

moray offshore renewables ltd

Developing Wind Energy In The Outer Moray Firth

Environmental Statement

Modified Transmission Infrastructure for
Telford, Stevenson and MacColl Wind Farms

Technical Appendix 2.1 B

Environmental and Planning Study
(RPS, 2013)





Moray Offshore Renewables Ltd (MORL)

Onshore Cable Route and Substation Option Areas Feasibility Study

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EXECUTIVE SUMMARY

RPS was appointed by Moray Offshore Renewables Limited (MORL) to undertake a high level feasibility assessment for the onshore section of their export cable route and substation in Aberdeenshire from the MORL wind farms in the Outer Moray Firth.

From a proposed landfall point at Inverboyndie near Banff, MORL has identified seven potential substation option area locations in the close vicinity of a 250 kV overhead electricity line to the south of New Deer. For the purposes of this study, the following project assumptions were made:

- The proposed substation compound would house two onshore converter substations, one owned by MORL and the second owned by Scottish Hydro-Electric Transmission (SHE-T). The two substations may be housed separately or within one building. The MORL substation would cover a maximum area of approximately 200m x 170m (8.5 acres) and would have an indicative height of up to 25m. The SHE-T substation would cover a maximum area of approximately 300m x 284m (8.5 hectares).
- Cabling between the landfall point and the substation location will be underground.
- There is the possibility that there may need to be some overhead cabling between the two substations, and also from the existing 250 kV overhead electricity line to the connecting substation, albeit this is likely to be fairly short.

This study provides an initial high level review of planning and environmental constraints in order to inform the following:

- A feasibility assessment of each of the seven proposed substation option area locations.
- Identification of a preferred cable route (approximately 500 metres wide) to each of the proposed substation option area locations from the landfall point.
- If possible, identification of an alternative cable corridor (approximately 500 metres wide) to each of the proposed substation option area locations from the landfall point.
- A summary of environmental surveys that is likely to be required, including details on the timescales of each of the surveys.

With reference to the identified planning and environmental constraints, all of the substation option area locations were classified as 'Satisfactory', a 'Possibility' or 'Unsatisfactory'. Substation option area locations 1, 2, 4, 6 and 7 are considered to present a 'Possibility' for substation development and have therefore been shortlisted for further investigation. Substation option area locations 3 and 5 were considered to be 'Unsatisfactory' from a planning and environmental perspective and have not therefore been shortlisted for further investigation.

In conjunction with the other engineering and economic appraisals that MORL are understood to have undertaken, the constraints identified for the shortlisted substation options areas should now be taken forward by MORL for more detailed assessment. The key constraints that will require to be considered when taking forward these shortlisted substation option areas will be minimising the effects of the substations on i) the character and appearance of the existing rural landscape, ii) wildlife interests and iii) residential amenity.

With regards to the proposed cable route, the principal conclusion of this appraisal is that the land referenced area for the cable corridor is relatively free from any significant planning or environmental constraints and is therefore considered to be satisfactory. The only potential exceptions to this relatively constraint free position are several areas of ancient woodland which are generally considered to be 'Unsatisfactory' for underground cable development. The only other potential constraints are the landfall area to the south of Boyndie Bay and in the vicinity of Craigston Castle and its associated woodlands which are considered to present a 'Possibility' for a underground cable development. In the light of these conclusions it is considered unnecessary to define specific 500m corridors within the referenced land at this stage. This level of detail should only become necessary after the next stage of more detailed investigations.

In conjunction with the other engineering and economic appraisal, it is considered that the next step for the substation option areas shortlisted for more detailed assessment should include:

- *Pre-application consultation with Aberdeenshire Council and other statutory and non consultees. In particular it is recommended that detailed consultation is had with Scottish Natural Heritage (SNH) to discuss the findings of the feasibility study and to confirm ecology surveys that may be required. Most importantly the meeting.*
- *Undertaking the following environmental surveys for each of the substation option areas:*
 - *Extended Phase 1 Habitat Surveys;*
 - *Protected Species Surveys;*
 - *Geomorphology Survey;*
 - *Landscape and Visual Survey;*
 - *Noise Surveys; and*
 - *Cultural Heritage Walkover Surveys.*
- *Undertaken a detailed environmental appraisal of the environmental impacts of the short listed substation option areas.*

Full details on the timescales for ecology surveys are provided within Appendix 3.

1 INTRODUCTION

Background

- 1.1 RPS was appointed by Moray Offshore Renewables Limited (MORL) to undertake a high level feasibility assessment for the onshore section of their export cable route and substation in Aberdeenshire from the MORL wind farms in the Outer Moray Firth.
- 1.2 It should be noted that this study focused on the following planning and environmental constraints only:
- Natural heritage;
 - Archaeology and cultural heritage;
 - Landscape and visual;
 - Noise;
 - Hydrology;
 - Land use; and
 - Planning policy.
- 1.3 The influence of other constraints, primarily engineering and economic constraints, are considered to be subject to separate appraisal and are not therefore discussed within the findings of this report.

Project Description

- 1.4 The onshore connection of the MORL wind farms in the Outer Moray Firth to the National Grid will be primarily composed of the following key elements:

Cable Landfall

- 1.5 The cable landfalls are the main area of interaction between the onshore and offshore components of the project. This study is based upon a proposed buried landfall point at Inverboyndie. For the avoidance of doubt, it is not the purpose of this study to comment on the feasibility of the proposed cable landfall point at Inverboyndie.

Onshore Transmission Cable

- 1.6 Delivery of the electricity from the MORL wind farms will be achieved via an onshore cable, connecting the onshore substations to the landfall and the subsea export cable beyond.
- 1.7 For the purposes of this study, it is assumed that the width of the onshore cable corridor will be approximately 500m wide and that the cable will be buried underground. It is noted however that there is the possibility that there may need to be some overhead cabling between the two proposed substations (as discussed below) and also from the existing 250 kV overhead line, albeit that this overhead cabling is likely to be relatively short.
- 1.8 MORL have provided a map showing the location of land that has been referenced to them from the proposed landfall point at Inverboyndie to the proposed substation option area locations near New Deer. This referenced land is identified on Figure 1. It is noted that although this referenced land signifies a significant cable corridor, that this corridor is still flexible. Consequently it is acknowledged that the onshore cable route can divert from this referenced land if necessary.

Onshore Substations

- 1.9 The onshore converter substations will provide the means by which the electricity being transported via the offshore export cable and onshore underground cable will be transmitted to

the National Grid. Two onshore substations will be required for this purpose, one owned by MORL and a second owned by Scottish Hydro-Electric Transmission (SHE-T).

- 1.10 The detailed designs of the onshore substations are not known at this point in time. However, MORL have advised that the footprint of the MORL substation would cover a maximum area of approximately 200m x 170m (8.5 acres) and would have an indicative height of up to 25m. The SHE-T substation would cover a maximum area of approximately 300m x 284m (8.5 hectares).
- 1.11 MORL have identified seven potential onshore substation option area locations for the purposes of this feasibility study. All of these potential substation option area locations are located to the south of New Deer where a 250 kV overhead electricity lines runs, thereby enabling the substations to be easily connected to the National Grid with minimal overhead cabling. The locations of the seven proposed substations option areas identified by MORL are shown on Figure 2.

Study Purpose

- 1.12 This study provides an initial high level review of planning and environmental constraints in order to inform the following:
- A feasibility assessment of each of the seven proposed substation option area locations.
 - Identification of a preferred cable route (approximately 500 metres wide) to each of the proposed substation option areas from the landfall point.
 - If possible, identification of an alternative cable corridor (approximately 500 metres wide) to each of the proposed substation option areas from the landfall point.
 - A summary of environmental surveys that is likely to be required, including details on the timescales of each of the surveys.

Report Structure

- 1.13 The remainder of this report is split into the following sections:
- Section 2 – Study Methodology;
 - Section 3 – Substation Option Areas Appraisal;
 - Section 4 – Onshore Cable Option Appraisal; and
 - Section 5 – Conclusions and Next Steps.

2 STUDY METHODOLOGY

Overall Approach

- 2.1 For the purposes of a high level planning and environmental appraisal, the key guiding principle is to avoid as many 'show stopper' constraints as possible. Show stopper constraints are considered to be constraints that would likely result in either unacceptable environmental effects or constraints that would result in the project being unlikely to obtain planning permission. The ultimate goal is to guide the selection of the proposed substation and proposed onshore cable route to a location that minimises environmental risk and maximises the likelihood of obtaining planning permission. Another important guiding principle is to ensure that the data collected and analysed is appropriately detailed for the level of review being undertaken.
- 2.2 Within this context, a simple but effective approach to this planning and environmental appraisal has been adopted which adheres to the following principles:
- A desk based assessment has been undertaken to collect and collate baseline planning and environmental data for the seven substation options and the land referenced area for the cable route as identified by MORL.
 - The baseline data has been captured on GIS and has been summarised in this report for the purposes of providing an overview of the key constraints in relation to the seven substation option areas and the land referenced for the cable route corridor.
 - A field visit has been undertaken to confirm the baseline data and to identify any further constraints that may be present that had not been identified during the desk based assessment.
 - A review of the constraints affected by each of the substation option areas and the land referenced for the cable route corridor has been completed.
 - Classification of the constraints has then been undertaken in order to identify which substation option areas should be taken forward for further detailed assessments and to identify optimum cable route corridors and possible alternative cable route corridors to each substation option area where possible.
- 2.3 Further details on each of the above stages are provided below.

Baseline Data Collection and Collation

- 2.4 The desk based assessment sought to identify the following planning and environmental constraints for both the proposed substation option area locations and the land referenced area for the cable route corridor:
- Nature conservation designations
 - Special Protection Areas (SPAs)
 - Special Areas of Conservation (SACs)
 - Ramsar
 - Sites of Special Scientific Interest (SSSIs)
 - National Nature Reserves (NNRs)
 - Local Nature Reserves (LNRs)
 - Sites of Interest to Natural Science (SINS)
 - RSPB Reserves
 - Scottish Wildlife Sites
 - Ancient Woodland

- Protected habitats and species records
- Protected archaeology and cultural heritage designations and constraints
 - Scheduled monuments
 - Listed Buildings
 - Gardens and Designed Landscapes
 - Conservation Areas
- Landscape designations
 - National Scenic Areas
 - Areas of Landscape Significance
 - Protected Views
 - Wild land
- Landscape character
- Land use
- Tourism and Recreation
 - Country Parks
 - Regional Parks
 - Longer distance routes
 - Core Paths
- Flood risk
- Planning policy constraints
- Any major planning applications or allocations that may represent a constraint to development.

2.5 A detailed breakdown of the information sources for each of the above constraints is presented in Appendix 1.

2.6 The baseline data has been captured to form a constraints map for the seven substation option area locations and the land referenced for the cable route corridor and this is presented graphically in Figures 3a to 3g.

Site Visit

2.7 The site visit sought to confirm the data captured for the desk based assessment as far as practicable and to identify any further constraints present on the seven substation option area locations that may be present that had not previously been identified. The site visit was restricted to publically accessible area as access to private land was not available at the time of survey.

2.8 In particular, the site visit sought to identify:

- Those properties whose residential amenity may be affected by the landscape and visual effects of the proposed substations, taking into account their proximity to the site, intervening topography and screening.
- Those properties whose residential amenity may be affected by the noise effects of the proposed substations, taking into account their proximity to the site and existing background noise levels.
- Primary habitats on site and the potential for protected species.

2.9 For the avoidance of doubt, a site visit was not undertaken for the purposes of the cable route corridor given the physical extent of the corridor. Consequently a site visit is recommended during subsequent stages of the selection process for the optimal cable route and any identified alternatives.

Appraisal

2.10 Once captured, the data was appraised against each of the seven substation option areas as well as with the land referenced for the cable route corridor. In order to guide the process of the site appraisal, the following criteria/principles were considered:

- potential effects upon international and national protected or designated resources;
- potential effects upon regionally and locally protected or designated resources;
- risks associated with flooding;
- potential land use impacts;
- avoidance of conflict with other proposed development;
- likely compliance with planning policy.

2.11 Each substation option area was then appraised on the basis of professional judgement and assigned one of the following criteria:

Category	Criteria
Satisfactory	Key risks should be capable of successful resolution through the adoption of standard mitigation measures. Good potential for development.
Possibility	Key risks that either in isolation or combination could lead to a refusal of planning permission if not mitigated for sufficiently. Although the issue should generally be capable of successful resolution, the issue may nevertheless require significant attention during construction and/or operation. Moderate potential for development.
Unsatisfactory	Key risks of such significance that there is a high probability that planning permission may not be granted because of a specific, or combination of specific issues. Alternatively the constraints may be such that they could cause excessive restrictions to the progression of the site. Poor potential for development.

3 PLANNING AND ENVIRONMENTAL BASELINE

Introduction

- 3.1 This section summarises the key planning and environmental constraints that lie within the land referenced area for the cable route corridor and substation option areas that have been taken into account in this feasibility study.

Planning and Environmental Constraints

Planning Policy and Applications

- 3.2 The Development Plan for the land referenced for the onshore cable route corridor and substation option areas currently comprises the Aberdeen City and Shire Structure Plan (ACSSP) 2009 and the Aberdeenshire Local Development Plan (ALDP) (2012).
- 3.3 As part of the reform of the planning system in Scotland supplementary guidance now has greater weight and forms parts of the Development Plan. The associated Supplementary Guidance (SG) for the ALDP was formally adopted in June 2012 and provides more detailed information on specific issues, proposals and sets out detailed policies.
- 3.4 The majority of the land referenced for the cable route corridor and all of the substation option areas comprise land defined as countryside within the ALDP.
- 3.5 Within the countryside, **ALDP Policy 3: Development in the Countryside** provides that development will be promoted in the countryside where it meets the needs of a rural community by contributing to its overall social and economic wellbeing and promotes vigorous and prosperous rural settlements.
- 3.6 Whilst the proposed cable route and substations are not a wind energy development, they are a fundamental element of the MORL wind farms in the Outer Moray Firth and consequently the criteria of SG Rural Development 3: Other Renewable developments are considered to be of relevance.
- 3.7 **SG Rural Development3: Other Renewable Energy Developments** provides that Aberdeenshire Council will approve renewable energy development, subject to other policies, if it is located, sited and designed in accordance with the following criteria. The applicant must demonstrate that:
1. any new facilities are well related to the source of the primary renewable resources that are needed for operation; and
 2. the proposal will not compromise public health, safety or amenity; and
 3. satisfactory steps will be taken to mitigate any negative development impacts on occupiers of nearby properties (in or outwith a settlement boundary).
- 3.8 The policy also provides that in all cases, if consent is granted, that Aberdeenshire Council will approve appropriate conditions (along with a legal agreement under Section 75, where necessary) relating to the removal of the development and associated equipment and to the restoration of the site, whenever the consent expires or the project ceases to operate for a specific period.
- 3.9 In the context of the above policy criteria, it is considered that there is clear operational need to locate the proposed substations and onshore cable route in this locale in order to make use of the existing electricity infrastructure. Consequently the principle of the proposed onshore cable route and substations should be acceptable. However, in the context of determining the acceptability of the proposed development, it is considered that the key policy criteria above relevant to identifying the most suitable substation location and cable route corridor will be proximity of the site to settlements and properties where there is greater potential for adverse impacts upon amenity.

- 3.10 Part of the land referenced for the onshore cable route corridor is defined as the coastal zone in the ALDP. The location of the coastal zone is shown on Figure 3g.
- 3.11 **ALDP Policy 4: Special Types of Rural Land** provides that Aberdeenshire Council will protect the special character of the coastal zone and that the Council will have special controls on development in these areas. These special controls include a presumption against development that would erode the special nature of the coastal zone.
- 3.12 The detailed circumstances in which development in the coastal zone may be acceptable is set out in SG STRLtype1: Development in the Coastal Zone.
- 3.13 **SG STRLtype1: Development in the Coastal Zone** provides that Aberdeenshire Council will approve development within the coastal zone if:
1. the site is within a settlement boundary identified in the plan; or
 2. outwith the settlement boundary the proposal requires a coastal location, and the social and economic benefits outweigh any adverse environmental impact; or
 3. it is demonstrated that there is no alternative site as it is the redevelopment of an existing building, or within the curtilage of an existing building.
- 3.14 In either of the above cases, the policy also provides that the applicant must also demonstrate that:
- a) it will not contribute to the coalescence of coastal developments; and
 - b) it will respect the character and amenity of the surrounding area; and
 - c) the site is not at risk from flooding, overtopping, landslip or erosion; and
 - d) there is no adverse impact on water quality and it will not result in the pollution of coastal waters; and
 - e) it will not unreasonably adversely impact on natural coastal processes or habitats.
- 3.15 Given that there will be no ground presence in the coastal zone following construction of the onshore cable, it is not considered that the above criteria raise any specific location guidance in relation to the identification of the onshore cable route corridor. It is considered that the proposed onshore cable route should be capable of meeting the criteria of SG STRLtype 1: Development in the Coastal Zone.
- 3.16 Part of the land referenced for the onshore cable route corridor is defined as areas of search for minerals in the ALDP. The location of these areas of search for minerals are shown on Figure 3g.
- 3.17 **ALDP Policy 14: Safeguarding of Resources and Areas of Search** provides that Aberdeenshire Council will not support developments that sterilise, degrade or otherwise make unavailable key strategic resources, including important mineral deposits.
- 3.18 In light of the above policy it is recommended that the preferred cable route avoid areas of search for minerals where possible. All areas of search for minerals within the land referenced area should therefore be considered a possibility only for development of the onshore cable route.
- 3.19 In addition to the above policies, particular attention should also be given to a number of other policies in the ALDP that relate to ensuring protection of the landscape, nature conservation interests and the amenity of the area. These include:
- **ADLP Policy 11: Natural Heritage** which provides that Aberdeenshire Council will improve and protect designated nature conservation sites and the wider biodiversity and geodiversity of the area. The way they will do this is set out in detail in the following Supplementary Guidance:
 - SG Natural Environment1: Protection of nature conservation sites
 - SG Natural Environment2: Protection of the wider biodiversity and geodiversity

- **ADLP Policy 12: Landscape Conservation** which provides that Aberdeenshire Council will plan for and promote the improvement and protection of all landscapes in Aberdeenshire by recognising and using landscape character areas. The way they will do this is set out in detail in the following Supplementary Guidance:
 - SG Landscape1: Landscape character
 - SG Landscape2: Valued views

- **ADLP Policy 13: Protecting, Improving and Conserving the Historic Environment** which provides that Aberdeenshire Council supports the protection, improvement and conservation of the historic environment. There will be a presumption against development that would have a negative effect on quality of these historic assets. The way they will do this is set out in detail in the following Supplementary Guidance:
 - SG Historic Environment1: Listed buildings
 - SG Historic Environment2: Conservation areas
 - SG Historic Environment3: Historic gardens and designed landscapes
 - SG Historic Environment4: Archaeological sites and monuments

- **ADLP Policy 14 Safeguarding of Resources and Areas of Search** provides that Aberdeenshire Council will not support developments that sterilise, degrade or otherwise make unavailable key strategic resources, including the water environment, important mineral deposits, prime agricultural land, open space, trees and woodlands. The way they will do this is set out in detail in the following Supplementary Guidance:
 - SG Safeguarding1: Protection and conservation of the water environment
 - SG Safeguarding2: Protection and conservation of agricultural land
 - SG Safeguarding3: Protection and conservation of trees and woodland
 - SG Safeguarding4: Safeguarding transportation facilities
 - SG Safeguarding7: Areas of search for minerals

3.20 From a desk based search of planning applications, no major planning applications or allocations that may represent a constraint to development of either the onshore cable route or substation option areas were identified.

