

# MLA/2020/00262

## **Application Update 1**

Responded

### **Request Date**

28-JUL-2020

### **Requested By**

Abbey Coppin

### **Request Subject**

MLA/2020/00262 Request for  
Application Update

### **Request CC Email Addresses**

majid.harouni@medway.gov.uk

### **Request Details**

Dear Sir/Madam

I am writing to ask you for application updates in order to enable the MMO to process your application. Please find attached the MMO's response (as National Competent Authority under the TEN-E Regulation) in consultation with Medway Council to the Gridlink Interconnector Draft Application File.

Your application will not be classed as fully submitted and therefore will not be processed further until you submit the updates.

Please do not hesitate to contact me if you have any queries regarding your application. Please quote the following reference number in any correspondence: MLA/2020/00262.

Yours sincerely,

Emma Dowson  
Marine Licensing Team  
emma.dowson@marinemanagement.org.uk  
+44 (0)20789 55501

### **Response Date**

19-OCT-2020

**Response By**

David Barber

**Please summarise your updates here**

Amendment to the Marine Licence application in accordance with changes required to the PCI Draft Application File as per MMO letter ENQ/2016/00229 / MLA/2020/00262 dated 28 July 2020.

# Project summary

## Application type

Please select the type(s) of application you are applying for.

If you wish to apply for a section 36 or 36A consent or a safety zone in addition to your marine licence application please tick the relevant box.

If you wish to also apply for consent under a local Act or Order please tick the Local Act consent box. Please explain which local Act or Order consent you are applying when giving details of the project background below. You should also upload a copy of the local Act or Order there too.

**Application type**

Marine licence

Please tick all additional application types that are relevant.

**Additional application types**

- Section 36 and Section 36A: Electricity Act 1989.
- Local Act Consent: Consent under a local Act or harbour order.

- Section 36
- Section 36A
- Local Act consent
- Safety zone

## Project details

**Project title**

Enter the title of your project (max. 250 characters)

GridLink Interconnector

## Project background

You should explain the background to the project. This should include the aims of the project, the need for the project, whether it forms part of a larger project and any other relevant information. (max. 2000 characters)

GridLink Interconnector Limited is proposing to develop a 1,400 megawatt (MW) electricity interconnector, linking the existing electricity grids in the UK and France. The GridLink project (GridLink) will consist of two converter stations, one close to the existing National Grid 400kv Kingsnorth Substation in Kent and one close to the existing RTE Warande Substation, Dunkerque in the Nord region of France. The converter stations will be connected together by subsea and underground high voltage direct current cables.

The project is designated as a European Union Project of Common Interest (PCI), project number No. 2018/540. This means that GridLink is of strategic importance to the UK and France, and it is considered imperative infrastructure necessary for Europe to meet its climate objectives; a beneficial consequence of primary importance to the environment.

The main project objectives are to improve the capacity of French and UK networks to distribute electricity to consumers; to ensure electricity supply is secure; and to bring economic benefits by increasing competitiveness in the energy market.

GridLink is configured so that power will be able to flow in either direction at different times, depending on supply and demand in each country. The landfall point for the submarine cables is the MedwayOne commercial area at the site of the former E.on coal-fired power station at Kingsnorth. The overall length of the interconnector is approximately 140km of submarine cable and approximately 1.5km and 13km of onshore underground cable in UK and France respectively.

The marine licence application relates to the UK marine components of GridLink from mean high water springs at Kingsnorth, through the Medway Estuary, and Outer Thames Estuary to the UK/France EEZ boundary in the Dover Straits; a distance of approximately 108km.

See Chapters 1-3 of the appended GridLink Marine Environmental Report (P2172\_R4822) for further information.

GridLink Marine Environmental Report (P2172\_R4822\_Rev0).pdf

Created By:Mrs Anna Farley

19-OCT-2020 15:19:26

A. Technical Appendix A - Compliance with Marine Plans.pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:15:20

B. Technical Appendix B - Stakeholder Meetings.pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:15:26

C. Technical Appendix\_C\_Sediment Suspension.pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:15:35

D. Technical Appendix D - EMF (P2172\_R4658\_Rev2).pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:15:57

E. Technical Appendix E - GridLink Marine HRA (P2172\_R4980\_Rev1).pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:22:55

F. Technical Appendix F - MCZ (P2172\_R4981\_Rev1).pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:26:48

G. Technical Appendix G - GridLink WFD Assessment (P2172\_R5048\_Rev2).pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:28:54

H. Technical Appendix H - Atlantic Herring & Sandeel Assessment  
(P2172\_R5066\_RevD2).pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:30:04

I. Technical Appendix I - Underwater noise (P2712\_R5169\_Rev0).pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:30:40

J. Technical Appendix J - P2172\_R4983\_Rev1\_NRA.pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:34:32

K. Technical Appendix K - Marine Archaeology Technical Report.pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:35:49

L. Technical Appendix L - GridLink WSI and PAD.pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:36:58

M. Technical Appendix M - Fisheries Co-Existence Plan (P2172\_R5149\_Rev0).pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:46:05

N. Technical Appendix N - Marine Mammal Mitigation Plan (P2172\_R5148\_Rev0).pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:49:09

O. Technical Appendix O - GridLink Integrated Geophys & Geotech Report.pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:50:27

P. Technical Appendix P - GridLink Nearshore Environmental Survey Report.pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:53:06

Q. Technical Appendix Q - GridLink Offshore Environmental Survey Report.pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:53:58

## **Programme of works**

You should detail the proposed programme of works for the project. This should include proposed start and end dates for the overall project and individual elements of the project. It should also include details of any elements that need to be completed by a certain date and details of any time periods during which activities could not be carried out and the reasons for this. It should also include proposed working hours. (max. 2000 characters)

The construction programme is expected to take approximately 36 months from start to finish. The project is envisaged to commence on-site construction in October early 2022 with commercial operations from early 2025.

The exact timing of the landfall and submarine cable installation works will be dependent upon the date of the contract award for the works, time required for detailed design and cable manufacture, availability of cable installation and other vessels and any restrictions to mitigate potential effects on features of conservation interest, fisheries or other sensitive receptors.

Please see appended GridLink Marine Environmental Report (P2172\_R4822) Chapter 3 for estimated timings of each activity.

## **Related consents and applications**

**Have any other applications been made to the MMO in relation to this project?**

Yes       No

**Has there been any other contact with the MMO in relation to this project?**

Yes       No

### Please give details

(max. 2000 characters)

GridLink have held meetings with the MMO since 2017; as listed in GridLink Marine Environmental Report Technical Appendix B (P2172\_R4822). Meetings have helped to inform route development, collect data, discuss potential areas of conflict and inform environmental assessment. A list of dates meetings/teleconference calls is provided below:

11/12/2017 Project introduction & discussion of scoping requirements  
19/04/2018 Discussed Connecting Europe Funding requirements & signoff  
16/07/2018 Discussed PCI requirements, Scoping opinion, Permit granting schedule, coordination with Medway Council, offshore survey permits  
23/09/2019 Provided update on PCI process and consent schedule  
04/04/2020 Meeting to discuss the use of fronded mattresses within the Margate and Long Sands SAC and the process for Stage 3 and Stage 4 of the HRA process (if required)  
24/06/2020 Meeting to discuss draft application file.

In addition, the following enquiries have been submitted (copies of responses are attached):

EIA/2018/00042 - MMO Response to EIA Screening Request  
ENQ/2018/00159 - Response to Scoping request to Inform Environmental Report  
ENQ/2019/00164 - Response to Scoping request to inform Environmental Report following a change to landfall location.

Please see appended GridLink Marine Environmental Report (P2172\_R4822), Chapter 4 and Technical Appendix B for further information.

