HEALTH AND SOCIAL SERVICES
A STATES OF GUERNSEY GOVERNMENT DEPARTMENT

Office of Environmental Health and Pollution Regulation

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Food and Environment Protection Act 1985 (Guernsey) Order 1987

Deposits in the Sea

Application for a FEPA Licence

IMPORTANT: before you start to complete this form, please read these notes carefully.

- This guidance is not intended to be definitive or comprehensive and applicants are advised to refer to the Food and Environment Protection Act 1985 (Guernsey) Order 1987.
- A signed hard copy of the application form must be accompanied by a location plan, descriptive drawing(s) (clearly identifying the Mean High Water Springs mark) and any supporting information including analytical data and environmental assessment. The completed application form, together with 4 photocopies, must each (both the original and the copies) be accompanied by a location plan, descriptive drawing(s) (clearly identifying the Mean High Water Springs mark) and any supporting information including analytical data and environmental assessment. All documents should be submitted to the above address **at least two calendar months before the licence is required.** Please note that should some of this material be protected by copyright you will be required to include additional original copies of that material to facilitate HSSD's consultations (question 6(b) refers).
- Some dredging projects may raise matters that require a significantly longer time for consideration. This is most likely to be the case for large and potentially contentious projects where substantial volumes of material are to be removed and/or disposed; those taking place adjacent to or within a marine conservation area or requiring an environmental statement. Applicants are advised to contact HSSD as early as possible during the planning stage in order to avoid delays in determining their application.
- If a shorter period for consideration of the application is unavoidable please give a full explanation. A period of two calendar months takes account of the need to consult other interested parties and the volume of other applications received and is designed to ensure that, except when significant problems arise, licences are issued by the date required by the applicant.
- Information should be provided about the anticipated duration of the entire project in respect of works below Mean High Water Springs (MHWS), together (where appropriate) with details of the planned phasing of the work for which a licence is sought during the first year and each subsequent 12 month period. Further application may be necessary to renew a licence that is due to expire. HSSD will normally write to the licence holder three months before the expiry date to determine whether renewal is required.
- There are three licence fee categories, which are related to the estimated total cost of the marine works. For smaller projects, costing less than £3,135 in total, the licence fee is £150; for projects costing between £3,135 and £26,125 in total, the fee is £500; and, for projects costing in excess of £26,125, the fee is £1,250. When you have determined the relevant licence fee category, a cheque for the appropriate amount, made payable to 'the States of Guernsey' and 'A/C Payee Only', should be forwarded to HSSD with the application documents. The cheque should be accompanied by a declaration of the estimated total cost of the proposed marine works.

- The latter information is not required to verify your assessment of the relevant licence fee category, but it is essential if the Department is to consider revision of the criteria for determination of the fee categories to more adequately reflect applicants' requirements.
- It should be noted that the licence fees referred to above are calculated to recover only average costs incurred in processing an application and administering a licence. In some cases there will be significant additional costs, usually associated with chemical analyses, monitoring studies or enforcement activities. Where significant additional costs are anticipated, you will be advised of the requirement and a separate charge will be requested to take account of the HSSD's costs.

  Licences cannot be backdated. Licences are normally issued for a period of 12 months from the date of issue or the expected duration of a phase of work.
- The licence can also cover the temporary deposit of material (generated from construction work) to be used as backfill/beach replenishment.
- Please answer all the questions. If any information is not available at the time of application please indicate at the appropriate section, giving reasons in a covering letter, and submit the details separately as soon as possible. Any delay in forwarding details is likely to result in a delay in determining your application.

It is the responsibility of the applicant to obtain any other consents or authorisations that may be required.

Under Section 14 of FEPA all information contained within or provided in support of this application will be placed on the Public register unless HSSD approve the applicant's reasons for withholding all or part.

Public register

Is there any information contained within or provided in support of this application that you consider should not be included on the Public Register on the grounds that it disclosure:

Please tick appropriate box

(a)	would be contrary to the interests of national security; or	YES		NO	✓
(b)	would prejudice to an unreasonable degree your or some other person's commercial interests or those of a third party?	YES		NO	✓

If **YES**, to either (a) or (b), please provide full justification as to why all or part of the information you have provided should be withheld.

Project title and payment details

1. Please give a brief description, including location, of the works:

FAB Link is a proposed underground and subsea interconnector which will allow the exchange and trading of up to 1400MW (mega-watt) of electricity between France and Britain. In December 2016 FAB Link Limited submitted a FEPA application for the FAB link interconnector. The subject of the application was a submarine cable corridor which entered the States of Guernsey waters from French territorial waters to make landfall at Longis Bay on the south coast of Alderney and then continued from landfall at Corblets Bay through States of Alderney and States of Guernsey waters onwards to the French Exclusive Economic Zone (EEZ) in the north.