3.21 Specific environmental constraints are discussed further within this report under the relevant topic headings.

Nature Conservation Designations

3.22 The following statutory and non statutory nature conservation designations have been taken into account in this feasibility study as a potential constraint:

- International Nature Conservation Designations
 - Special Protection Areas (SPAs)
 - Special Areas of Conservation (SACs)
 - Ramsar

- National Nature Conservation Designations
 - Sites of Special Scientific Interest (SSSIs)
 - National Nature Reserves (NNRs)

- Local Nature Conservation Designations
 - Local Nature Reserves
 - Sites of Interest to Natural Science
 - RSPB Reserves
 - Scottish Wildlife Trust Reserves
 - Ancient Woodland

3.23 Any parts of the onshore cable route land referenced area or substation option areas which lie within any of the above nature conservation designations would be considered unsatisfactory and discounted. Any parts of the onshore cable route land referenced area or substation option areas which lie in close proximity to any of the above nature conservation designations would be considered a possibility depending upon its potential to effect the designation.

3.24 There are no international or national nature conservation designations which lie within the land referenced area for the onshore cable route or the proposed substation option areas. The nearest international and national nature conservation designations to these areas are identified in the table below.

Nature Conservation Designation	Distance to Land Referenced Area (km)	Summary of Key Characteristics
Cullen to Stake Ness Coast SSSI	0.97	The site is designated for a mix of biological and geological features, including lowland dry heath, springs and saltmarsh.
Tore of Troup SSSI	3.95	The site is designated for upland habitat features.
Gight Woods SSSI	4.34	The site is designated for upland mixed ash and oak woodland habitat features.
Reidside Moss SAC and SSSI	4.7	The site is designated for raised bog.
Turclossie Moss SAC and SSSI	4.8	The site is designated for intermediate raised bog.
Gamrie and Pennan Coast SSSI	4.9	The site is designated for a mix of biological and geological features, most importantly for the development an important assemblage of breeding seabirds.
Troup, Pennan and Lion's Heads SPA	8.3	The site is designated for a an important assemblage of breeding seabirds.
Moss of Crombie SSSI	9.74	The site is designated for intermediate blanket bog.

3.25 Given the nature of development and distance of the land referenced area for the onshore cable route and the substation option areas from these international and national nature conservation designations it is considered that all of the land referenced areas and substation option areas would be considered satisfactory with regards to these designations.

3.26 There are no Local Nature Reserves, Sites of Interest to Natural Science, RSPB reserves or Scottish Wildlife Trust Reserves within the land referenced for the onshore cable route or substation option areas.

3.27 There are a number of areas of Ancient Woodland that lie within the land referenced area for the onshore cable route. The location of these areas can be seen on Figure 3a. Ancient Woodland is defined as land that is currently wooded and has been continually wooded at least since 1750. Although not a statutory designation, it is given considerable protection through the planning process given its important biodiversity and cultural heritage value by virtue of its antiquity. Consequently it is considered that all parts of the land referenced area for the onshore cable route which are covered by Ancient Woodland be considered unsatisfactory for development.

3.28 None of the proposed substation option areas contain woodland designated as Ancient Woodland, albeit it is noted that an area located to the west and south of Option Area 3 is designated for Ancient Woodland.

Protected Habitats and Species

3.29 The NBN Gateway was used to identify data on the distribution of protected habitats and species for the land referenced area for the onshore cable route and for the substation option areas. A field visit was then undertaken to identify any signs of protected habitats and species at each of the substation option areas. This field visit was restricted to publically accessible vantage points as access to private land was not available at the time of the survey. It was not possible to undertake a similar field visit to the land referenced for the onshore cable route given the large physical extent of this area.

3.30 It is considered that any parts of the onshore cable route land referenced area or substation option areas that lie within an area of importance for protected habitats and species would be

categorised as unsatisfactory depending on the ability to mitigate the potential risk to the protected species or habitat in question. Any parts of the onshore cable route land referenced area or substation option areas which lie in close proximity to area of importance for protected habitats and species would be considered a possibility depending upon its potential to effect the designation.

3.31 The initial desk assessment indicates that the main habitats within the land referenced area are typical of the region, e.g. intensively managed farmland, plantation woodland, remnant ancient and semi-natural woodland, freshwater rivers and ditches and farm outbuildings. An Extended Phase 1 Habitat survey is recommended for the area. This will inform the need for targeted, specific ecological surveys within the land referenced area. The desk assessment suggests that the following ecological surveys are likely to be required:

- Terrestrial mammals (badger, otter, water vole and potentially red squirrel);
- Bats (particularly roost assessments); and,
- Birds (winter bird surveys and roost / nest searches).

3.32 The substation option areas were identified as having the potential for a variety of protected species including water voles, otters, badgers, bats and barn owl. All substation option areas were also identified as being suitable for winter foraging and roosting waterfowl. Details on primary habitats and protected species potential for each of the substation option areas are contained within Appendix 2. A guide to the seasonal constraints relating to surveying for each of these ecological sensitivities is presented in Appendix 3.

Landscape designations

3.33 The following statutory landscape designations have been taken into account in this feasibility study as a potential constraint:

- National Landscape Designations
 - National Scenic Areas
 - Wild Land
- Local Landscape Designations
 - Areas of Landscape Significance
 - Valued views

3.34 Given that the onshore cable route would be underground it is recognised that it would have minimal visual impact. Therefore it is considered that all parts of the land referenced area for the onshore cable route that may lie within any national or local landscape designations would be considered satisfactory.

3.35 However, given the greater visual impact of the proposed substations, any substation option areas which lie within any national or local landscape designation would be considered unsatisfactory. Any of the substation option areas which lie in close proximity to any national or local landscape designations would be a possibility and any other considered satisfactory.

3.36 There are two National Scenic Areas in Aberdeenshire: Deeside & Lochnager and the Cairngorm Mountains. In recognition of their landscape qualities these areas are now part of the Cairngorms National Park. Both these areas lie far away from the land referenced area for the onshore cable route and the proposed substation option areas and are therefore not considered to be a constraint to development.

3.37 Wild land was considered using SNH's Core Areas of Wild Land in Scotland (25 April 2013) as prepared for the draft National Planning Framework 3. None of the land referenced for the onshore cable route or any of the substation option areas fall within any identified core areas of wild land.

3.38 Areas of Landscape Significance (ALS) were areas defined by Aberdeenshire Council in the Aberdeenshire Local Plan (2006) for their local landscape value. However, the recently adopted ALDP does not identify local landscape designations. Instead, Aberdeenshire Council intends producing further planning advice on landscape character areas which will highlight areas of increased landscape sensitivity, reflecting those areas formerly designated as ALS in the previous Aberdeenshire Local Plan.

3.39 There are 42 'Valued Views' identified in the ALDP. These Valued Views are defined as rural views which are valued by the community at large and should be protected from development which would "spoil the view". All of these Valued Views represent views from public vantage points, such as formal viewpoints and key views revealed by cresting a hill.

3.40 There are no Valued Views on or in the vicinity of the proposed substation option areas. Although there are Valued Views located within the land referenced for the onshore cable route, given that the proposed onshore cable would be underground it is considered that the development of the cable route in these areas would be satisfactory.

Landscape Character

3.41 The existing SNH landscape character assessment for Banff and Buchan (SNH, 1997) covers the land referenced area for the onshore cable route corridor and the preferred substation option areas. Appendix 1 of the ALDP Supplementary Guidance provides an amalgamated revision of these Landscape Character Assessments. The assessment divides the landscape into tracts that are mapped and referred to as landscape character areas. These have been subsequently subdivided into geographically specific areas and it is these areas that provide a useful starting point for the baseline characterisation of the land referenced area for the onshore cable route and the substation option areas. These landscape character areas are described below with a summary of their key characteristics.

Landscape Character Area	Landscape Character Sub Area / Type	Summary of Key Characteristics
Coast	Cliffs of the North and South East coasts	Cliff edged headland, inlets occasional sandy bays and notable blow holes. Overall impression of open, large scale landscape, wide expanses of merging sea and sky. Vegetated slopes and frequent habitation, including ruined castles and mansion houses.
Coastal Farmland	Western Coastal Farmland	Large scale landscape, with sweeping plains rising to infrequently placed rounded hills. Substantial amount of forestry blocks are a feature. Large fields of arable and pasture land and frequent farmsteads are a feature. An awareness of the presence of the sea nearby.
Agricultural Heartland	Agricultural Heartland	Agricultural land use over gently rolling landform. Open views over the surrounding, large scale landscape. Trees in shelterbelts, along ridges, around farms and in small coniferous blocks combine to provide some contrast and prevent a sense of bleakness. Field boundary types varied between fences and hedges to the south and east with some stone walls and consumption dykes to the north near Strichen.
The Straths and River Valleys	Deveron and Upper Ythan Valleys	Shallow valleys bounded by broad rolling hills. A loose network of hedges and shelterbelts and small woodland clumps make a key contribution to the landscape character. House and villages are concentrated on the roads alongside the rivers. Presence of some castles and mansion houses. Mosaic of diverse land uses; rough sheep grazing, hay fields, cereals, commercial forestry and deciduous woods.

3.42 Scottish Natural Heritage Review No. 37 (Banff and Buchan) identifies the landfall point as being located in The Coast landscape character area, within the Cliffs of the North and South East coasts landscape type. This landscape type is an open, large-scale coastal landscape with high headlands and cliffs with some sheltered sandy bays. The landfall area is located within the sheltered bay of Boyndie Bay. This area is of increased landscape sensitivity as the area was coincident with a former ALS.

- 3.43 The land referenced area for the onshore export cable route and the onshore substation option areas are located in The Coastal Farmland landscape character area (Western Coastal Farmland landscape type), Straths and River Valleys (Deveron and Upper Ythan Valleys landscape type), and Agricultural Heartland landscape character area (Agricultural Heartland landscape type).
- 3.44 Whilst a constraint to development, all of these landscape character areas are considered to have a similar level of risk and are likely to be satisfactory for the development of the underground cable route and a possibility for the development of the proposed substations.

Archaeology and Cultural Heritage

- 3.45 This appraisal includes consideration of protected archaeological constraints, specifically Scheduled Monuments, Gardens and Designed Landscapes, Listed Buildings and Conservation Areas.
- 3.46 It is considered that any of the substation option areas that fall within any of the above cultural heritage constraints would be unsatisfactory, any that fall adjacent or within their setting would be a possibility and any other would be considered satisfactory. Given the nature of the development it is considered that any parts of the land referenced areas that fall within the above cultural heritage designations would be unsatisfactory and any that fall in close proximity would be considered a possibility depending upon its potential to effect the designation (e.g. vibration effects etc.).
- 3.47 There are a number of Scheduled Monuments within the study area which are of national importance and given legal protection under the Ancient Monuments and Archaeological Areas Act 1979. It should be noted that the setting of Scheduled Monuments is also protected.
- 3.48 The location of the Scheduled Monuments is shown in Figure 3b and are listed below from the north west of the land referenced area for the onshore cable route to the southeast:
- Hills of Boyndie Barrows and Enclosures
 - Hills of Alvah, cairns
 - Stirling Cairn
 - Eden Castle
 - King Edward Old Parish Church
- 3.49 There are two Garden and Designed Landscapes which fall within the land referenced area for the onshore cable route, namely:
- Duff House Garden and Designed Landscape, near Banff.
 - Craigston Castle Garden and Designed Landscape, near Turiff
- 3.50 There are a total of 38 listed buildings within the land reference area for the onshore cable route as shown on Figure 3b. Listed buildings and their settings are protected under the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997. Listed buildings fall into three categories as follows:
- Category A – Buildings of national or international importance, either architectural or historic, or fine little-altered examples of some particular period, style or building type (three within cable route corridor)
 - Category B - Buildings of regional or more local importance, or major examples of some particular period, style or building type which may have been altered (twenty two within cable route corridor)
 - Category C – Buildings of local importance, lesser examples of any period, style, or building type, as originally constructed or moderately altered; and simple traditional buildings which group well with other listed buildings (thirteen) within cable route corridor).
- 3.51 There are two Conservation Areas which border the land referenced area for the onshore cable route, the Whitehills Conservation Area and the Banff Conservation Area, as shown on Figure 3b. These are protected under the same legislation as for listed buildings.

3.52 None of the substation options areas contain or are in close proximity to any Scheduled Monuments, Garden and Designed Landscapes and Conservation Areas. All of the substation option areas are therefore considered to be satisfactory from a cultural heritage designation perspective.

Land Use

3.53 Land use capability was considered using the Macaulay Land Capability for Agriculture (LCA) Classification maps. Prime quality agricultural land is defined as land which falls into one of the following three classes:

- Class 1 land is capable of producing a very wide range of crops and there are no or only very minor physical limitations affecting agricultural use.
- Class 2 land is capable of producing a wide range of crops, there are minor physical limitations affecting agricultural use and the land is highly productive.
- Class 3.1 land is capable of producing a moderate range of crops, with high yields of cereals and grass; potatoes and other vegetables are also grown.

3.54 The majority of the substation option areas fall within Class 3.1, the only exception to this being substation option areas 1 and 7 which partly lie within Class 3.2. Class 3.2 land is defined as land capable of average production with the potential for high yields of barley, oats and grass. Whilst a constraint to development, it is considered that land classification is unlikely to be a key consideration in the determination of the application for the substation given the extent of other prime quality agricultural land. All of the substation option areas are therefore considered to have a similar level of risk and likely to be satisfactory.

3.55 The land referenced for the onshore cable route falls between Class 3.1 and 3.2, with the largest areas of Class 3.1 land within the referenced land area being located around Milltown of Craigston and to the west of New Deer. Whilst a constraint to development, land classification is unlikely to be a key consideration in the determination of the application of the onshore cable route either given that the cable route will be underground and the land can be restored following completion. All of the land referenced area for the onshore cable route is therefore considered to have a similar level of risk and likely to be satisfactory.

Tourism and Recreation

3.56 The following tourism and recreation designations have been taken into account in this feasibility study as a potential constraint.

- Country Parks
- Regional Parks
- Promoted Long Distance Routes and Cycleways
- Core Paths

3.57 It is considered that any parts of the onshore cable route land referenced area or substation option areas which fall within a Country Park or Regional Park would be unsatisfactory, any that fall adjacent would be a possibility and any other would be considered satisfactory.

3.58 There are four country Parks in Aberdeenshire, namely Haughton Country Park, Balmedie Country Park, Haddo Country Park and Aden Country Park. None of these Country Parks lie within the land referenced area for the onshore cable route or the substation option areas. There are no Regional Parks within Aberdeenshire. Therefore these constraints can be discounted.

3.59 There are four promoted Long Distance Routes in Aberdeenshire, namely:

- The Deeside Way – a mainly off road route under development between Aberdeen and Ballater, much of which follows the route of the former Royal Deeside Railway.

- Formantine and Buchan Way – a 54 mile off road route linking Dyce with Ellon, Maud, Fraserburgh and Peterhead using the level track bed of a former railway line through rolling farmland.
- Gordon Way - a 12 mile waymarked hill and forest footpath from Bennachie Centre to Suie Hill.
- Aberdeenshire Coastal Path - a network of coastal and inland paths between Cullen in the north and St Cyrus in the south.

3.60 Furthermore, the National Cycle Network is a network of routes suitable for bicycles promoted by Sustrans. National Cycle Route (NCR) 1 is a long distance cycle route which connects Dover and the Shetland Islands via the east coast of Scotland and England.

3.61 The Aberdeenshire Coastal Path runs through Whitehills, Banff and MacDuff and therefore runs through the northern part of the land referenced area for the onshore cable route. NCR1 runs through the land referenced area for the onshore cable route between Maud and Turiff and also further north between Turiff and MacDuff. Whilst a constraint to the development of the onshore cable, given that the cable is to be buried and there would be no permanent disruption or barrier to walking or cycle on these long distance routes it is considered that the development of the onshore cable under these routes would be satisfactory.

3.62 The Aberdeenshire Core Path Plan was formally adopted by Aberdeenshire Council in March 2013. The Core Path Plan shows that there are a number of core paths around the Banff and Whitehills areas to the north of the land referenced area for the onshore cable route and also further south around New Byth. Again, whilst a constraint to the development of the onshore cable, given that there would be no permanent barriers to the use of these routes it is considered that the development of the onshore cable under these core paths would be satisfactory.

3.63 The Aberdeenshire Core Path Plan confirms that none of the proposed substation option areas are crossed or are in close proximity to any core paths. Consequently all of the substation option areas are considered to be satisfactory from a tourism and recreation perspective.

Flood Risk

3.64 SEPA have produced an Indicative River and Coastal Flood Map which shows the possible extent of flooding from rivers and the sea. The map focuses on the 200 year flood event (an event with a 0.5% chance of occurring in any year). Identification of these areas allows planning authorities to make informed decisions concerning the location of new developments.

3.65 SEPA's Indicative River & Coastal Flood Map has been consulted to give an indication of flood risk within the land referenced for the onshore cable route corridor and for each of the substation option areas. Any of the substation option areas which fall within an area prone to flooding would be categorised as unsatisfactory or a possibility depending upon the ability to mitigate the flood risk. The cable route is not considered to be vulnerable to the impacts of flooding and consequently all of the land referenced for the cable route is considered to be satisfactory from a flood risk perspective.

3.66 The River Deveron dissects the land referenced area for the onshore cable route corridor to the south of Banff and is highlighted on SEPA's flood map as having the potential to flood. Likewise the Burn of King Edward, a tributary of the River Deveron is also marked on SEPA's flood map. To the north of Cumniestown the Burn of Monquitter/ Burn of Byth dissect the route cable route corridor and are shown as having the potential to flood. Lastly the Little Water River which runs between substation location 6 and substation location 5 is also liable to flooding.

3.67 The SEPA's Indicative River & Coastal Flood Map confirms that none of the substation option areas are of risk from fluvial or tidal flooding. Consequently all of the substation option areas are considered to be satisfactory from a flood risk perspective.

