

## **Marine Licence Application for Dredging and Sea Disposal**

Version 1.0

### **Marine (Scotland) Act 2010**

## Acronyms

Please note the following acronyms referred to in this application form:

<b>BPEO</b>	Best Practicable Environmental Option
<b>MHWS</b>	Mean High Water Springs
<b>MMO</b>	Marine Mammal Observer
<b>MPA</b>	Marine Protected Area
<b>MS-LOT</b>	Marine Scotland – Licensing Operations Team
<b>PAM</b>	Passive Acoustic Monitoring
<b>SAC</b>	Special Area of Conservation
<b>SNH</b>	Scottish Natural Heritage
<b>SPA</b>	Special Protection Area
<b>SSSI</b>	Site of Special Scientific Interest
<b>WGS84</b>	World Geodetic System 1984

## Explanatory Notes

The following numbered paragraphs correspond to the questions on the application form and are intended to assist in completing the form. These explanatory notes are specific to this application and so you are advised to read these in conjunction with the Marine Scotland Guidance for Marine Licence Applicants document.

### **1. Applicant Details**

The person making the application who will be named as the licensee.

### **2. Dredging Contractor Details**

The person whose activities produce the substance(s) or object(s) to be dredged and/or intended for sea disposal (e.g the dredging contractor).

### **3. Agent Details**

Any person acting under contract (or other agreement) on behalf of any party listed as the applicant and having responsibility for the control, management or physical deposit or removal of any substance(s) or object(s).

### **4. Payment**

Indicate payment method. Cheques must be made payable to: The Scottish Government.

**Marine licence applications will not be accepted unless accompanied by a cheque for the correct application fee, or if an invoice is requested, until that invoice is settled. Target timelines for determining applications do not begin until the application fee is paid.**

### **5. Application Type**

Indicate if the application is for a new dredging site or a site that has previously been dredged. Provide the existing or previous consent/licence number, expiry date and quantity (in wet tonnes) dredged under the consent/licence up to a stated date if applicable.

### **6. Dredging and Sea Disposal Details**

- (a) Give a brief description of the dredging and sea disposal operation.
- (b) Provide the proposed start date of the project. The start date will not be backdated, since to commence a project for which a licence has not been obtained will constitute an offence, which may result in appropriate legal action. A licence is normally valid for the duration of the project but not exceeding 3 years. If a project will not be completed before a marine licence lapses, it will be necessary for licence holders to re-apply for a further licence to continue any ongoing work at least 14 weeks prior to the expiry date of the licence. **Target duration for determination of a marine licence application is 14 weeks.**
- (c) Provide the proposed completion date of the project.

- (d) Describe the location of the proposed works. Include a list of the latitude and longitude co-ordinates (WGS84) of the boundary points for each dredge site area. WGS84 is the World Geodetic System 1984 and the reference co-ordinate system used for marine licence applications. Co-ordinates taken from GPS equipment should be set to WGS84. Coordinates taken from recent admiralty charts will be on a WGS84 compatible datum. Ordnance survey maps do not use WGS84.

**Example:** For positions read from charts the format should be as in the example: 55°55.555'N 002°22.222'W (WGS84). The decimal point specifies that decimals of minutes are used and the datum is stated explicitly. If seconds are used then the format should be as in the example: 55°55'44"N 2°22'11"W (WGS84).

**It is important that the correct positions, in the correct format, are included with this application, as any errors will result in the application being refused or delayed.**

To supplement your application, please provide a suitably scaled extract of an Ordnance Survey Map (1:2,500 scale but not more than 1:10,000) or Admiralty Chart which must be marked to indicate:

- the full extent of the works in relation to the surrounding area;
- latitude and longitude co-ordinates defining the location of the works;
- the level of MHWS;
- any adjacent SAC, SPA, SSSI, MPA, Ramsar or similar conservation area boundary.

Drawings and plans will be consulted upon. 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.**

- (e) Provide details of the proposed disposal site for the dredged substance(s) or object(s) and, if necessary, any alternative disposal site(s) considered. In determining whether to grant a marine licence, MS-LOT will take into account any site nominated by the applicant. However, should this site be unsuitable, the nearest suitable disposal site for the dredged substance(s) or object(s) will be identified. Should you wish to establish a new site, please provide details in a covering letter with your application and MS-LOT will contact you to discuss your proposal before your application is determined. The cost of any site investigations to identify any new disposal site will normally be the responsibility of the applicant.
- (f) Indicate if any part of the works (dredging or sea disposal site) are located within the jurisdiction of a statutory harbour authority and provide details of the statutory harbour authority where relevant.
- (g) Provide a full method statement. The method statement must include details such as the rate of dredging, timing of the operation and order of the areas to be dredged.
- (h) Provide assessment of the potential impacts the works may have, including interference with other uses of the sea. Please include details of areas of concern e.g designated conservation areas, such as a SAC, SPA, SSSI, MPA or Ramsar site and shellfish harvesting areas. Further guidance on designated conservation areas can be obtained from SNH at this website: <http://gateway.snh.gov.uk/sitelink/index.jsp> and guidance on shellfish harvesting areas can be obtained from <http://www.foodstandards.gov.scot/> with regards to the Shellfish Waters Directive (2006/113/EC) which has parameters set to protect the water quality in which edible shellfish are grown.

