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Issued by email only

1 July 2020

Dear Sirs,

**Orkney Islands Council Harbour Authority (OICHA) – Scapa Deep Water Quay
Request for Screening Opinions**

We write on behalf of our Clients above to formally request individual screening opinions under The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 for the above named project.

As required by Paragraph 10 of the above Regulations we have provided a pack of information for this project (attached) which includes:

- a description of the location of the development, including a plan to identify the land;
- a description of the proposed development, including of the physical characteristics of the proposed development;
- a description of the location of the proposed development, with regard to the environmental sensitivity of the area and any potential significant environmental effects; and
- a description of any features of the proposed development, or proposed measures, envisaged to avoid or prevent significant adverse effects on the environment where possible.

The information provided is drawn from the recent Orkney Harbours Masterplan Phase 1 (March 2020), Strategic Environmental Assessment (SEA) Environmental Report (June 2019), and associated Habitat Regulations Assessment (HRA) (January 2020) and Supplementary information for the Habitats Regulations Appraisal Appropriate Assessment (AA) (undated) prepared by Intertek, and additional desk study by EnviroCentre. If copies of these documents would assist your appraisal please contact cfleming@envirocentre.co.uk and copies shall be issued to you.

We have also copied this communication to Orkney Islands Council as there is also a requirement to screen this project under The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. We have also therefore made a separate

request to Orkney Islands Council for a screening opinion which you have also been copied in to.

If you have any questions related to the information provided, please contact the undersigned.

Yours sincerely
for EnviroCentre Ltd

(issued electronically)

Dr. Campbell G. Fleming
Executive Director

Dr. Ian Buchan
Principal Environmental Consultant

Enc: Supporting pack of information for Scapa Deep Water Quay

CC: Orkney Islands Council

1. Scapa Deep Water Quay

Information to Support a Screening Opinion

1.1 Plans

The general location of this project within Orkney is shown on Drawing No. 673702-001.

A plan is also provided showing the project location within the local area. This is contained in Drawing No. 673702-002.

Illustrative layouts of the planned development and also the potential location of the access road (including existing public road re-alignment) as prepared by Arch Henderson are also attached.

1.2 Project Description and Local Sensitivities

- New deep water quayside infrastructure;
- 5+ hectares of laydown area; and
- Access road.

1.2.1 Location

Scapa Deep Water Quay will be situated 2 to 3 miles south from Scapa Pier – before Holm and round about Deepdale.

1.2.2 Description

There is no deep-water pier infrastructure in Scapa Flow located on the Orkney mainland coast. As part of option development consideration was given to possible locations for deep water quayside infrastructure in proximity to the existing Scapa Pier, with a suitable site potentially identified to the south of Scapa Pier.

This proposal comprises 300m of quayside with water depth of -20m CD, and a 75m wide approach quay with 5+ hectares of landside area – options for an extended pier or inclusion of dolphins could be considered during feasibility stage, depending on market opportunities at the time. The exact location of the access road from the site to the public road will be determined by local topography, consents and gradients required for vehicle movements. The proposal will also include re-alignment of the existing B9052 .

The main purpose of this facility would be to undertake any/ multiple industry activity that requires both deep-water berthing and large laydown area. There are specific market opportunities in the offshore wind and oil and gas sectors. This is also a potential location for the development of an LNG storage and supply hub.

It should be noted that as a design principle it will be attempted to balance any dredging or cut into the land with construction and/or reclamation requirements. Disposal of dredging material will be avoided as far as possible.

1.2.3 Construction Timing

From start to finish it is anticipated that the construction of Scapa Deep Water Quay would take approximately 26 months¹.

1.2.4 Local Sensitivities

This section notes some of the local sensitivities apparent from a high level desk based review. Further information on known sensitivities is provided in Section 1.3 below.

Designated Areas

Site of Special Scientific Interest

- Waulkmill (Approximately 8km west)
 - Waulkmill is a sheltered sandy bay contains a wide variety of wildlife habitats including the largest saltmarsh. It also has a distinctive flora of plants and the cliffs support a rich variety of herbs, ferns and shrubs. The only colony of native aspen on the Orkney mainland is found on cliffs on the eastern side of the bay. One species of moth, *Coloephora vigaureae*, has only been seen here. Wildfowl and waders feed where the burn flows into the bay, while the moorland and scrub provide good habitat for a variety of birds including stonechat.

