



# Triton Knoll Offshore Wind Farm Limited Triton Knoll Electrical System

Outline Onshore Code of Construction Practice  
(Revision B)

February 2016

APFP Regulation 5(2)(q)

Triton Knoll Offshore Wind Farm  
Limited

## Triton Knoll Electrical System

Outline Onshore Code of Construction  
Practice (Revision B)

February 2016

Drafted By:	TKOWFL
Approved By:	Kim Gauld-Clark and Paul Carter
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Triton Knoll Offshore Wind Farm Ltd  
Trigonos  
Windmill Hill Business Park  
Whitehill Way  
Swindon  
SN5 6PB

T +44 (0)845 720 090

Email: [tritonknoll@rwe.com](mailto:tritonknoll@rwe.com)

I [www.rweinnogy.com](http://www.rweinnogy.com)

[www.rweinnogy.com/tritonknoll](http://www.rweinnogy.com/tritonknoll)

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## 1 SUMMARY

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- 1.1 This Outline Onshore Code of Construction Practice (hereafter referred to as the Outline CoCP) sets out management measures which will be taken by Triton Knoll Offshore Wind Farm Limited to manage the potential environmental impacts of construction of the Triton Knoll Electrical System (TKES) and limit the disturbance from construction activities such as site preparation, material delivery and removal, works activities and site reinstatement as far as is reasonably practicable.
- 1.2 The Outline CoCP also introduces the Outline Construction Environment Management Plan (CEMP) and related subject-specific management plans which are listed as required documents for each stage of the proposed works by Requirement 14 of the draft development consent order (DCO). The Outline CEMP identifies the objectives and some of the management measures for the TKES to minimise environmental impacts during construction. Many of those detailed management measures appear within respective outline environmental management plans which are provided as Appendices to the Outline CoCP. Where no detailed management plan is required for a specific environmental topic, full details of the management measures to be implemented are included within the Outline CEMP.

## 2 INTRODUCTION

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### Overview

- 2.1 Triton Knoll Offshore Wind Farm Limited (TKOWFL) was granted development consent for the Triton Knoll array in July 2013. The array will be located approximately 33 km off the Lincolnshire coast, shown in Figure 1.1.
- 2.2 TKOWFL is submitting an application to the Planning Inspectorate (PINS), on behalf of the Secretary of State for Energy and Climate Change, for a Development Consent Order (DCO) for the Triton Knoll Electrical System (the proposed development) under the Planning Act 2008. The Triton Knoll Electrical System (TKES) will connect the consented Triton Knoll Offshore Wind Farm (TKOWF) to the National Grid substation at Bicker Fen, Boston, and will comprise offshore and onshore export cable circuits, landfall infrastructure, an onshore electrical compound, an onshore substation and works at the Bicker Fen substation.
- 2.3 All terms, acronyms and abbreviations used within this document are explained on first use, and / or set out in full within the Glossary appearing in the Environmental Statement (the ES) (Application Document 6.2).

### The Applicant

- 2.4 TKOWFL is a joint venture between two leading international energy companies; RWE Innogy UK Limited and Statkraft UK Limited. RWE Innogy UK is the UK subsidiary of the German renewable energy company RWE Innogy (part of RWE AG), a company with a strong and diversified position in renewable energy development. Statkraft UK Limited is the UK subsidiary of Statkraft Group, Europe's largest generator of renewable energy and the leading power company in Norway.

### Purpose of the Outline CoCP

- 2.5 This Outline CoCP sets out management measures which will be taken by TKOWFL to manage the potential environmental impacts of construction of the TKES and limit the disturbance from construction activities such as site preparation, material delivery and removal, works activities and site reinstatement as far as is reasonably practicable.

- 2.6 This is an outline document that, by reference to the assessments reported in the ES (Application Document 6.2), sets out the key elements that will be secured in the detailed CoCPs submitted to the relevant planning authorities to discharge Requirement 14 of the DCO.