Residential Amenity

- 3.68 The potential for adverse impacts upon residential amenity as a result of noise or landscape and visual impact is likely to be a key consideration in the determination of the planning application for the substations.
- 3.69 A desk based study was undertaken to identify the nearest properties to each of the substation option areas. This was followed up with a site visit to each of the substation option areas to enable the assessment to take into account potential mitigating factors such as screening and existing high levels of background noise. Professional judgement was then used to assess the potential for a detrimental impact upon residential amenity.
- 3.70 It is considered that any of the proposed substation option areas that have the potential for a detrimental impact upon residential amenity would be unsatisfactory. Where there is potential for mitigation to offset potential significant detrimental impacts upon residential the site is considered to be a possibility. All other sites are considered to be satisfactory.
- 3.71 A review of all of the substation option areas identified that the area is generally well settled, with a significant number of residential properties and farmsteads scattered in close proximity to the majority of all sites. Although some of the farmsteads and properties have associated woodland and planting around them, the majority are relatively open and experience open views across the surrounding countryside. A detailed review of the possible landscape and visual receptors at each substation option area is contained within Appendix 2.
- 3.72 There are a number of settlements and individual properties throughout the land referenced area for the onshore cable route. Whilst a constraint to development, given that the visual effects on these receptors would be largely confined to temporary visual effects associated during the construction of the onshore cable due to the cable being underground, proximity to settlements and properties is unlikely to be a key consideration in the determination of the application of the onshore cable route. All of the land referenced area for the onshore cable route is therefore considered to have a similar level of risk from a residential amenity perspective and is therefore likely to be satisfactory.

4 SUBSTATION OPTION AREA APPRAISAL

Introduction

- 4.1 This section sets out the key issues associated with each of the substation option areas. Further detailed information on each of the substation option areas is contained in Appendix 2.

Substation Option Areas Considered

Substation Option Area 1

- 4.2 Site 1 is located approximately 2 km to the south east of New Deer. The site is bounded by the A948 (New Deer – Auchengatt) public road to the east; a C class road to the north; and a mix of agricultural land and woodland to the south and west.

- 4.3 The key site issues are considered to be:

- The site is physically capable of accommodating the maximum footprints of both the proposed MORL and SHE-T substations.
- There are no statutory or non-statutory planning or environmental designations affecting the site or its environs.
- The site is flat and largely open in views from the A948 public road which forms part of the approach to the settlement of New Deer from the south. It is considered that the scale of the proposed substations would mean that they would be visually prominent in views from the A948.
- There are a number of residential properties in close proximity to the north of the site that currently experience open views across the site. It is considered that the scale of the proposed substations would mean that they would be visually prominent in views from these properties.
- Although there are some existing man made features within this landscape, the site remains rural in landscape character and appearance. It is considered that the construction of the proposed substations would have a significant effect on this rural landscape character and appearance.
- Although there are some large existing farm buildings in the surrounding landscape, the scale of the proposed substations would not enable them to be integrated with these buildings.
- The site is suitable for winter foraging and roosting of waterfowl and therefore consultation should be undertaken with SNH to establish if the site is a known important wintering area for waterfowl.
- The patch of mixed conifer and broadleaved woodland, adjacent to Clockhill is considered suitable for badgers. In addition to a badger survey of the site, a walkover of the woodland should be undertaken to identify squirrel dreys within any woodland affected by Site 1. Further details are provided in Appendix 2.

Substation Option Area 2

- 4.4 Site 2 is located approximately 2.7 km to the south of the settlement of New Deer. It is bounded by the A948 to the east; and agricultural land to the north, south and west. The properties within the small hamlet of Nethermuir are located to the south with Ebriehed Farm lying to the west of the site.

4.5 The key site issues are considered to be:

- The site option area boundary as provided by MORL is not physically capable of accommodating the maximum footprints of both the proposed MORL and SHE-T substations. However, it is considered that there is scope to extend the identified site boundary in order to accommodate both substations, albeit that this would likely result in the larger SHE-T substation being in relatively close proximity to Ebriehead Farm.
- There are no statutory or non-statutory planning or environmental designations affecting the site or its environs.
- The site is flat and largely open in views from the A948 public road which forms part of the approach to the settlement of New Deer from the south. It is considered that the scale of the proposed substations would mean that they would be visually prominent in views from the A948.
- Compared to the other substation option areas, there are relatively few properties that would experience a significant visual impact should the proposed substations be constructed at this location.
- Development of both substations would likely require the private access road to Ebriehead to be rerouted.
- The site is suitable for winter foraging and roosting of waterfowl and therefore consultation should be undertaken with SNH to establish if the site is a known important wintering area for waterfowl.
- There is suitable water vole, badger and otter habitat within the buffer area for this site. Details are provided in Appendix 2.

Substation Option Area 3

4.6 Site 3 is located approximately 2.8 km to the south east of the nearby settlement of New Deer. It is bounded by the A948 to the west, the B9016 and agricultural land to the north and agricultural land to the south and east.

4.7 The key site issues are considered to be:

- The site is physically capable of accommodating both the proposed MORL and SHE-T substations, albeit that given the smaller size of this site compared to the other site options this would require the proposed substations to be located in very close proximity to two residential properties at Woodside and Morven Cottage.
- The woodland to the south and west of the site is identified as ancient and long-established woodland. There are no other statutory or non statutory designations affecting the site or its environs.
- Given the mature tree planting which surrounds the western, eastern and southern boundary of the site, the site is relatively well enclosed. The site is effectively screened by these trees from the A948.
- Although there are several man made features within the landscape, including the existing overhead electricity pylons, a telecommunications mast and a nearby wind turbine, these features do not significantly impact upon the rural character and appearance of this landscape.
- Two properties at Woodside and Morven Cottage lie in very close proximity to the site and experience partial views towards the site.

- The site is suitable for winter foraging and roosting of waterfowl and therefore consultation should be undertaken with SNH to establish if the site is a known important wintering area for waterfowl.
- There is potential water vole, badger and to a lesser extent, otter habitat within the buffer areas of the site. In addition, outbuildings within the buffer area provides potential habitat for bats and barn owls (as well as other nesting birds). Details are provided in Appendix 2.

Substation Option Area 4

4.8 Site 4 is located approximately 1.6 km of New Deer. It is bounded by the B170 to the south east, an unclassified road to the north and by agricultural land to the south and west.

4.9 The key site issues are considered to be:

- Given the large physical extent of this site, it is physically capable of accommodating the proposed MORL and SHE-T substations in several potential locations.
- There are no statutory or non-statutory planning or environmental designations affecting the site or its environs.
- The site sits relatively low in relation to the surrounding landscape, overlooked by the B9170 and Myre of Bedlam to the east. Consequently the site is relatively well screened from the distant surrounding landscape on all sides.
- Although the existing overhead electricity pylons run across the site, the site still retains its rural character. It is considered that the proposed substations would result in a significant effect on the character and appearance of this rural location.
- The proposed substations would be visually prominent from the properties along the C class road to the north of the site, in particular from Tanamara.
- There is a watercourse (The Black Burn) running to the south west of the site, approximately 40m from the site boundary, which is identified within the SEPA 1 in 200 year flood map (5% probability).
- The site is suitable for winter foraging and roosting of waterfowl and therefore consultation should be undertaken with SNH to establish if the site is a known important wintering area for waterfowl.
- Black Burn and other minor ditches within the site are considered to provide water vole, and potentially otter habitat. There are a number of buildings (farm outbuildings and ruined residences) within the buffer areas which provide suitable habitat for roosting and nesting bat and bird species. There is limited potential for badgers within the site. Details are provided in Appendix 2.

Substation Option Area 5

4.10 Site 5 is located approximately 2.6km to the southwest of New Deer. It is bounded by a C class rural road to the south and by agricultural land on all other sides.

4.11 The key site issues are considered to be:

- The site is not physically capable of accommodating both the MORL and SHE-T substations.
- There are no statutory or non-statutory planning or environmental designations affecting the site or its environs.
- The site is visually well screened from the nearest properties to the south west of the site at Moss Croft by mature coniferous planting.

- The relatively enclosed nature of the site would help to reduce the significance of the impact of the proposed substations on the existing rural character and appearance of the site.
- The site is suitable for winter foraging and roosting of waterfowl and therefore consultation should be undertaken with SNH to establish if the site is a known important wintering area for waterfowl.
- The marshy grassland within Site 5 provides potential foraging habitat for bird species (including kestrel and barn owl), bats and to a lesser extent otters. The marshy grassland and standing water represents a greater degree of habitat diversity when compared to the other sites. Ditches to the north and east of the site provide water vole potential. As with Site 4 there are a number of buildings (farm outbuildings) within the buffer areas which provide suitable habitat for roosting and nesting bat and bird species. Details are provided in Appendix 2.

Substation Option Area 6

4.12 Site 6 is located approximately 4.9 km to the south west of New Deer. It is partly dissected by a C class rural road in its northern section and is bounded by the same road to the east as it relates to the southern half of the site. To the north, south and west the site is surrounded by rolling agricultural land.

4.13 The key site issues are considered to be:

- Given the large physical extent of this site, it is physically capable of accommodating the proposed MORL and SHE-T substations in several potential locations.
- The site is largely open, with occasional woodland planting found associated with properties and farmsteads. Although the existing overhead electricity pylons cross the site, the landscape remains rural in character.
- There are no statutory or non-statutory planning or environmental designations affecting the site or its environs.
- Given the extent and relatively open nature of the site, it is considered that the proposed substations would result in a significant effect on the character and appearance of this rural landscape.
- Although there are a large number of properties scattered around the immediate vicinity of the site, the majority of these properties have either been located in the lower undulating parts of the landscape or have boundary treatments which screen views of the site.
- The site is suitable for winter foraging and roosting of waterfowl and therefore consultation should be undertaken with SNH to establish if the site is a known important wintering area for waterfowl.
- The old outbuildings within the buffer area provides potential for roosting and nesting bird species (such as barn owl) and bat species. Ditches within the buffer area provide potential for water vole but minimal otter potential. Details are provided in Appendix 2.

Substation Option Area 7

4.14 Site 7 is located approximately 6.3 km from New Deer. It is bounded by C class rural roads to the west and south and agricultural land to the north and east.

4.15 The key site issues are considered to be:

- The site is physically capable of accommodating both the proposed SHE-T and MORL substations.

- There are no statutory or non-statutory planning or environmental designations affecting the site or its environs.
- Given the extent and relatively open nature of the site, it is considered that the proposed substations would result in a significant effect on the character and appearance of this rural landscape.
- The properties to the north of the site are effectively screened from the site by vegetation along the northern boundary of the site, whilst views from Burnside Millbrex to the east of the site are well screened by intervening outbuildings. Consequently the key potential sensitive receptors are confined to the properties at North Millbreck to the south west of the site.
- The site is suitable for winter foraging and roosting of waterfowl and therefore consultation should be undertaken with SNH to establish if the site is a known important wintering area for waterfowl.
- The old outbuildings within the buffer area provides potential for roosting and nesting bird species (such as barn owl) and bat species. Ditches within the buffer area provide potential for water vole but minimal otter potential. Details are provided in Appendix 2.

Option Classification

4.16

On the basis of the key issues for each site, the following table suggests a classification for each of the substation option areas based upon the criteria in Section 2.

Site	Appraisal	Classification
SOA1	This site is considered to be possible for development. However, any development on this site will need to demonstrate that it is capable of minimising visual intrusion and landscape impact, in particular on the residential properties to the north of the site and on the A948 which forms part of the approach to the settlement of New Deer. This site is considered to be jointly the least sensitive for ecological receptors.	Possibility
SOA2	This site is considered to be possible for development. However any development will need to demonstrate that it is capable of minimising visual intrusion and landscape impact, in particular on the A948 which forms part of the approach to the settlement of New Deer. This site is considered to be jointly the least sensitive for ecological receptors.	Possibility
SOA3	This site is considered to be unsatisfactory given potential detrimental impacts upon the residential amenity of Woodside and Morven Cottage. This site is considered to be jointly the most sensitive for ecological receptors.	Unsatisfactory
SOA4	This site is considered to be possible for development. However any development will need to demonstrate that it is capable of minimising adverse visual impact upon the properties along the C class road to the north of the site, in particular from Tanamara. This site is considered to be jointly the most sensitive for ecological receptors.	Possibility
SOA5	This site is considered to be unsatisfactory given it is not physically capable of accommodating both the MORL and SHE-T substations. This site is considered to be jointly the most sensitive for ecological receptors.	Unsatisfactory
SOA6	This site is considered to be possible for development. However, any development on this site will need to demonstrate that is capable of minimising visual intrusion and landscape impact given the number of properties scattered in close proximity to the site. This site is considered to be jointly the least sensitive for ecological receptors.	Possibility
SOA7	This site is considered possible for development. However, any development on this site will need to demonstrate that it is capable of minimising visual intrusion and landscape impact, in particular on the residential properties at North Millbrex. This site is considered to be jointly the least sensitive for ecological receptors.	Possibility

5 CABLE ROUTE APPRAISAL

- 5.1 As noted in Section 2 above this initial appraisal of the land referenced for the cable route corridor is based on a desk study only with insufficient time available for site visits along the potential cable corridor route.
- 5.2 The key site issues within the land referenced area for the cable route corridor identified from this desk based study are considered to be:
- There are no international, national or local natural heritage or landscape designations within the land referenced area, with the exception of Ancient Woodland as discussed below.
 - There are a number of areas of Ancient Woodland that lie within the land referenced area. The locations of these areas can be seen on Figure 3a. These areas should be generally be considered unsatisfactory for development.
 - The land referenced area for the onshore cable route corridor is located within the The Coast landscape character area (Cliffs of the North and South East landscape type), the Coastal Farmland landscape character area (Western Coastal Farmland character type), the Straths and River Valleys (Deveron and Upper Ythan Valleys landscape type) and the Agricultural Heartland landscape character type (Agricultural Heartland landscape type). All of these landscape character areas are considered to be satisfactory for the development of an underground cable route given their would be minimal landscape and visual impact.
 - There are five Scheduled Monuments, two Garden and Designed Landscapes and a total of 38 listed buildings within the land referenced area for the onshore cable route. All of these sites should be considered unsatisfactory for development. Parts of the land referenced in close proximity to the these sites should be considered to be a possibility depending upon the potential to affect the designation.
 - There are three areas of search for minerals within the land referenced area. Given the potential for sterilisation, these areas should be considered a possibility for development depending upon the potential for micrositing.
 - The Aberdeenshire Coastal Path, NCR1 and a number of core paths cross the land referenced areas for the onshore cable route. The locations of these routes can be seen on Figure 3e. Given the cable would be buried and there would be no permanent disruption or barriers to walking or cycling on these routes once operational it is considered that the development of the onshore cable route under these routes would be satisfactory.
 - The majority of the land referenced area is likely to be suitable for winter foraging and roosting of waterfowl. The land may also have potential for other protected species including badgers, bats, squirrels, water voles, otters and wild birds. These areas should be considered to be satisfactory or possible for development depending upon the potential for mitigation.

6 CONCLUSIONS AND NEXT STEPS

Conclusions

Preferred Substation Option Areas

- 6.1 Section 4 of this reports indicates that, of the seven substation option areas being appraised, two are considered to be potentially unsatisfactory from an environmental and/or planning perspective within the limits of this study. These are substation option areas 3 and 5.
- 6.2 It should be noted that it is possible that, when considered in conjunction with other engineering, economical or environmental constraints, overriding reasons may suggest that both of these site will be considered feasible and so this report should be read in conjunction with such other studies.
- 6.3 The remainder of the substation option areas are considered to be a possibility for development and should now be taken forward for more detailed assessment. The key constraints that will require to be considered when taking forward all of these option areas will be minimising the effects of the substations on i) the character and appearance of the existing rural landscape, ii) wildlife interests and iii) residential amenity.

Preferred Cable Route Corridors

- 6.4 The principal conclusion of this appraisal is that the referenced land for the onshore cable corridor is relatively free from any significant planning or environmental constraints, based upon the assumption that the cable is buried for its entire length from the landfall to the selected substation site. For most of the proposed cable route corridor there is considerable scope for micro-siting within the referenced land to avoid potential temporary loss of amenity to individual houses or other local features to provide an optimum solution.
- 6.5 The main exception to this relatively constraint free position relates to several areas of Ancient Woodland which it is considered would be unsuitable for an underground cable route and should consequently be avoided. Scheduled Monuments and Listed Buildings within the land referenced area for the cable route should also be avoided, albeit it should be relatively straightforward to micro-site around these constraints where encountered.
- 6.6 The only other potential exceptions to this relatively constraint-free position arise in relation to the landfall area to the south of Boyndie Bay and the Garden and Designed Landscapes at Craigston Castle and Duff House. In all of these areas potential routes will require more detailed investigation, although given that any surface disturbance during construction will be temporary in nature, no significant issues are to be anticipated. For similar reasons, no significant issues are likely to be raised by long distance promoted paths and core paths that cross the land reference area for the cable corridor at some points.
- 6.7 In the light of these conclusions it is considered unnecessary to define specific 500m corridors within the referenced land area for the cable corridor at this stage. This level of detail should only become necessary after the next stage of more detailed investigation of ground conditions and other local features.

Next Steps

- 6.8 In conjunction with the other engineering and economic appraisal, it is considered that the next steps for the substation option areas short-listed for more detailed assessment should include:
- Pre-application consultation with Aberdeenshire Council and other relevant statutory and non-statutory bodies. In particular, it is recommended that detailed consultation is had with SNH to discuss the findings of the feasibility study and to confirm ecology surveys that may be required. Most importantly the meeting with SNH should seek to determine the need for surveys over the winter 2013-2014 season in relation to wildfowl.

- The following environmental surveys should be undertaken for each of the substation option areas:
 - Extended Phase 1 Habitat Surveys;
 - Protected Species Surveys;
 - Geomorphology Survey;
 - Landscape and Visual Survey;
 - Noise Surveys; and
 - Cultural Heritage Walkover Surveys.
- Undertake a detailed environmental appraisal of the environmental impacts of the short listed substation options. The appraisal will include the following topics areas: landscape and visual; ecology; noise; noise; land use; socio-economics and land use. The appraisal should consider the potential impacts, appropriate mitigation measures that could be employed and the residual impacts of the proposed substations.
- Public consultation
- Identification of the preferred substation option area.

6.9 At the same time the following steps are proposed for the identification of the preferred cable route corridors and relevant alternatives to each of the substation option areas:

- Site visit to confirm the data captured from the desk based assessment of the land referenced area as far as practicable and to identify any further planning and environmental constraints that may be present that had not previously been identified.
- Pre-application consultation with Aberdeenshire Council and other relevant statutory and non-statutory bodies.

