

# Sea Link

## Volume 7: Other Documents

Document 7.5.8.2 Outline Construction Noise and Vibration Management Plan – Kent

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# Executive Summary

- Ex1.1.1 The purpose of this Outline Construction Noise and Vibration Management Plan (Outline CNVMP), which forms **Application Document 7.5.8.2 Outline Construction Noise and Vibration Management Plan – Kent**, is to set out principles for the management of noise and vibration during the construction phase of the Kent Onshore Scheme, in order to limit any potential impacts at nearby noise and vibration sensitive receptors (NSR).
- Ex1.1.2 This outline CNVMP has been informed by the construction noise and vibration assessment detailed in **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration**. It should be noted that as this is an outline document, certain details will remain to be developed as the Proposed Project progresses into detailed design. The full details of all measures may not be available until after consent for the Proposed Project has been determined and these will be provided within the Construction Noise and Vibration Management Plan (CNVMP) as necessary. The CNVMP will need to be in accordance with this Outline NVMP as per Schedule 3 Requirement 6 of the DCO (**Application Document 3.1 draft Development Consent Order**).
- Ex1.1.3 It should also be noted that an equivalent Outline CNVMP has been produced for the Suffolk Onshore Scheme (**Application Document 7.5.8.1 Outline Construction Noise and Vibration Management Plan – Suffolk**).

# 1. Introduction

## 1.1 Introduction

- 1.1.1 The Sea Link Project (hereafter referred to as the ‘Proposed Project’) is a proposal by National Grid Electricity Transmission plc (hereafter referred to as National Grid) to reinforce the transmission network in the South East and East Anglia. The Proposed Project is required to accommodate additional power flows generated from renewable and low carbon generation, as well as accommodating additional new interconnection with mainland Europe.
- 1.1.2 National Grid owns, builds and maintains the electricity transmission network in England and Wales. Under the Electricity Act 1989, National Grid holds a transmission licence under which it is required to develop and maintain an efficient, coordinated, and economic electricity transmission system.
- 1.1.3 This would be achieved by reinforcing the network with a High Voltage Direct Current (HVDC) Link between the proposed Friston substation in the Sizewell area of Suffolk and the existing Richborough to Canterbury 400 kV overhead line close to Richborough in Kent.
- 1.1.4 National Grid is also required, under Section 38 of the Electricity Act 1989, to comply with the provisions of Schedule 9 of the Act. Schedule 9 requires licence holders, in the formulation of proposals to transmit electricity, to:
- 1.1.5 Schedule 9(1)(a) “...*have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest;*” and
- 1.1.6 Schedule 9(1)(b) “...*do what [it] reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects*”.
- 1.1.7 This Outline Construction Noise and Vibration Management Plan (OCNVMP) sets out the framework for the management of noise and vibration, and where feasible at this stage, the site-specific measures and construction methodologies that are required to help avoid or reduce potential effects of the Proposed Project on the environment during construction. The OCNVMP is based on the Proposed Project detail as submitted with the application for development consent. This OCNVMP would be updated to a Construction Noise and Vibration Management Plan (CNVMP) prior to construction to include any further site-specific measures identified by the contractor.

## 1.2 The Proposed Project

- 1.2.1 The Proposed Project would comprise the following elements:

### The Suffolk Onshore Scheme

- A connection from the existing transmission network via Friston Substation, including the substation itself. Friston Substation already has development consent as part of

other third-party projects. If Friston Substation has already been constructed under another consent, only a connection into the substation would be constructed as part of the Proposed Project. A high voltage alternating current (HVAC) underground cable of approximately 1.9 km in length between the proposed Friston Substation and a proposed converter station (below).

- A 2 GW high voltage direct current (HVDC) converter station (including permanent access from the B1121 and a new bridge over the River Fromus) up to 26 m high plus external equipment (such as lightning protection, safety rails for maintenance works, ventilation equipment, aerials, similar small scale operational plant, or other roof treatment) near Saxmundham.
- A HVDC underground cable connection of approximately 10 km in length between the proposed converter station near Saxmundham, and a transition joint bay (TJB) approximately 900 m inshore from a landfall point (below) where the cable transitions from onshore to offshore technology.
- A landfall on the Suffolk coast (between Aldeburgh and Thorpeness).

## The Offshore Scheme:

- Approximately 122 km of subsea HVDC cable, running between the Suffolk landfall location (between Aldeburgh and Thorpeness), and the Kent landfall location at Pegwell Bay.

## The Kent Onshore Scheme:

- A landfall point on the Kent coast at Pegwell Bay.
- A TJB approximately 800 m inshore to transition from offshore HVDC cable to onshore HVDC cable, before continuing underground for approximately 1.7 km to a new converter station (below).
- A 2 GW HVDC converter station (including a new permanent access off the A256), up to 28 m high plus external equipment such as lightning protection, safety rails for maintenance works, ventilation equipment, aerials, and similar small scale operational plant near Minster. A new substation would be located immediately adjacent. R
- Removal of approximately 2.2 km of existing HVAC overhead line, and installation of two sections of new HVAC overhead line, together totalling approximately 3.5 km, each connecting from the substation near Minster and the existing Richborough to Canterbury overhead line.

