

Til: Kystdirektoratet (KDI) (kdi@kyst.dk)
Fra: Ahmed Hasso (ahmed.hasso@globalconnect.se)
Titel: Application to perform a seabed survey with Sub Bottom Profiler between Saeby (DK) and Lerkil (SE)
Sendt: 05-05-2025 15:46
Bilag: Appendix 1 Saeby (DK) - Lerkil (SE).pdf; Appendix 2 Submarine surveying - description of methods and execution.pdf; ansøeg-om-tilladelse-til-anlaeg-paa-soeterritoriet Seaby (DK) - Lerkil (SWE).pdf;

[EKSTERN E-MAIL] Denne e-mail er sendt fra en ekstern afsender.

Vær opmærksom på, at den kan indeholde links og vedhæftede filer, som ikke er sikre.

Hello,

Hereby we apply for the permit to perform a hydrographic survey in preparation for the planning of the installation of a fiber optic cable, using SubBottom Profiling (SBP).

Please provide the case number/Permit ID number for this application to make the communication easier.

We have already been sending Hydrographic survey Application to Geodatastyrelsen in Denmark (case number/Permit ID number GST-300-3513), the permit is granted. We included the methods Multibeam (multibeam echo sounder), SideScanSonar (side-scan sonar) and Magnetometer/Gradiometer.

Attached are the following documents:

- Application form
- Appendix 1 Saeby (DK) - Lerkil (SE)
- Appendix 2 Submarine surveying - description of methods and execution

If you wish to receive other documents, such as shapefiles for the planned cable, please contact us.

Please, let us know if you have any questions.

Sunny regards,

Ahmed Hasso
Team Leader, Permits Managment



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Ansøgning om tilladelse til anlæg på søterritoriet

Dette ansøgningsskema benyttes ved ansøgning om tilladelser til etablering, renovering og udvidelse af anlæg på søterritoriet.

Husk at læse vejledningen på side 6, før skemaet udfyldes.

Eventuelle spørgsmål til ansøgningsskema og vejledning rettes til Kystdirektoratet på tlf. 99 63 63 63 eller via e-mail kdi@kyst.dk.

Bemærk: En ansøgning kan først behandles, når alle nødvendige oplysninger foreligger.

Til Kystdirektoratets notater:

Dato for modtagelse:

|

Journal nr.:

|

Projekttype:

|

Sagsbehandler:

|

A. Oplysninger om ejere af den eller de matrikler, hvor anlægget opføres

Navn

No physical works

Adresse

|

Lokalt stednavn

|

Postnr.

|

By

|

Telefon nr.

|

Mobil nr.

|

E-mail

|



B. Evt. repræsentant (entreprenør, rådgiver eller lignende)

Navn

GlobalConnect AB, Ahmed Hasso

Adresse

Bäverns Gränd 17

Lokalt stednavn

Uppsala Sweden

Postnr.

753 19

By

Uppsala Sweden

Telefon nr.

Mobil nr.

+46 703-539850

E-mail

ahmed.hasso@globalconnect.se

C. Offentliggørelse af oplysninger

Ansøger giver ved underskrift tilladelse til, at ansøgningsmaterialet må offentliggøres på Kystdirektoratets hjemmeside www.kyst.dk. I henhold til persondataloven vil personfølsomme oplysninger, eller andre oplysninger friholdt for aktindsigt, uanset denne accept ikke blive offentliggjort.

Dato

2025-05-05

Underskrift

Ahmed Hasso

D. Anlæggets placering

Adresse

Solsbækvej 71

Postnr.

9300

By

Sæby

Kommune

Sæby

Matrikel nr. og ejerlagsbetegnelse

No physical works



E. Beskrivelse af anlægget i sin helhed

Kan evt. uddybes i bilag

Bemærk: Nødvendige bilag skal også vedlægges, se rubrik I

The overall purpose of the submarine survey is to identify optimal seabed conditions in the form of a flat bottom with soft sediments and no obstacles along the route. The investigation of seabed conditions is being conducted in preparation for the installation of an undersea cable (note: an optical cable with a diameter of approximately 25 millimeters), with the aim of identifying potential obstacles as well as any cultural heritage remains, ensuring a long-term stable installation. The purpose of the hydrographic survey is to enable an increase in telecommunications capacity to and from Sweden.

The survey will make it possible to plan the optimal route that GlobalConnect plan to establish the additional optical cable between Saeby (DK) and Lerkil (SE). The additional cable is planned to be laid parallel to the existing cable. The reason for the planned cable lay is to increase capacity and redundancy.