Special Protection Areas

- Orkney Mainland Moors (Terrestrial) (Approximately 6km west)
 - The predominant habitats include extensive areas of blanket bog, acid grassland, wet and dry heath, raised-mire and calcareous valley mire. The presence of extensive moorland provides nesting opportunities for an assemblage of moorland breeding birds, including Hen Harrier and Short-eared Owl. Sheltered river valleys and dales support willow scrub, tall-herb and flush vegetation, and several scattered lochans provide important breeding areas for Red-throated Diver.
- Hoy (Marine) (Approximately 15km south-west)
 - Cliffs provide important breeding sites for a number of seabird species such as Puffin, Guillemot, Kittiwake, Great Black-backed Gull and Fulmar. Inland moorland areas also support large numbers of breeding birds, in particular Great Skua and Arctic Skua. Red-throated Diver nest on the numerous small lochans found on the moorland. Peregrine are also known to breed in Hoy. The divers and seabirds feed in the rich waters around Hoy, outside the SPA.
- Scapa Flow pSPA (located within the pSPA)
 - The area included within the pSPA supports a population of European importance of the following Annex 1 species: including Great northern diver (*Gavia immer*), Red-throated diver (*Gavia stellata*), Black-throated diver (*Gavia arctica*), Slavonian grebe (*Podiceps auritus*). It also supports migratory populations of European importance of the following species: European shag (*Phalacrocorax aristotelis*), Common eider (*Somateria mollissima*), Long-tailed duck (*Clangula hyemalis*), Common goldeneye (*Bucephala clangula*), Red-breasted merganser (*Mergus serrator*)

Special Areas of Conservation

- Hoy (Approximately 16km south-west)

¹ Orkney Islands Council - Harbour Authority: Draft Orkney Harbours Masterplan Phase 1 Appropriate Assessment (Intertek 2020)

- The island of Hoy is located on the west of Scapa Flow and features a range of habitats and species which are found in no other part of Orkney.

Local Nature Conservation Site

- Gaitnip Hill (Immediately Adjacent)
 - Gaitnip Hill Local Nature Conservation Site is large area of mainly dry heather moorland dominated by heather and crowberry to the south, and peat bog with worked out cuttings to the north. The latter area is very wet with a mosaic of blanket bog dominated by bog cotton and heather, marshy and swamp, with drier 'islands' of uncut peat. Along the coastal edge is short grassland with plants such as spring squill and sea plantain. A burn flows through the site. The vegetation cover of its steep banks includes abundant blaeberry and a dense stand of bracken. Locally along it are springs producing unusual mounds of calcium-encrusted moss.

The site is important for breeding birds of prey. It supports a variety of nesting waders including oystercatcher, curlew, lapwing and snipe. In addition a variety of small birds nest here, including skylark, meadow pipit, wren, stonechat, twite and reed bunting.

Archaeology and Cultural Heritage

Canmore Points (Terrestrial)

Compiled and managed by Historic Environment Scotland, Canmore contains over 320,000 records and 1.3 million catalogue entries from all its survey and recording work, as well as from a wide range of other organisations, communities and individuals who are helping to enhance this national resource².

There are no Listed Buildings or Scheduled Monuments within the vicinity of the proposed development.

Two features are noted on the Canmore database:

Netherbutton.

Including Boundary Walls, Gatepiers and Outbuilding

Burn of Button.

The main generator house for RAF Netherbutton Radar Station (HY40SW 32) is situated on the W side of the A961, immediately to the N of the of a track that leads to Deepdale.

Set within earth banks to protect against bomb blast is a brick and concrete building measuring about 13m square. The building was not entered on the date of visit.

The building is visible on various dates of vertical air photography and is shown on the current OS 1:2500 scale digital map.

Canmore Points (Maritime)

Within the marine environment two unidentified objects have been identified from the Canmore database within the proposed Scapa Flow Deep Water Pier area (Figure 2):

