

# Shetland HVDC Link

## Shetland to Caithness

### Notice to Mariners

<b>NtM Number</b>	<b>Shetland HVDC Link/025</b>
<b>Date of Issue</b>	<b>05/08/2022</b>

#### 1 Planned Activity

NKT, on behalf of Scottish Hydro Electric Transmission Plc, are undertaking diving operations at Noss Head to assist with cable pull-in for the Shetland HVDC Link. The works are located approximately 400m offshore in around 19m of water.

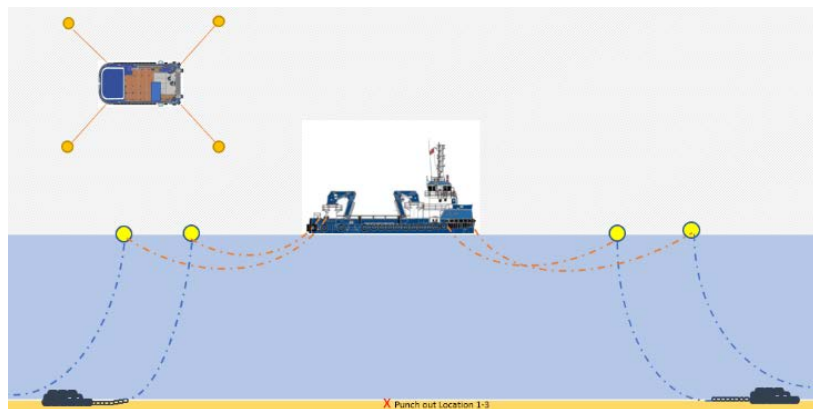
The Shetland HVDC link is a critical electricity transmission link and will form part of the electrical transmission grid that is essential to the transport of renewable energy between the locations where it is generated and areas of demand, and the delivery of both Scotland's and the United Kingdom's 2030 climate change targets.

Three Horizontal Directional Drilled (HDD) ducts were installed at the site last year. These ducts are currently protruding from the seabed at the locations provided below. The diving operations are expected to be completed by 31 August 2022. A wider area, referred to as the 'Mooring Area', is the area in which the diving and cable pull-in operations will take place.

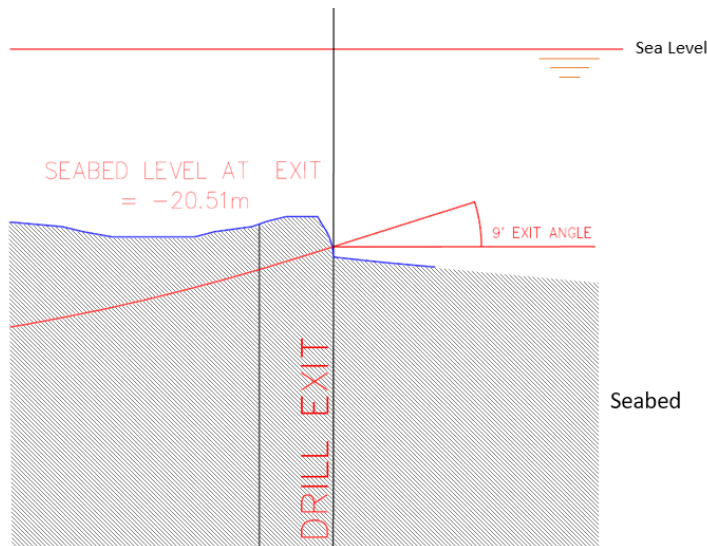
**Vessels are required to maintain a safe distance from the 'Mooring Area' until the estimated completion date of 31 August 2022.**

- Within the boundaries of the mooring area, steel ducts have been pushed out from each of the three HDD exit points and extend up to 2 m into the water column at an angle of approximately 9° to the horizontal as shown in the diagram.
- Moorings have been installed for the dive vessel VOE EARL to anchor when on station. The figure below shows the mooring and anchoring system when the VOE EARL is on station for duct diver support works. There will be times when the mooring system is left *in situ* without the vessel attached.
- When the mooring is left *in situ* all anchors will be clearly surface marked with marker buoys over the moorings. The size of the buoys is approx. 1.2m diameter and 1m high. The buoys have lights FI Y 5s 2M range (a single yellow flash every five seconds with a nominal range of 2 miles). The buoys do not have radar reflector. The vessel will display the Alpha flag during daylight and Red/White/Red lights during the hours of darkness.
- The moorings and anchoring are of a temporary nature. Once the diving and cable pull-in works are complete, the mooring and anchors will be fully recovered.

