work Act 1974 and other health and safety legislation (e.g. CDM Regulations 2015, Personal Protective Equipment at Work Regulations 1992, Lifting Operations and Lifting Equipment Regulations 1998, COSHH Regulations 2002, etc).

4.1.2 The contractor(s) would be responsible for setting out how health and safety matters are managed, risks are identified and reduced in accordance with the current best practices and legal requirements. The Health and Safety Plan would provide and focus on the health and safety of the contractor(s) staff and workforce and ensure the health and safety of any visitors to the site and its compounds and members of the general public in the vicinity of any activities. A safe system of work would be established, so that all steps necessary for safe working can be identified.

4.1.3 The contractor(s) would be regularly audited on its health and safety performance. All procedures and processes would be periodically reviewed internally by the contractor(s) and by SZC Co.

4.2 Emergency Access

4.2.1 SZC Co. would ensure that the requirements of the relevant emergency services would be followed for the provision of construction site access (suitable for emergency service vehicles and air ambulance). Emergency access routes may changes throughout the construction phase, particularly on the main development site.

4.2.2 For the main development site, an Emergency Co-ordinator will be appointed by the Sizewell C Project to appraise incidents arising, allocate available site-based resource, and contract emergency services to request assistance. This will ensure one point of contact for 999 calls. The Emergency Co-ordinator will also meet emergency services at the agreed rendezvous point and escort emergency services to the scene of incident. For associated development sites, contact will be made directly from the sites to the emergency services in the event of an incident.

4.2.3 Strategic Relationship Protocols will be developed with each emergency service provider (police, fire, ambulance, and coastguard) in order to set out the roles and responsibilities of SZC Co. and each of the service providers in responding to issues related to the Sizewell C Project. These will include details, where relevant, in relation to resources, training exercises and

principles of additional training requirements, provision of equipment, sharing of information, site access arrangements, communication, and incident response. In addition, a contact person for each emergency service for day-to-day liaison will be identified. Site familiarisation visits to be agreed / funded for emergency services under Strategic Relationship Protocols and Section 106.

4.3 Fire Prevention and Control

4.3.1 All construction sites shall put in place appropriate plans and management controls to prevent fires in liaison with Suffolk Fire and Rescue Service.

4.3.2 In addition, the main development site will maintain on site fire and rescue capability. This will comprise a 24/7 on-site fire service to provide first response to incidents / deal with small fires. Suffolk Fire and Rescue Service will be required for larger fires

4.3.3 Contractors will to be required to effect their own rescue from any equipment they bring on to site.

4.4 Extreme Weather Events

4.4.1 SZC Co. and its contractor(s) would consider the impacts of extreme weather events and related conditions during construction. SZC Co. or the contractor(s) would use a short to medium range weather forecasting service from the Met Office, or other approved meteorological data and weather forecast provider, to inform short to medium term programme management, environmental control, and impact mitigation measures.

4.4.2 The contractors' CEMPs would consider all measures deemed necessary and appropriate to manage extreme weather events, and would specifically cover training of personnel and prevention and monitoring arrangements. As appropriate, method statements would also consider extreme weather events where risks have been identified.

4.5 Other Events

4.5.1 All sites will maintain a proportionate security presence and will include security measures, such as fencing, lighting, turnstile access, as appropriate for the stage of the construction / activity on the site.

4.5.2 Procedures for dealing with protests and other potential incidents on site and in the community will also be put in place and will be supported, where appropriate, by Suffolk Constabulary, funded through the Section 106.

4.5.3 Site-specific nuclear safety and security measures would be subject to assessment under the nuclear site licensing regime and therefore are not covered within this COCP.

4.5.4 REPPIR 2019 sets out the requirements for emergency preparedness and response in relation to premises which work with ionising radiation and this is therefore not covered within this COCP. This would initially be of relevance in terms of impacts on Sizewell C workers due to an incident at Sizewell B but Sizewell C will have nuclear fuel on site towards the end of the construction phase.

4.6 Pollution Incident Control

4.6.1 The contractor(s) would prepare and implement appropriate measures to control the risk of pollution due to construction activities, materials, and extreme weather events and to document an incident control plan as part of the CEMPs.

4.6.2 The contractor(s) would be required to investigate and provide a report to SZC Co. in the event a pollution incident does occur, including the following:

- a description of the pollution incident, including its location, the type and quantity of contaminant, and the likely receptor(s);
- contributory causes;
- adverse effects and the measures implemented to mitigate adverse effects; and
- recommendations to reduce the risk of reoccurrence.

4.6.3 SZC Co. would consult with the relevant statutory bodies and other relevant parties such as the Health and Safety Executive (Construction), the Fire Authority, the Ambulance Service, the Environment Agency, Natural England, utilities companies, and the ESC emergency planning and pollution control functions when preparing response measures.

4.6.4 Further details on pollution incident control measures for the main development site and off-site associated development sites are set out within **Part B** and **Part C** of this CoCP, respectively.

References

1.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

1.2 British Standards Institution (2015) BS14001:2015 Environmental management systems.

CODE OF CONSTRUCTION PRACTICE PART B: MAIN DEVELOPMENT SITE

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None provided.

Figures

None provided.

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Appendix A: Freshwater Fish and Aquatic Invertebrates Mitigation Strategy

Executive Summary

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1 General Requirements

1.1 Introduction

1.1.1 As the Sizewell C Project covers a number of sites, **Part A**: **Project Wide Controls** of this CoCP includes the overarching construction management measures for the Sizewell C Project. This part sets out the controls and measures that relate to the main development site.

1.1.2 The principal works associated with the main development site and this part of the CoCP are as follows:

- development of site compounds;
- construction of perimeter construction fencing and permanent fencing, and diversion of Public Rights of Way (PRoWs);
- species translocation and site clearance;
- watercourse realignment;
- construction of road crossings and haul roads;
- land remediation and operation of a remediation processing compound;
- construction and decommissioning of accommodation campus and other temporary buildings;
- installation of plant and equipment to support construction (including cranes and site power);
- soil stripping, storage and re-use;
- bulk earthworks;
- deep excavation (of unit 1 and unit 2);
- excavation of other features such as culverts and building foundations;
- progressive mound creation;

- construction, commissioning and operation of concrete batching plant;
- construction of the cooling water system;
- dewatering;
- drainage works; and
- construction of the nuclear power station.

1.1.3 Where the requirements of construction practice are covered adequately by the **Part A** of this CoCP, those controls are not repeated in this part (**Part B**). Therefore, where no site-specific controls are specified here, reference should be made to the **Part A**. The specific measures in this part will prevail over any general measures set out in the **Part A**.

1.2 General Site Arrangements

1.2.1 The contractors will ensure that the site layout and appearance is designed according to the following principles:

- All works areas will be fully secured with appropriate hoardings or fences.
- Storage sites, temporary offices, fixed plant, machinery and equipment will be located to minimise environmental impacts, having due regard to neighbouring residential properties and the constraints of each site.
- Noise generating activities will be sited away from noise sensitive receptors, where practicable, or screened so as to avoid exceedances of the noise threshold levels (as set out in Section 3.2).
- Internal vehicle routes will be arranged to minimise the risk of carrying mud out of the site.
- The site layout will also consider and minimise potential impacts from restricting natural light to adjacent residential properties or ecological receptors.
- Site lighting will be positioned and directed to minimise intrusion into occupied residential properties and ecologically sensitive areas.

- Security cameras will be positioned and directed to avoid intruding into occupied residential or commercial properties.
- Site plant and facilities will be powered from mains electrical sources, where reasonably practicable.
- Campus-based workers and workers in the Land east of Eastlands Industrial Estate (LEEIE) caravan site will not be able to bring pets to site.
- Plant and equipment will be of good working order.

1.2.2 The contractors will display an information board at appropriate locations on the boundaries of the sites containing contact names, telephone numbers, addresses and the helpline number. Refer to **Part A** of this CoCP for further details. This will be in accordance with the employer's specification.

1.3 Working Hours

1.3.1 The majority of workers are expected to be working on either an early shift or a late shift. Most of the remaining employees would work to office hours. General shift patterns are set out in **Table 1.1**.

Table 1.1: Construction shift patterns.

Shift	Start Time	End Time
Early shift.	06:00–08:30	14:00–18:30
Late shift.	13:30–15:00	22:00–00:00
Night shift.	20:30–22:00	06:00–08:00
Office shift.	07:30–09:00	17:30–19:00

1.3.2 The early and late shifts as well as the night shift, are likely to operate on a four to six week cycle. Within these cycles, there would be longer weekends that result in the earlier departure of staff on Thursdays or Fridays, generally between 14:00 and 16:00.

1.3.3 At weekends, it is anticipated that different working patterns would apply. There are two likely work patterns that may be used:

- Some construction staff may work on Saturday mornings, with no shift on a Sunday.
- Others may work an alternating pattern, which may operate on a four-week cycle comprising 12 working days (Monday to Sunday plus

Monday to Friday), followed by a two-day non-working weekend (Saturday and Sunday), followed by 11 working days (Monday to Sunday plus Monday to Thursday), followed by a three-day non-working weekend (Friday to Sunday).

1.3.4 There would be some occasions and activities which require continuity of working (e.g. fixing of concrete formwork, large concrete pours, erection of steelwork and marine tunnelling activities) where the working pattern may differ from that described above. It is anticipated that these would involve a reduced proportion of the workforce. Where possible, the accommodation campus would be prioritised for workers more likely to undertake these activities.

1.3.5 The night shift would generally be a maintenance and logistics support shift involving activities such as:

- unloading and storing the morning's earliest heavy goods vehicle (HGV) arrivals;
- unloading and storing of freight from rail deliveries overnight;
- unloading and storing freight from occasional marine deliveries overnight;
- pre-placement of materials for the subsequent shifts;
- repositioning of scaffolding;
- essential plant maintenance and repair;
- dewatering operations;
- refuelling; and
- radiography of welds.

1.3.6 In addition, where continuity of work is essential, the night shift would include:

- tunnelling activities, including removal of excavated material;
- fixing of concrete formwork and reinforcing bars;

- welding of the reactor containment liner; and
- continuation of large concrete pours (in excess of 18 hours).

1.4 Other Relevant Environmental Management Strategies and Plans

1.4.1 In addition to this part of the CoCP, and the plans detailed in **Part A** (Doc Ref. 8.11), further strategies and plans are required to mitigate and manage specific environmental impacts on the main development site during construction. Overarching strategies and plans include:

- **Outline Drainage Strategy,** provided in **Volume 2, Appendix 2A** of the **ES** (Doc Ref. 6.3) [APP-181];
- **Lighting Management Plan,** provided in **Volume 2, Appendix 2B** of the **ES** (Doc Ref. 6.3) [APP-182];
- **Overarching Written Scheme of Investigation (WSI) for Archaeological Mitigation,** provided in **Volume 2, Appendix 16H** of the **ES** (Doc Ref. 6.3) [APP-275];
- **Peat Strategy,** provided in **Volume 2, Appendix 16G** of the **ES** (Doc Ref. 6.3) [APP-275];
- **Marine Mammal Mitigation Protocol,** provided in **Volume 2, Appendix 22N** of the **ES** (Doc Ref. 6.3) [APP-331]; and
- **Outline Landscape and Ecology Management Plan** (Doc Ref. 8.2) [APP-588].
- **Two Village Bypass Outline Landscape and Ecology Management Plan** (Doc Ref. 8.3A); and
- **Sizewell Link Road Outline Landscape and Ecology Management Plan** (Doc Ref. 8.3B).

1.4.2 The securing mechanisms for each strategy is set out within the **Mitigation Route Map** (Doc Ref. 8.12) [APP-616] and the **Mitigation Route Map Addendum** (Doc Ref. 8.12Ad). Other topic specific strategies and plans are detailed in **sections 2** to **14** below, as required.

2 Environmental Incident Controls

2.1 Control Measures to Reduce the Likelihood of Environmental Incidents

2.1.1 In order to minimise the potential for environmental incidents from construction activities at the Sizewell C main development site, a series of preventive (i.e. risk reduction) measures will be adopted.

2.1.2 The contractors and site personnel must be familiar with the potential environmental impacts and risks posed by the construction work. Although many of these are set out in this CoCP, the contractors will ensure that they have a clear understanding of those risks that are relevant to their contract before they commence work.

2.1.3 Contractors will therefore need to carry out their own risk assessment and devise method statements and incident response plans to ensure that suitable and sufficient controls are in place to avoid pollution and harm to human health or environmental receptors at all times either on or off-site. These would take into account applicable legislation, the environment and planning requirements, and best practice and guidance (for example, the Environment Agency's Pollution Prevention Guidance notes (Ref. 1.1) and other good construction practice, including that published by CIRIA).

a) Good Construction Practice

2.1.4 Good construction practice measures include (but not limited to) the following:

- Services critical to the Sizewell C Project would be protected at all times during the construction works. Inspection pits for the buried utilities would be undertaken and clearances clearly demarcated on-site. Critical services may require back up power supply or batteries.
- As far as feasible, minimising the storage of potentially polluting materials and substances (such as soil, fuel and chemicals), and locating storage areas:
  - as far away as possible from high risk locations;
  - as far away as possible from where there is a risk of damage by collision (e.g. from site traffic);
  - not within 50m of a spring, well or borehole;

- not within 10m of a watercourse, ditch, drainage channel or flood plain;
- not where polluting materials or substances could enter an open drain or soak into unmade ground where it could pollute groundwater;
- not where a spill could run over hard ground to enter a watercourse or soak into unmade ground where it could pollute groundwater;
- not on roofs (materials can enter guttering, itself a pathway to the surface or groundwater environment);
- the creation of temporary drainage networks (e.g. temporary connection into combined sewer infrastructure) during interim periods during the construction of the permanent drainage system;
- use of silt traps used to capture suspended solids;
- use of appropriately designed, built and maintained oil storage and refuelling facilities; and
- use of oil/water separators.

b) Storage, Handling and Disposal of Waste

2.1.5 Waste is to be segregated and stored in appropriate, covered containers which will be clearly marked as to their contents. The containers are to be located away from drains and water courses.

c) Spill Kits

2.1.6 Spill kits will be provided on-site and smaller kits will also accompany mobile plant, equipment and oil containers when taken to remote areas of the site.

2.1.7 Contractors must ensure that responsible personnel are suitably trained in the use of spillage response equipment and materials. If any equipment requires special training to use it, ensure the contact details of staff members who are trained in its use are identified on the equipment.

d) Watching Briefs

2.1.8 Contractors will ensure that a watching brief for contamination is maintained by trained personnel during the construction works to deal with potential additional 'chance finds' of contamination. In the event that 'chance finds' of additional contamination are discovered, the measures outlined in **Table 10.1** will be implemented. Excavation of areas of higher contamination risk will be completed by suitably qualified and experienced personnel, to ensure that mitigation measures are effective, and that residual impacts will not be significant.

e) Site security:

2.1.9 Access to the site is controlled by SZC Co. to avoid trespass and vandalism which may result in pollution. All valves on storage tanks will be locked when not in use to avoid tampering by vandals. Wherever possible storage of materials will be out of sight and in locked containers.

2.2 Environmental Incident Response Plan

2.2.1 An overview of environmental incident control is provided in **Part A** of this CoCP. Contractors will maintain an up-to-date record of all substances stored on-site, together with an indication of the maximum quantity likely to be stored. Any relevant Material Safety Data Sheets and approved COSHH assessments will also be held for any substances posing a risk to people and/or the environment (including waste materials).

2.2.2 Contractors will produce an Environmental Incident Response Plan that is specific to their work showing all stores, bulk storage vessels, drums or containers intended for storing oils, chemicals or other potentially polluting materials. This will be a clear plan of the site showing layout and access details, along with a schematic representation of the site drainage arrangements. Essential features that the plan will contain include:

- the layout of buildings and portacabins;
- access routes and meeting points for emergency services;
- the location of any on-site treatment facilities for trade effluent or domestic sewage;
- details of the potential environmental incidents, impacts and risks that the construction works pose and the control measures to mitigate those risks;

- areas or facilities used to store raw materials, products and wastes (include details of tank sizes and products stored);
- bunded areas, with details of products stored and estimated retention capacity;
- location of hydrants, 'fireboxes' and pollution prevention equipment and materials;
- any watercourse, spring or borehole, well located within or near the site;
- areas of porous or unmade ground;
- site drainage – foul, surface and trade effluent drainage systems including features such as:
  - inspection points to detect pollution;
  - oil separators/interceptors;
  - firewater/spillage containment systems;
  - balancing tanks;
  - pollution control devices (shut-off valves/penstocks fitted in drains);
  - sacrificial containment areas such as car parks; and
  - other areas suitable for portable storage tanks, for blocking drains and temporary.
- storage of water for firefighting; and
- a brief description of how all the contractor's facilities operate and how the storage vessels will be labelled for easy identification.

2.2.3 Contractors must keep a record of the equipment and materials on-site to deal with pollution incidents, including:

- absorbents;

- drain mats/covers;
- pipe blockers;
- booms;
- pumps; and
- over drums.

2.2.4 Contractors must ensure that all those involved in emergency response are familiar with, and have access to:

- the site plan;
- information on materials, their health, safety and pollution risks;
- appropriate spill response equipment; and
- training in incident response procedures.

a) Environmental Incident Response

2.2.5 In the event of an environmental incident, leak or spillage being discovered; contractors must:

- ASSESS risks to personnel.
- STOP the pollution at its source wherever possible. Spillages will not be washed into the ground or drains.
- Use spill kits to CONTAIN the spillage and prevent it from entering surface or groundwater.
- NOTIFY relevant parties. When notifying the relevant person, contractors must state clearly:
  - name;
  - company;
  - site;

- description of the incident and its location;
- date and time;
- any injuries or harm to human health as a result of the incident; and
- any immediate actions taken to mitigate the causes of the incident.

- CLASSIFY the significance of the incident in accordance with SZC Co.'s categorisation procedures.
- CLEAN-UP/REMEDIATE the incident using appropriate spill kit and other equipment and personal protective clothing as necessary. If necessary, this can include the use of a specialist spillage response contractor. Remedial actions to control and mitigate the incident will be put in place. These will include actions to reduce the impact, damage, harm and risk.
- DISPOSE of contaminated absorbents and/or contaminated soils/waters as hazardous waste in accordance with waste management procedures.
- INVESTIGATE AND REPORT the nature, scale and extent of the incident, together with emergency response actions taken and recommended corrective actions to prevent recurrence. Any consequent learning's following the incident will be managed in accordance with SZC Co.'s continuous improvement procedures.

b) Environmental Incident Reporting and Investigation

2.2.6 In the event of an incident of an environmental nature, contractors must immediately notify SZC Co. in accordance with defined SZC Co. procedures for managing non-conformances. This will also take account of any process that is defined as part of the details agreed with the Marine Management Organisation (MMO) in relation to the deemed marine licence conditions.

2.2.7 For environmental incidents, the contractors will complete an Environmental Incident Investigation Report and provide this within 24 hours of the incident taking place.

2.2.8 In the event that a substance has entered a drain, soaked into the ground, or been released to the atmosphere or ground in breach of permit

conditions; or an unexpected discovery made of protected species, habitats or a site of archaeological importance, work in that location will cease as soon as it is safe to do so. SZC Co. will consult with the relevant stakeholders on the appropriate course of action, including advice on further remediation and the need and responsibility for notifying the following regulatory bodies:

- The Environment Agency: in the event of a pollution incident impacting upon water, land or air.
- The Marine Management Organisation: in the event of a pollution incident impacting the area below the mean high water springs.
- Natural England: in the event of the identification and disturbance to a suspected protected species of animal, plant or habitat.
- Suffolk County Council Archaeological Service (SCCAS): in the event of the discovery of unexpected archaeological remains.
- The local authority (East Suffolk Council): in the event of a significant uncontrolled release of pollution to air, ground and/or water and which have impacted upon third party receptors.

2.2.9 The Environment Agency will be notified of a significant pollution incident as soon as possible to allow assessment and remediation measures to be taken. The notifications would be made in the first instance to the Environment Agency incident hotline (0800 80 70 60).

2.2.10 The Marine Management Organisation will be notified of any oil, fuel or contaminant spill to the marine environment as soon as possible. The notifications would be made in the first instance to (0300 200 2024 office hours; 07770 977 825 outside office hours or dispersants@marinemanagement.org.uk).

2.2.11 Emergency services will also be notified as appropriate to the nature and scale of the environmental incident.

c) Environmental Incident Response Training

2.2.12 All site personnel must be provided with appropriate induction and ongoing training on the environmental impact of the work they are carrying out, including the necessary procedures for preventing and responding to, a potential environmental incident.

2.2.13 Where appropriate to the contract, staff will be trained in environmental incident planning and response, including:

- briefings on the procedures and incident plans that are in place at the site;
- participation in emergency drills;
- participation in post-incident investigations;
- training in the use of pollution incident response equipment; and
- 'Toolbox' talks.

2.2.14 Evidence of such training will be available for inspection in the form of completed drill test plans, training records of staff and completed post-incident investigation reports.

2.3 Environmental Incident Drills and Auditing

a) Environmental Incident Response Drills

2.3.1 Within three months of the contractors submitting and SZC Co. approving the contractors' Environmental Incident Response Plan, a live trial of the plan will be undertaken. The purpose of the trial is to ensure that the plan is appropriate for the works being undertaken and that the site staff are prepared to deal with an environmental incident.

2.3.2 To ensure adequate and ongoing preparedness and response to potential environmental incidents on-site, contractors will ensure that they carry out regular tests of their Environmental Incident Response Plan.

2.3.3 Incident response drills will be carried out at least every 4 to 8 weeks so as to ensure that all those responsible for works that have the potential to cause environmental incidents are fully familiar with the incident response procedures.

2.3.4 Emergency incident test drills will be recorded as if they were incidents in their own right and will be accompanied by a post environmental incident investigation report, citing any relevant lessons learned and corrective actions from the exercise.

b) Auditing and Reporting

2.3.5 Compliance with the requirements of the statutory legislation and the CEMPs will be monitored through routine inspections and audits, including:

- periodic checks: the environmental incident prevention arrangements will be inspected periodically to identify and address deterioration or inadequacies in the arrangements;
- monthly reporting: performance in implementing drills and the occurrence of real incidents will be reported monthly to the SZC Co. project management team, together with the lessons learned for incident prevention and control; and
- periodic audit: on a periodic basis, SZC Co. will undertake an internal audit to monitor compliance.

3 Noise and Vibration

3.1.1 Best Practicable Means (as defined by Section 72 of the Control of Pollution Act 1974) will be applied to minimise construction noise and vibration on neighbouring sensitive receptors.

3.1.2 The following hierarchy of methods of noise management and noise control will be applied to all activities and operations:

- selection of plant, equipment and working methods to minimise noise and vibration emissions;
- management of hours of working or 'on' time for noisy operations;
- attenuation of noise and vibration at source; and
- attenuation of noise and vibration during transmission from source to receiver.

3.1.3 In addition to the controls set out in this CoCP, a **Noise Monitoring and Management Plan** will be developed to provide a framework for monitoring and managing noise at the site. The **Noise Monitoring and Management Plan** will be agreed with the relevant local planning authorities.

