

**Marine Licence Application for Construction Project**

**Extension to Marshalling Area at**

**St Margaret's Hope Pier, Orkney**

**Revision no.2**

**May 2019**

**Breck Environmental Consultancy Services**  
**Summerhill**  
**Strathpeffer, Ross-shire, IV14 9AZ**  
**Tel: 01997 420111**

24 May 2019

Ms Stephanie Sweeting  
Marine Licensing Casework Officer  
Marine Planning & Policy  
Marine Laboratory  
375 Victoria Road  
Aberdeen, AB11 9DB

Dear Ms Sweeting

**Extension to Marshalling Area**  
**St Margaret's Hope Pier, Orkney**

Thank you for your e-mail of 24<sup>th</sup> May.

I now enclose a revised application for the construction of the above marshalling area together with an electronic copy of same.

You will note from drawings no SMH 311B and SMH 313B that the sea outfall extends only to LWMST, a distance of only 300 mm from the face of the piled wall. This has been allowed for in the quantities of 100 mm dia pvc pipes (paragraph 6a in the application). The length, 40m as quoted includes all of the drainage pipes from the fill material to the weep holes in the piled wall.

Additional reinforcing steel for the deck slab has been allowed for as has the volume of concrete required for the deck slab. The value of the proposed works has been increased by £70 000 to allow for the cost of deck slab.

The duration of the contract has also been adjusted to allow for the construction of the deck slab but until the licence is awarded it is very difficult to predict a completion date. It would not be good engineering practice to cast the deck slab in inclement weather during the winter months. The permitted starting date will dictate whether the deck slab will require a greater or lesser period for the fill to settle to allow it to be cast during a period of suitable weather. The construction of the deck slab itself could take up to six months.

I have also updated the Construction Phase Health and Safety Plan. This includes a sample site induction sheet which must be signed by all visitors to the site once they have undergone the site induction.

Although not a drawing relevant to the full construction to which this application refers, I have enclosed a copy of drawing no. SMH 312C with remedial works marked in red as

required to prevent any possible slick emanating from the deposited material reaching the marine environment.

I look forward to receiving the licence at an early date.

Yours sincerely

[Redacted]

R T Cross B.Sc, C.Eng, M.I.C.E.

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## **Marine Licence Application for Construction Projects**

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>EIA</b>	Environmental Impact Assessment
<b>ES</b>	Environmental Statement
<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. 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).

### 3. 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.**

### 4. Application Type

Indicate if the application is for a new construction site or an existing construction site. Provide the existing or previous consent/licence number and expiry date if applicable.

### 5. Project Details

(a) Give a brief description of the project (e.g. construction of a new sea outfall).

(b) Provide the total area of proposed works in square metres.

(c) 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.**

(d) Provide the proposed completion date of the project.

(e) Provide the cost of the works seawards of the tidal limit of MHWS. This estimate should only cover

work taking place below the tidal level of MHWS and must take into consideration the cost of materials, labour fees etc.

- (f) Describe the location of the proposed works. Include a list of the latitude and longitude co-ordinates (WGS84) of the boundary points of the proposed project. 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. In a few cases, (e.g. laying of long pipelines) it may only be practicable to supply co-ordinates for the start and end points.

**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 photographs of the project location and submit these with your application. Please also 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.**

**Sewer outfalls, discharge pipes for industrial waste etc.** The size and description of the pipe must be shown on the longitudinal sections and also details of its supports, foundations, methods of jointing and details of any tidal flaps.

**Bridges over tidal waters:** An elevation with longitudinal and cross-sections of the bridge to a suitable scale must show the dimensions of the spans and width of piers, etc. above and below MHWS and the maximum and minimum heights of the undersides of the superstructures above MHWS. The headroom above MHWS and the width of span of the nearest bridges, if any, above and below the site must be stated.

**Tunnels under tidal waters:** The longitudinal section of the tunnel must show the distances between the bed of the river or estuary and the top of the tunnels. Cross-sections must show the internal and external dimensions of the tunnel and particulars of construction. When a proposed future dredging level is known this must also be shown on all sections.

**Overhead cables:** Catenary must be supplied in addition to the site plan showing the minimum clearance of the cable at MHWS and the electrical clearance allowed.

- (g) Indicate if the project is located within the jurisdiction of a statutory harbour authority and provide details of the statutory harbour authority where relevant.
- (h) Provide a full method statement, including schedule of works and the ultimate fate of the structure.
- (i) 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.

## 6. Deposits and/or Removals

- (a) Complete the table to indicate all permanent substances or objects to be deposited and/or removed from below MHWS. If you propose using types of substances or objects for which a specific box is not provided in the table, please describe the nature of such substances or objects in the box marked "other".
- (b) Please indicate the method of delivery of any substance(s) or object(s) to be placed below MHWS.
- (c) Where the proposed work involves salt marsh feeding, beach replenishment or land reclamation the description of the substances or objects must include details of its chemical quality. Where the substances or objects have not been chemically analysed, MS-LOT may request representative samples for analysis or require the applicant to arrange for analyses to be undertaken before the marine licence application can be determined.
- (d) If temporary deposits are required, please provide details as with the permanent deposits above. The temporary deposit location details (Latitude and Longitude WGS84) must be added to the form, and the period of time the site will be used must be provided. If granting a licence, MS-LOT will include on the document details of any area that has been approved as a temporary deposit site.

## 7. Disposal of Dredged Substance(s) or Object(s) at Sea

- (a) If you are proposing to dispose of any excess substance(s) or object(s) arising from the project at sea, a separate marine licence will be required (see Dredging and Sea Disposal application form). The granting of a marine licence for construction projects does not imply that a marine licence for sea disposal will also be granted as different assessment criteria are used to determine each type of application. If a separate application is being submitted for dredging and sea disposal then this must be accompanied with a BPEO report.
- (b) Provide the quantity of dredged substance(s) or object(s) for sea disposal in wet tonnes.

## 8. 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.**

## 9. 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.

## 10. 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 with reference to the policies, including but not limited to General Policies 7 and 13 (GEN 7 and GEN 13), that have been considered. If you have not considered the project with reference to Scotland's National Marine Plan please provide an explanation.

## 11. Pre-Application Consultation

Certain activities will be subject to public pre-application consultation. Activities affected will be large projects with the potential for significant impacts on the environment, local communities and other legitimate uses of the sea. The new requirement will allow those local communities, environmental groups and other interested parties to comment on a proposed development in its early stages – before an application for a marine licence is submitted. Further information can be obtained from: <http://www.scotland.gov.uk/Resource/0043/00439649.pdf>

If applicable, please provide your pre-application consultation report with your application.

## 12. Consultation (other than carried out under pre-application consultation)

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

## 13. Environmental Assessment

- (a) Under the Marine Works Environmental Impact Assessment (EIA) Regulations 2007, there may be a requirement for certain projects to undergo an EIA and produce an ES. If EIA is required, MS-LOT will not determine a marine licence application until the EIA consent decision in respect of the marine licence application has been reached. Please confirm if the project falls under Annex I or II of Directive 85/337/EEC: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011L0092&from=EN> in relation to the Marine Works (EIA) Regulations 2007.

**Marine licence applications for proposals which fall under the regulations will not be accepted unless a screening opinion has been issued in relation to this.**

- (b) Please indicate if an EIA has been undertaken and whether it was for the marine licence application to which this application relates or for any other EIA regulator (e.g local authority). Please attach any previous ES to the application.

**MS-LOT will not determine a marine licence application until the EIA consent decision in respect of any regulated activity associated with the marine licence application has been reached.**

## 14. Associated Works

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



# Marine Licence Application for Construction Projects

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

Date

24/5/19

Name in BLOCK LETTERS

ROBERT T CROSS

### 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
- Project Drawings
- Maps/Charts
- Co-ordinates of the boundary points of the area of harbour jurisdiction (if you are a statutory harbour authority)
- Method Statement
- Photographs of the location of the project
- Additional information e.g. consultation correspondence (if applicable)
- Noise Registry – Initial Registration Form (if applicable)
- Pre-application Report (if applicable)
- Environmental Statement (if applicable)
- Payment (if paying by cheque)

**1. Applicant Details**

Title: **MR**                      Initials: **A**                      Surname: **BANKS**

Trading Title (if appropriate): **PENTLAND FERRIES**

Address:

Name of contact (if different): **N/A**

Telephone No. (inc. dialing code): **01856831900 OR 07751452150**

Email: **Kathryn@pentlandferries.co.uk**

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. Agent Details (if any)**

Title: **MR**                      Initials: **R T**                      Surname: **CROSS**

Trading Title (if appropriate): **BRECK ENVIRONMENTAL CONSULTANCY**

Address:

Name of contact (if different): **N/A**

Telephone No. (inc. dialing code): **01997420111**

Email: **rtomcross@gmail.com**

**3. 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:

**4. Application Type**

Is this application for a new construction site or an existing construction site:

New Site  Existing Site

If an **EXISTING SITE**, please provide the consent/licence number and expiry date:

Consent/Licence Number	Expiry Date
05972/17/10	07/03/18

**5. Project Details**

(a) Brief description of the project (e.g. construction of a new sea outfall):

Extension to existing marshalling area for ferry traffic - see appendix to Paragraph 5(a)

(b) Total area of the proposed works (in square metres):

2873 m<sup>2</sup>

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

on receipt of licenc

(d) Proposed completion date:

12 months after

(e) Cost of the works seawards of the tidal limit of MHWS:

££250 000

(f) Location:

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

Latitude										Longitude										
5	8	°	4	9	.	8	7	0	'N			2	°	5	7	.	7	4	5	'W
5	8	°	4	9	.	8	7	1	'N			2	°	5	7	.	7	3	0	'W
5	8	°	4	9	.	7	8	4	'N			2	°	5	7	.	7	0	7	'W
5	8	°	4	9	.	7	7	4	'N			2	°	5	7	.	7	1	9	'W
5	8	°	4	9	.	8	1	0	'N			2	°	5	7	.	7	4	6	'W
5	8	°	4	9	.	8	1	6	'N			2	°	5	7	.	7	3	3	'W
		°			.				'N				°			.				'W
		°			.				'N				°			.				'W
		°			.				'N				°			.				'W
		°			.				'N				°			.				'W

(g) Is the project located within the jurisdiction of a statutory harbour authority?

