

# Vattenfall Wind Power Ltd Thanet Extension Offshore Wind Farm

Annex E to Appendix 8 to Deadline 8 Submission: Plan of Plans

Relevant Examination Deadline: 8

Submitted by Vattenfall Wind Power Ltd

Date: June 2019

Revision B

Drafted By:	Vattenfall Wind Power Ltd
Approved By:	Daniel Bates
Date of Approval:	June 2019
Revision:	В

Revision A	Original document submitted to the Examining Authority
Revision B	Revised document submitted to the Examining Authority

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# **Offshore Pre-Commencement Requirements/ Conditions**

Draft DCO Schedule 1, Part 3

DML Schedule 11 Part 2 & Schedule 12 Part 4

Detailed design parameters offshore Requirement 2 - 6

<u>Aviation safety</u> Requirement 7

### **Pre-construction Plans and documentation**

Schedule 11, Condition 13, 14 & 15 Schedule 12, Condition 11, 12, 13 & 14

### **Design Plan**

Schedule 11, Condition 13(1)(a) Schedule 12, Condition 11(1)(b)

# Construction programme & Monitoring Plan

Schedule 11, Condition 13(1)(b) Schedule 12, Condition 11(1)(c)

### **Construction Method Statement**

Schedule 11, Condition 13(1)(c) Schedule 12, Condition 11(1)(d)

# Project Environmental Management Plan

Schedule 11, Condition 13(1)(d) Schedule 12, Condition 11(1)(e)

# Marine Pollution Contingency Plan

# Scour Protection Management & Cable Protection Plan

Schedule 11, Condition 13(1)(e) Schedule 12, Condition 11(1)(f)

### <u>Draft Marine Mammal</u> Mitigation Protocol

Schedule 11, Condition 13(1)(f) Schedule 12, Condition 11(1)(q)

### <u>Draft Marine Mammal</u> <u>Mitigation Protocol (UXO)</u> Licence not sought at this time

# <u>Cable Specification, Installation</u> <u>& Monitoring Plan</u>

Schedule 11, Condition 13(1)(g) Schedule 12, Condition 11(1)(h)

# Written Scheme of Archaeological Investigation

Schedule 11, Condition 13(1)(h) Schedule 12, Condition 11(1)(i)

# Offshore Operations & Maintenance Plan

Schedule 11, Condition 13(1)(i) Schedule 12, Condition 11(1)(j)

# Aids to Navigation Management Plan

Schedule 11, Condition 13(1)(j) Schedule 12, Condition 11(1)(k)

### Site Integrity Plan

Schedule 11, Condition 13(1)(k)(i) Schedule 12, Condition 11(1)(l)

# Ringed Plover Mitigation Plan

Schedule 12, Condition 11(1)(m)

# Emergency Response Co-operation Plan (ERCoP)

Schedule 11, Condition 15(7) Schedule 12, Condition 13(7)

# **Contamination Prevention Plan**

Schedule 12, Condition 11(1)(a)

# Shipping & Navigation Liaison Plan

Schedule 11, Condition 25(2) Schedule 12, Condition 28(2)

### **Notifications & Inspections**

Schedule 11, Condition 7 & 22 Schedule 12, Condition 6, 20 & 23

### **Notification to the MMO**

Schedule 11, Condition 7(13) & 22(1) Schedule 12, Condition 6(6), 6(13), 20 & 24(1)

### **Kingfisher Information Service Notification**

Schedule 11, Condition 7(7) Schedule 12, Condition 6(7)

### **Notice to Mariners**

Schedule 11, Condition 7(8 & 9) Schedule 12, Condition 6(8 & 9)

### **Notification to UK Hydrographic Office**

Schedule 11, Condition 7(10 & 11) Schedule 12, Condition 6(10 & 11)

### **Aids to Navigation**

Schedule 11, Condition 8 & 9 Schedule 12, Condition 7 & 8

### **Aviation Safety**

Schedule 11, Condition 10

### **Fisheries Liaison and Co-existence Plan**

Schedule 11, Condition 20 Schedule 12, Condition 22

# Outline documents submitted in the examination

Outline documents submitted with the application

Document submitted with the application

### **Pre-construction Monitoring & Surveys**

Schedule 11, Condition 16 Schedule 12, Condition 15

### **Biogenic Reef Monitoring Plan**

Schedule 11, Condition 16(2)(a) Schedule 12, Condition 15(2)(a)

# Swath-bathymetry Survey & Side Scan Sonar Plan

Schedule 11, Condition 16(2)(b) Schedule 12, Condition 15(2)(d)

# <u>Saltmarsh Mitigation, Reinstatement</u> & Monitoring Plan

Schedule 12, Condition 15(2)(c) and 17(2)(c)

### **Seabed Preparation and clearance**

Schedule 11, Condition 21 Schedule 12, Condition 23

### **Offshore Ornithology Monitoring Plan**

Schedule 11, Condition 13(1)(k)(ii)

### **Construction Monitoring**

Schedule 11, Condition 17 Schedule 12, Condition 16

### Reporting of impact pile driving

Schedule 11, Condition 19(1)

### **Construction Traffic Monitoring Plan**

Schedule 11, Condition 17(4)

### **Reporting of Impact Pile Driving**

Schedule 11, Condition 19 Schedule 12, Condition 19

### Chemicals, drilling and debris

Schedule 11, Condition 11 Schedule 12, Condition 9

### **Post-consent requirement**

Post-consent document

# **Design Plan**

S.11, C.13(1)(a) / S.12, C.11(1)(b) Individual plans required for the Generation <u>and</u> Export Cable System Marine Licences

# Information Required **Foundations** Dimensions of foundations Proposed location of WTG and foundation type Exclusions zones and micrositing requirements **Foundations** WTGs Plan showing indicative layout Met mast of all structures Offshore substation/ platforms Rotor diameters and spacing of WTGs Dimensions of structures Inter-array cable & Lengths and arrangements of export cable cables (as informed by layouts) All packages Programme of construction

### Detail

A design plan at a scale of between 1:25,000 and 1:50,000, including detailed representation on the most suitably scaled admiralty chart.

Proposed layout of WTG in accordance with the recommendations contained in MGN543.