3.1.4 **Table 3.1** sets out best practice control measures that will be put in place, where appropriate, to mitigate potential impacts from noise and vibration at the main development site.

Table 3.1: Control measures to mitigate noise and vibration impacts

Receptor	Activity	Mitigation or Control Measure
Noise Mitigation Scheme		
Human receptors	All	Prior to the commencement of the works, the provisions of the Noise Mitigation Scheme will be discharged (see **Appendix 11H, Volume 2, Chapter 11 (Noise and Vibration)** of the **Environmental Statement** (Doc Ref. 6.3) [APP-210]. This will result in the identification of the receptors most impacted by construction works, and the periods when that impact is likely to occur. Where appropriate the noise insulation provisions will be implemented and in cases of high noise levels, arrangements agreed for temporary rehousing. It may be appropriate to revisit the Noise Mitigation Scheme should the works alter from those assessed prior to the commencement of the works.
Site Area		
Human receptors	All	All construction activities will be undertaken within the site boundaries; including areas designated as stockpiles and haul routes.
Compliance		
Human receptors	All	Prior to construction works, the detailed design, working methods and mitigation proposals will be developed and approved by SZC Co. and its contractors to minimise adverse effects at off-site receptors, as far as can reasonably be achieved.
		Where required, alternative working methods or hours will be considered and developed in response to the needs of specific receptors, as identified in **Volume 2, Chapter 11** of the **Environmental Statement** (Doc Ref. 6.3) [APP-202].
		SZC Co. will implement a programme of noise and vibration monitoring around the site at a number of strategically important locations, where appropriate, agreeing the locations with the local planning authority. The monitoring results will be made available to the local planning authority and public in a timely manner, using a method to be determined, but likely to include a web-based data portal.
		SZC Co. will have a system for the receipt and recording of any noise or vibration complaints from occupiers of noise sensitive receptors, and procedures for investigating and acting appropriately as necessary upon those complaints. Refer to **Part A** of this

Receptor	Activity	Mitigation or Control Measure
		CoCP (Doc Ref. 8.11(A)) for further details.
Erection of Physical Barriers		
Human receptors	All	Solid barriers or landscaping, or a combination of the two, will be installed as early as is practicable in the construction process and retained in the long term to maximise potential acoustic screening. All such structures will be maintained over the course of the project to maintain effective acoustic performance. This is in accordance with the **Construction Parameters Plan**, secured by a requirement set out in Schedule 2 of the **Draft Order** (Doc Ref. 3.1(A)).
Good Construction Practice		
Human receptors	All	All construction contractors will be required to follow standard good construction practice as outlined in BS 5228-1: 2009+A1: 2014 (Ref. 1.2) and BS 5228-2: 2009+A1: 2014 (Ref. 1.3). This includes, but is not limited to, the measures set out below. Plant, equipment and systems of work, will be selected or designed to achieve the lowest noise and/or vibration emission levels from the site wherever practical. The following measures will be adopted, where it is practicable to do so: • Adoption of construction methods and plant that are not inherently noisy. • Semi-static equipment or other continuous noisy plant will be sited as far as possible from sensitive receptors and fitted with suitable enclosures. • Noisy activities will be conducted during less sensitive periods or staggered. • Battery-powered generators will be used in preference to diesel-powered generators, where a fixed power supply is not available. • Low noise generators and compressors will be used.

Receptor	Activity	Mitigation or Control Measure
		• Effective exhaust silencing and plant muffling equipment will be fitted and maintained in good working order. • Mobile construction plant will be located away from adjacent occupied buildings or as close as possible to noise barriers or site hoardings to provide additional screening from sensitive noise receptors. • Plant will not be operated with covers open or removed. • All plant and equipment will be properly maintained • Engines will be switched off when not in use. • All equipment will be used in the mode of operation which minimises noise emissions. • Plant will be started up sequentially, rather than simultaneously. • Static plant known to generate significant levels of vibration will be fitted with vibration dampening.
	Haulage	Only designated haul routes will be used on-site.
		Haul roads will be well maintained to minimise noise generated from vehicles travelling over uneven surfaces and pot holes.
		Haul roads will avoid steep gradients where practicable, to reduce HGV engine noise emissions.
	Reversing	Where health and safety obligations can be achieved and where it is possible to do so, mobile construction plant will be fitted with low noise or broadband reversing alarms to minimise potenmtial for annoyance to sensitive receptors.
	Materials	Loading/unloading activities will be located away from sensitive receptors and shielded, where practicable.

Receptor	Activity	Mitigation or Control Measure
	Handling	Materials will be handled in a manner that minimises noise. This will include restricting drop heights during lorry loading to the minimum required for safe and efficient operations.
Night-Time Working		
Human receptors	All	Where night time work is required, it wil be carried out in a manner that minimises noise and vibration at all times. Where night time work is required close to receptors, prior warning will be given.
Externally Positioned Amplified Sound		
Human receptors	All	No amplified sound will be generated at any time within the site or at any time during any phase of works for the development. This constraint will not apply in the event of emergencies or emergency drills to the extent necessary to deal with an emergency or drill, or other health and safety requirements. This constraint will also not apply to the amplified noise generated by construction plant as a reversing alarm.
Training		
Human receptors	All	Training and instruction will be provided to site personnel on methods and techniques of working to minimise off-site noise and vibration impacts.
		On-site 'Toolbox' training will be provided to enable site workers to understand how their actions will interact with the environment and potentially impact upon sensitive receptors near to their work areas.

3.2 Construction Noise Thresholds

3.2.1 The construction noise thresholds for construction activities undertaken within the main development site are set out in **Table 3.2**.

Table 3.2: Construction noise thresholds

Period	Threshold (free field)	Parameter
Any day 07:00 to 23:00.	60	$L_{Aeq, T}$, dB, free field.
Night 23:00 to 07:00.	45	
Night 23:00 to 07:00.	65	L_{Amax}, dB, façade.

Time period T in this table refers to the period in question: day (16 hours) or night (8 hours).

3.2.2 These values apply at all residential receptors around the main development site. Receptors that are more sensitive to noise and/or vibration, as identified in **Volume 2, Chapter 11** of the **Environment Statement** (Doc Ref. 6.3) [APP-202], may have alternative thresholds and these will be set out in the **Noise Monitoring and Management Plan**.

3.2.3 Thresholds for receptors close to off-site works, such as the fen meadow compensation areas or the Alde Valley School in Leiston, will be set out in the **Noise Monitoring and Management Plan**, taking account of local noise conditions, as described in Section E.3.2 in Annex E of BS 5228-1: 2009+A1: 2014 and **Appendix 11D** [APP-206] and **Appendix 11E** [APP-207] of **Volume 2, Chapter 11** of the **Environment Statement**.

3.2.4 The contractor will be obliged to use best endeavours and best practicable means to adhere to these thresholds at all times.

3.2.5 **Table 3.1** sets out best practice control measures that will be put in place, where appropriate, to mitigate potential impacts from noise and vibration at the main development site.

3.3 Additional Mitigation, Monitoring and Management

a) Acoustic Screening

3.3.1 Solid barriers or landscaping, or a combination of the two, will be installed as early as is practicable in the construction process and retained in the long term to maximise potential acoustic screening. All such structures will be maintained over the course of the project to maintain effective acoustic performance. This is in accordance with the Construction Parameters Plan secured by a requirement included in Schedule 2 of the **Draft Order** (Doc Ref. 3.1(A)).

3.3.2 Additional temporary screens will be installed as necessary by SZC Co. and its contractors to provide screening attenuation and protect sensitive receptors from noisy construction methods and plant during construction.

3.3.3 Indicative locations where temporary screens are likely to be required are identified in **Appendix 11B** of **Volume 2** of the **Environmental Statement** (**ES**) (Doc Ref. 6.3) [APP-204].

b) Management and monitoring

3.3.4 The contractors will use working methods and implement the mitigation measures outlined in **Table 3.1** above to minimise noise and vibration emissions from the works.

3.3.5 A **Noise Monitoring and Management Plan** will be developed for the site and implemented, setting out:

- The locations of noise and/or vibration monitoring to be used during the course of construction, including sites where continuous monitoring will be undertaken.
- Arrangements for reporting noise and vibration monitoring results.
- Any further management measures that are considered necessary and appropriate, developed on a site-by-site basis.

3.3.6 The approach to communication, community and stakeholder engagement is set out within **Part A** of this CoCP and includes the approach to the notification of local communities of potentially noisy or disruptive works, along with a complaint handling process.

c) Monitoring

3.3.7 SZC Co. will implement a programme of noise monitoring around the site at a number of strategically important locations, where appropriate, agreeing the locations with the local planning authority as part of a **Noise Monitoring and Management Plan**. The programme of noise and/or monitoring will be developed and implemented, as outlined below:

- Continuous, unattended monitoring at a number of strategically important locations, which may include occupied residential receptors.

- Attended or short-term monitoring to provide a check on specific activities or at specific locations, where, for instance, significant impacts are likely to occur or in response to complaints or queries.

i. Monitoring Equipment

3.3.8 All sound level meters and acoustic field calibrators will comply with Type 1 / Class 1 specifications, as set out in the relevant standards. Effective windshields will be used throughout noise measurements to minimise turbulence at the microphone.

3.3.9 Meteorological data will be gathered during any noise measurements. Hand-held anemometers will be acceptable to periodically gather wind speed data for attended measurements. Where unattended measurements are undertaken, either a remote meteorological station will be used, or a suitable third party source of local meteorological data identified.

3.3.10 All sound level meters will have been laboratory-calibrated to a traceable standard within a two year period prior to the end of the measurements. All field calibrators will have been similarly calibrated within a one year period prior to the completion of the measurements.

3.3.11 All vibration monitoring will have been laboratory-calibrated to a traceable standard within a two year period prior to the end of the measurements.

3.3.12 Calibration certificates for all noise and vibration monitoring equipment will be appended to the results of any surveys.

3.3.13 On-site field calibration checks of the sound level meters used for unattended measurements will be undertaken periodically, as a minimum every three months. All field calibration checks will be reported, and any drifts stated.

3.3.14 The on-site field calibration checks of the sound level meters used for attended measurements will be undertaken immediately prior to the start of any measurement or series of measurements and after their completion, using acoustic calibrators. Where appropriate, intermediate field calibration checks will be carried out. All field calibration checks will be reported, and any drifts stated.

3.3.15 Should the field calibration of a meter drift by more than 1dB for an unattended measurement over several days or more, or by more than 0.5dB for an attended measurement, the data gathered will be reported but not used in any subsequent assessment.

ii. Continuous, unattended noise monitoring

3.3.16 The locations for unattended noise monitoring will be agreed between SZC Co. and the relevant landowner.

3.3.17 Reports of readings, in summary form or otherwise, will be provided to local authorities and other stakeholders at regular intervals in accordance with **Part A** of this CoCP and arrangements within an approved **Noise Monitoring and Management Plan.**

iii. Attended or short-term noise and vibration monitoring

3.3.18 The locations for unattended noise monitoring will be agreed between SZC Co. and the relevant landowner, where access to private land is required.

3.3.19 Attended or short-term unattended monitoring will take place where required, for example:

- in response to a complaint or a query raised by the local planning authority;
- where a particular activity requires measurement
- where a secure location cannot be identified for longer-term monitoring.

3.3.20 Where a request is made for monitoring by the local planning authority, or where the monitoring is in response to a complaint, all reasonable endeavours will be made to undertake the measurements in a timely fashion, subject to suitable weather in which to undertake such measurements.

3.3.21 Reports containing results of attended measurements will be made available in accordance with **Part A** of this CoCP and arrangements within an approved **Noise Monitoring and Management Plan.**

d) Advance notice of works

3.3.22 Advance notice of works will be provided to local residents as outlined in detail in **Part A** of this CoCP which sets out the approach to communication, community and stakeholder engagement. This includes:

- providing regular project updates and a ‘look ahead’ of forthcoming activities works; and

- providing notification to local communities of potentially noisy or disruptive works with a focus on periods when levels are expected to be above or close to a significant level.

4 Air Quality

4.1 Introduction

4.1.1 Control measures that will be put in place to mitigate potential impacts on air quality at the main development site has been identified with reference to guidance documents as follows:

- Institute of Air Quality Management (IAQM) (2016) Guidance on the assessment of dust from demolition and construction (Ref. 1.4);
- Department for Environment, Food and Rural Affairs (Defra) (2012) Process Guidance Notes (PGN3/01, PGN3/16) (Ref. 1.5); and
- European BREF (2006) Emissions from Storage (Ref. 1.6).

4.1.2 The proposed measures are principally based on the IAQM (2016) guidance published recommended packages of mitigation measures which represent appropriate measures to be applied to a given combination of activity and level of potential risk. These measures all have a long history of successful implementation in the UK and most are established good practice measures on any large construction site.

4.1.3 The measures set out in **Table 4.1** below have been informed by a dust risk assessment and development of an **Outline Dust Management Plan** provided in **Appendix 12A** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-213]. The measures identified will be implemented by the contractors and the relevant measures set out in detail within the Construction Environmental Management Plan prepared by the contractor for the relevant stage of works.

Table 4.1: Control measures to mitigate air quality impacts

Receptor	Activity	Mitigation or Control Measure
General Measures		
Human receptors. Ecological receptors.	Site management.	The community and stakeholder liaison will be undertaken in accordance with **section 3** of **Part A** of this CoCP (Doc Ref. 8.11(A)), unless otherwise agreed.
		A stakeholder communications plan will be implemented prior to commencement of works, including contact details for person(s) accountable for air quality and dust issues, and relevant details displayed at the site boundary.
		Adequate water supply will be made available for dust/particulate matter suppression and house-keeping.
		High risk dust generation activities will be minimised or avoided where practicable during prolonged dry or windy conditions.
		Run-off of mud and surface water from site during construction will be managed in accordance with **section 11** – **Groundwater and Surface Water** of this CoCP.
		Bonfires and burning of waste materials will be prohibited.
Human receptors. Ecological receptors.	Site layout.	Site access will be located as far as practicable from sensitive receptors.
		The site layout will be planned so that significant dust generating activities, including concrete batching plant and mobile crushing and screening plant, will be located as far as possible, and at least 200m from the site boundary and sensitive receptors.
		Earth bunds with grassing/seeding, and early planting will be used to screen sensitive boundaries where possible.
		Screens or barriers will be used to provide wind reduction for plant with significant dust raising potential.

Receptor	Activity	Mitigation or Control Measure
		Stockpiled materials with potential to produce dust will be reused as soon as possible, or covered, seeded or fenced to prevent wind whipping.
Human receptors. Ecological receptors.	Demolition.	Demolition methods will be selected to minimise dust, and equipment generally fitted with automatic water suppression.
		Cutting and grinding activities will be controlled or suppressed to minimise dust generation.
		Use of modular (pre-fabricated) buildings, as far as practicable, for temporary accommodation and site facilities during construction phase to minimise dust raising during the final removal and reinstatement phase.
		Buildings will be soft stripped inside prior to demolition
Human receptors. Ecological receptors.	Earthworks.	Surface stripping will be planned accordingly to minimise the potential for dust generation upwind of sensitive receptors.
		Damping down will be used prior to commencement of extraction works, with surface binding agents as required, to suppress and minimise dust generation.
		Long-term stockpiles will be seeded or fenced to minimise wind-blown dust.
		Drop heights will be restricted from loaders, hoppers, conveyors and other handling equipment to the minimum required for safe and efficient operations, to minimise dust emissions.
		Stockpile worked areas will be minimised to avoid unnecessary disturbance.
		Temporary stockpiles, prior to site of special scientific interest (SSSI) crossing, will be located at least 50m from sensitive boundaries in the direction of the prevailing wind, where possible.
Human receptors.	Construction.	Use of modular (pre-fabricated) buildings as far as practicable for site facilities during construction phase to minimise dust

Receptor	Activity	Mitigation or Control Measure
Ecological receptors.		raising from the use of concrete.
		Scabbling (roughening of concrete surfaces) will be avoided where possible.
		Sand and aggregates will be stored in three-sided bays damped down as necessary, or enclosed storage, to avoid wind-blown dust.
		Bulk powders such as cement will be delivered in enclosed tankers and stored in silos with industry standard emission control systems.
	Construction.	Use of a water suppression system if necessary and use of industry best practice when handling ballast and aggregate, such as not dropping the material from a greater height than necessary during unloading, will minimise the amount of dust generated by these operations
Human receptors. Ecological receptors.	Trackout.	Use of hard-standing areas and hard-surfaced roadways as far as practicable on a risk-based basis to reduce vehicles movements on unmade ground, and minimise the trackout of mud and dust raising from vehicle movements.
		Wheel wash-facilities will be installed at strategic points within the main development site to minimise tracked out materials from high risk to lower risk areas.
		Wheel wash facilities will be maintained for the duration of works, specifically those which involve creating dust or material output.
		All vehicles carrying loose aggregate, cement or soil exiting the site will pass through a wheel wash facility and will be checked to ensure sheeting is in place.
		All vehicles exporting dusty spoil and other materials off-site will be dampened down and subsequently completely sheeted, including the sides, prior to transport.

Receptor	Activity	Mitigation or Control Measure
		Regular water-assisted road sweeping of the site access road and local roads as necessary to remove residual tracked out materials.
		Rail freight exiting the site will pass through wet suppression system, and potentially dusty materials (concrete batching, aggregate fines) will be transported in enclosed wagons.
Human receptors. Ecological receptors.	Vehicles and machinery.	Haulage contractors will seek to ensure that all road vehicles will comply with the requirements of Euro VI emission standards where possible and Euro V standards (98/69/EC) as a minimum, unless otherwise agreed with the local authority.
		There will be a maximum speed-limit of 15mph for on-site surfaced roads and 10mph on unsurfaced haul roads and work areas.
		Non-Road Mobile Machinery (NRMM) engines should achieve Stage IV emissions standards where practicable and available.
		Vehicles and machinery will not be left idling unnecessarily.
		The use of stationary generators will be avoided where practicable and power will be provided by the construction electricity supply. Stationary generators where used will be controlled through an environmental permit, if applicable, to be issued by the appropriate regulatory authority, and in accordance with the requirements of the Medium Combustion Plant Directive, or the Industrial Emissions Directive as appropriate.
		The use of mobile power plant including diesel or petrol powered mobile plant will be avoided where practicable and then limited to temporary functions (less than 6 months) and non-distribution functions in accordance with Environment Agency Regulatory Guidance Note 2 and the Medium Combustion Plant Directive.
		Sustainable movement of off-site traffic will be promoted through the **Construction Traffic Management Plan** (Doc Ref. 8.7) [APP-608] and **Construction Workforce Travel Plan** (Doc Ref. 8.8) [APP-609].

Receptor	Activity	Mitigation or Control Measure
Activity-Specific Measures		
Human receptors. Ecological receptors.	Alluvium (peat and clay) extraction and haulage.	Alluvium extraction will be undertaken where possible during drier months (April to September) in order to improve workability and minimise mud generation and subsequent trackout on roads.
Human receptors. Ecological receptors.	Crag haulage.	All vehicles carrying dusty spoil and other materials within the site will be dampened down prior to transport.
		On leaving the loading areas, haulage vehicles will pass through a wheel wash facility.
Human receptors. Ecological receptors.	Concrete batching.	Concrete batching plant will be operated in accordance with all relevant environmental permit requirements.
		Plant and storage silos will be located as far as practicable from site boundary and at least 200m from sensitive receptors.
		Enclosed equipment fitted with dust arrestment will be employed on all dry batch transfers and mixing operations.
Human receptors. Ecological receptors.	Mobile crushing and screening plant.	Enclosed conveyors and transfer points will be employed as far as is practicable.
		Water suppression over the crusher aperture, or containment of crusher system will be employed where practicable.
		External plant will be regularly cleaned to minimise wind-blown dust.
Human receptors. Ecological receptors.	Lime treatment of alluvium.	Treatment will employ combined spreader-mixer plant with skirted mixer area under truck to minimise wind-blown dust; or, otherwise minimise treatment area between spreader and mixer and avoid lime spreading during periods of high wind.
		At near-restoration level, the treatment area will be planned according to daily wind-direction to minimise the potential source term upwind of sensitive receptors; minimising the cross-sectional treatment area lying perpendicular to the wind-direction.

Receptor	Activity	Mitigation or Control Measure
Human receptors. Ecological receptors.	Stockpiling	Active worked areas will be managed according to the risk of dust blow identified through monitoring, as appropiate, utilising additional measures such as enhancement of wet suppression using a binding agent, or limiting activities close to receptors during prolonged dry or windy conditions.

4.2 Additional Mitigation, Monitoring and Management

4.2.1 Monitoring of specific activities and of baseline dust levels will be undertaken to demonstrate that mitigation measures are effective and that residual impacts will be not significant.

4.2.2 **Table 4.2** below sets out monitoring and inspection measures that will be put in place at the main development site during construction.

Table 4.2: Monitoring measures to mitigate air quality impacts

Activity	Mitigation or Control Measure
Monitoring and Inspection	
Compliance	Regular site inspections will be carried out to demonstrate compliance with the **Outline Dust Management Plan** provided in **Appendix 12A** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-213]**,** and monitoring results and corrective actions will be recorded in a log book. Site inspections will be increased in frequency during periods of prolonged dry or windy conditions.
	All dust and air quality complaints, and corrective actions, will be recorded in a log book.
	Baseline and activity-specific dust and particulates (PM_{10}, $PM_{2.5}$) monitoring will be carried out in line with the CEMP. The need for diffusion tube monitoring of NO_2 concentrations on key road links will be agreed with the local authority.
Planning	Daily weather conditions will be reviewed prior to works to be undertaken within 50m of sensitive boundaries at the main platform area and the Land East of Eastlands Industrial Estate, within 100m of sensitive boundaries in stockpiling areas to determine the need for additional mitigation.
	Regular monitoring of on-site haul roads within 50m of sensitive boundaries during prolonged dry or windy conditions to determine the need for additional mitigation, such as use of boundary misting.
Maintenance	Regular inspection of haul routes will be made, with repairs as required, to ensure surfaces are maintained.

5 Landscape and Visual

5.1 Introduction

5.1.1 Control measures that will be put in place to mitigate potential landscape and visual impacts at the main development site have been identified with reference to guidance documents as follows:

- BS 3882:2015 Specification for topsoil and requirements for use (Ref. 1.7).
- BS 3936-1:1992 Nursery stock – Specification for trees and shrubs (Ref. 1.8).
- BS 3998:2010 Tree work – Recommendations (Ref. 1.9).
- BS 4428:1989 Code of practice for General Landscape Operations (excluding hard surfaces) (Ref. 1.10).
- BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations (Ref. 1.11).
- BS 6031:2009 Code of Practice for Earthworks (Ref. 1.12).
- UK Forestry Standard (Ref. 1.13).
- UK Forestry Standard Guidelines – Forests and Water (Ref. 1.14).
- UK Woodland Assurance Standard (Ref. 1.15).

5.1.2 The mitigation measures as detailed in **Table 5.1** are based on industry standard guidance and are appropriate to the proposed activities and potential effects/level of impact identified. These measures are considered to be established good practice on any large construction site.