Applicants should also be aware of the need to pay due regard to coastal and marine archaeological matters and attention is drawn to Historic Scotland's Operational Policy Paper HP6, "Conserving the Underwater Heritage".

Any application for beach replenishment works must be cross checked as to whether the proposed site is a designated bathing water site. If so, all physical works should ideally be done outwith the Bathing Water Season (1<sup>st</sup> June to 15<sup>th</sup> September). Further guidance on the Bathing Waters Directive (2006/7/EC) can be obtained from <http://apps.sepa.org.uk/bathingwaters/>.

Where there are potential impacts from the works, please provide details of proposed mitigation, such as use of MMOs or PAM, in response to potential impacts.

## 7. Details of Substance(s) or Object(s) to be Dredged

Information is required for each dredge site area listed in section 6 (d). please provide the following information:

**Name of Dredge Area:** For example Approach Channel or West of South Quay.

**Type (Maintenance or Capital):** **Maintenance dredge** applies to an area that has been dredged more than once and either annually or on a regular basis and was last dredged with the past 7 years; and a **Capital dredge** applies where an area/depth is being dredged either for the first time, or which has not been dredged within the past 7 years.

For capital dredging operations, a pre-dredge survey and sediment chemical analysis report will be required by MS-LOT prior to the issue of a sea disposal licence. Please contact MS-LOT for details in relation to specific projects. For maintenance dredging operations sites that have not been chemically analysed for more than 3 years, pre-dredge chemical analysis will be required to be undertaken. In addition to those samples analysed by the applicant, sediment sub-sample(s) must be submitted to MS-LOT as check monitoring may be required.

**Estimated Specific Gravity:** Indicate the specific gravity of the substance(s) or object(s) to be dredged from each dredge area.

**Depth:** Indicate the maximum depth (in metres) below the current seabed level, to which it is expected dredging is to be carried out, for each dredge area.

**Quantity to be Dredged per Year (wet tonnes):** Indicate the quantity of substance(s) or object(s) to be dredged (per year) from each dredge area. The quantity must be provided in wet tonnes.

## 8. Physical Composition

Indicate the approximate proportions as a percentage for each size range against each of the dredge site areas listed in section 6 (d) which are expected to be removed.

## 9. Details of Substance(s) or Object(s) Quality

Please indicate whether the substance(s) or object(s) from any of the areas to be dredged have been chemically analysed within the past 3 years. If yes, please provide details (locations, dates, results) on a separate sheet. If no, please provide justification. For capital projects, you are required to have representative sediment samples analysed at a laboratory of choice (see MS-LOT Pre-dredge Sampling Guidance document at <http://www.gov.scot/Topics/marine/Licensing/marine/Applications/predredge> for analytical requirements. This is liable to extend the time required to consider your application **as marine licence applications will not be determined without provision of this chemistry data.**

As part of the application determination process, you are required to carry out an assessment of the chemical and physical characteristics of the substance(s) or object(s) to be deposited at sea and potential effects upon the marine environment. It is your responsibility to show that the substance(s) or object(s) are suitable to be considered for sea disposal. This assessment should form part of your BPEO.

Under section 27(2) of the Marine (Scotland) Act 2010, the licensing authority has an obligation to consider the availability of practical alternatives when considering applications involving disposal of substance(s) or object(s) at sea. All applications for sea disposal must be supported by a detailed assessment of the alternative options - BPEO assessment. This must include a statement setting out the reasons why deposit of the substance(s) or object(s) at sea is the preferred option and applications will not be considered unless they are accompanied by such an assessment. All options in the BPEO must be explored fully (as per the guidance documents) otherwise your form and BPEO are liable to be returned to you, thereby delaying processing of the application.

As part of the licence conditions, you are likely to be required to take representative samples of the dredged substance(s) or object(s) during the dredging/sea disposal operations for analysis by MS-LOT. In such cases, samples must be taken at specified locations and depths and placed in containers which will be provided. The

samples must then be returned to MS-LOT at the Marine Laboratory Aberdeen. This process enables MS-LOT to fulfil its obligations under international conventions.

## **10. Details of Vessel(s) Undertaking Dredging and Sea Disposal**

Provide the vessel name, vessel type (e.g cutter-suction) and name and address of all vessel operators to be used for dredging and sea disposal operations. If vessel details are not available at the time of application, please indicate this on the form as these details will be required prior to licence issue.

## **11. Noise Monitoring**

Under the Marine Strategy Regulations (2010), there is now a requirement to monitor loud, low to mid frequency (10Hz to 10kHz) impulsive noise. Activities where this type of noise is produced include seismic airguns, other geophysical surveys (<10kHz), pile driving, explosives and certain acoustic deterrent devices. Where noisy activity is being undertaken, you must complete an initial registration form for the noise registry which allows you to provide details on the proposed work. Completion of a 'close-out' form, which allows licensees to provide details of the actual dates and locations where the activities occurred, is also required within 12 weeks of the completion of the 'noisy' activity or, in the case of prolonged activities such as piling for harbour construction or wind farms, at quarterly intervals or after each phase of foundation installation.

These forms can be downloaded from:

<http://www.scotland.gov.uk/Topics/marine/science/MSInteractive/Themes/noise-reduction>

**Marine licence applications will not be accepted until this form has been completed and submitted.**

## **12. Statutory Consenting Powers**

Please describe in the answer to this question what (if any) statutory responsibilities you (or your client) have to consent any aspect of the project.

