

B9075 Sandwater Road Realignment

Pre-Application Briefing Note (Draft)

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1 Introduction

1.1 Overview

Viking Energy Wind Farm LLP (VEWF) intend to submit an application for planning permission under the Town and Country Planning (Scotland) Act 1997 (as amended by the Planning etc. (Scotland) Act 2006) to realign the B9075, Sandwater Road on Mainland Island, Shetland, hereafter referred to as 'the Proposed Development'. The realignment is required to facilitate construction access, including abnormal roads, for the consented Viking Wind Farm.

A Screening Request was made to SIC on the 10th July 2018 under the Town & Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017, hereafter referred to as the 'EIA Regulations', for the proposed realignment of the B9075 Sandwater Road. SIC responded on the 20th September 2018 with their formal Screening Opinion confirming that the Proposed Development should be classed as EIA Development, requiring the planning application to be accompanied by an Environmental Impact Assessment (EIA) Report.

The Screening Opinion advised that the Proposed Development would require formal EIA due to the development's close proximity to Sandwater Loch, which is designated as a Site of Special Scientific Interest (SSSI) and falls within the catchment of identified Burn buffers for several watercourses. It was considered that the most appropriate means to assess the potential impacts of the proposed road improvement works would be by way of EIA.

This briefing note has been prepared to aid discussion on the scope of the EIA.

1.2 Background and Project Need

Viking Wind Farm

In May 2009 an application was submitted by VEWF to build a 150 turbine wind farm (Viking Wind Farm) on Mainland Island, Shetland. An addendum to the Environmental Statement (ES) was submitted in 2010 for a revised proposal of 127 turbines. Consent for Viking Wind Farm was approved by Scottish Ministers on 4th April 2012 for a 103 turbine scheme.

Construction access to the Viking Wind Farm site will be taken from a number of locations, including the B9075 (Sandwater Road). To facilitate the construction of the wind farm, it was considered that upgrade or realignment of the B9075 would be required.

B9075 (Sandwater Road)

In May 2016, a planning application with accompanying ES, was made to Shetland Islands Council (SIC) which comprised the widening and upgrade of approximately 730 metres (m) of the existing B9075 and the realignment of approximately 1,530 m, giving a total length of approximately 2.26 km from the junction with the A970 to the junction with the C class road to Upper Kergord. For the purposes of this report, this application is referred to as the '2016 Application', and the accompanying ES referred to as the '2016 ES'.

The 2016 Application was subsequently withdrawn in 2017 due to a decision made by VEWF to review the proposed upgrade and realignment options.

It is now proposed that the full length of the B9075 road will require realignment to facilitate construction of Viking Wind Farm. This would allow full separation between the wind farm construction traffic (who would

use the new road alignment) and general public traffic (who would continue to use the existing B9075) during construction of the wind farm to ensure road user safety. Once the wind farm is operational, it is proposed that the realigned B9075 will be used for all traffic, whilst a section of the existing road will be retained for recreational access to Sandwater Loch. The remaining 1.2 km (approximately) of existing road would be removed and the area reinstated, as shown on Figure 2.

1.3 Previous Assessment Findings

Full environmental survey and assessment work was previously carried out along, and in the vicinity, of the B9075 road as outlined in the 2016 ES. The results of the 2016 ES will be summarised where relevant in this report and have been reviewed in order to inform the proposed scope of the EIA Report for the Proposed Development.

Importantly, the 2016 ES concluded that with the adoption of mitigation measures, there would be no significant effects during construction or operation on the nationally important Sandwater Loch SSSI. This assessment remains relevant in the consideration of the Proposed Development, given that the proposals are of a similar nature and the realigned road would be located further to the north of the existing road (i.e. further away from the Sandwater Loch SSSI), as shown on Figure 3.

Furthermore, all environmental survey data collected and assessed for the 2016 ES, encompasses the Proposed Development. This allows a good understanding of the baseline environment and the potential for significant effects, given that it is assumed that the baseline conditions have remained materially unchanged.

2 The Characteristics of the Development

2.1 The Proposed Development

Access Track Layout and Design

It is proposed that the B9075 (Sandwater Road) is realigned between the junction with the A970 at Sandwater, westwards to the junction with the C class road to Upper Kergord (see Figure 1). Upon completion, the existing road would be removed in part from within the vicinity of Lamba Scord to where the realigned road meets the existing B9075, near the Burn of Weisdale. Between the A970 and Lamba Scord, the existing B9075 would be retained to facilitate recreational access to Sandwater Loch from the A970 junction, as shown on Figure 1.

The Proposed Development would comprise of two lanes of 2.8 m width in each direction, with a further 200 mm provided either side of the edge lines to give a 6 m running surface. Provision for a 1.5 m verge at either side would also be required. The realigned road would generally run in parallel and to the north of the existing B9075, with separation distances varying from immediately adjacent to up to approximately 85 m.

The design of the Proposed Development has been based on the principal that a significant amount of the road will be floated over deep peat thereby minimising peat excavations, reducing excavated peat volumes and leaving vegetation and soils intact.

The realignment would not result in any changes to existing land or property access, and no lighting or traffic lights are required as part of the Proposed Development.

New Junctions

Four new road junctions would be required:

- A970 at Sandwater;
- New unclassified road (to Upper Kergord)¹;
- Mid Kame southern access track at Lamba Scord; and
- Existing B9075 road.

The design of these junctions would be undertaken in consultation with the SIC Roads Authority and provide the axle load configurations associated with the wind turbine component delivery vehicles.

Watercourse Crossings

Where watercourses and ditches are to be crossed, new culverts would be required. Culverts would be designed in accordance with industry good practice to accommodate the design axle loads of construction traffic.

A new bridge would be required over the Burn of Pettawater, designed in accordance with current best practice and SEPA guidance.

All proposed watercourse crossings would require authorisation under the Water Environment (Controlled Activities) (Scotland) Regulations 2011.

Temporary Construction Compound

A temporary construction compound would be required and is proposed to be located adjacent to the junction of the B9075 and the Upper Kergord Road, as shown on Figure 2.

The temporary construction compound would provide welfare facilities, storage for materials and equipment, and car parking.