1.2.2 The Proposed Project also includes modifications to sections of existing overhead lines in Suffolk (only if Friston Substation is not built pursuant to another consent) and Kent, diversions of third-party assets, and land drainage from the construction and operational footprint. It also includes opportunities for environmental mitigation and compensation. The construction phase will involve various temporary construction activities including overhead line diversions, use of temporary towers or masts, working areas for construction equipment and machinery, site offices, parking spaces, storage, accesses, bellmouths, and haul roads, as well as watercourse crossings and the diversion of Public Rights of Way (PROWs) and other ancillary operations.

## 1.3 Purpose of the OCNVMP

- 1.3.1 The purpose of this OCNVMP is to provide the overarching general principles, controls, and arrangements that will be applied to the Proposed Project with regards to noise and vibration during construction.
- 1.3.2 This OCNVMP seeks to protect Noise and vibration Sensitive Receptors (NSR) including residential NSR (both domestic and recreational such as hotels, guest houses, holiday parks, campsites, and other tourism related uses), schools, health care facilities, offices, heritage, and ecological NSR.
- 1.3.3 This OCNVMP considers the impact of noise and vibration and the control measures that will be employed to mitigate the risks by reducing and minimising adverse effects. These will be supported through monitoring procedures to identify both elevated noise and vibration levels and to review complaints, should they arise. The complaints management procedure, including management responsibilities, is also addressed.
- 1.3.4 This OCNVMP aims to assist in complying with the following legislation:
- Environmental Protection Act 1990 (EPA) (HM Government, 1990); and
  - Control of Pollution Act 1974 (CoPA) (HM Government, 1974).
- 1.3.5 This OCNVMP aims to assist compliance with the above legislation through the following appropriate guidance:
- BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites. Part 1: Noise (BS 5228-1) (BSI, 2014);
  - BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites. Part 2: Vibration (BS 5228-2) (BSI, 2014); and
  - BS 7385-2: 1993 Evaluation and measurement for vibration in buildings – Part 2: Guide to damage levels from groundborne vibration (BS 7385-2) (BSI, 1993).
- 1.3.6 BS5228-1 and BS 5228-2 gained Approved Code of Practice status (in England) in 2015 under the powers conferred by sections 71(1)(b), (2) and (3) of CoPA 1974, as enacted under The Control of Noise (Code of Practice for Construction and Open Sites) (England) Order 2015. Compliance with the best practice noise and vibration mitigation requirements stated therein became a statutory obligation under the Act.
- 1.3.7 The contractor will be responsible for the further development of this OCNVMP into a CNVMP, its implementation, and delivery of the measures outlined herein as applicable to each work area. This will be secured through contractual agreements and monitored by National Grid. The OCNVMP will be reviewed as necessary by the contractor, during the construction programme. Any such review should consider any new consented change of land use around the Proposed Project and any future consented developments (not already considered) that could be affected by construction noise and vibration emissions to the environment.
- 1.3.8 If rapid action is required to solve a noise or vibration problem and that action may contravene something written in the CNVMP, typically it is preferable to undertake the mitigating action at the earliest opportunity. The CNVMP can then be revised in reasonable time after the event.
- 1.3.9 The application for development consent includes environmental commitments under the following categories:

- **Embedded Measures:** measures that form part of the engineering design set out in **Application Document 7.5.3.2 CEMP Appendix B Register of Environmental Actions and Commitments (REAC)**;
- **Control and Management Measures:** standard approaches and actions to be implemented on construction sites, intended to protect the environment. These may be general or topic-specific but are typically applicable across the whole of the Proposed Project. The control and management measures are provided in full in **Application Document 7.5.3.1 CEMP Appendix A Outline Code of Construction Practice**; and
- **Additional Mitigation Measures:** any additional project-specific measures needed to avoid, reduce, or offset potential impacts that could otherwise result in negative effects considered significant in the context of the EIA Regulations 2017. Mitigation measures have been identified by environmental topic specialists, taking into account the embedded design and control and management measures. These can be found in **Application Document 7.5.3.2 CEMP Appendix B Register of Environmental Actions and Commitments (REAC)**.

1.3.10 Construction phase measures relevant to noise and vibration are secured within this OCNVMP. Construction phase measures for other environmental topics are secured by one of the following three documents:

- **Application Document 7.5.3 Outline Onshore Construction Environmental Management Plan (CEMP)** general construction measures and methodologies to avoid or reduce potential effects of the Proposed Project. The CEMP also includes the Code of Construction Practice (CoCP) containing a list of the control and management measures that will be implemented on the Proposed Project, as Appendix A (**Application Document 7.5.3.1 CEMP Appendix A Outline Code of Construction Practice**) and a register of all mitigation measures including embedded and additional mitigation measures in Appendix B: REAC (**Application Document 7.5.2 Outline Offshore Construction Environmental Management Plan**);
- **Application Document 7.5.1.2 Construction Traffic Management and Travel Plan - Kent** measures to manage construction traffic and impacts on the wider traffic network; and
- **Application Document 7.5.7.2 Outline Landscape and Ecological Management Plan - Kent** measures to manage construction impacts on landscape and ecology.