YES  NO

If YES, please specify statutory harbour authority:

**ST MARGARET'S HOPE PIER TRUSTEES see append. to para 5(g)**

(h) Method statement including schedule of work (continue on separate sheet if necessary):

SEE APENDIX TO PARAGRAPH 5 (h)

(i) 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):

**6. Deposits and/or Removals**

(a) Permanent substance(s) or object(s) to be deposited and/or removed from below MHWS (continue on a separate sheet if necessary):

Type of Deposit/Removal	Deposits		Removals	
	Description	Quantity & Dimensions (metric)	Description	Quantity & Dimensions (metric)
Steel/Iron		No.		No.
		Dimensions		Dimensions
		133.7t Weight (kg/tonnes)		Weight (kg/tonnes)
Timber		No.		No.
		Dimensions		Dimensions
		Weight (kg/tonnes)		Weight (kg/tonnes)
Concrete	foundation wall anchor blocks + deck slab	No.		No.
		Dimensions		Dimensions
		3802t Weight (kg/tonnes)		Weight (kg/tonnes)
Plastic/Synthetic	geotextile	900 m <sup>2</sup>		m <sup>2</sup>
Clay (< 0.004 mm)		445 Volume (m <sup>3</sup> )		Volume (m <sup>3</sup> )
		Weight (kg/tonnes)		Weight (kg/tonnes)
Silt (0.004 ≤ Silt < 0.063 mm)		945 Volume (m <sup>3</sup> )		Volume (m <sup>3</sup> )
		Weight (kg/tonnes)		Weight (kg/tonnes)
Sand (0.063 ≤ Sand < 2.0 mm)		945 Volume (m <sup>3</sup> )		Volume (m <sup>3</sup> )
		Weight (kg/tonnes)		Weight (kg/tonnes)
Gravel (2.00 ≤ Gravel < 64.0 mm)		1900 Volume (m <sup>3</sup> )		Volume (m <sup>3</sup> )
		Weight (kg/tonnes)		Weight (kg/tonnes)
Cobbles (64.0 ≤ Cobbles < 256.0 mm)		2225 Volume (m <sup>3</sup> )		Volume (m <sup>3</sup> )
		Weight (kg/tonnes)		Weight (kg/tonnes)
Boulders (≥ 256.0 mm)		4450 Volume (m <sup>3</sup> )		Volume (m <sup>3</sup> )
		Weight (kg/tonnes)		Weight (kg/tonnes)

Pipe		40 Length (m)		Length (m)
		External Diameter (cm/m)		External Diameter (cm/m)
Other (please describe below):				
sewage tr.pl.	GRP tank	1tonne		

(b) Method of delivery of substance(s) or object(s):

All steel is at present in store adjacent to site or at Gill's Bay  
Concrete, clean crushed stone etc delivery by road

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

Quantity (tonnes):

N/A tonnes

Nature of substance(s) or object(s) (e.g. sand, silt, gravel etc.):

Source (if sea dredged state location of origin)

Particle size:

Have the substance(s) or object(s) been chemically analysed?  
If YES, please include the analysis data with your application

YES  NO

(d) Temporary substance(s) or object(s) to be deposited below MHWS (continue on a separate sheet if necessary):

Type of Deposit	Description	Quantity & Dimensions (metric)	
Steel/iron		7	No.
			Dimensions
		4.45t	Weight (kg/tonnes)
Timber			No.
		100sq m	Dimensions
			Weight (kg/tonnes)

Concrete		No.
		Dimensions
		Weight (kg/tonnes)
Plastic/Synthetic		m <sup>2</sup>
Clay ( $< 0.004$ mm)		Volume (m <sup>3</sup> )
		Weight (kg/tonnes)
Silt ( $0.004 \leq$ Silt $< 0.063$ mm)		Volume (m <sup>3</sup> )
		Weight (kg/tonnes)
Sand ( $0.063 \leq$ Sand $< 2.0$ mm)		Volume (m <sup>3</sup> )
		Weight (kg/tonnes)
Gravel ( $2.00 \leq$ Gravel $< 64.0$ mm)		Volume (m <sup>3</sup> )
		Weight (kg/tonnes)
Cobbles ( $64.0 \leq$ Cobbles $< 256.0$ mm)		Volume (m <sup>3</sup> )
		Weight (kg/tonnes)
Boulders ( $\geq 256.0$ mm)		Volume (m <sup>3</sup> )
		Weight (kg/tonnes)
Pipe		Length (m)
		External Diameter (cm/m)
Other (please describe below):		

**7. Disposal of Dredged Substance(s) or Object(s) at Sea**

(a) Do you intend to apply for a marine licence for sea disposal of dredged substance(s) or object(s) as part of the project?

YES  NO

If YES, please specify nature of substance(s) or object(s) (e.g sand, gravel, silt, clay, rock etc.):

(b) Quantity of substance(s) or object(s) (wet tonnes):

wet tonnes

**A separate marine licence application will be required to be submitted for sea disposal.**



**8. 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	
Use of Accoustic Deterrent Devices	
Piling	
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>

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

**9. Statutory Consenting Powers**

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

NO

**10. 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 with reference to the policies, including but not limited to General Policies 7 and 13 (GEN 7 and GEN 13), that have been considered:

See appendix to paragraph 10

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

**11. Pre-Application Consultation**

Is the application subject to pre-application consultation, under The Marine Licensing (Pre-application Consultation) (Scotland) Regulations 2013?

YES  NO

If YES, please indicate the date of the public notice for the pre-application consultation event and the type of consultation event held (a copy of the public notice must be supplied with this application):

Event Type	Date

**12. Consultation**

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

**13. Environmental Assessment**

(a) Does the project fall under Annex I or II of the EIA Directive?

Annex I       Annex II       Neither

If ANNEX I or ANNEX II, please provide the screening opinion issued to you in relation to the project.

(b) Has an EIA been undertaken:

for the marine licence application to which this application relates  
for any other EIA regulator (e.g local authority)

YES  NO   
YES  NO

**14. Associated Works**

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

## Appendix to Paragraph (5a)

### Description of Proposed Works

The marshalling area at St Margaret's Hope Pier was constructed about 14 years ago and extended in 2017. With the increased amount of traffic using the ferry route between St Margaret's Hope and Gill's Bay in Caithness Pentland Ferries has now ordered a larger ferry and an increased marshalling area is required. This would also remove queueing traffic from the main road.

The area of the extension of the marshalling area will be 2873 m<sup>2</sup> and will fill in a fairly useless area of the foreshore between the existing marshalling area and the main road as can be seen on drawing no SMH 311B.

The seaward face of the proposed works will be steel sheet piles. These are at present on site welded into panels. Their maximum thickness is 10 mm.

The sheet piles cannot be driven as they are already welded and consequently they will be set into a concrete foundation.

Allowing for corrosion in the splash zone of 0.075 mm per side per year, it is clear that these piles would be unserviceable in 30 to 40 years. Consequently a concrete wall 600 mm thick will be cast against the inner face of the piles. This will remove all localised pressure from the piles and the structure will remain in a safe condition even if the piles suffer severe corrosion. The piles/ concrete wall will be retained using 75 mm steel tie rods and 1 m<sup>3</sup> anchor blocks located within the fill material.

There will be drain holes in the piles/concrete wall and clean gravel drainage paths within the fill.

The bulk of the fill will comprise quarried stone, boulders and secondary aggregate. All voids will be filled with sand, silt or scalping to create a solid fill.

The fill material will be left possibly in excess of a year to ensure that it has drained and that all settlement has taken place. When all settlement has taken place a structural reinforced concrete deck slab will be cast on top of the temporary surface. The construction of this deck does not form part of this application as it is above HAT.

The final reinforcing to the deck slab will be tied to the reinforcing bars in the 600 mm concrete wall to give added support to the whole structure.

A suitable handrail will be erected on top of the 600 mm concrete wall.

A new office and cafeteria will later be constructed on the extended marshalling area and will be served by a sewage treatment plant giving a 30:20 SS:BOD standard with the outfall to LWMST. At the point of discharge, the outfall will just penetrate the sheet piled wall which will be constructed at LWMST. The outfall will require to be registered with SEPA who may require an extension below LWMST. If this is the case a further application will be made to Marine Scotland.

## Appendix to Paragraph 5(c)

### Duration of Project

Remedial work will start on site to prevent a silt slick emanating from material outwith the licensed area for a previous contract as soon as sheet piles can be brought on to site and the work force mobilised.

Although the proposed piled wall will form part of the final works, its construction will not be considered as a start of the project. This will start as soon as the licence is granted and should follow immediately after the construction of the remedial works.

The whole of the works with the exception of the construction of the concrete deck slab should be constructed within 12 months. It is probable that the fill will be left to settle for a further 12 months before the concrete deck slab is cast. The timing will depend on the season – it is not advisable to cast the deck slab during the winter months. The time for construction of the deck slab will be about a further 6 months.

## Appendix to Paragraph 5(e)

### Estimated gross cost of the proposed works

All materials are at present owned by Mr Andrew Banks/Pentland Ferries and are in stock adjacent to the site of the works with the exception of the concrete, the clean gravel for the drainage layers, some of the reinforcing mesh for the deck slab..