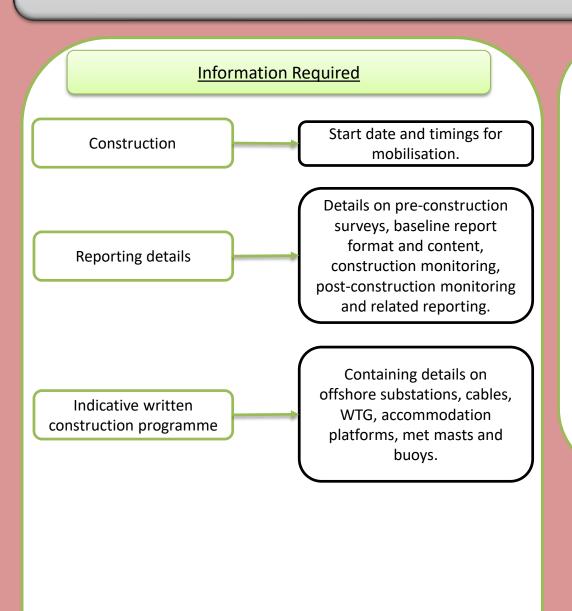
Links to:

Schedule 1, Part 3, Requirement 2-5: Detailed Design Parameters

Approval Requirements	
Discharging Authority Others	
ММО	In consultation with Trinity House, the MCA and Natural England

# **Construction programme & Monitoring Plan**

S.11, C.13(1)(b) / S.12, C.11(1)(c)



### Detail

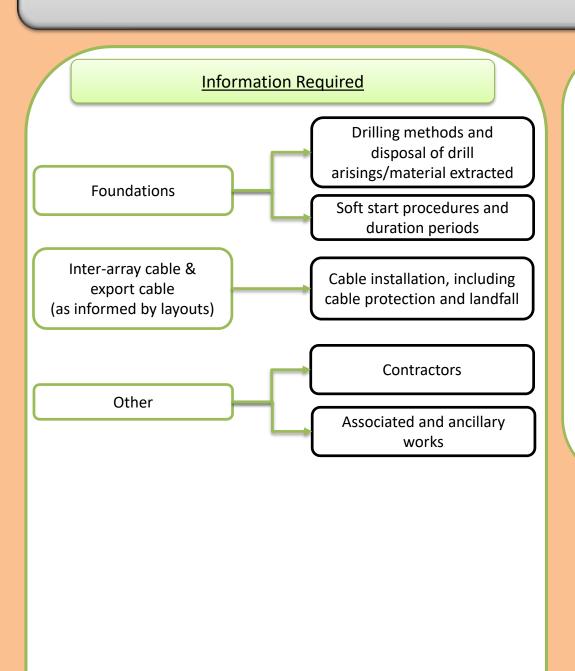
Details to be submitted to the MMO in accordance with the following:

- At least four months prior to the first survey, detail of the preconstruction surveys and an outline of all proposed monitoring;
- At least four months prior to construction, detail on construction monitoring;
- At least four months prior to commissioning, detail of postconstruction (and operational) monitoring.

Approval Requirements		
Discharging Authority	Others	
ММО		

# **Construction Method Statement**

S.11, C.13(1)(c) / S.12, C.11(1)(d)



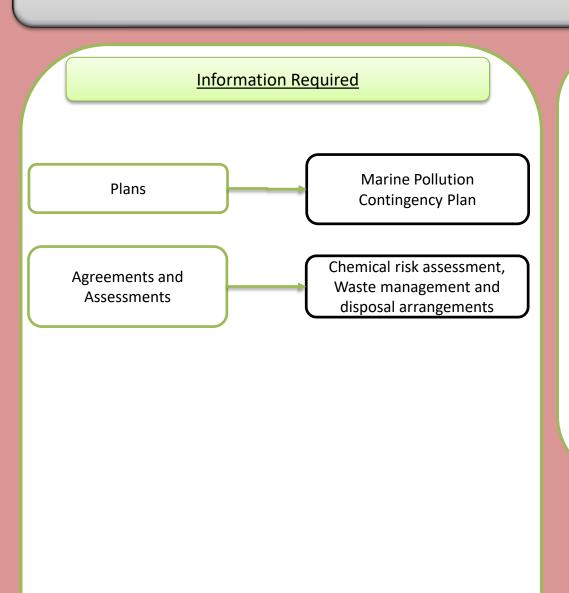
## Detail

- foundation installation methodology, including drilling methods and disposal of drill arisings and having regard to the Biogenic Reef Mitigation Plan;
- soft start procedures with specified duration periods;
- cable installation;
- contractors;
- associated and ancillary works.

Approval Requirements	
Discharging Authority	Others
ММО	

# **Project Environmental Monitoring Plan**

S.11, C.13(1)(d) / S.12, C.11(1)(e)



Detail

Marine pollution contingency plan addresses:

- Risks; and
- Methods and procedures for spills and collision incidents.

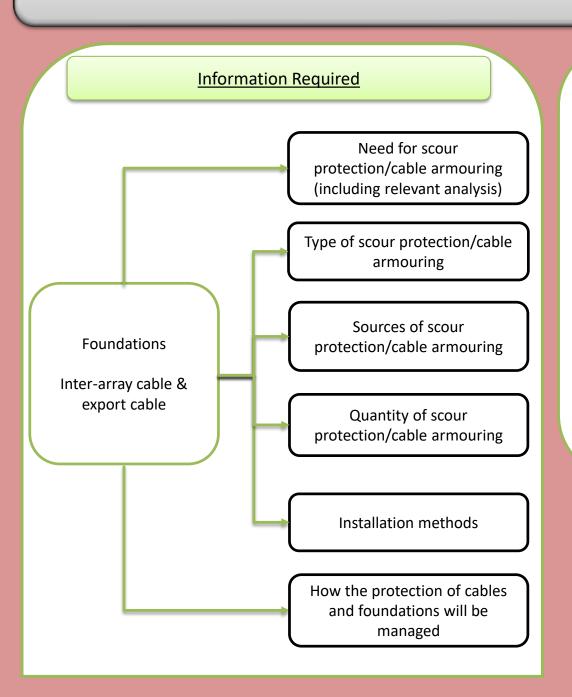
Chemical risk assessment details:

- How and when chemicals are to be used, stored and transported; and
- How accordance with recognised best practice guidance is met.

Approval Requirements	
Discharging Authority	Others
ММО	

# **Scour & Cable Protection Plan**

S.11, C.13(1)(e) / S.12, C.11(1)(f)



## Detail

### Details:

- Type;
- Sources;
- Quantity; and
- Installation methods

Must be updated for and resubmitted for approval if changes to it are proposed following cable laying operations.

Approval Requirements	
Discharging Authority	Others
ММО	

# **Draft Marine Mammal Mitigation Protocol**

S.11, C.13(1)(f) / S.12, C.11(1)(g)



Only required if

Driven or part driven pile foundations are proposed to be used

# <u>Detail</u>

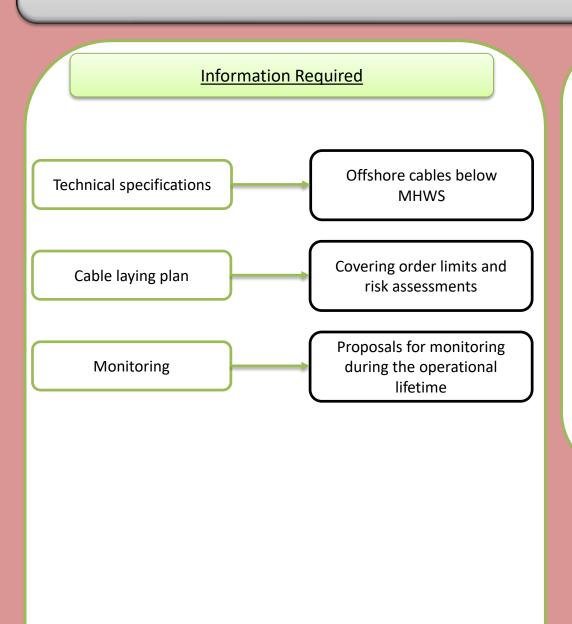
### Details:

• Follows current best practice as advised by the relevant statutory nature conservation bodies.