All vessels are required to comply with the COLREGS, especially rules 16 and 18.



Picture of marker buoys that will be deployed in the water at Noss Head.



Cross Section through water column and seabed at duct exit point



Photo of the HDD3 exit point showing the protruding duct

**All positions quoted in WGS84 UTM Zone 30N and in degrees and decimal minutes**

HDD Exit Reference	Easting	Northing	Latitude	Longitude
<b>Location of duct exit protrusion</b>				
HDD 1	497342.15	6480567.40	58° 27.9455' N	003° 02.7335' W
HDD 2	497324.33	6480561.46	58° 27.9424' N	003° 02.7518' W
HDD 3	497302.69	6480555.62	58° 27.9392' N	003° 02.7741' W

**2 Outline Programme of Works**

HDD exit point site	Start date: On site	Estimated Completion Date: 31/08/2022
---------------------	---------------------	---------------------------------------

**These dates are subject to weather permitting, and therefore there may be the potential for an extension to the work duration until the 14 September 2022.**

**3 Chart of Activity Area**

Please find chart on the last page of the document.

**4 Safe Clearances, Navigation Safety Features and Safety Notes for Mariners**



All vessels are requested to always maintain a safe distance (500m) from the construction and survey vessels.

**STAY A SAFE DISTANCE AWAY FROM DIVE FLAGS.** Maintain a distance of at least 300 feet (90m) from diver down flags and buoys in open water and at least 100 feet (30m) in inlets or navigation channels.

Vessel (*Voe Earl*) will display the Alpha flag during daylight and Red/White/Red lights during the hours of darkness.

When the Vessel (*Voe Earl*) is not on station the buoys will be illuminated with the appropriate lights, a single yellow flash every five seconds with a nominal range of 2 miles (FI Y 5s 2M range).

All vessels are required to comply with the COLREGS, especially rules 16 and 18 as the vessel will be restricted in her ability to manoeuvre.

5 Vessel Details	
<b>Mooring and Anchor Vessel</b>	
Vessel Name:	<i>Voe Earl</i>
Vessel Type / LOA(m):	Multipurpose Anchor / 24.07m
Vessel Function:	Handling Tug / Workboat
VHF Call Sign:	2FEP6
MMSI:	235090599
Vessel Bridge Mobile:	00447557476951
Vessel Sat Phone:	N/A
Onshore Contact:	<a href="mailto:voeearl@delta-marine.co.uk">voeearl@delta-marine.co.uk</a>
Vessel Photo	
<b>Mooring and Anchor Support Vessel</b>	
Vessel Name:	<i>Rona</i>
Vessel Type / LOA(m):	Utility Vessel / 12 m
Vessel Function:	Supporting <i>Voe Earl</i> mooring and anchor deployments
VHF Call Sign:	MACN3
MMSI:	235084204
Vessel Bridge Mobile:	N/A
Vessel Sat Phone:	N/A
Onshore Contact:	<a href="mailto:bobby.mitchell@seafastltd.co.uk">bobby.mitchell@seafastltd.co.uk</a>
Vessel Photo	
6 Project Contact Details	
<b>Scottish Hydro Electric Transmission Subsea Cable Installation Manager:</b>	
Name: Lorraine Wallington	
Email: <a href="mailto:Lorraine.wallington@sse.com">Lorraine.wallington@sse.com</a>	
Telephone: +44 7443 173906	

**Scottish Hydro Electric Transmission Lead Project Manager:**

Name: Chris Finnigan  
 Email: [chris.finnigan@sse.com](mailto:chris.finnigan@sse.com)  
 Telephone: +44 7385 385654

**Fisheries Liaison Officer (FLO):**

Name: John Watt  
 Email: [john.watt@brownmay.com](mailto:john.watt@brownmay.com)  
 Telephone: +44 7590 880746

**7 Geographic co-ordinates of activity area**  
*All positions quoted in WGS84*

Mooring Area	WGS84 UTM Zone 30N		Degrees Decimal Minutes	
	Easting	Northing	Latitude	Longitude
Mooring Area	497207	6480700	58° 28.017' N	003° 02.873' W
	497148	6480509	58° 27.915' N	003° 02.933' W
	497550	6480386	58° 27.848' N	003° 02.519' W
	497609	6480577	58° 27.951' N	003° 02.459' W