The estimated cost of the works does not include the cost of the materials in stock as they are mainly materials left over from previous contracts and will have been charged against these contracts and will have been notified in previous applications.

The cost of the deck slab and any concrete above HAT are not included.

The cost of the GRP sewage treatment plant tank is included but not the compressors or controls which will be housed in an annex to the office building at a later date. The cost of the sealed steel cover to the STW is not included.

The main costs are the charge out rate for the 35 tonne excavator and the concrete batching plant which will be used for the construction of the foundations and the concrete backing to the sheet pile wall. All plant is owned by Pentland Ferries. These are the only pieces of plant which will be used on site.

The estimated gross cost of the proposed works including the R.C. deck slab is £250 000

Appendix to Paragraph 5(f)

The location of the project is shown on the Location Plan which forms part of Drawing no SMH 311B.

It is a copy of part of 1:25000 scale ND with the central part of the construction being ND 44550 94025

The area of the construction is bounded by the following co-ordinates:

1. N 58° 49.870'	W 2° 57.745'
2. N 58° 49.871'	W 2° 57.730'
3. N 58° 49.784'	W 2° 57.707'
4. N 58° 49.774'	W 2° 57.719'
5. N 58° 49.810'	W 2° 57.746'
6. N 58° 49.816'	W 2° 57.733'

These co-ordinates are shown on drawing no SMH 311B.

Appendix to Paragraph 5(g)

1. The planning authority for the area is  
Orkney Islands Council  
Council Offices  
School Place  
Kirkwall, KW15 1NY

However the planning authority for marine works within the harbour area at St Margaret's Hope is

2. The Clerk to St Margaret's Hope Pier Trustees  
Heads  
St Margaret's Hope  
Orkney, KW17 2TL
3. The land owner is Mr A Banks who owns the foreshore to LWMST
4. Local Harbour Authority is St Margaret's Hope Pier Trustees

## Appendix to Paragraph 5(h)

### Method Statement

Initially remedial work will be carried out to prevent a silt slick emanating from excavated material stored outside the licensed area for a previous construction.

The method of construction will be as below except that no additional material will be brought on to site until the licence to which this application refers is awarded.

Work will start at the south end of the site with the excavator for the foundation of the wall and the placing of the sheet pile panels in the concrete foundation as described below.

This wall will only be constructed to a point which is closest to the south east corner of the previously constructed works. The excavated material from the foundation trench will be used to construct a bund between the sheet pile wall and the existing works to prevent any wash out of fines from the stored material reaching the marine environment. This bund will be covered on its seaward side with a layer of geotextile and some of the rock armour protecting the stored material will be removed and placed on the seaward side of the geotextile to protect the bund.

With no additional material permitted on site until the licence is granted, there will be no means of supporting the concrete anchor blocks and tie-rods at the stage, consequently there will be more temporary concrete bases for the supports until the licence is granted and additional fill material can be introduced.

The steel supported as shown on the sketch will be temporarily fitted with a horizontal bar or bars at right angles to their plane of support to prevent overturning while being positioned.

Once the licence is awarded the construction will continue as below.

The sheet piles for the retaining wall are already welded into panels and consequently cannot be driven. The panels will require to be set into the wet concrete foundation.

Using a 35 tonne tracked excavator remove all silt, sand etc from beach area from existing sea wall to location of foundation and stock pile on site for later use.

Excavate for foundation and stock pile excavated material on site for later use.

Place concrete blocks at intervals in the foundation excavation to ensure that the sheet pile panels do not reach the bottom of the foundation thus cutting it into two halves.

Allowing for 3 deliveries of ready-mix concrete per day, i.e. about 20 m<sup>3</sup>, this will be sufficient for a 10 m length of foundation. Erect temporary support for sheet pile panels and place panels in foundation excavation.

Cast concrete with an additive which prevents cement loss for underwater concrete into foundation excavation.



Once concrete has set, burn holes at 10m intervals in piling at foundation level and fix cuttings of pvc pipe for drainage.

Maintaining a support for the piles now in position, continue with setting the next 10 m length of panels as above.

Continue as above until all panels are in position.

Erect shutter behind panels and cast concrete wall 600 mm thick approximately 1500 mm high and position reinforcing bar.

Place first layer of quarried stone/boulders over the whole area and fill voids with sand/silt etc.

Place clean crushed stone as drainage layer between concrete wall and fill material. Place geotextile between fill and drainage layer.

Place or cast in situ concrete anchor blocks and fit steel tie bars.

Continue with next layer of fill material and fill voids with sand/silt/scalpings.

Erect shutter and construct concrete wall to full height.

Temporary support for sheet piles may now be removed.

Continue fill up to final level,

Cut tops of piles to line and level.

Use infilled area on a temporary basis possibly for over a year to allow all settlement to take place.

Erect batching plant for site batched concrete.

Set reinforcing mesh in position and cast concrete deck slab in alternate panels with 25 mm dowel bars linking panels.

Erect final handrail.

The above would indicate that each activity will be completed before the next starts. In practice, the construction of the concrete wall will probably start when placing of the panels is about 10 m ahead and the placing of fill and drainage material will start as soon as the shutters for the concrete wall have been struck.

#### Additional work for sewage treatment plant

Cast concrete base to line and level on cleaned foreshore behind piles before infill has reached this point.

Cover concrete base with wet mortar and lower GRP tank on to base and position correctly. Fill tank with clean water to prevent flotation as tide rises. This also prevents the tank from distorting when the concrete surround is cast.

Erect shutters and place 300 mm thick anti-flotation concrete surround to tank.

Remove shutters and continue with infill.

100 mm outfall pipe to be constructed vertically within concrete wall and through piles to LWMST. Chamber for anti-flood valve constructed at outfall of tank.

#### Note

1. As each temporary support to the sheet piled wall is removed and repositioned, its concrete bases will be removed from the sea bed and used as fill behind the wall.
2. Prior to this work officially starting, remedial work will be undertaken for a previous contract. This will require the part construction of the sheet piled wall as above and also the construction of a bund using the excavated material from the foundation for the wall together with a geotextile layer and rock armour. This will eventually form part of the final fill material.

Appendix to Paragraph 5(i)

When the application was made for the previous extension to the marshalling area in 2016 a Eurasian otter survey was carried out for Pentland Ferries by NDR (Environmental Services. A copy is enclosed.

It is not anticipated that there will have been any change since the survey was carried out.

**Proposed extension of marshalling  
area at the Ferry terminal -**

**Pier Road, St. Margaret's Hope,  
South Ronaldsay ORKNEY ISLES**

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*Eurasian otter survey*

**NDR (Environmental Services)**

**Ecological survey report**

prepared for

**Pentland Ferries Ltd**

[22nd March 2016]

**Andrew Banks**

[Nominated Officer]

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**Public - unrestricted**

**Project no.:** 503[1603.12]\pf  
**Report no.:** EcIA:A.rd1\pf  
**Issue no.** issue 1  
**Submission Date:** 28th April 2016



**NDR (Environmental Services)**

24 Harland Road, Castletown  
Caithness, Highland  
KW14 8UB  
SCOTLAND

## Report Summary Sheet

**Title** Proposed extension of marshalling area at the Ferry terminal - Pier Road, St. Margaret's Hope, South Ronaldsay ORKNEY ISLES: Eurasian otter survey

**Client** Pentland Ferries Ltd

**Client Reference** 22nd March 2016

**Short description of investigation**

NDR(ES) has been commissioned, by Pentland Ferries Ltd, to undertake an objective otter survey of the area including and surrounding their proposed extension to the marshalling area of the ferry terminal at St. Margaret's Hope.

Marine Scotland have requested the otter survey to be undertaken to determine the likelihood of any impact and whether a species protection plan is required.

This report will review the available data in order to undertake the required assessment and, if appropriate, provide a robust species protection plan.

**Confidentiality,** Public - unrestricted

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**Report No.** EcIA:A.rd1\pf

**Report Status** issue 1

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<b>Reviewed by</b>	Andrew Banks		2 <sup>nd</sup> May 2016
<b>Authorised by</b>	Neil Redgate	[Redacted]	26 <sup>th</sup> May 2016

**Citation:**  
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## Revision History

Issue	Date	Nature & location of amendment
Draft	22 <sup>nd</sup> April 2016	Document first created
1	26 <sup>th</sup> April 2016	Document authorised and issued

## Executive Summary

NDR(ES) has been commissioned, by Pentland Ferries Ltd, to undertake an objective otter survey of the area including and surrounding their proposed extension to the marshalling area of their ferry terminal at St. Margaret's Hope, South Ronaldsay, ORKNEY.

Marine Scotland has requested the otter survey to be undertaken to determine the likelihood of any impact and whether a species protection plan is required.

This report will review the available data in order to undertake the required assessment and, if appropriate, provide a robust species protection plan.

A standard walkover the site and land within 500m was undertaken on 8<sup>th</sup> April 2016.

The brief summary of the reports findings are -

- ◆ The local population of Eurasian otter, *Lutra lutra*, infrequently visits St. Margaret's Hope Bay and on such visits appears to avoid the ferry terminal and adjacent land.
- ◆ An unused holt has been located 400m north of the proposed development site.
- ◆ The development itself will have a neutral impact on the local population of Eurasian otter.
- ◆ As there is no evidence of the local population of Eurasian otter utilising the proposed development site, a Protected Species plan is not required.
- ◆ As a precaution and to implement good site practice, recommended actions are provided for incorporation in to the site management plan during construction.

## 1.0 Introduction

### 1.1 PURPOSE OF REPORT

Our client is seeking planning permission to extend the marshalling area at their ferry terminal at Pier Road, St. Margaret's Hope, South Ronaldsay, ORKNEY.