## Requirement for an Outline CoCP

- 2.7 Requirement 14 of the DCO states:

### **Code of construction practice (onshore)**

*14.—(1) No stage of the onshore works shall commence until for that stage a code of construction practice in accordance with the outline code of construction practice (onshore) has, after consultation with the Environment Agency, been submitted to and approved by the relevant planning authority,. The code of construction practice must, where relevant to that stage, cover all the matters set out in the outline code of construction practice.*

*(2) The code of construction practice must include—*

- (a) construction method statements, including management of public rights of way and methods (including both trenchless and non-trenchless techniques) for the crossing of watercourses; main river crossings shall be undertaken using trenchless methods only;*
- (b) a health and safety plan;*
- (c) a scheme for noise and vibration management during construction;*
- (d) an air quality management plan;*
- (e) a soil management plan;*
- (f) an artificial light emissions plan;*
- (g) a site waste management plan;*
- (h) a pollution prevention and emergency incident response plan;*
- (i) a construction environment management plan; and*
- (j) a communications plan.*

*(3) The code of construction practice approved in relation to the relevant stage of the onshore works must be followed in relation to that stage of the onshore works.*

- 2.8 The draft DCO allows for the requirements to be discharged in stages by reference to the works identified in Part 1 of Schedule 1 of the DCO and

- shown on the Works Plans. As a result, it may be that in discharging the relevant requirement for a particular stage it is not necessary or appropriate for all of the key elements of the Outline CoCP or its Outline appendices to be included. If this is the case, the final CoCP submitted to the relevant planning authority for that stage will make it clear why any key element is not included.
- 2.9 In respect of the intertidal area (the area between mean high water springs and mean low water) as there is an overlap in jurisdiction between the relevant planning authority and the Marine Management Organisation (MMO) the Applicant's discharge of the relevant DCO requirements will be co-ordinated with the discharge of the relevant conditions of the deemed marine licence (which forms part of the DCO) to ensure that the onshore and offshore works are co-ordinated and the intertidal area is properly protected.
- 2.10 The final CoCP (or CoCPs) will be produced by the contractor appointed to undertake the TKES works and agreed with the relevant local authorities (Boston Borough Council, East Lindsey District Council and Lincolnshire County Council) prior to the start of relevant phases of work in accordance with Requirement 14 of the DCO.
- 2.11 TKOWFL will work with all contractors, sub-contractors and their suppliers to ensure compliance with the relevant provisions of the final CoCP. These requirements will be incorporated into the construction work contracts for the onshore elements of the proposed development.

### **Scope of the Outline CoCP**

- 2.12 This Outline CoCP relates to the onshore elements of the TKES, landward of Mean Low Water. Although this document does not relate to offshore works seaward of Mean Low Water, or any works above Mean Low Water that are principally marine activities, it has been drafted to tie in with the approach that will be taken in the carrying out of those works.
- 2.13 The Outline CoCP sets out in a single overarching document the environmental management controls that will be applied for the onshore works and formalises commitments made to the relevant planning authorities and statutory consultees in the Environmental Statement.

### **Structure of the Outline CoCP**

- 2.14 This Outline CoCP addresses:  
Section 3: a brief overview of the project



Section 4: general provisions and construction principles

Section 5: general site arrangements

- 2.15 This Outline CoCP also introduces the Outline CEMP and related subject specific management plans as listed in DCO Requirement 14. The Outline CEMP is appended to the Outline CoCP and identifies the objectives and some of the management measures for the TKES to minimise environmental impacts during construction. Many of those detailed management measures appear within respective environmental management plans which are provided as Outline Appendices to the Outline CoCP. Where no detailed management plan is required for a specific environmental topic, full details of the management measures to be implemented are included within the Outline CEMP.
- 2.16 Those specific management plans are detailed in Table 1-1 below, and outline versions of those documents are included as appendices to this Outline CoCP:

Table 1-1: **Environmental Management Plans**

Name	Description	Appendix
Outline Construction Method Statement(s)	Sets out the scope of the construction works for the project and the management methods employed to limit its environmental impacts	One
Outline Health and Safety Plan	Addresses the safety of construction workers, visitors to the site and the general public	Two
Outline Noise and Vibration Management Plan	Sets out the approach to minimising noise impacts and detail the methods that will be used.	Three
Outline Air Quality Management Plan	Sets out the approach to minimising emissions	Four
Outline Soil Management Plan	Sets out the approach to retain soil condition and quality and allow effective re-instatement.	Five
Outline Artificial Light Emissions Plan	Sets out the approach to minimising artificial light impacts and the methods that will be used.	Six
Outline Site Waste Management Plan	Sets out the approach to minimising and controlling the amount of construction waste to	Seven

	be disposed.	
Outline Pollution Prevention and Emergency Incident Response Plan	Sets out measures to avoid and control pollution, and the recording and response measures to be implemented in the case of a pollution incident, including a release of hazardous materials or fire	Eight
Outline Construction Environmental Management Plan	Includes environmental mitigation measures for each topic area from the ES and systems related to implementation and management of those measures.	Nine
Outline Communications Plan	Sets out procedures to make local communities aware of nature and timings of works, as well as key management measures	Ten

- 2.17 Each of the plans referred to within Table 1.1 are being provided as indicative outline plans at this stage in the application. Final plans which reflect these appendices will be included within the final CoCP submitted for each stage of the works.

### **Enforcement of the final CoCP**

- 2.18 The final CoCP will be enforceable through the DCO (Requirement 14) during site preparation and the construction of the Triton Knoll Electrical System.

### **Contractor and construction supervision**

- 2.19 All contractors and subcontractors will be required to comply with the principles and commitments set out in the final CoCP through the construction works contracts entered into by TKOWFL. TKOWFL will have overall responsibility to ensure compliance with these principles and commitments. The construction Project Manager will ensure that the commitments are met, audited and any remedial actions recorded.

### 3 TRITON KNOLL ELECTRICAL SYSTEM PROJECT DESCRIPTION

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- 3.1 A brief description of the onshore elements of the TKES is set out in the remainder of this section. A full project description for these elements can be found within Volume 3 Chapter 1, Onshore Project Description, of the ES (Volume 3, Chapter 1).

#### Cable Route

- 3.2 Up to 6 underground high voltage alternating current electricity (HVAC) circuits will be laid from the landfall north of Anderby Creek, to the North of Skegness, Lincolnshire, to the National Grid substation at Bicker Fen, near Boston, Lincolnshire (approximately 60 km). This route has been subject to a selection and refinement process. The entire cable system will be installed underground.
- 3.3 Temporary Construction Compounds (TCCs) locations have been identified to allow easy access to and from the cable route. The locations of the TCCs have been chosen to minimise impact on local residents, businesses and the environment. Those locations are identified at Table 1.6 of the Onshore Project Description ES chapter, (Volume 3, Chapter 1).
- 3.4 The TCCs will be utilised to store and distribute materials required for each section of the cable route and for welfare facilities. There are a significant number of natural breaks in the cable route caused by major roads, railways, rivers and major drains, with TCCs required to service each section. TCCs along the cable route are approximately 0.5 ha – 1.5 ha.
- 3.5 The cable corridor will be up to 60m wide. This includes space for:
- Fencing of the route;
  - Cable circuit trenches;
  - Temporary construction haul road;
  - Temporary drainage; and
  - Separate storage of topsoil and subsoil (to retain integrity) on both outer edges of the corridor.
- 3.6 The cables will be installed in plastic ducts laid in cable trenches. Jointing bays will be required approximately every 600m-1,000m along the route to join lengths of cables.

## Landfall

- 3.7 TKOWFL has identified an area just north of Anderby Creek, Lincolnshire as the landfall area. The landfall area is within a field to the north of an existing privately-owned raised access track. The above ground landfall infrastructure will be located within the defined Transition Joint Bay Search Area and the exact location of the works will be determined following pre-construction surveys and detailed design work.. The existing access track from Roman Bank to the landfall site will be improved to allow access for construction vehicles.
- 3.8 Up to six offshore transmission cables will come ashore at the landfall location at Anderby Creek. The offshore cables will be joined to the onshore transmission cables in underground Transition Joint Bays (TJBs). Trenchless techniques will be used to install cable ducts for the cables under the sea defences to minimise disturbance, with the offshore cables pulled through the ducts to the TJBs.
- 3.9 The trenchless techniques that may be used for the landfall cable installation are
- horizontal directional drilling (HDD);
  - micro boring; or
  - pipe jacking.
- 3.10 The technique that will ultimately be used will be determined by pre-construction surveys and studies, which will provide detailed information about the ground conditions to enable the most appropriate technique to be selected.