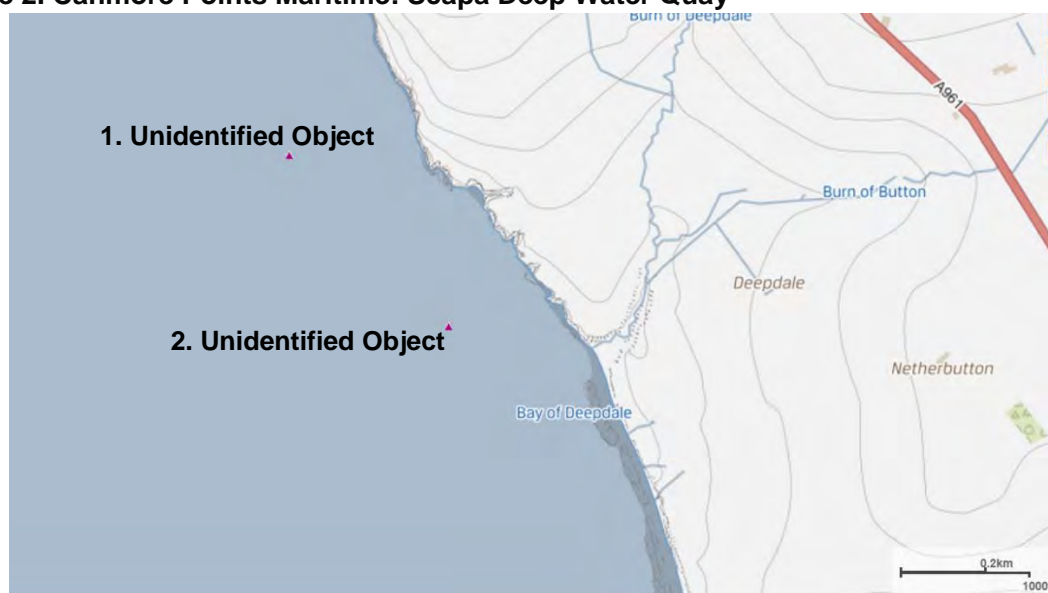
² <https://map.environment.gov.scot/sewebmap/>

1. A geophysical anomaly at N58 55.67383 W2 58.023 of high archaeological potential. It is an oval shaped mound on the seabed aligned SW-NE that measures 14.5 metres by 14 metres and is about 1.7 metres in height. It is situated in about 25 metres of water on flat ground.
2. A geophysical anomaly at N58 55.55.456 W2 57.6273 of high archaeological potential. An oval shaped mound on the seabed aligned SW-NE measuring 14.5 metres by 9.7 metres and is about 1.3 metres in height. It is situated in about 18 metres of water on ground the slopes east to west.

Figure 1. Canmore points terrestrial: Scapa Deep Water Quay



Figure 2. Canmore Points Maritime: Scapa Deep Water Quay



Air Quality

Previous Review and Assessment have determined there is no need for detailed assessment and no air quality management areas have been declared in Orkney Islands Council's area³.

Water Quality

From the SEPA website the local coastal waterbody is classified as good as shown below.

ID	Name	Heavily Modified	Artificial	Year	Classification
200474	Scapa Flow	N	N	2018	Good

1.2.5 Information Arising from Previous Consultation

During the preparation of the SEA, HRA and AA for the Orkney Harbours Masterplan Phase 1 consultation was undertaken by OICHA through Intertek. Whilst have not reproduced these documents here, we have reviewed the responses from the Statutory Consultees and distilled what we consider to be the key points:

- Protection of designated Sites (SPA/ SAC/ SSSI) and associated features to ensure the development does not undermine the Conservation Objectives, and hence site integrity of the site.
- Scapa Deep Water Quay is such that any lights associated with construction or operation of that pier would in effect be new within that location and hence have potential for likely significant effects. With respect to operational lighting of the proposed Scapa Deep Water Quay this aspect would require more attention to assess specific impacts associated with light, not just from the Quay itself but from any rigs/vessels berthed at it, in addition to those identified more widely with respect to visual disturbance.
- Any permanent loss of foraging habitat would require more detailed consideration at project level, informed by both ornithological (Scapa Deep Water Quay proposal falls within the Scapa Flow pSPA and this area has been identified as of high importance to black-throated diver (non-breeding), which feeds in the water column) and benthic surveys (kelp beds are recorded near the proposed Scapa Deep Water Quay).
- High-level assessment of the potential impacts of disturbance to the qualifying features of the Scapa Flow pSPA caused by vessel movements and avoidance/mitigation measures (e.g. with respect to siting of new infrastructure, such as that proposed at the Scapa deep water quay, and/or restoration of vessel movements/moorings to defined lanes/locations).
- At Scapa Deep Water Quay the GIS layer Landcover Scotland 2015 shows heather and bog as well as grasslands within the area proposed for this development so there is the possibility for Groundwater Dependent Terrestrial Ecosystems (GWDTEs) to be present. This area will need to be surveyed according to SEPA guidance LUPS-GU31.
- Requirement for a Flood Risk Assessment at the planning phase.
- SEPA '*...welcome the reference in the SEA to "Undertake Water Framework Directive (WFD) Assessment for all developments."*
- A Controlled Activities Regulations (CAR) construction site licence will be required for management of surface water run-off from a construction site, including access tracks, which:
 - is more than 4 hectares,
 - is in excess of 5km, or
 - includes an area of more than 1 hectare or length of more than 500m on ground with a slope in excess of 25?
- With regards to the works proposed for the Orkney Harbours Masterplan Phase 1, SEPA would note that such development is generally considered to be a 'Water Compatible Use' in line with