Marine Scotland has requested the otter survey to be undertaken to determine the likelihood of any impact and whether a species protection plan is required.

NDR(ES) has been commissioned to undertake an objective otter survey for this proposed planning application. This report will review the available data in order to undertake the required assessment and, if appropriate, provide a robust species protection plan.

### 1.2 DEFINITIONS

The following definitions are used throughout this report -

<i>couch</i>	temporary above ground resting place (often during daylight) of the Eurasian animal. It is formed by the otter pulling up tall vegetation and flattening it.
<i>holt</i>	the dwelling place of the Eurasian otter. It is usually a hole in a bank (often with an entrance under water) but also can be located well away from any watercourse. Entrances are frequently overhung by surrounding vegetation.
<i>spraint</i>	faecal pellets of the Eurasian otter.

Photographs, tables and figures are inserted at the appropriate place within the text of the report. All maps are collated and presented at the end of the relevant section. All illustrative material is numbered after the relevant section.

Nomenclature follows that of *The National Biodiversity Network's Species Dictionary* managed by the Natural History Museum<sup>1</sup>, with reference to Harris & Yalden (2008)<sup>2</sup>.

All measurements follow the SI units, time (GMT) and the orientation readings are expressed to the nearest compass point.

### 1.3 COMPETENCY

The author has over 30 years experience of investigating and studying highland & island ecology through surveys and ecological impact assessments. Through these observations it has become apparent that the ecology of the Highlands and Islands is different to the rest of mainland Scotland, as populations are at the edge of their distributional range and occupy sub-optimal biotopes. The author is currently developing and researching the principles of this Fringe Ecology in order to investigate and ratify these observations, develop appropriate research protocols to improve investigative studies and provide a better understanding of the ecology of the Highlands and Islands.

The author was previously<sup>3</sup> registered as a Chartered Environmentalist and full member of the following organisations - Institute of Ecology & Environmental Management, Institute of Environmental Assessment & Management, International Association of Impact Assessment, Bat Conservation Trust and Mammal Society. He is currently a Fellow of the British Naturalists' Association, Royal Entomological Society and a member of the British Ecological Society.

### 1.4 ACKNOWLEDGEMENTS

The author would like to take this opportunity to thank Orkney Wildlife Information and Records

<sup>1</sup> <http://nbn.nhm.ac.uk/nhm/>

<sup>2</sup> Harris, S. & Yalden, D.W. (eds) *Mammals of the British Isles: Handbook*, 4<sup>th</sup> ed. Mammal Society, Southampton. 799pp

<sup>3</sup> Withdrawn status as no longer full-time practitioner.



Centre (OWIRC) and National Biodiversity Gateway (NBN) for the provision of biological records.

## 2.0 Site description

### 2.1 LOCATION

The proposed development site is located immediately to the south of the existing marshalling area at our client's Ferry Terminal, on Pier Road, St. Margaret's Hope, South Ronaldsay.

Access to the site (ND 44539 94056) is at the southern corner of the marshalling area and the area of extension will not exceed 0.1ha., see figure 2.1.

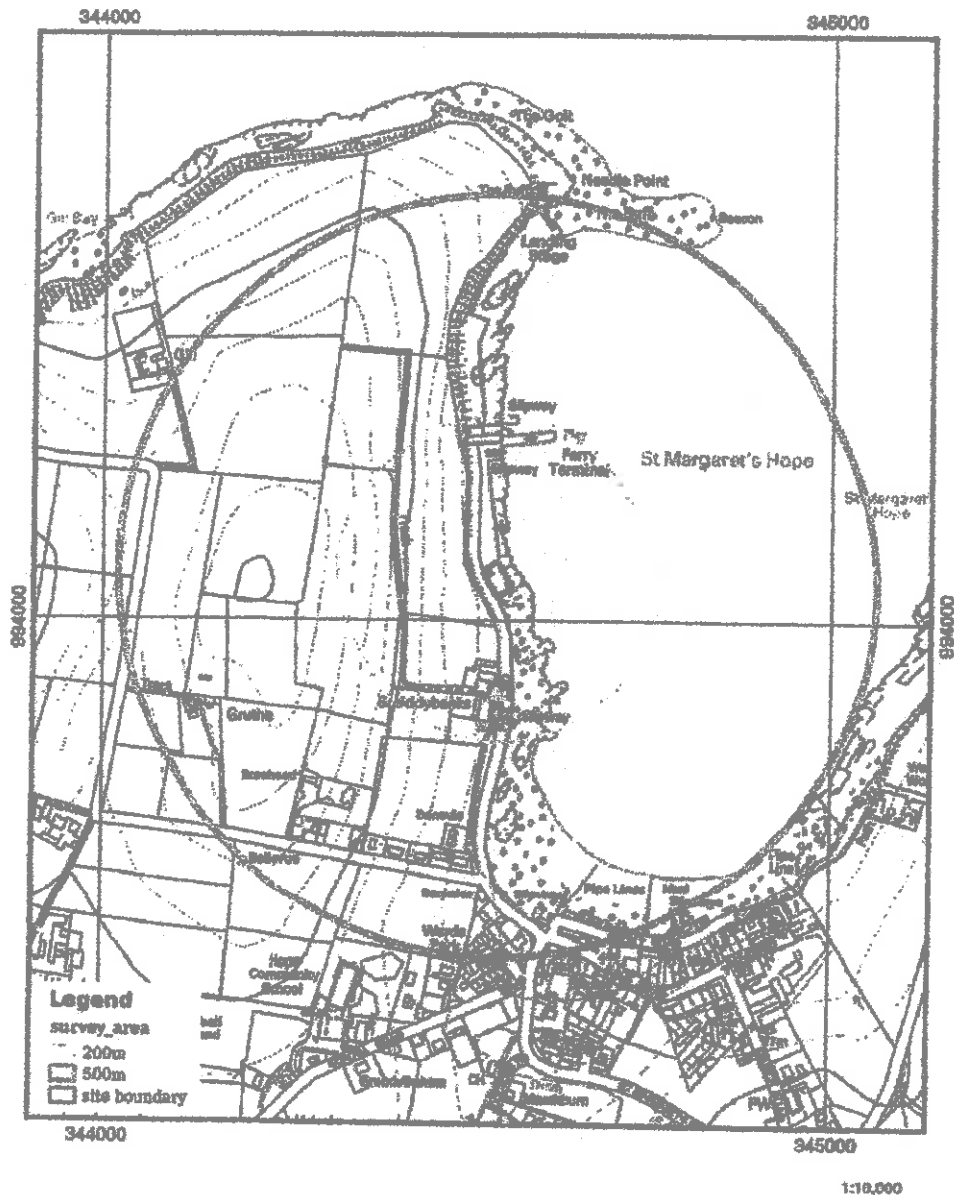


Figure 2.1: Site location & survey area

## 2.2 PHYSICAL ENVIRONMENT

### 2.2.1 LANDSCAPE

The landscape around the development site is a sheltered bay between two low lying headlands. The proposed development site is located on a cobble foreshore and abutted against the 4m high sea defence wall of Pier Road, see photograph 2.2.1a & b. The site is situated at the base of the east-facing slope of the Grutha headland.

The headland slope (a former raised beach coastline) is <10m in height: steep (~45°) to the south of the terminal with the gradient increasing (~57°) to the north of the terminal, along with isolated exposed cliff faces. The southern slope supports a thick cover of scrub consisting of small trees and shrubs with a luxuriant herbaceous ground cover. The northern slope is open, with a luxuriant grass sward and scattered trees. Above this former coastal cliff-line, the ground levels out and supports improved grassland with scattered field boundary shrubs, see figure and photographs 2.2.1.



Figure 2.2.1: Aerial image of site and location (9<sup>th</sup> May 2008)

## 2.2.2 HYDROLOGY

Examining the ordnance map and aerial image shows no watercourses on the headland nor elsewhere within the survey area, see figures 2.1 & 2.2.1.

A small burn flows along the eastern edge of St. Margaret's Hope and enters the bay (ND 44955 93633) just outside the survey area. A culverted watercourse under the village flows into the bay (ND 44602 93577) at the centre of the village.

## 2.3 BIODIVERSITY & LEGAL DESIGNATIONS

Scottish Natural Heritage<sup>1</sup> advise that there are no designated nature conservation sites or seal haul-out sites within the vicinity of the proposed development area. They further advise that the (Eurasian) otter, *Lutra lutra*, a European Protected Species (EPS), is known to occur widely around the coastline of Orkney. Both their breeding and resting sites are strictly protected under the The Conservation (Natural Habitats etc.) Regulations, 1994<sup>2</sup>.

Orkney Island Council<sup>3</sup> lists the (Eurasian) otter as a LBAP species.

## 3.0 Eurasian otter

### 3.1 HISTORICAL DATA

The Eurasian otter occurs widely throughout the islands of Orkney. Data for the proposed development site and surrounding 10km<sup>2</sup> were provided by OWIRC and NBN, see figure 3.1.

All the records for the Eurasian otter in the northern half of South Ronaldsay are from survey(s) between 1979-1985 and individual records from 1969 or earlier. These records show a widespread occurrence – being recorded from all the 2x2km tetrads around the tetrad (ND49M), in which the ferry terminal is located. There are no records of the Eurasian otter for this particular tetrad (ND49M) and, hence, the area surrounding the proposed development site.

There are only five recent records (2010-2012) and these are from Burray, Glimps Holm and their associated Churchill Barriers, to the north of South Ronaldsay.