The subject of this FEPA application is an Alternative cable corridor for the FAB link interconnector that bypasses the island of Alderney. The Alternative cable corridor lies exclusively in States of Guernsey territorial waters. As with the original FEPA application, the Alternative route has been designed to enable the connection of future tidal stream energy in the States of Alderney waters.

The project is designated as a Project of Common Interest under the provisions of European Union Regulation No. 347/2013 on guidelines for Trans-European Network for Energy (TEN-E Regulations).

2. **Applicant details**

Applicant for Licence(s):

Title (e.g. Mr/ Mrs/Miss/Ms)		Initials		Surname

Trading title (if appropriate)	FAB Link Limited
Address	17th Floor 88 Wood Street London EC2V 7DA
Name of contact (if different)	Mr Chris Jenner
Position within company (if appropriate)	Development Manager
Telephone number (inc. dialling code)	020 3668 6696
Fax number (inc. dialling code)	
Company Registration No.	54637
Email	chris.jenner@transmissioninvestment.com

3. **Details of agent (if any)**

Title (e.g. Mr/ Mrs/Miss/Ms)	Mrs	Initials	Anna	Surname

	Farley
Trading title (if appropriate)	Metoc Ltd trading as Intertek Energy and Water Consultancy Services
Address	Exchange House, 33 Station Road, Liphook, GU30 7DW
Name of contact (if different)	
Position within company (if appropriate)	Associate Director
Telephone number (inc. dialling code)	01428 728537
Fax number (inc. dialling code)	01428 727122

Company Registration No. 01489779 Email Anna.farley@intertek.com

Duration of project

4. Start date 01/07/2018 Expected completion date 31/12/2071

A licence is normally valid for 12 months or the duration of the works (whichever is the longer) but not normally exceeding 3 years. If necessary, application can be made to extend a licence for a further 12 months where the works are expected to continue beyond the duration of the original consent. The start date will not normally be backdated except in exceptional circumstances, since to commence works falling under Part II of FEPA for which a licence has not been obtained may constitute an offence and may result in appropriate legal action being taken.

Description and Cost of the proposed project

5. (a) Estimated gross cost of project (including materials, labour, fees etc.) for those works which it is proposed to undertake seawards of the tidal limit of Mean High Water Springs.

£90M for works within State of Guernsey territorial waters.

(b) Give full details below of the proposed project.
Where the project is expected to take longer than 12 months to complete, you should provide details of the work to be done during the first 12 month period and that planned for each subsequent 12 month period. The method of construction etc. should be described in the answer to question 7.

The project is expected to take between 3 and 4 years to construct. Installation of the marine cables is scheduled to take place from 01/07/2018 until 01/07/2021. Installation operations are likely to occur during two years within States of Guernsey territorial waters (subject to confirmation by installation contractor). The availability of capacity for cable manufacture will ultimately determine the overall schedule of the project.

The project will use four high voltage direct current (HVDC) marine cables. The preference is that cables will be installed bundled together in pairs, rather than laid individually. It is likely that one circuit (comprising two cables) will be installed during 2019 and the other circuit during 2020.

In general little or no preparation of the seabed will be required prior to laying of the cables. However, there are short sections along the Alternative cable corridor which will require some preparation. Three techniques are proposed:

1) Filling of gulleys – short sections of steep sided gulleys may need filling with rock prior to cable lay to provide a stable seabed to lay the cable on;

2) Boulder removal – a plough will be used to push boulders to one side of the cable trench.

3) Pre-sweeping - in areas of mobile sediments such as sandwaves or mega ripples, preparation in the form of mass flow excavation (MFE), suction dredging or similar technique, will be required.

Although detailed engineering surveys have been completed for the Alternative cable corridor further surveys will be completed by the cable installation contractor prior to commencement of cable installation. This typically takes place 3-6 months ahead of installation. The primary objective of these surveys is to confirm that no new obstructions have appeared on the seabed since the engineering surveys, and to complete unexploded ordnance (UXO) survey. The survey will involve a range of standard geophysical survey techniques such as multi-beam echosounder, sidescan sonar (SSS), sub-bottom profiler and magnetometer.

Details of the installation methodology are provided in answer to question 7. The results of a 2017 marine route survey indicate that burial in sediment will not be feasible for the majority of the route within the Alternative cable corridor. It is expected that installation will rely primarily on protection by rock berm.

Once installed, marine cables are not expected to require routine maintenance. It is likely that routine surveys using standard geophysical survey equipment and/or remotely operated vehicles to monitor buried depth and integrity of rock-berms will be undertaken, particularly in the initial years of operation, and should the local environmental conditions change or be suspected as having changed.