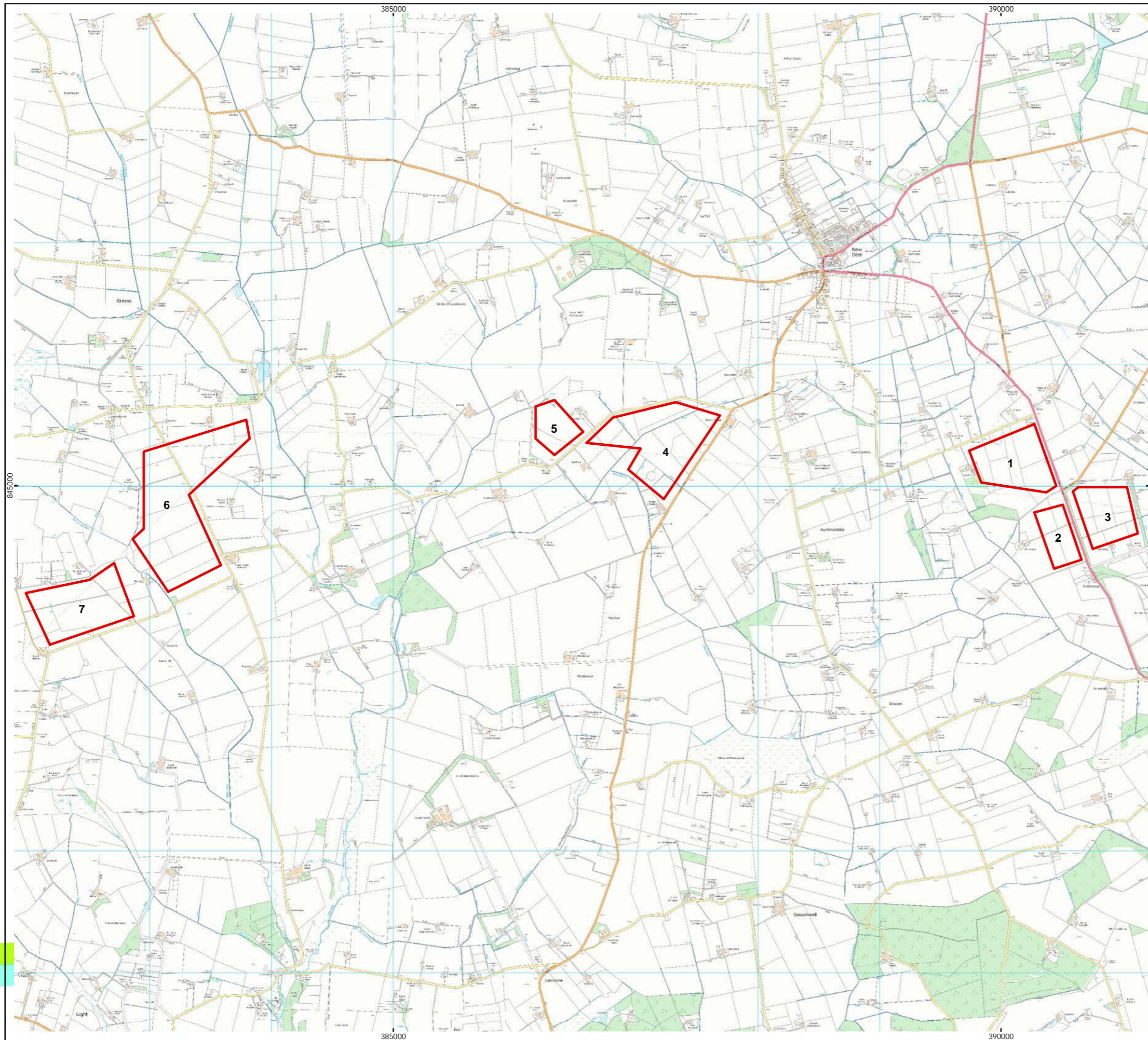
6.10 Details on the timescales for ecology surveys are provided in Appendix 3.

FIGURES

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- Figure 3f – Indicative Flood Risk
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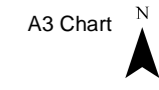
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KEY
Substation Option Areas

Horizontal Scale: 1:30,000
0 500 1,000 Meters



Geodetic Parameters: British National Grid

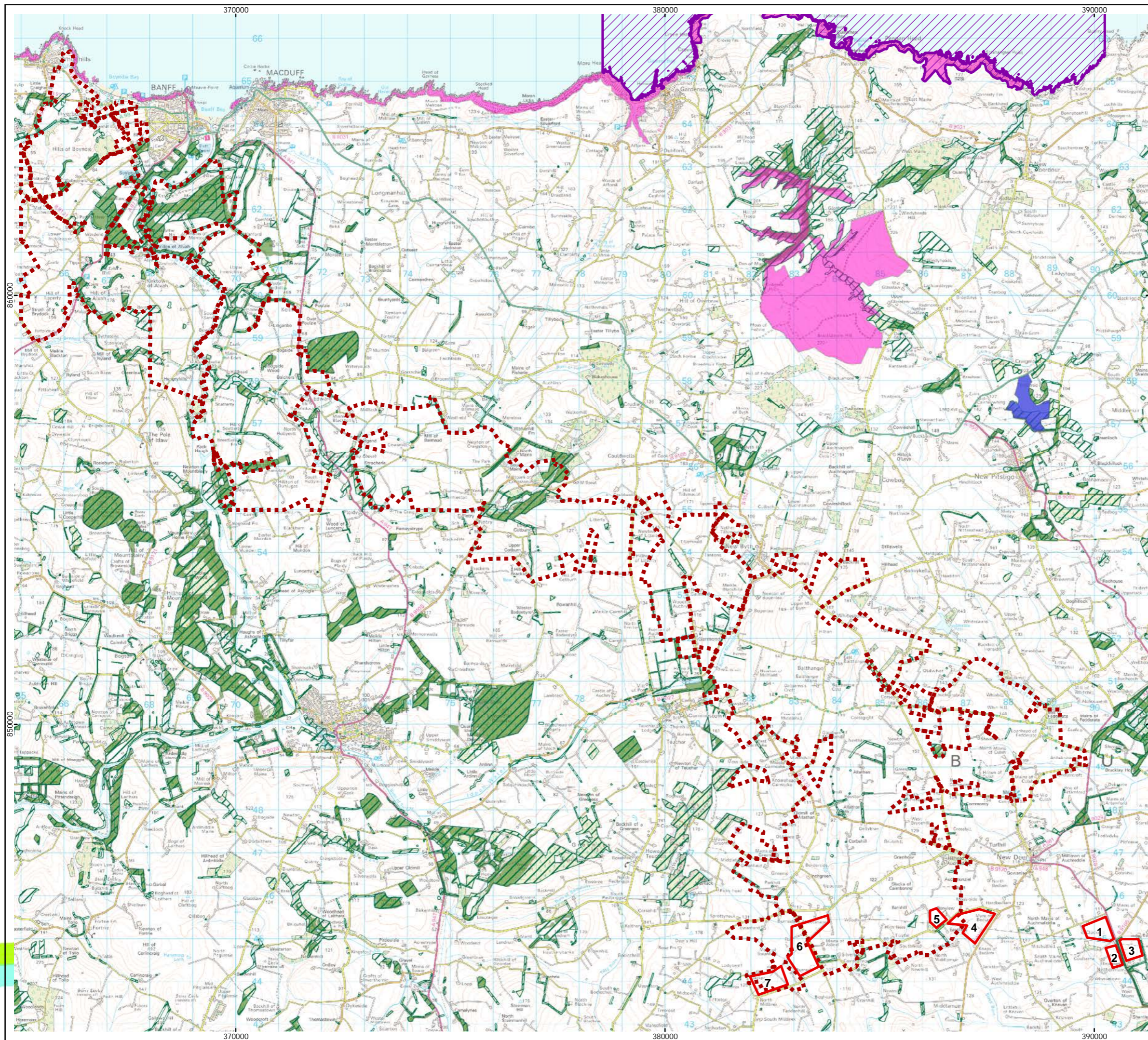
Produced: KAG
Reviewed: MF
Approved: AP

Date: 31/10/2013 Revision: -
REF: RPS-SAP7748_015

MORL Onshore Feasibility Study
MORL Substation Option Areas
Figure 2

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- KEY**
- CKDG Land Referenced Area (Sept 2013)
 - Substation Option Areas
 - Special Protection Area
 - Special Areas of Conservation
 - Sites of Special Scientific Interest
 - Ancient and Long-established Woodland
 - Semi-Natural Woodland Cover on Ancient and Long-established Woodland Sites

Dataset source - Scottish Natural Heritage

Horizontal Scale: 1:85,000 A3 Chart
 0 2,000 4,000 Meters

Geodetic Parameters: British National Grid

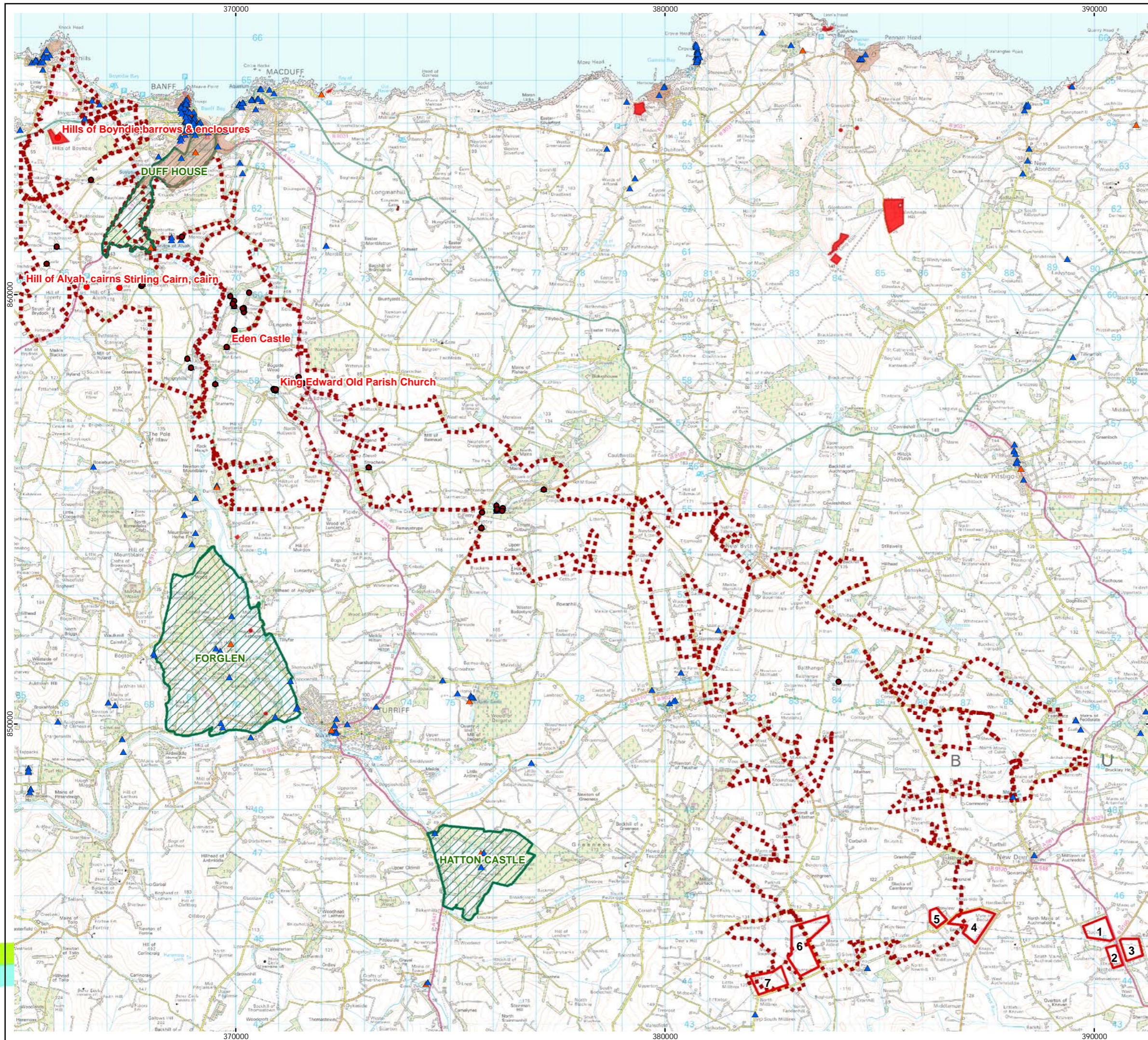
Produced: KAG
 Reviewed: MF
 Approved: AP

Date: 31/10/2013 Revision: -
 REF: RPS-SAP7748_012B

**MORL Onshore Feasibility Study
 Nature Conservation Constraints
 Figure 3a**

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- KEY**
- CKDG Land Referenced Area (Sept 2013)
 - Substation Option Areas
 - Scheduled monuments
 - Garden and Designed Landscapes
 - Conservation Areas
 - ▲ Listed Building Cat A
 - ▲ Listed Building Cat B
 - ▲ Listed Building Cat C(S)

Dataset source - Historic Scotland

Horizontal Scale: 1:85,000 A3 Chart
 0 2,000 4,000 Meters

Geodetic Parameters: British National Grid

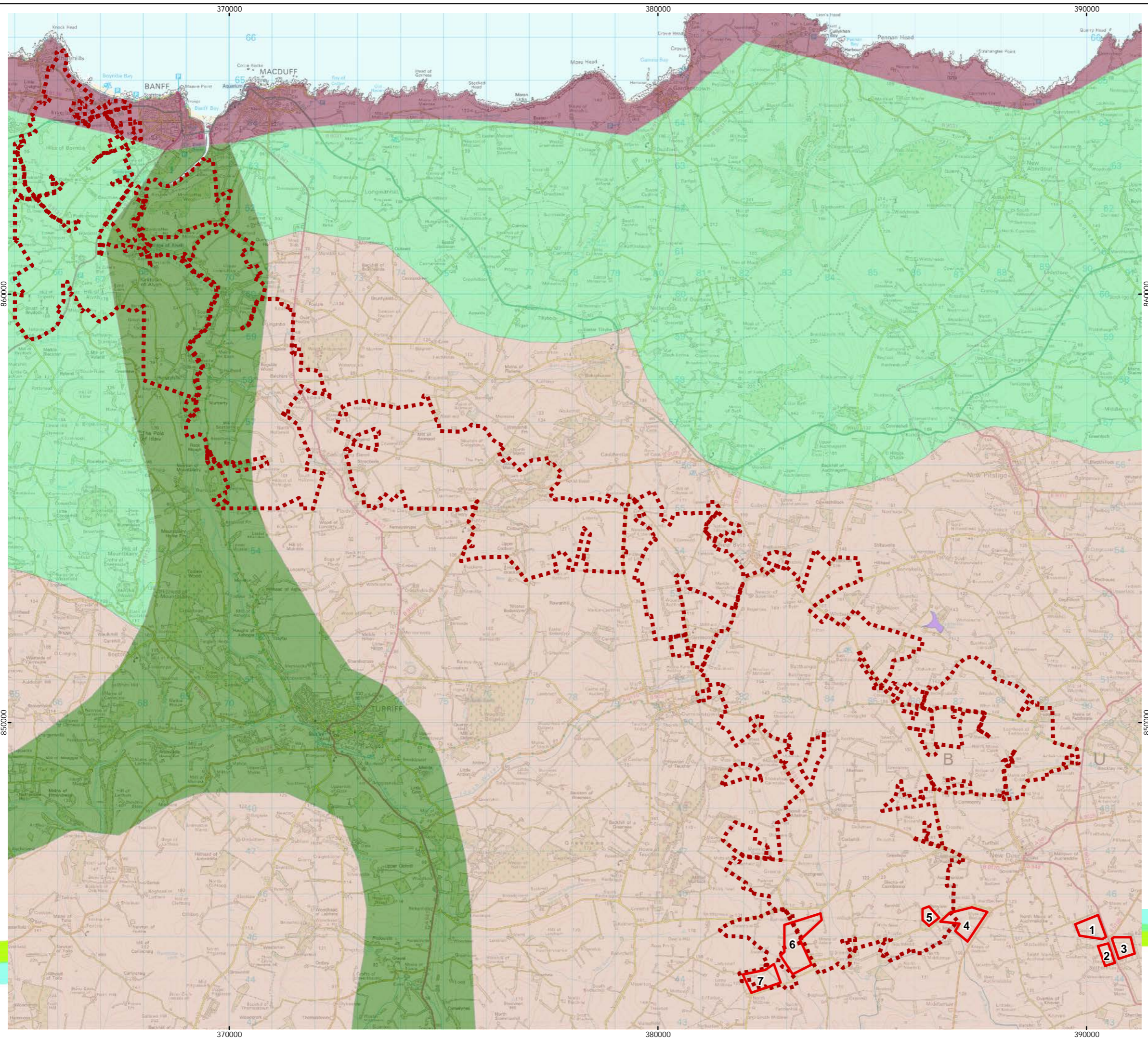
Produced: KAG
 Reviewed: MF
 Approved: AP

Date: 31/10/2013 Revision: -
 REF: RPS-SAP7748_008B

MORL Onshore Feasibility Study
 Archaeology & Cultural Heritage Constraints
 Figure 3b

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- KEY**
- CKDG Land Referenced Area (Sept 2013)
 - Substation Option Areas
 - SNH Landscape Character Areas**
 - Agricultural Heartland
 - Coastal Farmland
 - Inland Loch
 - River Valleys
 - The Coast

Dataset source - Scottish Natural Heritage

Horizontal Scale: 1:85,000 A3 Chart
 0 2,000 4,000 Meters

Geodetic Parameters: British National Grid

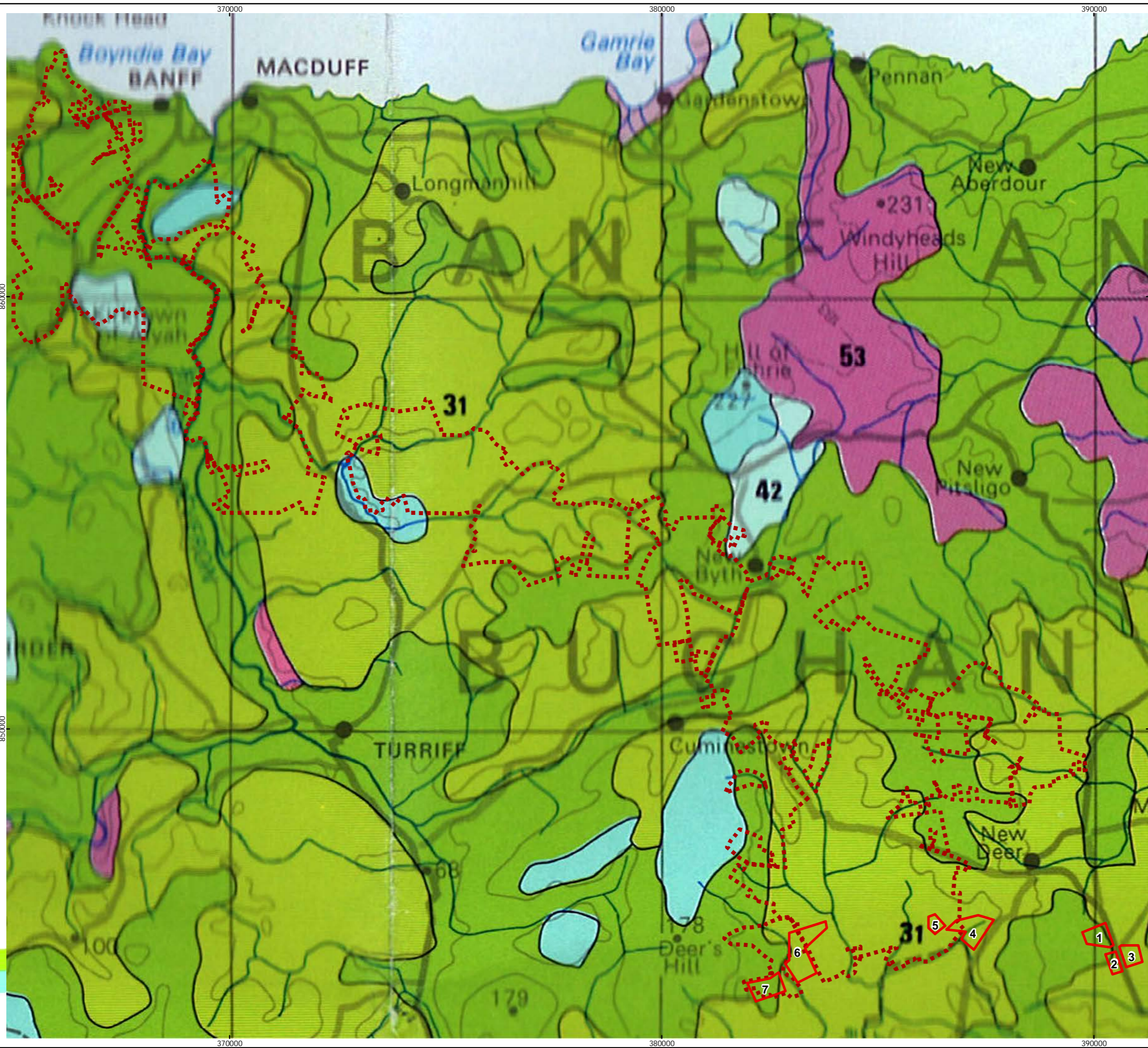
Produced: KAG
 Reviewed: MF
 Approved: AP