The otter is considered to commonly occur wherever there is a watercourse or on the coast. The absence of records for tetrad ND49M may well be a true reflection of the otter's distribution as it may well be deterred by the human activity in the bay. However, there is a single record (spraint) for the otter in the area of St. Margaret's Hope in 1968, which suggests that the otter has visited the bay. This may indicate that, due to the levels of human activity, visits maybe sporadic and, therefore, the likelihood of being observed is very low to not being seen. Our client reports that "none of their staff have seen an otter whilst working on and around the ferry terminal."

It is assumed that there are adequate food resources in the coastal waters for the local otter population and this resource is not a constraint on their occurrence in St. Margaret's Hope Bay. The lack of suitably sized watercourses in tetrad ND49M cannot be a causal factor in the otter's absence from this tetrad. The adjacent tetrads have very similar habitats and very few watercourses, as with the situation with tetrad ND49M. The Eurasian otter is known to travel considerable distances between watercourses and the coast.

Our client commissioned an otter survey "approximately 12 years ago" (~2003?) for a planning application for developing their ferry terminal. Unfortunately, neither our client nor their agent can find a copy of the survey report, which described a "walk over the site and shoreline: the survey did not find any evidence of otter being present" (Cross, pers.comm.).

1 Consultation 9<sup>th</sup> February 2016

2 The Conservation (Natural Habitats etc.) Regulations, 1994:SI 2716. Schedule 2 (as amended)

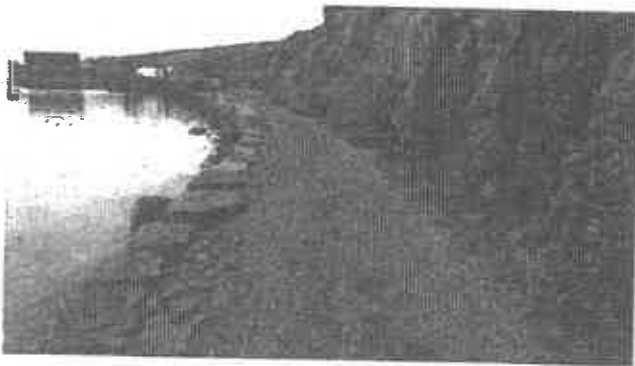
3 OIC (2002-2013) The Orkney Local Biodiversity Action Plan



a: Proposed extension area



b: Coastal slope adjacent to proposed development area

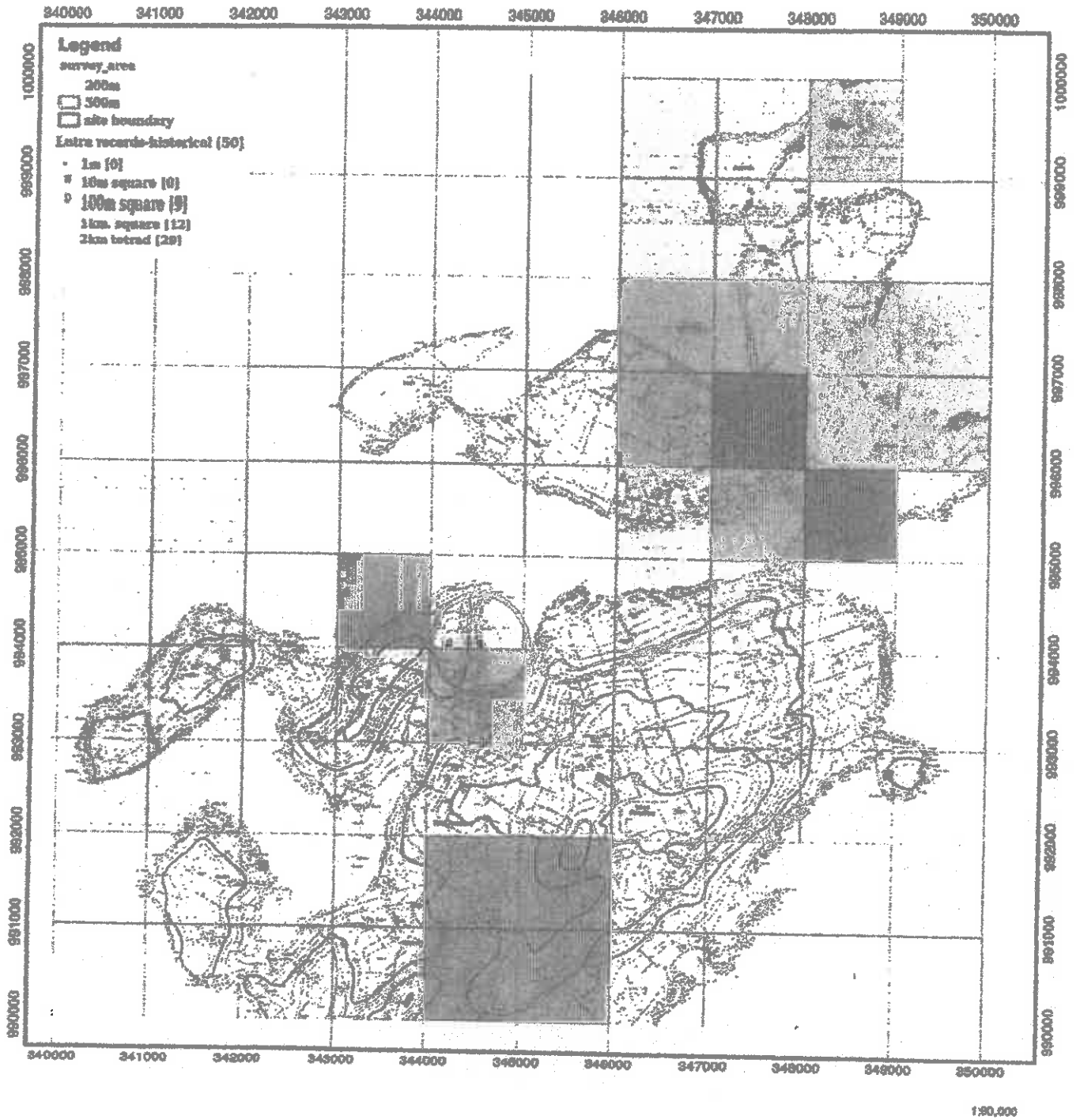


c: Northern shoreline and coastal slope



d: The Ruff sea defences and cobble beach

*Photograph 2.2.1: Development site and shoreline*



**Figure 3.1: Historical records of Eurasian otter in 10km. square ND49**  
 (deeper shading for 2x2km tetrad represents multiple records)

## 3.2 FIELD SURVEY

### 3.2.1 METHODOLOGY

The field survey was a standard walkover throughout the survey area, searching for field evidence of otter along coastal areas, watercourses and their neighbouring grounds. Whilst walking the coastline, the surveyor walked along the base of the cliffs and raised beaches and moved to the waterline where there were areas of fucoid beds on the rocks.

The agricultural land on top of the cliff coastline was not surveyed due to the open landscape. Any holts or couches present would not be directly impacted by the proposed extension, as it is below the cliff top and confined to the foreshore area. This allowed the surveyor to examine the slopes more closely and any pathways observed would indicate a link between these resting places and the shoreline.

Standard guidelines recommend a survey area of 200m from the proposed development area. Due to the large distances otters travel in the Highlands both within and between territories and not being restricted to waterways, NDR(E5) own procedures recommends surveying areas up to 500m distance from the proposed development footprint and not to be confined to watercourses alone.

Field evidence includes spraints, holts, couches, tracks, trails and feeding evidence.

#### Professional obligations

Professional obligations require the surveyor to record any field evidence of the presence or possible presence of other protected and designated species or other ecological interests during the survey.

### 3.2.2 CONSTRAINTS

The time of year precluded the likelihood of discovering any couches due to the post-winter condition of the coastal vegetation. Much of the foreshore is a stony or cobble beach that would not allow the registering of footprints and tidal movement would wash away any spraints.

### 3.2.3 RESULTS

The field survey was conducted on 8<sup>th</sup> April 2016 between 10:15 and 16:00hrs. The weather conditions were bright, sunny with 6/8 cirrus cloud cover and warm with a southerly moderate breeze. The equinox Spring tide was at its highest level at 09:51 and had just begun to ebb at the start of the survey. There was good visibility and no frost or snow on the ground.

The current field survey found no evidence of recent otter activity within the survey area.