## Intermediate Electrical Compound

- 3.11 An onshore Intermediate Electrical Compound (IEC) is required approximately mid-way along the cable route, to provide system stability and improved efficiency of transmission. The location of this has been subject to consultation.
- 3.12 The IEC will contain Above Ground Electrical Infrastructure (AGEI) including switchgear, busbars, capacitors, reactors, reactive power compensation equipment, filters, cooling equipment, control and welfare buildings and

lightning protection rods (if required). A permanent security fence will surround the compound.

- 3.13 The site includes space for the above ground infrastructure, drainage, landscaping, permanent and temporary access roads and a TCC.

## **Substation**

- 3.14 A new onshore substation is required close to the existing Bicker Fen substation. The location of this has been subject to consultation.
- 3.15 The Triton Knoll substation will contain a number of elements including switchgear, busbars, transformers, capacitors, reactors, reactive power compensation equipment, filters, cooling equipment, control and welfare buildings and lightning protection rods (if required). A security fence will surround the compound.
- 3.16 The site includes space for the above ground infrastructure, drainage, landscaping, permanent and temporary access roads and a TCC.

## **Grid Connection and Unlicensed Works at National Grid Bicker Fen Substation**

- 3.17 Depending on the final design of the Triton Knoll substation, up to four export circuits will be required to transmit the power from the Triton Knoll Substation to the grid interface point at the existing National Grid substation at Bicker Fen (a distance of about 1800 m). The voltage will be 400 kV as required by National Grid.
- 3.18 National Grid Electricity Transmission (NGET) is responsible for undertaking work at the existing substation to facilitate connection of the TKOWF. Those works will be limited to works within the current Bicker Fen substation . These works include the installation of new switchgear and busbars and associated earthworks.
- 3.19 TKOWFL will undertake the Unlicensed Works within the NGET substation. This includes the installation of equipment such as cable sealing ends, circuit breakers, surge arrestors, disconnections, current and voltage transformers,

busbars and busbar clamps, power quality measurement equipment and a relay/marshalling room.

## Cable route construction and installation

- 3.20 A number of methods will be used for construction and installation of the cables. The final Construction Method Statement (CMS) prepared for each section of the TKES works will provide further details of the crossing method(s) used within that section of the works.
- 3.21 The following methods will principally be used for cable route construction and installation:

### Open-cut trenching

- 3.22 Open-cut trenching will be used to install the majority of the cable in relatively unconstrained areas. A trench will be excavated for each cable circuit, with ducts installed prior to the trench being back-filled. Cables will be pulled through the ducts from jointing pits.

### Trenchless techniques

- 3.23 Trenchless techniques will be used as an alternative methodology to cross significant environmental and physical features such as main rivers, major drains, all adopted road crossings and railways. Such techniques will minimise the impacts of the works on these environments. An NRSWA Section 50 licence will be procured for every adopted road crossing for the installation of the apparatus.
- 3.24 The Crossings Schedule identifies the obstacles on the cable route that will be crossed using trenchless techniques. The most suitable method for crossing obstructions will be determined during the construction stage of the project which may identify additional trenchless crossings. Requirement 5(10) of the draft DCO provides that:

*(10) Unless otherwise agreed by the relevant planning authority, following consultation with the relevant drainage boards, the Environment Agency and the highways authority, where identified in the crossings schedule for the purpose of passing under a relevant obstruction trenchless techniques shall be used to install the cable ducts and electrical circuits within Work Nos 2, 3, 5, 8, 11 14, 17, 19, 21, 22, 24, 26, 29, 31, 33, 37, 39, 42, 44 and 46.*

- 3.25 Where any variation to the trenchless technique identified within the Crossings Schedule is to be agreed with the relevant planning authority and other relevant bodies, in accordance with Requirement 5(10) of the draft DCO, that will be identified within the CMS for any particular stage of works. An Outline CMS is included at Appendix 1 to this Outline CoCP.