This application is sent in aim to get permit approved for the survey equipment SubBottom profiling (sub-bottom penetrating sonar) (SBP), Grab Samplar (5-10 test points) and Video/Photo if needed.

One of the types of survey equipments that will be used for survey is SubBottom profiling (sub-bottom penetrating sonar) (SBP) – will be used for survey aimed at facilitating cable burial if the need or requirement arises.

The Survey will be carried out between Lerkil (SE) and Saeby (DK). Appendix 1 showing of planned cable route and coordinate list. Survey corridor width between 100 – 150 meters

Note:

GlobalConnect AB has already submitted for Permission for Hydrographic surveying to Geodatastrelsen in Denmark with case number GST-300-3513. The permission is given 2025-03-11 including following survey equipments:

- Multibeam (multibeam echo sounder) – aimed at optimizing the route in relation to the seabed topography
- SideScanSonar (side-scan sonar) – aimed at identifying and avoiding cultural heritage remains and identifying rocky seabeds
- Magnetometer/Gradiometer – aimed at identifying cable crossings prior to installation.



F. Beskrivelse af planlagte arbejdsmetoder

Kan evt. uddybes i bilag

Carry out submarine survey using survey equipments; SubBottom profiling (sub-bottom penetrating sonar) (SBP), Grab Sampler, Multibeam (multibeam echo sounder), SideScanSonar (side-scan sonar), Video/photo, and Magnetometer/Gradiometer. This application includes SubBottom profiling (sub-bottom penetrating sonar) (SBP). *Appendix 2 Submarine surveying – description of methods and execution* contains detailed information on how the work will be carried out with the survey equipment.

Note that permission, with case number GST-300-3513, is given 2025-03-11 by Geodatastrelsen, including the following survey equipments:

- Multibeam (multibeam echo sounder) – aimed at optimizing the route in relation to the seabed topography
- SideScanSonar (side-scan sonar) – aimed at identifying and avoiding cultural heritage remains and identifying rocky seabeds
- Magnetometer/Gradiometer – aimed at identifying cable crossings prior to installation.

G. Uddybning

Skal der i forbindelse med anlægget foretages uddybning?

☐

Ja

☒

Nej

Hvis ja skal mængden for uddybningen angives _____ m³

Beskrivelse af hvordan sedimentet fra uddybningen efterfølgende tænkes behandlet:

|



H. Opfyldning

Skal der i forbindelse med anlægget foretages opfyldning på søterritoriet?

☐

Ja

☒

Nej

Hvis ja skal mængden af opfyldningsmateriale angives _____ m³

Beskrivelse af opfyldningsmaterialets kvalitet:

|

I. Nødvendige bilag

Følgende bilag skal vedlægges:

- Søkort med indtegnet anlæg
- Matrikelkort med indtegnet anlæg
- Plan- og skitsetegning over det samlede anlæg
- Målsatte snittegninger over eventuelle moler, broer mv.
- Målfast oversigtskort med hele anlægget indtegnet
- Samtykkeerklæringer fra berørte grundejere

Evt. andet relevant materiale:

Appendix 1 Saeby (DK) - Lerkil (SE)

Appendix 2 Submarine surveying - description of methods and execution

J. Erklæring og underskrift

Undertegnede ansøger erklærer, at oplysninger, der står i ansøgningen, er i overensstemmelse med de faktiske forhold.

Dato

2025-05-05

Fulde navn (benyt blokbogstaver)

Ahmed Hasso

Underskrift

|

Ansøgningen sendes med post til:
Kystdirektoratet



Højbovej 1
Postboks 100
7620 Lemvig

Eller via e-mail: kdi@kyst.dk

Vejledning til ansøgningsskema

(vedrørende ansøgning om tilladelse til anlæg på søterritoriet)

Punkt A. Oplysninger om ejere

Her anføres navn, adresse mv. på ejere af den eller de matrikler, hvor anlægget opføres på eller ud for. Er der flere ansøgere, kan det anføres i et vedlagt bilag.

Punkt B. Evt. repræsentant (entreprenør, ingeniør eller lignende)

Her anføres navn, adresse mv. på den person, der fungerer som kontaktperson (projektansvarlig) under sagens behandling, det kan for eksempel være et entreprenør- eller ingeniørfirma.

Punkt C. Offentliggørelse af oplysninger

Kystdirektoratet er forpligtiget til at orientere naboer og andre berørte parter om ansøgninger om tilladelse til anlæg på søterritoriet. Ved orienteringen sker der altid en videregivelse af de oplysninger, som er angivet i skemaet. Endvidere offentliggøres ansøgningen på Kystdirektoratets hjemmeside.