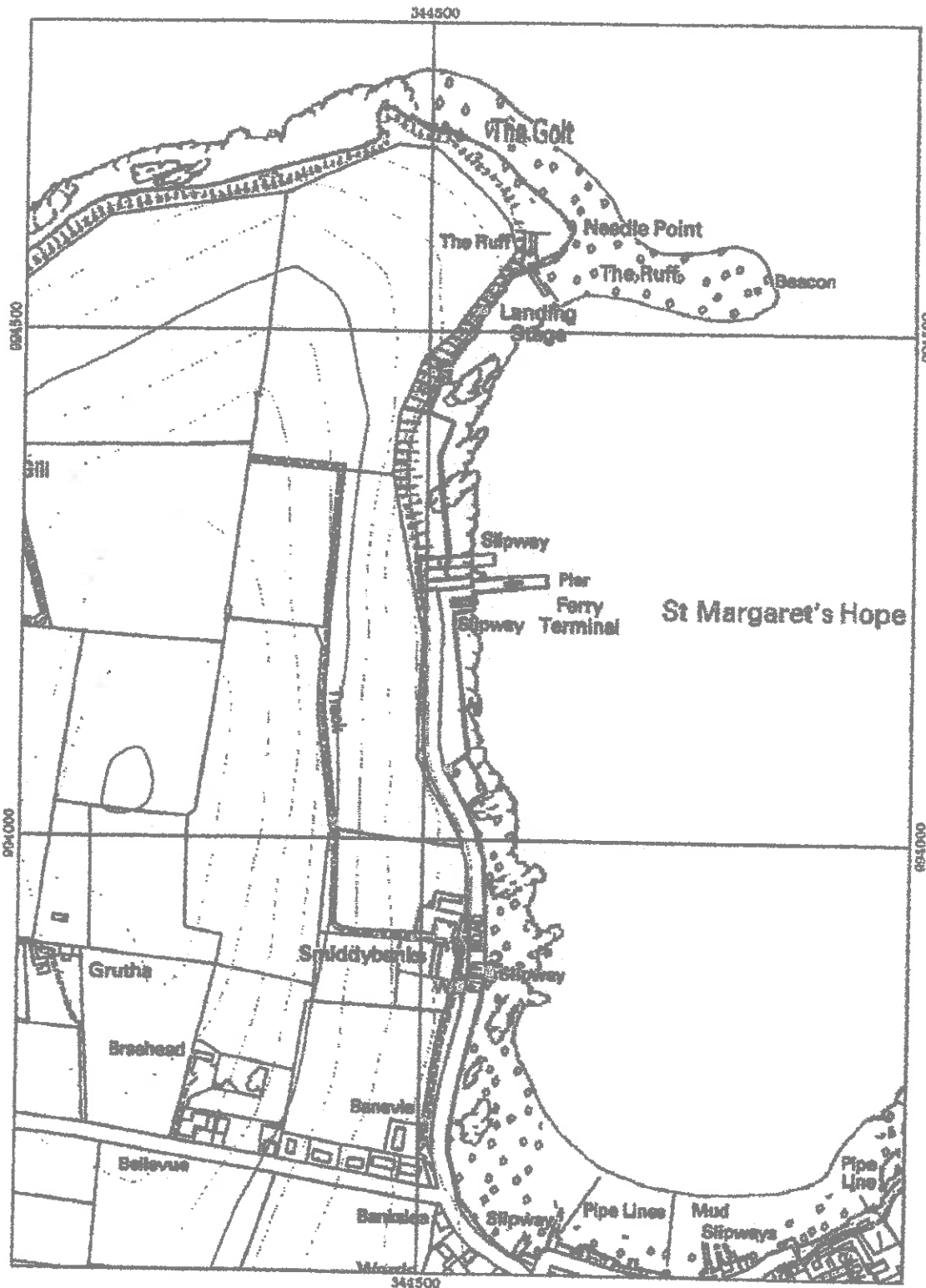
**Holts** A small holt (figure 3.2.3, no.1) was discovered to the north of the ferry terminal – holt (N) and is 400m north of the proposed development site. There is a pathway leading from this entrance downslope to the coast, see photograph 3.2.3. The holt is of similar size and location to coastal holts discovered on the north Caithness coastline.

Investigating the entrance and pathway showed no evidence of recent activity. Female otters are smaller than the male and are known to have a number of holts within their territorial range. This holt is most likely used on a very casual basis.

The survey discovered a hole (170m south of the proposed development site) in the sea defence wall that leads to a large dry cavity, see figure 3.2.3, no.2 and photograph 3.2.3e. This cavity has not been used as a holt but it has potential to be a one.

**Pathways & spraints** The only pathway observed was the infrequently used one leading from Holt (N). Investigating this pathway did not yield any spraints or footprints in the patches of damp soil which indicates no recent activity. No other pathway or trail was observed in the vegetation on the full length of the coastal slope within the survey area.

The culverted watercourse in St. Margaret's Hope and the small burn on the eastern edge of the village were investigated for any evidence of spraints, footprints and pathways. No such evidence was discovered.



1:5,000

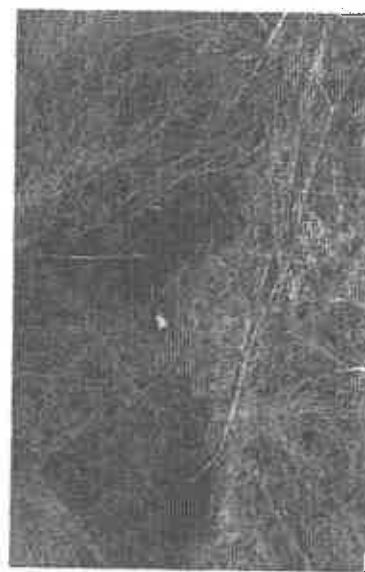
Figure 3.2.3: Eurasian otter survey results



a: Potential holt (arrowed) - pathway can be followed to track



b: Potential holt (N) - entrance & upper pathway



c: Potential holt (N) entrance in mid-slope of northern shore line.  
(see track - Strickland - provide scale)

*Photograph 3.2.3: Potential holt (N) - northern shoreline*





d: Potential holt (N) & pathway



e: Potential holt (S) site in sea defence wall

Photograph 3.2.3 (cont d): Potential holt (N) - northern shoreline & (S) - southern shoreline

### 3.3 SUMMARY

Although there is a dearth of recent records, it is evident that the Eurasian otter occurs widely throughout the northern half of South Ronaldsay.

There is evidence that the otter is present in the area with only infrequent visits to St. Margaret's Bay and, then, the ferry terminal site and the adjacent area are avoided: the nearest evidence to the proposed development site is the currently unused holt (N), 400m north of the proposed development site. There is no evidence of any recent activity.

There are no anticipated impacts and, therefore, the residual impact on the local population of Eurasian otter is neutral.

### 3.4 Recommendations

As there is no evidence of the local population of Eurasian otter utilising the proposed development site, a Protected Species plan is not required.

However, it is recommended that our client's subcontractors follow standard site management practices to avoid any criminal offence being committed should an otter be present on site during construction. Under The Habitats Regulations 1994 (as amended in Scotland), it is an offence to deliberately or recklessly -

- capture, injure or kill such an animal;
- harass an animal or group of animals;
- disturb an animal while it is occupying a structure or place used for shelter or protection;
- disturb an animal while it is rearing or otherwise caring for its young;
- obstruct access to a breeding site or resting place, or otherwise deny the animal use of the breeding site or resting place;
- disturb an animal in a manner that is, or in circumstances which are, likely to significantly affect the local distribution or abundance of the species to which it belongs;
- disturb an animal in a manner that is, or in circumstances which are, likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young;
- disturb an animal while it is migrating or hibernating;

There is also an offence of strict liability to -

- damage or destroy a breeding site or resting place of such an animal. No motive is required for this offence. Also, these sites and places are protected even if the animal is not there.

It is recommended that the following actions be incorporated into the site management plan -

- ◆ During construction, ensure at night that all open ditches or excavations are covered or ramped (with wooden boards or similar) to enable easy exit by otters and other species;
- ◆ Where possible place caps over the end of all pipes stored on site, or store pipes in a vertical position to minimise risk of entrapment. Where pipes cannot be capped or stored vertically, ensure all pipes are checked for trapped / resting otters before use;
- ◆ Each morning all site storage and construction areas, including spoil piles, will be checked for the presence of otters. If an otter is discovered, seek advice from SNH and leave the otter undisturbed: the animal may well just leave the area in

its own time.

- ◆ Measures will be introduced throughout the site to reduce the potential for otters being injured or killed as a result of road traffic accidents. These measures will include the introduction of mandatory speed limits along the access road and track and throughout the site.

## Appendix to Paragraph 6(a)

### Steel

Sheet piles	81 tonnes
Steel channels	12 tonnes
Tie rods	4.7 tonnes
Nuts + washers for tie rods	234 kg
Nuts + washers for piles	766 kg
Steel reinforcement in wall + deck slab	<u>35 tonnes</u>
Total steel	133.7 tonnes

### Concrete

Deck slab	862m <sup>3</sup>
Foundations	405 m <sup>3</sup>
Wall	288 m <sup>3</sup>
Anchor blocks	13 m <sup>3</sup>
Supports for building	20 m <sup>3</sup>
Surround to GRP tank	45 m <sup>3</sup>
Recycled temporary foundation	<u>20 m<sup>3</sup></u>
	1653 m <sup>3</sup> = 3802 tonnes

### Fill material

Quarried stone, boulders, secondary aggregate and scalplings will be used as main fill material. The volume to be used is approximately 8900 m<sup>3</sup>. It is estimated that this will comprised the following:

Clay	445 m <sup>3</sup>
Silt	445 m <sup>3</sup>
Sand	445 m <sup>3</sup>
Gravel	890 m <sup>3</sup>
Cobbles	2225 m <sup>3</sup>
Boulders	<u>4450 m<sup>3</sup></u>
	8900 m <sup>3</sup>

In addition there will be

Sand and silt from the excavation for the foundation each being approximately 500 m<sup>3</sup>, giving a total for silt as 945 m<sup>3</sup>.

There will be a further 1010 m<sup>3</sup> of clean gravel used for drainage making a total of 1900 m<sup>3</sup> for gravel.

There will be 40 m of 100 mm GRP pipe and 900 m<sup>2</sup> of geotextile which includes that used for remediation.

### Method of Delivery

Steel sheet piles are stored at Gill's Bay and will be delivered by ferry direct to site.

Reinforcing steel will be delivered by ferry direct to site.

All other steel is at present in store adjacent to site.

All ready-mix concrete and fill material will be delivered by road.

Appendix to Paragraph 6(d)

Temporary supports for the steel piles will be constructed as in the accompanying sketch.

Each steel support will weigh 350 kg

It is unlikely that more than 7 supports will be used at any time

Total weight 2.45 tonnes

These will be placed at 5 m intervals and will support

25 m lengths of waling weighing 2.00 tonnes.

Total weight of steel 4.45 tonnes

These will be removed and reused as the sheet pile wall progresses.

There will be 40 concrete foundations in total for the temporary supports at 0.5 m<sup>3</sup> each = 20 m<sup>3</sup>.

These will be broken up after use and recycled as part of the fill. Weight of concrete 46 tonnes

Timber shuttering to wall, office supports and round GRP tank will be 100 m<sup>2</sup>.

