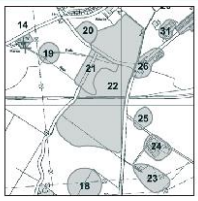
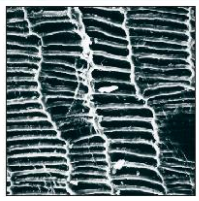
VWFS19










# B9075 SANDWATER ROAD

## *PRELIMINARY CULTURAL HERITAGE MANAGEMENT PLAN*

*for Viking Energy*

*January 2019*

HEADLAND ARCHAEOLOGY

B9075 SANDWATER ROAD

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| | |
|---|---|
| HA Job no.: | VWFS-Sandwater |
| NGR: | HU 41906 55201 |
| Parish: | Tingwall |
| Council: | Shetland Island |
| | |
| Project Manager: | Edward Bailey |
| Author: | Edward Bailey |
| Approved by: | Tom Janes |

# 1 INTRODUCTION

## *1.1 Purpose and Scope of the Cultural Heritage Management Plan*

The purpose of the Cultural Heritage Management Plan (CHMP: this document) is to support the proposed realignment of the B9075 Sandwater Road (the Proposed Development) and deal with predicted impacts to cultural heritage sites, both known and unknown. The existing road passes through a rich cultural heritage landscape and comes in contact with a number of known sites and areas of potential for previously unrecorded sites.

The CHMP will outline the predicted impacts and propose appropriate mitigation measures to deal with these impacts. The document will act as an overarching guide to the range and level of works required across the proposed development, however, individual sites or locations may be subject to archaeological mitigation which will be outlined in more detail in site/location specific Method Statements.

The Planning Authority responsible is Shetland Islands Council, which is represented by the Shetland Amenity Trust (SAT).

Plans showing the locations of areas requiring mitigation are provided at the end of this document, cross-referenced to the HA numbers provided in the Chapter 11: Cultural Heritage of the Environmental Impact Assessment Report (EIA Report) for the Proposed Development.

## *1.2 Background and Description*

The existing B9075 runs west from its junction with the A970 across the Petta Dale and the south end of Mid Kame across to the Valley of Kergord where it turns south and joins the A971 at the top of Weisdale Voe.

The new road runs parallel with and 40 to 100m north of the existing B9075 from the A970 before merging with the existing road just before it crosses the Burn of Weisdale some 1.8 km to the west. It covers a length of some 2070m. As part of the improvement the junction with the Kergord road has been re-designed, comprising a 206m long spur near the west end.

The roadline cuts across an area of heather and rush covered moorland. The middle section contains several peat hags and old peat cuttings. The peat depth varies across the proposed road line. Peat cutting in the past has almost removed the peat cover on the upper western slopes of the Petta Dale while on the west side of the Burn of Pettawater in the valley below the peat is over 4m deep in places.

The road design includes three segments that will be ‘floated’ on top of the peat making up some 40% of the total length with four remaining zones (A-D) where the peat and topsoil will be removed during construction possibly impacting archaeological features in these areas.

As part of the original 2016 ES for the project a walkover survey was carried out by AOC in July 2013. The survey was based on an earlier road layout and did not include the junction with the new Kergord road. A total of 57 sites were identified in the original EIA. Out of these 22 were partly or fully within the original site boundary with a further 9 sites in the vicinity of the Kergord junction. During the 2019 review and assessment of the Proposed Development, fifteen of these 22 sites were recategorized as being of no heritage significance.

As the sites identified in the 2016 ES had only previously been located using a hand held GPS they were re-surveyed using a differential GPS by Headland Archaeology (UK) Ltd's Archaeological Clerk of Works during site attendance for GI works. In addition, during the attendance seven new sites (HA1) were recorded.

All sites are likely to be post-medieval, the majority being 19th century turf-built boundaries and enclosures.

# 2 OBJECTIVES

This objectives of the programme of archaeological works:

> i) to safeguard the archaeological resource from any inadvertent adverse physical impact deriving from the ground-breaking works associated with the construction phase of the development.
> ii) to determine the character, extent and quality of any archaeologically significant remains in the parts of the proposed development area where ground disturbance will occur;
> iii) in the event that significant archaeological deposits are discovered and that preservation in situ proves unfeasible, to prepare a mitigation strategy compliant with PAN2/2011 and SPP 2014 and the necessary works undertaken.