The draft application has been updated to address necessary changes as requested by the MMO on 28 July 2020.

MMO Response to GridLink Screening Request.pdf

Created By: Mrs Anna Farley

25-JUN-2020 08:34:25

MMO Scoping Response 08 April 2020.pdf

Created By: Mrs Anna Farley

30-JUN-2020 16:15:33

MMO Scoping Response 05 Feb 2019.pdf

Created By: Mrs Anna Farley

30-JUN-2020 16:17:16

MMO Changes Required Letter 28 July 2020.pdf

Created By: Mrs Anna Farley

19-OCT-2020 09:57:29

### Have any applications been made to or consents issued by other authorities in relation to this project?

This could include applications for planning permission, environmental permits, development consent orders, transport and works orders, marine licences or any other type of licence, permit or consent. This could also include consents from local authorities, Government regulators, harbour authorities, devolved administrations, other European Union member states and any other type of authority.

Yes

No

**Please give details (including the authority name, dates, application reference numbers and the status of the application or consent where possible)**

(max. 2000 characters)

Option Agreement for License to use the seabed under Crown Estate Act 1961, Crown Estate, dated 19th July 2018, ref 00019299, option granted.

A River Medway Fisheries Compensation and Works License with Rochester Oyster and Floating Fishery (ROFF), granted 24 January 2019.

Outline Planning Permission under the Town and Country Planning Act 1990, application to be submitted to Medway Council in October 2020.

**Do you have statutory powers to consent or undertake without consent any aspect of this project?**

This could include statutory powers of a coast protection authority, harbour authority or lighthouse authority or any other type of statutory powers.

Yes  No

**Is the project located within the jurisdiction of a statutory harbour authority?**

This includes the jurisdiction of municipal, private and trust ports where they are a statutory harbour authority.

Yes  No

**Please give details**

(max. 2000 characters)

The Proposed Development passes 22.8km (between Kilometre point (KP) 0.0 – KP 22.8) through the Peel Ports authority area; and 38.9km (between KP 22.8 – KP 61.7) through the Port of London Authority area.

Consultation has been undertaken with both authorities and has informed route development. The Applicant is aware that both authorities will require River Works Licences for works to proceed in their authority areas and these will be applied for in due course.

## Applicant details

This is the person, company or organisation that will hold the licence.

**Contact type**

Select the Contact type. Individual should only be selected when the contact is not working on behalf of an Organisation.

- Individual
- Organisation

**Trading title (if applicable)**

GridLink Interconnector Limited

**Title**

Mr

**Forename**

David

**Surname**

Luson

**Organisation name**

GRIDLINK INTERCONNECTOR LTD

**Reg number**

**Position in organisation**

Director

**Contact within company**

**Postcode**

BR1 1QE

**Postal address**

25 East Street, Bromley

**Telephone number**

Please enter numbers, brackets and the international symbol (+) if needed.

07903323101

**Fax number**

Please enter in format +00(0)0000 000000

**Email address**

Please enter a valid email address formatted as xx@xx.xx

david.luson@iconinfrast  
ructure.com



## Sustainable development

The MMO strongly advise that a strategic appraisal is completed. Issues that should be considered include:

1. Identification of any conflicts between the project and the relevant marine plan.
2. Identification of alignment of the project with the Marine Policy Statement and any relevant National Policy Statement.
3. Identification of the environmental, social and economic drivers for a project that have been identified through existing feasibility studies or discussions with other public bodies (e.g. Local Authorities or Local Economic Partnerships).
4. Identification of any potential issues that may arise due to EU legislation (e.g. Water Framework Directive, Marine Strategy Framework Directive, Habitats Directive), and how these can potentially be avoided, or mitigated, at the strategic level.
5. Identification of any priority issues that may need addressing with regard to cumulative effects.
6. Options appraisal undertaken by the applicant, and the social, economic and environmental reasoning behind why the preferred option has been chosen.

**Please provide your Strategic Appraisal (if completed) by clicking the link below**

Strategic Appraisal Signposting.pdf  
Created By:Mrs Anna Farley  
29-JUN-2020 21:57:13

## Marine policy and plans

**This project must be assessed in accordance with the appropriate marine policy documents.**

You can explore the English marine plans using this service (<https://www.gov.uk/guidance/explore-marine-plans>) to find information on plan policies, marine licenses, and environmental designations.

Please note: While the status of a marine plan is 'draft' the MPS remains the primary policy document. Where draft plans exist they are material considerations and marine licence applications will need to refer to the draft marine plan as well as the MPS.

The MMO is also responsible for marine licensing in other parts of the world in certain circumstances. Where this is the case you will need to demonstrate how your activity is in accordance with the Marine Policy Statement. You can find information on the Marine Policy Statement here (<https://www.gov.uk/government/publications/uk-marine-policy-statement>).

**Please indicate which marine plan(s) and/or Marine Policy Statement you consider relevant to your project?**

- South Inshore and Offshore Marine Plans
- East Inshore and Offshore Marine Plans
- North East Inshore and Offshore Marine Plans (Draft)
- North West Inshore and Offshore Marine Plans (Draft)
- South West Inshore and Offshore Marine Plans (Draft)
- South East Inshore Marine Plans (Draft)
- Marine Policy Statement (Somewhere else in the world)

**Please detail how you considered that this project is in accordance with the relevant marine plan(s) and/or Marine Policy Statement**

(max. 2000 characters)

Appended GridLink Marine Environmental Report (P2172\_R4822) Technical Appendix A presents the key policies of the plans and summarises how the Proposed Development complies with the policy objectives.

**Please provide copies of documents supporting your assessment of this project**

If the supporting information is provided within other documents, such as an Environmental Statement, please clearly state this in the free text box (above)

**Have you assessed this project with regard to other policy statements and spatial plans?**

This includes national, regional and local policy and spatial plans.

- Yes       No

**Please give details**

(max. 2000 characters)

The project is designated as a European Union Project of Common Interest (PCI), project number No. 2018/540, under the provisions of European Union Regulation No. 347/2013 on guidelines for Trans-European Network for Energy (TEN-E Regulations) and receives grant funding under the Connecting Europe Facility (CEF).

**If possible, please provide a copy of the assessments done**

## Environmental impact assessment

### Has an environmental statement been produced to support this project?

Environmental statements are required for projects of a type listed in the Environmental Impact Assessment Directive. If you are not certain whether your project falls within this category, please contact us before proceeding with your application.

Yes  No

## Habitats regulations assessment

### Have the effects of the project on European sites been considered?

Yes  No

#### Please give details

(max. 2000 characters)

Stage 1 Screening for Appropriate Assessment and Stage 2 Information to Inform Appropriate Assessment has been completed for the Proposed Development. The two assessments are presented in a standalone document (document reference P2172\_R4980) that has been appended to the GridLink Marine Environmental Report as Technical Appendix E and has informed the assessment provided in the Environmental Report.

**If possible, please provide a copy of the assessments done**

## Marine conservation zone assessment

### Have the effects of the project on marine conservation zones been considered?

Yes  No

#### Please give details

(max. 2000 characters)

Screening and Stage 1 Assessment has been completed for the Proposed Development. The MCZ Assessment is presented as a standalone document (document reference P2172\_R4981) that has been appended to the GridLink Marine Environmental Report as Technical Appendix F and has informed the assessment provided in the Environmental Report.

**If possible, please provide a copy of the assessments done**

## Sites of special scientific interest

### Have the effects of the project on sites of special scientific interest (SSSI) been considered?

Yes  No

**Please give details**

(max. 2000 characters)

Effects on the Medway Estuary and Marshes SSSI has been assessed in the GridLink Marine Habitats Regulations Assessment (GridLink Marine Environmental Report Technical Appendix E). Although not a designated feature of this SSSI, Natural England have advised to assess the potential effects from the Proposed Development to breeding marsh harrier (*Circus aeruginosus*) within this site. As this site is not a European Site, no other features of the SSSI have been assessed. However, the features of this SSSI are broadly similar the Medway Estuary and Marshes SPA which have been assessed in the HRA.

