Environmental Impact Assessment Screening Request

Dredging and Reclamation at Robertson Metal Recycling, Inverkeithing

January 2020

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Contents

Appendices

Document history

Report Reference	Date	Notes
P2018-16-EIASC-R1	7 August 2019	Draft for review
P2018-16-EIASC-R2	17 January 2020	Updated draft for client review
P2018-16-EIASC-R2	23 January 2020	Final issue

1. Introduction

Robertson Metals Recycling have been operating a scrap metals recycling facility at Inverkeithing since the 1980s. Prior to that, the site has been used for ship breaking since the 1920s. Robertson Metals Recycling are investigating the feasibility of extending their existing facilities by reclaiming an area of land to extend a load-out quay and undertaking associated capital dredging.

This document supports a request to Marine Scotland – Licensing Operations Team (MS-LOT) for a screening opinion under The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 for the proposed works.

2. EIA Screening criteria

A metals recycling facility does not appear to fall into any of the projects listed in Schedule 1 of The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017.

The table in paragraph 2 of Schedule 2 of The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 sets out the descriptions of projects and applicable thresholds and criteria for the purposes of classifying works as schedule 2 works. Section 11(e) of this table lists the storage of scrap iron, including scrap vehicles. The applicable thresholds and criteria are: (i) the area of deposit or storage exceeds 0.5 hectare; or (ii) a deposit is to be made or scrap stored within 100 m of any controlled waters.

The area to be reclaimed for the storage of scrap metal (as hatched blue on Drawing 181034-31 in Appendix A) is approximately 0.8 hectares. Scrap will be stored within 100 m of controlled waters. It should be noted that the existing site, which has been operating for many years, would also trigger these applicable thresholds and criteria. The proposal to be considered for EIA screening is to extend the existing facilities as described in Section 3.1.

When making a determination as to whether schedule 2 works are an EIA project, the Scottish Ministers must take into account such of the selection criteria set out in schedule 3 of The Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 as are relevant to the works. These include the characteristics of the works, the location of the works, and the characteristics of the potential impact. Information to support this determination is provided in the following sections 3 - 5.

3. Characteristics of the works

3.1. Size and design of the works

The works are proposed at the existing metals recycling facility on Cruickness Road, Inverkeithing, on the north side of the Forth Estuary in Scotland. The existing site covers a land area of approximately 5.5 hectares.

The extent of the proposed works is shown in Drawing 181034-31 in Appendix A. The proposed reclamation area (hatched blue on the drawing) is approximately 0.8 hectares.

It is proposed that the existing jetty structure at the west of the site (No. 1 Jetty) will be re-built, as shown on Drawing 181034-31 in Appendix A. A solid quay will be formed along the line of the existing jetty with a new return wall running north to south between the existing No. 1 Jetty roundhead and the pitched revetment of No. 3 Jetty. The area of land between the newly formed quay walls will then be reclaimed, as detailed on Drawing 181034-31 in Appendix A. Both No. 1 Jetty and the Loadout Quay are currently in use.

The construction of the quay along the line of No. 1 Jetty will be undertaken from the existing jetty structure. Due to the inner bay at Inverkeithing drying out at low tide, it is proposed that the construction of the return wall will be undertaken from a construction bund along the line of the new wall. Once the new quay wall has been constructed, the bund will be removed and material from the bund will be re-used within the reclamation area. No marine-based equipment will be used for these works.

The return wall will tie in with the pitched revetment to suit the dredge requirements as shown on Drawing 181034-31 in Appendix A.

A new berthing pocket will be dredged along the line of No. 1 Jetty to a depth of 2.1 m below Chart Datum. The bed material is silt overlying clay (with gravel/stones/boulders) overlying rock, the depths of which are to be confirmed by ground investigation. A channel will be dredged between the new No. 1 Jetty berthing pocket and the existing Loadout Quay directly to the east, to a depth of 1.1 m below Chart Datum, as per the existing access channel. The Loadout Quay has a 90 m turning circle at the north-east corner of the quay – it is anticipated that this will require extending to 100 m by dredging for the new design vessel, as shown on Drawing 181034-31 in Appendix A.

Capital dredging will be required in the areas hatched red on Drawings 181034-31 and 181034-33 in Appendix A. The approximate volume to be dredged to achieve the required navigable depths is 100,000 – 150,000 m^3. Once the design has been finalised, sediment sampling will be undertaken to determine the chemical quality of the material to be dredged. It is proposed to reuse dredged material within the reclamation where possible. If any material is not suitable for use in the reclamation due to its physical properties, and it is deemed chemically suitable for disposal at sea, it is proposed to deposit this material at an existing licensed disposal site within the Firth of Forth.