This document assesses the construction impact of the Sandwater Road realignment on the archaeological resource and recommends an outline programme of archaeological works to mitigate that impact.

# 3 DESIGNATIONS AND STATUTORY ISSUES

There are no designated heritage assets along the proposed road realignment.

# 4 POTENTIAL FOR PREVIOUSLY UNRECORDED REMAINS

The desk-based assessment undertaken as for EIA identified a total of four assets which will be directly impacted by the construction phase of works (Janes 2019). However, not all features of cultural heritage interest are visible at the ground surface and suitable for recording by non-intrusive survey techniques (such as were used during the preparation of the desk-based assessment). Therefore, there exists a general potential for currently unrecorded sub-surface archaeological features to be present and, as a result, for any ground-breaking construction works to cause direct damage.

The potential for direct damage to unrecorded features will reflect the distribution and density of such features relative to the route of the road. Although the presence/absence of such features cannot be predicted with accuracy without intrusive investigation works, the background

information provided by sites in the wider area allows areas of higher or lower potential to be identified along the route, and for some prediction of the likely types of features which might be present.

Known monuments within the footprint of the proposed road and within close vicinity are confined to post medieval features, predominantly 19th century turf-built boundaries and enclosures. This does not preclude the possibility of earlier features to survive below ground. Therefore, appropriate mitigation will need to be undertaken to mitigate the development impact on potential buried features of archaeological interest.

# 5 PREDICTED CONSTRUCTION IMPACTS

The main permanent construction works comprise the construction of a new road to the north of the existing Sandwater Road in order to facilitate construction traffic associated with Viking Wind Farm.

The impacts resulting from works are restricted to the removal of four heritage assets relating to the post medieval industry and agriculture. Although the magnitude of these impacts will be high, they are of low cultural significance and are unlikely to need to be mitigated through avoidance.

## *5.1 Hierarchy of Preference for Mitigation*

For each potential impact identified, a hierarchy of preferences for mitigation has been applied, following an 'Avoid, Reduce, Record' approach. In all cases, the primary preference has been to avoid these impacts by removing the construction element entirely or relocating it to avoid areas of archaeological potential.

Where potential impacts could not be completely avoided through relocation or alternative design, the aim was to reduce the area likely to be impacted. For example, where an access road cuts through a known site, the width of the road will be the minimum necessary for the construction works.

The final level of mitigation covers the need to monitor works and investigate and record any remains identified during the construction works. Scottish Planning Policy states that where preservation in situ is not possible, developers should undertake appropriate excavation, recording, analysis, publication and archive prior to or during construction (SPP 2014, 35). This could involve several phases of work, including geophysical survey, evaluation, or archaeological monitoring leading to full excavation, all of which are outlined in more detail below.

# 6 MITIGATION WORKS

On the basis of the final design, mitigation will be applied depending on a number of factors, including the significance of the site, the location of work, the nature and magnitude of impact, and will take into account the provisions of SPP 2014 (para 150 – 152) and any statutory requirements. This section sets out the types of archaeological mitigation works to be undertaken in response to the impacts described above. It is organised by mitigation type and provides a relatively detailed indication of the methodology to be used as appropriate in each situation. However, in each case,

the works proposed will be subject to a method-specific Written Scheme of Investigation tailored to the likely archaeology present and the construction works taking place. Appendix 1 Identified proposed mitigation measures for sites directly impacted by the road construction and zones of ground disturbance.

## 6.1 Archaeological Clerk of Works

An Archaeological Clerk of Works will be appointed to oversee the programme of archaeological works and be responsible for the implementation of the Archaeological Management Plan. The Archaeological Clerk of Works will prepare a detailed Written Scheme of Investigation (WSI) for the proposed mitigation.

## 6.2 Fencing

A total of one site lies either within the development corridor or in such close proximity to it that there is a risk of accidental damage during the course of construction works. To avoid damage to these sites, they will be fenced off prior to construction works commencing. The location of the fences will be provided to the contractor by the archaeological contractor, although the erection of the fences will be undertaken by the main contractor. Fences will be semi-permanent in nature (ie post and wire or post and rail).