### **Other Crossings**

- 3.26 Where trenchless techniques are not used for the crossings of private roads, drains, ditches and other obstacles, alternative methodologies will be used.
- 3.27 Ditches may be flumed and cable ducts installed underneath the flumed ditch. Private roads may be open cut, with provision made for access where required.

### **Construction programme**

- 3.28 Construction periods for the various elements of the TKES are shown in Table 3-1.

**Table 3-1:** Triton Knoll Electrical System construction periods

Triton Knoll Electrical System Component	Pre-construction and Construction Work	Works Included
<b>Landfall</b>	Up to 14.75 months of activity over a 36 month period	This covers all associated works including: <ul style="list-style-type: none"> <li>• Site mobilisation including erection of fencing, and welfare and plant delivery;</li> <li>• Earthworks including ground raising for transition joint bays and access and drainage works;</li> <li>• Transition joint bay construction and HDD bores and duct installation</li> <li>• Cable pulling, cable jointing; and</li> <li>• Demobilisation, including removal of temporary work area.</li> </ul>
<b>Onshore cable circuits</b>	Up to 42 months of activity over a 54 month period  (For cable route section 3, including construction haul road to the Intermediate Electrical Compound, up to 54 months of activity over a 60 month period)	This covers all associated works including: <ul style="list-style-type: none"> <li>• Site mobilisation, fencing and welfare and plant delivery;</li> <li>• Earthworks and drainage works;</li> <li>• Open cut and trenchless duct installation, cable pulling, joint bay construction and cable jointing; and</li> <li>• Reinstatement, demobilisation and landscaping.</li> </ul>



Triton Knoll Electrical System Component	Pre-construction and Construction Work	Works Included
<b>Intermediate Electrical Compound</b>	Up to 46 months of activity over a 54 month period	This covers all associated works including: <ul style="list-style-type: none"> <li>• Temporary access road and permanent construction;</li> <li>• Site mobilisation, fencing and welfare and plant delivery;</li> <li>• Earthworks and drainage works;</li> <li>• Installation of electrical infrastructure; and</li> <li>• Reinstatement, demobilisation and landscaping.</li> </ul>
<b>Substation</b>	Up to 65 months of activity over a 71 month period	This covers all associated works including: <ul style="list-style-type: none"> <li>• Temporary and permanent access road construction;</li> <li>• Site mobilisation, fencing and welfare and plant delivery;</li> <li>• Earthworks and drainage works;</li> <li>• Installation of electrical infrastructure; and</li> <li>• Reinstatement, demobilisation and landscaping.</li> </ul>
<b>Unlicensed Works at National Grid Bicker Fen Substation</b>	Up to 12 months activity over an 18 month period	This covers all associated works including: <ul style="list-style-type: none"> <li>• Site mobilisation, fencing and welfare and plant delivery;</li> <li>• Earthworks;</li> <li>• Installation of electrical infrastructure; and</li> <li>• Reinstatement, demobilisation and landscaping.</li> </ul>

## 4 GENERAL PROVISIONS

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- 4.1 This section sets out the key provisions that will be applied by TKOWFL to the construction of the TKES. It also highlights where these key provisions will be secured in the plans that will be agreed with the relevant planning authorities as part of the CoCPs for each stage of the works authorised by the DCO.

### Construction Principles

- 4.2 The TKES will be constructed in an environmentally sensitive manner and will meet the requirements of all relevant legislation, codes of practice and standards identified in the Environmental Statement.

### Environmental Management

- 4.3 The TKES will be built, where reasonably practicable, in accordance with current best practice for minimising the adverse effects of construction on the environment and the local community.
- 4.4 TKOWFL will review the environmental performance of the main construction contractors as part of the tender selection process.