Approval Requirements	
Discharging Authority	Others
ММО	

# **Cable Specification, Installation & Monitoring Plan**

S.11, C.13(1)(g) / S.12, C.11(1)(h)



### Detail

Technical specification includes:

 Desked based assessment of attenuation of electro-magnetic fields strengths, shielding and cable burial depth following industry good practice.

Cable laying plan risk assessments of:

• Burial to ascertain suitable burial depths and cable laying techniques, including protection.

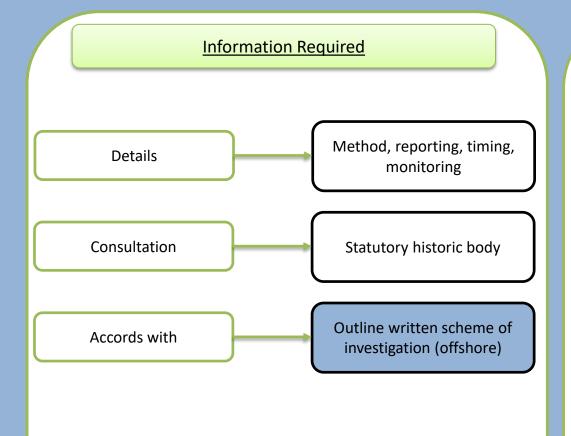
### Monitoring:

• Includes a risk based approach to the management of unburied or shallow cables.

Approval Requirements		
Discharging Authority	Others	
ММО		

# Written Scheme of Archaeological Investigation

S.11, C.13(1)(h) / S.12, C.11(1)(i)



Approval Requirements	
Discharging Authority Others	
ММО	In consultation with the statutory historic body

### Detail

### Scheme includes:

- Details of undertaker, archaeological consultant and contractor responsibilities;
- Methodology including geophysical, geotechnical and diver or ROV;
- Analysis of survey data and timetable for reporting submitted within four months of survey completion;
- Mitigation including exclusion zones;
- Monitoring of exclusion zones during and post-construction;
- Copy of any agreed report is submitted to the National Record of the Historic Environment;
- Reporting and recording protocol during construction, operation and decommissioning; and
- · Timetable of all further site investigations.

### Links to

- S.11, C13(1) and S.12, C10(2) pre-construction/ pre-commencement intrusive seabed works must accord with specific written scheme and be approved by MMO.
- S.11, C14 and S.12 C11 which includes the ERCoP and follows recommendations within MGN543.

# **Offshore Operations & Maintenance Plan**

S.11, C.13(1)(i) / S.12, C.11(1)(j)

# **Information Required** At least four months prior to Submission deadline commencement Outline offshore operations Accords with and maintenance plan

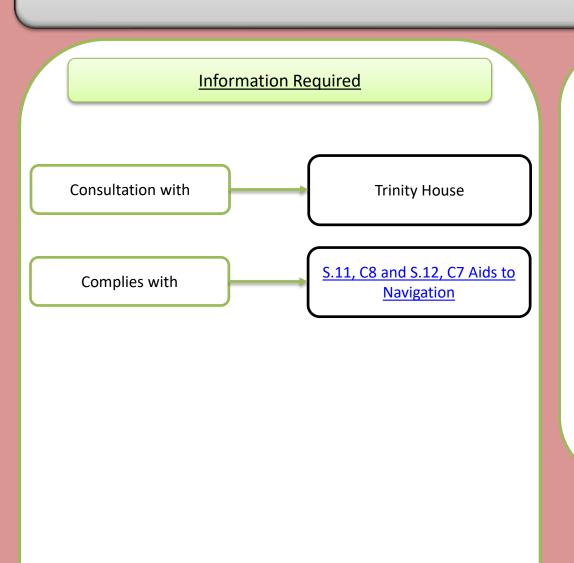
# Detail

- submitted to the MMO at least six months prior to commencement of operation of the licensed activities; and
- Review of plan to be resubmitted every three years during the operational phase.

Approval Requirements		
Discharging Authority	Others	
ММО		

# **Aids to Navigation Management Plan**

S.11, C.13(1)(j) / S.12, C.11(1)(k)



# Detail

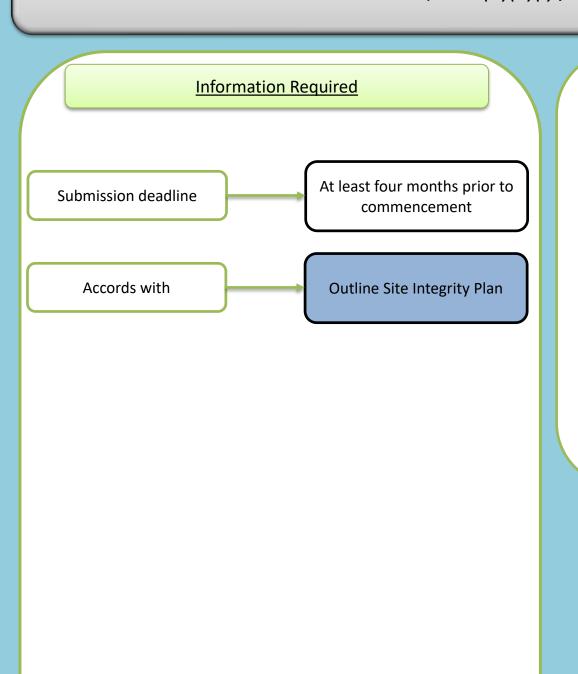
Complies with relevant conditions for the lifetime of the authorised scheme.

Links to S.1, P3, Req 6.

Approval Requirements	
Discharging Authority Others	
ММО	In consultation with Trinity House

# **Site Integrity Plan**

S.11, C.13(1)(k)(i) / S.12, C.11(1)(l)



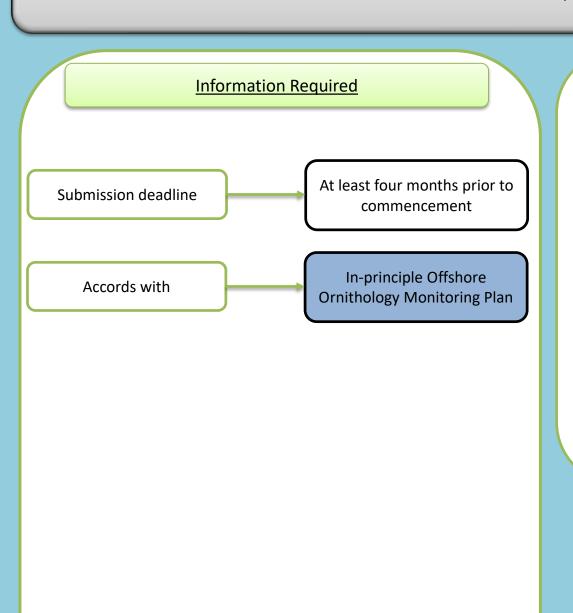
# Detail

• submitted to the MMO at least six months prior to commencement of operation of the licensed activities.