Cable repairs to correctly installed and protected marine cables are infrequent. A repair will typically be carried out by a single vessel and might be expected to have a duration of several weeks or months depending on the type and extent of damage, burial requirements and operational constraints such as weather. The application applies for up to 10 repair events within the Alternative cable corridor.

5. (c) **Types of work proposed** *Please tick appropriate boxes*

Energy generation:	windfarm/anemometry mast	
	tidal power/tidal barrier	
	wave power	
On-shore works:	sub-station/on-shore cables	
Barrages & island etc:	barrage	
	artificial reef/artificial island	
	habitat creation/replacement	
Intakes/outfalls pipes:	intake/outfall	
Cables:	subsea cable/overhead/on-shore cable	✓
	pipe/pipeline maintenance	
Navigation works:	buoy/navigation mark	
Scour protection:	Gabion	
	Mattress	✓
	rock placement	✓
	seabed investigation works	✓

6. (a) **Please detail below the location of the proposed project**

This should include Latitude and Longitude co-ordinates (WGS84, to 2 decimal minutes) defining extent of project. This should consist of two letters followed by 6 digits (e.g. TL632317) where the first 3 digits are the eastings and the last 3 digits are northings. For positions read from charts of 1:25,000 scale or smaller, the format should be, e.g. 55°55'.55N 2°22'.22W. The decimal point specifies that decimals of minutes are used and the datum is stated explicitly. If seconds are used then the datum should be explicitly marked, e.g. 55°55'44''N 2°22'11''W. For positions read from larger scale charts, e.g. 1:10,000, three decimal places of minutes should be used, e.g. 55°55'.444N 2°22'.222W. It is important that the correct positions are included with this application, as any errors may result in the application being refused or delayed.

See attached Appendix. Coordinates supplied in WGS84

If necessary, please continue on a separate sheet and tick this box ✓

(b) **The following MUST be provided with the completed application form:**

(i) a suitably scaled extract of a Map (e.g. 1:25,000 scale or larger) or Admiralty Chart which should be marked to indicate:

- the location of the project in relation to the surrounding area;
- the level of Mean High Water Springs;
- any adjacent Ramsar or similar conservation area boundary

(ii) construction plans and sections (showing work relative to tidal range) showing those proposed works below (i.e. seaward of) Mean High Water Springs, which should give details of the materials to be used (for beach nourishment the quality and source of material to be deposited is also required);

(iii) a descriptive schematic drawing and suitably scaled (e.g. 1:2,500 but no more than 1:10,000) location plan (either at A3 or A4 format) which show the full extent of the project in relation to the surrounding area. The applicant should note that these drawings/plans may be copied to others as part of the consultation procedure. If they are subject to copyright, **it is the responsibility of the applicant to obtain necessary approvals to reproduce the documents and to submit suitably annotated copies with the application.**

7. Detailed method of deposit, indicating any temporary structures e.g. causeways, jetties, landing stages to be constructed below Mean High Water Springs and measures to be taken:

(a) to minimise any risk to the marine environment;

Please see continuation sheet at end of application.

If necessary, please continue on a separate sheet and tick this box ✓

8. (a) **Quantity of permanent materials to be deposited below MHWS:**

Timber (m^2 or tonnes)		Iron/Steel (tonnes)		Plastic/Synthetic (m^2)	
Silt (m^3)		Sand (m^3)		Concrete (m^3)	2365.2

Concrete bags/mattresses
(confirm number, dimensions & total volume m^3)

292 mattresses for cable protection. Each 6m long x 3m wide. Maximum height 0.45m. Total volume = 2365.2m^3

Stone/Rock/Gravel
(confirm size range in mm & total volume m^3)

Size range: Berms 14.25m wide by 1.5m high. Two circuits to be protected.
Total 929594 tonnes rock.
Source likely to be onshore quarry within EU, most likely Norway. Further details to be provided once installation contract awarded.

If 'Other', please describe below

In addition to the above deposits, FAB Link requires a licence to cover discrete incidents of repair or replacement over the operational lifetime of the cable (50 years) limited to a maximum single length of 1km. New cable will be re-trenched. However, if burial is not possible the cable(s) will be protected either with rock berms, concrete mattresses, or a combination of both. Rock will be to similar grade as during installation. Up to 17000 tonnes of rock per repair incident, and in the short area where concrete mattresses are required, 167 concrete mattresses (1352.7m^3) per repair incident is applied for. We are requesting a licence for up to 10 repair incidents within the States of Guernsey territorial waters (3-12nm limit).

If necessary, please continue on a separate sheet and tick this box ✓

(b) Method of delivery of material. If sea delivery, please include the details of the vessels to be used, a chart of the proposed route and any proposed transhipment area.