**If possible, please provide a copy of the assessments done**

## Water Framework Directive compliance assessment

**Have the effects of the project been considered in accordance with the Water Framework Directive?**

Yes       No

**Please give details**

(max. 2000 characters)

A Water Framework Directive Assessment is provided as Technical Appendix G in the GridLink Marine Environmental Report (P2172\_R4822). This provides all information as outlined in the Environment Agency's (EA) 'Clearing the waters for all' scoping template. All information required by the scoping template has been provided.

**If possible, please provide a copy of the assessments done**

## Consultation and advertising

**Has public consultation taken place and/or has the project been advertised?**

Yes       No

**Has consultation about the project with any other statutory body taken place?**

Yes       No

## Please give details

(max. 2000 characters)

GridLink have held meetings with statutory bodies since 2017 to help inform route development, collect data, discuss potential areas of conflict and inform environmental assessment. Key statutory bodies contacted include:

- Kent and Essex Inshore Fisheries & Conservation Authority (KEIFCA)
- Maritime and Coastguard Agency (MCA)
- Natural England (discretionary advice received and attached)
- Peel Ports
- Port of London Authority (PLA)

A consultation meeting was held with Natural England on the 10 October 2019 to discuss route changes to avoid the Pan Sand Sandbank and the Medway Estuary rocky escarpment. A further meeting was held on the 23 March 2020, to discuss the use of Fronded Mats (as mitigation) at the London Array windfarm export cable crossing within the Margate and Long Sands Special Area of Conservation; and to discuss the Tangerine cable crossing which crosses areas of potential Sabellaria spinulosa reef within the Goodwin Sands Marine Conservation Zone.

A meeting was held with the MCA on the 03 February 2020 to discuss the GridLink preferred route, the route changes noted above and the scope of the Navigation Risk Assessment.

In addition, fishermen's associations, third-party asset owners and sailing/yacht clubs within the region have also been contacted and meetings held to discuss key concerns, assessment and mitigation.

Please refer to appended GridLink Marine Environmental Report (P2172\_R4822) Chapter 4 and Technical Appendix B for full list of stakeholders contacted. A copy of the GridLink Stakeholder Consultation Summary Report and Appendix 1 Statement of Community Involvement is also attached for reference.

Preliminary Advice from NE 17 March 2017.pdf

Created By:Mrs Anna Farley

16-OCT-2020 15:15:48

NE Pre-Application HRA and MCZ advise 02 September 2020 .pdf

Created By:Mrs Anna Farley

16-OCT-2020 15:14:27

MCA Pre-Application NRA advise 11 September 2020 .msg

Created By:Mrs Anna Farley

16-OCT-2020 15:10:11

GridLink Stakeholder Consultation Summary Report.pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:56:04

Appendix 1 GridLink Statement of Community Involvement.pdf

Created By:Mrs Anna Farley

19-OCT-2020 16:56:20

# Licence summary

**Do you consider this application to be for emergency activities?**

Emergency activities are those undertaken for the protection of life, property or the environment from an imminent risk.

Yes       No

**Do you consider this application would qualify for the accelerated licensing process for dredging?**

The accelerated licensing process applies to certain types of small-scale low-risk dredging activity.

Yes       No

**Proposed licence start date**

01-JAN-2022

**Proposed licence end date**

31-DEC-2069

## Site summary

Please provide the location of your proposed activities. Note that the responsibility for determining whether your proposed activities are below Mean High Water Springs (MHWS) rests with the applicant. If there is any doubt as to whether a site lies below MHWS you can undertake an independent survey to determine its location.

Use the 'Add/edit site(s)' button below to add one or more more locations to your application.

Next use the 'Add activity' button to add activities to your locations. (NB this option only appears once a location is created).

Basic examples:

Dredging at RiverA. Create one site for RiverA and add dredging as an activity.  
 Dredging and quay wall improvements at RiverA. Create 2 locations: one for the dredging in front of the new quay area and one for the quay wall improvements.  
 Dredging at RiverA and removal of large concrete block within the dredge area. Create 1 location and add two activities: 1 activity for removal and 1 activity for dredging.

Additional functions:

Subsites, Holes and Exclusion Zones can also be used more guidance is available in the 'Help' guide.

Activities:

When an activity is added to a site it is listed in a table. Click on the activity name in the table or use the links on the left hand side of this screen to navigate to the activity screen where you can provide your method statement and other information.

If you delete a site, the activities linked to it will still be visible on this screen. You

must delete these activities or move them to a valid site.

If you would like any advice on using this form or structuring your application please contact us.

## Sites

Please see included locations.kml file for detailed site locations.

## GridLink Application Corridor

## Site sensitivities

You should provide details of any protected areas (European or Ramsar sites, marine conservation zones, sites of special scientific interest, areas of outstanding natural beauty etc) and protected features (scheduled monuments, protected wrecks etc). You should also provide details of other areas and features of social, economic or environmental value. This could include shipping lanes, fishing grounds, recreational sailing areas, material assets, unprotected habitats and species and any other feature. (max. 2000 characters)

### Protected areas:

- Medway Estuary and Marshes SPA, Ramsar site and SSSI
- Thames Estuary and Marshes SPA and Ramsar site
- Outer Thames Estuary SPA
- Southern North Sea SAC
- Margate and Long Sands SAC
- Medway Estuary MCZ
- Goodwin Sands MCZ
- Foreland MCZ
- KEIFCA Byelaw Prohibited Area 4 – Pan Sand Hole.

Please see appended Marine Environmental Report (P2172\_R4822) Chapter 6, Technical Appendix E - Marine HRA and Appendix F MCZ Assessment for more information.

### Archaeological sensitivities:

Thirty-one wrecks, 10 aircraft, 25 obstructions, five findspots and 12 monuments are recorded within the Asset Placement Corridor. Of these, 6 wrecks and all 10 aircraft are protected under the 'Protection of Military Remains Act 1986.' Analysis of the geophysical data collected within the Proposed Development identified 283 geophysical anomalies, 37 of which relate to known historical assets. Please see Marine Environmental Report Chapter 13 for more information.

### Shipping sensitivities:

The Proposed Development lies within the Peel Ports authority area; and the Port of London Authority area. It runs parallel to one of the main shipping channels in the Thames Estuary, the Princes Channel; crosses the Medway Approach Channel traffic separation scheme (TSS), the Princes Channel TSS and the Dover Strait TSS in the English Channel. The total length of the Proposed Development within restricted navigational areas is 29.8km. Please see appended Marine Environmental Report (P2172\_R4822) Chapter 11 and Appendix J.

### Commercial fisheries sensitivities:

Six key fisheries have been identified; potting for whelks; potting for lobster and crab; bottom drift netting for Dover sole; general demersal trawl, beam trawling and anchored nets targeting whitefish; trawling for shrimp; and suction dredging for cockles. Please see appended GridLink Marine Environmental Report (P2172\_R4822) Chapter 12 for more information.

## List of activities at this site

Activity	Site	Activity type	Actions
Deposit of external cable protection (installation phase)	GridLink Application C...	Other deposits	
Unexploded Ordnance (UXO)	GridLink Application	Incineration of any substance or object at sea	



detonation	C...	
Deposit of external cable protection (repair)	GridLink Application C...	Maintenance of existing works
Unexploded ordnance (UXO) clearance	GridLink Application C...	Other removals
Laying of the cable (installation phase)	GridLink Application C...	Construction of new works

GridLink Application Corridor - Deposit of external cable protection (installation phase)

## Site

Please see included locations.kml file for detailed site locations.