Table 5.1: Control measures to mitigate landscape and visual impacts

Receptor	Activity	Mitigation or Control Measure
Landscape and ecological receptors. Human receptors (visual impact arising from tree loss).	Removal of vegetation.	Vegetation clearance will be undertaken in accordance with the Site Clearance drawings set out in Schedule 7 (Approved drawings) of the **Draft Order** (Doc Ref. 3.1(A)), unless alternative details are agreed pursuant to the relevant requirement set out in Schedule 2 of the **Draft Order** (Doc Ref. 3.1(A)). The contractors will seek to avoid unnecessary tree and vegetation removal over and above that set out in the approved drawings.
Landscape and ecological receptors. Human receptors (visual impact arising from tree loss).	Tree protection.	Trees within or adjacent to the site boundary, which are to be retained, will be protected in line with the recommendations in BS 5837: Trees in relation to design, demolition and construction – Recommendations (Ref. 1.11). The following measures will be implemented, as appropriate: • provision of appropriate protective fencing to reduce the risks associated with vehicles trafficking over root systems or beneath canopies; • measures to prevent compaction of soils; • maintenance of vegetation buffer strips, where practicable; • selective removal of lower branches to reduce the risk of damage by construction plant and vehicles (operations must consider the legal protection given to roosting bats and breeding birds; see **Table 6.1** below); • standard guidance for working within root protection zones including procedures to follow in the event that significant roots are uncovered during work; and • maintenance of trees on highways which are temporarily stopped as a result of the Sizewell C works prior to re-opening (e.g. selective branch removal).

Receptor	Activity	Mitigation or Control Measure
		An arboricultural consultant will assess and oversee vegetation clearance works, as relevant, relating to the protection of retained trees and trees subject to works.
Landscape and ecological receptors.	Tree works.	Any tree surgery operations will comply with the recommendations in BS 3998: Recommendations for Tree Work (Ref. 1.9), as appropriate.
		Tree felling will be carried out taking appropriate consideration of the UK Forestry Standard Guidelines – Forests and Water 2011 (Ref. 1.14) to mitigate risks from felling areas of woodland and trees on the freshwater environment. Where there are no wind throw or landscape visual issues, tree felling will be restricted to that necessary to allow the safe construction and operation of the proposed scheme. Any tree felling operations must consider the legal protection given to roosting bats and breeding birds. See **Table 6.1** for details in relation to control measures to mitigate potential impacts.
Landscape and ecological receptors. Human receptors (visual impact).	Tree planting and replacement.	The supply, storage, handling, planting and maintenance of new planting will be undertaken in accordance with appropriate British Standards, including BS 5837 Trees in relation to design, demolition and construction (Ref. 1.11); BS 3998 Recommendations for Tree Work (Ref. 1.9); BS 4428 Code of Practice for General Landscape Operations (excluding hard surfaces) (Ref. 1.10); BS 3936-1: Nursery Stock Specification for Trees and Shrubs (Ref. 1.8); and other guidance including the UK Forestry Standard (Ref. 1.13) and the UK Woodland Assurarance Standard (Ref. 1.15).
		Planting and other landscape measures will be implemented as early as is reasonably practicable, and within the appropriate planting season, where there is no conflict with construction activities or other requirements of the Sizewell C Project.
Human receptor (visual impact).	Hoarding and fencing.	Design of hoardings around construction activities shall include consideration of the character of the surrounding landscape (e.g. use of open mesh fencing where possible and appropriate in rural areas). Fencing and hoarding will be kept well maintained throughout construction.

6 Terrestrial Ecology and Ornithology

6.1 Introduction

a) Overview

6.1.1 The approach to mitigating impacts to ecological receptors during construction is controlled by a group of controls, including this CoCP. A summary of ecological measures, which are not secured by way of the CoCP but are subject to other securing mechanisms is provided below to give clarity to the scope of the CoCP measures that then follows.

i. Protected species licensing

6.1.2 This CoCP includes provisions for protected species which might be found within the active construction site, provided in **Table 6.1** below. In addition, an Terrestrial Ecology Monitoring Plan would be prepared by SZC Co. in order to discharge a requirement included in Schedule 2 of the Draft Order (Doc Ref. 3.1). This would set out the ecological surveys and monitoring process that would be followed during the construction stage.

6.1.3 A group of mitigation strategies, draft licences and non-licensable method statements for protected species at the main development site is appended to **Volume 2 Chapter 14** of the **ES** (Doc Ref. 6.3) [APP-224] and **Volume 2**, **Chapter 2**, **Section** 9 of the **ES addendum** (Doc Ref. 6.14). Many of the protected species, as well as important habitats, will be monitored during construction. In some cases baseline monitoring and operational monitoring will also be required. The ecological monitoring will be set out in an Ecological Monitoring Plan, secured by a requirement included in Schedule 2 of the **Draft Order** (Doc Ref. 3.1(A)). This would be operated alongside each relevant species or species group, which is agreed and (where necessary) licensed by Natural England.

6.1.4 For species where a more comprehensive approach is required, for reasons of population size, site importance or level of protection, a mitigation strategy has been included in the **Environmental Statement** (Doc Ref. Book 6).

6.1.5 Draft method statements and draft protected species licences are also appended to the ES where these are likely to be required. For some species where licences are unlikely to be required, such as otters and great crested newts, draft method statements have been included as appendices to **Volume 2, Chapter 14** of the **ES** (Doc Ref. 6.3) [APP-224] and **Volume 2**, **Chapter 2**, **Section** 9 of the **ES addendum** (Doc Ref. 6.14). .

b) Terrestrial ecology control measures

6.1.6 **Table 6.1** sets out best practice control measures that will be put in place, where appropriate, to mitigate potential impacts on ecological receptors at the main development site. Additional mitigation, monitoring and management measures are then provided in **section 6.2**.

Table 6.1: Control measures to mitigate potential impacts

Receptor	Activity	Mitigation or Control Measure
General		
All ecological receptors.	All construction activities.	Appointment of an Ecological Clerk of Works (ECoW) who would be an experienced ecologist, or similarly competent person, responsible for overseeing on-site ecological mitigation and ensuring that the ecological measures in this CoCP are implemented, including those set out below.
All ecological receptors.	All construction activities.	Toolbox talks and briefings will be held so that construction workers are fully aware of relevant matters, including the following: • the environmental sensitivities of the main development site, including designated sites as well as legally protected species; workers to be made fully aware of the mitigation and monitoring requirements detailed in mitigation strategies and/or protected species licences and method statements for the following species: bats, natterjack toads, water voles, otters, badgers, reptiles, great crested newts and the Deptford pink; • the habitat creation and mitigation measures that have been implemented adjacent to the main development site, including the reptile receptor area, the marsh harrier habitat compensation area and the wetland replacement habitat and other habitat creation at Aldhurst Farm; • the Rights Of Way and Access Strategy for the EDF Energy Estate; and • the content of the CoCP, as relevant to ecology.
Control Measures		
All ecological receptors.	All construction activities.	Earth bunds with grassing/seeding, including a bund along the length of the southern temporary construction area boundary (5m height), would be used to screen sensitive boundaries from

Receptor	Activity	Mitigation or Control Measure
		construction activities.
Sizewell Marshes SSSI. (Retained wet woodland and fen meadow habitats).	Installation of overhead lines above the SSSI.	To enable the re-provision and realignment of the overhead lines, the existing woodland vegetation within this corridor will be coppiced to ground level (in accordance with relevant plans) and then bog matting or a similar approach will be used to protect the wet woodland ground surface and coppiced stumps. Appropriate measures will also be used to protect the retained fen meadow habitats under this corridor. The overhead lines would only be installed once these protective measures are in place. These works will be overseen by the ECoW, or a suitably qualified ecologist, to ensure impacts to retained habitats are minimised.
Suffolk Shingle Beaches County Wildlife Site.	Construction of coastal defences. Restoration of coastal habitats.	Sand and shingle substrates from the existing surface layers of the Sizewell C frontage will be stockpiled to preserve the seedbank of the coastal vegetation, prior to the construction of the new coastal defences. These substrates will be safeguarded and then incorporated into the final landscaping of the new sea defences and frontage to enable reinstatement of the coastal vegetation including vegetated shingle and sand dune habitats. These works will be overseen by the ECoW, or a suitably qualified ecologist, to ensure appropriate layers, i.e. those likely to include seedbanks, are safeguarded.
Invasive Species		
Ecological receptors.	Establishment of invasive species.	There is the potential for non-native species to be introduced during the construction phase. Contractors will be required to undertake a biosecurity risk assessment and implement a management plan to avoid potentially facilitating the spread of non-native species during construction. Section 14(1) of the Wildlife and Countryside Act 1981 makes it illegal to plant or otherwise cause to grow in the wild any plant which is included in Part II of Schedule 9 of the Act. During construction, mitigation measures will be implemented as necessary to prevent the establishment of invasive plant species. A general strategy will be to establish a viable vegetation cover quickly, before invasive plant species can become established. Any invasive

Receptor	Activity	Mitigation or Control Measure
		species that colonise an area during construction will be removed and disposed of as required. Any imported soils will be subject to appropriate control processes to ensure they are free of any seeds/roots/stems of any invasive plant covered under the Wildlife and Countryside Act 1981.
Protected Species		
Wild mammals.	Protection of protected species.	Wild mammals are protected from inhumane killing or injury under the Wild Mammals (Protection) Act 1996. Mammal holes (i.e. sheltering species protected under the Wild Mammals (Protection) Act 1996) that are required to be removed during site clearance works, will be excavated sensitively, using hand tools where possible. Any deep holes and trenches will be covered overnight, and a ramp will be provided as an escape route for any wildlife that may fall in. Any hazardous liquids that are held on-site will be stored in a secure lock-up to avoid unnecessary harm to wild mammals.
Badgers	Protection of protected species.	Badgers are protected from killing, injury and disturbance in their place of shelter which is also protected from damage or access obstruction under the Protection of Badgers Act 1992. Activities associated with badger setts will be subject to specific mitigation, in accordance with a Natural England licence under the Protection of Badgers Act 1992. Badgers are present in the temporary construction area and there will be a programme of articfical sett construction and sett closures in advance of construction. Detailed mitigation is defined in the **Badger Mitigation Strategy** provided in **Appendix 14C3A** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-256]. If a badger or possible evidence of badgers (e.g. possible excavations) is found within the

Receptor	Activity	Mitigation or Control Measure
		active construction site, the ECoW should be contacted as soon as possible to advise on the appropriate course of action.
Natterjack toads.	Protection of protected species.	Natterjack toads are protected from killing and injury and disturbance in their place of shelter which is also protected from damage, under the Conservation of Habitats and Species Regulations 2017 ('Habitats Regulations') (Ref. 1.19) and the Wildlife and Countryside Act 1981. Natterjack toads are present in the field containing water management zone (WMZ) 1 within the temporary construction area. A capture and translocation programme will be implemented before works start in this location as defined in the **Natterjack Toad Mitigation Strategy** provided in **Appendix 14C7A** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-252]. If a natterjack toad is found within the active construction site (only likely in the vicinity of the WMZ), the ECoW should be contacted immediately to advise on the appropriate course of action.
Reptiles	Protection of protected species.	Reptiles are protected from killing and injury under the Wildlife and Countryside Act 1981. All four common species of reptiles are present within the Sizewell Estate. A reptile translocation programme will be implemented in advance of the main construction works, moving reptiles to the receptor sites identified in the **Reptile Mitigation Strategy** provided in **Appendix 14C2A** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-252]. Works in small areas of suitable reptile habitat can be undertaken via habitat manipulation and displacement via a reasonable avoidance Method Statement, provided in **Appendix 14C2B** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-252] which will include detailed avoidance mitigation. The works be undertaken during April-September so that reptiles can move away from the works areas. Timing of ground disturbance (including dismantling of spoil/rubble piles) will be avoided during the winter hibernation season (typically October to February inclusive). Dismantling of hibernation/shelter features, such as rubble piles, tree/hedge root zones, will be

Receptor	Activity	Mitigation or Control Measure
		undertaken by hand and under watching brief. If a reptile is found within the active construction site, the ECoW should be contacted immediately to advise on the appropriate course of action.
Otters	Protection of protected species.	Otters are protected from killing, injury and disturbance in their place of shelter which is also protected from damage under the Conservation of Habitats and Species Regulations 2017 ('Habitats Regulations') and the Wildlife and Countryside Act 1981. Otters are present within the Sizewell Estate boundary, including the Sizewell Marshes SSSI and use the Leiston drain area which will be crossed by the SSSI crossing An otter holt was located by the Sizewell drain in 2020 (status and mitigation actions to be defined). The requirement for any provision of an artifical otter holt will be subject to agreement with Natural England under a protected species licence. Mitigation measures are defined within a draft Method Statement at **Appendix 14C10** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-252]. If an otter or signs of otter are found within the active construction site, the ECoW should be contacted immediately to advise on the appropriate course of action.
Water voles.	Protection of protected species.	Water voles are protected from killing and injury and disturbance in their place of shelter which is also protected from damage, under the Wildlife and Countryside Act 1981. Water voles are both present within the Sizewell Estate boundary, including the Sizewell Marshes SSSI and the Leiston drain. For habitat to be lost within Sizewell Marshes SSSI, it is likely that displacement will be used to exclude the voles rather than a translocation as detailed within the Updated Water Vole Method Statement at **Appendix 2.9.C** of the **ES Addendum**. For waterbodies which are to be retained and not lost beneath the footprint of any of the proposed development, a buffer of a minimum of 10m will be demarcated to prevent

Receptor	Activity	Mitigation or Control Measure
		disturbance and degradation of habitats and any works within that buffer will be preceded be pre-construction surveys. If a water vole or signs of water vole are found within the active construction site, the ECoW should be contacted immediately to advise on the appropriate course of action.
Great Crested Newts.	Protection of protected species.	Great crested newts are protected from killing and injury and disturbance in their place of shelter which is also protected from damage, under the Conservation of Habitats and Species Regulations 2017 ('Habitats Regulations') and the Wildlife and Countryside Act 1981. There are no ponds within the main development site that support great crested newts but ponds within 200m of the development boundary do contain great crested newts so there is a possibility that they will be encountered when terrestrial habitat is cleared. Works in small areas of suitable terrestrial great crested newt habitat can be undertaken via habitat manipulation and displacement via a reasonable avoidance Method Statement which will include detailed avoidance mitigation, provided in **Appendix 2.9.C** of the **ES Addendum**. The works should ideally be undertaken during April-September so that great crested newts can move away from the works areas. Dismantling of hibernation/shelter features, such as rubble piles, tree/hedge root zones, will be undertaken by an ecological works contractor or the ECoW. If a great crested newt is found within the active construction site, the ECoW should be contacted immediately to advise on the appropriate course of action.
Bats	Protection of protected species.	Bats are protected from killing, injury and disturbance in their place of shelter which is also protected from damage, under the Conservation of Habitats and Species Regulations 2017 ('Habitats Regulations') and the Wildlife and Countryside Act 1981. Bats are widespread across the EDF Energy Estate, using woodlands and old buildings for roost sites and foraging widely across the estate.

Receptor	Activity	Mitigation or Control Measure
		Structures and trees with bat potential will be assessed to confirm their status with regards to bats prior to removal. Trees containing bat roosts will felled under a Natural England licence in accordance with the **Bat Mitigation Strategy** provided in **Appendix 14C1A** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-252]**.** If a bat is found within the active construction site, the ECoW should be contacted immediately to advise on the appropriate course of action.
Bats	Protection of protected species.	A bat barn will be installed within the first 6 months of commencement of construction works in Work No. 1A. The bat barn shall be installed in the vicinity of Lower Abbey Farm in the location indicated in Figure 2.8 of the Design and Access Statement Addendum (Doc Ref. 8.1Ad) and the structure would be a maximum height of 8m AOD and the footprint would be up to 25m^2. The final details would be developed in consultation with East Suffolk Council and Natural England.
Bats	Protection of protected species.	Temporary mitigation during the construction phase will include movable features such as trees in containers, bridge structures and fencing fitted with debris netting to maintain habitat connectivity and reduce temporary fragmentation effects
Hedgehogs	Protection of protected species	Removal of vegetation, ground clearance and the commencement of construction activities have the potential to risk killing or injuring hedgehogs, either in summer or “day” nests or winter hibernation nests (hibernation occurs between November to April). Ground clearance works would generally be undertaken outside of the hibernation period. Prior to ground clearance, an inspection for hedgehog nests would be undertaken by a suitably experienced ECoW prior to the removal of vegetation; this is likely to be undertaken in parallel with removal of reptiles from the construction footprint.
Birds	Protection of protected species	All birds are protected from killing and injury while nesting under the Wildlife and Countryside Act 1981, additional protection against disturbance is afforded to species listed under Schedule

Receptor	Activity	Mitigation or Control Measure
		1 of the Act. Clearance of potential breeding ('nesting') bird habitat (vegetation and structures) will ideally occur outside of the main breeding bird season (March to August inclusive). If this is not possible, a suitably qualified ecologist will check for the presence of breeding birds prior to the commencement of any clearance or construction activities. Where any active nests are found, a buffer zone (of at least 5m radius) will be implemented until the young have fledged and left the immediate area around the nest. Larger buffer zones (the radius will be dependent on the species concerned and the specific factors on-site at the time) will be implemented around breeding sites for species listed under Schedule 1 of the Wildlife and Countryside Act 1981, which will only be lifted when the young are independent. A suitably qualified ecologist will advise on the extent of buffer zones and define when the buffer zone may be lifted. As nesting occurs at other times of the year for some species, vigilance will be applied during clearance works at any time of the year. If nesting birds are found on or within the vicinity of the site, the ECoW should be contacted immediately to advise on the appropriate course of action. Barn owl (*Tyto alba*) boxes would be installed within the reptile receptor areas to provide additional nesting/roosting opportunities for the local barn owl population.
Fish / Aquatic invertebrates	Protection of protected species	When the Sizewell Drain is realigned, the section to be infilled would be subject to a fish and invertebrate rescue, relocating stranded individuals across to the new realigned drain or undisturbed sections of the Sizewell Drain. Further details of the key approaches to mitigating potential impacts to aquatic invertebrate and fish present within or adjacent to the construction site for Sizewell C main development site are provided in the Freshwater Fish and Aquatic Invertebrates Mitigation Strategy, Appendix A to this CoCP.

6.2 Additional Mitigation, Monitoring and Management

a) Additional mitigation

i. Sizewell Marshes SSSI Management

6.2.1 In the unlikely event that monitoring of the Sizewell Marshes SSSI during construction indicates a measurable decline in the extent of sensitive plant assemblages, such as the fen meadow habitats or indicates that habitat condition is deteriorating, then additional mitigation measures would be deployed. Deterioration could, for example, be detected by an increase in the extent and abundance of coarse grass and sedge species and which might be attributable to Sizewell C Project induced changes (e.g. air quality changes), Additional mitigation could include additional stock grazing or a cutting regime to remove excess vegetation.

6.2.2 If monitoring identifies such a requirement for additional mitigation measures, the mitigation response would be agreed with local site managers. The responsibility for deploying these measures would lie with SZC Co. subject to any other contractual arrangements with the contractor.

b) Management and monitoring

6.2.3 The contractors will use working methods and implement the mitigation measures outlined in **Table 6.1** above to ensure that significant effects are avoided, and levels are reduced, as far as can reasonably be achieved.

c) Monitoring

6.2.4 It is currently assumed that the contractor would be responsible for any required ecological monitoring within the order limits, whilst SZC Co./EDF Energy or their agents are likely to be responsible for much of the required monitoring outside the order limits (e.g. in relation to protected species or habitats in adjacent areas). The terrestrial ecological monitoring plan, secured by a requirement included in Schedule 2 of the **Draft Order** (Doc Ref. 3.1(A)) would set out these responsibilities as the scope of the monitoring.

6.2.5 The contractor would then set out the ecological monitoring they would undertake for SZC Co. within the Construction Environmental Management Plan. This will be in accordance with the terrestrial ecological monitoring plan. This plan is expected to include:

- success of protective measures for retained vegetation, or newly established vegetation within the order limits;
- bat use of retained corridors within the order limits (including Bridleway 19 alignment, northern edge of Kenton Hills and at the SSSI Crossing);
- ongoing use of any retained bat roosts within order limits; and
- any incidents associated with protected species which are unexpectedly detected within the active construction site.

7 Amenity and recreation

7.1 Introduction

7.1.1 Control measures that will be put in place to mitigate potential impacts on pedestrians, cyclists and equestrians using Public Rights of Way (PRoW), footways, permissive footpaths, open access land and the beach at the main development site are set out in **Table 7.1**.

Table 7.1: Control measures to mitigate impacts on pedestrians, cyclists and equestrians using PRoW, footways, permissive footpaths, open access land and the beach

Receptor	Activity	Mitigation or Control Measure
Human receptors. Horses Dogs	Construction works.	Method statements will be provided for works on or adjacent to PRoW, footways, cycle routes, permissive footpaths and publicly accessible land including the beach, to minimise safety risk and impacts on pedestrians, cyclists and equestrians.
Human receptors. Horses Dogs	Construction works.	Diversions and alternative routes will be provided prior to construction works commencing on or adjacent to PRoW, cycle routes and permissive footpaths, to minimise safety risk and impacts on pedestrians, cyclists, and equestrians.
Human receptors. Horses Dogs	Construction works.	Access on PRoW, permissive footpaths and publicly accessible land including the beach will be maintained during construction, with any required closures/diversions for construction purposes kept to a minimum. Any diversions will connect to the existing PRoW, footway and permissive footpath network.
Human receptors.	Construction works.	Information boards and interpretation boards will be erected at the beginning and end of each temporary diversion and at intervals along the route. The information boards will provide relevant information and be updated throughout construction.
Human receptors.	Construction works.	When diversions are in place, the contractors will ensure that the following measures are implemented: • Advance notice of any PRoW, cycle route, permissive footpath or highway closures and/or diversions will be communicated to the local community in accordance with **section 4** of **Part A** of this CoCP (Doc Ref. 8.11(A)). • PRoW (including diversions) will be maintained for pedestrians, equestrians and cyclists, including reasonable adjustments to maintain or achieve inclusive access. • Inclusive access (including for people with reduced mobility) will be maintained to community facilities where temporarily disrupted during construction. If additional measures or reasonable adjustments are identified through the community liaison process, to ensure accessibility by persons with a disability or reduced mobility, routes and/or diversions will be reviewed. • Where the usual means of access must be diverted or blocked off, alternative safe routes for persons with reduced mobility will be identified, considering existing hazards and obstructions such as pavement kerbs.

7.2 Additional Mitigation, Monitoring and Management

7.2.1 The site team will monitor PRoW, cycle routes, footways, permissive footpaths, open access land and the beach, including temporary diversions, to ensure that mitigation measures are effective.

8 Historic Environment (Terrestrial and Marine)

8.1 Introduction

8.1.1 Control measures that will be put in place to mitigate potential impacts from construction on the historic environment at the main development site are set out in **Tables 8.1** and **8.2**.

8.1.2 Mitigation has been identified with reference to the following professional standards:

- The Chartered Institute for Archaeologists (CIfA) 2014 Standard and Guidance for Archaeological Excavation (Ref. 1.20);
- CIfA 2014 Guidelines for the Collection, Documentation, Conservation and Research of Archaeological Materials (Ref. 1.21);
- CIfA 2014 Code of Conduct (Ref. 1.22);
- Historic England 2016 Understanding Historic Buildings: A Guide to Good Recording Practice (Ref. 1.23); and
- Standards for Field Archaeology in the East of England (Ref. 1.24).