The temporary construction compound would be jointly used for the proposed Upper Kergord access track as well as the Proposed Development. Once construction of both access tracks has been completed, the construction compound would be removed and the site reinstated and returned to its current use.

2.2 Construction

Key tasks during construction of the Proposed Development would relate to:

Advance Works

- Environmental mitigation to be implemented in advance of main construction works; and
- Advance services diversions.

Roadworks

- Site establishment;
- Temporary and permanent fencing;
- Site clearance;
- Temporary and permanent surface water outfalls;
- Service diversions;
- Topsoil stripping and storage;

¹ New access track from the B9075 running northwards to Upper Kergord to facilitate construction of a converter station platform which is subject to a separate planning application to SIC (Kergord Access Track (Ref No. 2016/268/PPF)).

- Pre-earthworks drainage;
- Earthworks (cuttings and embankments);
- Environmental bunds and landscaping;
- Drainage, service ducts and chambers;
- Topsoil spreading, seeding and turfing;
- Roadwork finishes including safety barriers, signs, road markings; and
- Accommodation works.

Structures

- Construction of river crossings;
- Bridge construction; and
- Culvert construction.

Environmental

- Earthworks mitigation; and
- Landscape and ecological mitigation.

Temporary Works

- Temporary works to facilitate bridge construction;
- Temporary traffic management to maintain traffic flows where roads are affected by construction of the Proposed Development; and
- Temporary balancing ponds at drainage outfalls.

Maintenance

- Landscaping maintenance and defects repair works; and
- Winter maintenance.

Programme

The construction programme is likely to take place over a 6-9 month period following the granting of consents. Liaison with landowners and local residents would be carried out prior to, and during construction, to ensure there is minimum disruption to them.

3 Location of the Development

3.1 Site Location

The Proposed Development would be located approximately 15 km north-west of Lerwick in the local authority area of SIC, as shown on Figure 1.

The existing single carriageway B9075 road runs generally east to west between the A970 (which runs generally north to south down the mainland) and the A971 (which follows the western coastline of the mainland). The stretch of B9075 requiring realignment is located between the junction with the A970 at Sandwater, westwards to the junction with the C class road to Upper Kergord.

3.2 Site Description

The site is located on undulating moorland and mainly comprises peat moorland and grassland, although other habitats are present. The site contains a number of small drains and burns which flow north to south

through the site, draining towards Weisdale Voe and Stromness Voe via the Burn of Weisdale in the west of the site and the Burn of Pettawater and Sandwater Loch in the east of the site.

The surrounding area is rural with occasional properties at Sandwater on the A970/B9075 junction, at Setter and Upper Kergord. Parcels of land adjacent to the existing B9075 are used for open sheep grazing.

4 Proposed Approach to EIA

4.1 The Overall Approach to the EIA

The EIA Report will be prepared in accordance with the EIA Regulations 2017, and the Good Practice Guidance published by the Scottish Government's Energy Consents & Deployment Unit in January 2013. Consideration will also be given to advice contained in Planning Advice Note 1/2013 and Planning Circular 1/2017 (Environmental Impact Assessment) where relevant.

The EIA work will comprise a series of specialist environmental studies which will be targeted to assess any potential significant effects which the Proposed Development may have on the environment. Each topic included within the EIA process will be incorporated as a separate chapter in the main body of the EIA Report, or included as an appendix if the assessment of the subject matter requires to be more detailed.

A schedule of mitigation measures will also be included as an appendix and cross-referenced in the relevant assessment work.

4.2 Structure of the EIA Report

It is anticipated that the EIA Report will be produced as four volumes:

- Volume 1: Non-Technical Summary;
- Volume 2: Written Statement;
- Volume 3: Figures; and
- Volume 4: Technical Appendices.

Volume 2 will include a set of introductory chapters that describe the background and needs case for the Proposed Development, and provide information with regard to the construction of the Proposed Development.

For each of the environmental features assessed in Volume 2, the following information will be included in the respective chapters:

- a summary;
- an introduction to the environmental feature;
- assessment scope, methodology and study area;
- baseline conditions;
- impact assessment and proposed mitigation; and
- references.

Where required, a confidential appendix will be prepared containing sensitive, confidential ecological/ornithological information to be provided to SIC and SNH.

4.3 EIA Report Format

The EIA Report will be made available on DVD and hard copy although in the interest of the environment we would encourage take up of the DVD format.

4.4 Supporting Documents

A Pre-application Consultation Report (PACR) will be prepared detailing engagement regarding the Proposed Development between the Developer and local Community Councils, SIC, other consultees and members of the public.

An Outline CEMP will be provided as an appendix within the EIA Report and will contain general, good practice information applicable to both the construction and decommissioning phases of the Proposed Development on the following subject-matters:

- Site Induction;
- Pollution Prevention;
- Site Waste Management;
- Drainage Management;
- Watercourse Crossings;
- Water Quality Monitoring;
- Excavation Materials and Reinstatement;
- Decommissioning Restoration Plan;
- Ecological (Habitats and Species) Protection;
- Archaeological Protection; and
- Environmental Incident and Emergency Response.

4.5 Identifying the Proposed Scope

The following sections of this report aim to provide sufficient detail to characterise the potential interactions between the Proposed Development and the environmental receptors identified. In presenting a rationale for the proposed scope of environmental assessment, this report has taken the sensitivity of the current state of the environment into account, based on an understanding of the baseline conditions. The report has also been prepared with reference to the potential magnitude of effects, considering the typical construction and operational activities, physical characteristics and potential emissions / residues associated with the Proposed Development.

Where there is sufficient evidence to support a topic out of the EIA process, this is presented. Otherwise, where it is considered that there is the potential for likely significant effects, the report provides details of the proposed scope or detailed impact assessment, including brief details of the proposed methodology for impact assessment which would be employed for each topic.

Within each section of this report, an overall description of the baseline environment is provided, followed by a summary of the potential effects, and the proposed scope of assessment work required as a result.

5 Environmental Features

5.1 Landscape and Visual

A Landscape and Visual Impact Assessment (LVIA) was undertaken as part of the 2016 ES which assessed effects on the landscape, on visual amenity and people's views from buildings, viewpoints, footpaths and transport routes in accordance with Guidelines for Landscape and Visual Impact Assessment Third edition (GLVIA3) (2013). The LVIA was undertaken within a 2 km study area, beyond which the potential for significant effects was considered unlikely.