## **13. Scotland's National Marine Plan**

Scotland's National Marine Plan has been prepared in accordance with the EU Directive 2014/89/EU, which came into force in July 2014. The Directive introduces a framework for maritime spatial planning and aims to promote the sustainable development of marine areas and the sustainable use of marine resources. It also sets out a number of minimum requirements all of which have been addressed in this plan. In doing so, and in accordance with article 5(3) of the Directive, Marine Scotland have considered a wide range of sectoral uses and activities and have determined how these different objectives are reflected and weighted in the marine plan. Land-sea interactions have also been taken into account as part of the marine planning process. Any applicant for a marine licence should consider their proposals with reference to Scotland's National Marine Plan. A copy of Scotland's National Marine Plan can be found at:

<http://www.gov.scot/Publications/2015/03/6517/0>

Indicate whether you have considered the project with reference to Scotland's National Marine Plan and provide details of considerations made including reference to the policies that have been considered. If you have not considered the project with reference to Scotland's National Marine Plan please provide an explanation.

## **14. Consultation**

Provide details of all bodies consulted and give details of any consents issued including date of issue.

## **15. Associated Works**

Indicate whether the application is associated with any other marine projects (e.g. land reclamation, or marine/harbour construction works etc). If this is the case, provide reference/licence number for the related marine projects.

# Marine Licence Application for Dredging and Sea Disposal

Version 1.0

## Marine (Scotland) Act 2010

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

Under Section 54 of the Marine (Scotland) Act 2010, all information contained within and provided in support of this application will be placed on a Public Register. There are no national security grounds for application information not going on the Register under the 2010 Act.

### Public Register

Do you consider that any of the information contained within or provided in support of this application should not be disclosed:

- (a) for reasons of national security; YES ☐ NO ☒
- (b) for reasons of confidentiality of commercial or industrial information where such confidentiality is provided by law to protect a legitimate commercial interest? 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.



## WARNING

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

Target duration for determination is 14 weeks. Please note that missing or erroneous information in your application and complications resulting from consultation may result in the application being refused or delayed.

Marine licence applications will not be accepted unless accompanied by a cheque for the correct application fee, or if an invoice is requested, until that invoice is settled. Target timelines for determining applications do not begin until the application fee is paid.

### Declaration

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

Signature

Redacted

Date

31st January 2019

Name in BLOCK LETTERS

Redacted

### Application Check List

Please check that you provide all relevant information in support of your application, including but not limited to the following:

- Completed and signed application form ☒
- Maps/Charts ☒
- Co-ordinates of the boundary points of the area of harbour jurisdiction (if you are a statutory harbour authority) ☒
- Method Statement Chapter 2 of the EIAR ☒
- BPEO Assessment ☒
- Analytical chemistry data (for capital projects) ☒
- Transportation plan (dredger route to and from disposal site – if required) See attached ☒
- Additional information e.g. photographs, consultation correspondence ☐
- Noise Registry – Initial Registration Form (if applicable) ☐
- Payment (if paying by cheque) ☐

### 1. Applicant Details

Title: Redacted Initials: Redacted Surname: Redacted

Trading Title (if appropriate): Caledonian Maritime Assets Ltd

Address: Municipal Buildings, Fore Street, Port Glasgow. PA14 5EQ

Name of contact (if different):

Telephone No. (inc. dialing code): Redacted

Email: Redacted

Statutory Harbour Authority? YES ☒ NO ☐

If **YES**, please provide a list of the latitude and longitude co-ordinates (WGS84) of the boundary points of the area of harbour jurisdiction using Appendix 01 Additional Co-ordinates form if necessary.

### 2. Dredging Contractor Details (if any)

Title: Initials: Surname:

If the Dredging Contractor is the Applicant shown in section 1 please tick the box ☐

Trading Title (if appropriate): TBC

Address:

Name of contact (if different):

Telephone No. (inc. dialing code):

Email:

### 3. Agent Details (if any)

Title: Redacted Initials: Redacted Surname: Redacted

Trading Title (if appropriate): Affric Limited

Address: Lochview Office, Loch Duntelchaig, Farr, Inverness. IV2 6AW

Name of contact (if different):

Telephone No. (inc. dialing code): Redacted

Email: Redacted



#### 4. Payment

Enclosed Cheque ☐

Invoice ☒

Contact and address to send invoice to:

Applicant ☒

Agent ☐

Other ☐

If **OTHER**, please provide contact details:

Title:

Initials:

Surname:

Address:

Email:

## 5. Application Type

Is this application for a new dredging site or a site that has previously been dredged:

New Site ☒ Previously Dredged Site ☐

If an **PREVIOUSLY DREDGED SITE**, please provide the following:

Consent/Licence Number	Expiry Date	Quantity (wet tonnes) dredged under consent/licence as at (date)

## 6. Dredging and Sea Disposal Details

(a) Brief description of the dredging and sea disposal operation:

Capital dredge of: the operational berthing area, an area to allow construction access and the footprint of the planned land reclamation to extend marshalling area. Full project description provided in Chapter 2, Volume 2 of the EIAR.

(b) Proposed start date (**Target duration for determination of a marine licence application is 14 weeks**):

October 2019

(c) Proposed completion date:

October 2021

(d) Location of Dredging:

The location of the works is provided in Drawing 49.2.1. Drawing 1973-909 shows the boundary of the dredge area. Drawing 1973-904 provide the dredge detail. The dredge area description and coordinates are attached to this form.