Approval Requirements	
Discharging Authority	Others
ММО	In consultation with Natural England

# **Offshore Ornithology Monitoring Plan**

S.11, C.13(1)(k)(ii)



## Detail

• submitted to the MMO at least six months prior to commencement of operation of the licensed activities.

Approval Requirements	
Discharging Authority Others	
ММО	In consultation with Natural England

# **Ringed Plover Mitigation Plan**

S.12, C.11(1)(m)



Submission deadline

At least four months prior to commencement

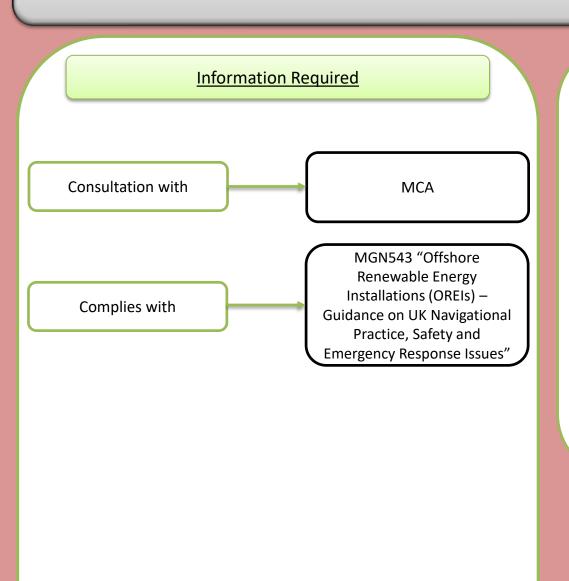
# Detail

• submitted to the MMO prior to commencement of operation of the licensed activities.

Approval Requirements	
Discharging Authority	Others
ММО	N/A

# **Emergency Response Co-operation Plan (ERCoP)**

S.11, C.15(7) / S.12, C.13(7)



Detail

No part of the authorised scheme may commence until the MMO, in consultation with the MCA, has given written approval of an Emergency Response Co-operation Plan (ERCoP) which includes full details of the plan for emergency, response and co-operation for the construction, operation and decommissioning phases.

Approval Requirements	
Discharging Authority	Others
ММО	MCA

# **Contamination Prevention Plan**

S.12, C.11(1)(a)

# **Information Required**

Work No.

3B

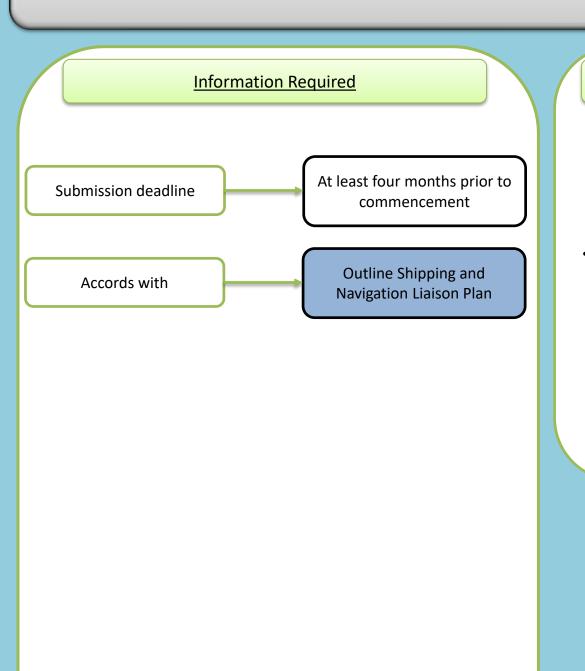
## Detail

A contamination prevention plan which must contain details of necessary measures in order to ensure that construction works undertaken within Work No. 3B do not release any contaminants into the marine environment.

# Approval Requirements Discharging Authority Others MMO N/A

# **Shipping and Navigation Liaison Plan**

S.11, C.25(2)/ S.12, C28(2)



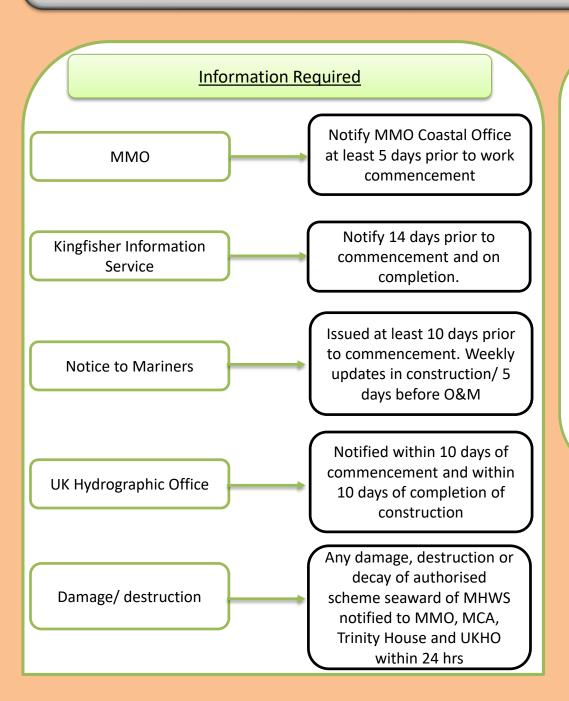
Detail

• submitted to the MMO at least six months prior to commencement of operation of the licensed activities.

Approval Requirements	
Discharging Authority Others	
ММО	

# **Notifications & Inspections**

S.11, C.7 & 22 / S.12, C.6, 20 & 23



### Detail

All agents and contractors notified to the MMO. Only persons and vessels notified to the MMO are permitted to carry out the licensed activities.

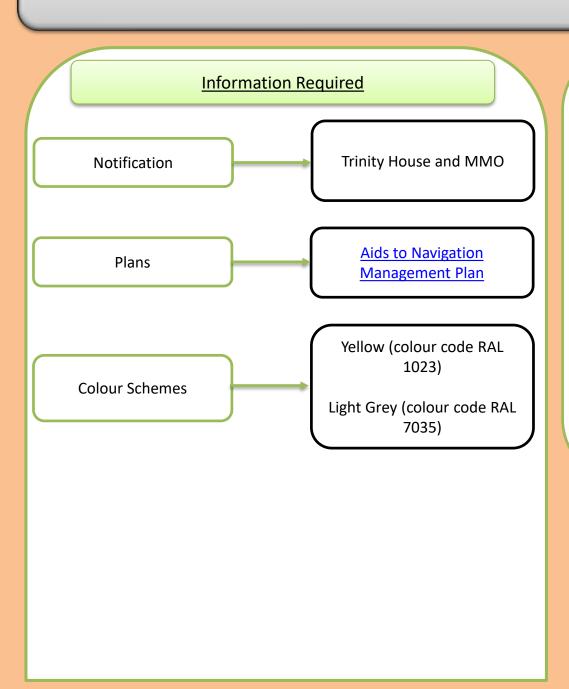
Confirmation of Kingfisher notifications must be provided to the MMO within five days.