Delivery of all materials will be via vessel. The exact details of vessels deployed and routes used will be defined once an installation contractor has been appointed. FAB Link Ltd will provide more specific information as a condition to any proposed licence, 3 months prior to commencement of offshore works.

(c) For work involving salt marsh feeding, beach replenishment or land reclamation please provide the following information relating to the material to be deposited:

(ii) quantity (tonnes) -

(iii) nature of material e.g. sand, silt, gravel etc. -

(iv) source (if sea dredged please state location of origin) -

Please tick appropriate box

(v) Has the material been chemically analysed? YES ☐ NO ☐

If **YES**, please include the analysis data with your application.

(vi) Particle size -

9. **Will there be a need to make any temporary deposits of material below high water springs during the works?** YES ☐ NO ✓

Quantity of temporary materials to be deposited below MHWS:

Timber (m^2 or tonnes)	☐	Iron/Steel (tonnes)	☐	Plastic/Synthetic (m^2)	☐
Silt (m^3)	☐	Sand (m^3)	☐	Concrete (m^3)	☐

Concrete bags/mattresses (confirm number, dimensions & total volume m^3) -

Stone/Rock/Gravel (confirm size range in mm & total volume m^3) -

If 'Other', please describe below

☐

10. **Do you intend to apply for a licence to DISPOSE AT SEA material dredged as part of the works?** YES ☐ NO ✓

If **YES**, please indicate:

(i) Nature of material for disposal (sand, gravel, silt, clay, rock etc.)

(ii) Quantity of material For disposal (tonnes)

11. **Please detail below all consents/ permissions you have applied for or received**

Type of consent/ permissions	*(tick appropriate box)* Applied for	Not applied for	Reference No.	Date of issue of consent
1. Planning, Environment Department		N/A		
2. Harbour Authority		N/A		
3. Commerce and Employment Department		N/A		
4.States of Alderney (*if applicable*)		N/A		
5.Chief Pleas of Sark (*if applicable*)		N/A		

12. Do you, or (if appropriate) your client, have statutory powers to consent any aspect of this project? YES ☐ NO ✓

If **YES**, please give details

The applicant, FAB Link Ltd, is a licence holder within the meaning of section 64(1) of the Electricity Act 1989, and so for the purpose of Class G, Part 17 of Schedule 2 of the Town and Country Planning (General Permitted Development) Order 2015 (as amended) is a statutory undertaker in the UK. However, these statutory powers do not extend to the States of Guernsey.

13. **Advertising and consultation**

(a) Have these proposals been advertised to the public? …… YES ☐ NO ✓

If **YES**, how and where?

(b) Have the public been invited to submit comments? ……YES ☐ NO ✓

If **YES**, to whom and by what closing date?

(c) Have any consultation meetings with the public been arranged? ……YES ☐ NO ✓

If **YES**, where and when are these to be held?

Consultation with Alderney, Guernsey & Jersey fisheries, Alderney Harbour and Guernsey Sea Fisheries Association took place in May 2017 prior to mobilisation of offshore geophysical and benthic survey which took place between 22nd June and 17th July along Alternative Cable Corridor. Comments received were incorporated into the Draft Environmental Report.
The Draft Environmental Report was issued to the above stakeholders and Alderney Wildlife Trust in early November with follow up meetings with Jersey Fishermen's Association, UK fishermen based in Dartmouth, Alderney Harbour Authority, Alderney Fishermen and Alderney Wildlife Trust, taking place on 14th, 20th and 21st November respectively, whereupon comments received were addressed in the final Environmental Report.

If necessary, please continue on a separate sheet and tick this box ☐

Conservation Bodies

14. **The Consenting Authorities have a duty to ensure that any dredging and disposal will not have a significant adverse environmental impact, particularly upon designated conservation areas such as Ramsar sites and other areas listed under the Conservation**

(Natural Habitats &c.) Amendment (Guernsey) Regulations 2004.

Where the views of the Heritage bodies are not known, HSSD will undertake consultation with the appropriate body about the application. Please provide copies of correspondence with the Heritage bodies or indicate below if no consultation has yet taken place.

The Alternative cable corridor does not pass through a Ramsar site or other areas listed under the Conservation (Natural Habitats &c.) Amendment (Guernsey) Regulations 2004. No consultation has taken place.

