

11. LANDSCAPE AND VISUAL IMPACT ASSESSMENT

11.1 Context

Dales Voe Base is located on the eastern shore of Dales Voe, on Mainland Shetland north of, and over the hill from, Lerwick. The Base, which is owned by Lerwick Port Authority, was opened in 1986 and was originally designed for inspection, repair, and maintenance of drilling rigs. It is therefore an established site.

It is proposed to develop a Decommissioning Yard at the existing Dales Voe Base. This will entail the expansion of the Base to accommodate a larger yard plus the necessary ancillary infrastructure. An EIA is required for the development and, as this is an expansion of the base, it is considered that Landscape and Visual Impact Assessment (LVIA) will be necessary in order to understand the potential effects of the expansion, with regard to the landscape character and views of the site. The following sections outline the baseline situation as it is currently understood and what are considered to be the key issues requiring detailed assessment. The section aims to provide sufficient information to allow the scope of the assessment to be properly set.

11.2 Baseline Situation

The existing Base at Dales Voe is the only large scale port development on the Dales Voe coastline but it is linked with Lerwick North Harbour activities by the road which runs from the Dales Voe Base along the northern coastline via Valley of Keelhamar, Greenhead and Point of Scattland to join the A970 at Gremista. It is therefore part of the overall port development. The existing baseline information provided is based on site walkover and review of maps.

The Dales Voe Base, which sits approximately between sea level and 20m AOD to the west of Luggie's Knowe, currently comprises open storage space, warehouses, an office block and car park and a Jetty with a 52m long face onto a water depth of 12.5m.

The landscape character is defined by the mass of hills that rise to 120m AOD, separating the Dales Voe from Lerwick; and the north western aspect of the Banks of the Lees which grade steeply to the shores of the Dales Voe, gradually reducing in height towards the Base and levelling down to the sea towards the north at Kebister of Ness. This landform has resulted from the Dales Voe slicing into the upland spine that defines the South Mainland. This is a natural landscape, generally of moorland and coastal grassland, both pasture and rough grazing. The Voe is relatively narrow with an approximate distance of 700m between the Base Jetty and the opposite coastline at Califf.

The land is undeveloped, apart from the Base, and there are no properties within the locality of the Base. Across Dales Voe, opposite the Base, the land is farmed with a scattered pattern of settlement located on the enclosed land of the lower-lying, gently sloping transitional coastal slopes (See Photographic Record, Plate 6). There is a generally linear trend following the more amenable lowland from South Califf through North Califf and North to Breiwick. The properties are well distributed and not numerous.

The sensitive visual receptors have been identified as the residents and visitors associated with properties located on the opposite side of the Voe and road users facing the Base and also those sailing in the Voe.

11.3 Key Issues and Scope of Environmental Statement

Key issues to be assessed are considered to include the following:

The proposed development is an expansion of the existing base; it is significant in scale and will create a change, of an industrial nature, in a coastal landscape that is currently undeveloped. This will be the key issue to be addressed with regard to landscape impacts, with the focus on the landscape character and interruption of the coastline.

With regard to visual impact the sensitive receptors will be limited in number. The main visual impact is anticipated to be upon those living and working across the Voe at Califf and those sailing through the Voe. The jetty extension, new quay and decommissioning slab will be low profile but will alter the shape and colour of the coastline and present an alteration in view. The issue will therefore be whether the changes in geometry and reflectance will have a significant impact and if so how this might be mitigated. Use of artificial light will also be a potential issue particularly during the winter months.

The construction phase will be associated with a range of impacts related to movement, lighting and scale of plant used. Timescale and phasing will be important factors in this regard.

Operation of the Base will affect the landscape character and visual experience through movement and the berthing of vessels and the decommissioning activity at the Base.

The low profile of the proposed development and the surrounding topography reduce the distance from which the base can be viewed. Long distance visual impacts assessment will therefore be largely scoped out. Viewpoints will be agreed with Scottish Natural Heritage prior to the assessment being carried out.

11.4 Assessment Methodology

The Landscape and Visual Impact Assessment (LVIA) will be undertaken in accordance with the Guidelines for Landscape & Visual Impact Assessment published jointly by the Landscape Institute and the Institute of Environmental Management and Assessment, 2nd Edition, 2002 and Landscape Character Guidance for England & Scotland published jointly by the Countryside Agency and Scottish Natural Heritage, 2002.