³ https://www.orkney.gov.uk/Files/Environmental_Health/2008_Air_Quality_Report.pdf

their Land Use Vulnerability Guidance, which is SEPA's interpretation of national planning policy and duties and requirements under relevant legislation. As such, they would be unlikely to object on flood risk grounds.

- Historic Environment Scotland consider that there is the potential for impacts on unknown maritime heritage assets which has not been assessed from the proposed reclamation works. We assume that no dredging works are required for this proposal. While the assessment notes the presence of the HMS Royal Oak c. 1km away from the site, there are also 2 records of high archaeological potential geophysical anomalies in close proximity to the site in the Canmore records. Further survey work and mitigation may be required at project design stage to avoid impacts on these assets. It is not clear from the written text of the assessment what the changes to setting are related to so it is difficult to understand this part of the assessment. However, we are content that significant adverse impacts on the setting of assets in our remit in the vicinity of the proposals are unlikely.
- There is a requirement to indicate whether dredging will be required, the limited area for reclamation may require further survey at project stage.
- Once any dredge disposal sites are determined, impacts on relevant designated sites in their vicinity also need to be considered.
- Consider '...fish farm developments' within Scapa Flow pSPA

1.3 Aspects of Environment Potentially Affected and Potential Mitigation Measures

The table below provides commentary on each of the environmental topics considered with information on:

- Local setting and any key features known;
- Potential effects of development; and
- Any mitigation, avoidance or enhancement measures that could be implemented.

Topic	Potential Effects	Context and Observations	Potential Mitigation
Air	Dust emissions during construction	Rural location with limited receptors; and No receptors immediately adjacent to the main site (although access road line to still be determined).	CEMP contains standard construction site dust suppression techniques. Readily mitigated.
Air	Traffic emissions during operation	As above	No mitigation
Biodiversity, Flora and Fauna	Damage to the Biodiversity, flora and fauna within the vicinity of the Orkney Islands.	Degradation of water quality during construction and operation through small accidental release of fuel and associated impacts on flora and fauna	<p>The following good practice guidelines shall be adhered to and incorporated into the CEMP:</p> <ul style="list-style-type: none"> • GGP 5: Works and maintenance in or near water; • PPG 6: Working at construction and demolition sites; • PPG 7: Safe Storage – The safe operation of refuelling facilities; • GPP 21: Pollution and incident response planning; and • GPP 22: Incident response – dealing with spills. <p>Operational Management Plan which includes the above in order to minimise likelihood of spills.</p>
Biodiversity, Flora and Fauna	Noise and visual impact.	Noise and visual impact resulting in disturbance to marine mammals and birds	<ul style="list-style-type: none"> • If piling is to be undertaken, piling will not commence if marine mammals are detected within the mitigation zone or until 20 minutes after the last visual detection. If any marine mammals are detected they will be tracked to ensure they have left the mitigation zone before they advise the crew to commence piling activities • A soft-start will be employed, with the gradual ramping up of piling power incrementally over a set time period