Punkt D. Anlæggets placering

Her anføres projektets adresse, dvs. dets fysiske placering. Det er vigtigt for sagens behandling, at matrikelnumre samt ejerlav angives. Disse oplysninger kan findes i ejendommens skøde eller indhentes fra kommunen eller på internettet, f.eks. på www.miljoportalen.dk.

Punkt E. Beskrivelse af anlægget

Her beskrives anlægget i sin helhed. Beskrivelsen skal bl.a. omfatte formål og baggrund for anlægget, anlæggets udformning, en beskrivelse af hvilke materialer, der anvendes til anlægget og overvejelser over anlæggets indvirkning på strømningsforhold og den nærliggende kyst.

Til anvendelse for en screening for VVM skal beskrivelsen ligeledes belyse nedenstående forhold.
Anlæggets

- dimensioner
- kumulation med andre projekter
- anvendelse af naturressourcer
- affaldsproduktion, forurening og gener
- risiko for ulykker, navnlig under hensyn til de anvendte materialer og teknologier



Anlæggets betydning for den miljømæssige sårbarhed i området særligt i forhold til

- nuværende arealanvendelse
- de tilstedeværende naturressourcers relative rigdom, kvalitet og regenereringskapacitet
- det naturlige miljøes bæreevne med særlig opmærksomhed på kystområder, områder der er fredet eller omfattet af national og international natur- og miljøbeskyttelses lovgivning, tætbefolkede områder, områder der er af særlig betydning ud fra et historisk, kulturelt eller arkæologisk synspunkt

Anlæggets potentielle påvirkninger herunder

- påvirkningernes omfang (geografisk område og antal personer der berøres)
- påvirkningernes grænseoverskridende karakter
- påvirkningers grader og -kompleksitet
- påvirkningens sandsynlighed
- påvirkningens varighed, hyppighed og reversibilitet

Beskrivelsen kan eventuelt suppleres med bilag.

Punkt F. Beskrivelse af arbejdsmetoder

Her angives hvilke arbejdsmetoder, der benyttes ved opførelsen af anlægget, bl.a. hvordan og hvornår arbejdet udføres. Angivelsen af arbejdsmetoder er vigtigt for vurderingen af anlæggets påvirkning på miljøet.

Punkt G. Uddybning

Hvis der i forbindelse med anlægget foretages en uddybning, skal det angives i kubikmeter, hvor stor en mængde sediment uddybningen omfatter, og ligeledes hvad der efterfølgende skal ske med sedimentet, f.eks. om det skal bruges til kystfodring, opfyldning mv.

Punkt H. Opfyldning

Hvis der i forbindelse med projektet foretages en opfyldning, skal omfanget af opfyldningen angives i kubikmeter materiale brugt til opfyldningen. Kvaliteten af materialet til opfyldningen skal belyses, specielt mht. om det er forurenede eller uforurenede materiale, der benyttes.

Punkt I. Nødvendige bilag

Følgende bilag skal foreligge, før en ansøgning om tilladelse til anlæg på søterritoriet kan behandles:

- Søkort med anlægget indtegnet
- Matrikelkort med anlægget indtegnet. Matrikelkort kan findes på www.miljoportalen.dk. Anlæg kan f.eks. indtegnes med tusch på matrikelkortet.
- Plan- og skitsetegning over det samlede anlæg
- Målsatte snittegninger, der gør rede for anlæggets konstruktioner. På snittegningen angives f.eks. konstruktionernes højde, bredde, længde mv.
- Målfast oversigtskort med hele anlægget indtegnet
- Samtykkeerklæringer fra ejerne af alle berørte matrikler skal vedlægges, hvis anlægget strækker sig over mere end ansøger / ejers matrikel. Hvis en repræsentant for ejeren, f.eks. entreprenør- eller ingeniørfirma søger om tilladelse til anlægget på ejerens vegne, skal ansøgningen desuden vedlægges en samtykkeerklæring fra ejeren om, at han er indforstået med dennes repræsentation, samt at han er indforstået med, at anlægget opføres på hans ejendom.

Er der i forbindelse med anlægget lavet en strømningsanalyse eller lignende, er det hensigtsmæssigt at vedlægge den/dem som bilag for at belyse sagen bedst muligt.

Hvis der er spørgsmål til ansøgningsskemaet, kan Kystdirektoratet kontaktes på tlf. 99 63 63 63 eller på email: kdi@kyst.dk.

Kystdirektoratet

Appendix 1

The appendix contains overview maps and detailed maps for the planned submarine cable, as well as a table presenting coordinates in WGS84.