As the detailed construction methodology has not yet been determined, it is not possible to provide a detailed method statement at this EIA Screening stage; however, the key stages are as follow:

1. Construct new quay wall along the line of No. 1 Jetty.
2. Construct temporary construction bund running north-south between existing roundhead at No. 1 Jetty and pitched revetment of No. 3 Jetty.
3. Construct new quay wall along the line of the temporary construction bund.
4. Remove construction bund and reclaim area between No. 2 Jetty and No. 3 Jetty (area hatched blue on Drawing 181034-31 in Appendix A).
5. Remedial/strengthening of existing timber/steel king-pile retaining structure (if required following condition survey and confirmation of dredging footprint) – refer to Drawing 181-034-31 in Appendix A.
6. Dredge to form berthing pocket along new quay.
7. Dredge to extend channel between new quay and existing Loadout Quay to the east.
8. Dredge to extend turning circle at existing Loadout Quay.

It is anticipated that works will be carried out in early 2021 and the construction period will be in the region of 12-18 months.

3.2. Cumulation with other existing works and/or approved works

There are no known existing and/or approved works that would result in cumulative effects.

3.3. Use of natural resources, in particular land, soil, water and biodiversity

Natural resources used to construct the quay wall and reclamation area will include steel and concrete structures.

As described in Section 3.1, where possible dredged material will be used in the reclamation. If sufficient suitable dredged material is not available, general fill material may be imported from a local quarry.

The use of natural resources beyond these is not envisaged.

Existing operations at this site enable the recycling of scrap metals, thereby reducing the requirement for use of natural resources in general.

3.4. Production of waste

The generation of waste in/near the marine environment during construction will be minimal. As described in Section 3.1, where possible dredged material will be used in the reclamation, which will reduce the requirement for offshore disposal.

The site operates a Waste Management Licence (WML/E/257) as a scrapyard. Existing operations at the site enable the recycling of scrap metals, thereby reducing waste in general.

3.5. Pollution and nuisances

Adherence to the Scottish Environment Protection Agency's (SEPA) Guidance for Pollution Prevention (GPP) 5: 'Works and maintenance in or near water' will minimise the risk of pollution incidents during the works.

On-site construction activities are not likely to be significant in terms of noise, dust and pollution.

3.6. Risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge

As stated above, adherence to SEPA's GPP 5: 'Works and maintenance in or near water' will minimise the risk of accidents during the works. The scale of the proposed works is relatively small compared to the existing operational site.

3.7. Risks to human health (for example due to water contamination or air pollution)

As stated above, adherence to SEPA's GPP 5: 'Works and maintenance in or near water' will minimise the risk of water contamination during the works. On-site construction activities are not likely to be significant in terms of noise, dust and pollution.

4. Location of works

4.1. Existing and approved land use

The wider site has been operating under a Waste Management Licence (WML/E/257) as a scrapyard for many years. The proposed extension makes use of an otherwise under-used area to expand the existing operation.

4.2. Relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground, and absorption capacity of the natural environment

The areas to be dredged and reclaimed are predominantly intertidal and subtidal muds, which are abundant in the local area and wider Firth of Forth.

5. Characteristics of the potential impacts

This section describes the key environmental issues that are relevant to the EIA screening request.

5.1. Potential for loss of habitat within designated conservation sites

The mudflats immediately to the north and east of the site are designated as a Special Protection Area (SPA), Ramsar site and Site of Special Scientific Interest (SSSI), as shown on the map in Appendix B. They are part of the large Firth of Forth protected sites.

5.1.1. Firth of Forth Special Protection Area (SPA)

The Firth of Forth SPA and Ramsar site is a complex estuarine system, stretching for over 100 km from the River Forth at Stirling eastwards past Edinburgh and along the coasts of Fife and East Lothian to a wide estuary mouth. A wide range of coastal and intertidal habitats is found within the site, including saltmarshes, dune systems, maritime grasslands, heath and fen, cliff slopes, shingle and brackish lagoons. Extensive mudflats occur in the Inner Firth, which typically support a rich invertebrate fauna, providing important food sources for the migrating and wintering waterbirds that depend on the estuary. The Firth is of major importance for a rich assemblage of waterbirds in the migration periods and through the winter, including divers, sea-ducks, geese, other ducks, waders and terns. The SPA is very large (over 6,000 hectares / 60 km^2).

A small area of dredging will occur within the SPA to create the side slopes for the new berth pocket at Jetty No. 1. The area to be dredged within the SPA is approximately 0.006 km^2 or 0.6 hectares which is around 0.01% of the overall SPA. The area to be dredged within the SPA is immediately adjacent to an area of the site that is used for storage of scrap metal. Due to regular localised noise and visual disturbance from existing operations, the value of this specific area as a bird feeding habitat is likely to be limited. No adverse effects are predicted on protected bird species as a result of this negligible habitat loss.

Overwintering bird surveys are underway, the scope of which have been agreed with Scottish Natural Heritage. The results of the surveys will support the consent applications.