## Activity details

### Activity type

Please select the type of activity that would take place. If more than one activity would take place you should enter the details of one activity here and then add another activity.

#### Activity type

Deposit of any substance or object

#### Activity subtype

Other deposits

## General

### Activity title

Enter the title of this activity (max. 250 characters)

Deposit of external cable protection (installation phase)

## Activity description

You should include a detailed description of the activity. For construction activities, this should include the dimensions of the works and materials to be used. (max. 2000 characters)

Where cable burial is not feasible due to difficult ground conditions or crossing existing subsea assets, external protections such as rock or mattresses will be used to protect the installed cables. The following external cable protection methods are likely to be used:

- Rock placement - Rock placement will be used to protect subsea cables by covering them in a continuous profiled berm of graded rock. The size of the berm will depend on the location, the site-specific anchor and fishing risks and metocean conditions. Rock sizes are likely to be in the range of 2cm to 22cm.
- Concrete mattresses - Concrete mattresses are matrices of interlinked concrete blocks which are placed over the cable. Mattresses are typically used in combination with rock protection e.g. at third-party asset crossings, or in areas where the main risk to the cables is from fishing activities. Typically, concrete mattresses are 6m long by 3m wide.
- Froned mats - Although not directly a form of external cable protection froned mats are used as an anti-scour system. The mats can either be attached to concrete mattresses or laid separately secured by gravity or anchors. The mats are proposed as mitigation to reduce scour and encourage resedimentation of the cable protection where the Proposed Development crosses the London Array Offshore Windfarm export cables.

The total requirement for external cable protection as follows:

In service Cable Crossings:

- Seven locations require external protection
- Total length of external protection = 755m
- Seabed footprint of external protection = 9,980m<sup>2</sup>
- External cable protection volume = 10,710m<sup>3</sup>

Maximum requirements due to ground conditions are estimated to be:

- Total length of external protection in UK waters = 3,944m
- Seabed footprint of external protection = 18,595m<sup>2</sup>
- External cable protection volume = 28,263m<sup>3</sup>

Please see appended GridLink Marine ER Chapter 3 (P2172\_R4822) for a full description of works

## Activity methodology

Your method statement should clearly explain how you are going to carry out the activities providing detail on any materials and plant to be used as well as proposed programme timings. (max. 2000 characters)

Specialised rock-placement vessels will be used to install external cable protection, these feature a large hopper to transport the rock, and a mechanism for deployment of the rock on site. The usual mechanisms are:

- Side dumping, whereby the rock is pushed or tipped over the side of the vessel;
- Split hopper, the halves of which separate to allow the rock to fall through the vessel; and
- Flexible fall pipe, where a retractable chute is used to control the flow of rock to the seabed.

Concrete mattresses are installed via a crane from either a dive support vessel or a construction support vessel; which lowers them one at a time or in batches using a special frame.

Information on material to be used is provided in 'Activity Description' above.

See 'Activity Programme' below for proposed timings

Please see appended GridLink Marine Environmental Report Chapter 3 (P2172\_R4822) for a detailed methodology on how external cable protection will be installed.

<b>Activity start date</b>	<b>Activity end date</b>
01-JAN-2022	31-DEC-2025

## **Activity programme**

You should detail the proposed programme of works for the activity. This should include proposed start and end dates for the activity. It should also include details of any elements that need to be completed by a certain date and details of any time periods during which the activity could not be carried out and the reasons for this. It should also include proposed working hours. (max. 2000 characters)

The construction programme is expected to take approximately 36 months from start to finish. The project is envisaged to commence on-site construction in early 2022 and be fully operational by end 2025. Deposits of external cable protection will occur in the same time period.

The exact timing of the landfall and submarine cable installation works will be dependent upon the date of the contract award for the works, time required for detailed design and cable manufacture, availability of cable installation and other vessels and any restrictions to mitigate potential effects on features of conservation interest, fisheries or other sensitive receptors.

A indicative programme of works is provided in appended GridLink Marine Environmental Report Chapter 3.

The following timing restrictions may be applied during deposition of external cable protection:

- Contractor shall consider whether activities can be programmed to minimise disruption and displacement during peak fishing season between April and October (e.g. avoid the season, programme activities so that fishing can continue in other areas of the Consent Corridor (Marine Licence Application Area) concurrently) .
- Time delay between sequential cable installation operations, e.g. cable-lay and post-lay burial, shall be minimised to a short as reasonably practicable, with a target delay less than 6 weeks.

## **Potential impacts**

You should detail the potential impacts this activity may have. This should include social, economic and environmental impacts. If this has already been detailed elsewhere in the application it is sufficient to reference that. (max. 2000 characters)

The appended GridLink Marine Environmental Report (P2172\_R4822) identifies potential effects external cable protection is likely to have on receptors, presents the findings of the significance assessment, describes how effects (if any) will be mitigated and assesses the significance of the residual effects. These are summarised in assessment summary tables in each relevant chapter.

An assessment of the potential effects of external cable protection on European and Ramsar sites has been provided in the GridLink Marine HRA (Technical Appendix E).

An assessment of the potential effects of external cable protection on Marine Conservation Zones has been provided in the GridLink Marine Conservation Zone Assessment (Technical Appendix F).

## **Proposed mitigation**

You should detail the mitigation you propose in response to the potential impacts. This should include a detailed explanation of the mitigation measure and evidence to demonstrate that the mitigation is likely to be successful. If this has already been detailed elsewhere in the application it is sufficient to reference that. (max. 2000 characters)

An Environmental Mitigation Schedule is provided in Chapter 15 of the GridLink Marine Environmental Report (P2172\_R4822\_Rev0). This presents the package of Project Specific Mitigation measures which have been identified during the Environmental Assessment process to reduce risks of external cable protection in environmentally sensitive areas.

Those pertinent to external cable protection are summarised below:

- Incorporate fronded mats at the London Array crossing to reduce scour and aid sediment deposition (PS1);
- Reduce scour at the London Array crossing (PS2);
- Encourage natural sediment deposition at the London Array crossing (PS3);
- Achieve burial depth to limit the use of external cable protection (PS4);
- Environmental monitoring at London Array crossing - The condition surveys will establish (if possible) the depth of sediment cover over the crossing. (PS49)

## **Residual risks**

You should detail the residual risks from the activity following the mitigation. This should include an assessment of the significance of the risks and evidence to show why these risks cannot be avoided or further mitigated. (max. 2000 characters)

The GridLink Marine Environmental Report (P2172\_R4822) describes how effects from external cable protection will be mitigated and assesses the significance of the residual effects. These are summarised in the assessment summary tables in each relevant chapter.

The Environmental Assessment concluded that there will be a Minor residual effect from external cable protection on the Physical Environment, Benthic Communities and Commercial Fish, see Chapters 5, 7 and 12, respectively.

For Navigation the assessment concluded that there is a potential localised Significant risk to navigation from external cable protection as the result of a reduction in water depth. Mitigation has been proposed to manage the risk. The Maritime and Coastguard Agency will be consulted once final designs for rock berms are complete to determine whether additional mitigation will be required such as aids to navigation i.e. marker buoys. The assessment concluded that overall there will be no residual effects on shipping and navigation within the region.

The Marine HRA concluded that with implementation of the proposed mitigation, external cable protection will not have an adverse effect on the integrity of the Margate and Long Sands SAC.

The MCZ assessment concluded that there is no significant risk that external cable protection either alone or in combination with other plans or projects will hinder the achievement of the conservation objectives stated for the MCZs.