Consultations will be held with SNH to agree the methodology to be followed; including the boundaries of the study area and preliminary viewpoint selection with reference to the potential visual envelope that will be established by computer generated ZVI analysis and verified by site inspection. At this time it is assumed that a 3 kilometre radius study area and a maximum of six selected viewpoints would be used. Panoramic digital photographs will be taken from the selected viewpoints and incorporated into the LVIA Report. Reference will be made to published information, including the following documents:

- The Shetland Isles Landscape Character Assessment. Gillespies. 1998. Scottish Natural Heritage Review Paper No 93;

- The Shetland Structure Plan 2001-2016; and
- Shetland Local Plan adopted 2004
- Basic Principles of Landscape & Visual Impact Assessment for Sponsors of Development, Shetland Islands Council Policy Paper, June 2006

A desk study of topography, landform, vegetation patterns, landscape features, water features, built form and historical & cultural factors will be carried out. Site inspection will be undertaken to confirm the information supplied and to identify the need for any supplementary information to be gathered.

The assessment will consider potential archaeological impacts in consultation with the Archaeological consultant and Shetland Amenity Trust.

Assessment of Landscape and Visual Impacts will consider changes in character and quality, perceived value, viewpoints affected and numbers of people affected, and the capacity of the landscape to accommodate the proposed development throughout the construction phase and during operation.

To summarise the LVIA of the proposed development will provide details of the following:

- Existing landscape character and conditions within the study area;
- Existing visibility of the proposed development area and the sensitivity of visual receptors;
- Identification and assessment of potential landscape and visual impacts;
- Mitigation measures to address these impacts; and
- Residual impacts.

12. ARCHAEOLOGY AND CULTURAL HERITAGE

12.1 Context

The extension of Dales Voe Base, Lerwick may have both direct and indirect impacts upon the physical fabric and setting of cultural heritage assets. The assessment will therefore establish the archaeological potential of the development site; identify cultural heritage assets that may be subject to impacts, both within the limits of the application site and beyond; assess the predicted impacts; and propose mitigation.

12.2 Baseline Situation

This scoping report considers designated sites within 1km of the centre of the proposed development (taken here as HU 4578, 4560) as well as undesignated sites in the immediate vicinity of the site. The archaeological potential of the area is well understood due to an extensive programme of works carried out prior to the construction of the supply base in the 1980s.

There is one designated sites within the proposed development. This is the site of a 'teind barn' which was excavated (and preserved in situ) during the 1980s immediately prior to the construction of the oil rig supply base. The site is thought by RCAHMS to represent a two-storey teind or tithe barn of the 16th century which was later reused as a corn drying kiln. Also found on the site were traces of earlier Norse building which itself may overlie an Early Christian chapel. The site is still clearly visible on the ground and lies within an undisturbed corner of land jutting into the southern end of the supply base. Traces of possible associated features can be seen as earthworks in the immediate vicinity of the building. The teind barn is listed as a Scheduled Monument.

The closest listed building to the proposed development is the Bod of Gremista, approximately 2.5 km to the south.

There are numerous prehistoric sites recorded within 1km of the centre of the proposed development, many of which were identified during the fieldwork carried out prior to the construction of the supply base. Several probable Iron Age round house have been found close to the supply base, at least one of which was built over a Neolithic settlement site. There are also several prehistoric burnt mound sites in the immediate area and a prominent grassy knoll close to the burn of Kebister was evaluated and found to contain prehistoric cist and urn burials.

A medieval or post-medieval settlement site is still visible at Kebister, approximately 100m south of the supply base and this appears unroofed on the 1st edition Ordnance Survey of 1881. A long dyke, known as the March Dyke, encloses an area of 20ha around the settlement (taking in the teind barn and the supply base). Within this area intricate field systems, including sub-peat dykes and numerous clearance cairns were recorded. These are thought to date to the medieval/post-medieval period. A number of hut sites have also been identified in the area and although undated some of them were thought to be either post-medieval or prehistoric depending on their form.

Multi-phase sites are common in Shetland, and once a settlement site was established it might stay in use for centuries or even millennia. In this case it appears that the site of the teind barn has been a focus for human settlement and activity for up to a thousand years. Although fieldwork in the area has identified and excavated sites with visible surface expression, the potential for further archaeological remains which cannot be traced above ground is relatively high. It is assumed that construction of the supply base has removed all archaeological potential within its present footprint and that there is no further potential within that area.