Topic	Potential Effects	Context and Observations	Potential Mitigation
			<p>until full operational power is achieved. The soft-start duration will be a period of not less than 20 minutes. This will allow for any marine mammals to move away from the noise source.</p> <ul style="list-style-type: none"> When piling at full power this will continue if a marine mammal is detected in the mitigation zone (as it is deemed to have entered voluntarily).
Biodiversity, Flora and Fauna	Marine Mammal Collision	Increased marine traffic leading to an increased risk of collision with marine mammals	Develop a Marine Mammal Protection Plan to assess and manage the risks of causing injury or disturbance to marine mammals (cetaceans and seals), as a result of construction and operations.
Biodiversity, Flora and Fauna	Introduction of new invasive species into the Orkney Islands.	Minimising the spread of Non-Native Species.	Works will be undertaken in line with the Scottish Governments "Non-native species: code of practice ⁴ (2012)"
Climatic Factors	Minimise greenhouse gases emissions and the Port's carbon footprint.	Construction and operational activities leading to increased greenhouse gas emissions, adding to existing carbon footprint.	<p>It is considered that the proposed development would not result in a significant effect upon climate given the nature of the development.</p> <p>Any increase in emissions created during either construction or operation is likely to be negligible, and pollution and emissions control would be discussed within a detailed Construction Environmental Management Plan (CEMP) and Operational Management Plan.</p> <p>Discussion of the vulnerability of the project to climate change is primarily concerned with the water environment, including flood risk. A flood risk assessment will be undertaken as part of the environmental assessment</p>

⁴ <https://www.gov.scot/publications/non-native-species-code-practice/>

Topic	Potential Effects	Context and Observations	Potential Mitigation
Cultural Heritage	Potential impact on cultural heritage assets	HMS Royal Oak protected war grave wreck is within the vicinity of the proposed development. This has an exclusion zone of 200m and the development will be a minimum of 1 km away.	Watching brief for archaeological/ cultural heritage assets
Landscape	Major impact on visual amenity of the area during construction and operation.	Alteration to seascape due to extension of quayside and new waterfront development. Impact on visual amenities to local populations and recreational users.	Design mitigation will be employed to help ensure that the proposed development integrates positively with its landscape setting.
Material Assets	Promote the sustainable use and management of material assets.	Proposal will be protecting and enhancing existing assets and ensuring sustainable use.	There is no mitigation proposed.
Material Assets	To meet the objectives of the Zero Waste Plan.	Additional waste created due to construction.	The CEMP will include a Site Waste Management Plan. Existing waste plans will continue to be in place during the operational phase.
Population and Human Health	Protect and improve human health and wellbeing through	Degradation of air quality on local communities, through dust and emissions during construction.	The CEMP will contain standard construction site dust suppression techniques.
Population and Human Health	Improve safety record of the harbour and improve safety for the sea users.	This is a safety issue which will be addressed during the construction phase and operation.	During construction contractors will adhere to Construction Method Statements, CEMP and Risk Assessments. There is no additional mitigation proposed.

Topic	Potential Effects	Context and Observations	Potential Mitigation
Soil	Potential impacts on coastal processes, leading to changes in wave climate and leading to coastal erosion (direct, long-term and irreversible).	This is unlikely to occur due to the foreshore substrate in the area being mainly rock platform. Reclamation of the shoreline would lead to land use change. There is no mitigation proposed.	Maintain or improve soil quality and prevent any further degradation of soils.
Soil	Loss of peatlands	Disturbance to and loss of peat lands	A peat management plan will be developed to ensure that peatlands are managed in accordance with best practice, specifically that peat habitats are wherever possible avoided during construction and where this is not possible that peat is reinstated effectively with a minimal loss of carbon.
Soil	Introduction of new pollution sources (primarily vessels) could lead to contamination of the seabed.	Potential for spills and discharges onto the water environment which could contaminate the seabed and habitats.	Operational Management Plan will be developed which to minimise likelihood of spills.
Water	Protect and enhance the state of the water environment.	Potential degradation of water quality during construction and operation.	Potential degradation of the water environment would be managed by the CEMP and Operational Management Plan.
Water	Presence of new pier may cause localised changes in hydrodynamics and morphological changes to the water body	Potential changes to coastal processes.	The design of the pier will introduce design mitigation which aims to minimise changes to hydrodynamics and coastal processes.
Water	Flooding	Potential flooding as a result of construction works	A flood risk assessment will be undertaken to determine likely flooding effects.