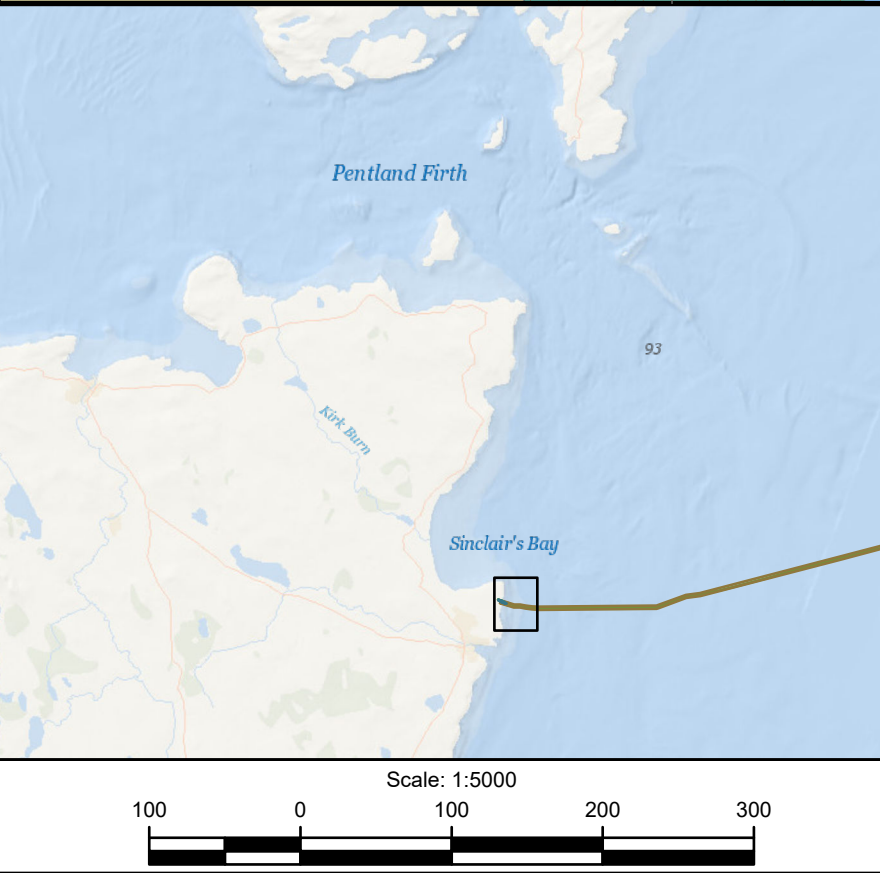
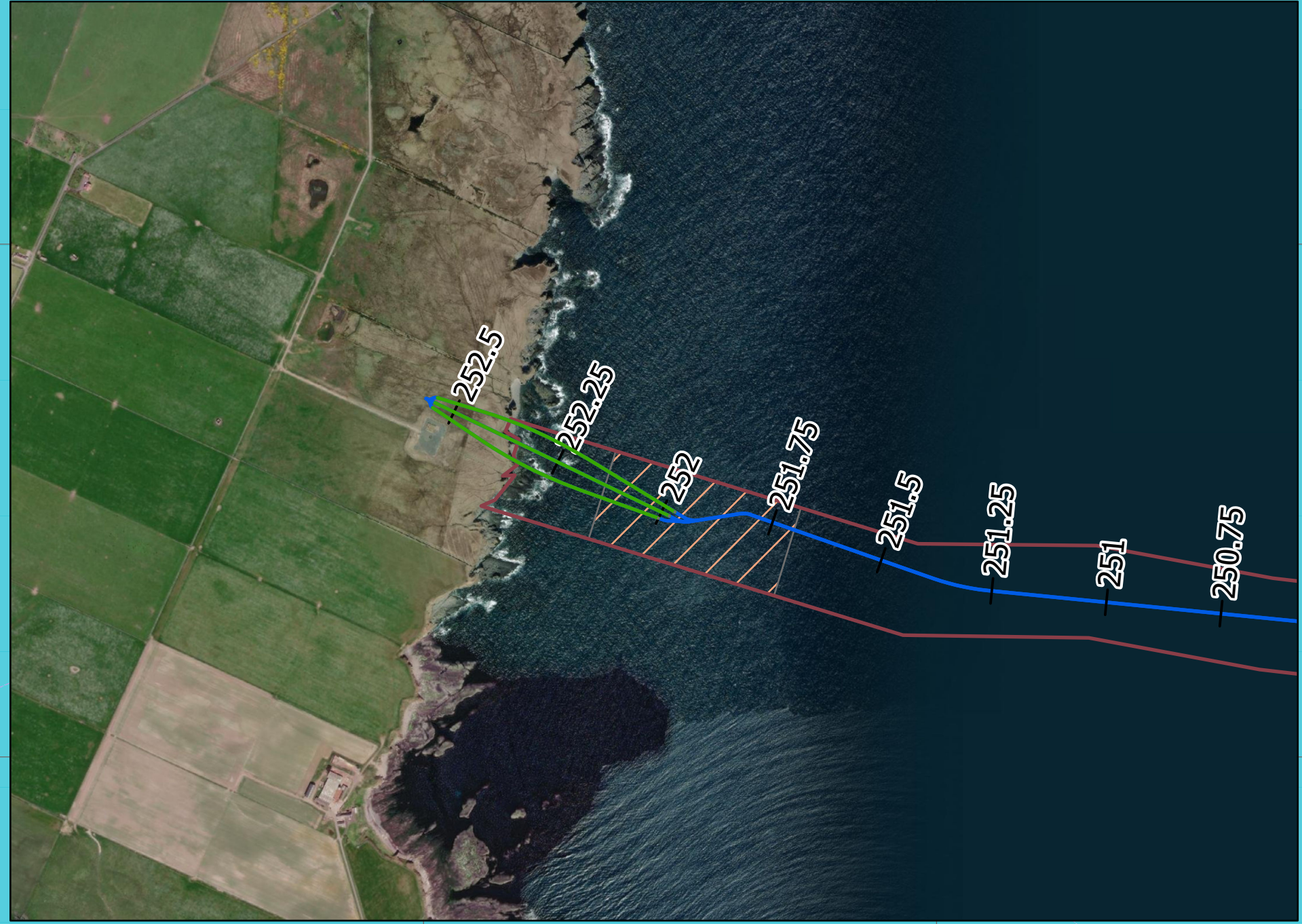