Copies of all Notice to Mariners provided to MMO and UKHO within 5 days

Approval Requirements	
Discharging Authority	Others
ММО	Notification (not consultation) provided to Kingfisher Information Services/ UKHO/ MCA

# **Aids to Navigation**

S.11, C.8 & 9 / S.12, C.7 & 8



### Detail

### Notifications:

Within 24 hrs of commencement of construction occurring; Within 24 hours of any aids to navigation being established; Within five days of completion of construction; Within 24 hrs notify of any failure of the aids to navigation during the whole life cycle of the project.

### Plans:

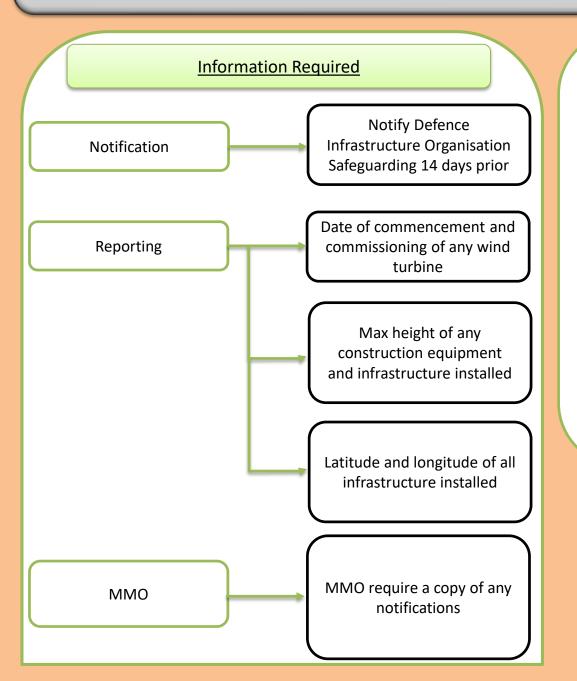
Reports on availability of aids to navigation in accordance with the frequency set out in the Aids to Navigation Management Plan.

In the event of a failure to aids of navigation the undertaker must lay down buoys, exhibit lights and take other steps to prevent danger to navigation as directed by Trinity House.

Approval Requirements	
Discharging Authority	Others
Trinity House and MMO	N/A

# **Aviation Safety**

S.11, C.10



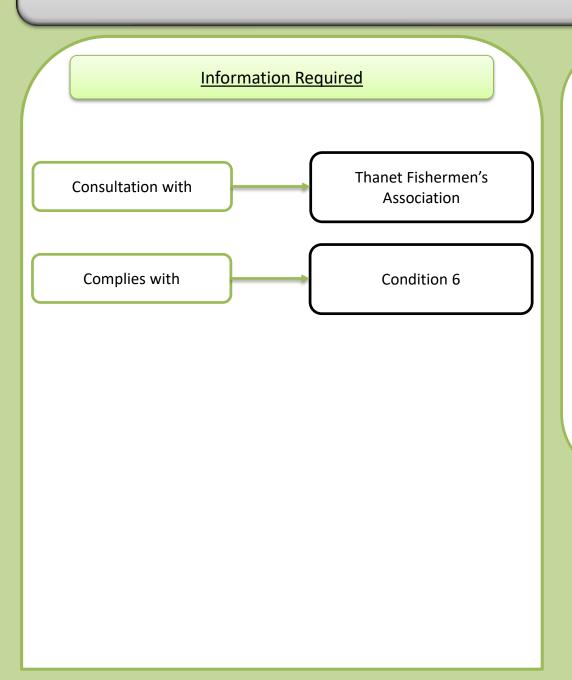
# Detail

Defence Infrastructure Organisation Safeguarding are to be notified of any changes and on completion of works.

Approval Requirements	
Discharging Authority Others	
Defence Infrastructure Organisation Safeguarding	N/A

# **Fisheries Liaison and Co-Existence Plan**

S.11, C.20 / S.12, C.22



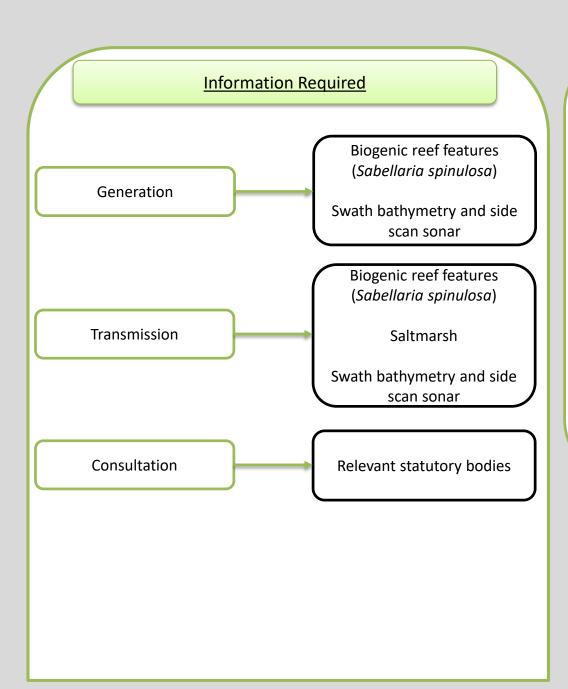
<u>Detail</u>

N/A

Approval Requirements	
Discharging Authority Others	
ММО	Consultation with Thanet Fisherman's Association

# **Pre-construction Monitoring & Surveys**

S.11, C.16 / S.12, C.15



### Detail

Survey proposals must detail:

- Objectives;
- Explain how comparisons to post-construction will be drawn.

Baseline Survey reports must detail:

- Valid statement of pre-construction position;
- Clearly define post-construction comparison that is intended.

Survey proposals/ details:

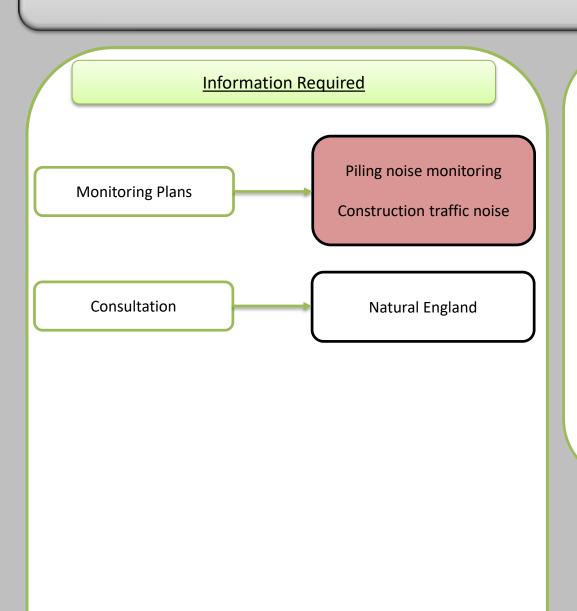
- Biogenic Reef Mitigation Plan
- Saltmarsh Mitigation, Reinstatement and Monitoring Plan.
- Swath bathymetric and Side Scan Sonar surveys must provide full coverage within the order limits including 500 m buffer.