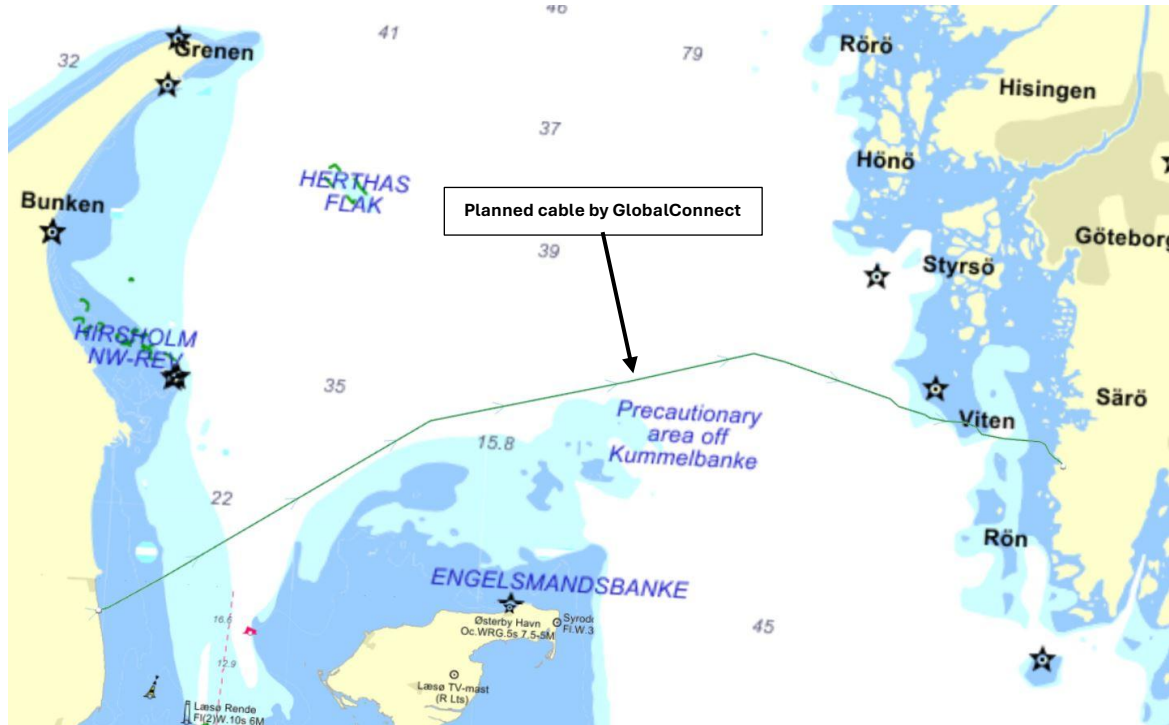
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Overview maps