Baseline Description

Landscape Designations

There are no nationally or locally significant sites designated for their landscape quality within the vicinity of the Proposed Development.

Landscape Character

There are four different Landscape Character Types (LCT) as defined by SNH's Landscape Assessment of the Shetland Islands² within the vicinity of the Proposed Development. The Proposed Development lies within the Inland Valleys LCT, which is further subdivided into two Landscape Character Areas (LCAs). The majority of the Proposed Development lies in the Peatlands and Moorlands Inland Valleys LCA, with a very short section at the western end extending into the Farmed and Settled Valleys: Tingwall and Weisdale LCA.

The key characteristics of the Peatlands and Moorlands Inland Valleys LCT include:

- Generally wild, open and expansive valley;
- Characterised by peatland and heather moorland with little diversity in colour and texture;
- Slight variations are provided by areas of standing water, eroded and exposed peatland and small inland lochs; and
- Extensive views along the valley, while wider views are contained by ridges of higher ground.

Visual Amenity

Visual receptors such as residential properties and existing roads includes scattered properties along the B9075 at Weisdale to the south, isolated properties at Kergord to the north and Sandwater to the east, along with the B9075 and A970 roads. There is a core path to the east of Sandwater and an aspirational core path (ATWW03) running north from Setter.

Previous Assessment Findings

The 2016 ES concluded that there would be no LCTs or LCAs that would be significantly affected by the proposed road works. During the construction phase, significant effects were predicted for building receptors at Setter and Sandwater, and the aspirational core path, immediately following construction (i.e.

² A Landscape Assessment of The Shetland Isles (No. 93) (1998), Scottish Natural Heritage. Available at: <http://www.snh.org.uk/pdfs/publications/review/093.pdf>

before mitigation had established). However, the assessment concluded that there would be no visual receptors significantly affected once construction had been completed and mitigation measures had begun to establish.

Landscape mitigation measures proposed for the 2016 Application comprised grading earthworks and heather and grass seeding, to help integrate the earthworks with the surrounding landscape over time.

Potential Effects

The Proposed Development would be of a similar nature and scale in comparison with the 2016 Application, albeit that a new alignment is proposed as opposed to an upgrade and partial realignment of the existing road.

Potential effects on landscape and visual amenity could include:

(a) Construction

- temporary physical effects on landscape fabric;
- temporary effects on landscape character; and
- temporary effects on views.

(b) Operation

- long term effects on landscape character; and
- long terms effects on views.

Proposed Scope of Assessment

No significant effects on landscape designations or landscape character are anticipated as a result of the Proposed Development, therefore it is proposed to scope out an assessment of landscape character. Whilst the 2016 ES identified potentially significant visual effects during the construction phase for building receptors at Setter and Sandwater, such effects would be short term. No long term significant visual effects are anticipated, therefore it is also proposed to scope out an assessment of visual effects.

Landscape mitigation measures to help integrate the road into the landscape over time, as proposed for the 2016 Application, would be reviewed. Mitigation measures and commitments will be included in a new schedule of mitigation measures, as part of the EIA Report.

5.2 Ornithology

Baseline Description

Ornithological Designations

No part of the Proposed Development lies within a site designated for its ornithological interest. However, the site overlaps the Central Shetland Moorland Areas Important Bird Area (IBA), and whilst not a designated site, is an area of national importance for breeding whimbrel.

Bird Survey Results

Breeding bird surveys³ undertaken between 2013 and 2015 along the section of B9075 affected by the realignment and upgrade works (buffered to 500 m), identified breeding habitat for several bird species of high nature conservation value within the surveyed area including up to three pairs each of whimbrel and dunlin, up to two pairs of golden plover and one pair of Arctic skua. The closest breeding red-throated divers and merlin nesting sites were both over 1 km from the road. A pair of whooper swan was found to regularly breed within 1 km; however, the nest site was more than 500 m from the road.

Bird surveys have been ongoing within these surveyed areas between 2015 – 2018, confirming the results of previous surveys.

In addition, large parts of the study area have been covered by breeding bird surveys to inform the development of Viking Wind Farm, providing valuable additional information on the extent of year-to-year changes in the numbers of breeding birds in the area.

As a result, there has been a substantial amount of survey work undertaken that covers the Proposed Development and surrounding area over the past ten years, allowing extensive knowledge about the bird activity to be established.

Outside the breeding bird season, the ornithological value of the study area was found to be relatively low.

Previous Assessment Findings

The 2016 ES concluded that after the implementation of appropriate mitigation measures, the residual effect on all bird receptors would not be significant.

Specifically, for all species, except whimbrel and common sandpiper, the number of territories potentially affected by construction disturbance was categorised as not significant. For the three whimbrel territories identified (which make up approximately 12% of the Central Shetland Moors IBA), without mitigation, the potential of disturbance was assessed as potentially leading to significant effects. For common sandpiper, the single territory potentially affected represents approximately 2% of the regional population (note that the territory is not occupied annually). Furthermore, common sandpiper has relatively high tolerance of human activity. Therefore even without mitigation, it was determined that the effect on this species would not be significant.

The 2016 ES also concluded that there would be no significant effects as a result of habitat loss for all bird species.

Various mitigation measures were recorded within the 2016 ES to prevent or reduce effects on bird species. These included restricting the timing of construction works in the most sensitive parts to outside the breeding season and minimising habitat loss and change. In addition, the preparation of a Bird Protection Plan (BPP) prior to construction commencing was proposed, to prevent and reduce disturbance to birds of high conservation importance. As part of the BPP, to avoid disturbance to breeding whimbrel, it was proposed that a defined 'Breeding Whimbrel Protection Zone' would limit access when whimbrel are breeding and sensitive to disturbance.

Potential Effects

Potential effects on ornithology could include:

³ Following the Moorland Bird Survey method (Brown and Shepherd, 1993).

(a) Construction

- Short-term disturbance and displacement;
- Habitat loss and change; and
- Indirect effects e.g. disruption to habitat function, effects on prey.