If necessary please continue on a separate sheet and tick this box ☐

15. Are any part of the dredging and/or deposit operations proposed located: *Please tick appropriate box*

within the boundaries of a designated conservation area/Ramsar site? YES ☐ **NO** ✓

If **NO**, and the boundary of the nearest such site is within 5 kilometres, Please indicate approximate distance of the works from this boundary

South Banks (States of Alderney) 4.5km
Récifs et landes de la Hague Site of Community Importance (France) 4.6km
Anse de Vauville Site of Community Importance (France) 4.8km

16. Do you, or (if appropriate) your client, have statutory powers to consent any aspect of this project? YES ☐ NO ✓

If **YES**, please give details below:

The applicant, FAB Link Ltd. is a licence holder within the meaning of section 64(1) of the Electricity Act 1989, and so for the purpose of Class G, Part 17 of Schedule 2 of the Town and Country Planning (General Permitted Development) Order 2015 (as amended) is a statutory undertaker in the UK. However, these statutory powers do not extend to the States of Guernsey.

17. Has an environmental assessment been undertaken to support any planning application in respect of the works, your own statutory powers (if applicable) or any other reason? YES ✓ NO ☐

If **YES**, is a copy of the assessment included with this application? YES ✓ NO ☐

(Please provide an explanation if the assessment has been made and a copy is not available)

-

Is the environmental assessment available for public inspection? YES ✓ NO ☐

If **YES**, at what locations:

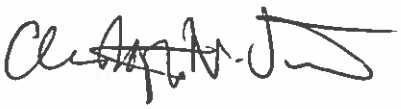
All application documents will be made available for download from www.fablink.net.

Declaration

I declare to the best of my knowledge and belief that the information given in this form and related papers is true.

WARNING

It is an offence under the Law under which this application is made to fail to disclose information or to provide false or misleading information.

Signature  Date 24-11-17

For and on behalf of the applicant

Name in BLOCK LETTERS CHRIS JENNER

Position within company (if appropriate) Development Manager

Please check carefully the information you have given and that all the enclosures (including copies) have been included

Useful addresses:

Environment Department
Sir Charles Frossard House
PO Box 43
La Charroterie,
St. Peter Port
Guernsey
GY1 1FH

Tel: 01481 717200

Commerce & Employment
Raymond Falla House,
Longue Rue,
St Martin,
Guernsey,
GY1 6AF

Tel: 01481 234567

Harbour Master's Office
P.O. Box 631
St Julians Emplacement,
St Peter Port,
Guernsey,
Channel Islands. GY1 3DL

Email guernsey.harbour@gov.gg
tel 01481 720 229
fax 714 177

The Secretary
La Société Guernesiaise
Candie Gardens
St Peter Port
Guernsey GY1 1UG
Channel Islands