Table 6.1 Sites to be fenced

| HA NO | US/DS | SITE NO | NAME |
|---|---|---|---|
| HA1 | | | Post medieval enclosures/Field boundaries/track |

## 6.3 Geophysical survey

It is proposed that the route of the new road is subject to a geophysical survey prior to construction. Given the uneven nature of the terrain, current geophysical survey techniques where the survey is undertaken by foot would not be appropriate to much of the proposed development site. It is therefore proposed should it prove feasible that a magnetometry survey undertaken using a drone would be undertaken. The results of which would be used to inform the trial trenching and avoid significant disturbance of peat deposits.

## 6.3 Evaluation

The methods adopted for any evaluation will be sufficient to determine the location, extent, nature, date, condition and importance of any archaeological features within the study area. Archaeological evaluation normally takes the form of trial trenching of a percentage sample (usually 5% to 10% of the total) of an area which is likely to be impacted by construction. Evaluation allows more confident prediction of the presence/absence of archaeological features and is used to either write off areas for any further work or decide whether a full archaeological excavation is required to adequately mitigate the impacts to the remains.

Much of the proposed development footprint lies within areas of deep peat (see appendix below) not suitable for intrusive evaluation and it may not be possible to evaluate the majority of these

areas prior to the construction phase. Evaluation as a mitigation technique has been proposed for those areas where meaningful results can be obtained (peat less than 1m in depth).

All survey information will be tied into the national grid and made available in a suitable digital format. This will permit rapid and accurate plotting on relevant construction drawings and assist in decision-making.

The results of the evaluation will be presented in a report that takes the form of a data structure report (as defined by Historic Environment Scotland). All bulk sediment samples collected during an evaluation will be processed and assessed, and the results of this assessment included in the report. All artefacts will be assessed, and the results of this assessment included in the report.

Where no features have been identified, recommendations that no further works are required will be put forward. Where archaeological features of significance have been identified, a strategy for excavation and recording will be agreed. This will either comprise Targeted Excavation or Archaeological Monitoring.

## *6.4 Targeted Excavation*

Where archaeological features are known to be present and will be impacted by the construction works, excavation of the features will take place prior to construction commencing. Excavation will be agreed with SAT prior to work commencing. It is proposed that one known archaeological site is subject to excavation. This is the possible mill site at Burn of Swirtars (AOC 3)

The methods adopted for any excavation will reflect the nature of the archaeological site and explicit research questions that can be addressed through excavation of the site. This will include techniques of excavation, recording, sediment sampling and artefact recovery.

Excavation will be limited to sites or parts of sites directly threatened by construction works unless it is found that partial destruction would result in significant loss of information from the site as a whole. It is assumed that threatened archaeological deposits and features will be fully excavated unless there are specific reasons to do otherwise.

The method statement will include details of on-site techniques, post-excavation assessment and the production of fully-costed proposals for all relevant analysis and reporting, including publication and other types of dissemination of results where appropriate.

## *6.5 Archaeological Monitoring*

Archaeological Monitoring in the context of this document refers to the active control of topsoil stripping operations, by a suitably experienced field archaeologist, in areas agreed between the archaeological contractor and the Planning Authority. The location and extent of stripping will be determined by the requirements of the construction. The rate and depth of stripping (up to the maximum required by the construction design) will be dictated by the monitoring archaeologist.

In the event that no archaeological deposits are encountered, the monitoring archaeologist will inform the main contractor and developer that archaeological monitoring has been completed in that area. All further construction work in that stripped area can then proceed without archaeological supervision.

In the event that archaeological deposits are encountered, the monitoring archaeologist will inform the main contractor and archaeological contractor. Works in the area will be put on temporary hold to allow the excavation and recording of features and deposits without unreasonable delay to construction works. The archaeological contractor will notify the Planning Authority of the discovery.

Should significant remains be encountered during monitoring works which cannot be dealt with quickly, it may be necessary to undertake full excavation of the site and a lengthier hold put on the works.