8.1.3 No tertiary mitigation measures specific to the historic environment have been identified. Additional mitigation measures are set out below.

8.2 Additional Mitigation, Monitoring and Management

a) Terrestrial

8.2.1 Measures to mitigate potential terrestrial historic environment impacts on the main development site are set out in **Table 8.1** below. These relate to buried archaeological remains on the temporary construction area and LEEIE; peats of archaeological interest under the main platform area and non-designated buildings of heritage interest associated with Sizewell B Relocated Facilities.

8.2.2 These measures will be secured by requirement which will include the obligation for an archaeological contractor to undertake the archaeological fieldwork (as distinct from the post-excavation) element of the mitigation ahead of construction commencing on the specific areas of the temporary construction area and LEEIE which require archaeological clearance.

8.2.3 Due to the depth of the peats of archaeological interest on the main platform area, archaeological works will need to take place at the same time as the deep excavation works with appropriate spatial separation of archaeology and construction works.

Table 8.1: Additional mitigation measures forterrestrial historic environment impacts

Receptor	Activity	Mitigation or Control Measure
Buried archaeological remains.	Intrusive ground works.	Works to be undertaken in accordance with the Overarching Archaeological Written Scheme of Investigation (WSI), secured by a requirement included in Schedule 2 of the **Draft Order** (Doc Ref. 3.1(A)). This requires that individual site-specific WSIs will be prepared to set out requirements for further investigation of areas that could not be surveyed pre-consent, to allow for the agreement of finalised mitigation proposals.
Peats of archaeological interest beneath the main platform.	Intrusive ground works and deep excavations.	The **Peat Strategy,** as provided in **Appendix 16G** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-275]**,** setting out appropriate investigative techniques to allow loss of archaeological interest in the peats on the main platform area to be mitigated. A WSI setting out specific details of the methodology to be adopted will be agreed with SCCAS and Historic England once the earthworks contractor is appointed. This is secured by a requirement included in Schedule 2 of the **Draft Order** (Doc Ref. 3.1(A)).
Built heritage.	Demolition	Descriptive and photographic record of Sizewell B buildings that are to be demolished and which are considered to be of historic interest. To be undertaken ahead of demolition to Historic England Level 2 standard.

b) Marine

8.2.4 Measures to mitigate potential marine historic environment impacts on the main development site are set out in **Table 8.2** below. These relate to deposits of geoarchaeological and palaeoenvironmental interest below the sea-bed and known (wrecks) and potential unknown archaeological material on or below the sea bed.

8.2.5 These measures are secured in the deemed marine licence, Schedule 20 of the **Draft Order** (Doc Ref. 3.1(A)).

Table 8.2: Additional mitigation measures for marine historic environment impacts

Receptor	Activity	Mitigation or Control Measure
Known wreck sites.	Construction works/dredging	Areas of construction activity and dredging are not proposed within proximity to known wreck sites.

Receptor	Activity	Mitigation or Control Measure
Previously unrecorded archaeological material.	Construction works/dredging	Toolbox talks will be provided to construction teams, with a reporting protocol implemented for any discoveries of archaeological material. Recording of material recovered during any necessary seabed clearance following unexploded ordnance (UXO) surveys to be undertaken in accordance with a WSI to be agreed with Historic England, if required.
Deposits of palaeoenviron-mental and geoarchaeolo-gical interest.	Construction works/dredging	Pre-development geoarchaeological works have been undertaken to investigate the main stratigraphic units to be encountered during site construction. Mitigation will be through the analysis of these sediment records.

c) Monitoring

8.2.6 Monitoring of the agreed programme of archaeological investigation (terrestrial) would be carried out by SCCAS during the implementation of the scheme, the details of which would be set out within the WSIs. The Regional Science Advisor for Historic England may also be requested to support the monitoring of terrestrial works, particularly on the peat, by SCCAS. This is secured by the conditions proposed for the deemed marine licence, Schedule 20 of the **Draft Order** (Doc Ref. 3.1(A)). Monitoring (if required) of marine historic environment mitigation and historic building recording would be undertaken by Historic England.

9 Soils and Agriculture

9.1 Introduction

9.1.1 Control measures that will be put in place to mitigate potential impacts on soils and agriculture at the main development site have been identified with reference to guidance documents as follows:

- Defra, Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Ref. 1.25);
- Good Practice Guide for Handling Soils (Ministry of Agriculture, Fisheries and Food (MAFF), 2000) (Ref. 1.26); and
- British Standard Specification for Topsoil and Requirements for Use (BS3882) (Ref. 1.7).

9.1.2 The mitigation measures, as set out in **Table 9.1,** are based on industry standard guidance and are appropriate to the proposed activities and potential effects/level of impact identified. These measures are considered to be established good practice on any large construction site.

9.1.3 The mitigation measures have been taken into consideration as part of a risk assessment undertaken to assess the effects of the likely activities associated with the construction of the proposed development.

9.1.4 An **Outline Soil Management Plan** (**SMP**) provided in **Appendix 17C** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-278] has also been developed which will set out information on handling methods and measures which would be implemented during construction and operation.

Table 9.1: Control measures to mitigate soils and agriculture impacts

Receptor	Activity	Mitigation or Control Measure
Agricultural land adjacent to the site boundary.	Earthworks	Provide suitable and effective stock control fencing.
		Ensure restrictions in relation to access to adjacent land are minimised.
Soils	Earthworks	The sustainable re-use of the soil resource would be undertaken in line with the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites and the MAFF Good Practice Guide for Handling Soils (Ref. 1.26).
		Where feasible and practical, the contractors will ensure soils are stripped and handled in the driest condition possible.
		Ensure protection of stockpiles from erosion and tracking over.
		Confining vehicle movements to defined haul routes until stripping is complete.
		Development of a Soil Resources Plan by the contractor, which would include detail on existing soil information, proposed storage locations and management measures.
		Ensuring topsoil and subsoil resources are stripped and stockpiled separately.
		Ensuring the physical condition of the replaced soil profile to at least 1.2m below ground level is sufficient for the post-construction use.
Best and most versatile (BMV) agricultural land.	Earthworks	Ensure appropriate re-use of soils with restoration to agricultural land, where set out on the **outline Landscape and Ecology Management Plan** (Doc Ref. 8.2) [APP-588] of a comparable grade to that prior to stripping. All monitoring and auditing to be undertaken in line with the **Outline SMP** specifications provided in **Appendix 17C** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-278].
		Create and maintain a register of land condition (soils, topography, drainage, boundary treatments etc.) to ensure the land can be restored to baseline where land take is required on a temporary basis.
Agricultural operations.	Earthworks	Toolbox talks will be used to inform all those working on the site of the requirements for soil handling and minimisation of disturbance to agricultural activities.
		All fencing around the proposed development would be sufficient to resist damage by livestock and will be regularly checked and maintained in a suitable condition. Any damage to boundary fencing would be repaired immediately

Receptor	Activity	Mitigation or Control Measure
		Measures contained in relevant Defra and Environment Agency best practice guidance on the control and removal of invasive weed species will be implemented where appropriate.
		Should animal bones be discovered which indicate a potential burial site, works will be paused in the affected area, and the Animal Health Regional Office will be advised and informed of the proposed mitigation measures. Works could restart once the relevant mitigation measures have been put in place.
		All movement of plant and vehicles between affected fields will cease in the event of a notifiable disease outbreak. Advice and guidance from Defra will be followed to minimise the biosecurity risk associated with the continuation of works.
		Industry standard measures would be put in place to control pollution, including from fuel or chemical stores, silt-laden run-off or dust
Watercourses	Earthworks	All soils will be stored away from watercourses (or potential pathways to watercourses) and any potentially contaminated soil be stored on an impermeable surface and covered to reduce leachate generation and potential migration to surface waters.
Landscape and ecological receptors. Human Receptors (visual impact).	Topsoil stripping and storage.	The sustainable re-use of the soil resource would be undertaken in line with the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites and the MAFF Good Practice Guide for Soil Handling, as detailed above. The Soil Resource Plans, aligned to the **Outline SMP** specifications provided in **Appendix 17C** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-278], will detail the measures to be used to source, test, strip, handle, store and spread site-won soil materials. Any imported topsoil required will comply with the BS 3882: 2015. The height of stockpiles will be controlled to minimise visual impact, where identified as a significant factor in the landscape and visual impact assessment.

10 Geology and Land Quality

10.1 Introduction

10.1.1 Control measures that will be put in place to mitigate potential impacts on geology, soils and land contamination at the main development site have been identified with reference to guidance documents as follows:

- Contaminated Land Report (CLR) 11[1] Guiding Principles for Land Contamination (GPLC) (Ref. 1.27);
- The Definition of Waste: Development Industry Code of Practice (DoWCoP) (Ref. 1.28);
- The Design Manual for Roads and Bridges (DMRB) (2008) Volume 11, Section 2, Part 5 Assessment and Management of Environmental Effects (Ref. 1.29);
- DMRB (1993) Volume 11, Section 3, Part 11 Geology and Soils (Ref. 1.30);
- Construction Industry Research and Information Association (CIRIA) C552 (2001) Contaminated Land Risk Assessment – A Guide to Good Practice (Ref. 1.31);
- National House-Building Council & Environment Agency (2008) Guidance on the Safe Development of Housing on Land Affected by Contamination (R&D66) (Ref. 1.32);
- CIRIA C665 (2007) Assessing Risks Posed by Hazardous Ground Gases to Buildings (Ref. 1.33);
- British Standards (2015) BS 8485 – Code of practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings (Ref. 1.34);

[1] It is noted that CLR11 is due to be withdrawn 2020 and replaced by updated online guidance: Environment Agency Land contamination: Risk Management (LCRM).

- CIRIA C681 (2009) Unexploded Ordnance – A Guide for the Construction Industry (Ref. 1.35);
- CIRIA C733 (2014) Asbestos in Soil and Made Ground: A Guide to Understanding and Managing Risks (Ref. 1.36);
- CIRIA C682 (2009) The Volatile Organic Contaminants Handbook (Ref. 1.37);
- British Standards (2015) BS 5930 – Code of practice for Ground Investigations (Ref. 1.38);
- British Standards (2017) BS 10175:2011+A2:2017 – Code of Practice for Investigation of Potentially Contaminated Sites (Ref. 1.39); and
- Environment Agency's Pollution Prevention guidance and Guidance for Pollution Prevention (Ref. 1.1).

10.1.2 The mitigation measures, as set out in **Table 10.1**, are based on industry standard guidance and are appropriate to the proposed activities and potential effects/level of impact identified. These measures are considered to be established good practice on any large construction site.

10.1.3 The mitigation measures have been taken into consideration as part of a risk assessment undertaken to assess the effects of the likely activities associated with the construction of the proposed development. With the incorporation of these mitigation measures, likely impacts are considered to be low and significant effects are not anticipated.

Table 10.1: Control measures to mitigate impacts on geology, soils and land contamination

Receptor	Activity	Mitigation or Control Measure
Human receptors. Controlled Water receptors (surface water and groundwater). Ecological receptors. Soils	Earthworks Topsoil stripping. Construction works.	The contractors will develop and implement health and safety risk assessments, method statements and ensure workers employ appropriate personal protective equipment (PPE), housekeeping and good hygiene practices.
		Implementation of a contamination watching brief by suitably qualified and experienced personnel would be completed for the proposed development when excavating areas of potential contamination risk. If unidentified contamination is encountered, works will be temporarily suspended in the area and appropriate investigations and remediation will be discussed and agreed with stakeholders and completed in accordance with current best practice;
		Implementation of appropriate dust suppression measures to reduce migration of contaminated dust in accordance with **section 4**.
		Minimise the area and duration of soil exposure and timely reinstatement of vegetation or hardstanding to reduce soil exposure/erosion and reduce temporary effects on soil compaction, in accordance with **section 9**.
		Stockpile management (such as water spraying and avoiding over stockpiling to reduce compaction of soil and loss of integrity) to reduce windblown dust and surface water run-off, in accordance with **sections 4** and **9**.
		Clear segregation between stockpiled material including imported material, excavated material stockpiled for re-use and excavated waste material stockpiled for treatment and/or off-site disposal, in accordance with **section 15.**
		Topsoil to be removed and appropriately stored for potential re-use in landscaping areas, subject to demonstrating suitability for reuse criteria. No topsoil to be buried within the earthworks to mitigate against potential gas generation.
		Covering/hydroseeding of the landscape bunds and temporary stockpiles to reduce soil erosion and dust generation, in accordance with **sections 4** and **9**.
		Stockpiles would be located a minimum of 10m from the nearest watercourse.
		Implementation of working methods during construction to ensure that surface water run-off from the stockpiles, landscape bunds or working areas into adjacent surface watercourses or leaching into underlying groundwater in accordance with best practice.
		Provision of a settlement and infiltration lagoon for each borrow pit during excavation to capture surface water run-off will be installed in accordance with any details approved pursuant to the surface and foul water drainage requirement, as set out in Schedule 2 of the

Receptor	Activity	Mitigation or Control Measure
		Draft Order (Doc Ref. 3.1).
		Piling risk assessment in accordance with Environment Agency guidance may be required to ensure that piling techniques deemed appropriate are implemented at the site by identifying and managing potential risks as a result of creating pathways to the aquifer.
		Implementation of appropriate pollution incident control e.g. plant drip trays and spill kits.
		Implementation of appropriate and safe storage of fuel, oils, chemicals and equipment during construction in accordance with Control of Substances Hazardous to Human Health Regulations and Oil Storage Regulations, in accordance with **section 2**.
		The wheels of all vehicles would be free of contamination before arriving at site. All vehicles would be inspected prior to leaving site and should contaminative substances be identified suitable measures (e.g. wheel washing) would be implemented.
		Implementation of an appropriate materials management strategy with associated materials management plans to document how the excavated materials would be dealt with and a verification plan to record the placement of materials at the site. Further details are provided in the Materials Management Strategy at **Materials Management Strategy** at **Appendix 2.2.C of Chapter 2 of the ES Addendum** (Doc Ref. 6.14).
		Implementation of a site waste management plan in accordance with the **Conventional Waste Management Strategy** provided in **Appendix 8A** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-194].
		Implementation of a temporary drainage system to manage drainage during earthworks in accordance with the **Outline Drainage Strategy** provided in **Volume 2, Appendix 2A** of the **ES** (Doc Ref. 6.3) [APP-181].
		Materials potentially impacted with asbestos fibres to be excavated and segregated for additional testing and either placing on site or disposal off site.
		Short term acute exposure risks to construction workers would be assessed as part of the development of the construction phase health and safety plan and managed through standard good practice health and safety procedures.

10.2 Additional Mitigation, Monitoring and Management

10.2.1 In addition to the control measures outlined in **Table 10.1**, the following mitigation will be undertaken prior to construction works:

- Additional assessment of the moderate WWII UXO bomb risk identified across the site and in areas not previously covered by the 2010 report would be undertaken in the form of a detailed UXO desk study and risk assessment. Where required, mitigation measures would then be implemented as appropriate.
- Additional ground investigation will be undertaken to inform the final design of the proposed development and to confirm the ground conditions and contamination status of the site.
- Remediation of soil and groundwater contamination will be undertaken prior to construction (e.g. source removal, treatment or capping) if deemed necessary.
- Gas protection measures will be incorporated within proposed structures, if monitoring and risk assessments deem them to be necessary.

11 Groundwater and Surface Water

11.1 Introduction

11.1.1 Control measures that will be put in place to mitigate potential impacts on groundwater and surface water receptors at the main development site have been identified with reference to guidance documents as follows:

- The Groundwater Protection Position Statements Guidance (Ref. 1.40), which provides an update to the Environment Agency's Principles and Practice (GP3) that was withdrawn in 2017. The position statement summarises the legislation relevant to the management and protection of groundwater and details the Environment Agency's approach to groundwater protection. The statements are not statutory requirements but may be included or referenced by statutory guidance and illustrate the Environment Agency's approach to a particular activity. A number of the position statements may be of relevance to the proposed development and should be viewed in order to aid the identification of necessary constraints to protect groundwater.

- Control of Water Pollution from Construction Sites: A Guide to Good Practice, CIRIA (2001) (Ref.1.42).

- Environment Agency's Pollution Prevention Guidelines: Working on Construction Sites (Ref. 1.1).

- The Design Manual for Roads and Bridges (DMRB) (2008) Volume 11, Section 2, Part 5 Assessment and Management of Environmental Effects (Ref 1.29).

- DMRB (2009) Volume 11, Section 3, Environmental Assessment Techniques (Ref.1.43).

11.1.2 The mitigation measures, as set out in **Table 11.1**, are based on industry standard guidance and are appropriate to the proposed activities and potential effects/level of impact identified. These measures are considered to be established good practice on any large construction site.

11.1.3 Additional reference should be made to the **Outline Drainage Strategy** provided in **Volume 2 Appendix 2A** of the **ES** (Doc Ref. 6.3) [APP-181] and the proposed Flood Risk Emergency Plans.

Table 11.1: Control measures to mitigate groundwater and surface water impacts

Receptor	Activity	Mitigation or Control Measure
Peat Formation. Crag Formation.	Removal of material on embankment of main construction area.	Plan and design piling activities in compliance with Environment Agency guidance. This guidance may highlight the need for a piling risk assessment.
Controlled waters receptors (groundwater and surface water). Ecological receptors.	Earthworks Construction works	Implementation of a contamination watching brief by suitably qualified and experienced personnel would be completed for the proposed development when excavating areas of potential contamination risk.
		Engineered drainage to be installed in the area of the borrow pits to manage surface run-off and protect groundwater.
		Ditches, swales and bunds to be constructed where required to prevent untreated surface water run-off from leaving the site. Oil/petrol interceptors to be incorporated into the drainage design. Construction phase drainage system implemented, incorporating SuDS measures such as open ditches and swales to promote infiltration to ground in accordance with the **Outline Drainage Strategy** provided in **Volume 2 Appendix 2A** of the **ES** (Doc Ref. 6.3) [APP-181].
		Water management zones have been embedded into the design as an integral part of the surface water management system. The water management zones to collect surface water run-off, sediment and contaminants. The water management zones to incorporate an underground piped network, infiltration trenches, storage tanks and ponds. These systems to be designed to discharge treated water to the surface water drainage network and to ground at greenfield run-off rates (water management zones 1 to 6 and 10) or to sea at a rate that can exceed greenfield run-off rates (water management zones 7 and 8).
		The construction phase temporary drainage to remain operational until the land is restored in accordance with the **outline Landscape and Ecology Management Plan** (**oLEMP**) (Doc Ref. 8.2) [APP-588] or until permanent site drainage and associated outfalls are commissioned. Where appropriate,

Receptor	Activity	Mitigation or Control Measure
		temporary drainage to be incorporated into the permanent drainage.
		All foul water generated during construction from the main and temporary construction areas to be pumped to construction sewage treatment plants and the treated water would then enter the site drainage systems before being discharged to sea such that there will not be a risk to groundwater or surface water receptors. Temporary arrangements will be required until the construction sewage treatment plant is operational. The provision of foul sewage treatment is included in the design of the LEEIE, with a packaged treatment plant being preferred for the Mobile Site Welfare Units that are proposed to serve the caravan pitches.
		A watching brief will be implemented during the works to identify the presence of any unforeseen contamination.
		The location of all existing observation boreholes within the areas to be excavated will be recorded by GPS. The boreholes will be backfilled and capped to remove potential pathways to underlying strata.
		Concrete and cement mixing and washing areas would be situated at least 10m away from surface water receptors. These would incorporate settlement, pH correction, and recirculation systems to allow water to be re-used. All washing out of equipment would be undertaken in a contained area, and all water would be collected for off-site disposal.
		The drainage/flood prevention strategies will consider the ground conditions of the site, including the permeability of the strata and the level of on-site contamination.
		Implementation of an appropriate materials management strategy with associated materials management plans to document how the excavated materials would be dealt with and a verification plan to record the placement of materials at the site. Further details are provided in the **Materials Management Strategy** at **Appendix 2.2.C of Chapter 2 of the ES Addendum** (Doc Ref.

Receptor	Activity	Mitigation or Control Measure
		6.14).
		Implementation of a site waste management plan in accordance with the **Conventional Waste Management Strategy** provided in **Appendix 8A** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-194].
		All temporary stockpiles would be managed to prevent soil erosion, windblown dust and surface water run-off by hydroseeding, water spraying and avoiding over stockpiling to reduce compaction of soil and loss of integrity, as discussed in **section 4**.
		Plan and design piling activities in compliance with Environment Agency guidance. This guidance may highlight the need for a piling risk assessment.
		Implementation of working methods to ensure there would be no surface water run-off from the works, or any stockpiles, into adjacent surface watercourses/leaching into underlying groundwater in accordance with best practice. Stockpiles would be located a minimum of 10m from the nearest watercourse.
		Implementation of appropriate pollution incident control e.g. plant drip trays and spill kits. Spill kits would be available on-site at all times. Sand bags or stop logs would also be available for deployment on the outlets from the site drainage system in case of emergency spillages (refer to **section 2**).
		Implementation of appropriate and safe storage of fuel, oils and equipment during works. For example, all fuels, oils, lubricants and other chemicals would be stored in an impermeable bund with at least 110% of the stored capacity. All refuelling would take place in a dedicated impermeable area, using a bunded bowser. Biodegradable oils would be used where possible. (refer to **section 2**).
		The wheels of all vehicles would be free of contamination before arriving at site. All vehicles would be inspected prior to leaving site and should contaminative

Receptor	Activity	Mitigation or Control Measure
		substances be identified suitable measures (e.g. wheel washing) would be implemented. (refer to **section 4**).
Surface watercourses.	Pre-construction and construction works within 50m of a watercourse or within flood zones 2 or 3.	A risk assessment for all works will be carried out for any use of cementitious materials within 50m of any active watercourse or within flood zones 2 or 3.
		Concrete and cement mixing and washing areas would be situated at least 10m away from surface water receptors. These would incorporate settlement, and recirculation systems (batching plants), to allow water to be re-used. All washing out of equipment would be undertaken in a contained area, and all water would be collected for on-site treatment and disposal via the Construction Discharge Outfall.
Surface water.	Pre-construction and construction works within watercourse or catchment area	Measures taken to prevent the deposition of silt or other material arising from work operations in existing watercourse or catchment areas will accord with principles set out in industry guidelines, including Pollution Prevention Guidance notes.
Surface watercourses.	Construction works	Measures will be taken with regard to any works within a watercourse to restrict the release of suspended sediment and solids into the water column, as far as practicable.