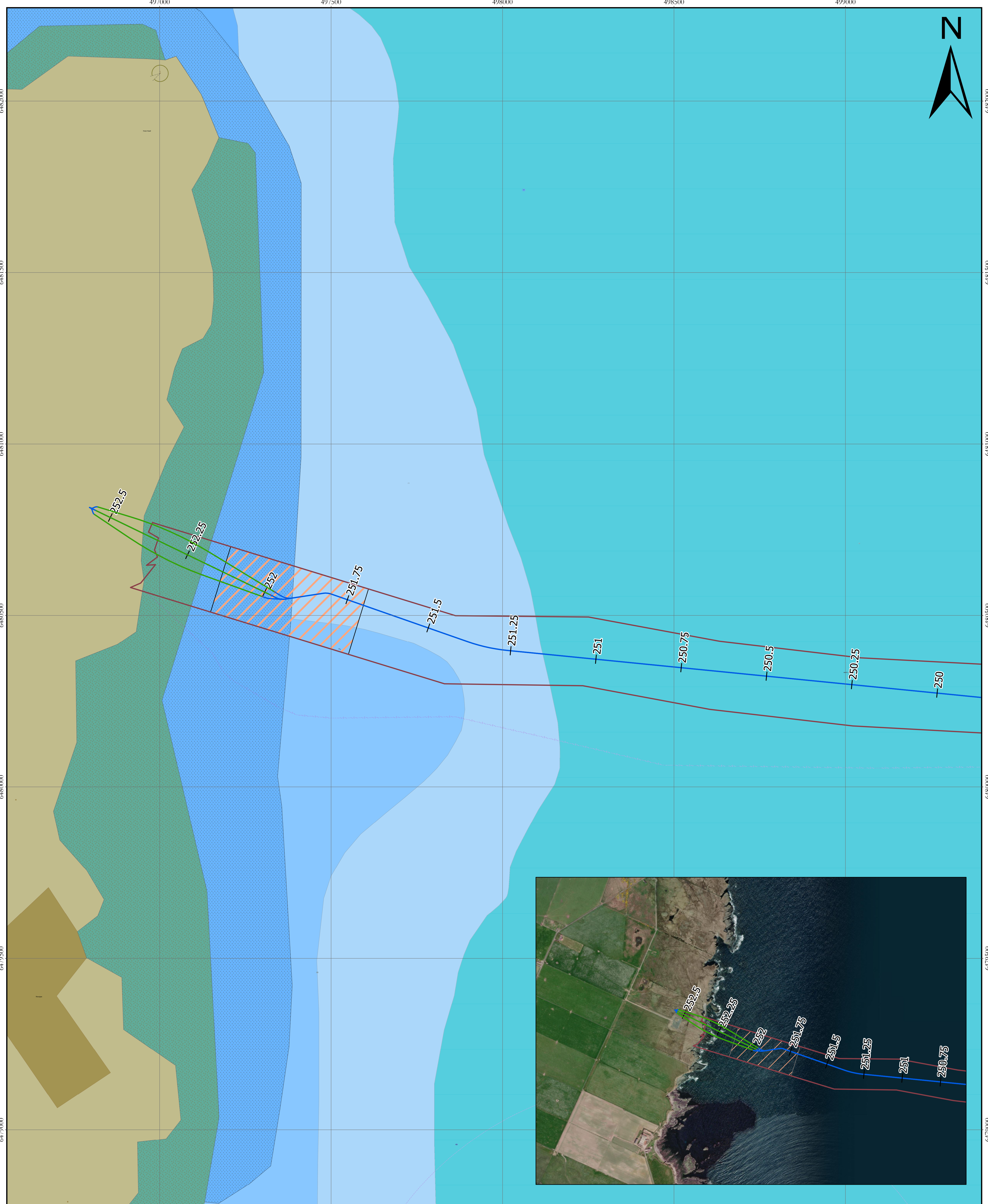
**Scottish Hydro Electric Transmission Legal Notice**