A method statement will be produced for excavation of any individual site and submitted to the Planning Authority for approval. The method statement will include details of on-site techniques, post-excavation assessment and the production of fully-costed proposals for all relevant analysis and reporting, including publication and other types of dissemination of results where appropriate. In cases of isolated or simple features there will be no requirement to prepare a specific method statement for excavation and recording.

Excavation will be limited to sites or parts of sites directly threatened by construction works unless it is found that partial destruction would result in significant loss of information from the site as a whole. It is assumed that threatened archaeological deposits and features will be fully excavated unless there are specific reasons to do otherwise.

When archaeological recording has been completed, the monitoring archaeologist will notify the main contractor that archaeological monitoring has been completed in that area. All further construction work in that stripped area can then proceed without archaeological supervision.

# 7 REPORTING OF RESULTS AND CREATION OF PROJECT ARCHIVE

The construction programme for the Sandwater Road realignment will run for several months. As a result, archaeological work and its results will accumulate gradually. The full significance of the results may not be clear until the end of the construction programme. However, it is important that an ordered project archive is created as the project proceeds so that risk of information loss is minimised. To achieve this aim, the following procedure will be established:

1. Any episode of evaluation (with or without archaeological discoveries) will be advanced to Data Structure Report (DSR) stage immediately after completion of fieldwork, including processing of all samples and artefacts.
2. Each discrete episode of archaeological excavation will be advanced to DSR stage immediately after completion of fieldwork, including processing of all samples and artefacts.
3. A very short report (by email) on the results of ongoing monitoring where archaeological discoveries are not made will be submitted to the client and to SAT on a regular basis throughout the duration of the work.
4. A single costed proposal for further analysis, reporting and publication will be prepared after completion of all archaeological fieldwork, addressing the results of all archaeological investigations for the approval of SAT. Any post-excavation analysis and/or publication approved by SAT will be implemented.
5. All reports will be submitted to SAT for approval as they are produced.

6. Primary archaeological data (records and artefacts) will be added to the project archive during the preparation of each DSR.
7. The project records archive will be deposited in the NHRE after completion of all reporting and publication tasks.
8. All artefacts will be declared to the Crown using standard Treasure Trove procedures after completion of all analytical work for allocation to a suitable museum for long-term curation
9. Any publicity, press releases and public relations associated with the Cultural Heritage of the site will be subject to approval of the clients' public relations representative.

# 8 REFERENCES


Dalland, M. 2018, *Viking Wind Farm: Sandwater/Kergord Road Widening and Realignment Archaeological Clerk of Works attendance during GI works,* unpublished client report for Headland Archaeology on behalf of Viking Energy

Historic Environment Scotland 2016 *Policy Statement*.

Janes, T. 2019, *B9075 Sandwater Road: Environmental Statement Chapter 11 Cultural Heritage and Archaeology,* unpublished client report for Jacobs

Scottish Government 2014 *Scottish Planning Policy.*

# APPENDIX 1: Proposed Mitigation

A) *Site:* AOC 3
*Type:* Mill
*Location*: Burn of Swirtars; 440346E, 1155115N.
*Description*: Possible mill comprising a rectangular structure to the east 9.9m east to west by 7.8m wide externally, defined by earth and stone banks 0.25 to 0.7m high and up to 2m wide with a possible entrance at the north-west corner.
A second rectangular structure lie immediately to the west measuring 10m east to west by 7.4m wide externally defined to the south and west by an L-shaped turf and stone bank up to 2m wide and 0.8m high. There are no traces of any wall to the north and the east side is defined by a straight break of slope. A trough runs inside the west end of the structure. It is some 1.4m wide by 0.4m deep and defined to the east by a vertical stone-built edge.

*Impact*: Most of the site will be destroyed by the construction work
*Mitigation*: Strip, map and record of the site prior to construction

*B) Site:* AOC 49
*Type: Track*
*Location:* Lamba Scord; 441104E, 1155115N
*Description: Modern rough gravel-covered peat track.*

*Impact*: The road cuts across a 50m wide segment of the track.
*Mitigation*: Photography and GPS survey

*C) Site:* AOC 50
*Type:* Possible track / erosion
*Location:* Lamba Scord; 441020E, 1154996N
*Description:* Erosion along line of old peat track?