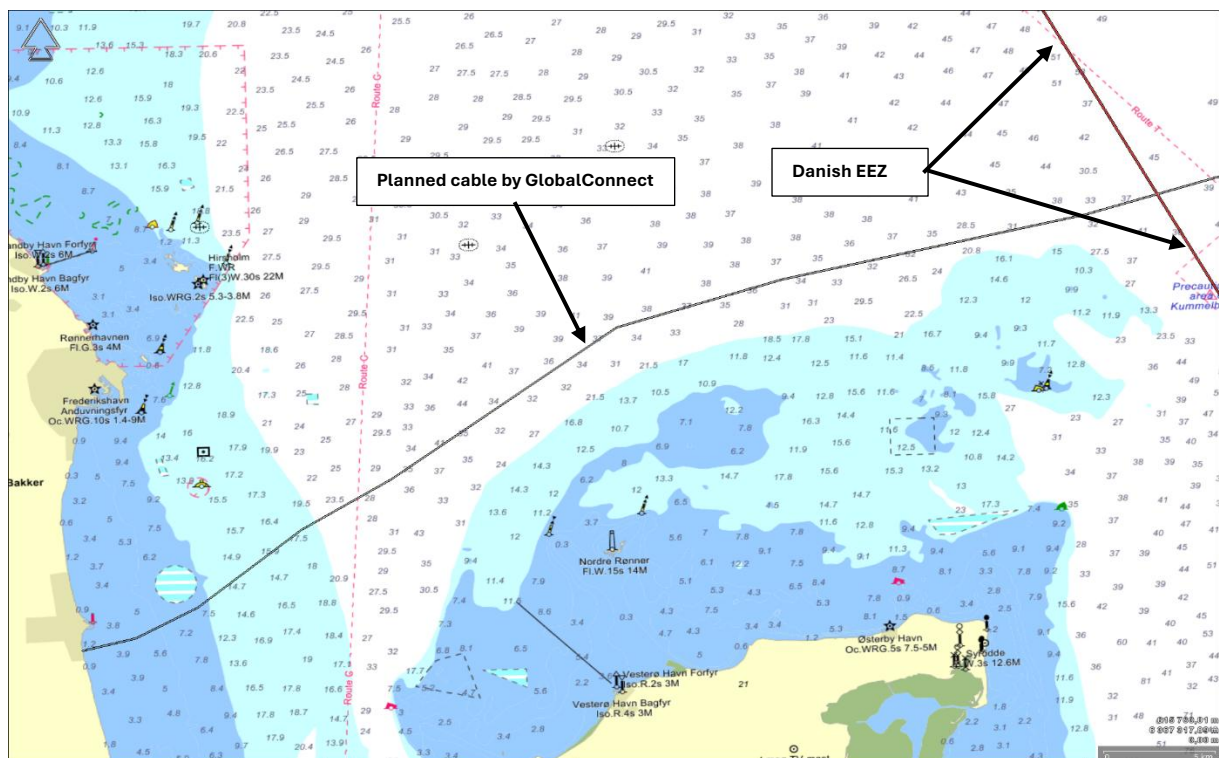
Overview map 1

The overview map shows the planned cable between Saeby in Denmark and Lerkil in Sweden.



Overview map 2

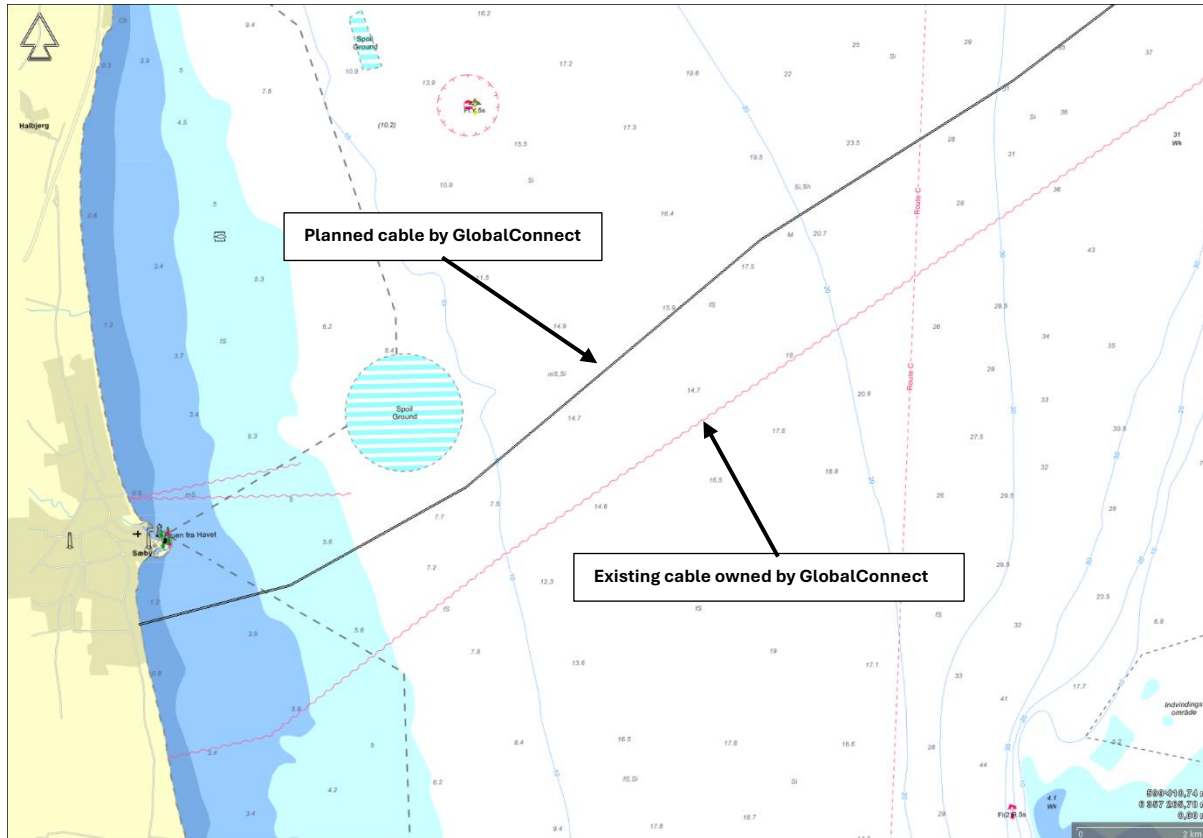
The overview map shows the planned cable between Saeby in Denmark and Lerkil in Sweden. The Map is zoomed to the part of the planned cable close to the Danish landfall.