11.2 Additional Mitigation, Monitoring and Management

11.2.1 In addition to the mitigation measures outlined in **Table 11.1** for construction activities, the following mitigation in **Table 11.2** would be undertaken prior to construction works:

Table 11.2: Secondary mitigation measures

Receptor	Activity	Mitigation or Control Measure
Construction workforce.	Construction works	A Flood Risk Emergency Plan will be developed in compliance with Environment Agency guidance to ensure that in the event of flooding occurring on-site, appropriate plans are in place to manage the risks and ensure that there is no increased risk to human health and that risks to property are managed appropriately. The plan would, as a minimum, include details of the requirements for monitoring regulatory flood warning alerts, identification of safe meeting areas, access and egress routes, activities required to secure plant and equipment in the event of a flood being forecast, checking of drainage systems, roles and responsibilities and checking procedures.
Superficial Aquifers (Lowestoft sand and gravel formation). Bedrock Aquifers (Crag Formation). Peat Formation. Sizewell Marshes SSSI. Minsmere-Walberswick Heaths and Marshes SSSI Groundwater Abstractions. Surface Waters (groundwater fed).	Dewatering of main construction area.	Groundwater Monitoring and Response Strategy will be prepared pursuant to a requirement set out in Schedule 2 of the **Draft Order** (Doc Ref. 3.1(A)) to assess the impact of the dewatering on surrounding sensitive receptors and the effectiveness of the cut-off wall and mitigation measures.
Superficial Aquifers (Lowestoft Sand & Gravel Formation). Peat Formation. Sizewell Marshes SSSI. Minsmere-Walberswick Heaths and Marshes SSSI. Sizewell Drain and associated drainage	Realignment of the Sizewell Drain	Development of the specific position, nature and operational parameters of the proposed control structures, and potentially the revised operation of other existing structures.

Receptor	Activity	Mitigation or Control Measure
network.		
Controlled waters receptors (groundwater and surface water). Ecological receptors.	Construction works	Additional Ground Investigation (GI) would be undertaken for the proposed development to inform detailed design and confirm ground conditions, contamination status and other ground related risks in areas of the site where limited existing information is available. This would be completed prior to construction works. Where the GI identifies contamination and ground related risks, further detailed quantitative risk assessment and remediation of soil and groundwater contamination prior to construction may be required.
Controlled waters receptors (groundwater and surface water). Ecological receptors.	Construction works	The additional GI would also include testing of marine sediments within the offshore area to provide additional information for materials re-use/disposal.

11.2.2 In addition, the following monitoring and management would be undertaken in support of construction works:

- A programme of short-term gas and groundwater monitoring would be designed as part of the additional GI for the site and would be required prior to construction works commencing. The results of this would determine the need for further long-term gas monitoring.
- Active management and maintenance of the drainage infrastructure would be required to ensure the continued efficacy of the surface water drainage system.
- Reassurance monitoring would be carried out for groundwater and surface water in line with the Monitoring and Response Strategy.

12 Marine Environment (Coastal geomorphology and hydrodynamics, Marine water quality and sediments, and Marine Ecology and Fisheries)

12.1 Introduction

12.1.1 The control measures relating to the marine environment within this CoCP have been drawn from the impact assessments of impacts on coastal geomorphology and hydrodynamics, marine water quality and sediments and marine ecology and fisheries.

12.1.2 **Table 12.1** below sets out control measures that will be put in place to mitigate potential impacts on the marine environment.

12.1.3 A Marine Licence will be deemed within the DCO consent which will secure the necessary mechanism for protection of the marine environment associated with licenced activities. The Marine Licence will provide consent for all construction works below the Mean High Water Spring tidal mark and, where necessary, have Conditions to control those works or mitigate any potential impacts, In particular, controlling mechanisms by means of proposed Conditions on the Marine Licence include, but are not restricted to:

- regular (3 yearly) sampling of sediments to ensure that dredging and deposition of sediment do not release unacceptable concentrations of contaminants from within the sediments;
- use of materials, that might interact with the marine environment or affect marine water quality, restricted to those approved by the MMO;
- production of marine environmental management plans and detailed Construction Method Statements to demonstrate that construction in the marine area will sufficiently mitigate any risks and not adversely affect the environment;
- the need to issue Notices to Mariners for all marine works such that local sea users are aware of the works, thus minimising the risk of accidents; and
- procedures for reporting spills, dropped objects and volume of material dredged and deposited.

Table 12.1: Control measures to mitigate potential impacts

Receptor	Activity	Mitigation or Control Measure
Marine Receptors.	Pollution prevention.	Standard pollution prevention control measures would be implemented to avoid any pollution risk to watercourses and sensitive habitats. Control measures specific to the site include: • The heavy plant used for construction on the foreshore will be fitted with new hydraulic hoses before work commences, and hoses checked during daily checks, to minimise the risk of a hydraulic hose failure on the foreshore. No plant to be left on the foreshore when not in use. • Refuelling will take place in a dedicated impermeable area away from the foreshore. • Biodegradable oils will be used where possible. • Spill kits will be available on-site at all times and staff will be trained in their use. • Concrete and cement mixing and washing areas will be situated at least 10 m away from the nearest watercourse or the foreshore (other than on board vessels such as jack-up barges). All washing out of equipment will be undertaken in a contained area. Site drainage water will be treated with oil separators and a silt-buster (or similar technology) to reduce hydrocarbons and sediments entering water courses.
	Chemical use.	For chemical use associated with the marine environment chemicals used would be selected from those listed for use by the offshore oil and gas industry under the Offshore Chemicals Regulations 2002, or gone through a similar level of ecotoxicological hazard/risk assessment. Chemicals for use with Tunnel Boring Machine would be selected for the optimum combination of technical performance and lowest hazard properties.
	Chemical use.	Wastewater on the tunnel floor would be discharged via the combined drainage outfall (CDO). Discharges would be treated with oil separators and a silt-buster or similar technology to minimise hydrocarbon and sediment inputs.

Receptor	Activity	Mitigation or Control Measure
	Chemical and oil spills.	The potential for chemical and oil spills from construction and delivery vessels would be managed through compliance with International Maritime Organisation (IMO) regulations. Sufficient spill kits for hydrocarbons and any construction chemicals would be supplied. All spills to be reported to the MMO as stated on deemed marine licence.
	Beach access.	Access to the beach will be required for construction of the BLF and may require a pathway across the existing 5m bund or lowering the bund by c. 0.5m for insertion of a deck section. As this has a coastal defence function, disturbance of the bund will be minimised – a single point of access will be established and the bund protected by a suitable temporary surface. The height and seaward extent of the dune will be preserved as far possible, and should be higher than the lowest section on the Minsmere Outfall to SZC frontage, so that a similar or better level of protection would be provided on the SZC site and therefore flooding impacts via SZC would be less likely
	Bund height.	Avoid altering the 5m bund wherever possible
	Plant movement.	Heavy plant movements on the active beach face will be minimised to avoid compaction of the beach sediments, which would increase the risk of damage to the upper beach in storms by reducing sediment mobility and beach porosity. A defined traffic corridor will be established to allow all necessary works to be completed with the minimum disturbance of the beach surface and all plant will remain within this defined corridor.
	Plant movement.	Profiling the soft coastal defence feature (SCDF) to the mean high water spring (MHWS) will require plant movement on the beach face. The duration of these works and the seaward extent of plant movements should be minimised and the beach regraded on completion to remove compression tracks.
	Construction of the SCDF.	SCDF to be made of suitable beach grade materials, to be agreed and stated in the Coastal Processes Monitoring and Mitigation Plan (CPMMP)report, secured by a condition attached to the deemed marine licence. The material would be toward the coarse end of the particle-size spectrum and of a suitable chemistry for vegetation, as specified in **Chapter 14**, **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-224] SCDF to be planted suitably as soon as possible after constructed. This could be done in stages if the SCDF is to be built in stages over a long period. Subject to assessment and confirmation at the time, material won from excavation for the hard coastal defence feature should be used for construction of the SCDF.

Receptor	Activity	Mitigation or Control Measure
	Jack-up barges.	Use of jack-up barges to be minimised by use of Cantitravel construction technique for the two Beach Landing Facilities, whereby piling proceeds form landward along the platform of the BLFs as they are constructed. Anchoring and positioning of jack-up barges should be carried out with attention to the location of the longshore bars, to minimise as far as possible the placement of legs or anchors into these features and hence avoid disruption of these sediment transport pathways. Repositioning of spud legs should be avoided if possible, unless it is to minimise the period of any unavoidable disruption of the bars. Similarly, anchoring and positioning of jack-up barges should be carried out with attention to sensitive features such as exposed Coralline Crag deposits where *Sabellaria* reef exists, to minimise as far as possible the placement of legs or anchors into these features. Repositioning of spud legs should be avoided if possible to avoid the potential for impacts on sensitive habitats as identified in Toolbox talks.
	Dredging	Plough or water injection dredging methods to be used for construction and use of the enhanced Beach Landing Facility including berthing bed and access routes. Dredging works for the emplacement of heads at the fish recovery and return, CDO and cooling water intakes and outfalls should be limited to as small an area as practicably achievable and within the worst-case assessment of the **ES**. Dredging of the navigation access channel for the BLF should be limited to the depths and spatial footprint required to achieve the tolerance of the vessels and within the maximum footprint assessed in the **ES**. Dredging will be by plough dredge only. Frequency of maintenance dredging should be minimised by monitoring the rate of infill and defining a minimum seabed level required to trigger maintenance dredging.
	Ballast management.	Invasive non-native species (INNS) can be introduced in ballast water of construction and delivery vessels if not treated effectively. The potential for INNS to be introduced during ballast water activities will be managed by compliance with the IMO Ballast Water Management Convention.
	Vessel movements.	Vessel movements will be under the control of the Harbour Master and navigational safety will receive top priority. However, it is recommended that construction and delivery vessels conform to a recommended site

Receptor	Activity	Mitigation or Control Measure
		speed restriction of <10 knots to minimise disturbance and, whilst highly unlikely, the potential for collisions with marine mammals.
	Piling and UXO detonation.	Impacts of noise from piling will be minimised by compliance with the **Marine Mammal Mitigation Protocol** provided in **Volume 2, Appendix 22N** of the **ES** (Doc Ref. 6.3) [APP-331], which has been prepared in accordance with Joint Nature Conservation Committee (2010) guidelines, to minimising the risk of injury to marine mammals from piling noise. Where feasible, pilling should be avoided during periods of high water to reduce the potential for underwater noise propagation. Impact piling will be avoided where possible and soft-start procedures will be used. Where feasible a hydrohammer (which has hydraulic plungers filled with water designed to dampen the impact and reduce the source noise) will be used for piling during construction of the marine elements of the two Beach Landing Facilities to minimise underwater noise propagation. Piling in the marine environment for construction of the two Beach Landing Facilities will only occur outside of the period 01 May to 31 August to avoid impacts on breeding birds. Should unexploded ordnance be found and require detonation this would be assessed and relevant mitigation measures appended to the Marine Mammal Mitigation Protocol for implementation.

12.2 Additional Mitigation, Monitoring and Management

12.2.1 The Marine Management Organisation would be consulted in relation to those dredging options and disposal routes, subject to licencing requirements. Dredging and disposal activities would undergo the necessary monitoring defined within the licence to ensure sediment samples are acceptable for disposal at sea, as discussed in the Dredge Disposal Site Characterisation Report appended at **Volume 2, Appendix 22K** (Doc Ref. 6.3) [APP-328].

13 Waste Management and Resource Use

13.1 Introduction

13.1.1 **Table 13.1** sets out control measures that will be put in place to reduce effects from material resource and waste management during the construction of the main development site. These measures have been developed in line with the following guidance documents:

- Site Waste Management Plans – Guidance for Construction Contractors and Clients Voluntary Code of Practice (2004) (Doc Ref. 1.39);
- Construction Code of Practice for Sustainable Use of Soils on Construction Sites (2009) (Doc Ref. 1.27); and
- CL:AIRE Definition of Waste: Development Industry Code of Practice (2011) (Doc Ref. 1.26).

Table 13.1: Control measures to mitigate potential impacts

Receptor	Activity	Mitigation or Control Measure
Quarries/finite sources of virgin materials.	Material resource use.	• A Materials Management Plan would be developed by the Contractor under the CL:AIRE Definition of Waste Code of Practice (DoWCoP) in accordance with **Materials Management Strategy** at **Appendix 2.2.C of Chapter 2 of the ES Addendum** (Doc Ref. 6.14). • A Soil Resources Plan as part of an **Outline Soil Management Plan** provided in **Appendix 17C** of **Volume 2** (Doc Ref. 6.3) [APP-278] would be developed by the Contractor, as described in Section 8 of this document. • Materials would be delivered to site on an 'as required' basis to avoid damage or contamination and therefore limit the likelihood of waste. • Where site-won material is not available or suitable for re-use, secondary or recycled materials would be procured where available and practicable. • The design of the temporary roads would incorporate geogrid or lime stabilisation methods to reduce the amount of granular fill required. • All suitable excavated material would be re-used in the construction of the development and in landscaping features to reduce the requirement to import materials for construction and reduce the need to remove surplus materials from site. • Temporary stockpiling of fill materials prior to incorporation in the development would be avoided where possible, to ensure double handling and damage is minimised. However, where required, materials would be stockpiled in accordance with best practice and managed appropriately to limit the likelihood of damage or contamination. • Locally sourced materials and suppliers would be identified and used where practicable. • Pre-cast elements would be used where practicable to ensure efficient use of materials and avoid the generation of waste arisings from cut-offs.
Waste management infrastructure.	Waste generation and management.	• The Contractor would manage waste in line with measures and key performance indicators set out within the **Waste Management Strategy** as provided in **Volume 2, Appendix 8A** of the **ES** (Doc Ref. 6.3) [APP-194]. A summary of these is provided below.

Receptor	Activity	Mitigation or Control Measure
		• The Contractor would produce a Site Waste Management Plan (SWMP), which would consider the sourcing, transport and use and disposal of waste and material resources, in a sustainable manner. It would also take account of, and capture, design changes as the design of the development evolves and would ensure that unavoidable construction waste is identified and managed in accordance with the waste hierarchy and other relevant legislative requirements. The SWMP would be used to derive the management options that would achieve the highest practicable performance levels within the hierarchy. • Facilities would be provided on-site to separate out waste, for example for recycling. • The waste hierarchy would be applied to minimise disposal of waste and maximise reuse and recycling. Opportunities for re-use and recycling of waste include (but are not limited to): – re-using excavated soils on-site in the landscaping features of the development; – chipping green waste on-site for use in the landscaping for the development; – composting of green waste; – recycling of inert material by crushing, blending and subsequent re-use, as an aggregate; – re-using waste and materials on other nearby schemes – for example, re-using waste for uses with clear benefits to the environment, for example in the remodelling of agricultural land or in the restoration of nearby quarries or other excavation sites; and – where waste must be taken to recycling/disposal facilities, these facilities would have the appropriate permits to ensure environmental risks are minimised. The recycling/disposal facilities should be located as close to the works as possible to minimise transport, thereby reducing greenhouse gas emissions resulting from transportation. The Contractor will identify the closest and relevant treatment and disposal sites.

13.2 Addition Mitigation, Monitoring and Management

13.2.1 A materials tracking system would be developed to track and record the movement and placement of excavated materials within the proposed development. Audits of the Materials Management Plan and tracking system would be undertaken during construction of the proposed development, including audits of tracking data.

13.2.2 The Contractor would be responsible for monitoring the implementation of the SWMP. Audits of the SWMP and relevant monitoring records would be undertaken throughout the construction period.

14 Greenhouse Gas Emissions

14.1.1 In accordance with the sustainability principle to 'design and construct for a low carbon future', SZC Co. and its contractors will seek to control and manage greenhouse gas emissions during construction, where possible.

14.1.2 The contractors will be required to specify measures to reduce greenhouse gases from construction activities, such as:

- Training to understand energy use and opportunities for reducing carbon emissions.
- Promoting low carbon transport of people, material and equipment.
- Minimising energy consumption (including fuels), through efficient working methods, using and specifying low energy equipment, and using smart technologies.
- Maximising local sourcing of materials and local waste management facilities.
- Using low embodied carbon in materials and incorporating material resource efficiency and waste minimisation best practice into design.
- Monitoring and reporting on embodied and emitted greenhouse gas, including achieved reductions as a result of adopting low carbon and sustainable solutions and alternatives.

References

1.1 Environment Agency Pollution Prevention Guide 2.

1.2 British Standards Institution (2014) *BS 5228-1:2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites. Noise'.*

1.3 British Standards Institution (2015) *BS 5228-2:2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites. Vibration'.*

1.4 IAQM (2016) Guidance on the Assessment of Mineral Dust Impacts for Planning. Institute of Air Quality Management, London.

1.5 Defra (2012) Process Guidance Notes (PGN3/01, PGN3/16).

1.6 European Commission (2006). *Integrate Pollution Prevention and Control: Emissions from Storage.*

1.7 British Standards Institution (2007). *BS 3882:2007 'Specification for topsoil and requirements for use'.*

1.8 British Standards Institution (1992). *BS 3936-1:1992 'Nursery stock - Specification for trees and shrubs'.*

1.9 British Standards Institution (2010). *BS 3998:2010 'Tree work. Recommendations'.*

1.10 British Standards Institution (1989). *BS 4428:1989 'Code of practice for general landscape operations (excluding hard surfaces)'*.

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1.12 British Standards Institution (2009). *BS 6031:2009 'Code of Practice for Earthworks'.*

1.13 Department for Environment, Food & Rural Affairs (2017). *'The UK Forestry Standard'.*

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1.15 UK Woodland Assurance Standard (2018).

1.16 Wildlife and Countryside Act (1981). *Available at: http://www.legislation.gov.uk/ukpga/1981/69.*

1.17 Wild Mammals (Protection) Act (1996).

1.18 The Protection of Badgers Act (1992). *Available at: http://www.legislation.gov.uk/ukpga/1992/51.*

1.19 Conservation of Habitats and Species Regulations 2017. *Available at: http://www.legislation.gov.uk/uksi/2017/1012/contents/made.*

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1.23 Historic England (2016) *Understanding Historic Buildings.*

1.24 David Gurney, 2003. *'Standards for Field Archaeology in the East of England', East Anglian Archaeology Occasional Papers 14.*

1.25 Department for Environment, Food & Rural Affairs (2018). *Construction Code of Practice for the sustainable use of soils on construction sites.*

1.26 Ministry of Agriculture, Fisheries and Food (2000). *Good Practice Guide for Handling Soils.*

1.27 Contaminated Land Report (CLR) 11[2] Guiding Principles for Land Contamination (GPLC).

1.28 The Definition of Waste: Development Industry Code of Practice (DoWCoP).

1.29 The Design Manual for Roads and Bridges (DMRB) (2008) *Volume 11, Section 2, Part 5 Assessment and Management of Environmental Effects.*

1.30 Design Manual for Roads and Bridges (1993) *Volume 11, Section 3, Part 11 Geology and Soils.*

[2] It is noted that CLR11 is due to be withdrawn in December 2019 and replaced by updated online guidance: Environment agency (June 2019) Land contamination: Risk Management (LCRM).

1.31 Construction Industry Research and Information Association (2001) *C552 Contaminated Land Risk Assessment – A Guide to Good Practice.*

1.32 National House-Building Council & Environment Agency (2008) *Guidance on the Safe Development of Housing on Land Affected by Contamination.*

1.33 Construction Industry Research and Information Association (2007) *C665 – Assessing Risks Posed by Hazardous Ground Gases to Buildings.*

1.34 British Standards Institution (2015). *BS 8485:2015 + A1:2019 - Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings.*

1.35 Construction Industry Research and Information Association (2009) *C681 – Unexploded Ordnance – A Guide for the Construction Industry.*

1.36 Construction Industry Research and Information Association (2014) *CIRIA, C733 - Asbestos in Soil and Made Ground: A Guide to Understanding and Managing Risks.*

1.37 Construction Industry Research and Information Association (2009) *CIRIA C682 (2009) The Volatile Organic Contaminants Handbook.*

1.38 British Standards Institution (2015) *BS 5930 – Code of practice for ground investigations.*

1.39 British Standards Institution (2017) *BS 10175:2011+A2:2017 – Code of Practice for Investigation of Potentially Contaminated Sites.*

1.40 The Groundwater Protection Position Statements Guidance.

1.41 Site Waste Management Plans – Guidance for Construction Contractors and Clients Voluntary Code of Practice (2004).

1.42 Control of Water Pollution from Construction Sites: A Guide to Good Practice, CIRIA (2001)

1.43 DMRB (2009) Volume 11, Section 3, Environmental Assessment Techniques.

CODE OF CONSTRUCTION PRACTICE PART C: OFFSITE ASSOCIATED DEVELOPMENTS

Contents

Tables

Plates

None provided.

Figures

None provided.

Executive Summary

This **Code of Construction Practice** (**CoCP**) forms part of the application for a Development Consent Order (DCO) for the Sizewell C Project.

The aim of the **CoCP** is to provide a clear and consistent approach to the control of Sizewell C construction activities on the main development site and the associated development sites, to minimise impacts on people and the environment.

Part C: **Off-site Associated Developments** of this **CoCP** sets out how construction activities will be managed and controlled at the offsite associated developments in order to deliver many of the mitigation commitments arising from the construction stages of the Sizewell C Project. The **CoCP Part A**: **Project Wide Controls** sets out project wide measures and the **CoCP Part B**: **Main Development Site** then sets out those measures relevant to the main development site.

1. Code of Construction Practice Part C: Off-site Associated Developments

1.1 General requirements

a) Introduction

1.1.1 As the Sizewell C Project covers a number of sites, **Part A**: **Project Wide Controls** of this CoCP includes the overarching construction management measures for the Sizewell C Project. This part sets out the controls and measures that relate to the associated development sites.

1.1.2 The principal works associated with these sites and this part of the CoCP are as follows:

- two temporary park and ride facilities; one to the north-west of Sizewell C at Darsham (the 'northern park and ride'), and one to the south-west at Wickham Market (the 'southern park and ride');
- permanent road improvements on the A12 to bypass Stratford St Andrew and Farnham (referred to as the 'two village bypass');
- a permanent road linking the A12 to the Sizewell C main development site (referred to as the 'Sizewell link road');
- permanent highway improvements at Yoxford roundabout and other road junctions;
- a temporary freight management facility at Seven Hills on land to the south-east of the A12/A14 junction; and
- a temporary extension of the existing Saxmundham to Leiston branch line into the main development site ('the green rail route') and other permanent rail improvements on the Saxmundham to Leiston branch line.

1.1.3 Where the requirements of construction practice are covered adequately by the **Part A** of this CoCP, those controls are not repeated in this part (**Part C**). Therefore, where no site-specific controls are specified here, reference should be made to the **Part A**. The specific measures in this part will prevail over any general measures set out in the **Part A**.

b) General Site Arrangements

1.1.4 The contractor will ensure that the site layout and appearance is designed according to the following principles:

- All work areas will be fully secured with appropriate hoardings or fences.
- Storage sites, temporary offices, fixed plant, machinery and equipment will be located to minimise environmental impacts, having due regard to neighbouring residential properties and the constraints of each site.
- Noise generating activities will be sited away from noise sensitive receptors, where practicable, or screened so as to avoid exceedances of the noise threshold levels.
- Internal vehicle routes will be arranged to minimise the risk of carrying mud out of the site.
- The site layout will also consider and minimise potential impacts from restricting natural light to adjacent residential properties or ecological receptors.
- Site lighting will be positioned and directed to minimise intrusion into occupied residential properties and ecologically sensitive areas.
- Security cameras will be positioned and directed to avoid intruding into occupied residential or commercial properties.
- Site plant and facilities will be powered from mains electrical sources, where reasonably practicable.
- Plant and equipment will be of good working order.