Timings of reporting to be agreed with the MMO.

Approval Requirements	
Discharging Authority	Others
ММО	N/A

# **Construction Monitoring**

S.11, C.17 / S.12, C.16



# Detail

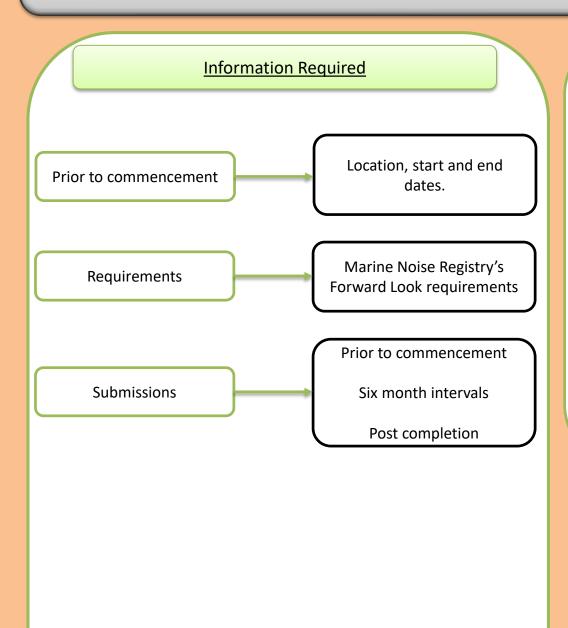
Must be submitted in discharging condition 12(b) (Sch 11) and condition 9(d) (Sch 12).

Monitoring of noise generated by the installation of the first four piled foundations. Results to be provided to the MMO within six weeks of the installation of the first four piled foundations.

Approval Requirements	
Discharging Authority	Others
ММО	In consultation with Natural England

# **Reporting of Impact Pile Driving**

S.11, C.19 / S.12, C.19



# <u>Detail</u>

Only when driven or part driven pile foundations are proposed.

UK Marine Noise Registry to be provided with:

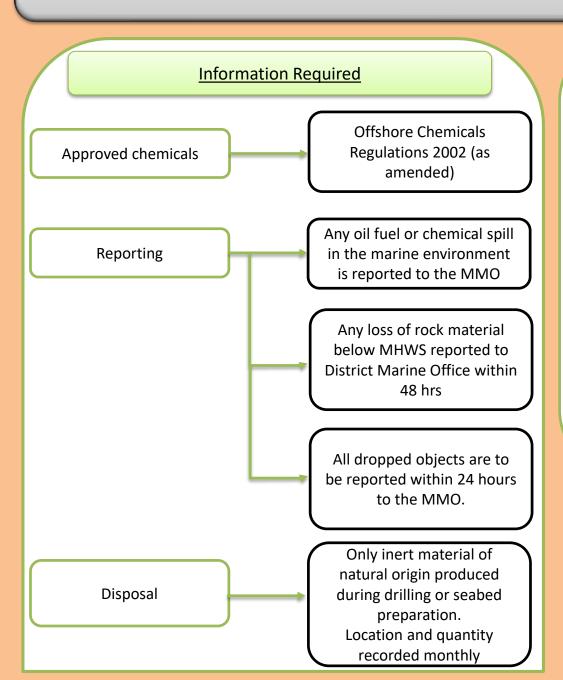
- Prior to commencement expected locations and start/ end dates;
- Six month Interval locations and dates of impact pile driving; and
- Locations and dates of impact piling within 12 weeks of completion.

MMO to be notified of successful submission to UK Marine Noise Registry within 7 days of submission.

Approval Requirements	
Discharging Authority	Others
ММО	Provide specific information to UK Marine Noise Registry

# Chemicals, drilling and debris

S.11, C.11 / S.12, C.9



### Detail

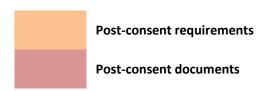
Coatings and treatments are suitable for the marine environment and used in accordance with HSE and EA Pollution Prevention Control Guidelines.

Storage, handling, transport and use of fuels, lubricants, chemicals and other substances must be undertaken so as to prevent release into the marine environment; including bunding of 110% of the total volume of all reservoirs and containers.

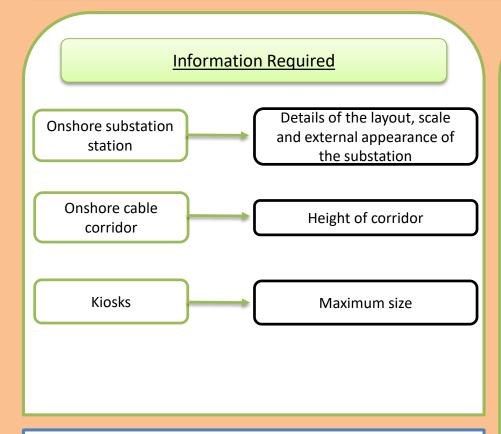
Undertaken must ensure that any rock material used in construction is from a recognised source; free from contaminants and contains minimal fines.

The undertaker must inform the MMO of the location and quantities of material disposed of each month by submission of a disposal return.

<u>Approval Requirements</u>	
Discharging Authority	Others
ММО	N/A



# **Detailed Design Parameters Onshore (Req 11)**



<u>Approval Requirements</u>	
Discharging Authority	Others
Relevant Planning Authority	N/A

### Detail

The total number of buildings housing principle electrical equipment for the onshore substation must not exceed 1.

Buildings must not exceed a height of 14 m above existing ground level.

External electrical equipment must not exceed a height of 12.5 m above existing ground level.

The artificial berm associated with Pegwell Bay must not exceed a height of 1.3 m above existing ground level for the cables and a height of 2.3 m for the TJBs.

# Landfall Method Notification (Req 12)

# Landfall Option Confirmation of which option will be undertaken.

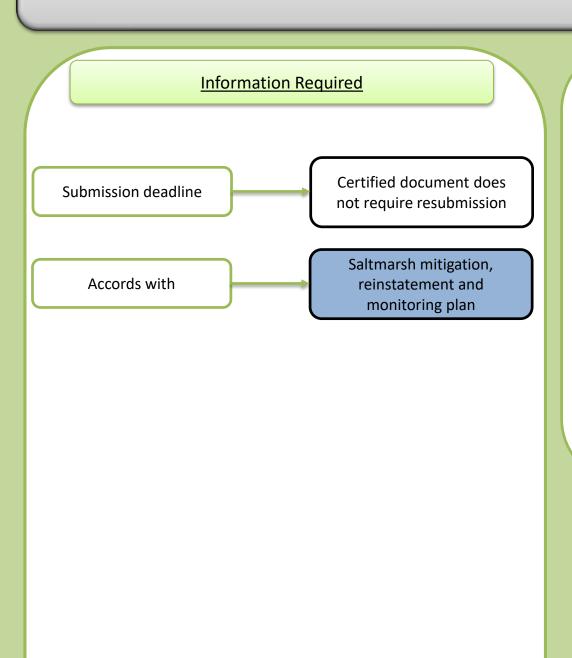
Approval Requirements	
Discharging Authority	Others
None	N/A

### Detail

No part of Work No. 3B may commence until written notification is provided to the relevant planning authority confirming which one option of Work No. 3B(a), 3B(b) or 3B(c) will be constructed. The method statement must include:

- The anticipated timing of the proposed works being undertaken; and
- Where applicable, measures for long horizontal directional drilling below the coastal shore platform and cliff base at the landfall.