1.3.11 The above plans are referenced in the OCNVMP where appropriate.

## 1.4 Structure of the OCNVMP

1.4.1 The OCNVMP structure is set out in Table 1.1.

**Table 1.1 Structure of the OCNVMP**

| Chapter | Content      |
|---------|--------------|
| 1.      | Introduction |

| Chapter | Content                                     |
|---------|---------------------------------------------|
| 2.      | Project Description                         |
| 3.      | Project Team Roles and Responsibilities     |
| 4.      | Construction Noise and Vibration Management |

## 2. Pertinent Project Details

### 2.1 Introduction

- 2.1.1 Details of the Proposed Project are provided in **Application Document 6.2.1.4 Part 1 Introduction Chapter 4 Description of the Proposed Project**. Pertinent information relating to noise and vibration are summarized in this Section.

### 2.2 Construction Programme

- 2.2.1 Subject to gaining development consent, construction works would be expected to start in 2026 and be functionally completed by the end of 2031, with reinstatement potentially continuing into 2032. Certain advanced works (such as archaeological trial trenching or protected species mitigation) may take place in advance of the commencement of the main construction works.
- 2.2.2 The construction schedule would be developed as the Proposed Project progresses and would take account of seasonal constraints such as protected species breeding or hibernation seasons and reducing impacts associated with flood zones.

### 2.3 Identification of NSR

- 2.3.1 In order to assess potential construction noise impacts, the closest NSR need to be identified. NSR identified as part of the ES are shown in **Application Document 6.4.2.9 Noise and Vibration**.
- 2.3.2 All NSR where the initial assessment indicated potential significant adverse effects from construction noise and vibration are detailed in **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration**.
- 2.3.3 Further assessment of construction noise and vibration impacts, including identification of any additional NSR (in case, for example, new dwellings are constructed between the ES and construction phase) and specification of mitigation in the form of best practicable means (BPM) is to be completed by the contractor.

### 2.4 Construction Workforce

- 2.4.1 The staff required during the construction of the proposed works would vary throughout the construction period. It is anticipated that the peak workforce in Kent would be approximately 231, which is anticipated to occur on the 25 April 2030.

### 2.5 Construction Working Hours

- 2.5.1 The proposed construction core working hours (unless otherwise approved by the Local Planning Authority) are:
- Monday – Friday: 0700am–1900pm; and
  - Saturday, Sundays and Bank Holidays: 0700am–1700pm.

- 2.5.2 The core working hours exclude start up and close down activities up to 1 hour either side of the core working hours. These activities include staff arrival, briefings, checking plant, loading equipment, compound general maintenance activities, debriefing, storing equipment and plant, and staff leaving site.
- 2.5.3 Exceptions to the above core working hours include but are not limited to:
- trenchless crossing operations including at landfalls and beneath highways, railway lines, woodlands, nature reserves, Sites of Special Scientific Interest or watercourses;
  - the installation and removal of conductors, pilot wires and associated protective netting across highways, railway lines or watercourses;
  - the jointing of underground cables;
  - the continuation of any work activity commenced during the core working hours to a point where they can securely and or safely be paused;
  - delivery to the transmission works of abnormal loads and any highway works requested by the highway authority to be undertaken outside the core working hours;
  - the testing or commissioning of any electrical plant installed as part of the authorised development including undertaking of any identified corrective activities;
  - the completion of works delayed or held up by severe weather conditions which disrupted or interrupted normal construction activities;
  - activity necessary in the instance of an emergency where there is a risk to persons or property;
  - marine works (all works below the mean high water springs line);
  - security monitoring;
  - intrusive and non-intrusive surveys;
  - mechanical and electrical installation works within buildings once erected and enclosed;
  - any highway works requested by the highway authority to be undertaken on a Saturday or Sunday or outside the core working hours; and
  - activity necessary in the instance of an emergency where there is a risk to persons or property.
- 2.5.4 Percussive piling works would be limited to Monday – Friday: 0700 to 1900 and 0700 to 1700 on Saturdays and may not occur on Bank Holidays, unless otherwise approved by the local planning authority .
- 2.5.5 Other than those necessary to undertake the operations listed in paragraph 2.5.1 above, HGV deliveries would be limited to Monday – Friday: 0700 to 1900 and 0700 to 1700 on Saturdays and may not occur on Bank Holidays, unless otherwise approved by the relevant highway authority.

## Night-time Working

- 2.5.6 There is no intention for night working on the Proposed Project as standard. However, there may be occasions where night working is required; examples of operations that may take place outside of the core working hours are set out in paragraph 2.5.1 above.

## 2.6 Terrestrial Enabling Works, Access, and Site Preparation

- 2.6.1 In order for the elements of the Kent Onshore Schemes to be constructed, enabling works are required such as the establishment of construction compounds, temporary bellmouths, and access tracks and drainage works. Details are provided in **Application Document 6.2.1.4 Part 1 Introduction Chapter 4 Description of the Proposed Project**.