Legend



Approximate Capital Project Location

Do not scale this map

Client

Orkney Islands Council Harbour Authority

Project

OICHA Capital Projects Screening Exercise

Title

Capital Project Locations

Status

FINAL

Drawing No.
673702-001

Revision
-

Date
28 May 2020

Drawn
JP

Checked
CF

Approved
CF

Scale

1:50,000 @A3

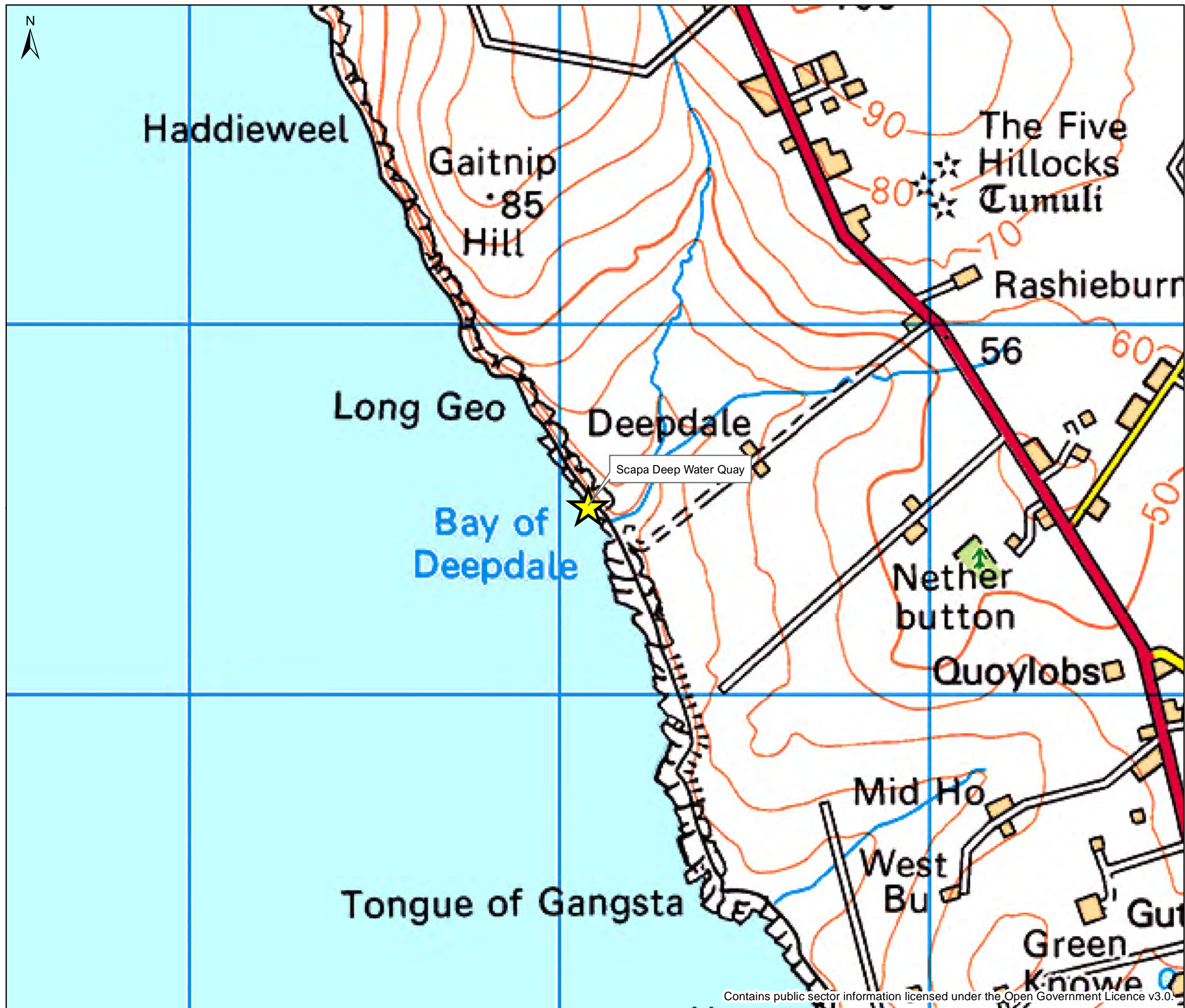
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Rev	Date	Amendment	Initials
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Legend

★ Approximate Capital Project Location

Do not scale this map

Client
Orkney Islands Council Harbour Authority

Project
OICHA Capital Projects Screening Exercise

Title
Capital Project Locations:
Scapa Deep Water Quay

Status
FINAL

Drawing No. 673702-002	Revision -	Date 28 May 2020
Drawn JP	Checked CF	Approved CF