### Construction Environmental Management Plans

- 4.5 Final CoCPs will be developed by TKOWFL for the route of the works in consultation with the relevant planning authorities outlining the principles to be adopted by all contractors and subcontractors as explained in this Outline CoCP.
- 4.6 The implementation and management of these principles will be further developed in the CEMPs by the Principal Contractor, which shall follow the Outline CEMP contained at Appendix Nine to this Outline COCP. The Outline CEMP addresses each of the ES chapter topics in turn and sets out the mitigation measures which will be employed by the Principal Contractor in respect of those impacts, or direct attention to the specific environmental management plan where such measures are set out.
- 4.7 Separate environmental management plans on specific issues will also set out the procedures and records to be adopted for key areas where mitigation measures will be required. Table 1-1 above describes the plans that will be

required, and where indicative versions of such plans can be found within this Outline CoCP.

- 4.8 Each CEMP will be complied with by the Principal Contractor (or contractors) employed by TKOWFL to carry out the works for each stage of the works. The Principal Contractor will be an experienced contractor in the sector who will comply with industry best practice.
- 4.9 An Ecological Clerk of Works (ECoW) shall be employed for the duration of the project to ensure the mitigation, method statements and plans contained within those environmental management plans are implemented effectively.

## Health and Safety Principles

- 4.10 Appropriate industry standards will be adopted and implemented for the health, safety and welfare of the construction staff on the TKES and arrangements will be in place for the discharge of duties under the Construction (Design and Management) Regulations 2015 (or updated as appropriate).
- 4.11 The Principal Contractor for the onshore TKES works will develop Health and Safety Plans to address the safety of construction workers, visitors to the site and the general public for each stage of the TKES works. The Outline Health and Safety Plan (H&SP) is included at Appendix Two to this Outline CoCP, –. The final versions of the H&SP will set out how all health and safety risks are identified and managed in accordance with legal requirements and current best practice for each stage of the TKES works.

## Community Liaison

- 4.12 An identified member of the construction team will be responsible for communication with local residents, businesses, local councils and highways authorities. A Communications Plan will be submitted for comment to the relevant Local Authorities for each stage of the TKES Works. An Outline Communications Plan is set out in Appendix Ten to this Outline CoCP. Communication will be carried out in accordance with the final plan for each stage of the TKES works including information about types and timings of works, transport routes and likely hours of traffic movements and key traffic management measures.
- 4.13 The relevant Local Authorities will be informed in writing in advance of proposed works and key milestones. A system for dealing with enquiries or

complaints from the public, Local Authorities or statutory consultees will be agreed with the relevant local authorities and established by the Principal Contractor.

## 5 GENERAL SITE OPERATIONS

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### Working Hours

- 5.1 The proposed construction working hours would be controlled by Requirement 16 of the draft DCO, which states:

#### **Construction hours**

*17.—(1) Save as otherwise agreed in the code of construction practice and subject to paragraphs (2) and (3), construction of the onshore works and construction-related traffic movements to or from the site of the relevant work shall only take place between 0700 hours and 1900 hours Monday to Saturday with no activity on Sundays or bank holidays.*

*(2) If agreed in advance with the relevant planning authority construction of the onshore works and construction related traffic movements to or from the site of the relevant work may take place outside the hours specified in paragraph (1) for certain identified works, including—*

- (a) where continuous periods of construction are required for works such as concrete pouring and finishing, electrical circuit pulling and jointing, and testing;*
- (b) for the delivery and unloading of abnormal loads;*
- (c) for the landfall works;*
- (d) any other time critical element of the onshore works; or as otherwise agreed in the code of construction practice.*

*(3) Save for paragraph (4), all construction works which are to be undertaken outside the hours specified in paragraph (1) must be agreed in advance with the relevant planning authority.*

*(4) In respect of trenchless techniques—*

- (a) where continuous 24 hour working is required, the undertaker shall notify the relevant planning authority in advance of such works; and*
- (b) where a trenchless technique is to take place within 100m of an occupied dwelling, the works shall take place in accordance with the construction hours specified in paragraph (1) unless otherwise agreed in advance with the resident of that dwelling and notified to the relevant planning authority.*

- 5.2 In addition to the controls on construction hours set out within the DCO, the undertaker will comply with the following constraints imposed by this Outline CoCP. These are:

- Construction activities that generate potentially significant noise levels at the nearest noise sensitive receptors will generally be restricted to the hours of 07:30 to 19:00 on weekdays and 08:00 to 13:00 on Saturdays.
- Other construction activities (that are not likely to generate significant levels of noise at the nearest residential properties) may still take place outside of these hours during the standard working hours periods (07:00-19:00 Mon-Sat).
- It may be necessary to undertake trenchless works outside these hours in very specific circumstances as a trenchless drilling operation must be undertaken in one continuous operation. However, night-time working will be avoided wherever possible and the relevant Local Authority will be notified of any works that are necessary outside of the above hours prior to works taking place.
- Trenchless works will be completed in the shortest reasonably practical timescale.
- Where possible, trenchless works that are likely to result in significant noise effects at nearby residential receptors will be restricted to daytime working hours on weekdays. No trenchless work will be carried out at locations within 100 m of a residential property during night time hours without the permission of the property resident. No trenchless works will be carried out at locations less than 50 m from any residential property at any time.
- Residential properties located further than 100 m from trenchless compounds that could experience significant night-time noise levels due to night-time works will be offered temporary re-housing for the duration of those trenchless works.

5.3 Any variation to the construction hours to be agreed in advance with the relevant planning authority under draft DCO Requirement 17(2), will be addressed within the final CoCP submitted for the relevant stage of works, or subsequently agreed in writing with that authority.

### **General Site Layout and Good Housekeeping**

- 5.4 A good housekeeping policy will be applied to the construction areas and TCCs at all times. As far as reasonably practicable the following principles will be applied:
- Working areas to be kept in a clean and tidy condition;

- The site will be secured to prevent unauthorised access;
  - Wheel washing facilities will be cleaned frequently;
  - Open fires will be prohibited at all times;
  - All necessary measures will be taken to minimise the risk of fire and the contractor will comply with the requirements of the local fire authority;
  - Adequate welfare facilities will be provided for construction staff;
  - Waste from the construction areas will be stored securely to prevent wind blow; and
  - Waste will be removed at frequent intervals.
- 5.5 TCCs will be required for the storage of materials, plant, assembly of large items and parking of mobile plant and vehicles. Within these areas material and plant storage will be located to limit adverse environmental effects where possible.

## Screening and Fencing

- 5.6 Secure temporary fencing will be installed around the construction compounds and will also be provided for sections of the cable route as appropriate with allowances for private land access, stock crossing and relevant ecological constraints.
- 5.7 The type of fencing will be selected to suit the location and purpose and will be agreed with the relevant Local Authority. All boundary fences/screens will be installed prior to the commencement of works and maintained in a tidy condition and fit for purpose.
- 5.8 All construction areas will remain securely fenced at all times during construction. All temporary screening and fencing will be removed as soon as reasonably practicable after completion of the works.

## Site Security

- 5.9 Adequate security of the TCCs will minimise the opportunity for unauthorised entry, protect the public, and prevent theft from and damage to the works. Site gates will be secured when there is no site activity and appropriate security measures will be implemented. Where possible, access to construction areas will be limited to specified entry points and all personnel entries/exits will be recorded for security and health and safety purposes.

## Emergency Contacts and Procedures

- 5.10 An emergency response plan will be developed by the Principal Contractor in accordance with the Outline Pollution Prevention and Emergency Incident Response Plan (PPEIRP) at Appendix Eight of this Outline COCP for each stage of the TKES works and all contractors and subcontractors will work in accordance with this plan.
- 5.11 Emergency procedures will be developed for the onshore elements of the TKES works taking into account the anticipated hazards and the conditions at each work site.
- 5.12 The final PPEIRP for each stage of the TKES works will include:
- Emergency pollution control measures based on Environment Agency guidelines;
  - Fire and safety;
  - Site evacuation; and
  - Spill prevention and control procedures.
- 5.13 The emergency procedure will contain emergency phone of relevant local and statutory authorities. The procedures will be displayed at the work sites and all site staff will be required to follow them.