## 3. Project Team Roles and Responsibilities

### 3.1 Project Responsibilities

- 3.1.1 The contractor will undertake the construction works in accordance with the DCO and its associated documents including the CNVMP, which will be based upon this OCNVMP. The relevant aspects of the CNVMP will be notified to the workforce at commencement of works to highlight the relevant commitments and responsibilities to those undertaking the work.
- 3.1.2 Overall roles and responsibilities relevant to the CNVMP are presented in Table 3.1. These roles may be delivered by multiple people across the Proposed Project, who are designated with that specific responsibility, e.g. Environmental Clerk of Works (EnvCoW). The EnvCoW will also draw on the experience of the technical specialists, who will advise in specific areas.

**Table 3.1 Overall roles and responsibilities relevant to the CNVMP**

| Role                         | Organisation  | Responsibilities                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environmental Manager        | Contractor    | The Environmental Manager will be responsible for the maintenance of all environmental plans and registers, including monitoring to ensure that the environmental measures and mitigation are implemented on site and as recorded within the CNVMP. They will be the main point of contact for all environmental matters on the Proposed Project. They will work closely with external stakeholders such as the relevant highway authorities. |
| EnvCoW                       | National Grid | The EnvCoW will monitor that the works proceed in accordance with relevant environmental DCO requirements and adhere to the required mitigation measures. The EnvCoW will be supported by appropriate technical specialist advisors depending on the location and potential impacts.                                                                                                                                                          |
| Permits and Consents Manager | Contractor    | The Permits and Consents Manager will work with the Environmental Manager to draft and submit permits and consents on behalf of the Proposed Project, track the progress, provide updates, and communicate approvals.                                                                                                                                                                                                                         |
| Works Supervisor             | Contractor    | The Works Supervisor will be responsible for delivering the site works in accordance with the requirements of the CNVMP and implementing good environmental practices required by the Environmental Manager. They will be responsible for managing operatives, plant, and their areas of work in accordance with the principles of good environmental practice.                                                                               |

| Role                          | Organisation               | Responsibilities                                                                                                                                                                                                            |
|-------------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical specialist advisors | Contractor / National Grid | These will have the relevant experience to supervise the relevant aspects of the works, which might include an arboriculturist, land contamination specialist, soil specialist, ecologist, archaeologist, acoustician, etc. |

## 3.2 Information Training and Awareness

- 3.2.1 In accordance with control and management measure GG05 in **Application Document 7.5.3.1 CEMP Appendix A Outline Code of Construction Practice**, construction workers and maintenance staff will undergo training to increase their awareness of environmental issues which will include topics relevant to the CNVMP.
- 3.2.2 Regular environmental toolbox talks will be provided by the contractor. These will give targeted information about site-specific issues or activities taking place at that time.

## 4. Construction Noise and Vibration Management

### 4.1 Construction Noise and Vibration Assessment

#### ES Construction Noise and Vibration Assessment

- 4.1.1 The assessment of construction noise and vibration impacts presented in **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration** is indicative, based on available construction information, including those used on similar projects. Additionally, the assessment excluded mitigation measures, such as localised screening. The assessment therefore provided an indication of likely impacts and highlighted potential construction noise and/or vibration ‘hot-spots’ requiring further consideration of mitigation and BPM during the planning and construction phases. Indicative mitigation measures were identified at the hot-spots. The identified hot-spots and indicative mitigation measures are provided below in Section 4.3 of this OCNVMP.

#### Further Construction Noise and Vibration Assessment

- 4.1.2 The contractor will conduct detailed construction noise and vibration assessments to determine whether there are likely to be any new or different significant adverse effects at NSR compared to the indicative assessment presented in the ES, and therefore whether additional measures, including site-specific BPM, may be required. The contractor will then identify the required site-specific mitigation measures and update the CNVMP accordingly to ensure the measures are implemented.
- 4.1.3 Noise and vibration impacts will be assessed by the contractor in accordance with applicable guidance, such as BS 5228-1 (BSI, 2014) and BS 5228-2 (BSI, 2014).

### 4.2 General Measures

- 4.2.1 General noise and vibration control measures are listed in BS 5228-1 and BS 5228-2, which are the primary guidance documents for the assessment and control of noise and vibration from construction works.

#### Best Practicable Means (BPM)

- 4.2.2 BPM is defined in Section 72 (CoPA) and Section 79 of the EPA (as amended by the Noise and Statutory Nuisance Act 1993) as those measures which are:
- “reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications.”*
- 4.2.3 National Grid will require its contractor to consider mitigation in the following order:
- design of the works in terms of techniques and plant: Methods/approaches with lower noise and vibration consequences should be selected over those with higher consequences unless there are significant penalties in terms of cost, health safety or

environmental impact, or delays to the programme which also has cost implications (though it should also be understood that the elongation of the duration of exposure of NSR to noise by amending methods to reduce noise levels may also be undesirable, depending on the context);

- BPM as identified above, including:
  - noise and vibration control at source: for example the selection of quiet and low vibration equipment;
  - use of equipment with proprietary acoustic treatments (such as enclosure of generator equipment);
  - review of construction methodology to consider quieter methods;
  - location of equipment on site;
  - control of working hours;
  - the provision of acoustic screening at locations (and for specific activities); and
  - the use of less intrusive audible warnings such as broadband vehicle reversing alarms to be used in sensitive areas.