(b) Operation

- Habitat loss and change.

Proposed Scope of Assessment

Given that the Proposed Development would lead to similar levels of disturbance and habitat loss as set out in the 2016 ES, which concluded that residual effects on all bird species would not be significant, it is proposed to scope out a detailed ornithology assessment.

Instead, it is proposed that mitigation measures are reviewed and updated in light of recent survey data and the changes associated with the Proposed Development. Mitigation measures and commitments will be included in a new schedule of mitigation measures, as part of the EIA Report.

5.3 Ecology, Biodiversity and Nature Conservation

Baseline Description

Ecological Designations

There is one designated nature conservation site adjacent to the south of the existing B9075; Sandwater Loch SSSI (see Figure 3). It is notified as an example of a mesotrophic loch and for its open-water transition fen (extensive beds of common club-rush). The SSSI supports a diverse community of submerged aquatic plants with six species of pondweed including the nationally scarce slender-leaved pondweed and is the largest and best example in Shetland of club-rush swamp. The loch is relatively shallow, which, though surrounded by dwarf shrub and acid moorland, is mesotrophic with a neutral pH because of the strong influence of an underlying band of crystalline limestone.

Habitat

A full suite of terrestrial ecology surveys were undertaken for the 2016 ES, including a Phase 1 Habitat Survey and a targeted National Vegetation Classification (NVC) survey. Habitats were also assessed for their potential to be classified as ground water dependent terrestrial ecosystems (GWDTE). Surveys were also carried out for protected species including otter, fish and freshwater invertebrates. The surveys covered the existing B9075 with a buffer of 200 m for habitats and 250 m for fauna.

Surveys classified large parts of the area as blanket bog or wet modified bog, dominated by ling heather, hare's tail cotton-grass, common cotton-grass and wooley hair-moss. Areas of habitat where wooley hair-moss was common were often characterised by deep haggings, with a high level of associated bare peat. Other habitats present include wet and dry dwarf shrub heath, unimproved and semi-improved acid grassland and a few small areas classified as marsh/marshy grassland.

Protected Species

Otter

No otter resting sites were identified during surveys, although suitable resting and laying up habitat is present in the survey area. Signs of otter were limited to sprainting areas.

Fish

Surveys undertaken of the Burn of Weisdale recorded brown trout, salmon and eels, and surveys of the Burn of Pettawater recorded brown trout, eels and three-spined stickleback, but no salmon. Habitat surveys found the Burn of Weisdale to contain the most variable habitat, with niches available for all stages of salmonid lifecycles'. Limited spawning habitat was found along the length of the Burn of Pettawater.

Freshwater Invertebrate

Invertebrate communities recorded in the Burn of Weisdale and Burn of Pettawater largely consisted of common and widespread species typical of Scottish upland or rural watercourses and no rarities were identified.

Previous Assessment Findings

Ecological Designations

No direct works within the Sandwater Loch SSSI designation itself, although construction work will take place in the upstream Burn of Pettawater catchment.

The 2016 ES assessed that, given the buffer of the existing B9075 and the limited number of watercourses passing from the construction area to the SSSI, the likelihood of pollutants entering the Sandwater Loch are low. Furthermore, given the volume of the body of water it would be unlikely that the quantity of pollutants, if they did enter the waterbody, would be sufficient to have a detrimental effect either to the pH (and therefore the mesotrophic status of the loch), or the flora associated with the transition fen habitats.

With the adoption of mitigation, including best practice measures to ensure that water quality is maintained, and pollution and sedimentation risk is controlled as far as possible, it was considered in the 2016 ES that there would be no significant effects to the nationally important Sandwater SSSI during both construction and operation of the road.

Habitats and Groundwater Dependent Terrestrial Ecosystems (GWDTE)

The 2016 ES predicted that habitat loss would be minor with the exception of a small permanent loss of blanket bog habitat; however, assuming mitigation is fully implemented, effects would not be significant.

In terms of impacts to GWDTEs, the 2016 ES found that the loss would be limited to two areas of mire habitat; all other habitats recorded were up slope and so groundwater would unlikely be affected. However, the two areas of mire were found unlikely to be reliant on groundwater influences, as the species present exist due to collection of surface water run-off from surrounding mire habitats. No significant effects were predicted to GWDTE habitat.

Protected Species

Otter

The 2016 ES concluded that, as long as new bridges were appropriately designed to minimise disruption to otter movements, new structures would be unlikely to result in significant effects with the adoption of appropriate mitigation measures. No significant effects during operation were predicted.

Watercourse, Fish and Macroinvertebrates

The 2016 ES found that any habitat loss would be localised and of small scale, and pollution events would be short in duration and unlikely to affect the overall nature of the watercourse or freshwater invertebrate population. No significant construction or operational effects were predicted.

Potential Effects

Potential effects on ecology and nature conservation could include:

(a) Construction

- Permanent or temporary losses of habitat due to new infrastructure;
- Permanent or temporary disturbances of habitat;
- Permanent losses to protected and other animal species or their sheltering, breeding or feeding habitats; and
- Temporary disturbances affecting animals, or their habitats.

(b) Operation

- Permanent effects from loss of habitats.

Potential effects to the SSSI and its designing features could occur from pollution associated with construction works, such as increased silt loading and sedimentation caused through earthworks, hydrocarbon and oil pollution from machinery working on site, or pollution from materials used in construction.

Indirect effects such as sediment discharge or reduction in water quality could indirectly damage catchment fish populations, which might indirectly affect otter's ability to forage in the area.

Proposed Scope of Assessment

The EIA Report will include an assessment on the potential effects of the Proposed Development on Sandwater Loch SSSI. The assessment will utilise existing survey data collected for the 2016 ES. No further survey effort is proposed.

No further assessment on habitats, protected species, fish or macroinvertebrates is proposed as it is anticipated that with the implementation of appropriate mitigation measures, residual effects would not be significant. Mitigation measures would include best practice design at all important watercourse crossings to allow easy and safe passage of otters and fish and to ensure access is not restricted. In addition, marked exclusion zones at all 'at-risk' watercourses and water bodies would be applied to minimise any disturbance to protected species. Where this is not possible (such as crossing points), access to watercourses would be kept to a minimum.