## **Additional supporting information**

You should use this section to provide any further information about this activity that you wish to have taken into account in the processing and determination of this application. (max. 2000 characters)

## **Other deposits**

## Material details

Start date	End date	Description	Amount to be deposited (kg)
01-JAN-2022	31-DEC-2025	External cable protection will be required for crossing existing in-service subsea cables. Seven crossing will require external cable protection totaling: -Total length of external protection = 755m - Maximum width of external cable protection = 12.46m -Seabed footprint of external protection = 9,980m <sup>2</sup> -External cable protection volume = 10,710m <sup>3</sup> - Density of rock (granite) is assumed to be 2750 kg/m <sup>3</sup>	29452500
01-JAN-2022	31-DEC-2025	External	77723250

cable protection may be required where ground conditions are not suitable for burial in sediment. The maximum requirements due to ground conditions are estimated to be:

- Total length of external protection in UK waters = 3,944m
- Maximum width of external cable protection = 7.3m
- Seabed footprint of external protection = 18,595m<sup>2</sup>
- External cable protection volume = 28,263m<sup>3</sup>
- Density of rock (granite) is assumed to be 2750 kg/m<sup>3</sup>

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01-JAN-2022	31-DEC-2025	Estimate for deposit of Frond Mats at London Array	285000
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Crossing.  
Estimate is based on mats positioned around perimeter of crossing out to 5m.  
Assumes crossing is 225m long x 9.76m wide.  
Assumes mats are 2.5m x 5m.  
Assumes 380 mats will be deposited around & over crossing.  
750kg per mat.

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## Further details

### Additional information

(max. 2000 characters)

### Supporting documents

GridLink Application Corridor - Unexploded Ordnance (UXO) detonation

## Site

Please see included locations.kml file for detailed site locations.

## Activity details

### Activity type

Please select the type of activity that would take place. If more than one activity would take place you should enter the details of one activity here and then add another activity.



**Activity type**

Incineration of any substance or object

**Activity subtype**

Incineration of any substance or object at sea

**General**

**Activity title**

Enter the title of this activity (max. 250 characters)

Unexploded Ordnance (UXO) detonation

**Activity description**

You should include a detailed description of the activity. For construction activities, this should include the dimensions of the works and materials to be used. (max. 2000 characters)

Given the nature of the marine development, there is a risk that UXO may be encountered during intrusive activities e.g. cable installation, cable repair activities. A UXO desktop study was prepared by 6 Alpha Associates (2019) which concluded that it is almost certain that UXO will be found in the Application Corridor.

The offshore bathymetrical, geophysical, geotechnical and environmental survey completed in 2019 were designed to detect any significant seabed features and obstacles within the Asset Placement Corridor. A more detailed UXO specific pre-construction survey using a magnetometer array will be undertaken pre-installation, to detect anomalies that may be UXO.

It is proposed that as project specific mitigation, deflagration charges (in the region of 1.54kg) will be used on all UXO – whereby the explosive is burnt out rather than blown up. As a precautionary measure, GridLink are applying for permission to detonate up to ten UXO, although from experience on other power cable projects in the Thames region it is thought more likely that up to two would be required.

Please see appended GridLink Marine Environmental Report Chapter 3 (P2172\_R4822\_Rev0) for a detailed description of UXO detonation

## Activity methodology

Your method statement should clearly explain how you are going to carry out the activities providing detail on any materials and plant to be used as well as proposed programme timings. (max. 2000 characters)

Following the UXO survey (see above) the Preferred Cable Route will be micro-routed within the UXO survey corridor, to ensure a suitable safety distance between the cable installation and any UXO finds, so that no UXO clearance is necessary. If any significant UXO is identified, the decision-making hierarchy shall be:

1. Avoid by micro-routeing
2. If the UXO cannot be avoided, undertake clearance to surface or move UXO away from cable installation.
3. If the UXO cannot be safely moved, carry out clearance by on-site detonation.

Following the UXO survey, the Preferred Cable Route will be micro-routed within the UXO survey corridor to provide a suitable safety distance between the cable installation and any UXO finds. With micro-routing, no UXO clearance is necessary.

UXO clearance and deflagration requires the use of a specialised UXO expert. Up to two vessels may be used: one for identification; and a second for retrieval / clearance or deflagration. During deflagration, the vessel undertaking the deflagration will stand off at a specified distance. The distance depends on factors such as water depth, vessel type, activity and the predicted UXO Net Explosive Quality. A vessel stand off distance of 150m is considered a minimum safe requirement for the largest UXO identified as potentially present within the Application Corridor

See 'Activity Programme' below for proposed timings

Please see appended GridLink Marine Environmental Report Chapter 3 (P2172\_R4822\_Rev0) for a detailed methodology UXO deflagration

<b>Activity start date</b>	<b>Activity end date</b>
01-JAN-2022	31-DEC-2025

## Activity programme

You should detail the proposed programme of works for the activity. This should include proposed start and end dates for the activity. It should also include details of any elements that need to be completed by a certain date and details of any time periods during which the activity could not be carried out and the reasons for this. It should also include proposed working hours. (max. 2000 characters)

The construction programme is expected to take approximately 36 months from start to finish. The project is envisaged to commence on-site construction in early 2022 and be fully operational by early 2025. The potential UXO deflagration could take place in this same time period. However this will be between 01 April and 31 September (to avoid effects on harbour porpoise).

A indicative programme of works is provided in appended GridLink Marine Environmental Report (P2172\_R4822\_Rev0) Chapter 3.

## Potential impacts

You should detail the potential impacts this activity may have. This should include social, economic and environmental impacts. If this has already been detailed elsewhere in the application it is sufficient to reference that. (max. 2000 characters)

The GridLink Marine Environmental Report (P2172\_R4822\_Rev0) has identified that there is the potential for significant effects, including intra-project, transboundary and incombination effects on marine mammals from UXO deflagration. Other receptors that will be potentially sensitive are fish and commercial fisheries. The assessments are provided in the each relevant topic chapters of the Environmental Report.

An assessment of the potential effects of potential UXO deflagration on European sites has been provided in the GridLink Marine HRA (Technical Appendix E).

## Proposed mitigation

You should detail the mitigation you propose in response to the potential impacts. This should include a detailed explanation of the mitigation measure and evidence to demonstrate that the mitigation is likely to be successful. If this has already been detailed elsewhere in the application it is sufficient to reference that. (max. 2000 characters)

An Environmental Mitigation Schedule is provided in Chapter 15 of the GridLink Marine Environmental Report (P2172\_R4822\_Rev0). This presents the package of embedded mitigation measures to be incorporated into the design, installation and operation of GridLink to minimise the risks to the environment. Measures EM44-EM47 are relevant to UXO deflagration. In addition, it outlines the Project Specific Mitigation measures which have been identified during the EA process to reduce risks of potential UXO deflagration on sensitive receptors. Those pertinent to potential UXO deflagration are summarised below:

- If required, UXO deflagration will be undertaken between 01 April and 31 September (to avoid effects on harbour porpoise) (PS10)
- The Contractor shall use Lofitech AS seal scarer acoustic deterrent device (ADD) or similar prior to UXO deflagration (PS11)
- Deflagration will be used on all UXO charge sizes (PS44)
- With respect to UXO deflagration, GridLink will ensure that UXO deflagration for the project in UK and French sectors will not occur on the same day and will liaise with the MMO to reduce risk of incombination and transboundary effects (PS45)
- To minimise the risk to fishing interests, locations of any UXO requiring clearance by deflagration shall be discussed with the FLO (PS28 and PS29)

## Residual risks

You should detail the residual risks from the activity following the mitigation. This should include an assessment of the significance of the risks and evidence to show why these risks cannot be avoided or further mitigated. (max. 2000 characters)

The GridLink Marine Environmental Report (P2172\_R4822\_Rev0) describes how effects from UXO deflagration will be mitigated and assesses the significance of the residual effects. These are summarised in the assessment summary tables in each relevant chapter.