There are three recorded maritime losses within 1km of the proposed development. One of these is a 17th century craft which was recorded as being lost at Earl's Baa around 1600. The location of the loss of this craft is regarded as tentative. The other two losses were of 19th and 20th century date. There are no designated wrecks close to the proposed development.

12.3 Key Issues and Scope of Environmental Statement

Potential impacts due to the proposed development are likely to be restricted to operational setting impacts upon designated sites in the onshore area, to indirect impacts upon wreck sites in the offshore zone during the construction phase and to direct impacts upon surviving submerged archaeological sites and relict prehistoric landscape surfaces and deposits.

Potential impacts of the development include:

- Direct physical: disturbance during construction/dredging including impacts caused through anchoring of construction vessels;
- Indirect physical: vibration, noise, disturbance of sediments, construction traffic; and
- Setting (mostly direct but potentially indirect): visual intrusion, noise, physical separation, increase in traffic.

Based on the current understanding of the potential archaeology and cultural heritage issues relating to the site and proposed development an impact assessment is considered necessary and will be included as a topic chapter with the ES.

12.4 Assessment Methodology

The assessment will be carried out with reference to the following guidance:

- Standard and Guidance Archaeological Desk-Based Assessment (Institute for Archaeologists 2008);
- Joint Nautical Archaeology Policy Committee (JNAPC) Code of Practice for Seabed Development
- Scottish Historic Environment Policy (Historic Scotland 2008);
- Scottish Planning Policy (Scottish Government 2010)
- Shetland Local Plan (2004)
- Shetland Structure Plan (2001-2016)

The baseline study will comprise:

- Desk-based assessment taking in data held by the Shetland Sites and Monuments Record (SMR) and the National Monuments Record of Scotland (NMRS) including aerial photographs; maps held by the National Library of Scotland; Historic Scotland databases; marine and maritime data; any existing geophysical and geotechnical data and other readily available published sources.
- Targeted walk-over survey to identify previously unidentified assets, confirm findings of the desk-based assessment and identify any variations in archaeological potential.
- Visits to assets identified as being at risk of significant impacts upon setting by the assessor or consultees.

The following study areas will be used:

- Inner study area: application area
- Outer study area: 1km from application area

The findings of the desk-based assessment and walkover will be taken into account during the design of the development in order to prevent or reduce impacts as far as is reasonably practicable.

The assessment of impacts will consider:

- Potential direct and indirect construction impacts upon cultural heritage assets (including palaeoenvironmental deposits) within the application boundary;
- Potential impacts upon the setting of all scheduled monuments, Non-Statutory Register sites of schedulable quality and listed buildings within 1km of the development boundary. Other assets beyond 1km will be considered generally, but will only be assessed where they are raised specifically by consultees or where the assessor considers there to be potential for significant impacts.

13. ENVIRONMENTAL MANAGEMENT PLAN

Following completion of the ES and upon receipt of the HRO, an Environmental Management Plan (EMP) will be developed to deliver the mitigation and monitoring proposed in the Environmental Statement.