Date: 31/10/2013 Revision: -
 REF: RPS-SAP7748_009B

**MORL Onshore Feasibility Study
 Landscape Character Areas
 Figure 3c**

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KEY

CKDG Land Referenced Area (Sept 2013)

Substation Option Areas

Land Capability for Agriculture

3-1: Land capable of producing a moderate range of crops

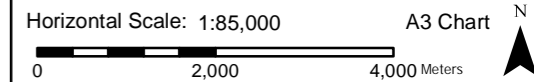
3-2: Land capable of producing a moderate range of crops

4-1: Land capable of producing a narrow range of crops

4-2: Land capable of producing a narrow range of crops

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Geodetic Parameters: British National Grid

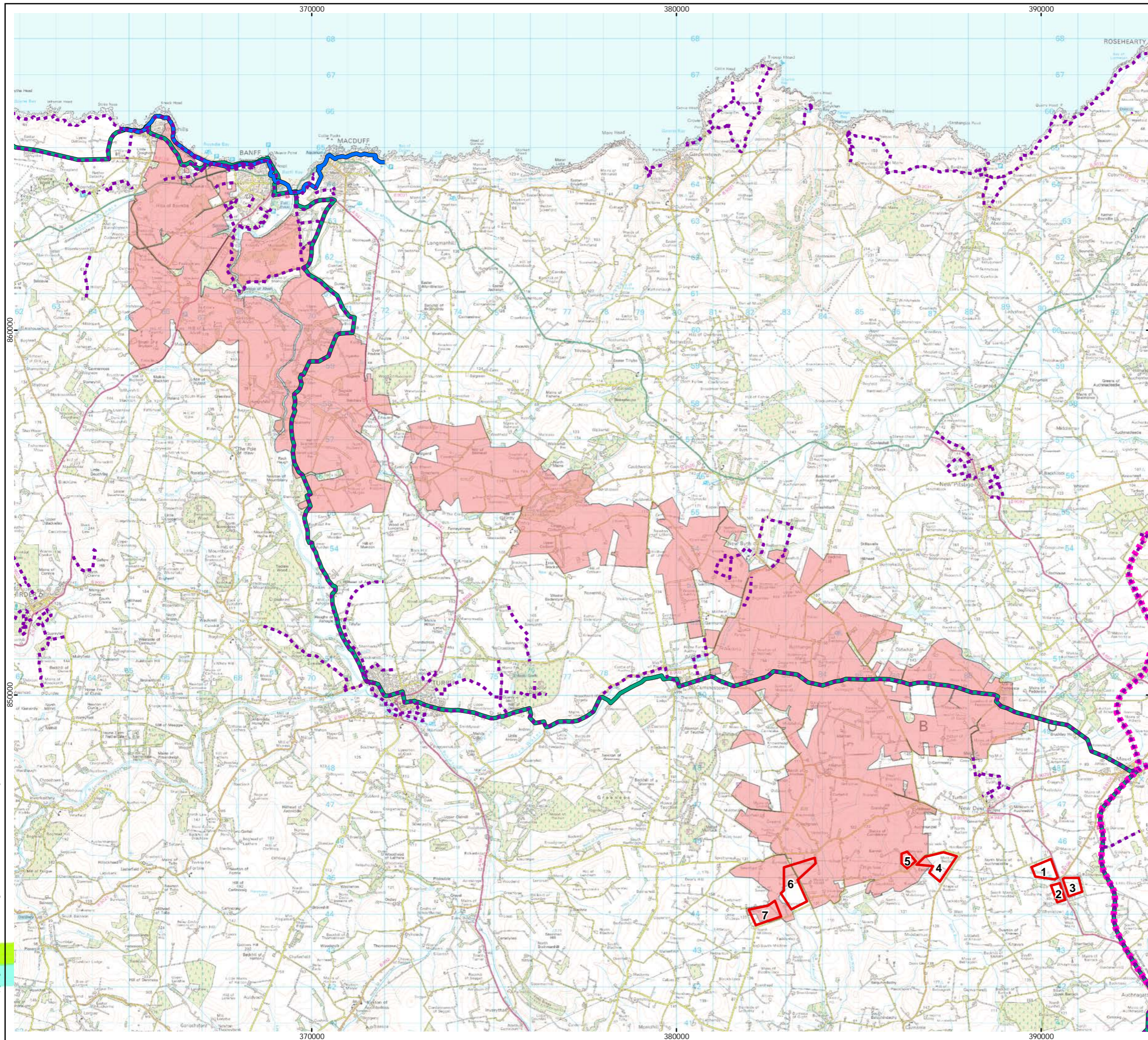
Produced: KAG
Reviewed: MF
Approved: AP

Date: 31/10/2013 Revision: -
REF: RPS-SAP7748_005B

**MORL Onshore Feasibility Study
Agricultural Land Classification
Figure 3d**

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- KEY**
- CKDG Land Referenced Area (Sept 2013)
 - Substation Option Areas
 - Formartine & Buchan_Way
 - Aberdeenshire Coastal Path
 - SUSTRANS Route 1
 - Core Paths

Dataset source - Aberdeenshire Council

Horizontal Scale: 1:100,000 A3 Chart
0 2,500 5,000 Meters

Geodetic Parameters: British National Grid

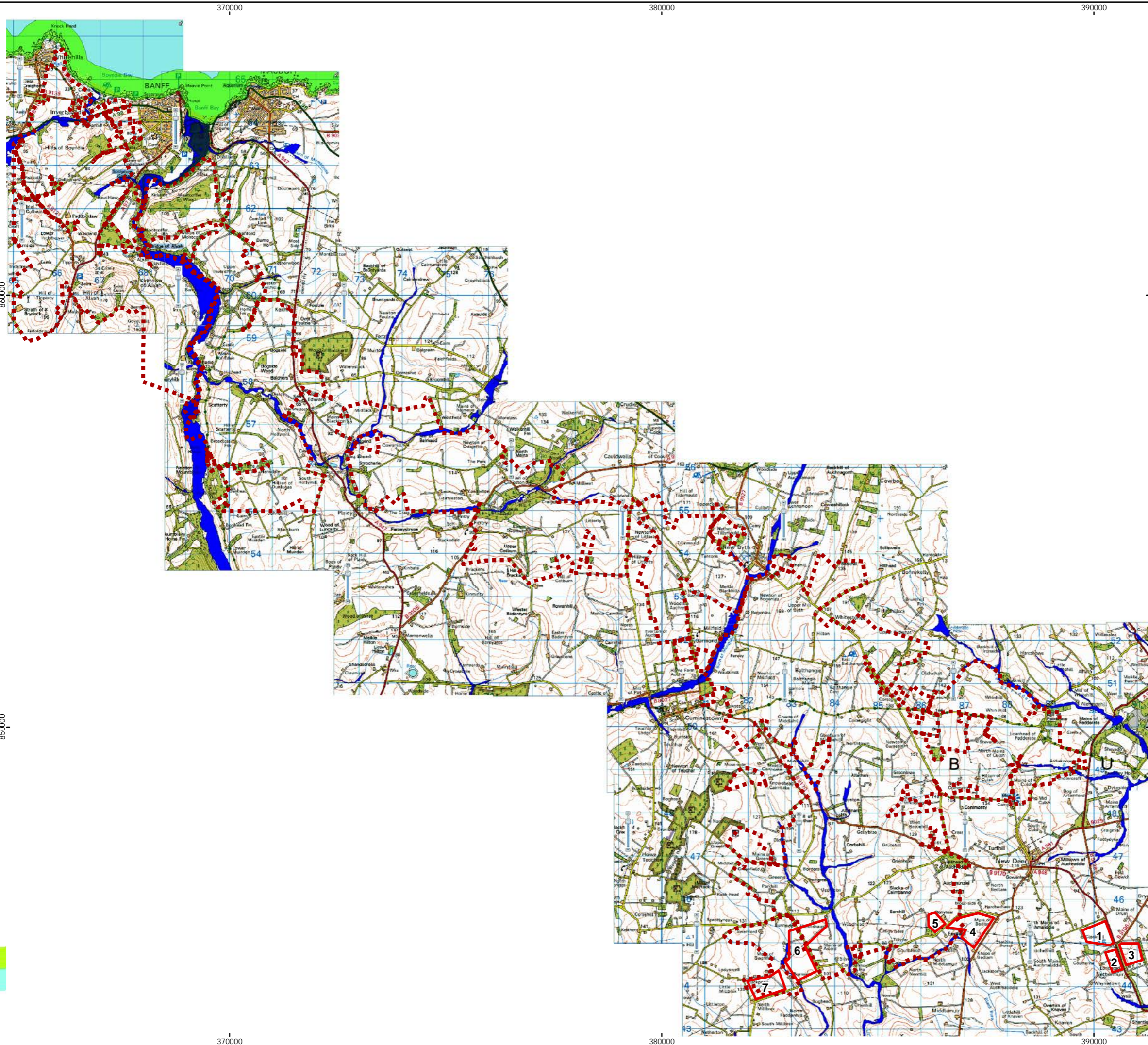
Produced: KAG
Reviewed: MF
Approved: AP

Date: 31/10/2013 Revision: -
REF: RPS-SAP7748_011B

MORL Onshore Feasibility Study Tourism & Recreation Constraints Figure 3e

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- KEY**
- CKDG Land Referenced Area (Sept 2013)
 - Substation Option Areas
 - SEPA Indicative Flood Map**
 - Areas at risk of flooding from rivers
 - Areas at risk of flooding from the sea
 - Areas at risk of flooding from both

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Horizontal Scale: 1:85,000 A3 Chart

Geodetic Parameters: British National Grid

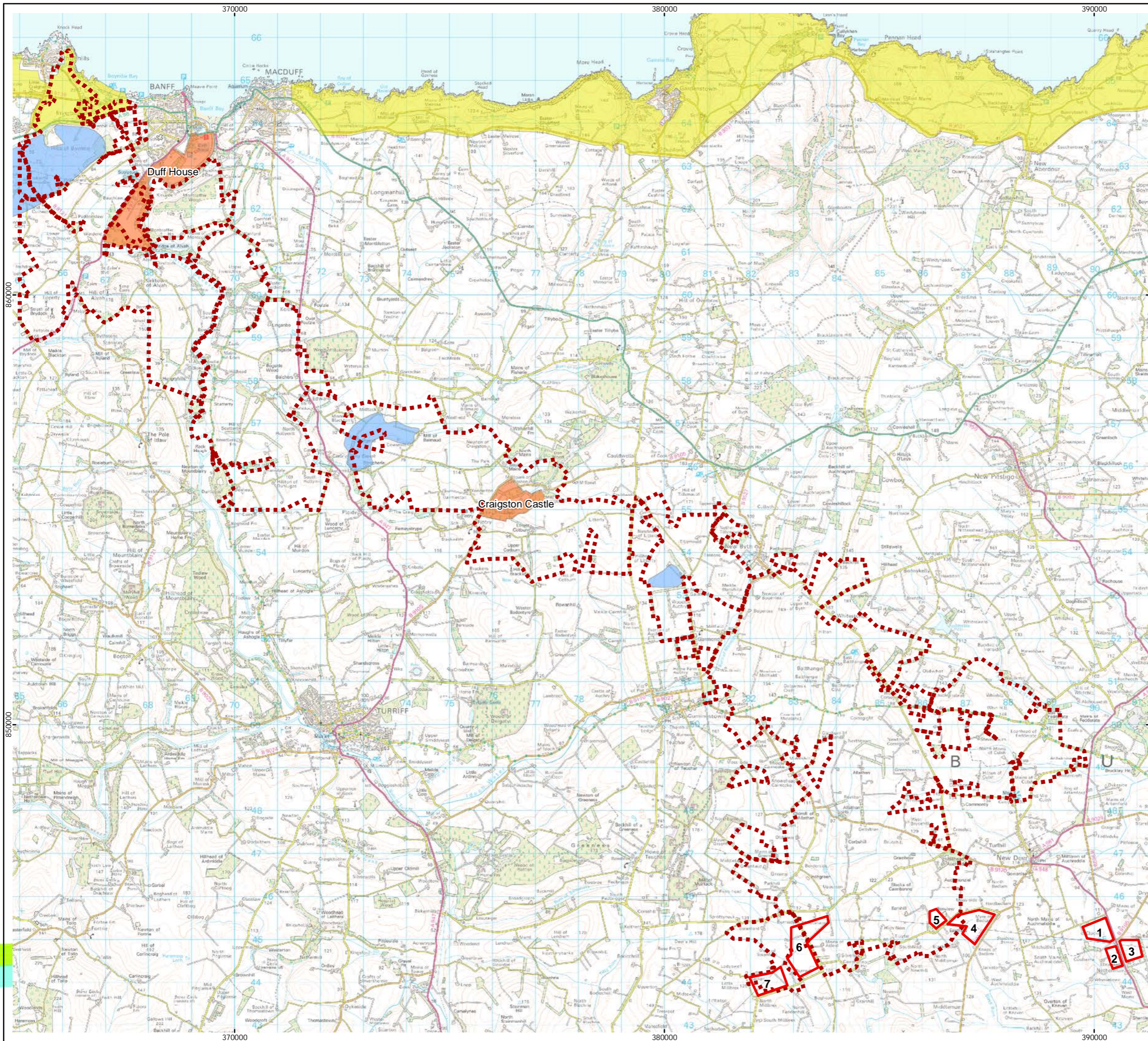
Produced: KAG
 Reviewed: MF
 Approved: AP

Date: 31/10/2013 Revision: -
 REF: RPS-SAP7748_006B

MORL Onshore Feasibility Study Indicative Flood Risk Figure 3f

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- KEY**
- CKDG Land Referenced Area (Sept 2013)
 - Substation Option Areas
 - Designed Landscape (Policy 13)
 - Coastal Zone (Policy 4)
 - Area of search for Minerals (Policy 14)

Planning Policy designations from
Aberdeenshire Local Development Plan

Horizontal Scale: 1:85,000 A3 Chart
0 2,000 4,000 Meters

Geodetic Parameters: British National Grid

Produced: KAG
Reviewed: MF
Approved: AP

Date: 31/10/2013 Revision: -
REF: RPS-SAP7748_010B

MORL Onshore Feasibility Study Planning Policy Constraints Figure 3g

Moray Offshore
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APPENDIX 1 – BASELINE DATA INFORMATION SOURCES

Appendix 1 – Baseline Data Sources

Topic	Features	Source	Web link
Nature Conservation Designations	Special Protection Agency	Scottish Natural Heritage	http://www.snh.gov.uk/
	Special Areas of Conservation	Scottish Natural Heritage	http://www.snh.gov.uk/
	Ramsar	Scottish Natural Heritage	http://www.snh.gov.uk/
	Sites of Special Scientific Interest	Scottish Natural Heritage	http://www.snh.gov.uk/
	National Nature Reserves	Scottish Natural Heritage	http://www.snh.gov.uk/
	Local Nature Reserves	Aberdeenshire Council	http://www.aberdeenshire.gov.uk/
	Sites of Interest to Natural Science	North East Scotland Biological Records Centre	http://www.nesbrec.org.uk/
	Scottish Wildlife Trust Reserves	Scottish Wildlife Trust	http://scottishwildlifetrust.org.uk/
	Ancient Woodlands	Scottish Natural Heritage	http://www.snh.gov.uk/
Protected Habitats and Species Records	Protected Species	National Biodiversity Network	https://data.nbn.org.uk/
Archaeology and Cultural Heritage Designations	Scheduled Monuments	Historic Scotland	http://www.historic-scotland.gov.uk/
	Listed Buildings	Historic Scotland	http://www.historic-scotland.gov.uk/
	Gardens and Designed Landscapes	Historic Scotland	http://www.historic-scotland.gov.uk/
	Conservation Areas	Aberdeenshire Council	http://www.aberdeenshire.gov.uk/
	Non statutory listed features	Royal Commission on the Ancient and Historical Monuments of Scotland	http://www.rcahms.gov.uk/
Landscape	National Scenic Areas	Scottish Natural Heritage	http://www.snh.gov.uk/
	Wild Land	Scottish Natural Heritage	http://www.snh.gov.uk/
	Areas of Landscape Significance	Aberdeenshire Council	http://www.aberdeenshire.gov.uk/
	Protected views	Aberdeenshire Council	http://www.aberdeenshire.gov.uk/
	Landscape Character	Scottish Natural Heritage	http://www.snh.gov.uk/
Land Use	Agricultural Land Classification	Macaulay Institute	http://www.macaulay.ac.uk/

	Historic Land Use Assessment	Royal Commission on the Ancient and Historical Monuments of Scotland	http://www.rcahms.gov.uk/
Tourism and Recreation	Country Parks	Scottish Natural Heritage	http://www.snh.gov.uk/
	Regional Parks	Scottish Natural Heritage	http://www.snh.gov.uk/
	Longer distance routes	Aberdeenshire Council	http://www.aberdeenshire.gov.uk/
	National Cycle Network	Sustrans	http://www.sustrans.org.uk/
	Core Paths	Aberdeenshire Council	http://www.aberdeenshire.gov.uk/
Flood Risk	Indicative River and Coastal Flood Map	Scottish Environment Protection Agency	http://www.sepa.org.uk/
Planning Policy Designations	Aberdeenshire Local Development Plan	Aberdeenshire Council	http://www.aberdeenshire.gov.uk/
Planning Developments	Planning Applications	Aberdeenshire Council	http://www.aberdeenshire.gov.uk/