*Please be advised that this Notice to Mariners should be treated as official notice of the nature, duration and location of the works which are scheduled to take place. During the period of notice, failure to remove equipment or entry into the identified location may have serious consequences and may be considered a breach of the Convention on International Regulations for Preventing Collisions at Sea 1972 and/or the Merchant Shipping Act 1995 (a breach of which can carry criminal sanctions). Additionally, Scottish Hydro Electric Transmission may consider taking legal action to remove any obstruction and/or seek damages for any delay, in addition to any legal costs in doing so.*

*Scottish Hydro Electric Transmission will commence works on the **8<sup>th</sup> June 2022**. Please be advised that any equipment remaining within the notified location, after the **4<sup>th</sup> of June 2022**, will be regarded as having the potential to obstruct or delay the works and **will be removed without further notice to you and may be discarded**. In these circumstances, no compensation will be payable to you for any losses (including loss of equipment and/or loss of profit).*

*For the avoidance of any doubt, no compensation will be paid in relation to any new equipment placed within the identified location following the issuance of this Notice to Mariners.*





<p><b>Drawing Title</b></p> <h2 style="text-align: center;">SHETLAND HVDC Link Noss Head HDD Mooring Plan</h2>																																							
<p><b>Client</b></p>			<p><b>Project</b></p> <p style="text-align: center;">SHETLAND HVDC Link</p>			<p><b>Contractor</b></p>																																	
<p><b>Geodetic parameters</b></p> <table border="0" style="width: 100%;"> <tr> <td>Datum: WGS84</td> <td>Semi-major Axis: 6378137.000m</td> <td>False Northing: 0m</td> <td>Vertical Datum: LAT</td> </tr> <tr> <td>Projection: UTM 30N</td> <td>Inverse Flattening: 298.25722</td> <td>Scale Factor (CM): 0.9996</td> <td></td> </tr> <tr> <td>Ellipsoid: WGS84</td> <td>False Easting: 500000m</td> <td>Central Meridian (CM): 3°W</td> <td></td> </tr> </table>										Datum: WGS84	Semi-major Axis: 6378137.000m	False Northing: 0m	Vertical Datum: LAT	Projection: UTM 30N	Inverse Flattening: 298.25722	Scale Factor (CM): 0.9996		Ellipsoid: WGS84	False Easting: 500000m	Central Meridian (CM): 3°W																			
Datum: WGS84	Semi-major Axis: 6378137.000m	False Northing: 0m	Vertical Datum: LAT																																				
Projection: UTM 30N	Inverse Flattening: 298.25722	Scale Factor (CM): 0.9996																																					
Ellipsoid: WGS84	False Easting: 500000m	Central Meridian (CM): 3°W																																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">A</th> <th colspan="2">24-06-2021</th> <th colspan="2">-</th> <th colspan="2">Issued for Information</th> <th colspan="2">DR TC NW</th> </tr> <tr> <th>NKT Rev.</th> <th>SSEN Rev.</th> <th>Date</th> <th>Status Code</th> <th>Description</th> <th>Drawn</th> <th>Checked</th> <th>Approved</th> <th colspan="2"></th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td colspan="2"> </td> </tr> </tbody> </table>										A		24-06-2021		-		Issued for Information		DR TC NW		NKT Rev.	SSEN Rev.	Date	Status Code	Description	Drawn	Checked	Approved												
A		24-06-2021		-		Issued for Information		DR TC NW																															