Detailed maps

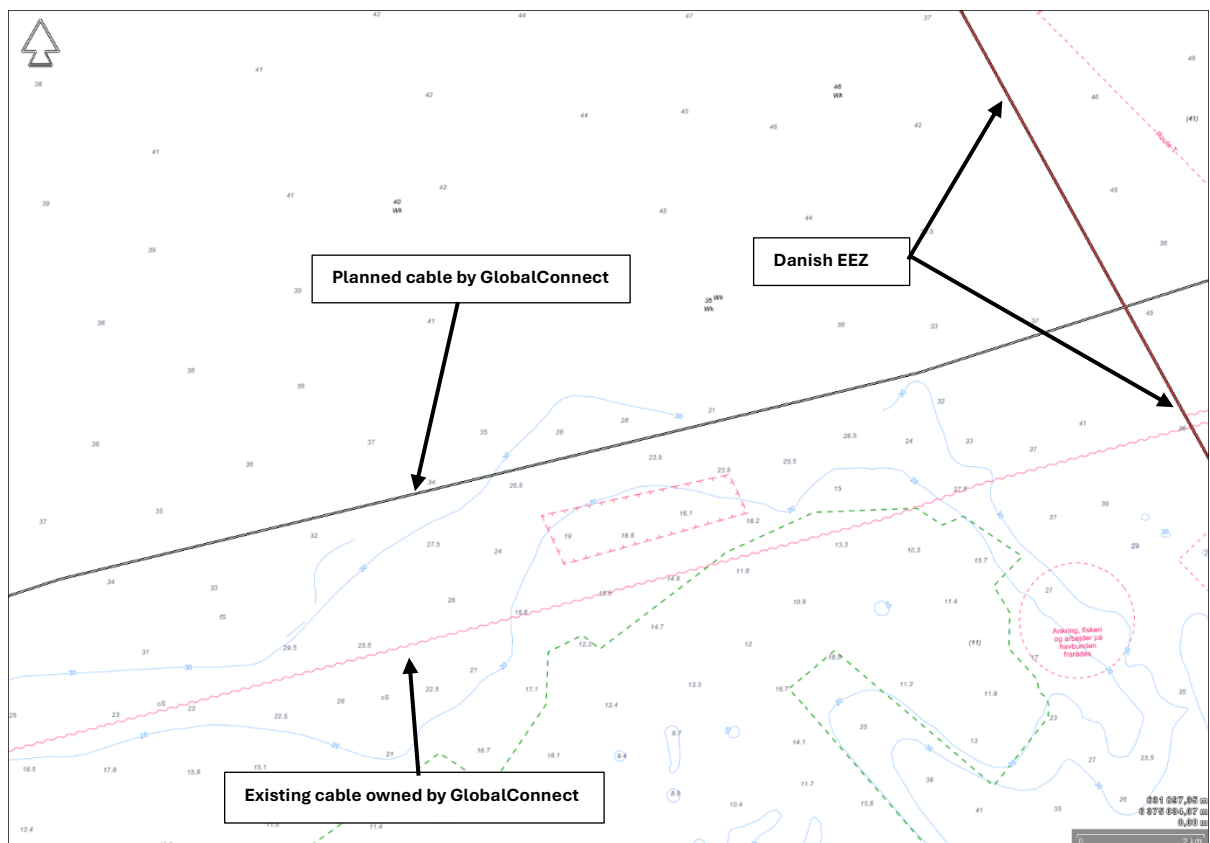
In this section, detailed maps of the planned cable from the Danish landfall are presented. The detailed maps are arranged in order from the landfall and eastward toward the sea.

Detailed map 1



The map displays the proposed cable route from the Port of Los Angeles to the Port of Long Beach. A black line represents the 'Planned cable by GlobalConnect', and a red dashed line represents the 'Existing cable owned by GlobalConnect'. A legend indicates 'Soil Ground' with a green dashed outline. The map includes elevation contours, water bodies, and a north arrow.

Detailed map 4



Coordinates

Table 1 shows coordinates for the planned cable according to the WGS-84 coordinate system.