With respect to the deflagration of UXO, there is the potential for an adverse effect on the conservation objectives for the Primary Feature harbour porpoise of the Southern North Sea SAC and Appropriate Assessment is required. In addition, there is the potential for transboundary effects on the Primary Features (harbour porpoise, grey seal and common seal) of the Bancs des Flandres SAC and Appropriate Assessment is required. This assessment also applies more widely to all marine mammals within the Proposed Development which are European Protected Species. With implementation of the proposed mitigation, the Proposed Development will not have an adverse effect on the integrity of the Southern North Sea SAC or Bancs des Flandres SAC either alone or in combination with other plans or projects.

GridLink will apply for an EPS Licence for the UXO deflagration.

## Additional supporting information

You should use this section to provide any further information about this activity that you wish to have taken into account in the processing and determination of this application. (max. 2000 characters)

GridLink Application Corridor - Deposit of external cable protection (repair)

## Site

Please see included locations.kml file for detailed site locations.

## Activity details

### Activity type

Please select the type of activity that would take place. If more than one activity would take place you should enter the details of one activity here and then add another activity.

#### Activity type

Construction, alteration or improvement of any works

#### Activity subtype

Maintenance of existing works

## General

### Activity title

Enter the title of this activity (max. 250 characters)

Deposit of external cable protection (repair)

### Activity description

You should include a detailed description of the activity. For construction activities, this should include the dimensions of the works and materials to be used. (max. 2000 characters)

The potential requirement for repair operations requiring external cable protection during the lifetime of the Proposed Development will depend on the number of faults, location of the faults, and the burial / protection method used for the original installation.

The estimate of the number of repair operations is three:

- One operational cable fault over the operational lifetime of the cable ( nominal 40 years);
- Two third party interactions with the cable over the operational lifetime of the cable (nominal 40 years), based on calculation formulas provided by Ofgem, ENTSO-E and CIGRE 379 .

As a contingency all repair activities requiring potential external cable protection will be undertaken within the Application Corridor and the effects of each cable repair is assumed to be the following:

- Repair to 500m length of each cables (i.e. two power cables and the fibre optic cable);
  - Cables can be reburied
  - Cable removal and re-burial footprints will not overlap (as a worst case, as in reality they may occur within overlapping areas);
- Should re-burial not be feasible, alternative protection method, e.g. rock placement or concrete mattresses, up to 7m wide may be used.

The Environmental Report has assumed that as a contingency cable protection may be required in three locations, totalling 7m wide by 500m long.

Please see GridLink Marine Environmental Report Chapter 3 (P2172\_R4822\_Rev0) for a description of cable repair operations.

### Activity methodology

Your method statement should clearly explain how you are going to carry out the activities providing detail on any materials and plant to be used as well as proposed programme timings. (max. 2000 characters)

The objective is that after a cable repair the additional joints and the extra cable length will be buried. However, if this is not feasible e.g. due to ground conditions, external cable protection will be provided (either concrete mattresses or rock placement) deployed from either the repair vessel itself or a separate specialised vessel.

Activity start date	Activity end date
01-JAN-2025	01-JAN-2035

## Activity programme

You should detail the proposed programme of works for the activity. This should include proposed start and end dates for the activity. It should also include details of any elements that need to be completed by a certain date and details of any time periods during which the activity could not be carried out and the reasons for this. It should also include proposed working hours. (max. 2000 characters)

A cable repair operation might be expected to take between two and six weeks depending on the type and extent of damage, burial requirements and operational constraints such as weather.

Any remedial cable protection works will take place 10 years from installation with a substantive review being undertaken every 5 years.

## Potential impacts

You should detail the potential impacts this activity may have. This should include social, economic and environmental impacts. If this has already been detailed elsewhere in the application it is sufficient to reference that. (max. 2000 characters)

The GridLink Marine Environmental Report (P2172\_R4822\_Rev0) identifies potential effects external cable protection (during repair) is likely to have on receptors, presents the findings of the significance assessment, describes how effects (if any) will be mitigated and assesses the significance of the residual effects. These are summarised in assessment summary tables in each relevant chapter.

The deposition of external cable protection during cable repair activities will have a similar effect to the installation activities but on a smaller magnitude. Depending on the location of the repair there is the potential that water depths may be reduced which could cause effects to navigation. This has been assessed in the GridLink Navigation Risk Assessment (Technical Appendix J).

An assessment of the potential effects of external cable protection on European and Ramsar sites has been provided in the GridLink Marine HRA (Technical Appendix E).

An assessment of the potential effects of external cable protection on Marine Conservation Zones has been provided in the GridLink MCZ Assessment (Technical Appendix F).

## Proposed mitigation

You should detail the mitigation you propose in response to the potential impacts. This should include a detailed explanation of the mitigation measure and evidence to demonstrate that the mitigation is likely to be successful. If this has already been detailed elsewhere in the application it is sufficient to reference that. (max. 2000 characters)

The project specific mitigation proposed for deposit of external cable protection during installation is pertinent for cable repair.

An Environmental Mitigation Schedule is provided in Chapter 15 of the GridLink Marine Environmental Report (P2172\_R4822\_Rev0). This presents the package of Project Specific Mitigation measures which have been identified during the Environmental Assessment process to reduce risks of external cable protection in environmentally sensitive areas.

Those pertinent to external cable protection for repair are summarised below:

- Achieve burial depth to limit the use of external cable protection (PS4);
- To reduce the sensitivity of shipping to the water depth changes the Maritime and Coastguard Agency will be consulted once final designs for rock berms are complete to determine whether additional mitigation will be required such as aids to navigation i.e. marker buoys.

## **Residual risks**

You should detail the residual risks from the activity following the mitigation. This should include an assessment of the significance of the risks and evidence to show why these risks cannot be avoided or further mitigated. (max. 2000 characters)

The deposition of external cable protection during cable repair activities will have a similar residual effect to the installation activities. External cable protection for cable repairs will be on a smaller extremely localised scale, and as such not expected to have any significant effects on biological receptors. Any impacts will be less than those identified for installation operations by the Environmental Assessment.

Depending on the location of the repair operation there is the potential for significant effects on commercial fisheries and navigation due to a potential reduction in water depth. However, this will be extremely localised and the mitigation proposed is designed to reduce the sensitivity of shipping.

## **Additional supporting information**

You should use this section to provide any further information about this activity that you wish to have taken into account in the processing and determination of this application. (max. 2000 characters)

## Maintenance of existing works

### **Use intended to be made of the works**

You should detail the use that will be made of the works. For example, if you are proposing to build a quay to use for unloading cargo then you should detail the type of cargo, quantity to be unloaded, frequency of unloading, methodology of unloading and any other relevant information. (max. 2000 characters)

Potential deposition of external cable protection during repair of installed marine cables used for the purposes of exporting and importing electricity.

GridLink Application Corridor - Unexploded ordnance (UXO) clearance

## Site

Please see included locations.kml file for detailed site locations.

## Activity details

### **Activity type**

Please select the type of activity that would take place. If more than one activity would take place you should enter the details of one activity here and then add another activity.

### **Activity type**

Removal of any substance or object

**Activity subtype**

Other removals

**General**

**Activity title**

Enter the title of this activity (max. 250 characters)

Unexploded ordnance (UXO) clearance

**Activity description**

You should include a detailed description of the activity. For construction activities, this should include the dimensions of the works and materials to be used. (max. 2000 characters)

Removal of UXO from the seabed during repair works. The repair location will be re-surveyed to identify any UXO within the Asset Placement Corridor. The new section of cable will be positioned to avoid UXO, so that UXO clearance is not necessary. However, if any significant UXO is identified, the decision-making hierarchy taking account of environmental sensitivities, safety and technical considerations shall be:

- 1.Avoid by micro-routeing.
- 2.If the UXO cannot be avoided, undertake clearance to surface or move UXO outside the UXO survey corridor.