The shuttering will be progressively moved as the sheet pile wall and its concrete backing progresses. The timber shuttering will be removed from site on completion of the wall.

Temporary Support for Sheet piles  
N.I.S.

H.W.M.S.T.  


steel sheet piles

200 x 100 R.H.S waling

concrete backing to piles

200 x 100 R.H.S

200 x 100 R.H.S waling

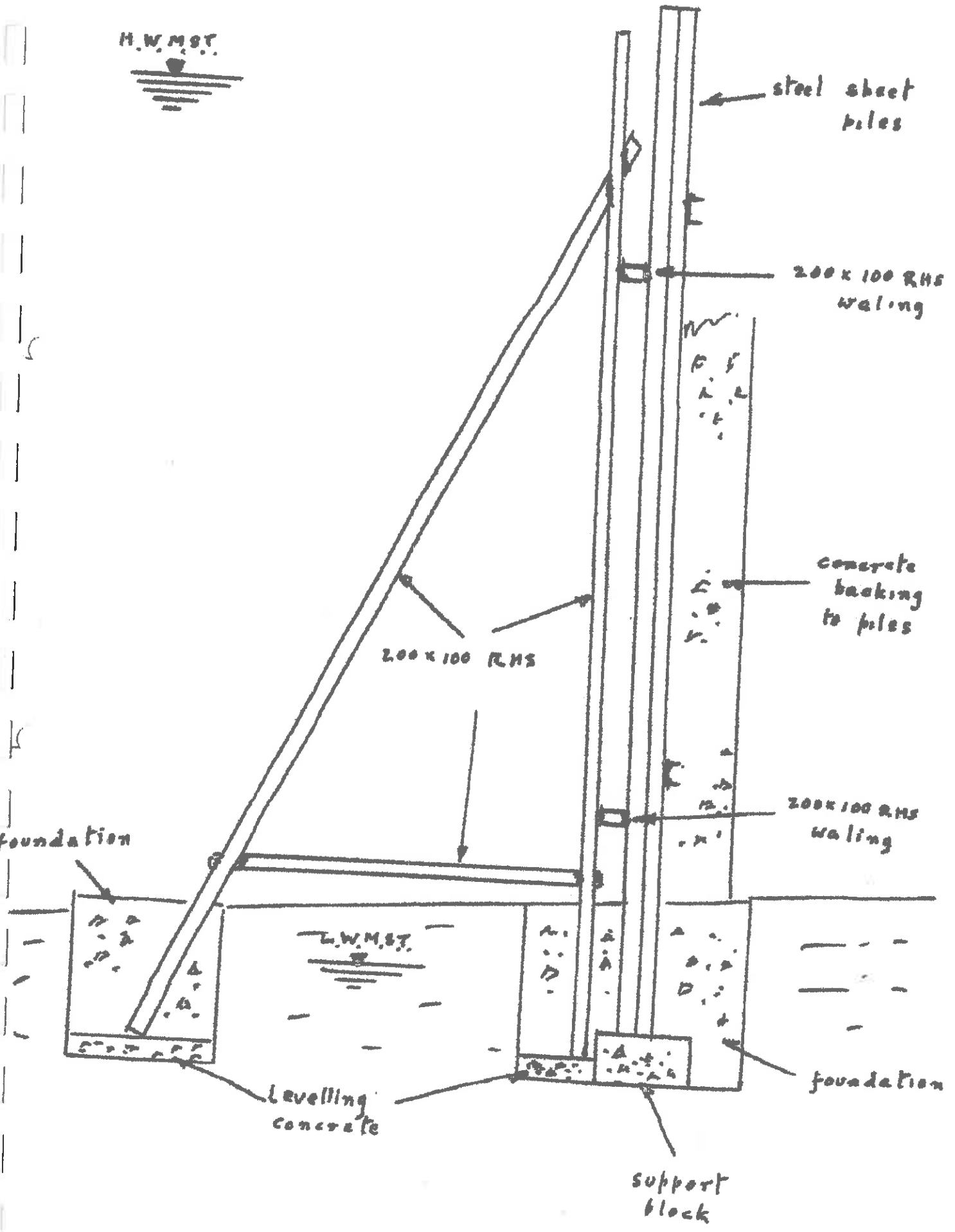
foundation

L.W.M.S.T.  


levelling concrete

foundation

support block



## Appendix to Paragraph 10

### Scotland's National Marine Plan

#### Gen. 2 Economic Benefit

The economic benefit particularly to South Ronaldsay, the East Mainland of Orkney and the north east corner of Caithness has been considerable over the last 20 years since the ferry service began. High class new housing can be seen springing up in these areas which until the start of the service was seen very much as a backwater. With the "North Coast 500" tourist routes attracting many more tourists, many of them decide to use the ferry and visit Orkney.

Such is the popularity of the service (it takes about 40% of traffic travelling to Orkney at present), a larger ferry is required and is at present under construction with an expected entry to service during the summer of 2018.

With the present ferry and its proposed replacement having open vehicle decks, this is the only method of transporting hazardous material, e.g. fuel oil, diesel etc but not LPG into the island without using a specially chartered ship.

The economic benefit to some of Orkney's smaller islands is that at certain times, special trips may be carrying, for example, wind turbine parts which could not easily be done without a private charter.

#### Gen 3 Social Benefit

The ferry service is run from time to time to allow shopping trips from Orkney to Inverness or Wick with returns on the same day. Sports clubs regularly use the service for team matches on mainland Scotland and during the season of agricultural shows, the ferry introduces an additional sailing for those wishing to attend. The service is at these times full to capacity and the larger ferry is required, consequently the larger marshalling area is required.

#### Gen 4 Co-existence

There is an existing small building on the pier which houses lobster ponds and other existing pier buildings have been leased to a marine based company. At present there is very little traffic generated by these enterprises. With the proposed increased size of the marshalling area, traffic which at present parks on the road to the pier will park in the marshalling area leaving considerably more vehicular space for these other enterprises.

#### Gen 5 Climate Change

This section should be read in conjunction with "Additional Information – calculation of design tide level"

Global warming at present is estimated to cause a rise in sea level of 1 mm per year. Take Newlyn for example, mean sea level has risen by 200 mm in the last 200 years. This rise in sea level does not take into account isostatic rise in land levels following the end of the last ice age. The ice sheet only extended to the south of the Midlands and consequently Newlyn

would not have been covered with ice and there would be no isostatic land rise to compensate for the rise in sea level.

Isostatic rise is taken as approximately a third of the thickness of ice accumulated during the ice age. Central Perthshire shows the greatest rate of land rise of approximately 4 mm per year with Orkney showing a rise of 1 mm per year balancing the 1 mm per year sea level rise.

It is considered by some bodies that the rate of rise in sea level is increasing but these vary so much that no absolute figure can be allocated to them.

At present there is no intention to design the marshalling area for sea levels other than those calculated as shown to raise the level of the marshalling area above that of the road leading to it. It would be unproductive leaving, at times of extreme high tide, the marshalling area high and dry but with no access to it as St Margaret's Hope and the road to the pier would be submerged.

Should Orkney Islands Council at some time in the future decide to raise the level of the road and construct flood defence works for St Margaret's Hope, that would be the time to consider any possible raising of the level of the marshalling area.

Global warming is more likely to cause problems due to increased rainfall, not a problem for the marshalling area, and possibly increased storm surges. These have been dealt with in the section regarding the calculated tide height.

#### Gen 6 Historic Environment

The existing stone built pier is the only point which can be considered historic environment. It was built at a time when nearly all vessels would have been sailing vessels or ones with very low-powered steam engines. However, with the advent of more powerfully engined vessels, the pier has tended to be undermined by the wash from these vessels and has been progressively upgraded with steel sheet piles to prevent further undermining. The north face of the pier is still stone faced.

The proposed extension to the marshalling area will not impact on the pier, as its nearest point will be over 100 m from the pier.

#### Gen 7 Landscape /Seascape

When the application for the previous extension to the marshalling area (05972/17/10) was being considered, Orkney Islands Council as Planning Authority and as a consultee considered that a sheet piled sea wall may not be visually acceptable.

It was pointed out that every commercial pier in Orkney is of sheet piled construction and that the Planning Authority was quite happy with them. Further, the sheet piled wall would provide a berthing face for smaller vessels and probably would not be seen. No more was heard from the Orkney Islands Council.

The area of foreshore to be covered by the proposed extension to the marshalling area can be seen on the enclosed photographs. It does not appear to have any recreational or visual benefit and as such would not be missed if the marshalling area was extended over it.



The office /cafeteria/waiting room does not form part of this application but will require planning permission when Orkney Islands Council as Planning Authority will have an opportunity to comment on its visual impact.

#### Gen 8 Coastal Processes and Flooding

This has been covered under comments on Gen 5 –Climate Change and under “Additional Information – design tide levels”

#### Gen 9 Natural Heritage

This is covered by the Eurasian otter survey by NDR (Environmental Services) which formed part of application 05972/17/10 and is reproduced here under appendix to paragraph 5(i)

#### Gen 10 Invasive non-native species.

Not appropriate to this application

#### Gen 11 Marine Litter

Not appropriate to this application but litter bins will be provided adjacent to the proposed office block.

#### Gen 12 Water Quality and Resource

Not appropriate to this application

#### Gen 13 Noise

It is anticipated that there will be no more noise or vibration during the construction phase than is produced during the day to day running of the ferry service.

All excavation will be in the strata known as Eday Marie. This can be easily excavated and there will be no requirement for a rock-breaker or other similar attachment for the excavator.

The sheet piles are presently welded into panels and as such cannot be driven by a piling hammer as in normal construction.