vertex_index	x	y	Combined
0	10.52817769170371	57.320366101087956	10.52817769170371, 57.320366101087956
1	10.567785257596865	57.32543004800143	10.567785257596865, 57.32543004800143
2	10.614398800215232	57.33871658335223	10.614398800215232, 57.33871658335223
3	10.692964512121419	57.3726828386942	10.692964512121419, 57.3726828386942
4	10.76020424354853	57.394326269935355	10.76020424354853, 57.394326269935355
5	10.931602870032608	57.46028568661829	10.931602870032608, 57.46028568661829
6	11.056078699024578	57.47994101975059	11.056078699024578, 57.47994101975059
7	11.282876343923258	57.505157997499815	11.282876343923258, 57.505157997499815
8	11.461512883305096	57.53208638062297	11.461512883305096, 57.53208638062297
9	11.506734989601107	57.52690370611665	11.506734989601107, 57.52690370611665
10	11.663001319172182	57.50210626289791	11.663001319172182, 57.50210626289791
11	11.675014887610141	57.49659846387481	11.675014887610141, 57.49659846387481
12	11.714568849197093	57.491090200435856	11.714568849197093, 57.491090200435856
13	11.721632756440052	57.48877385574172	11.721632756440052, 57.48877385574172
14	11.744354070659673	57.486913948879476	11.744354070659673, 57.486913948879476
15	11.773408624762345	57.48656301243381	11.773408624762345, 57.48656301243381
16	11.789404952302021	57.48354481979044	11.789404952302021, 57.48354481979044
17	11.797467773438576	57.47800583391094	11.797467773438576, 57.47800583391094
18	11.829825726179061	57.47537788591504	11.829825726179061, 57.47537788591504
19	11.883620056954062	57.47424300651373	11.883620056954062, 57.47424300651373
20	11.891128537227788	57.47213660673073	11.891128537227788, 57.47213660673073
21	11.896874156915509	57.46641360759893	11.896874156915509, 57.46641360759893
22	11.905753750978347	57.461813492426266	11.905753750978347, 57.461813492426266
23	11.90998742178993	57.46067102903986	11.90998742178993, 57.46067102903986
24	11.916732735201087	57.45780519739734	11.916732735201087, 57.45780519739734
25	11.918467942636566	57.45674031280007	11.918467942636566, 57.45674031280007
26	11.918858975298082	57.45614869684413	11.918858975298082, 57.45614869684413
27	11.918394624012532	57.45560966063884	11.918394624012532, 57.45560966063884

Appendix 2 Submarine surveying - description of methods and execution

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Introduction

Application for submarine survey permission by using survey equipment Sub Bottom Profiler in Danish Territorial Sea and Economic Zone (EEZ), to prepare to the application for permission to lay optocable between Seaby, Denmark and Lerkil, Sweden.

CLAIMS

Global Connect AB requests that the Kystdirektoratet grant permission to carry out a submarine survey including Sub Bottom Profiler and Grab sampler as equipment in the Kattegat, within routes/areas according to coordinates specified in Appendix 1 Saeby (DK) - Lerkil (SE). Hydrographic survey permits for the same route is granted by Geodatastyrelsen including survey equipments Multibeam (multibeam echo sounder), SideScanSonar (side-scan sonar), Magnetometer/Gradiometer (registration number/case number GST-300-3513).

GlobalConnect AB requests that the permit shall be valid for 2 years from the date of the permit and that the permit be subject to the conditions as proposed below.

The claim does not include geophysical surveys where frequency ranges below 200 kHz occur during the period 1 May to 31 August.

Draft terms and conditions

When starting up underwater sound survey equipment, observers are used to scout for marine mammals such as porpoises and seals to ensure that they are not in the vicinity of the survey vessels. When using equipment that emits sound with a frequency below 200 kHz, so-called soft start-up of the equipment must be applied. To avoid the main calving period for porpoises (May-August), surveys with sub bottom profiles are carried out during the period September to April.

Instruments or other equipment must not be left behind after the investigations have been completed. Spills of oil and other harmful substances should be avoided as far as possible. All survey vessels are equipped as standard for oil clean-up. Dumping of waste in connection with the work must not take place. Lost geotechnical and geophysical equipment shall be recovered as far as possible and reasonably.

Investigations of the presence of ancient monuments must be planned together with maritime archaeological expertise. Information about ancient monuments that emerge during the investigation work must be reported initially to Geodatastyrelsen and Kystdirektoratet, in order to be guided to the supervisory authority. Analysis of survey data shall be carried out in consultation with the authority and maritime archaeology expertise.

About the applicant

GlobalConnect AB is one of the leading providers of digital infrastructure and network services in the Nordic region. The company is headquartered in Copenhagen, Stockholm, Oslo, Helsinki and Hamburg. GlobalConnect employs approximately 2,000 people and provides 30,000 business customers and 800,000 households with network services and fiber connectivity. The company has 235,000 km of its own fiber network. GlobalConnect AB is owned by EQT.

Background and purpose of the application

The company plans to lay a fiber cable with a route between Seaby in Denmark and Lerkil in Sweden. The company has identified a suitable cable route mainly parallel to the company's existing fiber connection between the same land points. The survey distance within Denmark's territorial sea and in Denmark's economic zone is about 49 km + 6 km long with a varying corridor width of between about 100 – 150 m.