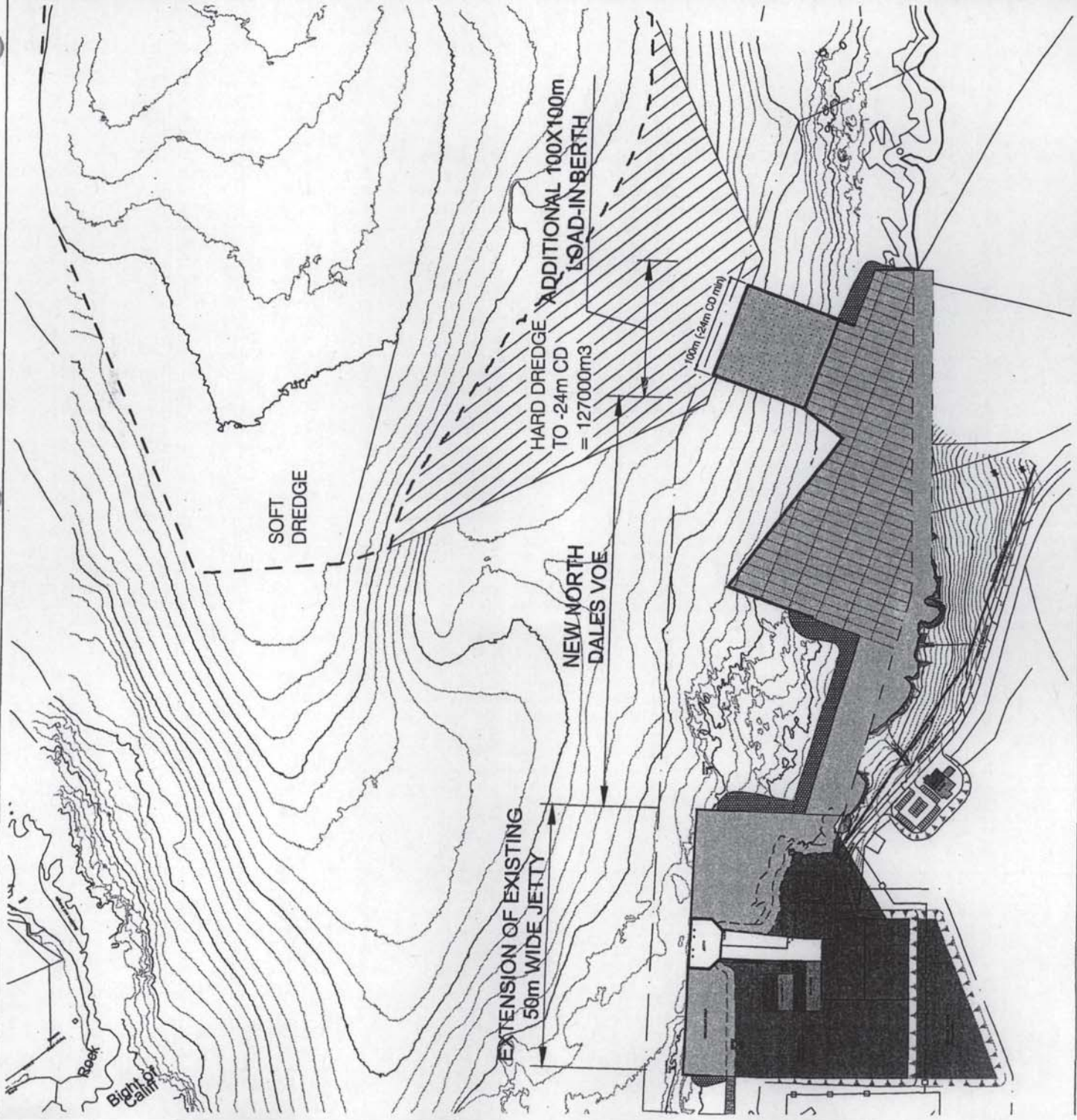
The EMP will be developed in conjunction with the lead contractor to assist them to achieve compliance with the conditions set out in the HRO. The EMP will establish roles and responsibilities of the team, with a lead Environmental Manager, who will be responsible for the implementation of the Environmental Management Plan, ensuring that all agreed measures are implemented.

GLOSSARY

BGS	British Geological Survey
CD	Chart Datum
EcIA	Ecological Impact Assessment
EIA	Environmental Impact Assessment
EMS	Environmental Management System
ES	Environmental Statement
HRO	Harbour Revision Order
HSE	Health & Safety Executive
JNCC	Joint Nature Conservation Committee
LFT	Lerwick Fish Traders
LPA	Lerwick Port Authority
LVIA	Landscape and Visual Impact Assessment
NNR	National Nature Reserve
RCAHMS	Royal Commission on the Ancient and Historic Monuments of Scotland
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SIC	Shetlands Islands Council
SEA	Strategic Environmental Assessment
SEPA	Scottish Environmental Protection Agency
SI	Statutory Instrument
SNH	Scottish Natural Heritage
SP	Structure Plan
SSSI	Site of Special Scientific Interest
UKHO	United Kingdom Hydrographic Office

Appendices

Appendix 1



LERWICK PORT AUTHORITY

Notes & Legend

1. Drawing adapted from Arch Henderson Drawing No. 102002-20, Rev. C.
2. Hatched grey areas indicate existing base extent.