*Impact*: The road cuts across the northern third of the site
*Mitigation*: Photography and GPS survey

*D) Site: HA* 01
*Type:* Bank
*Location:* Burn of Weisdale; 440200E, 1154940N
*Description:* A 70m long turf bank aligned north to S. It is 1.8m wide at the base, 0.9m wide at top and up to 0.5m high. It is best preserved to the S, becomes less well defined and lumpy towards the north end. A ditch runs along its east side.
The bank runs parallel with the west side of an enclosure (HA 06). It may represent a sub-division within this enclosure.

*Impact*: A 45m long middle segment of the bank will be destroyed by the road construction
*Mitigation*: Detailed survey and machine excavation of two slots to record the nature of the bank

*Site:* HA 01
*Type:* Enclosure
*Location:* Burn of Weisdale; 440210E, 1154970N
*Description:* A sub-rectangular enclosure located on the east side of the Burn of Weisdale. It measures 220m north to south by 149m wide. It is defined by turf banks with a trapezoidal cross section up to 2.1m wide at the base, 0.9m wide at the top and up to 0.9m high. The banks of the enclosure are truncated by the Kergoard road and several drains, especially on the less well-preserved east side.
The enclosure is depicted on the 1st edition OS 6-inch map (Orkney & Shetland 1880, sheet XLIII). A second enclosure (HA 07) is abutting its south side.

*Impact*: Most of the banks forming the east side of the enclosure will be destroyed during the construction of the road
*Mitigation:* Detailed survey and machine excavation of three slots to record the nature of the banks

## *Impact zones*

Sub-surface archaeological features may be affected by the construction work in four zones where peat and topsoil will be removed during construction.

*Zone A*

This is a sub-triangular area, covering 2320m$^2$ and measuring some 55m E-W, by 75m N-S at the junction with the A970 at the east end. Peat probe data indicate a peat depth between 1 and 2.3m, increasing towards the west. The Ordnance Survey Second Edition map of 1902 (Zetland Sheet XLIII) depict an L-shaped building in this area but no remains of the building is currently visible on the ground.

*Mitigation proposal:*

Geophysics and/or peat probing is proposed for areas of deep peat. It may be possible to excavate an evaluation trench in the eastern part of the area where the peat is 1m deep. Dependent on the results of earlier survey a watching brief may be appropriate during construction.

*Zone B*

This zone comprises two D-shaped areas forming the bridgeheads for the new road on either side of the Burn of Pettawater. The two areas cover some 1710m$^2$ measuring 28m and 45m long by up to 30m wide. The peat probe data indicate that the peat is between 3.4m and 2.5m deep.

*Mitigation:*

Geophysics and/or peat probing are proposed for this zone. Given the peat depth and the proximity to the stream with risk of silt entering the water, it is not recommended to evaluate this zone through evaluation trenching. Watching brief during construction.

*Zone C*

This area is 560m long and between 20m and 56m wide. It covers some 20100m$^2$ in the area where the road rises up on the east side of Lamba Scord cutting into the landscape to lower the incline of the road. The zone impacts on three sites in the area: AOC 46, 49 and 50 (see above). The peat is up to 3.7m deep at the very east end of the zone at the foot of the hill but is much shallower on the east-facing slope of the hill, where peat-cutting has reduced the cover to less than 0.5m. The peat covers deepens towards the west end of the zone which contains several peat hags.

*Mitigation:* Geophysics and/or peat probing is proposed for areas of deep peat. It may be possible to evaluate a large proportion of this zone where the peat cover is less than 1.2m deep through trenching. Dependent, on the results of earlier survey a watching brief may be appropriate during construction.

*Zone D*

This area is 585m long and between 15m and 40m wide. It covers the area where the road descends down towards the Burn of Weisdale gradually merging with the existing B9075. The zone also includes a 205m long curving spur to the west that forms the new junction with the Kergord road. The zone covers a total area of some 19500m$^2$. This zone impacts on three sites in the area: AOC 03, HA 05 and HA 06 (see above). The peat is up to 3.6m deep at the very north-east end of the zone but in the rest of the area the peat is between 0.3m and 1m deep.

*Mitigation:* It will be possible to evaluate a large proportion of this zone through trenching.