# Saltmarsh Mitigation, Reinstatement and Monitoring plan (Req 13)

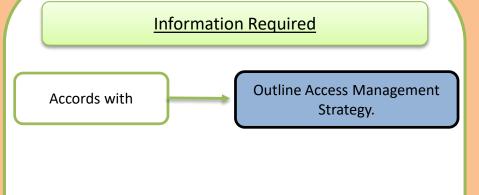


Detail

 undertake appropriate surveys at the locations for Works No. 3A and 3B in order to monitor the impact of development authorised by the Order within any areas of saltmarsh, as provided for within the saltmarsh mitigation, reinstatement and monitoring plan.

Approval Requirements	
Discharging Authority	Others
Relevant Planning Authority	N/A

# Access Management Strategy (Req 14)

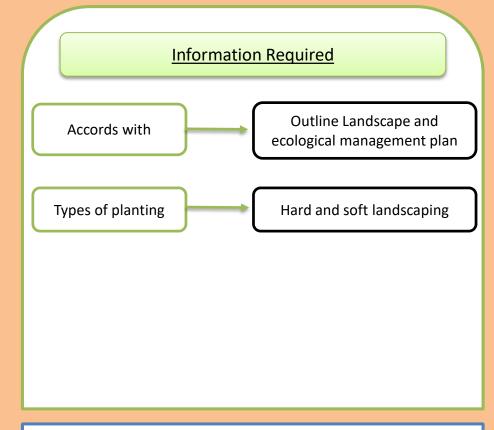


<u>Detail</u>

No stage of the connection works may commence until for that stage an access management strategy (which must accord with the outline access management strategy) has been submitted to and approved by the relevant planning authority.

Approval Requirements	
Discharging Authority	Others
Relevant Planning Authority	N/A

# **Onshore Substation Landscaping (Req 15)**



Approval Requirements	
Discharging Authority	Others
Relevant Planning Authority	N/A

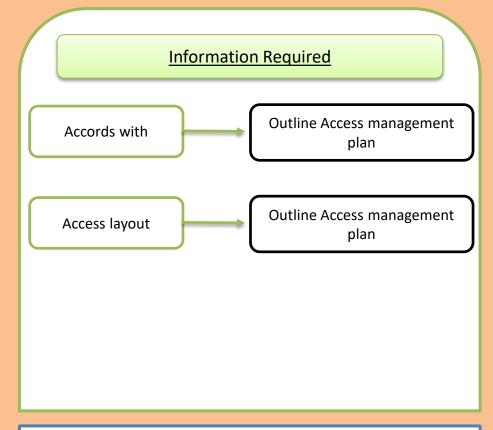
### Detail

Written landscaping management scheme and associated work programme must accord with the outline landscape and ecological management plan (LEMP).

Details of hard and soft landscaping includes:

- Location, number, species, size and planting density of any proposed planting, including any trees;
- Cultivation, importing of materials and other operations to ensure plant establishment;
- Proposed finished ground levels;
- Hard surfacing materials;
- Vehicular and pedestrian access, parking and circulation areas:
- Minor structures, such as furniture, refuse or other storage units, signs and lighting;
- Proposed and existing functional services above and below, ground, including drainage, power and communications cables and pipelines, manholes and supports;
- Details of existing tress to be retained with measures for their protection during the construction period;
- Retained historic landscape features and proposals for restoration, where relevant;
- Implementation timetables for all landscaping works;
- Maintenance of the landscaping, including irrigation arrangements; and
- Soil retention, handling and protection.

# **Highways Accesses** (Req 17)



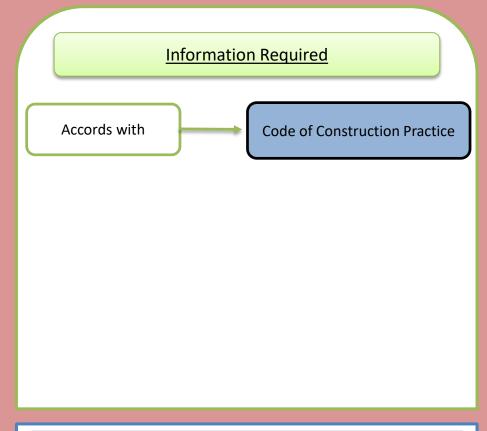
Approval Requirements	
Discharging Authority	Others
Relevant Highway Authority	N/A

## <u>Detail</u>

Written details (in accordance with the Outline Access Management Plan) of:

- Siting, design, layout and any access management measures for any new, permanent or temporary means of access used by vehicular traffic; or
- Any alteration to an existing means of access to a highway used by vehicular traffic.

# Construction Environmental Management Plan (CEMP) (Req 18)



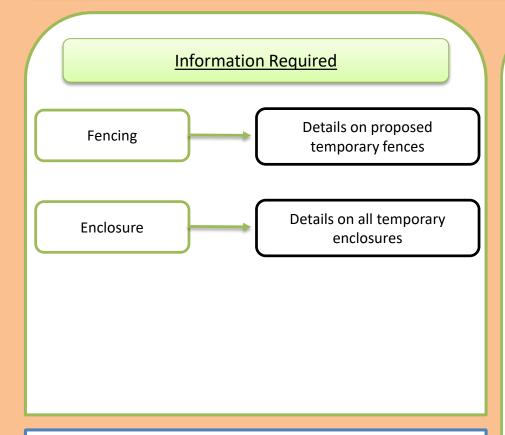
Approval Requirements	
Discharging Authority	Others
Relevant Planning Authority	n/a

### Detail

### The CEMP must contain details of:

- relevant health, safety and environmental legislation and compliance;
- local community liaison responsibilities;
- site security;
- biosecurity measures;
- lighting;
- soil management;
- dust control measures;
- flood risk management; and
- waste management.

# Temporary fencing and other means of enclosure (Req 19)



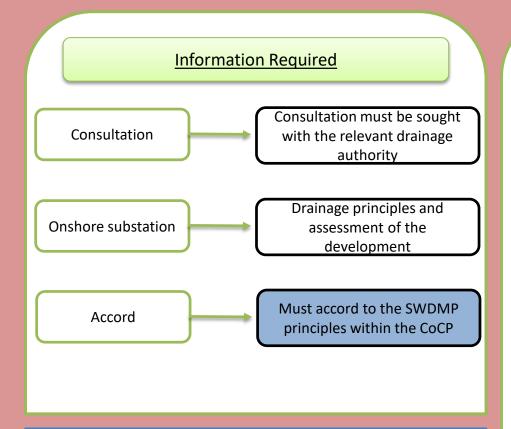
<u>Detail</u>

All construction sites must remain securely fenced at all times during construction.