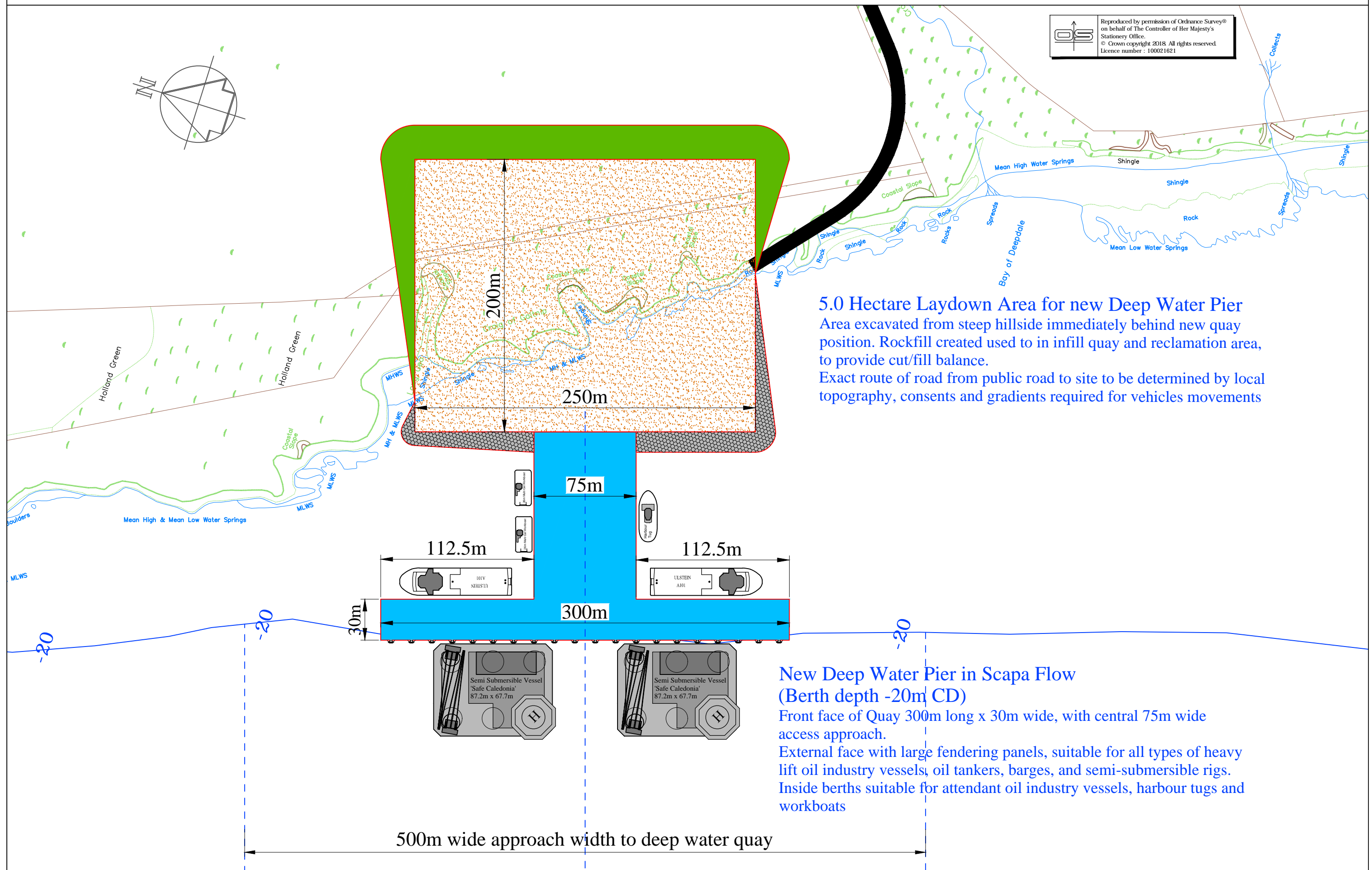
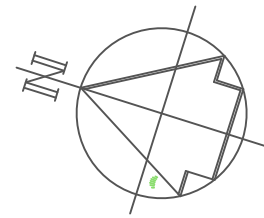
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SCAPA DEEP WATER QUAY