Latitude and Longitude co-ordinates (WGS84) defining the extent of all dredge areas (continue on Appendix 01 Additional Co-ordinates form if necessary):

### Dredge Area A

Latitude								Longitude							
		°			.		' N				°			.	' W
		°			.		' N				°			.	' W
		°			.		' N				°			.	' W
		°			.		' N				°			.	' W
		°			.		' N				°			.	' W
		°			.		' N				°			.	' W

### Dredge Area B

Latitude									Longitude								
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W

### Dredge Area C

Latitude									Longitude								
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W

### Dredge Area D

Latitude									Longitude								
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W

### Dredge Area E

Latitude									Longitude								
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W
		°			.			' N				°			.		' W

(e) Name of Disposal Site and Oslo Code:

Stornoway HE035

Latitude and Longitude co-ordinates (WGS84) defining the extent of disposal site (continue on Appendix 01 Additional Co-ordinates form if necessary):

Latitude									
5	8	°	1	0	.	9	3	3	' N
5	8	°	1	0	.	8	5	0	' N
5	8	°	1	1	.	1	3	3	' N
5	8	°	1	1	.	2	1	7	' N

Longitude										
0	0	6	°	2	2	.	7	8	3	' W
0	0	6	°	2	2	.	6	6	7	' W
0	0	6	°	2	2	.	0	0	0	' W
0	0	6	°	2	2	.	1	3	3	' W

(f) Is any part of the works (dredging or sea disposal site) located within the jurisdiction of a statutory harbour authority?

YES ☒ NO ☐

If **YES**, please specify statutory harbour authority:

Caledonian Maritime Assets Ltd

(g) Method statement including rate of dredging, timing of the operation and order of the areas to be dredged (continue on separate sheet if necessary):

The dredge rate will be determined by the vessels and equipment utilized. The dredge of the access and marshalling areas will be carried out through the winter months. This is to minimise disturbance to the users of the pontoons, which will be out of service during the works. The access and marshalling areas will be dredged in an east to west direction to facilitate access.

It is likely that the operational area dredge will be carried out during the same campaign, with activities scheduled around ferry operations.

Further methodology and programme information is included in Volume 2, Chapter 2 of the EIAR.

(h) Potential impacts the works may have (including details of areas of concern e.g. designated conservation and shellfish harvesting areas) and proposed mitigation in response to potential impacts (continue on separate sheet if necessary):

Impacts associated with the dredge are considered within the Tarbert Ferry Terminal Upgrade - Environmental Impact Assessment Report (EIAR).

**7. Details of Substance(s) or Object(s) to be Dredged** (Please provide details for each of the Dredge Areas listed in Section 5 (d) above. Continue on a separate sheet if necessary):

Dredge Area	Name of Dredge Area	Type (Maintenance or Capital)	Harbour bed, Seabed or Estuary bed?	Estimated Specific Gravity	Depth (metres)	Quantity to be Dredged per Year (wet tonnes)
A	Operational	Capital	Seabed	1.8	2	10,000
B	Marshalling	Capital	Seabed	1.8	7	70,000
C	Access	Capital	Seabed	1.8	2	10,000
D						
E						

8. **Physical Composition of Substance(s) or Object(s) to be Dredged** (Please provide the approximate proportions as a percentage for each size range against each of the dredge site areas listed in Section 6 (d) above. Continue on a separate sheet if necessary):

<b>Dredge Area</b>	<b>Clay and Silt</b> ( $< 0.063$ mm)	<b>Sand</b> ( $0.063 \leq \text{Sand} < 2.0$ mm)	<b>Pebbles, Cobbles &amp; Boulders</b> ( $\leq 2.0$ mm)
<b>A</b>	78.9%	13.0%	8.1%
<b>B</b>	68.5%	16.5%	15%
<b>C</b>	84.3%	11.3%	4.4%
<b>D</b>			
<b>E</b>			

9. **Details of Substance(s) or Object(s) Quality**

Have the dredged substance(s) or object(s) been chemically analysed in the last 3 years?

YES ☒ NO ☐

10. **Details of Vessel(s) Undertaking Dredging and Sea Disposal** (please note that a marine licence cannot be issued until the vessel details have been confirmed. Continue on a separate sheet if necessary):

<b>Vessel Name</b>	<b>Type of Vessel</b>	<b>Name and Address of Operator</b>
TBC		



## 11. Noise Monitoring

Will loud, low to mid frequency (10Hz to 10kHz) impulsive noise be produced by the project?

YES ☐ NO ☒

If **YES**, which please indicate the noise generating activities and sound frequencies:

Noise Generating Activity	Sound Frequency (Hertz)
Use of Explosives	
Other (please describe below):	

If you have ticked **YES**, please complete the Noise Registry – Initial Registration form located at:  
<http://www.scotland.gov.uk/Topics/marine/science/MSInteractive/Themes/noise-reduction>

**A marine licence application will not be accepted until this form has been completed and submitted.**

## 12. Statutory Consenting Powers

Do you, or (if appropriate) your client, have statutory powers to consent any aspect of this project?

The operational dredge and part of the other dredge areas is within the existing Harbour Order. A Harbour Revision Order has been submitted to Transport Scotland to consent the rest of the works.

## 13. Scotland's National Marine Plan

Have you considered the application with reference to Scotland's National Marine Plan?