Do not scale this drawing

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Client
Lerwick Port Authority

Project
Dales Voe Base,
Lerwick

Title
Proposed De-Corn Base
Overall Plan
AH - 102002 - 20

Drawing No.
001

Project No.
360039J

Drawing Status
FINAL

File path: I:\360039-a dales voe wtdrawings and figures\cadd\ah

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Date
17 November 2010

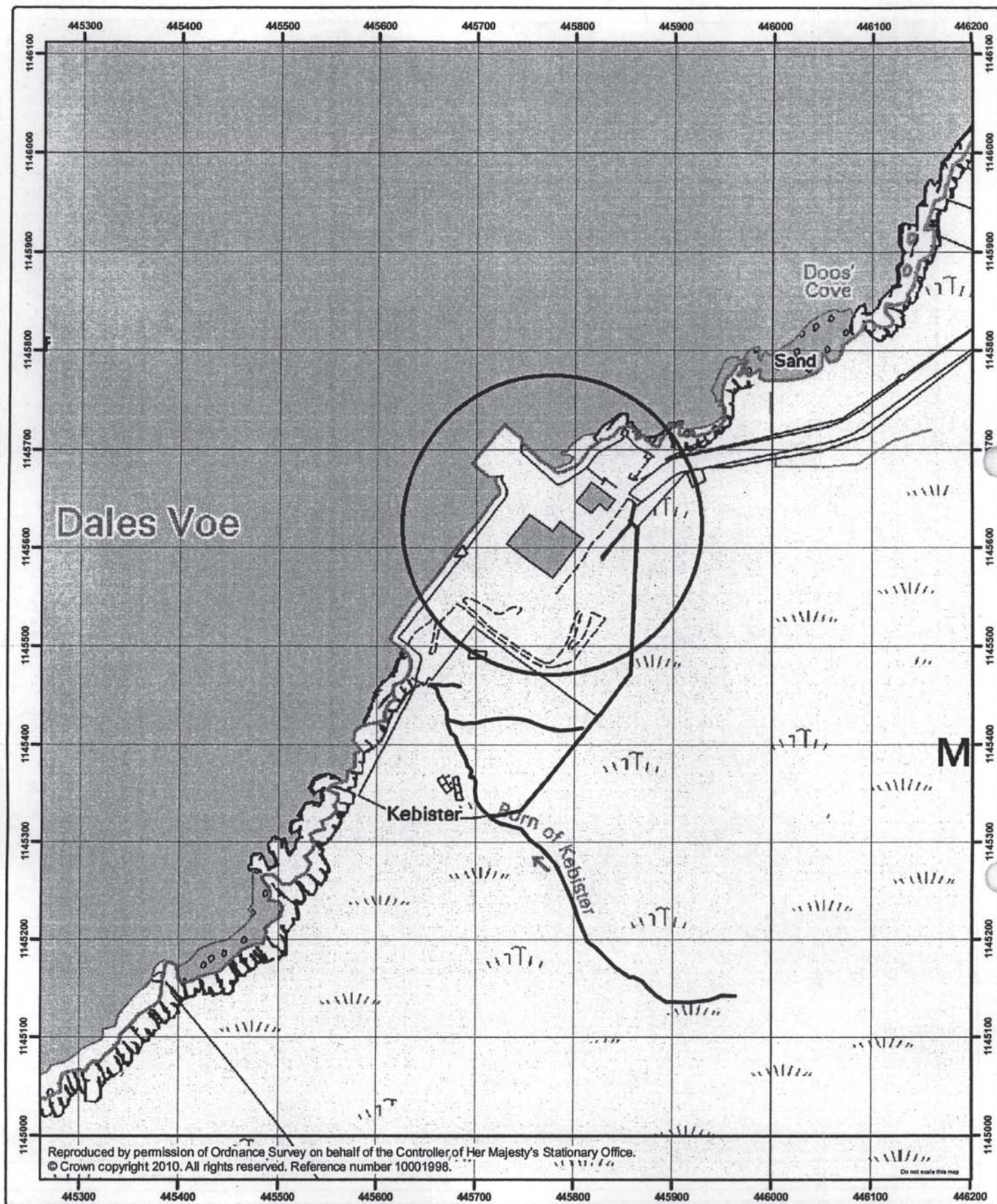
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Approved
R

Revision

Initials



Legend

-  Site Location
-  Observed Hydrological Features

Client

Lerwick Port Authority

Project

Dales Voe
Environmental Impact Assessment Scoping Report

Title

Figure 7.1 Hydrological Features

Status

Final

Drawing No.