APPENDIX 2 – SUBSTATION OPTION AREAS PLANNING AND ENVIRONMENTAL AND CHECKLIST

MORL FEASIBILITY STUDY– PLANNING & ENVIRONMENTAL CHECKLIST

Site Reference and Location	Site 1 – Mile End Drum (390167, 845311) Site 1 is located approximately 2 km to the south east from the settlement of New Deer. The site is bounded by the A948 (New Deer – Auchengatt) public road to the east; a C Class road to the north; and a mix of agricultural land and woodland to the south and west.
Planning	
Current designation in Development Plan	The Development Plan for the site currently comprises the Aberdeen City and Shire Structure Plan 2009 and the Aberdeenshire Local Development Plan (2012) There are no specific policy designations in the Development Plan for this site. However the following general development policies will apply from the Aberdeenshire Local Development Plan: <ul style="list-style-type: none">• Policy 3 - Development in the Countryside;• Policy 8 – Layout, siting and design of new development;• Policy 11 – Natural Heritage;• Policy 12 – Landscape Conservation; and• Policy 13 – Protecting, improving and conserving the historic environment.
Land Use	
Land Use	The site is currently agricultural land and comprises both arable land and semi-improved poor grassland. There are a number of residential properties in close proximity to the north of the site, whilst the property at Mile End Burn to the north east of the site is used as commercial garage and workshop. The property at Clockhill to the west of the site provides boarding for cats and dogs.
Agricultural Land Classification	The site falls within the Macaulay Land Capability for Agriculture Category 3 – Land capable of producing a moderate range of crops. The land falls mostly within sub category 3 ₂ with a small part of the eastern side of the site falling within category 3 ₁ . The sub categories are detailed further below: <ul style="list-style-type: none">• Category 3₁ – Land capable of producing consistently high yields of a narrow range of crops (principally cereals and grass) and/or moderate yields of a wider range (including potatoes, field beans and other vegetables and root crops). Short grass leys are common.• Category 3₂ – Land capable of average production but high yields of barely oats and grass are often obtained. Other crops are limited to potatoes and forage crops. Grass leys are common and reflect the increasing growth limitations for arable crops and degree of risk involved in their production
Rights of Way / Core Paths	There are no core paths on or within close proximity to the site. No footpaths crossing the site were identified during the field visit. Nevertheless, it may be that there are alleged rights of way running within or adjacent to the site. This would need to be confirmed through consultation with Aberdeenshire Council and ScotWays.
Landscape and Visual	
Nature of Landscape	The landscape character of the site is defined as ‘Agricultural Heartland’. The site is set in undulating arable land with the topography of the land sloping gently down from north to south. Due to the large field size and the use of post and wire fencing around the site, the site is largely open in views from the A8948 public road and forms part of the approach to the settlement of New Deer from the south. There is some tree and shrub planting along the northern boundary of the site which provides limited visual screening. Although there are a number of man-made features within the surrounding landscape, including the existing overhead electricity pylons to the south, a number of large steel agricultural sheds at Clockhill and Mile-End Drum and a wind turbine to the north east of the site, these features have not significantly impacted upon the key characteristics of the landscape which remains predominantly rural in nature.
Possible receptors	There are a number of properties, in particular along the northern boundary of the site, that are potentially sensitive receptors to the development of a substation on this site. Potential impacts upon these properties are discussed below: <ul style="list-style-type: none">• Mile End Burn (390211, 845541) comprises a single storey residential bungalow and a commercial car garage and workshop. Open views of the site would only be experienced from the south of the property.• Drumlea (390062, 845615) comprises a single storey bungalow with an open front garden to the south, enabling extensive views out across the majority of the site in views from the front of the property.• Da-Bhinn (389853, 845388) is a single story bungalow whose views of the site are partly screened by a mature existing conifer hedge to the east of the property. The property does however still experience views over the western part of the proposed site.• Auchmaliddie Croft (389707, 845518) is a two story property that is relatively well set back

MORL FEASIBILITY STUDY– PLANNING & ENVIRONMENTAL CHECKLIST

	<p>from the C class road. The property is surrounded by large agricultural sheds to the north and east, but would still experience more distant views of the western part of the site from the front of the property.</p> <ul style="list-style-type: none"> • Clockhill (389714, 845147) appears to be largely screened from views out towards the site by a combination of the large agricultural sheds which surround the property and some existing mature tree planting associated with the farmstead. • Little Drum (390575, 845290), lies to the east of the A8948. Views of the site would be predominantly screened by the existing planting around the property.
Ecology	
International and national nature conservation designations	N/A
Local nature conservation designations	There are no local nature conservation designations within the site. An area of Ancient and Long-established woodland is located within 100m of the site boundary to the south east. Several patches of Semi-natural woodland cover exist within 500m of the site to the west and north of the site. It is considered that these designations will be unaffected by works within the site boundary.
Protected species records	Otter, red squirrel, brown hare, and water vole records exist within 1km of the site dated between 2003 to 2013.
Primary habitats on site	The site is located on improved agricultural land (stubble field) and semi-improved poor grassland. The western boundary of Site 1 extends into a patch of mixed conifer and broadleaved woodland, adjacent to Clockhill. There is a small patch of tall ruderals and scattered scrub to the north of the site. The road drain within the northern buffer of Site 1, which flows north from the Lang Stracht minor road was almost dry at the time of the survey, with no flow. The ditch has long stretches of bare peat with some patches of soft rush (<i>Juncus effusus</i>). A second ditch to the west of Site 1, running south from Lang Stracht was found to be overgrown with rosebay willowherb (<i>Epilobium angustifolium</i>). There are no water features within the site.
Protected species potential	Site 1, as with all of the option areas, is suitable for winter foraging and roosting of waterfowl. It is recommended that consultation is urgently undertaken with Scottish Natural Heritage (SNH) to determine if the site is a known important wintering area for waterfowl. The outcome of the consultation will determine the need for targeted winter bird surveys. Both ditches within the buffer of Site 1 are considered to have low to negligible potential for water voles and otters. The patch of mixed conifer and broadleaved woodland, adjacent to Clockhill is considered suitable for badgers.
Confirmation of surveys required	<p>The following surveys are recommended for Site 1:</p> <ul style="list-style-type: none"> • Depending on the outcome of SNH consultation there may be the requirement to undertake winter walkover surveys for ornithological interests. The survey, if required, would involve three visits spread between November and March. • Badger survey of suitable habitat within 100m of the site, particularly within the patch of mixed conifer and broadleaved woodland, adjacent to Clockhill. • A walkover to identify squirrel dreys within any woodland affected at Site 1.
Noise	
Nearest receptors	<p>There are a number of residential/ commercial properties surrounding the site, namely:</p> <ul style="list-style-type: none"> • Mile-End Drum (approximately 40m to the north) • Drumlea (approximately 120m to the north) • Da-Bhinn(approximately 30m to the north) • Clockhill (approximately 30m to the west) • Little Drum (approximately 200m to the east on the opposite site of the A968) <p>There are 11 other properties within 500m of the site boundary on all sides of the site.</p>
Background observation (noise)	The most noticeable sources of noise at the time of the site visit was vehicle noise from the A8948 and loud barking from the kennels at Clockhill.
Archaeology and Cultural Heritage	
Scheduled Monuments	There are no Scheduled Monuments in close proximity to the site.
Listed buildings	There are no listed buildings within or in close proximity to the site
Other designations (designed landscape etc)	There are no landscape designations affecting the site.
Notable features on site	There are no notable features on site.
Setting/aspect of protected features of interest	Agricultural landscape setting, historic land use of 'fields and farming'.

MORL FEASIBILITY STUDY– PLANNING & ENVIRONMENTAL CHECKLIST

Hydrology, Hydrogeology & Soils

Nearest watercourse	There are no watercourses in close proximity to the site.
---------------------	---

Transport and Access

Access arrangements	Access could be gained from the A948 which runs along the east of the site or from the C class road that runs along the north of the site. There is also a private access track running to the south of the site which provides access to two farmsteads, Ebriehead and Coulterna.
---------------------	--

It is considered that the access from the C class road would provide the most suitable access point to the site.

Surfaced road	A948 to the east of the site and C class road to the north.
---------------	---

Distance of joining to public road	Site 1 is approximately 20m from the A948 and 60m from the C class road to the north. The private access track is approximately 30m at the nearest point to the site boundary.
------------------------------------	--

Other comments	The large physical extent of the site is capable of accommodating both the proposed MORL and SHE-T substations.
----------------	---

Given the relatively flat and open nature of the site, it is considered that the proposed substations would result in a significant effect on the character and appearance of this existing predominantly rural landscape. Although there are some large existing farm buildings in the landscape, it is considered that the scale of the proposed substations would not enable them to be integrated with these buildings. The scale of the proposed substations, combined with the lack of shelter belts, hedgerows and trees on the site, would mean that the proposed substations would also be visually prominent from the A948 and a number of residential properties to the north of the site.

MORL FEASIBILITY STUDY– PLANNING & ENVIRONMENTAL CHECKLIST

Site Reference and Location	Site 2 – Ebriehead (390474, 844659) Site 2 is located approximately 2.7 km to the south of the settlement of New Deer. It is bounded by the A948 to the east; and agricultural land to the north, south and west. The properties within the small hamlet of Nethermuir are located to the south with Ebriehead Farm lying to the west of the site.
Planning	
Current designation in Development Plan	The Development Plan for the site currently comprises the Aberdeen City and Shire Structure Plan 2009 and the Aberdeenshire Local Development Plan (2012) There are no specific policy designations in the Development Plan for this site. However the following general development policies will apply from the Aberdeenshire Local Development Plan: <ul style="list-style-type: none">▪ Policy 3 - Development in the Countryside▪ Policy 8 – Layout, siting and design of new development▪ Policy 11 – Natural Heritage▪ Policy 12 – Landscape Conservation▪ Policy 13 – Protecting, improving and conserving the historic environment.
Land Use	
Land Use	The site is currently agricultural land and is predominantly improved grassland.
Agricultural Land Classification	The site falls within the Macaulay Land Capability for Agriculture Category 3 – Land capable of producing a moderate range of crops. The land falls mostly within sub category 3 ₁ , with part of the site falling within category 3 ₂ . The sub categories are detailed further below; <ul style="list-style-type: none">▪ Category 3₁ – Land capable of producing consistently high yields of a narrow range of crops (principally cereals and grass) and/or moderate yields of a wider range (including potatoes, field beans and other vegetables and root crops). Short grass leys are common.▪ Category 3₂ – Land capable of average production but high yields of barely oats and grass are often obtained. Other crops are limited to potatoes and forage crops. Grass leys are common and reflect the increasing growth limitations for arable crops and degree of risk involved in their production
Rights of Way / Core Paths	There are no core paths on or within proximity of the site. No footpaths crossing the site were identified during the field visit. Nevertheless, it may be that there are unclassified rights of way running within or adjacent to the site but this would need to be confirmed through consultation with Aberdeenshire Council and Scotways.
Landscape and Visual	
Nature of Landscape	The landscape character of the area is defined as ‘Agricultural Heartland’. The site is set in undulating agricultural land with the topography of the land sloping gently down from north to south. The site is bounded by post and wire fencing and hence is relatively open in views from the A948. To the east of the site, beyond the A8948, runs a line of mature broadleaved woodland which provides effective screening of the site from the east. The existing overhead electricity pylons which cross the site and can be seen into the distance to the west of the site from the A948 are a significant feature in the landscape but do not undermine the rural character of the area.
Possible receptors	There are several potentially sensitive properties in close proximity to the site. Potential impacts upon these properties are discussed below: <ul style="list-style-type: none">▪ Ebriehead (390156, 844509) lies to the west of the site but existing planting around the property means that views of the site are predominantly screened.▪ Carpenters Croft (390744, 844265) lies to the south of the site on the northern edge of Nethermuir. The upper storey of this house currently experiences out across the site.▪ Whynieton Hollow (390186, 844222) lies to the south west of the site. However, due to intervening topography the site experiences only partial views of the site.▪ Whynieton Farm (389918, 844088) lies approximately 515m to the south west of the site. Views of the site are relatively well screened by the intervening Ebriehead property and associated planting.
Ecology	
International and national nature conservation designations	N/A
Local nature conservation designations	There are no local nature conservation designations within the site. An area of Ancient and Long-established woodland is located within 100m of the site boundary to the east, along the A948. It is considered that this designation will be unaffected by works within the site boundary. If access to the site is taken via the A948, there is the potential for this local designation to be impacted.

MORL FEASIBILITY STUDY– PLANNING & ENVIRONMENTAL CHECKLIST

Protected species records	Otter, red squirrel, brown hare, and water vole records exist within 1km of the site dated between 2003 to 2013.
Primary habitats on site	Site 2 is sited on improved grassland which has recently been sown and is being grazed by a small number of sheep. There is a small field drain to the west of the site, and access restrictions prevented this from being investigated. There is a conifer plantation, interspersed with single broadleaved trees, 150m north west of the site. There is a narrow strip of woodland running to the east of the A948 which is within 100m of the eastern boundary of Site 2. There is no woodland or water features within Site 2.
Protected species potential	There is potential for otter and water vole within the field drain, running north to south, within the buffer to the west of the site. The patch of conifer plantation, interspersed with single broadleaved trees, north west of the site has moderate badger potential. This woodland is within 150m of the north west boundary of Site 2. Site 2, as with all of the option areas, is suitable for winter foraging and roosting waterfowl. See the recommendations within Site 1.
Confirmation of surveys required	The following surveys are recommended at Site 2: <ul style="list-style-type: none">▪ Otter and water vole survey of suitable habitat within 250m of the site▪ Badger walkover survey of suitable habitat within 100m of the site▪ Depending on the outcome of SNH consultation there may be the requirement to undertake winter walkover surveys for ornithological interests. The survey, if required, would involve three visits spread between November and March.

Noise

Nearest receptors	There are a number of residential/ commercial properties surrounding the site, namely: <ul style="list-style-type: none">▪ Ebriehead (approximately 110m to the east)▪ Whynieton Hollow (approximately 250m to the south-west)▪ Nethermuir settlement (approximately 100m to the south)▪ Woodside (approximately 250m to the east on the opposite side of the A968) There are 4 other properties within 500m of the site boundary on all sides of the site.
Background observation (noise)	The most notable sources of noise at the time of the site visit was vehicle noise from the A948.

Archaeology and Cultural Heritage

Scheduled Monuments	There are no Scheduled Monuments in close proximity to the site.
Listed buildings	There are no listed buildings within or in close proximity to the site
Other designations (designed landscape etc)	There are no landscape designations affecting the site.
Notable features on site	There are no notable features on site.
Setting/aspect of protected features of interest	Agricultural landscape setting, historic land use of 'fields and farming'.

Hydrology, Hydrogeology & Soils

Nearest watercourse	There are no watercourses in close proximity to the site.
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Transport and Access

Access arrangements	Access could be gained from the A948 which runs along the east of the site. There are also private access tracks running to the south and north of the site which provide access to private properties. There is also a private access track running through the site which provides access to Ebriehead. It is considered that access from the A948 may be difficult due to fast vehicle speeds on this stretch of road.
Surfaced road	A948 to the east of the site.
Distance of joining to public road	Site is approximately 20m from the A948 and 20m from the access track to the south and 100m from the access track to the north.
Other comments	The site boundary as provided by MORL is not physically capable of accommodating both the proposed MORL and SHE-T substations. However it is considered that there is scope to extend the identified site boundary in order to accommodate both substations, albeit that this would likely result in the larger SHE-T substation being in relatively close proximity to Ebriehead. Development of both substations would also likely require the private access to Ebriehead to be rerouted. Given the relatively flat and open nature of the site, it is considered that the proposed substations would result in a significant effect on the character and appearance of this existing predominantly rural landscape. The scale of the proposed substations, combined with the lack of shelter belts, hedgerows and trees on the site would mean that the proposed substation

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would be visually prominent from the A948. However, it is recognised that there are relatively few properties in comparison to the other substation option areas considered that would experience a significant visual impact should the proposed substations be constructed.

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Site Reference and Location	Site 3 – Woodside (390888, 844756) Site 3 is located approximately 2.8 km to the south east of the nearby settlement of New Deer. It is bounded by a mature woodland belt to and the A948 to the west; the B9106 and agricultural land to the north; and mature woodland and agricultural land to the south and east.
Planning	
Current designation in Development Plan	The Development Plan for the site currently comprises the Aberdeen City and Shire Structure Plan 2009 and the Aberdeenshire Local Development Plan (2012) There are no specific policy designations in the Development Plan for this site. However the following general development policies will apply from the Aberdeenshire Local Development Plan: <ul style="list-style-type: none">▪ Policy 3 - Development in the Countryside▪ Policy 8 – Layout, siting and design of new development▪ Policy 11 – Natural Heritage▪ Policy 12 – Landscape Conservation▪ Policy 13 – Protecting, improving and conserving the historic environment.
Land Use	
Land Use	Agricultural grazing land. There are two residential properties to the south of the site, namely Woodside and Morven Cottage. Badnyrieves Farm lies to the north east of the site.
Agricultural Land Classification	The site falls within the Macaulay Land Capability for Agriculture Category 3 – Land capable of producing a moderate range of crops, and within sub category 3 ₁ ; <ul style="list-style-type: none">▪ Category 3₁ – Land capable of producing consistently high yields of a narrow range of crops (principally cereals and grass) and/or moderate yields of a wider range (including potatoes, field beans and other vegetables and root crops). Shot grass leys are common.
Rights of Way / Core Paths	There are no core paths on or within close proximity to the site. No footpaths crossing the site were identified during the field visit. Nevertheless, it may be that there are alleged rights of way running within or adjacent to the site. This would need to be confirmed through consultation with Aberdeenshire Council and ScotWays. The Formartine and Buchan Way runs to the east of the site approximately 750m away.
Landscape and Visual	
Nature of Landscape	The landscape character of the area is defined as 'Agricultural Heartland'. Long narrow mature tree belts provide effective screening of the site when viewed from the A948 (including its junction with the B9106) and from the east. This tree belt is identified as ancient and long-established woodland. A tree belt running along the south of the site is also identified as ancient and long-established woodland. There is also some recent broadleaved planting running through the middle of the site which provides some low level visual screening. The topography of the site slopes gently down from north to south. Due to the existing mature woodland belt to the north, west and south the site is relatively well self contained and feels quite secluded. Although there are several man made features within the landscape, including the existing overhead electricity pylons, overhead electricity lines on wooden poles, and a telecommunications mast and wind turbine to the north west of the site, the site retains its rural landscape character. The properties of Badnyrieves, Woodside, Morven Cottage and the hamlet of Nethermuir lie in close proximity to this site.
Possible receptors	Given the screening provided by the existing woodland tree belt, potential landscape and visual effects upon residential properties would be primarily confined to the following three properties: <ul style="list-style-type: none">▪ Woodside (390902, 844510) lies to the immediate south of the site. The primary views of this two storey property are southwards and westwards towards the A948. Views to the rear of the building would be partly screened by a combination of outbuildings and existing planting.▪ Morven Cottage (391067, 844515) lies to the immediate south of the site. the primary views of this single storey property are westwards towards Woodside and eastwards to the rear garden of the property. However, there would be oblique views north westwards towards the site.▪ Badnyrieves Farm (391048, 845092) lies to the north west of the site. The property is orientated towards the site and sits at an elevated position above the site. Although the property has open views towards the site, the existing overhead power lines and associated pylons form prominent features within this existing view.