YES ☒ NO ☐

If **YES**, provide details of considerations made including reference to the policies that have been considered:

Scotland's National Marine Plan and applicable policies have been considered in Chapter 4, Volume 2 of the EIAR.

If **NO**, please provide an explanation of why you haven't considered the National Marine Plan?

#### 14. Consultation

List all bodies you have consulted and provide copies of correspondence:

Please see Tarbert Ferry Terminal Upgrade - Pre- Application Consultation (PAC) Report.

#### 15. Associated Works

Provide details of other related marine projects, including reference/licence numbers (if applicable):

This application is submitted in conjunction with a marine licence construction application. Harris Development Ltd's pontoons (Licence number 06197/16/0) will be temporarily moved during the dredging and construction works, then reinstated as described in Volume 2, Chapter 2 of the EIAR.

## Dredge Location

Tarbert is located on the south-east coast of the Isle of Harris and has a grid reference centre point of NG 15766 99848 (Drawing 49.2.1). Tarbert is the main community on the Island of Harris. The ferries that utilise this terminal provide the shortest link between Harris and Uig on Skye which has road links to the Scottish Mainland. The harbour is situated to the south of the main village.

The dredge area boundary is detailed on Drawing 1973-909, the locations of the points marked on the drawing are provided in Table 1. The dredge area is bound by: MHWS between points SB12 and SB14, a straight line between SB14 and SB15, MHWS for SB15 to SB16, then straight lines joining points SB16, SB17, SB11 and SB12.

**Table 1: Boundary of Upgrade Works**

Point Number	Latitude Longitude	National Grid Reference
SB11	N57°53.790' W06°47.897'	NG15795 99773
SB12	N57°53.729' W06°47.950'	NG15735 99664
SB14	N57°53.824' W06°48.142'	NG15558 99854
SB15	N57°53.849' W06°48.189'	NG 15515 99903
SB16	N57°53.815' W06°47.907'	NG 15788 99820
SB17	N57°53.801' W06°47.899'	NG15794 99794

## Dredge Areas

As shown in Drawing 1973-904 there are three areas that need to be dredged, the:

- Operational Dredge Area – Existing seabed excavated to achieve a dredge level of -5.0mCD at pier berth. Area of the dredge is approximately 4,000m<sup>2</sup> and the estimated dredge volume is approximately 4,500m<sup>3</sup>;
- Marshalling Area - Existing seabed excavated to remove soft, poor quality seabed material depths vary across the area, with a maximum depth of approximately -7.85m CD. Area of the dredge is approximately 8,500m<sup>2</sup> and the estimated dredge volume is approximately 31,300m<sup>3</sup>; and
- Access Dredge (Pontoon) Area – an area adjacent to the Marshalling Area where the pontoons are located that needs to be dredged to facilitate access by vessels to dredge the Marshalling Area. Dredged to be reduce seabed to -1mCD to -3mCD. Area of this dredge is approximately 4,800m<sup>2</sup> with an estimated dredge volume of 5,000m<sup>3</sup>.

To ensure stability 1 in 2 slopes will be utilised at the edge of the dredge areas to reach the adjacent seabed level, as shown in Drawing 1973-904.

An estimated total of 40,800m<sup>3</sup> of spoil material will arise from the combined dredge. However, to allow for insitu changes a dredge licence for 50,000m<sup>3</sup> is sought.

The borehole pre-disposal sampling results (submitted with the dredge licence) identified a range of specific gravities across the total proposed dredge area of between 1.2 and 2.1. A

specific gravity of 1.8 has been assumed as an average, therefore the mass of the combined materials would be approximately 90,000 tonnes removed.

## Transportation Plan

The dredge area is within the Tarbert Harbour Area, and the dredge disposal ground is within the Stornoway Harbour Area, routes to be utilised in these areas will be agreed with the relevant harbour masters, prior to works commencing. The routes will be based on obstacles in place and activities being undertaken at the time of the dredge works. Between the two harbour areas, the vessels will utilise the shortest safe route taking account of tidal and weather conditions. It is assumed that they will pass around the south side of the island of Scalpay avoiding the narrow channel between Scalpay and the Isle of Harris.