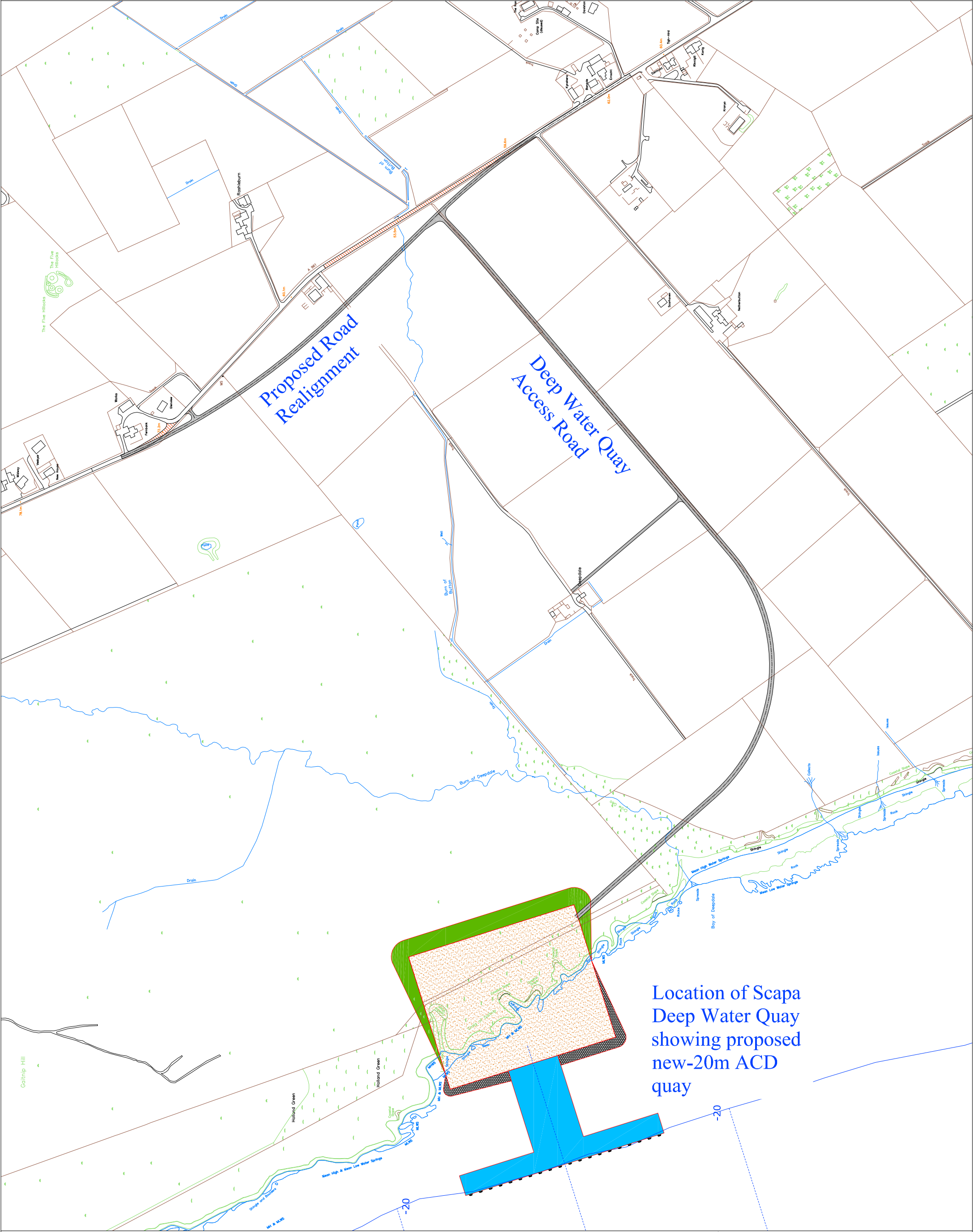
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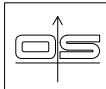
5.0 Hectare Laydown Area for new Deep Water Pier
Area excavated from steep hillside immediately behind new quay position. Rockfill created used to in fill quay and reclamation area, to provide cut/fill balance.
Exact route of road from public road to site to be determined by local topography, consents and gradients required for vehicles movements

New Deep Water Pier in Scapa Flow
(Berth depth -20m CD)
Front face of Quay 300m long x 30m wide, with central 75m wide access approach.
External face with large fendering panels, suitable for all types of heavy lift oil industry vessels, oil tankers, barges, and semi-submersible rigs.
Inside berths suitable for attendant oil industry vessels, harbour tugs and workboats

SCAPA DEEP WATER QUAY - ROAD REALIGNMENT

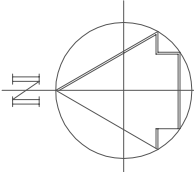


Location of Scapa
Deep Water Quay
showing proposed
new-20m ACD
quay



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PRELIMINARY (P2)
- FOR DISCUSSION



SCALE 1:5,000 (A3)