360039j-002

Revision

Scale

1:5,000

A4

Date 12/11/10

Redacted

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Appendix 2

Dales Voe Base: Site Walkover Photographic Record 22nd July 2010



Plate 1: View of the Base from the north east



Plate 2: Rocky coastline east of Dales Voe Base

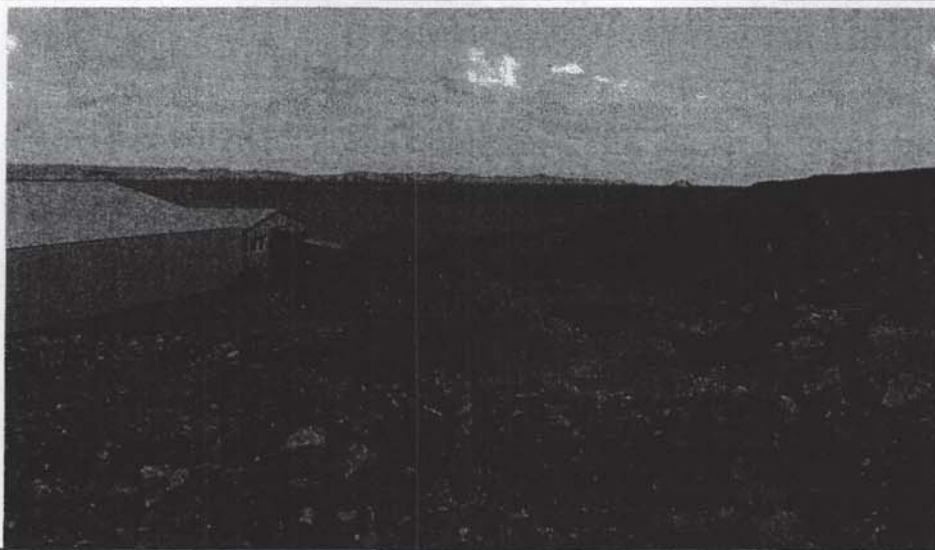


Plate 3: Rock extraction to rear of the base



Plate 4: Burn of Kebister discharging into Dales Voe



Plate 5: Otter spraint on cliff edge to north east of the base

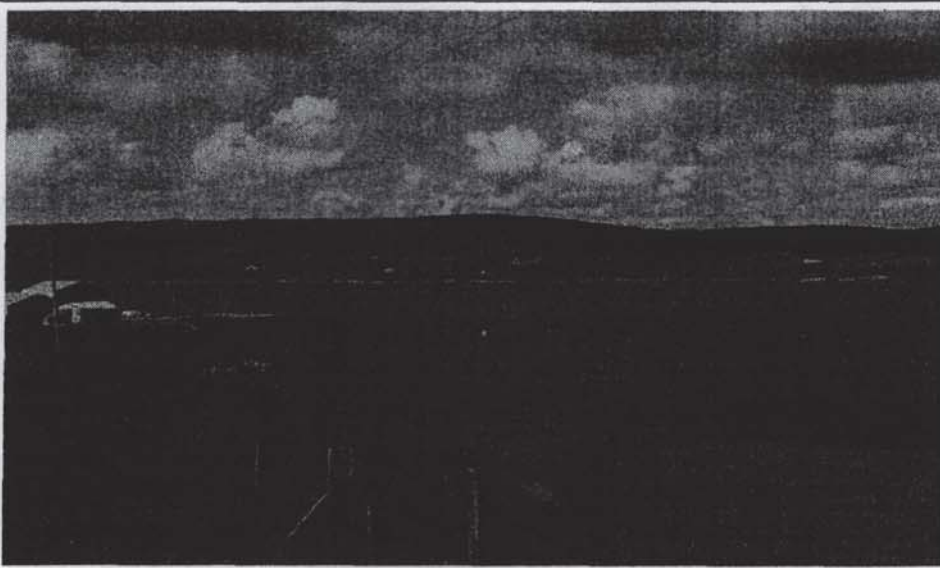


Plate 6: Residential properties looking onto the Voe