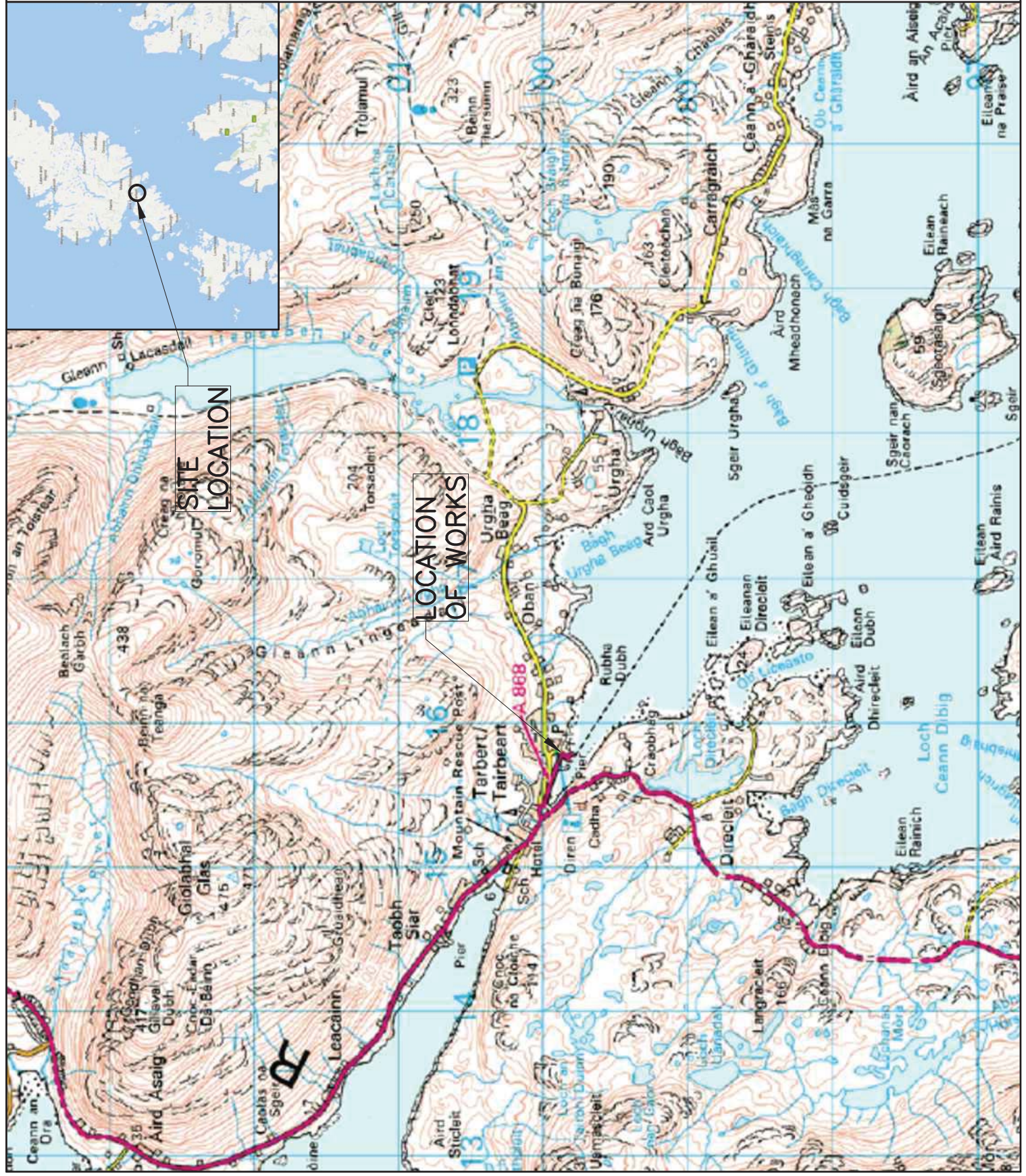
### Drawing 49.2.1

LOCATION OF WORKS  
SCALE: 1:25000

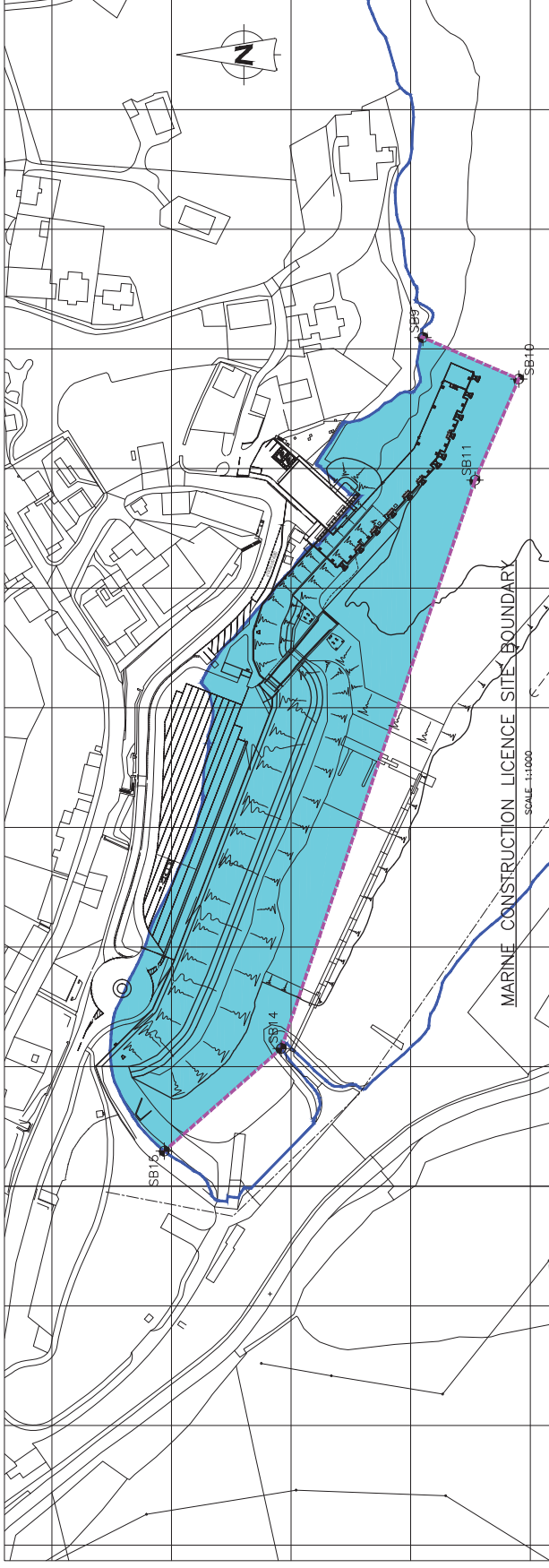
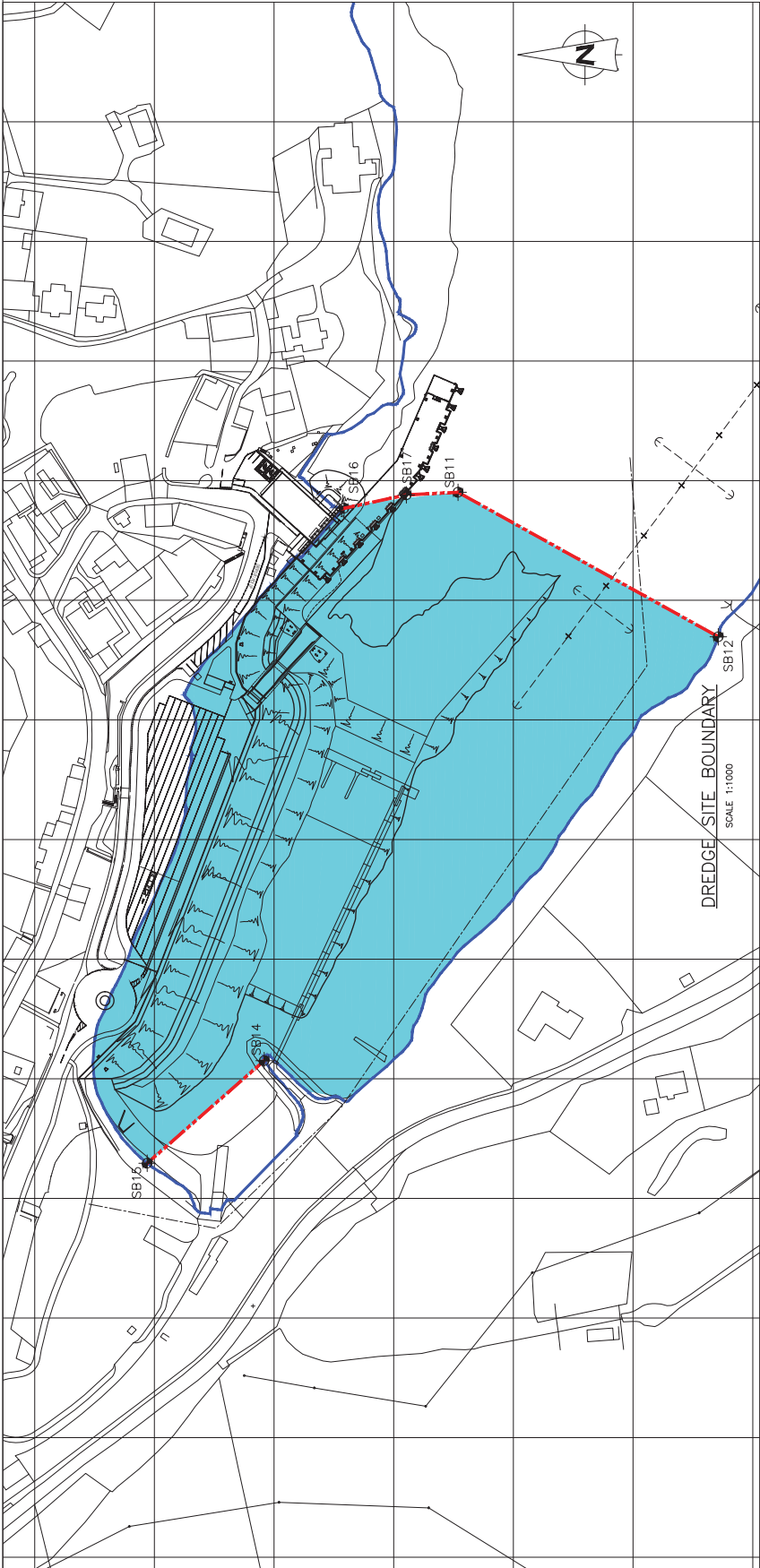
0 250 500 750 1000

Metres

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GENERAL NOTES

1. ALL LEVELS ARE IN METRES AND RELATE TO CHART DATUM UNLESS NOTED OTHERWISE.

2. TIDE LEVELS ARE AS FOLLOWS:  
HAT = +5.9mCD  
MLWS = +4.0mCD  
LAT = +0.1mCD

4. CHART DATUM IS 2.74m BELOW ORDNANCE DATUM.

POINT	LATITUDE	LONGITUDE	NATIONAL GRID REF
SB9	N5753.804	W0647.838	NG15855 99795
SB10	N5753.782	W0647.853	NG15837 99755
SB11	N5753.790	W0647.897	NG15795 99773
SB12	N5753.729	W0647.950	NG15735 99664
SB14	N5753.824	W0648.142	NG15558 99854
SB15	N5753.849	W0648.189	NG15515 99903
SB16	N5753.815	W0647.907	NG15788 99820
SB17	N5753.801	W0647.899	NG15794 99794

LEGEND

MHWS (APPROX)

DREDGE SITE BOUNDARY

MARINE CONSTRUCTION LICENCE SITE BOUNDARY

WORKS BELOW MHWS

REV	DATE	DETAILS	AMENDMENTS
A	13.12.18	MINOR AMENDMENTS:	AB BP TR
			DOWN (see D) (see D)