In order to obtain the documentation required for the assessment of a suitable cable route and the preparation of environmental impact assessments for future permit processes, the company needs to carry out a number of investigations and inventories. A central part of this work is to implement geophysical surveys of the seabed, e.g. to gather knowledge about the seabed area and different sediment types, as well as to identify and position nearby existing pipelines, any wrecks, larger boulders, mountains in the open or unexploded munitions. The information from the surveys will then be used in the further planning and design of the cable route. The company therefore applies to Kystdirektoratet for a submarine survey permit through the current permit application.

Survey route / area

The surveys will be carried out in the northern part of the Kattegat, between Denmark and Sweden, figure 1. The route on which the investigations will be carried out is hereinafter referred to as the planned cable route and is shown in Figure 2 and information in Appendix 1 Saeby (DK) - Lerkil (SE). Permits have already been submitted to Swedish authorities for the Swedish Territorial water and Swedish EEZ.



Figure 1 Planned Cable route between Seaby in Denmark and Lerkil in Sweden. The corridor 100-150 meters for surveying will be around the red line presented on the map.

Lerkil (SWE) - Seaby (DK)



Figure 2 Planned Cable route between Seaby in Denmark and Lerkil in Sweden. Map showing the part on the Danish Territorial water and EEZ. The corridor 100-150 meters for surveying will be around the red line presented on the map.

After searching databases, no nature protected areas have been found on the planned route and corridor. The same applies to ancient remains and wrecks, none have been found in databases.

Military areas have not been investigated, due to the difficulty of finding data.

Planned Survey

The surveys planned are geophysical surveys. The type of measuring equipment, purpose and results of the surveys are shown in table 1. There is also a description of the dominant frequency range and expected sound level of each survey method.

The surveys will mainly be carried out from ships and smaller boats. The geophysical surveys cover the entire survey route/area, while any sediment samples are taken at a smaller number of points. The following methods may be used:

- Sub Bottom Profiler: SBP
- Multibeam Echo Sounder: MBES
- Side Scan Sonar: SSS
- Magnetometer
- Grab Sampler
- Video/photo

Table 1 Equipments will be used during the submarine surveying.

Name	Equipment Example	Frequency/Power/Energy	Purpose	Result area
Sub Bottom Profiler HF	Benthos ChirpIII	1-20 kHz 1- 4 kW Sound level: 209 dB re 1 μ Pa @ 1 m Pulse length (ms): 5-60 msec	Bottom penetration	Geology Inventory sequence Sediment composition Solid bottom detection Mountain Sub Bottom Cable and pipe detection
Video/Photo	Camera- /Videorigg 1 and 2	Passive Possibly flash and headlights	Bottom surface of objects and facilities Verification	Calibration backscatter/geo
Grab Sampler	TBD (Van Veen, Ponar)	Physical sampling	Bottom surface Bottom substrate Verification	Calibration backscatter/geo Environmental sampling

At the present time, it has not been decided in detail what equipment will be used in each investigation or where the possible sampling points for sediment examination will be. The number of samples has not been decided at this stage either, but it is estimated that there are about 5–10 test points and the examinations will last for a total of about a week. Each sample will be no larger than 3-6 liters.

Overall, it can be said that the measurements will emit continuous, non-impulsive sounds, both low and high frequency, and with a sound level of up to a maximum of 209 dB re 1 μ Pa @ 1 m, (1 m from the sound source centrally in the main lobe's main axis).

Time for when the surveys will be carried out

Investigations are expected to last in the field for a total of about a week. Since all surveys are dependent on prevailing weather conditions, the schedule is an estimate and the surveys may need to be paused or delayed, which may mean that they need to be carried out for longer extended calendar time. In addition, the ongoing investigations depend on the possible cumulative impact of other actors in the area, such as other exploration vessels or commercial fisheries. In view of the difficulties in establishing a detailed timetable when the investigations may be carried out, the company requests a permit period of two years.

Equipment, products, etc.

The surveys themselves generate limited or no emissions. Dumping of waste in connection with the work must not take place and no instruments or equipment may be left in the investigation area after the completion of the work. Spills of oil and other harmful substances shall be avoided as far as possible and any lost equipment shall be recovered as far as possible and reasonably. All survey vessels are equipped as standard for oil clean-up.

Environmental assessment

In summary, the assessment is that the planned investigations, with proposed conditions and protective measures, will not have a significant impact on the environment or marine mammals, birds, fish or fisheries in the area. No potential significant impacts are expected to occur on plants or mammal's environment. Any sampling points in regional and national environmental monitoring are also not expected to be affected.