## 4.3 Specific Mitigation Measures

### Specific Indicative Mitigation Measures Identified in ES

#### Construction Noise

- 4.3.1 The assessment presented in **Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration** identified potential significant adverse effects at:
- four construction works sites affecting seven NSR due to daytime and potential weekend construction noise.
- 4.3.2 No significant adverse effects have been identified from potential night-time works.
- 4.3.3 National Grid has committed to undertake additional mitigation to reduce the significant effects to a non-significant level. Additional temporary noise mitigation measures will be put in place to reduce noise levels from construction plant and machinery at the following locations, unless a detailed assessment is undertaken at a later stage that demonstrates that no significant noise impacts would occur to nearby NSR:
- Access off Cottington Road;
  - Access off Ebbsfleet Lane; and
  - Access off Ebbsfleet Lane (through golf centre).
- 4.3.4 In addition to the above, there is one high sensitivity NSR in the vicinity of proposed works; namely the Great Oaks Small School (Receptor ID E\_35). Although significant adverse effects from construction noise and vibration are not expected at this location, specific consideration will be given to this NSR by the contractor in order to reduce potential adverse effects of noise and vibration during construction as far as practicable through the use of BPM.

- 4.3.5 With regards to ecological receptors, there are also potential significant adverse effects from noise on the Sandwich Bay to Hacklinge Marshes Site of Special Scientific Interest (SSSI), and Abbey Farm Wetlands, without mitigation.
- 4.3.6 Examples of construction noise mitigation measures are provided in Table 4.1 with the attenuation values that these typically achieve.

**Table 4.1 Examples of construction noise mitigation measures**

| Example Mitigation                                                                     | Likely Attenuation                                                                           |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Screening                                                                              | 5 dB where activities are partially obscured and 10 dB where activities are totally obscured |
| Specified use of quieter plant                                                         | 5 to 10 dB                                                                                   |
| Suitable material handling methods. Do not drop materials from excessive heights       | Up to 15 dB                                                                                  |
| Alternative construction methods                                                       | 10 to 20 dB                                                                                  |
| Use of an acoustic shed with adequate ventilation around trenchless crossing machinery | Up to 15 dB                                                                                  |
| Use of temporal restrictions                                                           | Avoiding temporal significance criteria being exceeded.                                      |

- 4.3.7 The contractor will conduct detailed construction noise assessments to determine whether there are likely to be any new or different significant adverse effects at NSR and therefore whether additional measures, including site-specific BPM, may be required.

### **Construction Vibration**

- 4.3.8 The assessment presented in **Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration** did not identify any potential significant adverse effects from construction vibration.
- 4.3.9 The contractor will conduct detailed construction vibration assessments to determine whether there are likely to be any new or different significant adverse effects at NSR and therefore whether additional measures, including site-specific BPM, may be required. Examples of construction vibration mitigation measures are provided in Table 4.2.

**Table 4.2 Example construction vibration mitigation measures**

| <b>Example Mitigation</b>                                                | <b>Likely Attenuation</b>                                                                                                                 |
|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Alternative construction methods (e.g. non-percussive/vibratory methods) | Would not generate material levels of vibration, therefore removing impact                                                                |
| Reducing energy per blow                                                 | Depends on the energy reduction but could be set relative to the impact thresholds. However, this may increase the duration of activities |
| Pre-boring for piled foundations                                         | Dependant on ground conditions                                                                                                            |

### Specific Indicative Mitigation Measures Identified by the Contractor

- 4.3.10 The CNVMP will include any site-specific noise and vibration mitigation measures identified by the contractor following their detailed construction noise and vibration assessment.

## 4.4 Applications for Prior Consent Under Section 61 of the Control of Pollution Act 1974

### Introduction

- 4.4.1 With the implementation of noise and vibration control measures, such as those identified in Table 4.1 and Table 4.2, no significant residual effects are predicted based on the outcome of the construction noise assessment conducted as part of the ES. However, as noted above, the contractor will be required to prepare a construction noise and vibration assessment based on their proposed construction methodologies.
- 4.4.2 Where the results of the contractor's assessment indicate the potential for significant effects at NSR, or for working outside of core hours, a Section 61 application may be required. If this is the case, the contractor will liaise with Thanet District Council and/or Dover District Council to discuss the works and determine whether the works would benefit from a Section 61 consent. Where applicable, the contractor will then prepare and apply for Section 61 consent under CoPA (HM Government, 1974) for the applicable construction activities.
- 4.4.3 The number, extent (geographically and in terms of construction activities) and duration of Section 61 applications will be the subject of consultation between the contractor and Thanet District Council and/or Dover District Council.
- 4.4.4 Lead-in times will be agreed with Thanet District Council and/or Dover District Council in advance of the applications being submitted and a format for the applications will be agreed prior to the first applications being made. This is to ensure appropriate information is provided in a timely manner. Thanet District Council and/or Dover District Council are required to inform the applicant of their decision within 28 days of the final application being received. If this does not occur, then there is an appeals process

- 4.4.5 The contractor will be required to demonstrate that BPM, as defined under Section 72 of CoPA, are employed at all times for all activities, to minimise noise and vibration effects.
- 4.4.6 Agreement of proposed measures will be sought from Thanet District Council and/or Dover District Council through Section 61 consent, dispensation, or variation applications.