Mitigation measures will be identified and included in a new schedule of mitigation measures, as part of the EIA Report. Detailed mitigation measures would be outlined in a CEMP (pre-construction version) which

would take into account any additional findings from pre-construction surveys and input from an ECoW. A draft CEMP will be included with the EIA Report.

5.4 Geology, Hydrogeology and Hydrology

Baseline Description

The Proposed Development is located within the catchments of the Burn of Weisdale (to the west) and Burn of Sandwater (to the east) characterised by two valleys defined by river systems, rising from 20 m Above Ordnance Datum (AOD) to 80 m AOD.

There are two notable watercourses/bodies in the Sandwater catchment; Pettawater which is upstream of the B9075 and Sandwater Loch, immediately downstream. As discussed previously, Sandwater Loch is designated as a SSSI due to its mesotrophic nature. Within the Burn of Weisdale catchment, the Burn of Weisdale flows to the south meeting Weisdale Voe. There is a weir structure which influences the flow regime in this catchment.

The majority of the Proposed Development is underlain by peat located upon metamorphosed sedimentary rocks.

There are no known Private Water Supplies within 1 km of the B9075. The mains supply route is located south of the existing B9075 and generally follows the route of the road, except for a 500 m deviation between the Burn of Weisdale and Sandwater Loch.

Previous Assessment Findings

A Peat Landslide Hazard Risk Assessment (PLHRA) was carried out for the 2016 ES which identified three areas that have a medium to high risk of peat sliding, due principally to surface slopes, greater peat thickness and proximity to water bodies. The risk of instability in all other areas was assessed as very low to low risk.

The 2016 ES identified that the realignment and improvements to the existing road would pass through an area of extensive and highly variable peat cover. A Peat Management Plan (PMP) supported the 2016 ES due to the potential impact the enabling works for the road could have on the peat deposits. The PMP noted that there is potential for excavated peat to be reused on site (in the backfilling of temporary excavations or for earthworks and landscaping) or opportunities to use peat for restoration at Viking Wind Farm development, although a notable quantity may need to be sent to landfill under a waste exemption license.

Waters in the study area, including Sandwater Loch which is designated as a SSSI, were deemed to be of high vulnerability and sensitive to effects of pollution from silt laden runoff. However, the 2016 ES considered that with the integration of mitigation measures, no significant residual effects would occur. Proposed mitigation measures included the following:

- the adoption of Sustainable Urban Drainage (SuDS) to minimise any change to hydrology of the site and surrounding area;
- implementation of pollution control measures with reference to SEPA guidance; at locations close to interaction with watercourses, the application of silt entrapment measures would be recommended;
- location of all temporary stockpiles at least 50 m from the edge of watercourses;
- ensuring that all construction works follow good practice principles and adhere to drainage measures employed; continued monitoring by the ECoW throughout the construction phase; and

- no discharge of water from settlement ponds or temporary stockpiles allowed within 50 m of watercourses.

These measures would all be captured in the CEMP.

Other mitigation measures and techniques were set out in the 2016 ES associated with impacts to natural drainage patterns, soil and peat storage and reuse, chemical contamination runoff and pollution, groundwater disruption, bank integrity and peat landslide hazard risk. It was concluded that, after taking into consideration these measures, no significant effects on geology, hydrogeology and hydrology features were predicted.

Potential Effects

Potential effects could include:

(a) Construction

- Excavation, removal and storage of soils and peat;
- Impacts of Erosion;
- Impacts on Surface and Ground Water Flows and Quality; and
- Impacts on Ground Conditions.

(b) Operation

- Impacts on Ground Conditions; and
- Impacts on Surface and Ground Water Flows and Quality.

A notable change to the Proposed Development compared to that assessed in the 2016 ES is the removal and reinstatement of approximately 1.2 km of the existing B9075 road, from within the vicinity of Lamba Scord to where the realigned road meets the existing B9075, near Burn of Weisdale, as shown on Figure 2.

The design of the Proposed Development has been based on the principal that a significant amount of the road will be floated over deep peat thereby minimising peat excavations, reducing excavated peat volumes and leaving vegetation and soils intact.

Proposed Scope of Assessment

The EIA Report will include an assessment of geology, hydrogeology and hydrology.

A draft PMP will be prepared and included with the EIA Report. It is not proposed to update the PLHRA from the 2016 ES as the results of this assessment will not change and have been considered in the development of the PMP, and design of the road.

5.5 Cultural Heritage and Archaeology

Baseline Description

Two C listed buildings are located within 1 km of the B9075; South Setter House and Kergord House (see Figure 3), which date to the late 18th and mid-19th centuries respectively and are considered of low cultural heritage value.

Information obtained from the National Monument Record of Scotland, Sites and Monuments Record and a walkover survey undertaken in 2013 suggest that the majority of cultural heritage assets in the vicinity of the B9075 comprise remains of post-medieval farming activity including boundary banks, ditches and fence-lines. Remains of structures such as a house, a mill, sheepfold and enclosures are also present.

Previous Assessment Findings

Direct Effects

The 2016 ES predicted that there would be direct effects on elements of turf-covered earthwork banks, including a ditch; the area of a former late 19th/early 20th century building and a cattle roup; remains associated with an enclosure recorded on historic mapping; the routes of various former roads and tracks; and the location of a former foot bridge. There would also be potential for direct effects on peripheral elements of the mill at the Burn of Swirtars; an Old Sheepfold; earthworks banks in the west and south-west of the road; and the former buildings at the Burn of Weisdale.

Indirect Effects

The 2016 ES predicted that indirect effects would be limited to effects on the settings of Kergord House and of South Setter House (see Figure 3).

The 2016 ES suggested mitigation to avoid, minimise or offset effects, which included: carrying out further investigation where there is potential for unknown archaeological remains to survive to allow the preservation or recording of significant remains; archaeological sites with the potential to be damaged by the works were recommended to be fenced off but where preservation in situ would not be feasible, archaeological excavation was suggested; and an archaeological watching brief to be carried out during ground breaking works to identify and record remains prior to their destruction.

With the application of the above mitigation, no significant residual direct or indirect effects were identified in the 2016 ES.