NKT Rev.	SSEN Rev.	Date	Status Code	Description	Drawn	Checked	Approved																																
<p><b>Service layer credits</b>  <small>GeoWise, Esri, DeLorme, NaturalVec, Maxar, Microsoft, NOAA OCS, Esri, DeLorme, UK Hydrographic Office</small></p>																																							
Scale: 1:5000	Drawing Size: ISO A1	NKT Project No.: G19009	SSEN Project No.: LT09	NKT Document No.: -	SSEN Document No.: -	Sheet No.: 01 of 01	Rev: A																																

**Notes**

NKT, on behalf of Scottish Hydro Electric Transmission Plc, will be undertaking diving operations at Noss Head to assist with the horizontal directional drilled (HDD) exit points for the Shetland HVDC Link. A mooring and anchoring system will be set up during the duration of the works to support the diver. A high-resolution marine survey to determine the exit point of the HDD holes will then be completed.

The vessel will remain on station during the immediate work period and will return to harbor in between works at the exit point. The current programme has 3 separate 4-5 day work phases for the vessel, with a few weeks in between. This means there could be times when the mooring system is left in situ without the vessel attached. In this instance all anchors will be clearly surface marked.

The moorings and anchoring will only be of a temporary nature and will be removed once the installation works are completed, the mooring and anchors will be fully recovered.

The Shetland HVDC link is a critical electricity transmission link and will form part of the electrical transmission grid that is essential to the transport of renewable energy between the locations where it is generated and areas of demand, and the delivery of both Scotland's and the United Kingdom's 2030 climate change targets.

Works are scheduled to take place between 12th July and 20th September 2021.

**Legend**

- Shetland HVDC Link with grid KP
- HDD target pop-out locations
- Shetland HVDC license corridor
- HDD drills
- Mooring area extents

<ul style="list-style-type: none"> <li><span style="background-color: #90EE90; width: 15px; height: 10px; display: inline-block;"></span> 0m - 10.0m</li> <li><span style="background-color: #66B3FF; width: 15px; height: 10px; display: inline-block;"></span> 10.0m - 20.0m</li> <li><span style="background-color: #ADD8E6; width: 15px; height: 10px; display: inline-block;"></span> 20.0m - 30.0m</li> <li><span style="background-color: #ADD8E6; width: 15px; height: 10px; display: inline-block;"></span> 30.0m -</li> </ul>	<ul style="list-style-type: none"> <li><span style="font-size: 10px;">3</span> shallow sounding</li> <li><span style="font-size: 10px;">30</span> deep sounding</li> <li><span style="font-size: 10px;">25</span> contour label</li> <li><span style="font-size: 10px;">21</span> underwater hazard</li> <li><span style="font-size: 10px;">1</span> Buoy (example)</li> <li><span style="font-size: 10px;">1</span> Beacons (example)</li> <li><span style="font-size: 10px;">1</span> Lights</li> <li><span style="font-size: 10px;">1</span> Submarine cable</li> <li><span style="font-size: 10px;">1</span> Pipeline</li> <li><span style="font-size: 10px;">#</span> Obstruction</li> <li><span style="font-size: 10px;">#</span> Wreck</li> <li><span style="font-size: 10px;">#</span> offshore platform</li> </ul>
---	---