If a potential UXO cannot be avoided for whatsoever reason, this potential UXO will be investigated by visual inspection using an ROV. If visual inspection confirms a UXO, then if it is safe to do so the UXO will be removed. Clearance works will be using an electromagnetic grab where safe.

Please see appended GridLink Marine Environmental Report Chapter 3 (P2172\_R4822\_Rev0) for a detailed description of UXO clearance



## Activity methodology

Your method statement should clearly explain how you are going to carry out the activities providing detail on any materials and plant to be used as well as proposed programme timings. (max. 2000 characters)

Following the UXO survey the repair section will be micro-routed within the UXO survey corridor, to ensure a suitable safety distance between the repair and any UXO finds, so that no UXO clearance is necessary. If any significant UXO is identified, the decision-making hierarchy shall be:

1. Avoid by micro-routeing
2. If the UXO cannot be avoided, undertake clearance to surface or move UXO outside the Application Corridor

If a potential UXO cannot be avoided for whatsoever reason, this potential UXO will be investigated by visual inspection using an ROV. If visual inspection confirms a UXO, then if it is safe to do so the UXO will be removed. Clearance works will be using an electromagnetic grab where safe.

See 'Activity Programme' below for proposed timings

Please see appended GridLink Marine Environmental Report Chapter 3 (P2172\_R4822\_Rev0) for a detailed methodology UXO clearance

<b>Activity start date</b>	<b>Activity end date</b>
01-JAN-2025	31-DEC-2040

## Activity programme

You should detail the proposed programme of works for the activity. This should include proposed start and end dates for the activity. It should also include details of any elements that need to be completed by a certain date and details of any time periods during which the activity could not be carried out and the reasons for this. It should also include proposed working hours. (max. 2000 characters)

A cable repair operation might be expected to take between two and six weeks depending on the type and extent of damage, burial requirements and operational constraints such as weather.

## Potential impacts

You should detail the potential impacts this activity may have. This should include social, economic and environmental impacts. If this has already been detailed elsewhere in the application it is sufficient to reference that. (max. 2000 characters)

UXO clearance will have no significant effects on biological receptors. Socio-economic receptors such as commercial fisheries and navigation may be temporarily disrupted by the presence of the project vessels which will likely be stationary at a specific location for a number of days. Vessels will be requested to remain at least 500m from the project vessels during this time.

## Proposed mitigation

You should detail the mitigation you propose in response to the potential impacts. This should include a detailed explanation of the mitigation measure and evidence to demonstrate that the mitigation is likely to be successful. If this has already been detailed elsewhere in the application it is sufficient to reference that. (max. 2000 characters)

None proposed for clearance.

### **Residual risks**

You should detail the residual risks from the activity following the mitigation. This should include an assessment of the significance of the risks and evidence to show why these risks cannot be avoided or further mitigated. (max. 2000 characters)

None

### **Additional supporting information**

You should use this section to provide any further information about this activity that you wish to have taken into account in the processing and determination of this application. (max. 2000 characters)

GridLink Application Corridor - Laying of the cable (installation phase)

### **Site**

Please see included locations.kml file for detailed site locations.

## **Activity details**

### **Activity type**

Please select the type of activity that would take place. If more than one activity would take place you should enter the details of one activity here and then add another activity.

#### **Activity type**

Construction, alteration or improvement of any works

#### **Activity subtype**

Construction of new works

### **General**

#### **Activity title**

Enter the title of this activity (max. 250 characters)

Laying of the cable (installation phase)

## Activity description

You should include a detailed description of the activity. For construction activities, this should include the dimensions of the works and materials to be used. (max. 2000 characters)

The total length of the GridLink Preferred Route is 140km; of which the Proposed Development forms 106km within the UK Marine Area (inshore territorial waters between MHWS and 12 nautical miles [NM]) and 2.5km in the offshore waters of the UK EEZ (not licensable). The remaining 31.5km of submarine cable lies in French waters.

The Installation Contractor will be able to deviate from GridLink Preferred Cable Route i.e. to micro-route around obstacles, but only within an area defined as the Asset Placement Corridor; a (nominally) 500 m wide corridor which was surveyed by survey contractor MMT on behalf of GridLink in 2019.

The subsea cable system will consist of two mass impregnated submarine HVDC cables and a fibre optic cable for control and monitoring purposes. The Fibre Optic cable will also serve as a commercial fibre cable.

The diameter of each cable will be approximately 130 mm, with a copper conductor. The cable will have a lead sheath, to ensure no moisture can penetrate the insulation, and steel wire armour to protect the cable from external damage during installation and burial/protection. The armouring is made from round or flat steel wire wound in a helical form. A polyethylene sheath is applied over the armour wires to make the cable easier to handle and ensure the armour wires remain in place during bending.

A summary of the cable design is below:

- Conductor: 2000mm<sup>2</sup> copper, stranded or segmental
- Conductor screen: Carbon-impregnated paper
- Insulation: Mass-impregnated paper
- Insulation screen: Carbon-impregnated paper
- Metallic sheath: Lead alloy and steel tape reinforcement
- Extruded sheath: Polyethylene
- Armour: 4mm steel wires
- Serving: Polypropylene
- Cable diameter: Approximately 128mm

Please see appended GridLink Marine Environmental Report Chapter 3 (P2172\_R4822\_Rev0) for a full description of installation works

## Activity methodology

Your method statement should clearly explain how you are going to carry out the activities providing detail on any materials and plant to be used as well as proposed programme timings. (max. 2000 characters)

A pre-lay grapnel will be towed along the cable route to clear any seabed debris. Discrete areas of seabed may require pre-sweeping, where a dredger or mass flow excavator is used to remove a portion of a mobile sandwave.

There are three possible configurations for cable installation:

- Pre-cut trenching – A vessel will tow a plough to create a v-shaped trench. A cable lay vessel (CLV) will lay the cables directly into the trench. A third vessel will tow a back-fill plough to push the spoil heaps into the trench.
- Simultaneous lay and burial – simultaneous trench excavation and cable-lay into the trench. The CLV may tow the burial equipment or it is deployed by another vessel navigating close behind. The cables are fed into the burial equipment and the cables are buried as the spread progresses along the route.
- Post-lay burial – The CLV lays the cables on the seabed and a post-lay burial vessel follows later to bury the cables. As the post-lay burial is a stand-alone operation, the two operations may be separate physically and in time.

The cables will be buried using the following methods:

- Jet trenching - water-jetting tool to fluidise seabed used to bury the cable in areas of loose non cohesive sediments such as sand and silt.
- Conventional narrow share cable plough - used in cohesive sediments such as clays through to rock and non-cohesive sediments such as loose coarse sand to fine dense sand.
- Advanced cable plough (vertical injectors), likely to be used between KP0.41 and KP7.1 to achieve target burial depth of 3.5m.
- Cutting - technique is used to install cables into hard sediments such as clay, cemented sand, sandstone and weak bedrock. This method is unlikely to be used.

For cable materials and timings please see 'Activity Description' and Activity Programme' respectively.