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Ecology

International and national nature conservation designations	N/A
Local nature conservation designations	There are no local nature conservation designations within the site. An area of Ancient and Long-established woodland is located within 100m of the site boundary to the west, along the A948. It is considered that this designation will be unaffected by works within the site boundary. If access to the site is taken via the A948 or the first 150m of the B9106, there is the potential for this local designation to be impacted. Instead, it is recommended that access is taken from the existing minor track immediately north of the site so as to avoid the need for any tree felling. There is a patch of Semi-natural woodland cover within 100m of the site to the east and south of the site. It is considered that these designations will be unaffected by works within the site boundary.
Protected species records	Otter, red squirrel, brown hare, and water vole records exist within 1km of the site dated between 2003 to 2013.
Primary habitats on site	Site 3 is located on poor semi-improved grassland which was being grazed by cattle at the time of the survey. There has been recent planting of a mix of tree species through the middle of the site, presumably in an effort to connect the two narrow woodland strips located to the east and west of Site 3. The woodland strip to the west of the site, along the A948, is mature sycamore on flat, stony ground. The woodland strip to the east of Site 3 is mature broadleaved woodland of mixed species. The patch of woodland south of the site is young broadleaved woodland with a dense understory. The large woodland to the north east of the site is young conifer plantation (approximately 5m high and densely planted). It was not possible to fully investigate the drains to the east and north east of the site. Investigations from the B9106 indicated that the ditch to the east of the site is heavily overgrown with tall grasses and gorse. An area of marshy grassland, dominated by soft rush, exists to the east of the site. There are stone outbuildings at Badnyrieves.
Protected species potential	<p>Site 3, as with all of the option areas, is suitable for winter foraging and roosting waterfowl. See the recommendations within Site 1.</p> <p>The steep banks of the ditch to the east of Site 3 provide some suitability for water voles but the ditch has low suitability for otters.</p> <p>The woodland strip to the east of the site and the patch of woodland to the south are considered suitable for badgers, whilst the strip to the west showed no sign of badgers during the survey from the A948. The large woodland to the north east of the site has low potential for badgers as it appears densely planted. The area of marshy grassland to the east of the site provides potential foraging habitat for bird species, such as barn owl and bat species. The stone outbuildings at Badnyrieves provides potential roosting and nesting habitat for barn owl and bat species.</p>
Confirmation of surveys required	<p>The following surveys are recommended at Site 3:</p> <ul style="list-style-type: none"> ▪ Depending on the outcome of SNH consultation there may be the requirement to undertake winter walkover surveys for ornithological interests. The survey, if required, would involve three visits spread between November and March. ▪ Badger walkover survey of suitable habitat within 100m of the site. ▪ Otter and water vole surveys of suitable habitat within 250m of the site. ▪ A walkover survey of all buildings within 500m of the site to assess their potential for roosting (and nesting) bat and bird species.

Noise

Nearest receptors	<p>There are a number of residential/ commercial properties surrounding the site, namely:</p> <ul style="list-style-type: none"> ▪ Woodside (approximately 10m to the south) ▪ Morven Cottage (approximately 60m to the south) ▪ Badnyrieves (approximately 50m to the north-east) <p>There are 7 other properties and the hamlet of Nethermuir within 500m of the site boundary on all sides of the site.</p>
Background observation (noise)	The existing mature woodland which surrounds the site means the site is relatively well screened from traffic noise from the A948. This was confirmed by the site visit which identified relatively low background noise levels at the site.

Archaeology and Cultural Heritage

Scheduled Monuments	There are no Scheduled Monuments in close proximity to the site.
Listed buildings	There are no listed buildings within or in close proximity to the site
Other designations (designed)	There are no landscape designations affecting the site.

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landscape etc)	
Notable features on site	There are no notable features on site
Setting/aspect of protected features of interest	Agricultural landscape setting, historic land use of 'fields and farming'.
Hydrology, Hydrogeology & Soils	
Nearest watercourse	There are no watercourses on or in close proximity to the site.
Transport and Access	
Access arrangements	Access could be gained from the A948 which runs along the west of the site or the B9106 which runs along the north of the site. Access to the site can be gained off the B9106 via the track serving Badnyrieves Farm steading. Ancient woodland is considered a sensitive receptor and there is the potential for loss of ancient woodland to allow access to the site. There is also a private access track which provides access to Woodside and Morven Cottage.
Surfaced road	A948 to the west of the site and B9016 to the north.
Distance of joining to public road	Site is approximately 70m from the A948 and 50m from the B9016 to the north. The unclassified access track is approximately 130m at the nearest point to the site boundary.
Other comments	The site is physically capable of accommodating both the proposed MORL and SHE-T substations, albeit that given the size of the site this would require the proposed substations to be located in very close proximity to both Woodside and Morven Cottage. On this basis it is considered that this site is unlikely to be acceptable given potential impacts upon residential amenity.

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Site Reference and Location	<p>Site 4 – Myre of Bedlam (387381, 845491)</p> <p>Site 4 is located approximately 1.6 km to the south west of the nearby settlement of New Deer. It is bounded by the B9170 and a small buffer strip comprising agricultural land to the east; an unclassified rural road and a similar buffer strip to the north; and by agricultural land to the south and west. The properties of Tanmara, Moss-side, Hardbedlam, Myre of Bedlam, Knaps of Bedlam, Blackhouse, Eastfield and Benview lie in close proximity to this site.</p>
Planning	
Current designation in Development Plan	<p>The Development Plan for the site currently comprises the Aberdeen City and Shire Structure Plan 2009 and the Aberdeenshire Local Development Plan (2012)</p> <p>There are no specific policy designations in the Development Plan for this site. However the following general development policies will apply from the Aberdeenshire Local Development Plan:</p> <ul style="list-style-type: none">▪ Policy 3 - Development in the Countryside▪ Policy 8 – Layout, siting and design of new development▪ Policy 11 – Natural Heritage▪ Policy 12 – Landscape Conservation▪ Policy 13 – Protecting, improving and conserving the historic environment.
Land Use	
Land Use	<p>The site is currently agricultural land and is predominantly semi-improved grassland. There are a number of residential properties scattered around the site, albeit that two of the nearest properties to the north east of the site are currently uninhabited.</p>
Agricultural Land Classification	<p>The site falls within the Macaulay Land Capability for Agriculture Category 3 – Land capable of producing a moderate range of crops, and within sub category 3₁;</p> <ul style="list-style-type: none">▪ Category 3₁ – Land capable of producing consistently high yields of a narrow range of crops (principally cereals and grass) and/or moderate yields of a wider range (including potatoes, field beans and other vegetables and root crops). Short grass leys are common.
Rights of Way / Core Paths	<p>There are no core paths on or within close proximity to the site. No footpaths crossing the site were identified during the field visit. Nevertheless, it may be that there are alleged rights of way running within or adjacent to the site. This would need to be confirmed through consultation with Aberdeenshire Council and ScotWays.</p>
Landscape and Visual	
Nature of Landscape	<p>The landscape character of the area is defined as ‘Agricultural Heartland’.</p> <p>The site is set in rolling agricultural farmland which sits relatively low in relation to the surrounding landscape, overlooked by the B9170 and Myre of Bedlam to the east. Consequently the site is relatively well screened from the surrounding more distance landscape on all sides. There is very little tree planting on or in the vicinity of the site, and the site is surrounded by post and wire fencing only. Although the existing overhead electricity pylons run across the site, the site still retains its rural landscape character.</p> <p>A number of the neighbouring farms, including Myre of Bedlam, Benview, Eastfield and Knaps of Bedlam have large agricultural shed units associated with them. There is a variation in the landscape between these farmsteads and other residential dwellings which lie along the C class road to the north of the site.</p>
Possible receptors	<p>There are a number of properties to the north, east and west of the site that are potentially sensitive receptors to the development of a substation on this site. Potential impacts upon these properties are discussed below:</p> <ul style="list-style-type: none">▪ Moss-side (387329, 845929) is orientated towards the site but is relatively well screened due to planting to the front of the property, albeit the upper storey of the front of the house would likely experience open views of the site.▪ Tanmara (387087, 845682) currently experiences open views out across the site.▪ Benview (386547, 845606) has open views out across the site, albeit that there is some screening provided by planting around the property.▪ Eastfield (386569, 845159) is orientated in an east west direction and consequently primary views are to the north and south and not towards the site.▪ Knaps of Bedlam (387197, 844813) is well screened from the site by existing planting and farm buildings to the north and east. Consequently key views are westwards away from the site.▪ Myres of Bedlam (387765, 845545) sits on an elevated position to the east of the site and overlooks out across the site. Some large mature trees provide screening of the site from the front of the property. <p>No residential properties were identified associated with Blackhouse Farm (386809, 844912).</p>

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Ecology

International and national nature conservation designations	N/A
Local nature conservation designations	There is a patch of Semi-natural woodland cover immediately north of the site and within 400m south west of the site. It is considered that these designations will be unaffected by works within the site boundary.
Protected species records	Otter, red squirrel, brown hare, and water vole records exist within 1km of the site dated between 2003 to 2013.
Primary habitats on site	The site is located on a mix of improved (sown) grassland, poor semi-improved grassland and marshy grassland. There are a number of drains flowing through the site into Black Burn to the west of the site. Black Burn had shallow, slow flowing water at the time of the survey and had a good covering of vegetation. The banks are steep in places. There are a number of buildings (farm outbuildings and ruined residences) within the buffer areas. There are no significant patches of woodland in the site or within the buffer area for the site. A number of small areas of conifer plantations are located south and north of the site, with one small patch located within the site (to the south west).
Protected species potential	Site 4, as with all of the option areas, is suitable for winter foraging and roosting waterfowl. See the recommendations within Site 1. The small patches of conifer plantations in the survey area are not considered suitable for badgers, but may provide bird nesting habitat. Black Burn is considered suitable for water voles and potentially foraging otters. The minor drains have varying levels of water vole suitability. A female or juvenile sparrowhawk was observed hunting along a ditch to the north east of the site. The buildings within the buffer area have varying levels of suitability for roosting and nesting bird species (such as barn owls) and bats. There is low potential for badgers within the site.
Confirmation of surveys required	The following surveys are recommended at Site 4: <ul style="list-style-type: none"> ▪ Depending on the outcome of SNH consultation there may be the requirement to undertake winter walkover surveys for ornithological interests. The survey, if required, would involve three visits spread between November and March. ▪ Otter and water vole survey of all suitable habitat within 250m of the site. ▪ A walkover survey of all buildings within 500m of the site to assess their potential for roosting (and nesting) bat and bird species. ▪ A badger survey of all suitable habitat within 100m of the site.
Any other comments	There is a sedimentation risk to Black Burn for any works within Site 3. Appropriate pollution prevention measures would be required to mitigate this potential risk.

Noise

Nearest receptors	There are a number of residential/ commercial properties surrounding the site, namely: <ul style="list-style-type: none"> ▪ Myre of Bedlam (approximately 80m to the east) ▪ Knaps of Bedlam (approximately 50m to the south) ▪ Springfield (approximately 200m to the south) ▪ Blackhouse (approximately 220m to the south-west) ▪ Eastfield (approximately 160m to the south) ▪ Tanamara (approximately 50m to the north) ▪ Moss-side (approximately 200m to the north) ▪ Benview (approximately 180m to the north-west) <p>There are 4 other properties within 500m of the site boundary on all sides of the site</p>
Background observation (noise)	The site visit identified relatively low background noise levels at the site.

Archaeology and Cultural Heritage

Scheduled Monuments	There are no Scheduled Monuments in close proximity to the site.
Listed buildings	There are no listed buildings within or in close proximity to the site
Other designations (designed landscape etc)	There are no landscape designations affecting the site.
Notable features on site	There are no notable features on site.
Setting/aspect of protected features of interest	Agricultural landscape setting, historic land use of 'fields and farming'.

Hydrology, Hydrogeology & Soils

Nearest watercourse	There is a watercourse (The Black Burn) running to the south/ south-west of the site approximately 40 m at the nearest point from the south western boundary of the site. The watercourse is identified within the SEPA 1 in 200 year flood map (5% probability), however the area identified as having the potential for flooding is just outwith the site boundary. There are
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also several small watercourses which run through the site.

Transport and Access

Access arrangements	The B9170 runs to the south of the site and a C class road runs to the north of the site. Potential access to the site can be gained off the B class or the C class rural road.
Surfaced road	The B9170 to the south and category C road to the north.
Distance of joining to public road	The B9170 is approximately 60m from the site boundary and the category C road is approximately 10m from the site boundary at the closest point.
Other comments	<p>Given the large physical extent of this identified site, the site is capable of accommodating the proposed MORL and SHE-T substations in several different potential locations.</p> <p>It is considered that the proposed substations would result in a significant effect on the character and appearance of this rural landscape, albeit this effect would be reduced slightly given the sites lowly position in relation to the surrounding topography. The proposed substations would be visually prominent from the properties along the C class road to the north of the site, in particular from Tanamara.</p>

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Site Reference and Location	<p>Site 5 – Moss-side (386315, 845380)</p> <p>Site 5 is located approximately 2.6 km to the south west of the closest settlement New Deer. It is bounded by a C class rural road and a buffer strip comprising agricultural land to the south and by agricultural land on all other sides. The properties of Pitaig, Benview, Eastfield, Moss-side Cottage and Moss Croft lie in close proximity to this site which topographically slopes at a steeper gradient down from north to south when compared to the other substation option areas considered.</p>
Planning	
Current designation in Development Plan	<p>The Development Plan for the site currently comprises the Aberdeen City and Shire Structure Plan 2009 and the Aberdeenshire Local Development Plan (2012)</p> <p>There are no specific policy designations in the Development Plan for this site. However the following general development policies will apply from the Aberdeenshire Local Development Plan:</p> <ul style="list-style-type: none">▪ Policy 3 - Development in the Countryside▪ Policy 8 – Layout, siting and design of new development▪ Policy 11 – Natural Heritage▪ Policy 12 – Landscape Conservation▪ Policy 13 – Protecting, improving and conserving the historic environment.
Land Use	
Land Use	<p>The site is currently predominantly agricultural grazing land, with the eastern part of the site used for growing hay. The south west corner of the site, which is more wetland in characteristics, does not appear to be well used for agricultural grazing.</p>
Agricultural Land Classification	<p>The site falls within the Macaulay Land Capability for Agriculture Category 3 – Land capable of producing a moderate range of crops, and within sub category 3₁;</p> <ul style="list-style-type: none">▪ Category 3₁ – Land capable of producing consistently high yields of a narrow range of crops (principally cereals and grass) and/or moderate yields of a wider range (including potatoes, field beans and other vegetables and root crops). Short grass leys are common.
Rights of Way / Core Paths	<p>There are no core paths on or within close proximity to the site. No footpaths crossing the site were identified during the field visit, albeit the access track to Pitaig is signed as a footpath and may therefore be a right of way. This would need to be confirmed through consultation with Aberdeenshire Council and ScotWays.</p>
Landscape and Visual	
Nature of Landscape	<p>The landscape character of the area is defined as 'Agricultural Heartland'.</p> <p>The site is rolling undulating farmland with relatively few properties in close proximity in relation to the other substation option areas considered. The site slopes up from the C class road to the south of the site towards Pitaig. The south west corner of the site is relatively enclosed, being screened from Moss-side Cottage and Moss Croft by mature vegetation associated with these properties. Although the existing overhead electricity pylons cross the site, the site remains rural in character.</p>
Possible receptors	<p>There are relatively few properties who may potentially sensitive receptors to the development of a substation on this site. Potential impacts upon these properties are discussed below:</p> <ul style="list-style-type: none">▪ Moss-side Cottage (386244, 845167) has no potential views out to the site due to existing dense coniferous tree screening and outbuildings.▪ Moss Croft (386144, 845197) is currently uninhabited but appears to be being renovated. The rear of the property which is orientated towards the site is screened from the site by dense coniferous trees and shrubs.▪ Benview (386536, 845591) is orientated with views predominantly to the south and consequently only experiences oblique views towards the site.▪ Pitaig (386017, 845749) experiences partial views towards the site. The existing overhead power lines and associated pylons are visually prominent within this view.▪ Eastfield (386576, 845176) has limited potential views of the site due to existing vegetation screening along the C class road.
Ecology	
International and national nature conservation designations	N/A
Local nature conservation designations	<p>There is a patch of Semi-natural woodland cover within 100m of the site to the south and within 400m west of the site. It is considered that these designations will be unaffected by works within the site boundary. It is recommended that access to the site is planned so as to avoid the need for any tree felling.</p>
Protected species records	<p>Otter, red squirrel, brown hare, and water vole records exist within 1km of the site dated between 2003 to 2013.</p>

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Primary habitats on site	Site 5 is located on improved grassland (managed for hay production) and marshy grassland, dominated by soft rush. The ground in Site 5 is wet, with an area of open standing water in the buffer area south west of the site.
Protected species potential	Site 5, as with all of the option areas, is suitable for winter foraging and roosting waterfowl. See the recommendations within Site 1. Marshy grassland within the site and the associated standing water provides suitable foraging habitat for bird species (including kestrel and barn owl), bats and to a lesser extent, otters. Ditches to the east and north of the site have water vole potential.
Confirmation of surveys required	The following surveys are recommended at Site 5: <ul style="list-style-type: none">▪ Depending on the outcome of SNH consultation there may be the requirement to undertake winter walkover surveys for ornithological interests. The survey, if required, would involve three visits spread between November and March.▪ Otter and water vole survey of all suitable habitat within 250m of the site.▪ A walkover survey of all buildings within 500m of the site to assess their potential for roosting (and nesting) bat and bird species.▪ A badger survey of all suitable habitat within 100m of the site.
Any other comments	N/A

Noise

Nearest receptors	There are a number of residential/ commercial properties surrounding the site, namely: <ul style="list-style-type: none">▪ Benview (approximately 60m to the north-east)▪ Moss-side cottage(approximately 110m to the south)▪ Moss Croft (approximately 160m to the south west)▪ Piltaig (approximately 160m to the north-west)▪ Eastfield (approximately 200m to the south-east) There are 3 other properties within 500m of the site boundary on all sides of the site.
Background observation (noise)	The site visit identified relatively low background noise levels at the site.