CLIENT

PROJECT

TARBERT FERRY TERMINAL  
UPGRADE WORKS

**Wallace Stone**  
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DRAWING

PROPOSED DREDGE SITE  
BOUNDARY & MARINE  
CONSTRUCTION LICENCE SITE  
BOUNDARY

Redrafted

DATE	10/18	DATE	12/18	DATE	12/18
SCALE (A1)	AS SHOWN	SCALE	PRELIMINARY		
REVISION	A				

PROJECT No. 1973

DRAWING No. 909

1. ALL LEVELS ARE IN METRES AND RELATE TO CHART DATUM.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

HAT	+5.9mCD
MHWS	+5.0mCD
MLWS	+0.8mCD
LAT	+0.1mCD

4. CHART DATUM IS 2.74m BELOW ORDNANCE DATUM.

	A	17.07.18	DREDGE EXTENT INCREASED	ADS	TR	TR
	REV	DATE	DETAILS	DRAWN	CHECK'D	APPROV'D

AMENDMENTS



PROJECT  
TARBERT FERRY TERMINAL  
UPGRADE WORKS

Wallace Stone

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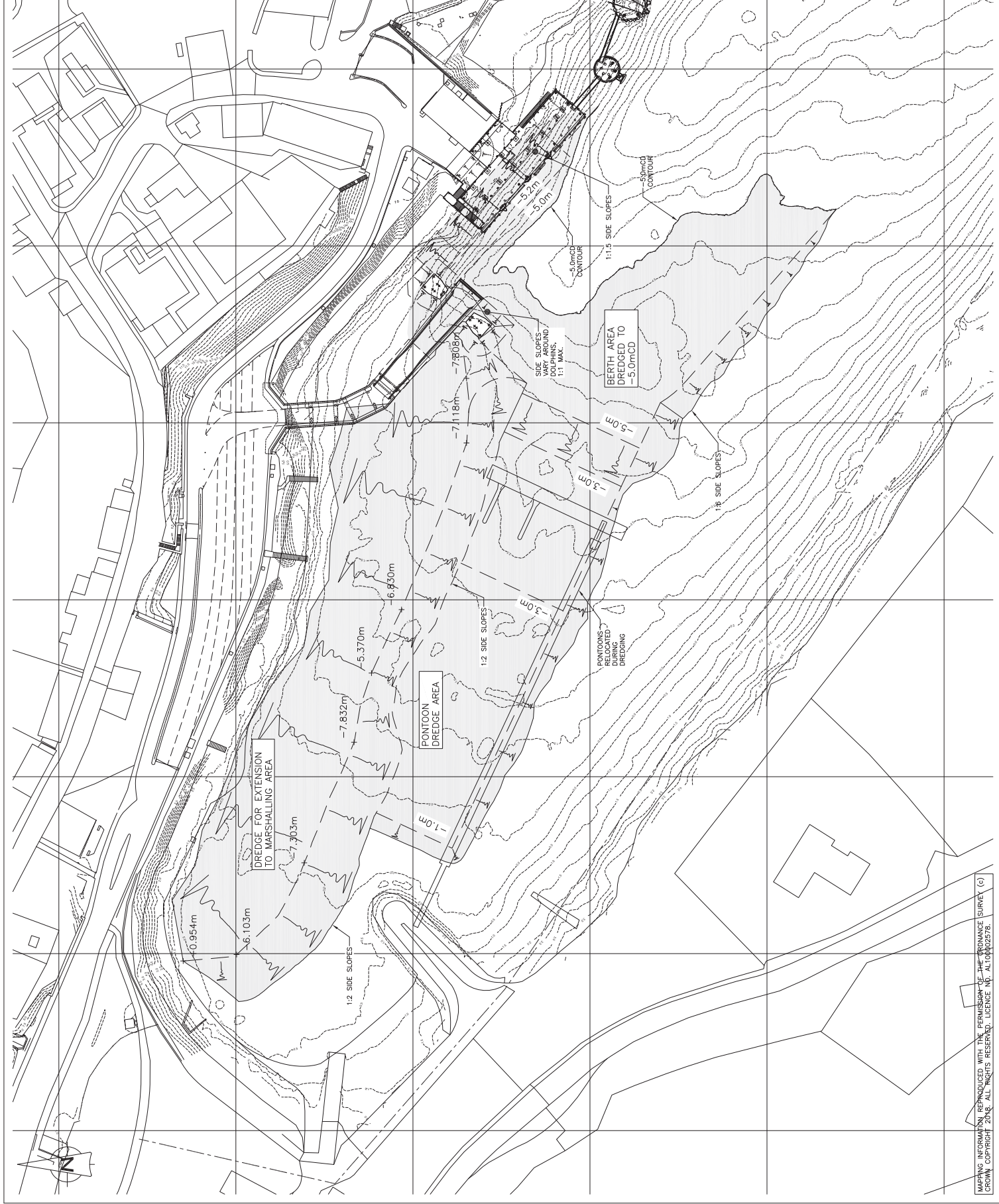
HEBRIDES  
01851 612454  
hebrides@wallacestone.co.uk

DRAWING TITLE

## PROPOSED DREDGE LAYOUT

Redacted

DATE	MAY '18	DATE	MAY '18	DATE	MAY '18
SCALE (A) 1:250		STAGE INFORMATION			
REVISION	A				
PROJECT No.		1973		DRAWING No. 904	



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