5.1.2. Firth of Forth Site of Special Scientific Interest (SSSI)

The Firth of Forth SSSI is an extensive coastal site which is of importance for a variety of geological and geomorphological features, coastal and terrestrial habitats, vascular plants, invertebrates and breeding, passage and wintering birds. The SSSI contains large areas of mudflats which while not of particular importance for their invertebrate populations, are important because of the large populations of birds which they support.

A small area of dredging will occur within the SSSI to create the side slopes for the new berth pocket at Jetty No. 1. The SSSI is very large (over 7,000 hectares) so the scale of any potential impact on the site is likely to be negligible.

5.2. Disturbance during construction and operation

Noise and visual disturbance during the dredging and reclamation could temporarily disturb or displace birds, fish or marine mammals from the immediate area of the works.

If piling is required to form the new quay walls, to reduce the impacts of noise on birds, marine mammals and fish, JNCC Guidelines[1] on piling noise will be followed. This includes the use of vibro-piling where possible, and if impact piling is required, a soft-start method will be used to gradually ramp up of piling power incrementally over a time period of not less than 20 minutes, until full operational power is achieved. Initiating piling at a lower power will allow any species to move away from the noise source, reducing the likelihood of exposure to sounds which can cause injury.

[1] http://jncc.defra.gov.uk/pdf/JNCC_Guidelines_Piling%20protocol_August%202010.pdf

In terms of disturbance to birds, as the proposed reclamation and the majority of the proposed dredging will take place in close proximity to the existing metals recycling site, any birds in the vicinity are likely to have habituated to a level of visual and noise disturbance.

Due to the relatively confined location of the facility within the Firth of Forth, it is unlikely that marine mammals are regularly present in the immediate area.

6. Conclusion

This document provides information to enable MS-LOT to determine whether an EIA is required for the proposed reclamation and dredging works at the existing Robertson Metals Recycling Facility. It will be submitted as part of a formal EIA screening request to MS-LOT.

Appendix A
Drawings of the proposed works

M.H.W.S.	+5.80m C.D.
O.D.	+2.95m C.D.
M.L.W.S.	+0.80m C.D.
LAT	0.00m C.D.

TIDE DATA (ROSYTH)

NAVIGATION CHANNEL EXTENDED BETWEEN LOADOUT QUAY AND No. 1 JETTY

NEW TURNING CIRCLE EXTENDED TO 100m DIA.

DREDGE SLOPE 1:4

DREDGE SLOPE 1:4

DREDGE SLOPE 1:8

DREDGE SLOPE 1:8

DREDGE AREA -1.1m A.C.D.

DREDGE POCKET -2.1m A.C.D.

DREDGE AREA -1.1m A.C.D.

EXISTING TURNING CIRCLE (90m)

NEW QUAY WALL

No. 1 JETTY

No. 2 JETTY

NEW QUAY WALL

RECLAMATION

DREDGE AREA -1.1m A.C.D.

LOADOUT QUAY

No. 7 JETTY

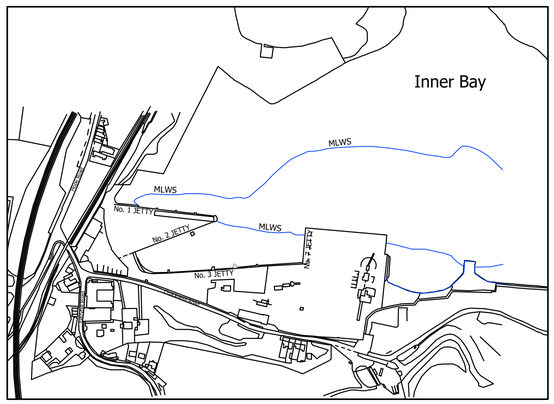
DREDGE SLOPE 1:8

DREDGE SLOPE 1:8

No. 3 JETTY

NEW QUAY WALL

EXISTING PITCHED REVETMENT



LOCATION PLAN

(SCALE:- 1:5000)

REV	DATE	REVISION	DRN	CHK
B	20-1-20	TURNING CIRCLE RE-INSTATED	MJ.	K.J.
A	16-1-20	DREDGE SLOPES ADDED / AMENDED	MJ.	K.J.