## Application Procedure

- 4.4.7 The Section 61 application will include the following information:
- an outline of the proposed construction methods, types, and numbers of plant to be used;
  - definition of the working hours required and, where these differ from the core working hours, a justification of the hours sought;
  - a programme of works which identifies the location and duration of each significant noise and/or vibration-generating activity;
  - the sound power levels, or sound pressure level at 10m, for each item of plant, for each relevant activity;
  - appropriate justification that the method and plant proposed demonstrates that BPM has been employed to control noise and vibration impacts;
  - predicted noise and vibration levels at specified NSR supported by calculations following the methodology in BS 5228-1 (BSI, 2014) for noise and BS 5228-2 (BSI, 2014) for vibration and the likely effects of these levels on affected NSR, and the likely durations of these effects;
  - all steps to be employed to minimise noise and vibration during the works;
  - proposals for noise and vibration monitoring including frequency, locations relative to each work site, reporting proposals etc.; and
  - proposals for the notification of occupants/stakeholders affected by works.

## Unscheduled Overruns

- 4.4.8 In the event that planned works, covered by consent (either a full Section 61 application or dispensation/variation) extend beyond the approved working hours or generally agreed construction period, and/or continue due to unforeseen circumstances that would affect safety or engineering practicability, Thanet District Council and/or Dover District Council will be kept informed of the nature, time, location, and reasons for the overrun as soon as possible, and records kept by the site management.
- 4.4.9 Thanet District Council and/or Dover District Council will be requested to provide a telephone number and nominate an office to receive such notifications. Overruns, and the reasons for these, will be reviewed by National Grid, its contractor, and Thanet District Council and/or Dover District Council, with the aim of reducing the potential for further unplanned overruns if these are likely to result in significant noise or vibration effects.
- 4.4.10 In the case of work required in response to an emergency (or which, if not completed, would be damaging or unsafe) Thanet District Council and/or Dover District Council will

be advised as soon as is reasonably practicable of the reasons for, and likely duration of, such works.

## Suitably Qualified Persons

- 4.4.11 The person(s) responsible for the development of Section 61 applications and variations, and for the associated noise and vibration calculations and/or monitoring, will need be able to demonstrate the following to be deemed competent:
- appropriate training and education relevant to the management of construction noise and vibration;
  - experience of the Section 61 process and of monitoring of noise and vibration; and
  - they hold a 'certificate of competence' from the Institute of Acoustics (IoA) course, 'Environmental Noise Measurement' (or equivalent);
- or,
- confirmation that they are, at minimum, an Associate Member of the IoA (AMIOA).
- 4.4.12 Any team leader associated with the above must be able to demonstrate all of the above and also be a full member of the IoA (MIOA) as a minimum.

## 4.5 Public Notification and Communications

- 4.5.1 The contractor will implement a system for the provision of information to local residents and occupiers about the works. A community relations team will be appointed to provide dedicated community relations and external communication support during construction. The information to be provided to local residents will be specific to the works to be carried out, describing the nature of the works, the location and extent of the works, the duration of works, and the hours to be worked.
- 4.5.2 Local residents will be informed of the commencement and likely duration of the construction work activities through community liaison in accordance with control and management measure GG27 detailed in **Application Document 7.5.3.1 CEMP Appendix A Outline Code of Construction Practice**. The letter(s) will be tailored to a specific area and will reflect the works to be carried out and the duration of works. The letter will include a contact telephone number for public information. In addition, an emergency number will be displayed at the entrance to the compounds.
- 4.5.3 The title and contact details for the Proposed Project will be displayed at the entrance to the main site compound. This will include an emergency telephone number. In addition, details of the works, including contact details, will be provided to the relevant community groups, such as the local parish councils and landowners before work commences.
- 4.5.4 A free telephone project helpline and project website will be maintained and managed by the National Grid community relations team. The project helpline and website information will be visible on boards placed in appropriate locations where they will be visible to the public, including the main site compound. The telephone number and project website details will be provided to the relevant planning authorities and other relevant parties.
- 4.5.5 The community relations team will record the details of any complaints and how these are to be investigated and appropriately managed. Further details about the complaints

procedure can be found in Section 5 of **Application Document 7.5.3 Outline Onshore Construction Environmental Management Plan (CEMP)**.