1.1.5 The contractor will display an information board at appropriate locations on the boundaries of the sites containing contact names, telephone numbers, addresses, and the helpline number. Refer to the **Part A** of this CoCP for further details. This will be in accordance with the employer's specification.

c) Working Hours

1.1.6 Construction activities would take place Monday to Saturday and between the hours of 07:00 to 19:00 hours for all associated development sites. Where possible, noisy works will be avoided on Saturday afternoons between 13:00 and 19:00 hours. Working on Sundays or bank holidays is not expected and will not be undertaken without prior notification to East Suffolk Council (ESC). Some activities may require 24 hour working and where this is the case, ESC will be notified in advance, including details of any noise control measures that may be necessary.

1.2 Other Relevant Environmental Management Strategies and Plans

1.2.1 In addition to this part of the CoCP, and the plans detailed in **Part A**, further strategies and plans are required to mitigate and manage specific environmental impacts at the associated development sites during construction. Overarching strategies and plans include:

- **Outline Drainage Strategy,** provided in **Volume 2, Appendix 2A** of the **ES** (Doc Ref. 6.3) [APP-181];
- the Overarching Written Scheme of Investigation for Archaeological Mitigation, **Appendix 16H, Volume 2** of the **Environmental Statement (ES)** (Doc Ref. 6.3) [APP-275];
- **Outline Landscape and Ecology Management Plan** (Doc Ref. 8.2) [APP-588].
- **Two Village Bypass Outline Landscape and Ecology Management Plan** (Doc Ref. 8.3A); and
- **Sizewell Link Road Outline Landscape and Ecology Management Plan** (Doc Ref. 8.3B).

1.2.2 The securing mechanisms for each strategy is set out within the **Mitigation Route Map** (Doc Ref. 8.12) [APP-616] and the **Mitigation Route Map Addendum** (8.12Ad). Other topic specific strategies and plans are detailed in **sections 2** to **13**, as required.

2. Environmental Incident Controls

2.1 Control Measures to Reduce the Likelihood of Environmental Incidents

2.1.1 In order to minimise the potential for environmental incidents from construction activities at the Sizewell C associated development sites, a series of preventive (i.e. risk reduction) measures will be adopted.

2.1.2 The contractors and site personnel must be familiar with the potential environmental impacts and risks posed by the construction work. Although many of these are set out in this CoCP, the contractors will ensure that they have a clear understanding of those risks that are relevant to their contract before they commence work.

2.1.3 Contractors will therefore need to carry out their own risk assessment and devise method statements and incident response plans to ensure that suitable and sufficient controls are in place to avoid pollution and harm to human health or environmental receptors at all times either on or off-site. These would take into account applicable legislation, the environment and planning requirements, and best practice and guidance (for example, the Environment Agency's Pollution Prevention Guidance notes and other good construction practice, including that published by CIRIA[1]).

2.1.4 All drainage proposals and contractor method statements must be in accordance with the design elements in the Environment Agency's Pollution Prevention Guidance notes and other good construction practice, including that published by CIRIA[2].

a) Good Construction Practice

2.1.5 Good construction practice measures include:

- as far as feasible, minimising the storage of potentially polluting materials and substances (such as soil, fuel and chemicals), and locating storage areas:
  - as far away as possible from high risk locations;
  - as far away as possible from where there is a risk of damage by collision (e.g. from site traffic);

[1]

[2] Environment Agency's Pollution Prevention Guidelines have been withdrawn, but still constitute relevant advice on good practice. Where stated, they should be referred to in the absence of alternative guidance documents.

- not within 50m of a spring, well or borehole;
- not within 10m of a watercourse, ditch, drainage channel or flood plain;
- not where polluting materials or substances could enter an open drain or soak into unmade ground where it could pollute groundwater;
- not where a spill could run over hard ground to enter a watercourse or soak into unmade ground where it could pollute groundwater;
- not on roofs (materials can enter guttering, itself a pathway to the surface or groundwater environment);
- the creation of temporary drainage networks (e.g. temporary connection into combined sewer infrastructure) during interim periods during the construction of the permanent drainage system;
- use of silt traps used to capture suspended solids;
- use of appropriately designed, built and maintained oil storage and refuelling facilities; and
- use of oil/water separators.

b) Storage, Handling and Disposal of Waste

2.1.6 Waste is to be segregated and stored in appropriate, covered containers which will be clearly marked as to their contents. The containers are to be located away from drains and water courses.

c) Spill Kits

2.1.7 Spill kits will be provided on-site and smaller kits will also accompany mobile plant, equipment and oil containers when taken to remote areas of the site.

2.1.8 Contractors must ensure that responsible personnel are suitably trained in the use of spillage response equipment and materials. If any equipment requires special training to use it, ensure the contact details of staff members who are trained in its use are identified on the equipment.

d) Watching Briefs

2.1.9 Contractors will ensure that the following watching briefs are maintained:

- Contamination: watching brief for contamination is maintained by trained personnel during the construction works to deal with potential additional 'chance finds' of contamination. In the event that 'chance finds' of additional contamination are discovered, the measures outlined in **Table 10.1** will be implemented. Excavation of areas of higher contamination risk will be completed by suitably qualified and experienced personnel, to ensure that mitigation measures are effective, and that residual impacts will not be significant.
- Ecology: Maintain a watching brief for the presence of ecological receptors and habitat.

e) Site security:

2.1.10 Access to the construction sites would be controlled by SZC Co. to avoid trespass and vandalism which may result in pollution. All valves on storage tanks will be locked when not in use to avoid tampering by vandals. Wherever possible storage of materials will be out of sight and in locked containers.

2.2 Environmental Incident Response Plan

2.2.1 An overview of environmental incident control is provided in **Part A** of this CoCP**.** Contractors will maintain an up-to-date record of all substances stored on-site, together with an indication of the maximum quantity likely to be stored. Any relevant Material Safety Data Sheets (MSDSs) and approved COSHH assessments will also be held for any substances posing a risk to people and/or the environment (including waste materials).

2.2.2 Contractors will produce an Environmental Incident Response Plan that is specific to their work showing all stores, bulk storage vessels, drums or containers intended for storing oils, chemicals or other potentially polluting materials. This will be a clear plan of the site showing layout and access details, along with a schematic representation of the site drainage arrangements. Essential features that the plan will contain include:

- the layout of buildings and portacabins;
- access routes and meeting points for emergency services;
- the location of any on-site treatment facilities for trade effluent or domestic sewage;

- details of the potential environmental incidents, impacts and risks that the construction works pose and the control measures to mitigate those risks;
- areas or facilities used to store raw materials, products and wastes (include details of tank sizes and products stored);
- bunded areas, with details of products stored and estimated retention capacity;
- location of hydrants, 'fireboxes' and pollution prevention equipment and materials;
- any watercourse, spring or borehole, well located within or near the site;
- areas of porous or unmade ground;
- site drainage – foul, surface and trade effluent drainage systems including features such as:
  - inspection points to detect pollution;
  - oil separators/interceptors;
  - firewater/spillage containment systems;
  - balancing tanks;
  - pollution control devices (shut-off valves/penstocks fitted in drains);
  - sacrificial containment areas such as car parks; and
  - other areas suitable for portable storage tanks, for blocking drains and temporary.
- storage of water for firefighting; and
- a brief description of how all the contractor's facilities operate and how the storage vessels will be labelled for easy identification.

2.2.3 Contractors must keep a record of the equipment and materials on-site to deal with pollution incidents, including:

- absorbents;
- drain mats/covers;

- pipe blockers;
- booms;
- pumps; and
- over drums.

2.2.4 Contractors must ensure that all those involved in emergency response are familiar with, and have access to:

- the site plan;
- information on materials, their health, safety and pollution risks;
- appropriate spill response equipment; and
- training in incident response procedures.

a) Environmental Incident Response

2.2.5 In the event of an environmental incident, leak or spillage being discovered; contractors must:

- ASSESS risks to personnel.
- STOP the pollution at its source wherever possible. Spillages will not be washed into the ground or drains.
- Use spill kits to CONTAIN the spillage and prevent it from entering surface or groundwater.
- NOTIFY relevant parties. When notifying the relevant person, contractors must state clearly:
  - name;
  - company;
  - site;
  - description of the incident and its location;
  - date and time;
  - any injuries or harm to human health as a result of the incident; and

- any immediate actions taken to mitigate the causes of the incident.

- CLASSIFY the significance of the incident in accordance with SZC Co.'s categorisation procedures.
- CLEAN-UP/REMEDIATE the incident using appropriate spill kit and other equipment and personal protective clothing as necessary. If necessary, this can include the use of a specialist spillage response contractor. Remedial actions to control and mitigate the incident will be put in place. These will include actions to reduce the impact, damage, harm and risk.
- DISPOSE of contaminated absorbents and/or contaminated soils/waters as hazardous waste in accordance with waste management procedures.
- INVESTIGATE AND REPORT the nature, scale and extent of the incident, together with emergency response actions taken and recommended corrective actions to prevent recurrence. Any consequent learning's following the incident will be managed in accordance with SZC Co.'s continuous improvement procedures.

b) Environmental Incident Reporting and Investigation

2.2.6 In the event of an incident of an environmental nature, contractors must immediately notify SZC Co. in accordance with defined SZC Co. procedures for managing non-conformances.

2.2.7 For environmental incidents, the contractors will complete an Environmental Incident Investigation Report (EIIR) and provide this within 24 hours of the incident taking place.

2.2.8 In the event that a substance has entered a drain, soaked into the ground, or been released to the atmosphere or ground in breach of permit conditions; or an unexpected discovery made of protected species, habitats or a site of archaeological importance, work in that location will cease as soon as it is safe to do so. SZC Co. will consult with the relevant stakeholders on the appropriate course of action, including advice on further remediation and the need and responsibility for notifying the following regulatory bodies:

- The Environment Agency: in the event of a pollution incident impacting upon water, land or air.
- Natural England: in the event of the identification and disturbance to a suspected protected species of animal, plant or habitat.

- Suffolk County Council Archaeological Service: in the event of the discovery of unexpected archaeological remains.
- The Local Authority (East Suffolk Council): in the event of a significant uncontrolled release of pollution to air, ground and/or water and which have impacted upon third party receptors.

2.2.9 The Environment Agency will be notified of a significant pollution incident as soon as possible to allow assessment and remediation measures to be taken. The notifications would be made in the first instance to the Environment Agency incident hotline (0800 80 70 60).

2.2.10 Emergency services will also be notified as appropriate to the nature and scale of the environmental incident.

c) Environmental Incident Response Training

2.2.11 All site personnel must be provided with appropriate induction and ongoing training on the environmental impact of the work they are carrying out, including the necessary procedures for preventing and responding to, a potential environmental incident.

2.2.12 Where appropriate to the contract, staff will be trained in environmental incident planning and response, including:

- briefings on the procedures and incident plans that are in place at the site;
- participation in emergency drills;
- participation in post-incident investigations;
- training in the use of pollution incident response equipment; and
- 'Tool Box' talks.

2.2.13 Evidence of such training will be available for inspection in the form of completed drill test plans, training records of staff and completed post-incident investigation reports.

2.3 Environmental Incident Drills and Auditing

a) Environmental Incident Response Drills

2.3.1 Within three months of the contractors submitting and SZC Co. approving the contractors' Environmental Incident Response Plan, a live trial of the plan will be undertaken. The purpose of the trial is to ensure that the plan is

appropriate for the works being undertaken and that the site staff are prepared to deal with an environmental incident.

2.3.2 To ensure adequate and on-going preparedness and response to potential environmental incidents on-site, contractors will ensure that they carry out regular tests of their Environmental Incident Response Plan.

2.3.3 Incident response drills will be carried out at least every 4 to 8 weeks so as to ensure that all those responsible for works that have the potential to cause environmental incidents are fully familiar with the incident response procedures.

2.3.4 Emergency incident test drills will be recorded as if they were incidents in their own right and will be accompanied by a post environmental incident investigation report, citing any relevant lessons learned and corrective actions from the exercise.

b) Auditing and Reporting

2.3.5 Compliance with the requirements of this CoCP and statutory legislation will be monitored through routine inspections and audits.

- Periodic checks: The environmental incident prevention arrangements will be inspected periodically to identify and address deterioration or inadequacies in the arrangements;
- Monthly reporting: Performance in implementing drills and the occurrence of real incidents will be reported monthly to the SZC Co. project management team, together with the lessons learned for incident prevention and control; and
- Periodic audit: On a periodic basis, SZC Co. will undertake an internal audit to monitor compliance.

3. Noise and Vibration

3.1 Control Measures

3.1.1 Best Practicable Means (as defined by section 72 of the Control of Pollution Act 1974 (Ref 1.1) will be applied to minimise construction noise and vibration on any neighbouring sensitive receptors.

3.1.2 The following hierarchy of methods of noise management and noise control will be applied to all activities and operations:

- selection of plant, equipment and working methods to minimise noise and vibration emissions;
- management of hours of working or 'on' time for noisy operations;
- attenuation of noise and vibration at source; and
- attenuation of noise and vibration during transmission from source to receiver.

3.1.3 In addition to the controls set out in this CoCP, a **Noise Monitoring and Management Plan** will be developed to provide a framework for monitoring and managing noise on a site-by-site basis. The **Noise Monitoring and Management Plan** will be agreed with the relevant local planning authorities.

3.1.4 **Table 3.1** sets out best practice control measures that will be put in place, where appropriate, to mitigate potential impacts from noise and vibration at each site.

Table 3.1: Control measures to mitigate noise and vibration impacts.

Receptor	Activity	Mitigation or Control Measure
Noise Mitigation Scheme		
Human receptors	All	Prior to the commencement of the works, the provisions of the Noise Mitigation Scheme will be discharged (see **Appendix 11H, Volume 2 Chapter 11 (Noise and Vibration)** of the **Environmental Statement (Doc Ref. 6.3)** [APP-210]. This will result in the identification of the receptors most impacted by construction works, and the periods when that impact is likely to occur. Where appropriate the noise insulation provisions will be implemented and in cases of high noise levels, arrangements agreed for temporary rehousing. It may be appropriate to revisit the Noise Mitigation Scheme should the works alter from those assessed prior to the commencement of the works.
Site Area		
Human receptors	All	All construction activities will be undertaken within the site boundaries; including areas designated as stockpiles and haul routes.
Compliance		
Human receptors	All	Prior to construction works, the detailed design, working methods and mitigation proposals will be developed and approved by SZC Co. and its contractors to minimise adverse effects at off-site receptors, as far as can reasonably be achieved.
		Where required, alternative working methods or hours will be considered and developed in response to the needs of specific receptors, as identified in the relevant chapters in the **ES**.
		SZC Co. will implement a programme of noise and vibration monitoring around the site at a number of strategically important locations, where appropriate, agreeing the locations with the local planning authority. The monitoring results will be made available to the local planning authority and public in a timely manner, using a method to be determined, but likely to include a web-based data portal.
		SZC Co. will have a system for the receipt and recording of any noise or vibration complaints from occupiers of noise sensitive receptors, and procedures for investigating and acting appropriately as necessary upon those complaints. Refer to the **Part A** of this CoCP (Doc Ref. 8.11(A)) for further details.

Receptor	Activity	Mitigation or Control Measure
Erection of Physical Barriers		
Human receptors	All	Solid barriers or landscaping, or a combination of the two, will be installed as early as is practicable in the construction process and retained in the long term to maximise potential acoustic screening. All such structures will be maintained over the course of the project to maintain effective acoustic performance. This is in accordance with the **Construction Parameters Plan**, secured by a requirement set out in Schedule 2 of the **Draft Order** (Doc Ref. 3.1(A)).
Good Construction Practice		
Human receptors	All	All construction contractors will be required to follow standard good construction practice as outlined in BS 5228-1: 2009+A1: 2014 (Ref. 1.4) and BS 5228-2: 2009+A1: 2014 (Ref. 1.5). This includes, but is not limited to, the measures set out below. Plant, equipment and systems of work, will be selected or designed to achieve the lowest noise and/or vibration emission levels from the site wherever practical. The following measures will be adopted, where it is practicable to do so: ● Adoption of construction methods and plant that are not inherently noisy. ● Semi-static equipment or other continuous noisy plant will be sited as far as possible from sensitive receptors and fitted with suitable enclosures. ● Noisy activities will be conducted during less sensitive periods or staggered. ● Battery-powered generators will be used in preference to diesel-powered generators, where a fixed power supply is not available. ● Low noise generators and compressors will be used. ● Effective exhaust silencing and plant muffling equipment will be fitted and maintained in good working order.

Receptor	Activity	Mitigation or Control Measure
		• Mobile construction plant will be located away from adjacent occupied buildings or as close as possible to noise barriers or site hoardings to provide additional screening from sensitive noise receptors. • Plant will not be operated with covers open or removed. • All plant and equipment will be properly maintained • Engines will be switched off when not in use. • All equipment will be used in the mode of operation which minimises noise emissions. • Plant will be started up sequentially, rather than simultaneously. • Static plant known to generate significant levels of vibration will be fitted with vibration dampening.
	Haulage	Only designated haul routes will be used on-site.
		Haul roads will be well maintained to minimise noise generated from vehicles travelling over uneven surfaces and pot holes.
		Haul roads will avoid steep gradients where practicable, to reduce HGV engine noise emissions.
	Reversing	Where health and safety obligations can be achieved and where it is possible to do so, mobile construction plant will be fitted with low noise or broadband reversing alarms to minimise potenmtial for annoyance to sensitive receptors.
	Materials Handling	Loading/unloading activities will be located away from sensitive receptors and shielded, where practicable.
		Materials will be handled in a manner that minimises noise. This will include restricting drop heights during lorry loading to the minimum required for safe and efficient operations.

Receptor	Activity	Mitigation or Control Measure
Night-Time Working		
Human receptors	All	Where night time work is required, it wil be carried out in a manner that minimises noise and vibration at all times. Where night time work is required close to receptors, prior warning will be given.
Externally Positioned Amplified Sound		
Human receptors	All	No amplified sound will be generated at any time within the site or at any time during any phase of works for the development. This constraint will not apply in the event of emergencies or emergency drills to the extent necessary to deal with an emergency or drill, or other health and safety requirements. This constraint will also not apply to the amplified noise generated by construction plant as a reversing alarm.
Training		
Human receptors	All	Training and instruction will be provided to site personnel on methods and techniques of working to minimise off-site noise and vibration impacts.
		On-site 'Toolbox' training will be provided to enable site workers to understand how their actions will interact with the environment and potentially impact upon sensitive receptors near to their work areas.

3.2 Construction Noise Thresholds

3.2.1 The noise thresholds for construction activities undertaken at the Associated Developments sites will vary according to local noise conditions, as described in Section E.3.2 in Annex E of BS 5228-1: 2009+A1: 2014.

3.2.2 The appropriate noise thresholds for each Associated Development site will be set out in the **Noise Monitoring and Management Plan** for that site.

3.2.3 The construction nose thresholds will apply at all residential receptors. Receptors that are more sensitive to noise and/or vibration, as identified in the relevant chapter of the **Environment Statement**, may have alternative thresholds and these will also be set out in the **Noise Monitoring and Management Plan**.

3.2.4 The contractor will be obliged to use best endeavours and best practicable means to adhere to these thresholds at all times.

3.2.5 **Table 3.1** sets out best practice control measures that will be put in place, where appropriate, to mitigate potential impacts from noise and vibration at each site.

3.3 Additional Mitigation, Monitoring and Management

a) Acoustic Screening

3.3.1 Temporary screens will be installed as necessary by SZC Co. and its contractors to provide screening attenuation and protect sensitive receptors from noisy construction methods and plant during construction.

b) Management and Monitoring

3.3.2 The contractors will use working methods and implement the mitigation measures outlined in **Table 3.1** to minimise noise and vibration emissions from the works.

3.3.3 A **Noise Monitoring and Management Plan** will be developed for the associated development sites and implemented, setting out:

- The locations of noise and/or vibration monitoring to be used during the course of construction, including sites where continuous monitoring will be undertaken.
- Arrangements for reporting noise and vibration monitoring results.

- Any further management measures that are considered necessary and appropriate, developed on a site-by-site basis.

3.3.4 The approach to communication, community and stakeholder engagement is set out within **Part A** of this CoCP and includes the approach to the notification of local communities of potentially noisy or disruptive works, along with a complaint handling process.

c) Monitoring

3.3.5 SZC Co. will implement a programme of noise monitoring around the site at a number of strategically important locations, where appropriate, agreeing the locations with the local planning authority as part of a **Noise Monitoring and Management Plan**. The programme of noise and/or monitoring will be developed and implemented, as outlined below:

- Continuous, unattended monitoring at a number of strategically important locations, which may include occupied residential receptors.

- Attended or short-term monitoring to provide a check on specific activities or at specific locations, where, for instance, significant impacts are likely to occur or in response to complaints or queries.

i. Monitoring Equipment

3.3.6 All sound level meters and acoustic field calibrators will comply with Type 1 / Class 1 specifications, as set out in the relevant standards. Effective windshields will be used throughout noise measurements to minimise turbulence at the microphone.

3.3.7 Meteorological data will be gathered during any noise measurements. Hand-held anemometers will be acceptable to periodically gather wind speed data for attended measurements. Where unattended measurements are undertaken, either a remote meteorological station will be used, or a suitable third party source of local meteorological data identified.

3.3.8 All sound level meters will have been laboratory-calibrated to a traceable standard within a two year period prior to the end of the measurements. All field calibrators will have been similarly calibrated within a one year period prior to the completion of the measurements.

3.3.9 All vibration monitoring will have been laboratory-calibrated to a traceable standard within a two year period prior to the end of the measurements.

3.3.10 Calibration certificates for all noise and vibration monitoring equipment will be appended to the results of any surveys.

3.3.11 On-site field calibration checks of the sound level meters used for unattended measurements will be undertaken periodically, as a minimum every three months. All field calibration checks will be reported, and any drifts stated.

3.3.12 The on-site field calibration checks of the sound level meters used for attended measurements will be undertaken immediately prior to the start of any measurement or series of measurements and after their completion, using acoustic calibrators. Where appropriate, intermediate field calibration checks will be carried out. All field calibration checks will be reported, and any drifts stated.

3.3.13 Should the field calibration of a meter drift by more than 1dB for an unattended measurement over several days or more, or by more than 0.5dB for an attended measurement, the data gathered will be reported but not used in any subsequent assessment.

ii. Continuous, unattended noise monitoring

3.3.14 The locations for unattended noise monitoring will be agreed between SZC Co. and the relevant landowner.

3.3.15 Reports of readings, in summary form or otherwise, will be provided to local authorities and other stakeholders at regular intervals in accordance with **Part A** of this CoCP and arrangements within an approved **Noise Monitoring and Management Plan.**

iii. Attended or short-term noise and vibration monitoring

3.3.16 The locations for unattended noise monitoring will be agreed between SZC Co. and the relevant landowner, where access to private land is required.

3.3.17 Attended or short-term unattended monitoring will take place where required, for example:

- in response to a complaint or a query raised by the local planning authority;
- where a particular activity requires measurement
- where a secure location cannot be identified for longer-term monitoring.