Any temporary fencing must be removed on completion of the relevant works.

Approval Requirements	
Discharging Authority	Others
Relevant Planning Authority	N/A

# Onshore substation surface Water and Drainage Management Plan (Req 20)



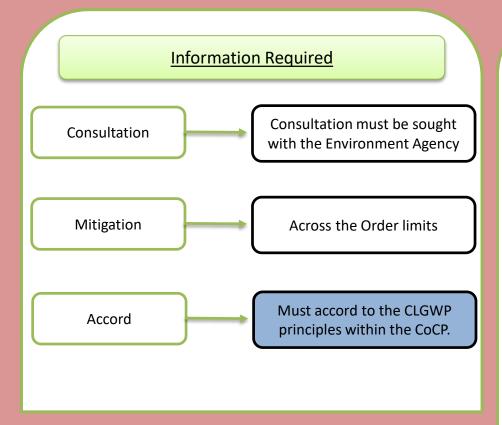
# Approval Requirements Discharging Authority Others Relevant Planning Authority In consultation with relevant drainage authority

# <u>Detail</u>

### Must include:

- Sustainable drainage principles; and
- Assessment of the hydrological and hydrogeological context of the development.

# Contaminated Land and Groundwater Plan (CLGWP) (Req 21)



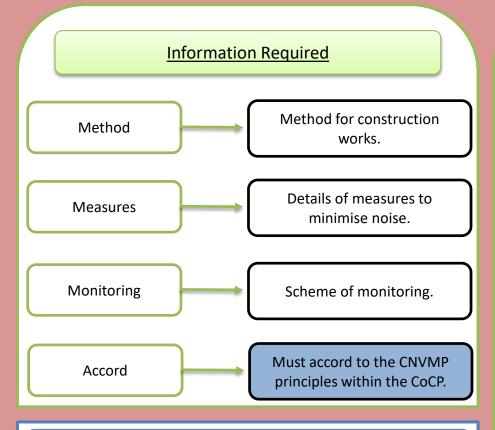
# Approval Requirements Discharging Authority Others Relevant Planning Authority In consultation with the Environment Agency

# <u>Detail</u>

### Must include:

• Mitigation measures against the potential release of contaminants within the Order limits.

# Construction Noise and Vibration Management Plan (CNVMP) (Req 22)



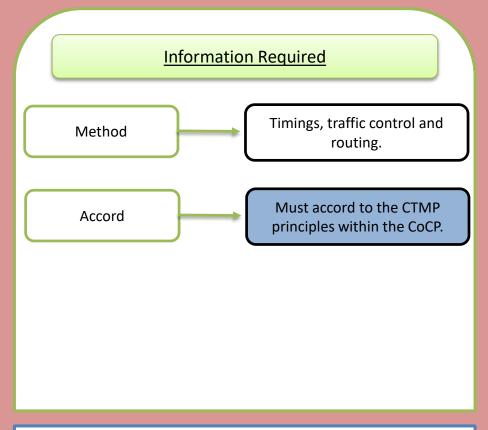
Approval Requirements	
Discharging Authority	Others
Relevant Planning Authority	N/A

# <u>Detail</u>

### Must set out:

- The construction works, and the method used;
- The noise attenuation measures to be taken to minimise noise resulting from the construction works, including any noise limits; and
- A scheme for monitoring for noise during construction to ensure compliance with noise limits and attenuation measures.

# Construction Traffic Management Plan (CTMP) (Req 23)



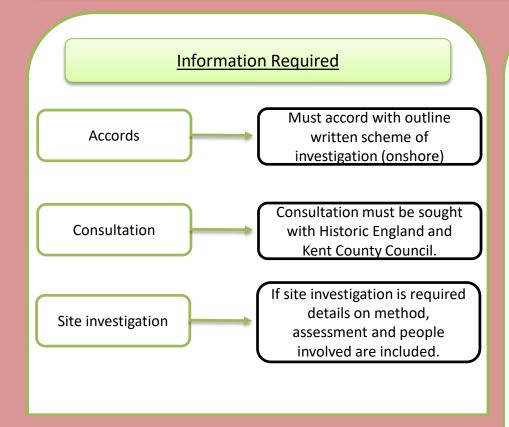
<u>Approval Requirements</u>	
Discharging Authority	Others
Relevant Highway Authority	N/A

## <u>Detail</u>

### Must set out:

- Scheduling and timing of movements, in particular abnormal load movements;
- Temporary warning signs and traffic control; and
- Construction vehicle routing.

# Onshore Archaeological Written Scheme of Investigation (Req 24)



Approval Requirements	
Discharging Authority	Others
Relevant Planning Authority	Consultation with Historic England and Kent County Council

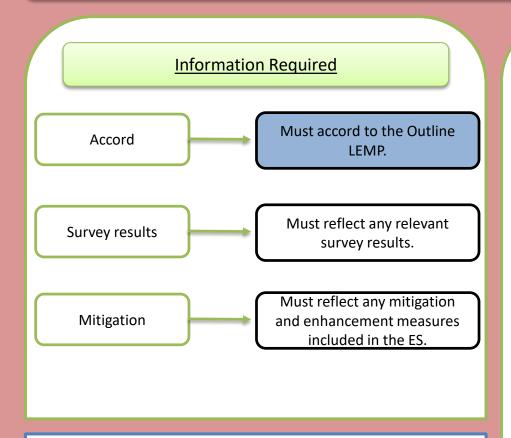
### Detail

If a site investigation is required the scheme must include details on:

- Research questions;
- Methodology of investigation and recording;
- Post investigation assessment;
- Analysis and recording provisions;
- Publication and dissemination provisions of the analysis and records;
- Archive deposition provisions for analysis and records; and
- Nomination of a competent person or persons/organisation to undertake the works.

Site investigations must complete investigation and post investigation assessments.

# Landscape and Ecological Management Plan (LEMP) (Req 25)

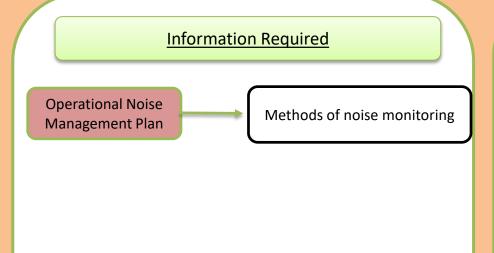


## <u>Detail</u>

Surveys include any habitat and species specific surveys e.g. badgers, newts, birds, bats, etc...

Approval Requirements	
Discharging Authority	Others
Relevant Planning Authority	In consultation with Natural England

# **Control of Noise during Operational Phase (Req 28)**



<u>Detail</u>

### Includes:

• Monitoring, attenuation and any applicable noise limits with reference to the onshore substation

Approval Requirements	
Discharging Authority	Others
Relevant Planning Authority	NA