Tel: (01481) 725093
Fax: (01481) 726248

Email: societe@cwgsy.net

National Trust of Guernsey

www.nationaltrust-gsy.org.gg

States of Alderney
PO Box 1
Alderney GY9 3AA
Email: states@alderney.gov.gg

Chief Pleas of Sark,
Sark

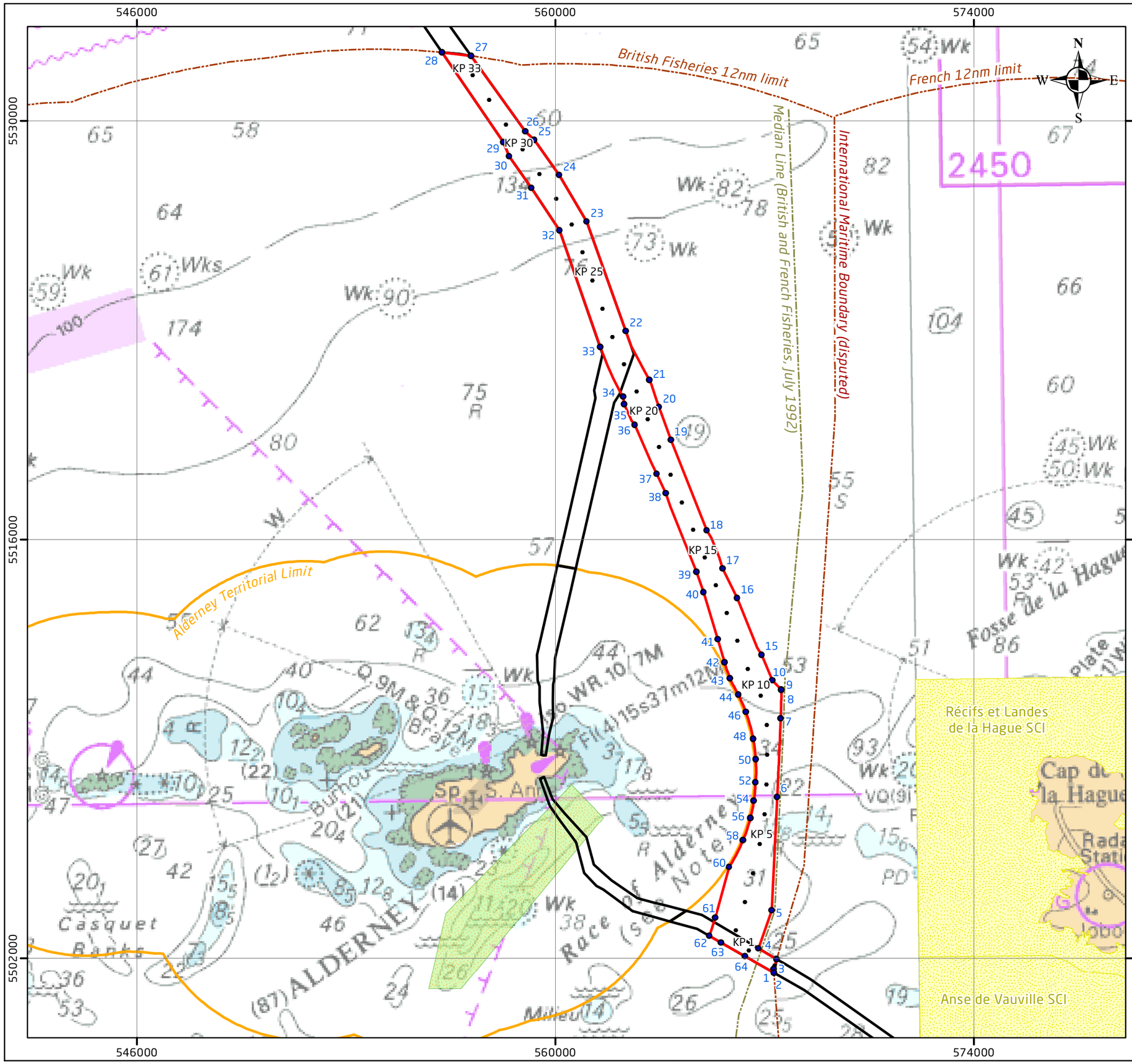
Question 6(a) – FAB link Alternative Cable Corridor Coordinates

ID	Latitude (DMS)	Longitude (DMS)
1	2° 4' 2.22" W	49° 39' 44.67" N
2	2° 4' 2.56" W	49° 39' 48.49" N
3	2° 3' 57.37" W	49° 39' 59.49" N
4	2° 4' 27.25" W	49° 40' 11.27" N
5	2° 4' 4.53" W	49° 40' 52.30" N
6	2° 3' 53.15" W	49° 42' 55.07" N
7	2° 3' 45.64" W	49° 44' 19.81" N
8	2° 3' 45.63" W	49° 44' 20.02" N
9	2° 3' 43.53" W	49° 44' 50.98" N
10	2° 3' 43.53" W	49° 44' 51.02" N
11	2° 3' 43.52" W	49° 44' 51.04" N
12	2° 3' 43.54" W	49° 44' 51.05" N
13	2° 3' 43.64" W	49° 44' 51.12" N
14	2° 3' 58.71" W	49° 45' 1.35" N
15	2° 4' 16.20" W	49° 45' 29.12" N
16	2° 4' 55.86" W	49° 46' 30.91" N
17	2° 5' 19.57" W	49° 47' 3.01" N
18	2° 5' 45.26" W	49° 47' 44.44" N
19	2° 6' 43.51" W	49° 49' 22.99" N
20	2° 7' 2.56" W	49° 49' 58.58" N
21	2° 7' 18.30" W	49° 50' 28.18" N
22	2° 7' 56.96" W	49° 51' 21.33" N
23	2° 9' 0.34" W	49° 53' 20.25" N
24	2° 9' 45.49" W	49° 54' 10.88" N
25	2° 10' 26.45" W	49° 54' 49.41" N
26	2° 10' 41.89" W	49° 54' 58.51" N
27	2° 12' 11.05" W	49° 56' 21.24" N
28	2° 13' 0.27" W	49° 56' 25.28" N
29	2° 11' 18.91" W	49° 54' 47.25" N
30	2° 11' 9.03" W	49° 54' 32.04" N
31	2° 10' 32.15" W	49° 53' 57.51" N
32	2° 9' 46.11" W	49° 53' 11.33" N
33	2° 8' 40.21" W	49° 51' 4.52" N
34	2° 8' 2.53" W	49° 50' 10.17" N
35	2° 8' 1.27" W	49° 50' 2.34" N
36	2° 7' 43.79" W	49° 49' 39.83" N
37	2° 7' 7.68" W	49° 48' 46.33" N
38	2° 6' 53.01" W	49° 48' 25.23" N
39	2° 6' 3.13" W	49° 46' 59.71" N
40	2° 5' 51.80" W	49° 46' 37.56" N
41	2° 5' 29.10" W	49° 45' 46.51" N
42	2° 5' 18.30" W	49° 45' 21.39" N
43	2° 5' 9.19" W	49° 45' 3.99" N
44	2° 5' 9.19" W	49° 45' 3.98" N
45	2° 5' 9.17" W	49° 45' 3.96" N
46	2° 4' 55.92" W	49° 44' 46.36" N