Please see appended GridLink Marine Environmental Report Chapter 3 (P2172\_R4822\_Rev0) for a detailed methodology for cable installation

<b>Activity start date</b>	<b>Activity end date</b>
01-JAN-2022	31-DEC-2025

## **Activity programme**

You should detail the proposed programme of works for the activity. This should include proposed start and end dates for the activity. It should also include details of any elements that need to be completed by a certain date and details of any time periods during which the activity could not be carried out and the reasons for this. It should also include proposed working hours. (max. 2000 characters)

The construction programme is expected to take approximately 36 months from start to finish. The project is envisaged to commence on-site construction in early 2022 and be fully operational during 2025.

The exact timing of the landfall and submarine cable installation works will be dependent upon the date of the contract award for the works, time required for detailed design and cable manufacture, availability of cable installation and other vessels and any restrictions to mitigate potential effects on features of conservation interest, fisheries or other sensitive receptors.

A indicative programme of works is provided in appended GridLink Marine ER (P2172\_R4822\_Rev0) Chapter 3.

The following timing restrictions maybe applied during cable installation:

- No HDD works to be undertaken in the Medway Estuary between 01 October and 31 April (to avoid effects on overwintering birds).
- Contractor shall consider whether activities can be programmed to minimise disruption and displacement during peak fishing season between April and October (e.g. avoid the season, programme activities so that fishing can continue in other areas of the Consent Corridor (Marine Licence Application Area) concurrently) .
- Time delay between sequential cable installation operations, e.g. cable-lay and post-lay burial, shall be minimised to a short as reasonably practicable, with a target delay less than 6 weeks.

## **Potential impacts**

You should detail the potential impacts this activity may have. This should include social, economic and environmental impacts. If this has already been detailed elsewhere in the application it is sufficient to reference that. (max. 2000 characters)

The appended GridLink Marine ER (P2172\_R4822\_Rev0) identifies the potential effects the Proposed Development is likely to have on receptors, presents the findings of the significance assessment, describes how effects (if any) will be mitigated and assess the significance of the residual effects. These are summarised in assessment summary tables in each relevant chapter.

An assessment of the potential effects on European and Ramsar sites has been provided in the appended GridLink Marine HRA which forms Technical Appendix E. An assessment of the potential effects on Marine Conservation Zones has been provided in the appended GridLink MCZ Assessment (Technical Appendix F).

## Proposed mitigation

You should detail the mitigation you propose in response to the potential impacts. This should include a detailed explanation of the mitigation measure and evidence to demonstrate that the mitigation is likely to be successful. If this has already been detailed elsewhere in the application it is sufficient to reference that. (max. 2000 characters)

An Environmental Mitigation Schedule is provided in Chapter 15 of the Marine Environmental Report (P2172\_R4822\_Rev0). This presents the package of embedded mitigation measures to be incorporated into the design, installation and operation of the Proposed Development to minimise the risks to the environment; and Project Specific Mitigation measures which have been identified during the assessment process to reduce risks in environmentally sensitive areas.

Those pertinent to cable installation are summarised below.

- Avoid external cable protection where possible and minimise displacement of the seabed in areas of sensitive habitat (PS4);
- Avoid deviation off the Preferred Cable Route (PS5);
- Avoid anchor placement in sensitive areas (PS6 and PS7).
- Micro-route the cable to avoid or minimise effects to Sabellaria reef (PS8)
- No HDD works during winter months to avoid effects on overwintering birds (PS9)
- Minimise suspended solid concentrations (PS24 -PS27)
- Reduce sensitivity of shipping - this includes but is not limited to, ensuring that the Installation contractor establishes a communications protocol with Peel Ports and Port of London Authorities (PS33 - PS38), Trinity House (PS32, PS41) and yacht clubs in the area (PS42) to ensure disruption is minimised.
- Coordination with the Channel Navigation Service and Dover Coastguard Operations centre to provide 24-hour radio and radar coastal vessel traffic information which helps vessels navigate safely to help prevent collisions (PS47).
- An extensive series of project specific mitigation has been developed in consultation with the local fishing industry. Much targets specific sections of the Preferred Cable Route where specific sensitivities to a certain fishery have been identified (PS12 - PS30)
- Marine archaeological exclusion zones have been established to avoid sensitive archaeological features (PS39 and PS41).

## Residual risks

You should detail the residual risks from the activity following the mitigation. This should include an assessment of the significance of the risks and evidence to show why these risks cannot be avoided or further mitigated. (max. 2000 characters)

The Marine Environmental Report (P2172\_R4822\_Rev0) describes how effects (if any) will be mitigated and assess the significance of the residual effects. These are summarised in assessment summary tables in each relevant chapter.

All residual effects on receptors potentially effected by cable installation works were assessed as Not Significant.

The Marine HRA concluded that with the implementation of the proposed mitigation, the Proposed Development will not have an adverse effect on the integrity of European Sites in the area.

The MCZ assessment concluded that with the implementation of the proposed mitigation, there is no significant risk that the Proposed Development either alone or in combination with other plans or projects will hinder the achievement of the conservation objectives stated for the MCZs.

### Additional supporting information

You should use this section to provide any further information about this activity that you wish to have taken into account in the processing and determination of this application. (max. 2000 characters)

Please refer to GridLink Marine Environmental Report and supporting Technical Appendices.

## Construction of new works

### Use intended to be made of the works

You should detail the use that will be made of the works. For example, if you are proposing to build a quay to use for unloading cargo then you should detail the type of cargo, quantity to be unloaded, frequency of unloading, methodology of unloading and any other relevant information. (max. 2000 characters)

GridLink is a proposed subsea and underground electricity interconnector cable between the existing electricity grids in the UK and France with a nominal rating of 1400 megawatts (MW).

GridLink will provide a new interconnector between the National Grid's Kingsnorth 400 kilo volt (kV) substation in Kent and the RTE Warande 400 kV substation to the south of Dunkerque, Nord region in France. The power will be able to flow in either direction, depending on supply and demand requirements in each country.

## Licence conditions

### Are there any conditions you consider should be added to the marine licence?

Any suggested conditions will be considered as part of the application and may be applied to the consent. However, proposed conditions may also be edited or removed and other conditions may be applied in addition to or in place of any conditions you propose.

Yes  No

## Online contacts

### Name

MMO Application Contacts

### Description

MMO Application Contacts

Central Contact Details	Team Coordinator	Edit/Prepare Application	Submit Application	Applicant	Co-applicant	Copy Recipient	Invoice Addressee
David Barber	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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**Role**

# Other details

## Fees and charges

### **Cost of project seaward of mean high water springs (£)**

Specify pounds only or pounds and  
pence, e.g. 1000 or 1000.10

150000000



## Public register

### **Permission to add your data to the MMO evidence base:**

The Marine Management Organisation (MMO) has gathered information from a number of existing sources to support marine planning, marine licensing and associated functions of the MMO. The MMO is continuously adding to the evidence base to support future decision making, with the aim to ensure a sustainable future for our coastal and offshore waters.

A new marine plan led system of marine management will set the direction for decision making on marine use and will:

- guide marine users to the most suitable locations for different activities;
- manage the use of marine resources to ensure sustainable levels; and
- consider all the benefits and impacts of current and future activities that occur in the marine environment.

**1.**The MMO would like your permission to use any of the data you submit in a digital format that can be entered into a geographical information system. This data may be used to inform MMO functions.

#### **Can we use your data to inform MMO functions?**

Yes       No

**2.**Under section 101 of the Marine and Coastal Access Act 2009 the MMO must maintain a register of activities where it is the appropriate licensing authority. Information contained within or provided in support of this application will be placed on the MMO's Public Register unless:

- The Secretary of State determines that its disclosure would be contrary to the interests of national security; or
- The MMO determines that its disclosure would adversely affect confidentiality of commercial or industrial information where such confidentiality is provided by law to protect legitimate commercial interest.

#### **Is there any information in your application (including any supporting documents) that you believe should be withheld from the Public Register?**

Yes       No