## 4.6 Noise and Vibration Monitoring

### Introduction

- 4.6.1 It is not currently proposed that routine noise and/or vibration monitoring will be undertaken during the construction period. However, the need for monitoring, and any potential monitoring locations, will be identified in any Section 61 applications for specific activities where required and will be the subject of discussion between the contractor, National Grid, and Thanet District Council and/or Dover District Council prior to agreement of any Section 61 application.
- 4.6.2 In the event that complaints regarding noise and/or vibration are received, noise and/or vibration measurements may be undertaken, either at the complainant's property or at a suitable known reference distance, if appropriate.
- 4.6.3 Where applicable, monitoring will be carried out in accordance with the requirements set out in this Section. Meetings will be sought to be held Thanet District Council and/or Dover District Council, to review and agree on the general requirements for monitoring if these have not already been agreed through the DCO process.
- 4.6.4 Where noise or vibration monitoring is to be implemented, as a minimum it will be in accordance with the procedures described in this Section.

### Noise Monitoring

- 4.6.5 Noise monitoring carried out either through pre-agreed schemes of monitoring or in response to complaints will be undertaken using the following procedures.
- 4.6.6 Noise monitoring will be conducted in accordance with the methodology described in Annex G of BS 5228-1 (BSI, 2014).
- 4.6.7 During the activity working hours, noise levels will be measured at either free-field or façade positions of the most affected façade of any occupied dwelling or other building used for residential purposes. If the location is free-field, then the levels will be corrected to façade by the addition of 3 dB.
- 4.6.8 The total ambient noise level,  $L_{Aeq,T}$  from all sources when measured between 1.2 m and 2 m above the ground at the monitoring locations will either not exceed the appropriate level that is agreed with Thanet District Council and/or Dover District Council through the Section 61 process.

### Vibration Monitoring

- 4.6.9 The contractor will normally limit vibration arising from site activities at any residential building to a level of 1.0 mm/s PPV.
- 4.6.10 Where works that may induce high levels of vibration, monitoring will be undertaken at the external foundations of the nearest representative NSR. The monitoring will be undertaken in accordance with Section 9, of BS 5228-2 (BSI, 2014).
- 4.6.11 In relation to standard buildings and structures, monitoring is required to ensure that PPV levels of 12.5 mm/s PPV are not exceeded for any vibration-generating works,

such as percussive or vibratory piling, or vibratory compaction. A lower trigger (typically 5 mm/s PPV) will be set such that warning is provided before exceeding 12.5 mm/s PPV.

- 4.6.12 Lower threshold values may be applicable to some structures if they are more sensitive to vibration. This would be determined by the contractor prior to starting works.

## Exceedance Actions

- 4.6.13 During monitoring, in the event of a Construction Noise or Vibration Threshold Level exceedance, the responsible contractor will implement the following measures:
- notify National Grid of the exceedance;
  - immediately undertake an investigation of construction/demolition activities on site to ascertain if any work activities are being implemented contrary to specified noise or vibration control measures. If the exceedance is directly attributable to the Proposed Project, then the specific work activity suspected of causing the exceedances will be stopped as soon as it is safe to do so, and the contractor will determine why the appropriate measures of the CNVMP were not being implemented;
  - remedial measures will be determined and implemented where appropriate to ensure no repeat of the Construction Noise or Vibration Threshold Level exceedance;
  - work activities identified to have caused the exceedance will not be allowed to continue/resume until the agreed remedial measures have been implemented;
  - identify and rectify causes of the exceedance;
  - record actions taken to identify and rectify the exceedance;
  - if the cause of the Construction Noise Threshold Level being breached is not related to site operations, record the outcome of the investigation once the investigation is completed; and
  - report the above to Thanet District Council and/or Dover District Council according to any agreed protocol.

## Repeated Exceedances

- 4.6.14 In the event of a series of repeated exceedances of the Construction Noise or Vibration Threshold Levels within a short period of time (for example, should three or more exceedances occur within consecutive monitoring periods) the following course of action will be taken by the contractor:
- identification of exceedances;
  - following identification of an exceedance, determine whether the exceedances are directly attributable to the Proposed Project;
  - inspection of all works currently being undertaken at the relevant construction site or area to determine if the noise and vibration control measures, as outlined within the CNVMP, are being implemented appropriately;
  - confirmation of the root cause of the exceedance within one hour. If the exceedance is identified to have been caused by a third party, details and location of third-party activities will be recorded and communicated to the third party. If the exceedance is

directly attributable to the Proposed Project, then the specific work activity suspected of causing the exceedance will be stopped as soon as is safe to do so and the contractor will determine if the appropriate measures of the CNVMP were being implemented. Remedial measures to ensure no repeat of the Construction Noise or Vibration Threshold Level exceedance will be identified and implemented. Work activities determined to have caused the Construction Noise or Vibration Threshold Level exceedance will not be allowed to continue/resume until the agreed remedial measures have been implemented; and

- within 48 hours of the exceedance of three or more sequential exceedances, the contractor will conduct an investigation to determine which activities and/or decisions resulted in the exceedances occurring. A report detailing the findings of the investigation will be compiled by the contractor and provided to National Grid, this will be made available to Thanet District Council and/or Dover District Council on request.

## 5. Implementation

### 5.1 Implementation of the CNVMP

- 5.1.1 National Grid will put in place robust procedures to inform and supervise all those working on the Proposed Project including its contractor, to make sure the control measures set out in the CNVMP are adopted when undertaking the construction of works authorised by the DCO. The main responsibility for implementing these control measures will fall to the contractor.
- 5.1.2 The contractor will brief all operatives on the specific details within the CNVMP prior to the commencement of works. The briefings will be delivered by a suitably trained member of the team such as the site supervisor, Construction Manager or Environmental Manager.