ID	Latitude (DMS)	Longitude (DMS)
47	2° 4' 43.56" W	49° 44' 27.16" N
48	2° 4' 31.90" W	49° 43' 58.31" N
49	2° 4' 31.90" W	49° 43' 58.28" N
50	2° 4' 28.06" W	49° 43' 36.30" N
51	2° 4' 28.06" W	49° 43' 36.27" N
52	2° 4' 28.78" W	49° 43' 10.99" N
53	2° 4' 28.79" W	49° 43' 10.96" N
54	2° 4' 32.21" W	49° 42' 51.05" N
55	2° 4' 32.21" W	49° 42' 51.02" N
56	2° 4' 38.33" W	49° 42' 32.48" N
57	2° 4' 38.34" W	49° 42' 32.45" N
58	2° 4' 51.06" W	49° 42' 8.55" N
59	2° 4' 51.08" W	49° 42' 8.52" N
60	2° 5' 14.86" W	49° 41' 39.77" N
61	2° 5' 39.18" W	49° 40' 44.91" N
62	2° 5' 49.07" W	49° 40' 25.29" N
63	2° 5' 29.87" W	49° 40' 17.99" N
64	2° 4' 50.10" W	49° 40' 2.87" N

FAB LINK ALTERNATIVE ROUTE FEPA APPLICATION

Figure 1-1: FAB Link Alternative Route



Legend

- RPL Point
- FAB Link Alternative Cable Corridor KP
- FAB Link Alternative Cable Corridor
- Original Cable Corridor

Jurisdiction

- Alderney Territorial Sea Limit
- Median Line (British and French Fisheries, July 1992)
- International Maritime Boundary
- South Banks
- SCI

NOTE: Not to be used for Navigation

Date	Thursday, November 9, 2017 09:46:40
Projection	ED_1950_UTM_Zone_30N
Spheroid	International_1924
Datum	D_European_1950
Data Source	UKHO, MARINEFIND, EEA, FABLINK, CDA, WDPA
File Reference	J:\P2024\Mxd\FEPA\Alderney_Bypass_FEPA_Report\Fig_1_1_Overview.mxd
Created By	Jennifer Arthur
Reviewed By	Emma Langley
Approved By	Anna Farley

Co-financed by the European Union Connecting Europe Facility

0 1 2 3 4 km

Response to Question 7(a)

FAB Link - seabed deposits for cable protection (installation)
The Alternative cable corridor within the States of Guernsey territorial waters is 33.8km long from the median line between States of Guernsey and French territorial waters (KP0) to the median line between States of Guernsey and the French Exclusive Economic Zone (EEZ, KP33.8).

Pre-sweeping of sand waves in areas of mobile sediment such as sand waves or mega ripples will be conducted using a mass flow excavator (MFE) or suction dredger, or a similar technique. This will enable the cables to be laid on a stable seabed by removing a proportion of the feature to create a flatter profile. The MFE displaces sediment and seabed material by creating an area of strong, highly localised down current from a nozzle suspended 1-3m above the seabed. It is deployed from a cable lay vessel or support vessel and lowered adjacent to the area to be cleared, connected by an umbilical. Sediment is pushed to either side of the cable trench. If suction dredging is employed, dredged material is returned to the seabed within the Alternative cable corridor by opening up the hopper doors in the bottom of the dredger. The suction dredger has the widest footprint; it is possible that a 50m wide corridor will be swept using this technique, down to a depth of 1.5m. Approximately 1.35km of the route per circuit will require pre-sweeping.

Once laid on the seabed the cables need either to be buried or otherwise protected from the threat of external damage such as anchors or fishing activity. The choice of burial technique or protection method will vary along the route depending upon the seabed conditions in each section. Where possible the cable will be buried in the seabed. Where the seabed composition is not suitable for burial, external mechanical protection will be provided through either rock-placement, application of concrete mattresses and/or installation of cast iron shells.

The results of a marine survey undertaken in 2017 indicate that burial is unlikely to be feasible for the majority of the Alternative cable corridor; although there is a small area in the north of the cable corridor where burial in sediment may be possible. It is expected that installation will rely primarily on protection by rock berm. Table 3-3 of the FAB Link Alternative Cable Corridor – FEPA Application Environmental Report identifies the maximum length each cable protection technique may be deployed. Rock placement may be used on 33.03km of the Alternative cable route.