3.3.18 Where a request is made for monitoring by the local planning authority, or where the monitoring is in response to a complaint, all reasonable endeavours will be made to undertake the measurements in a timely fashion, subject to suitable weather in which to undertake such measurements.

3.3.19 Reports containing results of attended measurements will be made available in accordance with **Part A** of this CoCP and arrangements within an approved **Noise Monitoring and Management Plan.**

d) Advance notice of works

3.3.20 Advance notice of works will be provided to local residents as outlined in detail in **Part A** of this CoCP, which sets out the approach to communication, community and stakeholder engagement. This includes:

- providing regular project updates and a 'look ahead' of forthcoming activities works; and
- providing notification to local communities of potentially noisy or disruptive works with a focus on periods when levels are expected to be above or close to a significant level.

4. Air Quality

4.1 Introduction

4.1.1 Control measures that will be put in place to mitigate potential impacts on air quality at the offsite associated developments have been identified with reference to guidance documents as follows:

- Institute of Air Quality Management (IAQM) (2016) Guidance on the assessment of dust from demolition and construction (Ref. 1.4);
- Defra (2012) Process Guidance Notes PGN3/01 (Ref.1.5) and PGN3/16 (Ref. 1.6); and
- European BREF (2006) Emissions from Storage (Ref. 1.7).

4.1.2 The proposed measures are principally based on the IAQM (2016) guidance published recommended packages of mitigation measures which represent appropriate measures to be applied to a given combination of activity and level of potential risk. These measures all have a long history of successful implementation in the UK and most are established good practice measures on any large construction site.

4.1.3 The measures identified within **Table 4.1** will be implemented and monitored through the contractors Construction Environmental Management Plan (CEMP), which will include the relevant dust management measures for that stage of construction.

Table 4.1: Control measures to mitigate air quality impacts

Receptor	Activity	Mitigation or Control Measure
General Measures		
Human receptors Ecological receptors	Site Management	The community and stakeholder liaison will be undertaken in accordance with **section 3** of **Part A** of this CoCP, unless otherwise agreed.
		A stakeholder communications plan will be implemented prior to commencement of works, including contact details for person(s) accountable for air quality and dust issues, and relevant details displayed at the site boundary.
		Adequate water supply will be made available for dust/particulate matter suppression and house-keeping.
		High risk dust generation activities will be minimised or avoided where practicable during prolonged dry or windy conditions.
		Run-off of mud and water from construction sites will be managed in accordance with **section 11** (groundwater and surface water) of this CoCP.
		Bonfires and burning of waste materials will be prohibited.
Human receptors Ecological receptors	Site layout	Site access will be located as far as practicable from sensitive receptors.
		The site layouts will be planned so that significant dust generating activities, including concrete batching plant and mobile crushing and screening plant, will be located as far as possible from the site boundary and sensitive receptors.
		Earth bunds with grassing / seeding, and early planting will be used to screen sensitive boundaries where possible.
		Screens or barriers will be used to provide wind reduction for plant with significant dust raising potential.
		Stockpiled materials with potential to produce dust will be reused as soon as possible, or covered, seeded or fenced to prevent wind whipping.
Human receptors Ecological receptors	Demolition	Demolition methods will be selected to minimise dust, and equipment generally fitted with automatic water suppression.
		Cutting and grinding activities will be controlled or suppressed to minimise dust generation.
		Use of modular (pre-fabricated) buildings, as far as practicable, for temporary accommodation and site facilities during construction phase to minimise dust raising during the final removal and reinstatement phase.

Receptor	Activity	Mitigation or Control Measure
		Buildings will be soft stripped inside prior to demolition
Human receptors Ecological receptors	Earthworks	Surface stripping will be planned accordingly to minimise the potential for dust generation upwind of sensitive receptors.
		Damping down will be used prior to commencement of extraction works, with surface binding agents as required, to suppress and minimise dust generation.
		Long-term stockpiles will be seeded or fenced to minimise wind-blown dust.
		Drop heights will be restricted from loaders, hoppers, conveyors and other handling equipment to the minimum required for safe and efficient operations, to minimise dust emissions.
		Stockpile worked areas will be minimised to avoid unnecessary disturbance.
Human receptors Ecological receptors	Construction	Use of modular (pre-fabricated) buildings as far as practicable for site facilities during construction phase to minimise dust raising from the use of concrete.
		Scabbling (roughening of concrete surfaces) will be avoided where possible.
		Sand and aggregates will be stored in three-sided bays damped down as necessary, or enclosed storage, to avoid wind-blown dust.
		Bulk powders such as cement will be delivered in enclosed tankers and stored in silos with industry standard emission control systems.
	Construction	Use of water-suppression and use of industry best practice when handling ballast and aggregate, such as not dropping the material from a greater height than necessary during unloading will minimise the amount of dust generated by these operations
Human receptors Ecological receptors	Trackout	Use of hard-standing areas and hard-surfaced roadways as far as practicable to reduce vehicles movements on unmade ground, and minimise the trackout of mud and dust raising from vehicle movements.
		Wheel washing facilities will be installed at strategic points within the sites to minimise tracked out materials from high risk to lower risk areas.
		Wheel washing facilities will be maintained for the duration of works, specifically those which involve creating dust or material output.
		All vehicles exiting the sites will pass through a wheel wash facility and any vehicle carrying loose aggregate, cement or soil will be checked to ensure sheeting is in place.

Receptor	Activity	Mitigation or Control Measure
		All vehicles exporting dusty spoil and other materials off site will be dampened down and subsequently completely sheeted, including the sides, prior to transport.
		Regular water-assisted road sweeping of the site access road and local roads will be carried out as necessary to remove residual tracked out materials.
Human receptors Ecological receptors	Vehicles & machinery	Contractors will seek to ensure that all road vehicles will comply with the requirements of Euro VI emission standards where possible and Euro V standards (98/69/EC) as a minimum, unless otherwise agreed with the local authority.
		There will be a maximum speed-limit of 15mph for on-site surfaced roads and 10mph on on-site unsurfaced haul roads and work areas
		Non-Road Mobile Machinery (NRMM) engines should achieve Stage IV emissions standards where practicable and available.
		Vehicles and machinery will not be left idling unnecessarily
		The use of mobile power plant including diesel or petrol powered mobile plant will be avoided where practicable and where necessary limited to temporary functions (less than 6 months) and non-distribution functions in accordance with Environment Agency Regulatory Guidance Note 2 and the Medium Combustion Plant Directive (2015/2193).

4.2 Monitoring

4.2.1 Monitoring of specific activities and of baseline dust levels will be undertaken to demonstrate that mitigation measures are effective and that residual impacts will be not significant.

4.2.2 **Table 4.2** sets out monitoring and inspection measures that will be put in place at the associated development sites.

Table 4.2: Monitoring measures to mitigate air quality impacts

Activity	Mitigation or Control Measure
Monitoring and Inspection	
Compliance	Regular site inspections will be carried out to demonstrate compliance with the Dust Management Plan and monitoring results and corrective actions will be recorded in a log book, to be made available to the local authority on request. Site inspections will be increased in frequency during periods of prolonged dry or windy conditions.
	All dust and air quality complaints, and corrective actions, will be recorded in a log book, to be made available to the local authority on request.
	Baseline and activity-specific dust and particulate matter (PM_{10}, $PM_{2.5}$) monitoring will be carried out according to the requirements identified within the risk assessment. The need for diffusion tube monitoring of NO_2 concentrations on key road links will be agreed with the LPAs through the CEMP and implemented accordingly.
Planning	Daily weather conditions will be reviewed prior to works to be undertaken within 50m of sensitive boundaries and within 100m of sensitive boundaries in stockpiling areas to determine the need for additional mitigation.
	Regular monitoring of on-site haul roads within 50m of sensitive boundaries during prolonged dry or windy conditions to determine the need for additional mitigation, such as use of boundary misting.
Maintenance	Regular inspection of haul routes will be made, with repairs as required, to ensure surfaces are maintained.

5. Landscape and Visual

5.1 Introduction

5.1.1 Control measures that will be put in place to mitigate potential landscape and visual impacts at the associated development sites have been identified with reference to guidance documents as follows:

- British Standards (BS) 3882:2015 Specification for topsoil and requirements for use (Ref.1.8).
- BS 3936-1:1992 Nursery stock - Specification for trees and shrubs (Ref.1.9).
- BS 3998:2010 Tree work – Recommendations (Ref.1.10).
- BS 4428:1989 Code of practice for general landscape operations (excluding hard surfaces) (Ref.1.11).
- BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations (Ref.1.12).
- BS 6031:2009 Code of Practice for Earthworks (Ref.1.13).
- UK Forestry Standard (Ref.1.14).
- UK Forestry Standard Guidelines – Forests and Water (Ref.1.15).
- UK Woodland Assurance Standard (Ref.1.16).

5.1.2 The mitigation measures as detailed in **Table 5.1** are based on industry standard guidance and are appropriate to the proposed activities, and potential effects/level of impact identified.

Table 5.1: Control measures to mitigate landscape and visual impacts

Receptor	Activity	Mitigation or Control Measure
Landscape and ecological receptors Human receptors (visual impact arising from tree loss)	Removal of vegetation	Construction works will avoid the unnecessary removal of trees and vegetation.
Landscape and ecological receptors Human receptors (visual impact arising from tree loss)	Tree protection	Trees within or adjacent to the order limits, which are to be retained, will be protected in line with the recommendations in B2 5837:2012 (Ref.12). The following measures will be implemented, as appropriate: • provision of appropriate protective fencing to reduce the risks associated with vehicles trafficking over root systems or beneath canopies; • measures to prevent compaction of soils; • maintenance of vegetation buffer strips, where practicable; • selective removal of lower branches to reduce the risk of damage by construction plant and vehicles (operations must consider the legal protection given to roosting bats and breeding birds); • standard guidance for working within root protection zones including procedures to follow in the event that significant roots are uncovered during work; and • maintenance of trees on highways which are temporarily stopped as a result of the Sizewell C works prior to re-opening (e.g. selective branch removal).
		An arboriculturalist will assess and oversee works to retained trees, as required.
Landscape and ecological receptors	Tree works	Any tree surgery operations will comply with the recommendations in BS 3998:2010 (Ref.1.10), as appropriate
		Tree felling will be carried out taking appropriate consideration of the UK Forestry Standard Guidelines – Forests and Water 2011 to mitigate risks from felling areas of woodland and trees on the freshwater environment. Where there are no wind throw or landscape visual issues, tree felling will be restricted to that necessary to allow the safe construction and operation of the proposed scheme. Any tree felling operations must consider the legal protection given to roosting bats and breeding birds.

Receptor	Activity	Mitigation or Control Measure
Landscape and ecological receptors Human receptors (visual impact)	Tree planting and replacement	The supply, storage, handling, planting and maintenance of new planting will be undertaken in accordance with appropriate British Standards, including BS 5837:2012 (Ref.12), BS 3998 (Ref.8), BS 4428:1989 (Ref.11) BS 3936-1:1992 (Ref.9); and other guidance including the UK Forestry Standard (Ref.12) and the UK Woodland Assurance Standard (Ref.16).
		The contractor will provide a programme for undertaking planting works.
		Planting and other landscape measures will be implemented as early as is reasonably practicable, and within the appropriate planting season, where there is no conflict with construction activities or other requirements of the Sizewell C Project.
		Relevant local authorities, Natural England, Historic English and other bodies (where they have an interest) and adjacent landowners will be consulted, as appropriate, regarding the landscape and planting proposals.
Landscape and ecological receptors Human receptors (visual impact)	Topsoil stripping and storage	The sourcing, testing, stripping, handling, storage and spreading of site-won and imported topsoil will comply with BS 6031: 2009 (Ref.13). Imported topsoil will comply with the BS 3882: 2015 (Ref.1.8) topsoil.
		Specific measures to include: • the separate handling and storage of different soils, particularly topsoils and subsoils; • handling soils that are in a suitably dry condition and not during wet weather to avoid long-term damage to soil structure from compaction; • the prevention of soil contamination with chemicals or other materials, or through movement of soils between landholdings • use of measures to control weeds on soil stores; and • control of heights of stockpiles to minimise visual impact where identified as a significant factor in the Landscape and Visual Impact Assessment (LVIA).
Human receptor (visual impact)	Hoarding and fencing	Design of hoardings around construction activities shall include consideration of the character of the surrounding landscape (e.g. use of open mesh fencing where possible and appropriate in rural areas. Fencing and hoarding will be kept well maintained throughout construction.

6. Terrestrial Ecology

6.1 Introduction

6.1.1 **Table 6.1** sets out control measures that will be put in place to mitigate potential terrestrial ecology impacts at the offsite associated developments.

Table 6.1: Control measures to mitigate potential impacts

Receptor	Activity	Mitigation or Control Measure
Ecological receptors	Appointment of ecologist	Appointment of an Ecological Clerk of Works, a specialist ecologist, or similarly competent person, who will be appointed by the contractor to be responsible for overseeing on-site ecological mitigation and ensuring that measures in the CoCP are implemented.
Ecological receptors	Tool box talks	Tool box talks and briefings will be required so that construction workers are fully aware of the environmental sensitivities of the various associated development sites, including both European and nationally designated sites as well as legally protected species. Tool box talks will provide a basic overview of the life history, habitat requirements, identification and legal protection granted to the legally protected species / other species of conservation concern present on site that may be encountered during the works.
Ecological receptors	Vegetation removal	All vegetation removal will be supervised by Ecological Clerk of Works and will have regard to the breeding birds and any additional measures that may be defined in a relevant protected species licence or mitigation strategy.
Reptiles and mammals	Vegetation removal	An inspection of field margins will be undertaken by the ECoW to identify any potential reptile refugia, after which the refugia will be removed. A phased vegetation clearance process will be undertaken to displace any reptiles from the site, under the supervision of a suitably experienced ecologist. Removal of vegetation and of places of shelter/hibernation features will be undertaken outside of the reptile hibernating period (October to February inclusive), during periods of warm, dry weather. Where this is not possible, vegetation will be cut to the ground (to remove potential bird nesting habitat), but any roots will remain intact until hibernation is complete. The root system of vegetation will then be removed once the reptile hibernation season is over. The phased approach to site clearance and topsoil stripping will discourage brown hare and hedgehogs away from the site of activity and into the surrounding suitable habitat.
Nesting birds	Vegetation removal	The removal of scrub and trees and ground clearance works will generally be undertaken outside of the breeding bird season. Measures could also be put in place to deter birds from nesting in any hedgerow to be removed (for example, cutting back vegetation and making the area less suitable); however, the ground will need to remain undisturbed during the reptile hibernation period. Where it is not possible to undertake these works outside of the breeding bird season, an inspection for nests will be undertaken by a suitably experienced Ecological Clerk of Works prior to the removal of vegetation. If nesting birds are

Receptor	Activity	Mitigation or Control Measure
		identified during this process, works in the vicinity of the nest (estimated to be a 10m standoff) will cease until the young have fledged.
Badgers	Construction works	Prior to construction works commencing, a pre-construction walkover of the site will be conducted in order to identify whether there are any signs of badgers and/or any newly established setts that may be impacted by the works. If any setts are identified that will be disturbed by the construction works, or will require closure, then a licence from Natural England will be obtained. All licensable works will be undertaken between July to November (inclusive). Any excavations made during construction activities will be closed at the end of the day to prevent access by badgers. If it is not possible for excavations to be closed at night, a means of egress (i.e. a wooden plank or soil ramp) will be provided to ensure that any badgers that may access these excavations have a means of escape. If badgers gain access and establish setts within the operational site, a licence from Natural England will be obtained to close and destroy these setts ahead of the site removal and restoration phase.
Ecological receptors.	Establishment of invasive plant species.	Section 14(1) of the Wildlife and Countryside Act 1981 makes it illegal to plant or otherwise cause to grow in the wild any plant which is included in Part II of Schedule 9 of the Act. There is the potential for non-native species to be introduced or spread from existing locations during the construction phase. Contractors will be required to undertake a biosecurity risk assessment and implement a management plan to avoid potentially facilitating the spread of non-native species during construction. This will include advanced removal and treatment of invasive plant species from any known locations within the Order Limits. During construction, mitigation measures will be implemented as necessary to prevent the establishment of invasive plant species. A general strategy will be to establish a viable vegetation cover quickly, before invasive plant species can become established. Any invasive species that colonise an area during construction will be removed and disposed of as required. Any imported soils will be subject to appropriate control processes to ensure they are free of any seeds/roots/stems of any invasive plant covered under the Wildlife and Countryside Act 1981.

7. Amenity and Recreation

7.1 Introduction

7.1.1 Control measures that will be put in place to mitigate potential impacts on pedestrians, cyclists and equestrians using Public Rights of Way (PRoW), cycle routes, permissive footpaths and open access land at the offsite associated development sites.

Table 7.1: Control measures to mitigate impacts on pedestrians, cyclists and equestrians using PRoW, cycle routes, permissive footpaths and open access land

Receptor	Activity	Mitigation or Control Measure
Human receptors Horses Dogs	Construction works	Method Statements will be provided for works on or adjacent to PRoW, footways, cycle routes, permissive footpaths and publicly accessible land, to minimise safety risk and impacts on pedestrians, cyclists and equestrians.
Human receptors Horses Dogs	Construction works	Diversions and alternative routes will be provided prior to construction works commencing on or adjacent to PRoW, cycle routes and permissive footpaths, to minimise safety risk and impacts on pedestrians, cyclists, and equestrians.
Human receptors	Construction works	Access on PRoW, permissive footpaths and publicly accessible land will be maintained during construction, with any required closures/diversions for construction purposes kept to a minimum. Any diversions will connect to the existing PRoW, footway and permissive footpath network.
Human receptors	Construction works	Information boards and interpretation boards will be erected at the beginning and end of each temporary diversion and at intervals along the route. The information boards will provide relevant information and be updated throughout construction.
Human receptors	Construction works	When diversions are in place the contractor will ensure that the following measures are implemented: • advance notice of any PRoW, cycle route, permissive footpath or highway closures and/or diversions will be communicated to the local community in accordance with Part A of the CoCP; • PRoW (including diversions) will be maintained for pedestrians, equestrians, and cyclists, including reasonable adjustments to maintain or achieve inclusive access; • inclusive access (including for people with reduced mobility) will be maintained to community facilities where temporarily disrupted during construction. If additional measures or reasonable adjustments are identified through the community liaison process to ensure accessibility by persons with a disability or reduced mobility, routes and/or diversions will be reviewed; and • where the usual means of access must be diverted or blocked off, alternative safe routes for persons with reduced mobility will be identified, considering existing hazards and obstructions such as pavement kerbs.

7.2 Monitoring

7.2.1 The site team will monitor PRoW, cycle routes permissive footpaths and open access land at the associated development sites, including temporary diversions, to ensure that mitigation measures are effective.

8. Historic Environment

8.1 Introduction

8.1.1 **Table 8.1** sets out control measures that will be put in place to mitigate direct potential impacts on the historic environment at the associated development sites.

8.1.2 Mitigation has been identified with reference to the following professional standards:

8.1.3 The following professional standards apply:

- Chartered Institute for Archaeologists (CIfA) 2014 Standard and Guidance for Archaeological Excavation;
- CIfA 2014 Guidelines for the Collection, Documentation, Conservation and Research of Archaeological Materials;
- CIfA 2014 Code of Conduct; and
- Standards for Field Archaeology in the East of England.
- Historic England 2011: Environmental Archaeology.

8.1.4 No tertiary mitigation measures specific to the terrestrial historic environment have been identified. Additional mitigation measures are set out below.

8.2 Additional Mitigation, Monitoring and Management

a) Additional mitigation

8.2.1 Measures to mitigate potential terrestrial historic environment impacts on the associated development sites are set out in the table below. These relate predominantly to buried archaeological remains which have been identified in parts of all of the associated development sites in pre-application evaluation fieldwork and also to deposits of potential geoarchaeological interest on the Two Village Bypass.

8.2.2 These measures will be secured by requirements which will include the obligation for an Archaeological Contractor to undertake the archaeological fieldwork (as distinct from the post-excavation) element of the mitigation ahead of construction commencing on the specific areas of the associated development sites which require archaeological clearance.

Table 8.1: Additional mitigation measures for terrestrial historic environment impacts

Receptor	Activity	Mitigation or Control Measure
Buried archaeological remains	Intrusive ground works	Works will be undertaken in accordance with the Overarching Archaeological Written Scheme of Investigation, as provided in **Volume 2, Chapter 16, Appendix 16H** of the **ES** (Doc Ref. 6.3) [APP-275] and individual site Written Schemes of Investigation for each associated development site. Where relevant, individual site-specific Written Schemes of Investigation will also set out requirements for further investigation of areas that could not be surveyed pre-consent, to allow for the agreement of finalised mitigation proposals.

b) Monitoring

8.2.3 Monitoring of the agreed programme of archaeological investigation would be carried out by SCCAS during the implementation of the scheme, the details of which would be set out within the WSIs. The Regional Science Advisor for Historic England may also be requested by SCCAS to support the monitoring of terrestrial works.

9. Soils and Agriculture

9.1 Introduction

9.1.1 **Table 9.1** sets out control measures that will be put in place to mitigate potential impacts relating to soils and agriculture at the offsite associated developments.

9.1.2 Mitigation has been identified with reference to guidance documents as follows:

- Defra Construction Code of Practice for the Sustainable Use of Soil on Construction Sites (Ref. 1.17);
- Good Practice Guide for Handling Soils (Ministry of Agriculture, Fisheries and Food, 2000) (MAFF) (Ref 1.18); and
- British Standard Specification for Topsoil and Requirements for Use (BS 3882:2015) (Ref. 1.8).

9.1.3 The mitigation measures are based on industry standard guidance and are appropriate to the proposed activities and potential effects/level of impact identified. These measures are considered to be established good practice on any large construction site.

9.1.4 The mitigation measures detailed in **Table 9.1** have been taken into consideration as part of a risk assessment, undertaken to assess the effects of the likely activities associated with the construction of the proposed development.

9.1.5 An **Outline Soil Management Plan** has also been developed and is provided in **Appendix 17C** of **Volume 2** of the **ES** (Doc Ref. 6.3) [APP-278] which will set out information on handling methods and measures which would be implemented during construction and operation.

Table 9.1: Control measures to mitigate soils and agriculture impacts

Receptor	Activity	Mitigation or Control Measure
Agricultural land adjacent to the site boundary	Earthworks	Provide suitable and effective stock control fencing.
		Ensure restrictions in relation to access to adjacent land are minimised.
Soils	Earthworks	The sustainable re-use of the soil resource would be undertaken in line with the Construction Code of Practice for the Sustainable Use of Soil on Construction Sites and the MAFF Good Practice Guide for Soil Handling.
		Where feasible and practical, the contractors will ensure soils are stripped and handled in the driest condition possible.
		Ensure protection of stockpiles from erosion and tracking over.
		Confining vehicle movements to defined haul routes until stripping is complete.
		Development of a Soil Resources Plan by the contractor, which would include detail on existing soil information, proposed storage locations and management measures
		Ensuring topsoil and subsoil resources are stripped and stockpiled separately;
		Ensuring the physical condition of the replaced soil profile to at least 1.2m below ground level is sufficient for the post-construction use.
Best and most versatile agricultural land	Earthworks	Ensure appropriate re-use of soils with restoration to agricultural land of a comparable grade to that prior to stripping. All monitoring and auditing to be undertaken in line with the **Outline Soil Management Plan** (Doc Ref. 6.3) [APP-278] specifications.
		Create and maintain a register of land condition (soils, topography, drainage, boundary treatments etc.) to ensure the land can be restored to baseline where land take is required on a temporary basis.
Agricultural operations	Earthworks	Toolbox talks will be used to inform all those working on the site of the requirements for soil handling and minimisation of disturbance to agricultural activities.
		All fencing around the proposed development will be sufficient to resist damage by livestock and will be regularly checked and maintained in a suitable condition. Any damage to boundary fencing will be repaired immediately.