Arch Henderson 1919

Civil Engineers
Structural Engineers
Architects
Principal Designers
Geotechnical Services
Environmental Services

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Aberdeen, Dundee, Falkland Islands, Glasgow, Inverness, Lerwick, Southampton and Thurso

PROJECT :

ROBERTSON METALS RECYCLING
New Port Infrastructure - Inverkeithing

TITLE :

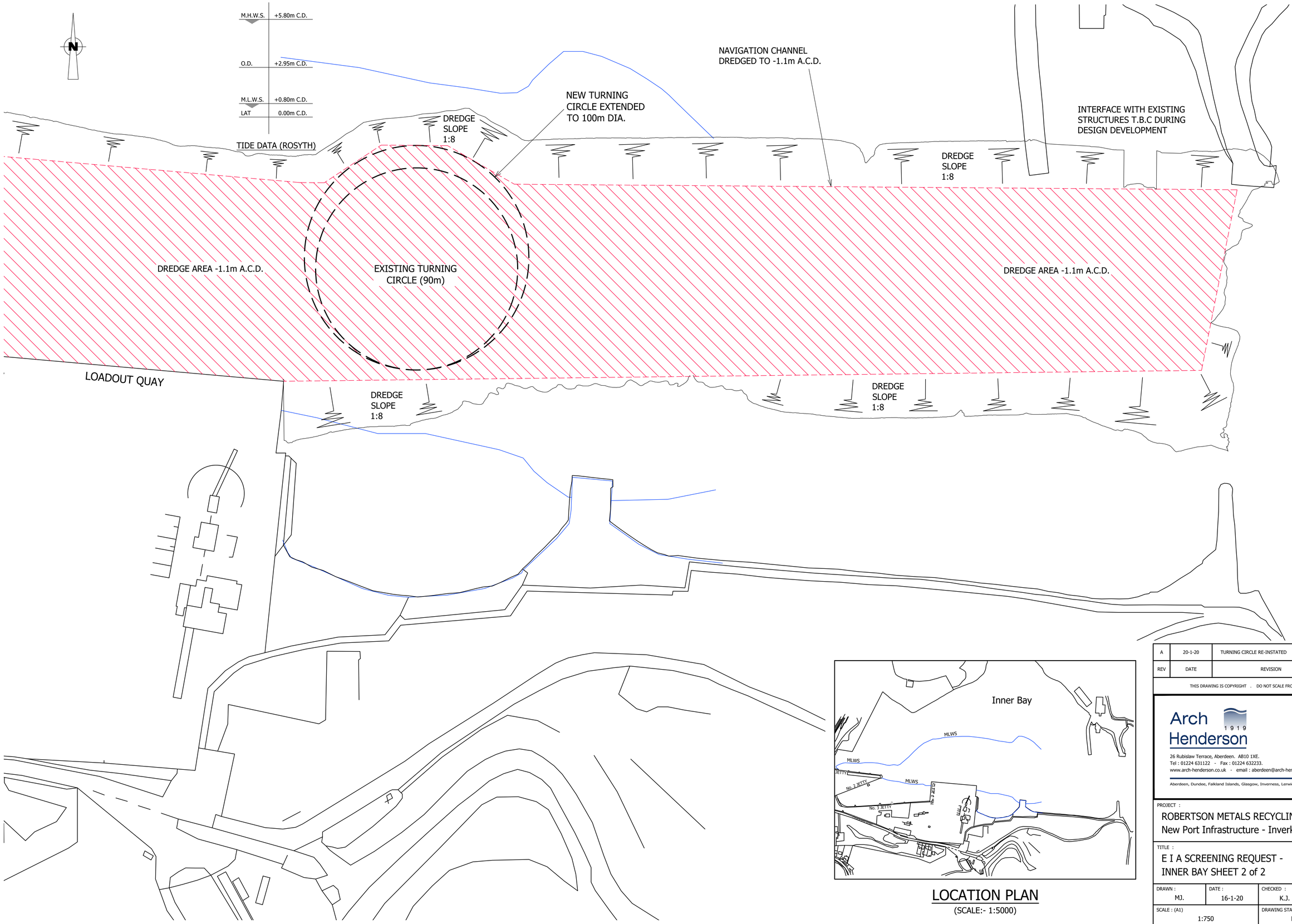
E I A SCREENING REQUEST -
INNER BAY SHEET 1 of 2

DRAWN :	DATE :	CHECKED :	DATE :
MJ.	10-7-19	KJ	6-8-19

SCALE : (A1)	DRAWING STATUS :
1:750	PRELIMINARY

DRAWING No : 181034 - 31

REV : B



LOCATION PLAN
(SCALE:- 1:5000)

REV	DATE	REVISION	DRN	CHK
A	20-1-20	TURNING CIRCLE RE-INSTATED	MJ.	K.J.

Arch Henderson 1919
Civil Engineers
Structural Engineers
Architects
Principal Designers
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PROJECT :
ROBERTSON METALS RECYCLING
New Port Infrastructure - Inverkeithing

TITLE :
E I A SCREENING REQUEST -
INNER BAY SHEET 2 of 2

DRAWN :	DATE :	CHECKED :	DATE :
MJ.	16-1-20	K.J.	16-1-20

SCALE : (A1)	DRAWING STATUS :
1:750	PRELIMINARY

DRAWING No : 181034 - 33 REV : A

Appendix B
Map of designated conservation sites