Rock placement is used to protect subsea cables by covering them in a continuous profiled berm of graded rock. The berm provides a strong protective cover to prevent potential impact and snagging, and also ensures stability by shielding the cable from the current flow. The size of the berm and grade of rock required will depend on the current and wave loading conditions. For assessment purposes the maximum berm size has been assumed to be 1.5m high by 14.25m wide. The FEPA application applies for 929594 tonnes of rock to cover the two circuits.

Rock placement vessels will be used to deploy rock on site (see Section 3.4.1 of FAB Link Alternative Cable Corridor – FEPA Application Environmental Report). Of the three mechanisms that can be used (side dumping, split hopper and flexible fall pipe) fall pipe vessels have a big advantage in regions of strong currents, such as the Alderney Race, as rock can be more accurately placed.

Concrete mattress will be used for protection at specific points such as crossing of existing cables. Mattresses are laid by crane from a general marine installation vessel. The crossing design for each asset crossed will indicate the footprint of impact to the seabed. However, the industry standard is 7m wide bridge over existing cable. Concrete mattresses are 6m long by 3m wide. It is estimated that 292 mattresses will be deposited within the 3-12nm limit, with a maximum seabed footprint of 5,256m^2. See Section 3.4.2 of FAB Link Alternative Route – FEPA Application Environmental Report for further information. Exact positions of the concrete mattresses are dependent on cable crossing agreements and the installation contractor and further details will not be available until the installation contract is awarded. FAB Link Ltd will provide the information when it is available.

FAB Link - seabed deposits for repair of cable
Cable repairs to correctly installed and protected marine cables are infrequent but require operations which temporarily intrude on the environment and the activities of other users of the sea. Maintenance activities will have a similar impact to the installation activities assessed in the FAB Link Alternative Cable Corridor FEPA Application - Environmental Report, however they will be on a smaller extremely localised scale, and as such are not expected to have any significant impacts. Any impacts will be less than those identified for installation operations.

Details for a typical marine cable repair are provided in Section 3.6 of the accompanying FAB Link Alternative Route – FEPA Application Environmental Report. In summary, where a cable fault is detected, the relevant section of the cable will be located and retrieved to surface for inspection and replacement. It may be

necessary to de-bury the cable(s) prior to cable recovery. The cable repair will typically be carried out by a single vessel e.g. a dynamically positioned cable vessel, with a range of supporting vessels to assist in exposing, recovering and protecting the cable. As the fault location may be uncertain up to 1km has been allowed for as a replacement length. By the nature of a submarine cable repair, the extra length of cable inserted during a repaired cable section means it cannot be returned to its exact previous alignment on the seabed. The excess cable will be laid on the seabed in a loop off to one side of the original route, but still within the proposed Alternative cable corridor. The repair joints, newly inserted cable and any previously exposed length will be buried, typically using jetting machines (if seabed sediments allow), concrete mattresses or rock placement deployed from either the repair vessel itself or a separate specialised vessel.

FAB Link Ltd is requesting a FEPA licence that covers up to ten discrete incidents of repair or replacement over the operational life time of the cable (50 years) within States of Guernsey territorial waters (3-12nm). This would be limited to a maximum single cable length of 1km; 1km x 2 for bundled cable and 1km x 3 for bundled cable including the fibre optic per incident. Ten incidents for a marine cable over its operational life time is lower than the industry used 'rule of thumb' which is one fault every ten years per 100km; based on historic experience. It is also in line with other UK cable projects e.g. London Array (MLA/2015/00095) that have Marine Licences for the same number of repairs. As the marine cables cross a number of different jurisdictions and it cannot be predicted where a fault may occur, a Marine Licence has also been applied for in the UK to also cover ten incidents as a precaution.

After completion of repairs / maintenance works, a post-installation survey will be carried out along the section of cable that has undergone repair or replacement to demonstrate the successful burial and depth of the cable.

Further detail regarding the methods described above is provided in the FAB Link Alternative Cable Corridor – FEPA Application - Environmental Report – Section 3 Project Description. The Environmental Report reports on the environmental appraisal process that was undertaken for the project, its findings and conclusions. An Environmental Mitigation Schedule is provided in Chapter 14 of the ER. This presents the package of mitigation measures to be incorporated into the design, installation and operation of FAB Link to minimise the risks to the environment. Those pertinent to seabed deposits are listed below:

- Rock and mattresses will only be deployed where adequate burial cannot be adequately achieved.
- Preference for the cables to be installed as bundled cables as far as reasonably practicable.

Measures have also been proposed which minimise the effects on commercial fisheries.