## Lighting and Visual Intrusion

- 5.14 External lighting of the construction site will be designed and positioned to:
- Provide the necessary levels for safe working;
  - Minimise light spillage or pollution; and
  - Avoid disturbance to adjoining residents and occupiers
- 5.15 An Artificial Light Emissions Plan (ALEP) for each stage of the TKES works will be agreed with the relevant Local Authority and implemented as approved. An Outline ALEP can be seen at Appendix Six of this Outline CoCP.

## Other Impacts

- 5.16 Other environmental impacts of the project will be minimised through the adoption of recognised methods to control dust, mud, noise and vehicle



emissions. The precise methods to be used will be agreed with the relevant authorities prior to works starting on site and will be contained within the:

- CEMP for each stage of the TKES works – to be based on the Outline CEMP at Appendix Nine of this Outline CoCP;
- Air Quality Management Plan (AQMP) for each stage of the TKES works – to be based on the Outline AQMP at Appendix Four of this Outline CoCP; and
- Noise and Vibration Management Plan (NVMP) for each stage of the TKES works – to be based on the Outline NVMP at Appendix Three of this Outline CoCP.

## Pest Control

- 5.17 The risk of pest/vermin infestation will be reduced by ensuring any putrescible waste is stored appropriately and regularly collected from the construction areas, and effective preventative pest control measures are implemented in accordance with the Outline CEMP at Appendix Nine of this Outline CoCP -. Any pest infestation will be dealt with promptly and notified to the relevant Local Authority as soon as possible.

## Waste

- 5.18 All waste arising during the construction of the project will be stored in designated waste areas located away from sensitive environmental receptors. Where appropriate, waste will be stored in secure containers to prevent the escape of waste and wind blow.
- 5.19 Hazardous wastes will be stored separately from other wastes. All waste will be handled and managed in accordance with the Duty of Care requirements. Each transport of waste from the site will be accompanied by a Waste Transfer Note which includes:
- A description of the waste (including an industry SIC code);
  - Quantity, and details of any pre-treatment undertaken;
  - Specific handling requirements (where appropriate);
  - The name and permit reference of the facility to where the waste is being taken; and
  - The waste carrier details.

- 5.20 These matters will be addressed in detail in accordance with the Outline Site Waste Management Plan (SWMP) at Appendix Seven of this Outline CoCP.

## **Welfare**

- 5.21 The TCCs shall be serviced by temporary construction offices and necessary welfare facilities, including mess rooms, locker rooms, showers and toilet facilities, plus facilities for mobile construction teams either at the beach area or along the cable corridor, in compliance with CDM 2015 (or updated as appropriate).

## **Crane Arcs**

- 5.22 Cranes will be operated in accordance with the requirements of BS 7121, Code of Practice for Safe Use of Cranes.

## **Utilities**

- 5.23 Where the construction works will be in close proximity to existing utilities, or any works affecting existing drains, sewers or chambers works will be undertaken in a manner agreed with the relevant statutory authority.
- 5.24 Details of procedures to be followed will be set out in the CMS for each stage of the TKES works. An Outline CMS can be seen in Appendix One of this Outline CoCP). Those procedures will include preventing surface water entering foul sewers and foul sewage entering surface water drains.

## **Monitoring**

- 5.25 As part of the ongoing process for ensuring that impacts due to the construction of the TKES are minimised, a monitoring strategy will be established between TKOWFL and the relevant local authorities. Each contractor will be required to comply with the final CoCP and the TK Environmental Clerk of Works will be required to monitor compliance and report breaches.
- 5.26 In addition, a public hotline will be made available to members of the public. The hotline number will be published within the local newspaper for the area, so that the general public can voice their queries or complaints.

## **Clearance of Site on Completion**

- 5.27 TCCs and accesses will be cleared as work progresses and when they are no longer required for the construction. On completion of construction work all plant, temporary buildings or vehicles will be removed.
- 5.28 Following completion of works the working area will be reinstated to its previous condition. Further details will be set out in and the CMS for each stage of the TKES works, which shall accord with the Outline CMS; which can be seen at Appendix One of this Outline CoCP.