A strip foundation will be excavated and the pile panels will be gently lowered into wet concrete in the foundation trench.

#### Gen 14 Air Quality

It is not envisaged that the air quality during construction or use after construction will be worse than in any car park. With the strong winds encountered most of the time in Orkney, the air quality will possibly be much better than that encountered in any car park.

#### Gen 15 Planning Alignment A

The construction of a larger marshalling area appears to comply precisely with this planning alignment.

Public service vehicles both in Orkney and in Caithness are timetabled to co-ordinate with ferry arrival and departure times. Times for sailing are scheduled to allow vehicles leaving Orkney optimum travelling time going south or easy travelling for those visiting Orkney. The larger marshalling area will make it easier for vehicles to be positioned according to size and type which should make loading the ferry more efficient.

#### Gen 16 Planning Alignment B

Not appropriate to this application

#### Gen 17 Fairness

It is considered that this application treats all those with a marine interest at St Margaret's Hope pier with fairness.

#### Gen 18 Engagement

There will be consultation with all interested bodies as part of the application process.

#### Gen 19 Sound Evidence

Tide levels etc have been calculated using historic data and sound scientific evidence.

#### Gen 20 Adaptive Management

Pentland Ferries is a young company having been operating between Gill's Bay in Caithness and St Margaret's Hope for about 20 years. It is growing rapidly as can be seen by their purchase of a second and larger new ferry. The management has proved that it can adapt to all aspects of the ferry service and has even attempted to set up new ferry routes further south in Scotland.

#### Gen 21 Cumulative Impacts

The main impact of the proposed development will be the introduction of full sewage treatment from the office and waiting room. This will reduce the flow to the existing septic tank which serves all properties at the ferry terminal. The cumulative impact should be a reduction in bacteria etc entering St Margaret's Hope bay.

### Appendix to Paragraph 13

An earlier application for these proposed works included the use of baled rubber tyres as the main fill material.

This required an environmental impact assessment report as part of the application.

Due to the length of time taken for the application process these tyres were no longer available and a new application was made in February 2019 where the fill material was changed to quarried stone and secondary aggregate in place of the tyres. Due to this change no environmental impact assessment was required.

This application is similar to that of February 2019 but with a change to some quantities due mainly to the concrete deck slab being included.

As the EIA is no longer relevant to this application a copy is not enclosed as part of the application.

## **Additional Information**

### General Notes

With the increased volume of traffic using the Gill's Bay to St Margaret's Hope ferry service Pentland Ferries has purchased a new ferry which is due to arrive during the summer of 2018. This ferry is 20 m longer and 2 m wider than the existing.

With the increased volume of traffic which will queue while waiting to board the larger ferry a larger marshalling area is required.

The existing booking office is at the wrong side of the road and people wanting to book must cross the road.

A new office with cafeteria constructed on the enlarged marshalling area will avoid interaction between pedestrians and traffic.

The existing septic tank serving the existing waiting room is not suitable for additional loading, consequently a new sewage treatment plant designed to give a final effluent standard better than 30 ppm SS and 20 ppm BOD will be constructed within the extended marshalling area with a sea outfall to LWMST. This outfall will require to be registered with SEPA.

Services for the proposed office and STW will be taken from the existing office block and will not impede on the proposed works.

The reinforced concrete underbuilding for the proposed office and STW are above HWMST and consequently the volume and costs of the reinforced concrete are not included in this application. This will be assessed as part of a future planning application to Orkney Islands Council.

Drain holes have been left at the base of the piles. These will allow water to drain away quickly from behind the sheet pile concrete wall thus preventing a build up of pressure behind the wall during periods of low tide.

The final surface of the marshalling area will have a 150 mm fall towards the sea. This will allow for road drainage to continue as at present and run across the marshalling area. A drainage channel will be formed in the concrete around the office and STW to prevent puddles forming at these locations.

Enclosed are the following:

1. Calculations of appropriate tide levels up to and including the 1 in 200 year return period design level.
2. A copy of an extract from the recent safety file for the construction of the present extension to the marshalling area. The drawings have not been included but the rest of the material is pertinent to this application/contract.

## Extension of Marshalling Area at St Margaret's Hope Pier

### Design Levels

The design levels for the marshalling area extension, the floor level of the proposed harbour office and cafeteria and the level of the lids to the proposed sewage treatment plant are based on the predicted extreme tide level with a 1 in 200 year return period, i.e a 0.5% probability.

As there is no tide gauge at St Margaret's Hope pier all tidal predictions are based on those taken from Admiralty tide tables for Widewall Bay, a distance of some 7 or 8 km south west measured around the coast. Predictions of tide heights in the Admiralty tables are given to "Chart Datum" which is generally taken as equating to the lowest astronomical tide at that location. Land levels are quoted to a datum referred to as Ordnance Datum (Newlyn) which is regarded as mean sea level at Newlyn in Cornwall. The difference in level between these two data is 1.67 m at Widewall Bay, OD being the higher of the two.

The following levels have been taken from the Admiralty tables for Widewall Bay:

LAT	MLWS	MHWS	HAT
-0.3 m	0.4	3.6	4.1

Converting this to Ordnance Datum we get:

LAT	MLWS	MHWS	HAT
-1.97	-1.27	1.93	2.43

These figures are based on barometric pressure being normal and no storm surge or waves causing raised tides.

With a barometric pressure drop of 1 millibar the tide can be expected to rise by about 10 mm.

Extreme high pressure over the Atlantic Ocean coupled with extreme low pressure over the North Sea would create a storm surge of skew surge passing through the Pentland Firth. This surge usually follows the tidal wave by about two hours and does not fully add to the maximum tide level caused by astronomical forces together with barometric heightening.

Figures taken for Wick and Aberdeen which are in similar meteorological areas to St Margaret's Hope (Widewall Bay) show that each has a predicted 1 in 200 year return period extreme tide of 2.89 m OD and 3.17 m OD respectively. This compares with predicted HAT from the Admiralty tables of 2.29 m OD and 2.55 m OD respectively, i.e. an increase of 0.60m and 0.62 m respectively.

It is reasonable to assume that a 1 in 200 year return period extreme tide at St Margaret's Hope (Widewall Bay) would be 0.60 m above the predicted HAT, i.e.  $2.43 + 0.60 = 3.13$  m OD.

The low point on the coast road to the pier at St Margaret's Hope which is at the entrance to the marshalling area is covered by the tide at about 5 yearly intervals. This coincides with a 1

in 5 year return period of 2.66 m OD. For design purposes we will take this as the road level at the entrance to the marshalling area.

The 1 in 200 year return period tide level is 3.03 m OD, some 0.37 m above road level.

This figure coincides exactly with the extreme level encountered at St Margaret's Hope and Burray in January 2005, when these areas flooded by over 300 mm above road level.

On the same day both Aberdeen and Wick recorded their highest ever tide levels. These levels were both 0.51 m above their respective HAT predicted levels. This equates to 1 in 60 to 1 in 70 return period high tide. It should also be noted that on the same day there was no flooding recorded at Kirkwall.

It is assumed that the additional 100 mm above the predicted HAT at St Margaret's Hope compared with Wick and Aberdeen would be due to the storm surge passing through the Pentland Firth where St Margaret's Hope would be more exposed to the surge wave than would Wick and Aberdeen on the East Coast.

This is the only occasion when a tide level has been seen anywhere near this level by residents who have lived in St Margaret's Hope for over 70 years.

Taking road level as above at 2.66 m OD and with a fall of 1 in 200 across the marshalling area to allow for surface water run-off, the level at 30 m from the road will be  $2.66 - 0.15 = 2.51$  m OD. This will be the surface level beside the new office block/cafeteria. To keep the floor level of the office above the 1 in 200 year return period tide level the floor level will require to be raised to 3.03 m OD or by at least 0.52 m.

It should be noted that BS6394 for the Design of Maritime Structures recommends that a 1 in 100 year return period for tide levels is used for design purposes. The difference between 1 in 100 and 1 in 200 year return period levels is only 60 mm.

If the floor level of the office is constructed to the 1 in 200 year level, there will be a factor of safety of 60 mm above that recommended in BS6394.

Normally an additional allowance would be made above the 1 in 200 year level to allow for wave run-up. In this case there is a limited fetch from due north of 2 km from the Burray shore. This gives a calculated maximum wave height of 0.5 m which corresponds with the maximum observed wave height in the bay. Run-up will be very limited. In Kirkwall where there is a calculated wave height of 1.5 m, the accepted figure for run-up over a sloping grassy shore is 0.6 m. It is not considered that wave run-up will be of any significance to this structure.

For a domestic building, it is considered mandatory that an escape route is provided above the predicted tide level + the predicted wave run-up.

In this case, if the tide level is above the level of the marshalling area deck, the ferry will not run, there will be no vehicles in the marshalling area and the office will be closed, consequently there is no requirement for the provision of an escape route.

The sewage treatment plant to serve the office block will require to have its lids above tide levels, i.e. at floor level of the office block. Should sea water enter the plant through the lids,

it would kill the bacteria which treats the sewage. It would not be practicable to have completely sealed lids as they would require to be opened to allow emptying of sludge on a 60 day cycle.

If it was practicable to have sealed lids, the treatment plant could be constructed with the lids at ground level but a pumping station would then be required to pump the effluent out against the pressure of the tide.

With the treatment plant raised so that the lids are at floor level of the office block, a tidal anti-flooding ball valve could be fitted to the outfall pipe such that at times of extreme high tide, the ball valve would prevent sea water entering the plant through the outfall. There would be sufficient storage in the plant to retain the effluent until the tide receded.

Using these levels, the height of the marshalling area deck beside the sheet piling will be 2.5 m OD above a beach level of -1.27 m OD, i.e. a height of 3.77 m.