Receptor	Activity	Mitigation or Control Measure
		Measures contained in relevant Defra and Environment Agency best practice guidance on the control and removal of invasive weed species will be implemented where appropriate.
		Should animal bones be discovered which indicate a potential burial site, works will be paused in the affected area, and the Animal Health Regional Office will be advised and informed of the proposed mitigation measures. Works could restart once the relevant mitigation measures have been put in place.
		All movement of plant and vehicles between affected fields will cease in the event of a notifiable disease outbreak. Advice and guidance from Defra will be followed to minimise the biosecurity risk associated with the continuation of works.
		Industry standard measures would be put in place to control pollution, including from fuel or chemical stores, silt-laden runoff or dust
Watercourses	Earthworks	All soils will be stored away from watercourses (or potential pathways to watercourses) and any potentially contaminated soil will be stored on an impermeable surface and covered to reduce leachate generation and potential migration to surface waters.
Landscape and ecological receptors Human receptors (visual impact)	Topsoil stripping and storage	The sustainable re-use of the soil resource would be undertaken in line with the Construction Code of Practice for the Sustainable Use of Soil on Construction Sites and the MAFF Good Practice Guide for Soil Handling, as detailed above. The Soil Resource Plans, aligned to the Soil Management Plan, will detail the measures to be used to source, test, strip, handle, store and spread site-won soil materials. Any imported topsoil required will comply with the BS 3882: 2015. The height of stockpiles will be controlled to minimise visual impact, where identified as a significant factor in the landscape and visual impact assessment.

10. Geology and Land Quality

10.1 Introduction

10.1.1 Control measures that will be put in place to mitigate potential impacts on geology, soils and land contamination at the offsite associated developments have been identified with reference to guidance documents as follows:

- Contaminated Land Report (CLR)11[3] (Ref.1.19) and the Guiding Principles for Land Contamination (GPLC) (Ref.1.20);
- The Definition of Waste: Development Industry Code of Practice (DoWCoP) (Ref.1.21);
- The Design Manual for Roads and Bridges (DMRB) (2008) Volume 11, Section 2, Part 5 Assessment and Management of Environmental Effects (Ref.1.22);
- DMRB (1993) Volume 11, Section 3, Part 11 Geology and Soils (Ref.1.23);
- Construction Industry Research and Information Association C552 (2001) Contaminated Land Risk Assessment – A Guide to Good Practice (Ref.1.24);
- National House-Building Council & Environment Agency (2008) Guidance on the Safe Development of Housing on Land Affected by Contamination (R&D66) (Ref.1.25);
- CIRIA C665 (2007) Assessing Risks Posed by Hazardous Ground Gases to Buildings (Ref.1.26);
- British Standards (2015) BS 8485 – Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings (Ref.1.27);
- CIRIA C681 (2009) Unexploded Ordnance – A Guide for the Construction Industry (Ref.1.28);
- CIRIA C733 (2014) Asbestos in Soil and Made Ground: A Guide to Understanding and Managing Risks (Ref.1.29);
- CIRIA C682 (2009) The Volatile Organic Contaminants Handbook (Ref.1.30);

[3] It is noted that CLR11 is due to be withdrawn in early 2020 and replaced by updated online guidance: Environment agency (June 2019, updated December 2019) Land contamination: Risk Management (LCRM).

- British Standards (2015) BS 5930 – Code of practice for ground investigations (Ref.1.31);
- British Standards (2017) BS 10175:2011+A2:2017 – Code of Practice for Investigation of Potentially Contaminated Sites (Ref.1.32); and
- Environment Agency's Pollution Prevention guidance (PPGs) and Guidance for Pollution Prevention (GPPs) (Ref.1.33).

10.1.2 The mitigation measures, as set out in **Table 10.1**, are based on industry standard guidance and are appropriate to the proposed activities and potential effects/level of impact identified. These measures are considered to be established good practice on any large construction site.

10.1.3 The mitigation measures have been taken into consideration as part of a risk assessment undertaken to assess the effects of the likely activities associated with the construction of the proposed development. With the incorporation of these mitigation measures, likely impacts are considered to be low and significant effects are not anticipated.

Table 10.1: Control measures to mitigate impacts on geology, soils and land contamination

Receptor	Activity	Mitigation or Control Measure
Human receptors Controlled water receptors (surface water and groundwater) Ecological receptors Soils	Earthworks Topsoil stripping Construction works	The contractors will develop and implement health and safety risk assessments, method statements and ensure workers employ appropriate PPE, housekeeping and good hygiene practices.
		Implementation of a contamination watching brief by suitably qualified and experienced personnel would be completed for the proposed development when excavating areas of potential contamination risk. If unidentified contamination is encountered, works will be temporarily suspended in the area and appropriate investigations and remediation will be discussed and agreed with stakeholders and completed in accordance with current best practice.
		Implementation of appropriate dust suppression measures to reduce migration of contaminated dust.
		Minimise the area and duration of soil exposure and timely reinstatement of vegetation or hardstanding to reduce soil exposure/erosion and reduce temporary effects on soil compaction.
		Stockpile management (such as water spraying and avoiding over stockpiling to reduce compaction of soil and loss of integrity) to reduce windblown dust and surface water run-off.
		Clear segregation between stockpiled material including imported material, excavated material stockpiled for re-use and excavated waste material stockpiled for treatment and / or off-site disposal.
		Topsoil to be removed and appropriately stored for potential re-use in landscaping areas, subject to demonstrating suitability for reuse criteria. No topsoil to be buried within the earthworks to mitigate against potential gas generation.
		Covering/hydroseeding of the landscape bunds and temporary stockpiles to reduce soil erosion and dust generation.
		Stockpiles would be located a minimum of 10m from the nearest watercourse.
		Implementation of working methods during construction to ensure that surface water run-off from the stockpiles, landscape bunds or working areas into adjacent surface watercourses or leaching into underlying groundwater in accordance with best practice.

Receptor	Activity	Mitigation or Control Measure
		Provision of a settlement and infiltration lagoon for each borrow pit during excavation to capture surface water run-off.
		Piling risk assessment in accordance with Environment Agency guidance may be required to ensure that piling techniques deemed appropriate are implemented at the site by identifying and managing potential risks as a result of creating pathways to the aquifer.
		Implementation of appropriate pollution incident control, e.g. plant drip trays and spill kits.
		Implementation of appropriate and safe storage of fuel, oils, chemicals and equipment during construction in accordance with Control of Substances Hazardous to Human Health Regulations and Oil Storage Regulations.
		The wheels of all vehicles would be free of contamination before arriving at site. All vehicles would be inspected prior to leaving site and should contaminative substances be identified suitable measures (e.g. wheel washing) would be implemented.
		Implementation of an appropriate materials management strategy with associated materials management plans to document how the excavated materials would be dealt with and a verification plan to record the placement of materials at the site. Further details are provided in the **Materials Management Strategy** at **Appendix 2.2.C of Chapter 2 of the ES Addendum** (Doc Ref. 6.14).
		Implementation of a site waste management plan in accordance with the Conventional Waste Management Strategy.
		Implementation of a temporary drainage system to manage drainage during earthworks in accordance with the Drainage Strategy.
		Implementation of the soil management measures, informed by the Outline Soil Management Plan.

10.2 Additional Mitigation, Monitoring and Management

10.2.1 In addition to the control measures outlined in **Table 10.1**, the following mitigation will be undertaken prior to construction works:

- additional assessment of the moderate WWII UXO bomb risk identified on certain associated development sites would be undertaken in the form of a detailed UXO desk study and risk assessment. Where required, mitigation measures would then be implemented as appropriate.
- additional ground investigation will be undertaken to inform the final design of the proposed development and to confirm the ground conditions and contamination status of the site;
- remediation of soil and groundwater contamination will be undertaken prior to construction (e.g. source removal, treatment or capping) if deemed necessary; and,
- gas protection measures will be incorporated within proposed structures, if monitoring and risk assessments deem them to be necessary.

11. Groundwater and Surface Water

11.1 Introduction

11.1.1 **Table 11.1** sets out control measures that will be put in place to mitigate potential impacts on groundwater and surface water receptors at the associated development sites.

11.1.2 Mitigation has been identified with reference to guidance documents as follows:

- The Groundwater Protection Position Statements Guidance (Ref. 1.34) provides an update to the Environment Agency's Principles and Practice (GP3), which was withdrawn in 2017. The position statement summarises the legislation relevant to the management and protection of groundwater and details the Environment Agency's approach to groundwater protection. The statements are not statutory requirements, but may be included or referenced by statutory guidance and illustrate the Environment Agency's approach to a particular activity. A number of the position statements may be of relevance to the proposed development and will be viewed in order to aid the identification of necessary constraints to protect groundwater;
- Control of water pollution from construction sites: A guide to good practice, CIRIA (2001) (Ref. 1.35);
- Environment Agency's Pollution Prevention Guidelines: Working on construction sites (Ref. 1.36);
- The DMRB (2008) Volume 11, Section 2, Part 5 Assessment and Management of Environmental Effects (Ref. 1.22); and
- DMRB (2009) Volume 11, Section 3, Environmental Assessment Techniques (Ref. 1.23).

11.1.3 In addition to the mitigation measures outlined in **Table 11.1** for construction activities, the following mitigation will be undertaken prior to construction works:

- additional ground investigation will be undertaken to inform the final design of the proposed developments and to confirm the ground conditions and contamination status of the sites; and
- remediation of soil and groundwater contamination will be undertaken prior to construction (e.g. source removal, treatment or capping) if deemed necessary.

Table 11.1: Control measures to mitigate groundwater and surface water impacts

Receptor	Activity	Mitigation or Control Measure
Controlled waters receptors (groundwater and surface water) Ecological receptors	Earthworks Construction works	Implementation of a contamination watching brief by suitably qualified and experienced personnel would be completed for the proposed development when excavating areas of potential contamination risk.
		Concrete and cement mixing and washing areas would be situated at least 10m away from surface water receptors. These would incorporate settlement, pH correction, and recirculation systems to allow water to be re-used. All washing out of equipment would be undertaken in a contained area, and all water would be collected for off-site disposal.
		The drainage/flood prevention strategies will consider the ground conditions of the site, including the permeability of the strata and the level of on-site contamination.
		Implementation of an appropriate materials management strategy with associated materials management plans to document how the excavated materials would be dealt with and a verification plan to record the placement of materials at the site. Further details are provided in the **Materials Management Strategy** at **Appendix 2.2.C of Chapter 2 of the ES Addendum** (Doc Ref. 6.14).
		Implementation of a site waste management plan in accordance with the **Conventional Waste Management Strategy** provided in **Appendix 8A of Volume 2 of the ES** (Doc Ref. 6.3) [APP-194].
		All temporary stockpiles would be managed to prevent soil erosion, windblown dust and surface water run-off by hydroseeding, water spraying and avoiding over stockpiling to reduce compaction of soil and loss of integrity.
		Plan and design piling activities in compliance with Environment Agency guidance. This guidance may highlight the need for a piling risk assessment.
		Implementation of working methods to ensure there would be no surface water run-off from the works, or any stockpiles, into adjacent surface watercourses/leaching into underlying groundwater in accordance with best practice. Stockpiles would be located a minimum of 10m from the nearest watercourse.

Receptor	Activity	Mitigation or Control Measure
		Implementation of appropriate pollution incident control e.g. plant drip trays and spill kits. Spill kits would be available on site at all times. Sand bags or stop logs would also be available for deployment on the outlets from the site drainage system in case of emergency spillages.
		Implementation of appropriate and safe storage of fuel, oils and equipment during works. For example, all fuels, oils, lubricants and other chemicals would be stored in an impermeable bund with at least 110% of the stored capacity. All refuelling would take place in a dedicated impermeable area, using a bunded bowser. Biodegradable oils would be used where possible.
		The wheels of all vehicles would be free of contamination before arriving at site. All vehicles would be inspected prior to leaving site and should contaminative substances be identified suitable measures (e.g. wheel washing) would be implemented.
Surface watercourses	Pre-construction and construction works within 50m of a watercourse or within flood zones 2 or 3.	A risk assessment for all works will be carried out for any use of cementitious materials within 50m of any active watercourse or within flood zones 2 or 3.
		Concrete and cement mixing and washing areas would be situated at least 10m away from surface water receptors. These would incorporate settlement, and recirculation systems (batching plants), to allow water to be re-used. All washing out of equipment would be undertaken in a contained area.
Surface water	Pre-construction and construction works within watercourse or catchment area	Measures taken to prevent the deposition of silt or other material arising from work operations in existing watercourse or catchment areas will accord with principles set out in industry guidelines, including Pollution Prevention Guidance notes (PPGs)
Surface watercourses	Construction works Earthworks	Temporary SuDS to be implemented early in the construction phase. Construction phase water management zones to intercept surface run-off, sediment and contaminants from the construction compound and laydown areas, and incorporate sustainable drainage measures such as swales, filter drains, infiltration ponds and soakaways to promote infiltration.
		Construction drainage to be contained within the site, with infiltration to ground. A low bund is proposed to be constructed to achieve this with an external toe drain to intercept off-site run-off that may otherwise be impeded by the presence of the proposed bund. Only if full infiltration is not possible, would these systems discharge into existing surface drainage network at greenfield run-off rates to minimise the potential for impact.

Receptor	Activity	Mitigation or Control Measure
		Hardstanding to be constructed within the construction compounds where required to mitigate potential spills and leaks. Water falling onto impermeable surfaces to pass through a bypass separator.
Habitat Loss Surface water	Construction works at northern park and ride site	The 20m buffer zone between Little Nursery Wood and the site to be maintained, minimising disturbance to the watercourse running adjacent to the site boundary.
Controlled waters	Decommissioning and deconstruction	The removal of the proposed development to include the removal of any related drainage and SuDS measures within the site. Any control measures used to protect groundwater and surface water during the construction phase would also be applied during the removal and reinstatement phase.
Construction workforce	Work in or near surface water flood routes / zones	Construction works for activities within or adjacent to surface water flood routes / zones should employ weather monitoring to predict potential extreme events and halt construction works, if required. Additional details will be developed as part of the Flood Risk Emergency Plan, which would be developed by the Contractor and submitted to and approved by SZC Co., following consultation with the local planning authority and the Environmental Agency.
Controlled waters: Two Village Bypass; Sizewell Link Road; Green Rail Route; and Yoxford and Other Highways Improvements.	Construction welfare	Foul sewage arising from the construction compound to be tankered off-site.
Controlled waters: Northern Park & Ride; Southern Park & Ride; Freight Management Facility.		Foul drainage arising on site during construction to be tankered off site until the operational arrangements are in place.
Construction workforce: Two Village Bypass; Sizewell Link Road.	Work in or near watercourses	Construction works for activities within or adjacent to watercourses should employ weather monitoring to predict potential extreme events and halt construction works, if required. Additional details will be developed as part of the Flood Risk Emergency Plan.
Surface water: Yoxford and Other Highways Improvements	Construction Earthworks	Construction drainage to be contained within the site to infiltrate into the underlying strata and, where appropriate, the existing drainage system to be used (i.e. at the junction with the existing A12 and the B1122).

Receptor	Activity	Mitigation or Control Measure
Surface water: Freight Management Facility	Construction Earthworks	A swale to be constructed across the northern boundary and part of the eastern boundary and to the south of the widened Felixstowe Road to ensure that surface water run-off would be contained within the site and infiltrated into the underlying strata. The design of the swales and underground attenuation tanks to consider the ground conditions of the site.

c) Additional Mitigation, Monitoring and Management

11.1.4 In addition to the mitigation measures outlined in **Table 11.1** for construction activities, the following mitigation would be undertaken prior to construction works:

Table 11.2: Secondary mitigation measures

Receptor	Activity	Mitigation or Control Measure
Construction workforce and property: Sizewell Link Road; Two Village Bypass; Green Rail Route.	Construction works	A Flood Risk Emergency Plan will be developed in compliance with Environment Agency guidance to ensure that in the event of flooding occurring on site, appropriate plans are in place to manage the risks and ensure that there is no increased risk to human health and that risks to property are managed appropriately. The plan would, as a minimum, include details of the requirements for monitoring regulatory flood warning alerts, identification of safe meeting areas, access and egress routes, activities required to secure plant and equipment in the event of a flood being forecast, checking of drainage systems, roles and responsibilities and checking procedures.
Construction workforce at Two Village Bypass.	Construction	Further to the requirement for a Flood Risk Emergency Plan, the following measured are specifically identified for the Two Village Bypass construction: Construction phasing to minimise or prevent constraint in floodplain (beyond that within the final design). Constructing embankment with culvert in place and not afterwards, so no more restriction than final design. Providing temporary pumping to mitigate impact of any temporary flood plain loss. Link to Environment Agency/Met office weather information and an associated emergency flood action plan to manage effects of out of bank flows.
Controlled waters receptors (groundwater and surface water) Ecological receptors	Construction works	Additional Ground Investigation (GI) would be undertaken for the proposed development to inform detailed design and confirm ground conditions, contamination status and other ground related risks in areas of the site where limited existing information is available. This would be completed prior to construction works. Where the GI identifies contamination and ground related risks, further detailed quantitative risk assessment and remediation of soil and groundwater contamination prior to construction may be required.

11.1.5 In addition, the following monitoring and management would be undertaken in support of construction works:

- A programme of short-term gas and groundwater monitoring would be designed as part of the additional GI for the site and would be required prior to construction works commencing. The results of this would determine the need for further long-term gas monitoring.
- Active management and maintenance of the drainage infrastructure would be required to ensure the continued efficacy of the surface water drainage system.

12. Waste Management and Resource Use

12.1 Introduction

12.1.1 **Table 12.1** sets out control measures that will be put in place to reduce effects from material resource and waste management during the construction of the offsite associated developments. These measures have been developed in line with the following guidance documents:

- Site Waste Management Plans – Guidance for Construction Contractors and Clients Voluntary Code of Practice (2004) (Ref.1.37);
- Construction Code of Practice for Sustainable Use of Soils on Construction Sites (2009) (Ref.17); and
- CL:AIRE Definition of Waste: Development Industry Code of Practice (2011) (Ref.1.21).

Table 12.1: Control measures to mitigate potential impacts

Receptor	Activity	Mitigation or Control Measure
Quarries/finite sources of virgin materials	Material resource use	• A CEMP will be developed by the contractor which will define the materials management measures and will take account of the CL:AiRE Definition of Waste Code of Practice and be in accordance with the **Materials Management Strategy** at **Appendix 2.2.C of Chapter 2 of the ES Addendum** (Doc Ref. 6.14); • materials will be delivered to site on an 'as required' basis to avoid damage or contamination and therefore limit the likelihood of waste; • where site-won material is not available or suitable for re-use, secondary or recycled materials will be procured where available and practicable; • the design of the temporary roads will incorporate geo-grid or lime stabilisation methods to reduce the amount of granular fill required; • all suitable excavated material will be re-used in the construction of the development and in landscaping features to reduce the requirement to import materials for construction and reduce the need to remove surplus materials from site; • temporary stockpiling of fill materials prior to incorporation in the development will be avoided where possible, to ensure double handling and damage is minimised. However, where required, materials will be stockpiled in accordance with best practice and managed appropriately to limit the likelihood of damage or contamination; • locally sourced materials and suppliers will be identified and used where practicable; and • pre-cast elements will be used where practicable to ensure efficient use of materials and avoid the generation of waste arising from cut-offs.
Waste management infrastructure	Waste generation and management	• The contractor will manage waste in line with measures and key performance indicators set out within the **Waste Management Strategy** as provided in

Receptor	Activity	Mitigation or Control Measure
		Volume 2, Appendix 8A of the **ES** (Doc Ref. 6.3) [APP-194]. A summary of these is provided below. • The contractor will produce a site waste management plan which will consider the sourcing, transport and use and disposal of waste and material resources, in a sustainable manner. It will also take account of, and capture, design changes as the design of the development evolves and will ensure that unavoidable construction waste is identified and managed in accordance with the waste hierarchy and other relevant legislative requirements. The site waste management plan will be used to derive the management options that will achieve the highest practicable performance levels within the waste hierarchy. • Facilities will be provided on-site to separate out waste, for example for recycling. • The waste hierarchy will be applied to minimise disposal of waste and maximise reuse and recycling. Opportunities for re-use and recycling of waste include (but are not limited to): ○ re-using excavated soils on-site in the landscaping features of the development; ○ chipping green waste on-site for use in the landscaping for the development; ○ composting of green waste; ○ recycling of inert material by crushing, blending and subsequent re-use, as an aggregate; and ○ re-using waste and materials on other nearby schemes. For example, re-using waste for uses with clear benefits to the environment, for example in the remodelling of agricultural land or in the restoration of nearby quarries or other excavation sites. ○ Where waste must be taken to recycling/disposal facilities, these facilities will have the appropriate permits to ensure environmental risks are minimised. Such recycling/disposal facilities will be located as close to the works as possible to minimise transport, thereby reducing greenhouse gas

Receptor	Activity	Mitigation or Control Measure
		emissions resulting from transportation. The contractor will identify the closest relevant recycling/disposal facility.

a) Monitoring

12.1.2 A materials tracking system will be developed by the contractor to track and record the movement and placement of excavated materials within the proposed development. Audits of the **Materials Management Plan** and tracking system will be undertaken during construction of the proposed development, including audits of tracking data.

12.1.3 The contractor will be responsible for monitoring the implementation of the site waste management plan. Audits of the site waste management plan and relevant monitoring records will be undertaken throughout the construction period.

13. Greenhouse Gas Emissions

13.1.1 In accordance with the sustainability principle to 'design and construct for a low carbon future', SZC Co. and its contractors will seek to control and manage greenhouse gas emissions during construction, where possible.

13.1.2 The contractors will be required to specify measures to reduce greenhouse gases from construction activities, such as:

- Training to understand energy use and opportunities for reducing carbon emissions.
- Promoting low carbon transport of people, material and equipment.
- Minimising energy consumption (including fuels), through efficient working methods, using and specifying low energy equipment, and using smart technologies.
- Maximising local sourcing of materials and local waste management facilities.
- Using low embodied carbon in materials and incorporating material resource efficiency and waste minimisation best practice into design.
- Monitoring and reporting on embodied and emitted greenhouse gas, including achieved reductions as a result of adopting low carbon and sustainable solutions and alternatives.

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[4] Although withdrawn by the Environment Agency, it is still a relevant good practice guidance document.