### 5.2 Site Checks and Reporting

- 5.2.1 Regular site checks will be carried out across the Proposed Project to monitor compliance with the CNVMP. The programme of site inspections will be controlled by the Environmental Manager who will draw on appropriate suitably experienced specialists for specific tasks. The overarching inspections are summarised below in Table 5.1. Immediate action including, if necessary 'stopping a job', will be taken should any incidents or non-conformance with the CNVMP be found during inspection.
- 5.2.2 Site checks and inspections will include checks against compliance with control and management measures and other commitments made by the Proposed Project.

**Table 5.1 Anticipated site checks relevant to the CNVMP**

| Inspection Type            | Purpose                                                                                                                                                                                                                                                            | Who                                       | Frequency |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------|
| Environmental Inspections  | To monitor compliance with project commitments and the environmental standards.<br>To record adherence to control and management commitments and raise actions where concerns are identified.<br>To check mitigation measures for sensitive features are in place. | Environmental Manager<br>EnvCoW           | Weekly    |
| Audits (External/Internal) | Formal audit process for internal Management System.                                                                                                                                                                                                               | External Auditor<br>Environmental Manager | Annual    |

| Inspection Type            | Purpose                                                                                                                                                                                                                    | Who              | Frequency                           |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------------------|
| Site Checks                | To ensure that working practices are carried out in accordance with approved methods, standards and control and management commitments. These will also check compliance with requirements agreed in any applicable permit | Works Supervisor | Daily visual check in working area. |
| Environmental Observations | Allows all staff to raise concerns or control and management ideas to safeguard continual improvement and innovation.                                                                                                      | All staff        | As required.                        |

- 5.2.3 The results of inspections will be recorded in an Environmental Log. Findings will be disseminated to the wider construction team and additional procedures put in place if required.

## 5.3 Non-Compliance Procedure

- 5.3.1 The EnvCoW will generally be responsible for undertaking site audits to check compliance with the CNVMP. All incidents associated with the construction of the Proposed Project, including environmental incidents and non-conformance with the CNVMP, will be reported and investigated. Where the contractor, suppliers or sub-contractors are not delivering the requirements, National Grid will review performance and will conduct further training and issue formal warnings as appropriate.

## 5.4 Community Liaison

- 5.4.1 In accordance with control and management measure GG27 detailed in **Application Document 7.5.3.1 CEMP Appendix A Outline Code of Construction Practice**, members of the community and local businesses will be kept informed regularly of the works through active community liaison. This will include notification of noisy activities, heavy traffic periods and start and end dates of key phasing. A contact number will be provided which members of the public can use to raise any concerns or complaints about the Proposed Project. All construction-related complaints will be logged by the contractor (s) in a complaints register, together with a record of the responses given and actions taken. This will be made available to local authorities for review on request. Further details can be found in Section 5 of **Application Document 7.5.3 Outline Onshore Construction Environmental Management Plan (CEMP)**.

## 5.5 Complaints Procedure

- 5.5.1 The complaints procedure for the Proposed Project is outlined within Section 5 of **Application Document 7.5.3 Outline Onshore Construction Environmental Management Plan (CEMP)**.

## 5.6 Change Process

### Introduction

- 5.6.1 This section explains the process for updating the CNVMP alone. This does not cover changes to the DCO (material or non-material) which would be managed through the process set out in Schedule 6 of the Planning Act 2008.
- 5.6.2 Therefore, the below process is limited to changes that need to be made to the CNVMP.

### CNVMP Changes

- 5.6.3 It may be necessary to amend the details contained in the CNVMP as a result of the iterative discussion and engagement that will continue after the NVMP has been approved. The resulting changes would not alter any of the underlying commitments, mitigations and methodologies set out in the CNVMP. An example may be where a pre-construction assessment identifies that a measure already committed to is no longer required in the CNVMP. In every case, consideration will be given to any changes to the outcome of the assessment of environmental effects.
- 5.6.4 Where there is a proposed change to the CNVMP, National Grid will provide details to the relevant planning authority together with evidence of relevant stakeholder engagement, whereupon the relevant planning authority will, acting reasonably, endeavour to respond within 28 days to either confirm its consent to the change to the CNVMP or provide its reasons why the change is not accepted.

# References

1. BSI. (1993). *BS 7385-2: 1993 Evaluation and measurement for vibration in buildings – Part 2: Guide to damage levels from groundborne vibration*. London: BSI.
2. BSI. (2014). *BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites. Part 1: Noise*. London: BSI.
3. BSI. (2014). *BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites. Part 2: Vibration*. London: BSI.
4. HM Government. (1974). *Control of Pollution Act 1974*. Retrieved from legislation.gov.uk: <https://www.legislation.gov.uk/ukpga/1974/40/contents>
5. HM Government. (1990). *Environmental Protection Act 1990*. Retrieved from legislation.gv.uk: <https://www.legislation.gov.uk/ukpga/1990/43/contents>

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