Potential Effects

Potential direct effects relate to the possibility of disturbing, removing or destroying insitu remains and artefacts during the construction phase of works. An indirect effect refers to any change in the baseline condition of a designated heritage asset.

Proposed Scope of Assessment

No further assessment on cultural heritage is proposed as it is anticipated that with the implementation of mitigation measures, residual effects would not be significant.

Instead, a Cultural Heritage Management Plan (CHMP) is proposed to be completed, which would then form part of the CEMP. The CHMP would comprise a desk-based study to identify known cultural heritage assets within close proximity to the Proposed Development. Assets would be identified on plan, and recommendations provided in the form of a tabulated assessment for asset specific mitigation measures, where appropriate.

5.6 Air Quality and Noise

The 2016 ES included an air quality assessment, following guidance published by the Institute of Air Quality Management (IAQM) 2014, along with a noise assessment to compare predicted effects from construction

and operation of the development with the assumed baseline noise environment. Site based surveys for both air quality and noise were scoped out following consultation with SIC Environmental Health Department.

Baseline Description

Air Quality

The B9075 does not lie within an area identified by SIC as a priority for improving air quality. Annual mean NO₂ (nitrogen dioxide), PM₁₀ (particulate matter of size fraction approximating to <100mm diameter) and PM_{2.5} (particulate matter of size fraction approximating to <2.5 mm) concentrations are not expected to exceed the air quality objectives (for the years 2015-2017).

Noise

There is a single residential receptor (Sandwater) at the eastern extent of the B9075 and a small hamlet called Setter containing three residential receptors to the west. Basic noise levels for the A970 and B9075 were calculated in the 2016 ES.

Previous Assessment Findings

Air Quality

The 2016 ES identified that construction phase impacts may arise due to fugitive dust emissions, which are commonly created by construction activities. However, with the implementation of good practice measures such as monitoring of dust levels, screening stockpiles and implementing speed-limit for site traffic, no significant effects during construction were anticipated.

The assessment of operational phase air quality impacts were scoped out of the 2016 ES. It was assumed that while vehicular traffic on the road network would lead to emissions of air pollutants, the proposed changes were essentially a 'like-for-like' replacement of the existing B9075 and no changes to the existing traffic flows would be anticipated once the road is operational.

Noise

Noise would be emitted by equipment and vehicles used during the construction phase and by any operational traffic during the operation phase. The level of noise emitted by these sources, and the distance to receiver locations were the main factors assessed in the 2016 ES to determine potential effects of noise at receptor locations.

Residential receptors considered in the 2016 ES included Sandwater House and Setter. No significant residual noise effects were assessed as a result of construction or operational activities at either property providing mitigation in the form of a noise management section within the CEMP is applied.

Proposed Scope of Assessment

Given the nature and scale of the Proposed Development, with the implementation of appropriate mitigation measures, no significant effects are anticipated.

It is therefore proposed that an assessment on the potential effects of noise and air quality assessment as a result of the Proposed Development is scoped out of the EIA Report. However, the mitigation measures referred to in the 2016 ES will be reviewed and updated as required in light of the changes associated with the Proposed Development to minimise any air quality or noise impacts during construction and operation. Mitigation measures and commitments will be included in a new schedule of mitigation measures, to be included in the EIA Report, and incorporated into the CEMP.

5.7 Land Use, Socio-economics, Access and Recreation

The 2016 ES included a desk based assessment on the potential land use, socio-economic, access and recreation effects resulting from the construction and operation of the B9075 road improvement works within a 1 km buffer.

Baseline Description

The surrounding area is sparsely populated and comprises of undulating barren, open heather moorland of limited agricultural value. There is a core path that leaves the B9075 at the eastern extent, heading south to facilitate access to the banks of Sandwater Loch. This forms part of a variety of outdoor-based recreational activities in the area which include walking, bird watching, fishing, cycling and horse-riding.

Previous Assessment Findings

The 2016 ES considered that there would be a minor effect on land use as a result of the permanent acquisition of land required to accommodate the road improvement works, currently used for rough sheep grazing. Similarly, a minor adverse impact upon access and recreational users during construction was predicted.

There would be a minor beneficial socio-economic effect during construction as a result of the construction workforce using local amenities. No socio-economic effects are predicted during the operational phase.

Overall the 2016 ES predicted that there would be no significant effects as a result of the road improvement works as long as mitigation measures identified to prevent or minimise predicted impacts or enable effects to be beneficial were implemented. These include designing the road in line with latest highway standards, the installation of signage and segregated pedestrian walkways during construction, and use of local suppliers to maximise beneficial effect upon the local economy.

Proposed Scope of Assessment

The Proposed Development would be completely 'off-line' compared to the previous proposal and therefore impacts upon access and recreational users would likely be reduced during construction as there would be segregation from the works. A notable change to the Proposed Development compared to that assessed in the 2016 ES is the removal and reinstatement of the existing B9075 from Lamba Scord to within the vicinity of the Burn of Weisdale (approximately 1.2 km), as shown on Figure 2. However, the section of road at Sandwater Loch would be retained for recreational access to this area, whilst the realigned road would link into the Viking Wind Farm access track network within the vicinity of Lamba Scord, providing wider access opportunities to the Island.

It is therefore proposed to scope out a detailed assessment on land use, socio-economics, access and recreation. However, appropriate mitigation measures will be developed and included in a new schedule of mitigation measures, to be included in the EIA Report.

5.8 Traffic and Transport

An assessment on traffic and transport effects was carried out and documented in the 2016 ES. This considered the potential for increased traffic on the public road network (A970 and relevant section of B9075), the potential for congestion, journey delay, safety and degradation of the road surface.

Baseline Description

The A970 forms a main strategic road on the mainland island, running north to south and forming a spine road for the island. It is a single carriageway for the entire length. The existing B9075 is a single carriageway B classified road that forms a strategic route across the island, running east to west between the A970 and A971.

Previous Assessment Findings

The 2016 ES considered that minor effects on congestion and journey delay are likely as a result of the road improvement works and traffic management would be required during the construction phase. There would also be the possibility of temporary road closures during key activities.