Archaeology and Cultural Heritage

Scheduled Monuments	There are no Scheduled Monuments in close proximity to the site.
Listed buildings	There are no listed buildings within or in close proximity to the site.
Other designations (designed landscape etc)	There are no landscape designations affecting the site.
Notable features on site	There are no notable features on site.
Setting/aspect of protected features of interest	Agricultural landscape setting, historic land use of 'fields and farming'.

Hydrology, Hydrogeology & Soils

Nearest watercourse	A small watercourse is located to the north west corner of the site.
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Transport and Access

Access arrangements	A C class road runs to the south of the site and there is an access track running along the west of the site which provides access to Piltaig.
Surfaced road	C class road to the south.
Distance of joining to public road	C class road is 50m from the site boundary at the closest point.
Other comments	The site is not physically capable of accommodating both the MORL and SHE-T substations. The site is visually well screened and in this regard would offer a generally acceptable location for a substation location. The relatively enclosed nature of the site would help to reduce the significance of the impact of the proposed substations on the existing rural character and appearance of the site.

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Site Reference and Location	<p>Site 6 – East Swanford (382971, 845112)</p> <p>Site 6 is located 4.9 km to the south west of the nearest settlement, New Deer. It is partly dissected by a C class rural road in its northern section and bounded by the same road to the east as it relates to the southern half of the site. Potential access can be gained from this road. To the north, south and west the site is surrounded by rolling agricultural land. Nine properties lie in close proximity to the site as well as one derelict property (to the north).</p>
Planning	
Current designation in Development Plan	<p>The Development Plan for the site currently comprises the Aberdeen City and Shire Structure Plan 2009 and the Aberdeenshire Local Development Plan (2012)</p> <p>There are no specific policy designations in the Development Plan for this site. However the following general development policies will apply from the Aberdeenshire Local Development Plan:</p> <ul style="list-style-type: none">• Policy 3 - Development in the Countryside• Policy 8 – Layout, siting and design of new development• Policy 11 – Natural Heritage• Policy 12 – Landscape Conservation• Policy 13 – Protecting, improving and conserving the historic environment.
Land Use	
Land Use	<p>The site is a mix of arable farmland and agricultural grazing land.</p>
Agricultural Land Classification	<p>The site falls within the Macaulay Land Capability for Agriculture Category 3 – Land capable of producing a moderate range of crops, and within sub category 3₁;</p> <ul style="list-style-type: none">• Category 3₁ – Land capable of producing consistently high yields of a narrow range of crops (principally cereals and grass) and/or moderate yields of a wider range (including potatoes, field beans and other vegetables and root crops). Short grass leys are common.
Rights of Way / Core Paths	<p>There are no core paths on or within close proximity to the site. No footpaths crossing the site were identified during the field visit. Nevertheless, it may be that there are alleged rights of way running within or adjacent to the site. This would need to be confirmed through consultation with Aberdeenshire Council and ScotWays.</p>
Landscape and Visual	
Nature of Landscape	<p>The landscape character of the area is defined as 'Agricultural Heartland'.</p> <p>The site is a gently rolling landscape, although there are small areas to the north-east and west of the site where the landform drops more sharply away. The landscape is largely open, with occasional woodland planting found associated with properties and farmsteads. The site is predominantly surrounded by post and wire fencing, with occasional shrub hedges and woodland planting. Although the existing overhead electricity pylons cross the site, the landscape remains rural in character.</p>
Possible receptors	<p>There are a number of scattered rural properties and farms scattered around this site who may be potentially sensitive to the development of a substation on this site. However, the majority of these properties have either been located in the lower undulating parts of the landscape or have boundary treatments which partly screen views of the site. Potential impacts upon properties are discussed below:</p> <ul style="list-style-type: none">• Upper Burnside and Burnside (382693, 845540) are single storey properties which currently experience oblique views out in a south easterly direction towards the site. Views from Burnside are also partly screened by vegetation to the front of the property.• Maryhill House (382686, 845653) does not appear to be in use as a residential property and experiences limited views towards the site.• Cragganmore (382905, 845660) is a one and a half storey house which faces southwards towards the site. Some planting to the front of the property provides partial screening.• Maryhill (382943, 845653) is a derelict property.• The Neuk (383129, 845533) appears to be uninhabited.• Abbotshaugh (383489, 845540) is a one and a half storey house. Although the property has some associated outbuildings and boundary tree planting, the property does experience relatively open views to the south towards the site. However the existing overhead power lines and associated pylons lie in close proximity to the site and form prominent features within this existing view.• Nethererton of Greens (383560, 845750) lies to the north east of the site. However, the intervening topography and vegetation surrounding this property effectively screens views of the site.• Laurelston (383793, 845648) lies to the north east of the site where the land falls away more steeply from the identified site option boundary. Nevertheless, the property does experience uphill views towards the site, particularly from the upper storey of the property.

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	<ul style="list-style-type: none"> • East Swanford (382830, 844996) is relatively well screened from views of the site by mature trees which surround the property. • Oakwood (383897, 8454119), although relatively distant in relation to the other properties, faces westwards towards the site and has relatively uninterrupted views south-westwards from the front of the property across the site. • Mains of Asleid (383664, 844871) comprises one single storey property which is orientated towards the site and a second two storey property which is orientated southwards away from the site. The single storey property is relatively well screened from the site by some mature planting the south west and due to its lower position in the undulating landscape. • Upper Mains of Asleid (383680, 844405) is a one and a half storey property whose primary views are south eastwards away from the site. • Asleid Cottages (383711, 844179) comprises a one and a half storey property whose primary views are westwards towards Rowan Brae. However, given the open nature of the intervening landscape, the property would experience oblique views north westwards towards the site. • Burnside Milbrex (382952, 844231) lies to the south west of the site. The front of the property faces southwards towards the road, whilst views towards the site from the rear and side of the property are well screened by surrounding mature trees.
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Ecology

International and national nature conservation designations	N/A
Local nature conservation designations	There is a patch of Semi-natural woodland cover within 100m of the site to the east and four small isolated patches to the west of the site. It is considered that these designations will be unaffected by works within the site boundary. It is recommended that access to the site is planned so as to avoid the need for any tree felling.
Protected species records	Otter, red squirrel, brown hare, and water vole records exist within 1km of the site dated between 2003 to 2013.
Primary habitats on site	Site 6 is located on a mix of arable farmland (including stubble fields, hay fields and sown crops) and high density cattle and sheep grazing. There are small patches of conifer plantations and broadleaved woodland within the buffer area. Ditches to the east of the site appear to flow into Little Water, which is a fast flowing stream between 50cm and 1.5m wide. A large area of the western buffer was not accessible and could not be seen from the road. Open water 400 to 500m north east of the site supports mallards and teal. In addition to these larger waterbodies, four smaller waterbodies are visible within the buffer area, from the mapping. There are a number of old outbuildings within the buffer area which are in varying states of repair.
Protected species potential	Site 6, as with all of the option areas, is suitable for winter foraging and roosting waterfowl. See the recommendations within Site 1. The small patches of conifers and broadleaved woodland are considered to offer low to negligible potential for protected species, although they may provide nesting bird habitat. Waterfowl using the open water over 400m north east of the site are unlikely to be effected by the works. The smaller waterbodies are likely to support amphibians, but given the northern latitude of the site, great crested newts are considered unlikely to be present. The old outbuildings within the buffer area provides potential for roosting and nesting bird species (such as barn owl) and bat species. Ditches within the buffer area provide potential for water vole but minimal otter potential.
Confirmation of surveys required	<p>The following surveys are recommended at Site 6:</p> <ul style="list-style-type: none"> • Depending on the outcome of SNH consultation there may be the requirement to undertake winter walkover surveys for ornithological interests. The survey, if required, would involve three visits spread between November and March. • Otter and water vole survey of all suitable habitat within 250m of the site. • A walkover survey of all buildings within 500m of the site to assess their potential for roosting (and nesting) bat and bird species. • A badger survey of all suitable habitat within 100m of the site.
Any other comments	

Noise

Nearest receptors	<p>There are a number of residential/ commercial properties surrounding the site, namely:</p> <ul style="list-style-type: none"> • The Neuk (approximately 110m to the north) • Abbotshaugh (approximately 20m to the north) • Oakwood (approximately 250m to the south east) • North Mains of Asleid (approximately 250m to the south east) • Mains of Asleid (approximately 250m to the south east) • Upper Mains of Asleid (approximately 60m to the east) • Asleid Cottages (approximately 200m to the south-east)
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	<ul style="list-style-type: none">• Burnside (approximately 60m to the south-west)• East Swanford (approximately 100m to the west) <p>There are 10 other properties within 500m of the site boundary on all sides of the site.</p>
Background observation (noise)	The site visit identified relatively low background noise levels at the site.
Archaeology and Cultural Heritage	
Scheduled Monuments	There are no Scheduled Monuments in close proximity to the site.
Listed buildings	There are no listed buildings within or in close proximity to the site. The nearest listed building is approximately 750 m to the south of the site.
Other designations (designed landscape etc)	There are no landscape designations affecting the site.
Notable features on site	There is one non-statutory listed features (Royal Commission on the Ancient and Historic Monuments of Scotland) just to the north of the site boundary. <ul style="list-style-type: none">• Listed as 'term pending' http://canmore.rcahms.gov.uk/en/site/174242/details/abbotshaugh/
Setting/aspect of protected features of interest	Agricultural landscape setting, historic land use of 'fields and farming'.
Hydrology, Hydrogeology & Soils	
Nearest watercourse	There is a watercourse (Burn of Asleid) running to the west of the site approximately 150m at the nearest point from the north- eastern boundary of the site. The watercourse is identified within the SEPA 1 in 200 year flood map (5% probability), however the area identified as having the potential for flooding is outwith the site boundary.
Transport and Access	
Access arrangements	There are C class to the north, south and east of the site and there are a number of private access tracks to properties running throughout the site.
Surfaced road	C class roads running to the north, south and east of the site.
Distance of joining to public road	Approximately 40m to C class roads.
Other comments	<p>The large physical extent of the site is capable of accommodating both the proposed MORL and SHE-T substation in several potential locations.</p> <p>Given the extent and relatively open nature of the site, it is considered that the proposed substations would result in a significant effect on the character and appearance of this rural landscape. Although there are a number of properties and farmsteads scattered in close proximity to the site, due to a combination of the undulating topography of the site and the greater number of properties that benefit from mature planting around them, the majority of properties do not experience wide open panoramic views across the whole site. From a visual amenity perspective, it is considered that locating both the substations to the south of the site would be the preferred location.</p>

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Site Reference and Location	Site 7 - Millbrex Site 7 is located approximately 6.3 km from the nearest settlement, New Deer. It is bounded by C Class rural roads to the west and south both with intervening buffer strips of agricultural land. To the north and east agricultural land surrounds the site. The properties of Blackpool, Lean-Ar-Arghaidh, Sunnysbank Farm, Burnside, Rowan Brae and North Millbrex lie in close proximity to this site which is located in typically undulating countryside. Topographically the land slopes down from west to east.
Planning	
Current designation in Development Plan	The Development Plan for the site currently comprises the Aberdeen City and Shire Structure Plan 2009 and the Aberdeenshire Local Development Plan (2012) There are no specific policy designations in the Development Plan for this site. However the following general development policies will apply from the Aberdeenshire Local Development Plan: <ul style="list-style-type: none">▪ Policy 3 - Development in the Countryside▪ Policy 8 – Layout, siting and design of new development▪ Policy 11 – Natural Heritage▪ Policy 12 – Landscape Conservation▪ Policy 13 – Protecting, improving and conserving the historic environment.
Land Use	
Land Use	The site is predominantly agricultural grazing land.
Agricultural Land Classification	The site falls within the Macaulay Land Capability for Agriculture Category 3 – Land capable of producing a moderate range of crops. The land falls mostly within sub category 3 ₂ with part of the site falling within category 3 ₁ . The sub categories are detailed further below; <ul style="list-style-type: none">▪ Category 3₁ – Land capable of producing consistently high yields of a narrow range of crops (principally cereals and grass) and/or moderate yields of a wider range (including potatoes, field beans and other vegetables and root crops). Short grass leys are common.▪ Category 3₂ – Land capable of average production but high yields of barely oats and grass are often obtained. Other crops are limited to potatoes and forage crops. Grass leys are common and reflect the increasing growth limitations for arable crops and degree of risk involved in their production
Rights of Way / Core Paths	There are no core paths on or within close proximity to the site. No footpaths crossing the site were identified during the field visit. Nevertheless, it may be that there are alleged rights of way running within or adjacent to the site. This would need to be confirmed through consultation with Aberdeenshire Council and ScotWays.
Landscape and Visual	
Nature of Landscape	The landscape character of the area is defined as 'Agricultural Heartland'. The site is set in undulating agricultural land with the topography of the site sloping gently down from west to east. The site also falls away beyond the north of the site. The site is relatively open, with post and wire fencing to the east, west and south of the site. To the north the site is bounded by gorse hedging and scrub. Although the site is crossed by the existing overhead pylons, the site feels relatively remote with the exception of the properties at North Millbrex which overlook the site. The site is rural in character.
Possible receptors	The properties to the north of the site at Blackpool (381909, 844236), Lean Ar Aghaidh (382147, 844214) and Smiddybank Farm (382406, 844351) are all effectively screened from the site by scrub vegetation along the northern boundary of the site. Burnside Millbrex (382952, 844231) lies to the east of the site. The front of the property faces southwards towards the road, whilst views from the western side of the property are well screened by intervening outbuildings. The key potential sensitive receptors are therefore confined to the properties at North Millbreck (382114, 843642) which overlook the site. These include a traditional two storey farmhouse which faces south eastwards over the site, and three steading conversions which partly overlook the site.
Ecology	
International and national nature conservation designations	N/A

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Local nature conservation designations	There is a patch of Semi-natural woodland cover within 250m of the site to the west and five small patches within 500m to the south and east of the site. It is considered that these designations will be unaffected by works within the site boundary. It is recommended that access to the site is planned so as to avoid the need for any tree felling.
Protected species records	Otter, red squirrel, brown hare, and water vole records exist within 1km of the site dated between 2003 to 2013.
Primary habitats on site	The site is predominantly poor grassland, grazed by cattle. The field in the north of the site is ploughed and sown with grass. A hedge has been planted through the site and along the northern boundary. It is not yet well established and provides low value. A large area of the northern buffer was not accessible and could not be seen from the road. There are a number of old outbuildings within the buffer area which are in varying states of repair.
Protected species potential	Site 7, as with all of the option areas, is suitable for winter foraging and roosting waterfowl. See the recommendations within Site 1. Flocks of herring gull and common gull were feeding in fields to the south and north west of the site, within the buffer area. This habitat is locally abundant so is unlikely to be of particular importance to these species. A dead hare was identified on the road immediately south of the site and this species is likely to be present across the entire local area. The old outbuildings within the buffer area provides potential for roosting and nesting bird species (such as barn owl) and bat species. Ditches within the buffer area provide potential for water vole but minimal otter potential. There are no water or woodland features within the site.
Confirmation of surveys required	The following surveys are recommended at Site 7: <ul style="list-style-type: none"> ▪ Depending on the outcome of SNH consultation there may be the requirement to undertake winter walkover surveys for ornithological interests. The survey, if required, would involve three visits spread between November and March. ▪ Otter and water vole survey of all suitable habitat within 250m of the site. ▪ A walkover survey of all buildings within 500m of the site to assess their potential for roosting (and nesting) bat and bird species.
Any other comments	N/A

Noise

Nearest receptors	There are a number of residential/ commercial properties surrounding the site, namely: <ul style="list-style-type: none"> ▪ North Milbrey (approximately 50m to the south) ▪ Blackpool (approximately 100m to the north-west) ▪ Lean-Ar-Argheidh (approximately 40m to the north) ▪ Smiddybank Farm (approximately 120m to the north) <p>There are various other rural properties scattered in the landscape within 1km.</p>
Background observation (noise)	The site visit identified relatively low background noise levels at the site.

Archaeology and Cultural Heritage

Scheduled Monuments	There are no Scheduled Monuments in close proximity to the site.
Listed buildings	There are no listed buildings within or in close proximity to the site.
Other designations (designed landscape etc)	There are no landscape designations affecting the site.
Notable features on site	There are two non-statutory listed features (Royal Commission on the Ancient and Historic Monuments of Scotland) within or close to the site boundary: <ul style="list-style-type: none"> ▪ Cairn (Canmore ID 1990) Blue Cairn has supposed to have been about 40yds in diameter, and 15ft high. Its stones were removed for building purposes, particularly some 15 years ago (c.1856) for a local road. No finds were noted when the site was dug over to a foot in depth. Name Book 1871. No trace – visited by OS (ISS) 30 January 1973 http://canmore.rcahms.gov.uk/en/site/19910/details/burnside+blue+cairn/ ▪ Cairn (Canmore ID 19911) A cairn about 40yds in diameter and 15ft high, has formerly situated about 15 chains ESE of Blue Cairn (NJ84SW 4). The stones were removed some 15 years ago (c. 1856) for the building of a road, and the site cultivated to the depth of a foot. No relics were found. Name Book 1871. No trace. Visited by OS (ISS) 30 January 1973. http://canmore.rcahms.gov.uk/en/site/19911/details/burnside/
Setting/aspect of protected features of interest	Agricultural landscape setting, historic land use of 'fields and farming'.

Hydrology, Hydrogeology & Soils

Nearest watercourse	There is a watercourse (Burn of Asleid) running to the east of the site approximately 100m at the nearest point from the north- eastern boundary of the site. The watercourse is identified within the SEPA 1 in 200 year flood map (5% probability), however the area identified as
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having the potential for flooding is outwith the site boundary.

Transport and Access

Access arrangements	There is a C class road to the south of the site. There is also an access track running along the west of the site which provides access to a number of properties but this route is unlikely to be suitable for construction vehicles.
Surfaced road	C class road to the south of the site.
Distance of joining to public road	Less than 50m at closest point from site boundary.
Other comments	<p>The site is physically capable of accommodating both the proposed SHE-T and MORL substations.</p> <p>It is considered that the proposed substation would result in a significant effect on the character and appearance of this rural landscape. However, the visual impact of the proposed development would be predominantly confined to the farmhouse and steading conversions at North Millbex which overlook the site. Consequently the preference would be to locate the substation to the north east of the site as far as possible.</p>

APPENDIX 3 – ECOLOGY SURVEYS CALENDAR

A guide to optimal () and sub-optimal () survey periods is presented below for the surveys identified in relation to the seven sub-station option areas and potentially the land referenced area.

	J	F	M	A	M	J	J	A	S	O	N	D
Extended Phase 1 Habitat Survey												
Birds – winter bird survey												
Birds – breeding bird surveys and nest searches												
Bat – activity surveys												
Bat – building inspections												
Squirrels – search for dreys in woodland												
Water vole												
Otter												
Badger												