Proposed Scope of Assessment

The Proposed Development would be completely 'off line' from the existing B9075 road. Therefore, during construction, all 'general public' traffic will be separated from the construction works and the potential for construction impact would be minimised.

It is proposed to scope out a detailed assessment on traffic and transport from the EIA Report as no significant effects are anticipated to occur.

However, a Traffic Management Plan (TMP) would be prepared prior to construction works commencing to enforce appropriate measures such as approved haulage routes and provision of details for traffic control if required.

5.9 Forestry

There are no areas of commercial forestry within the vicinity of the Proposed Development and therefore an assessment of forestry would not be required.

5.10 Climate Change

With regard to climate change, in the context of the EIA process climate change is considered both in relation to the contribution of the Proposed Development to increasing or decreasing gaseous emissions with global warming potential (GWP), and in relation to climate change adaptation.

Emissions associated with the Proposed Development would be limited to temporary and short term emissions of exhaust gases from vehicles and construction plant, and the potential for the release of carbon dioxide as a result of dewatering and exposing peat and peat soils during construction. Neither source is considered likely to be significant in terms of GWP.

In terms of climate adaptation, consideration would be given to the potential implications of climate change on road design (e.g. design for increased flood risk); however, no potential for significant impacts have been identified and it is therefore proposed that an assessment of climate change is scoped out of the EIA.

5.11 Human Health

Potential effects on human health as a result of the Proposed Development could relate to noise or air quality during construction. Neither of these topics are considered to result in a significant effect and are proposed to be scoped out of the EIA Report. It is therefore proposed that an assessment of human health is scoped out of the EIA.

5.12 Risk of Major Accidents and / or Disasters

Given the nature of the Proposed Development, and its remote location, the risk of a major accident or disaster is considered to be extremely low. Furthermore, the Principal Designer would need to fully assess risks and mitigate as appropriate during the design stage as part of the requirements of the Construction (Design and Management) Regulations (2015).

It is therefore proposed that an assessment of the risk of major accidents and / or disasters is scoped out of the EIA.

6

Summary of Issues Scoped In and Out

Table 7.1 below lists each topic and the elements scoped in and out from further assessment; based on the justification given in the previous sections.

Table 7.1 Issues Scoped In and Out

Topic	Scoped In	Scoped Out
Landscape and Visual	Landscape mitigation measures.	Landscape assessment (designations and character). Visual impact assessment
Ornithology	Review of mitigation measures.	Ornithology assessment.
Ecology, Biodiversity and Nature Conservation	Assessment on Sandwater Loch SSSI. Review of mitigation measures and production of draft CEMP.	Assessment of habitats, protected species, fish and macroinvertebrates.
Geology, Hydrogeology and Hydrology	Assessment of geology, hydrogeology and hydrology. PMP	
Cultural Heritage	Cultural Heritage Management Plan.	Assessment of direct or indirect impacts.
Air Quality and Noise	Review of mitigation measures and production of draft CEMP.	Assessment of air quality and noise.
Land Use, Socio-economics, Access and Recreation	Review of mitigation measures and production of draft CEMP.	Assessment of land use, socio-economics, access and recreation.
Traffic and Transport	Construction Traffic Management Plan.	Construction and operational traffic assessment.
Forestry	-	Forestry assessment.
Population and Human Health	-	Assessment of population and human health.
Climate Change	-	Assessment of climate change.
Accidents and Disasters	-	Accidents and disasters assessment.

Key:



Proposed B9075 Sandwater Road Alignment

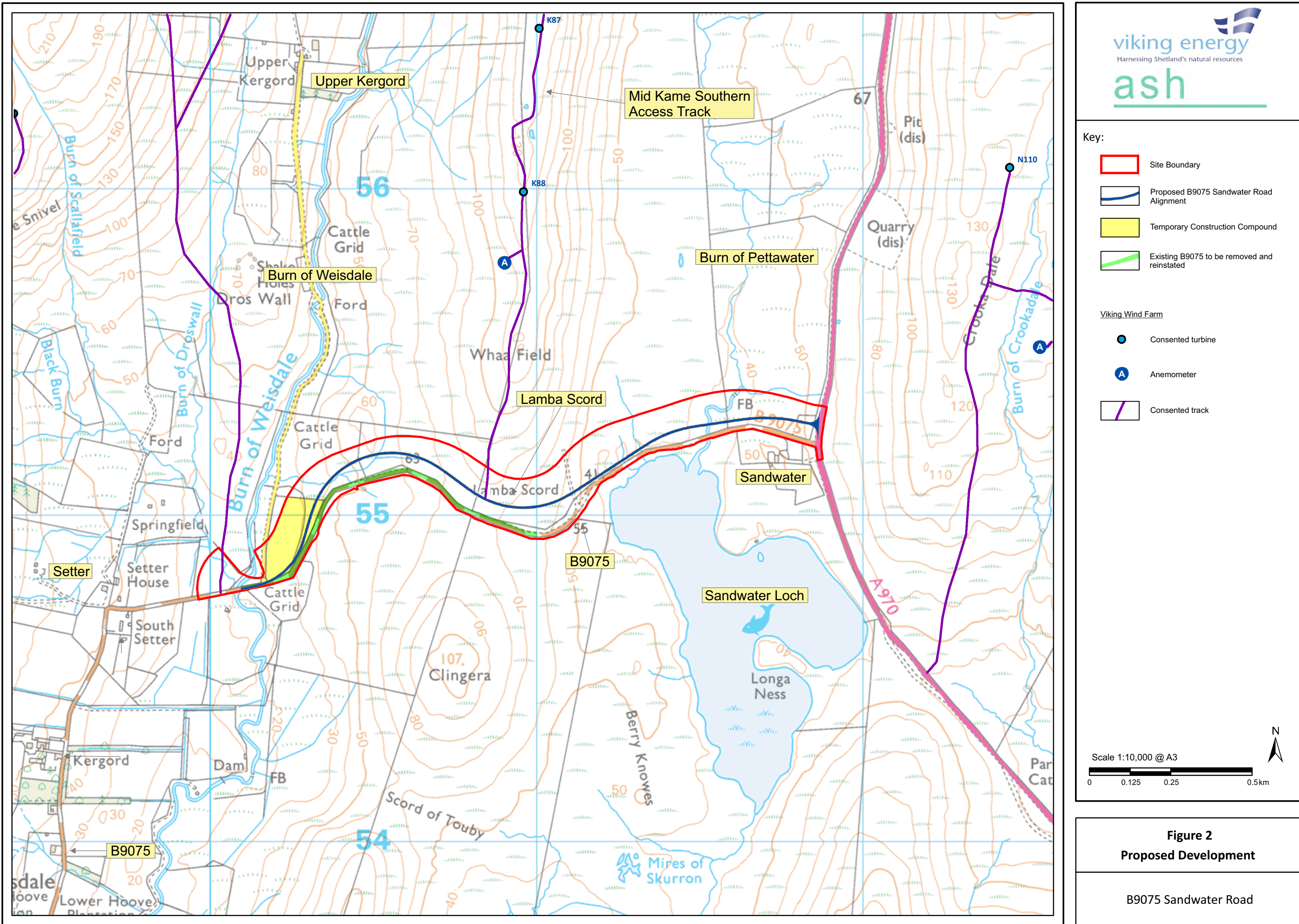
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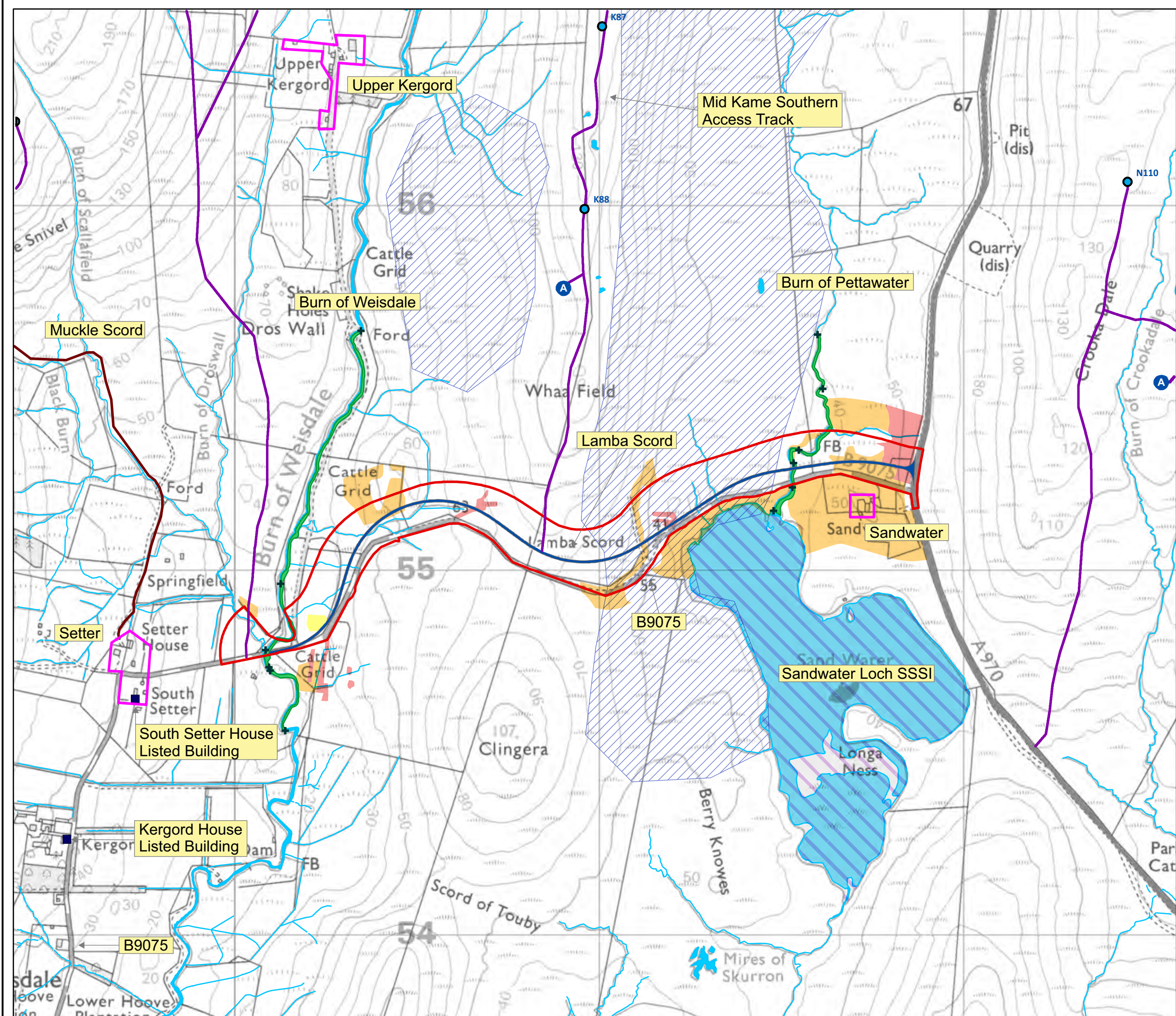


Figure 1 - Location Plan

B9075 Sandwater Road







- Key:
- Site Boundary
 - Proposed B9075 Sandwater Road Alignment
 - Temporary Construction Compound
- Viking Wind Farm
- Consented turbine
 - Anemometer
 - Consented track
- Environmental Designations
- Site of Special Scientific Interest (SSSI)
 - Listed Building
- Environmental Constraints
- Potentially sensitive areas for Whimbrel
 - Watercourses / Water Bodies
 - High Groundwater Dependent Terrestrial Ecosystems
 - Moderate Groundwater Dependent Terrestrial Ecosystems
 - Watercourses may be used by foraging otter
 - Otter spraints
 - Settlement / Built Receptors
 - Aspirational Core Path

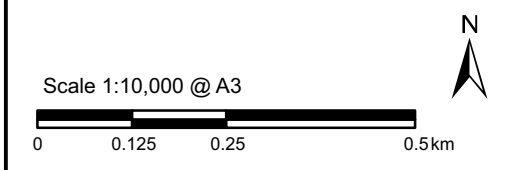


Figure 3
Environmental Designations
and Constraints

B9075 Sandwater Road