Landscape Sensitivity and Capacity Study for Wind Farm Development on the Shetland Islands

A Report to
Shetland Islands Council
Prepared by
Land Use Consultants

March 2009

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Shetland Islands Council

LOCAL DEVELOPMENT PLAN

Landscape Sensitivity and Capacity Study for Wind Farm Development on The Shetland Islands

Final Report

A report to
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March 27th 2009

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1. INTRODUCTION

Background and Policy Framework

1.1. This report sets out the findings of a review of landscape sensitivity to wind farm development on the Shetland Islands. The results of this study informed the development of the *Shetland Islands Supplementary Planning Guidance* (SPG) 2009 document which is compliant with *Scottish Planning Policy 6* (SPP6) and which was prepared in parallel with this study. The report content forms part of the technical appendices to the SPG.

Need for the Study

1.2. The Shetland Islands are particularly renowned for their remote wildness and scenic quality. The islands are valued as a natural, historical and cultural resource, and it is therefore of key importance that wind farms are developed in harmony with the surrounding landscape and the needs of other users of this resource.

1.3. Given the pressures for wind farm development on the Shetland Islands, there is a clear need for a policy framework that draws on transparent, robust and defensible background information that can provide a base for assessing wind farm development applications and providing landscape and visual guidance to developers.

1.4. *SPP6*, published in March 2007, requires planning authorities to set out a spatial framework for the consideration of wind farm development proposals over 20 megawatts (MW), based on the identification of '*Broad Areas of Search'* and '*Areas to be afforded Significant Protection'*. **Appendix 3** of this document provides further information on SPP6.

1.5. In addition, *Annex 2 to PAN45* was published in November 2008. This document provides advice on the process of preparing spatial frameworks for wind farm developments of over 20MW and describes key issues and considerations that are directly relevant to this study.

Study Brief

1.6. This study is intended to provide guidance relevant to landscape and visual matters on areas which are considered most appropriate for wind farm development on the Shetland Islands, such that it can be applied to wind farm proposals of various sizes. It therefore identifies indicative landscape capacities for wind farm development, alongside providing landscape related guidance for wind farm developments of differing size and scale.

1.7. A sensitivity study for each landscape character area is accompanied by the provision of guidance on wind farm development, within various visual compartments, as identified from information contained in *A Landscape Assessment of the Shetland Isles*[1]. This guidance draws upon that already included in the landscape character assessment, the *Shetland Structure Plan* and the *Shetland Local Plan*.

[1] Gillespies (1998) *A Landscape Assessment of The Shetland Isles.* Scottish Natural Heritage Review No 93.

1.8. Locational and generic guidance provided in this study does not take away the requirement for detailed consideration of siting and design, and the need to assess landscape and visual effects of individual wind farm development proposals on a case by case basis or, indeed against other technical and environmental constraints or social issues.

Previous Studies

1.9. There is currently no agreed method for evaluating sensitivity or capacity of different types of landscape. The approach taken in this study builds on LUC's experience from previous and ongoing studies and on our method developed for assessing wind farm development in Scotland and elsewhere. It also draws on the current thinking on techniques and criteria for judging landscape sensitivity and capacity as documented in *Topic Paper 6* by Scottish Natural Heritage and The Countryside Agency (2002). As part of this study, a number of similar reports were reviewed, and used to inform the methodology used here. These are listed in **Appendix 5**.

Structure of the Report

1.10. The remainder of the report is structured as follows:

- **Section 2**: Methodology applied in the study
- **Section 3**: Overview of key landscape characteristics of the Shetland Islands
- **Section 4**: Evaluation of landscape character areas
- **Section 5**: Evaluation and analysis of visual compartments
- **Section 6**: Landscape locational and design guidelines for wind farm development proposals.

1.11. The report is supported by the following figures:

- **Figure 1**: Viewpoints
- **Figure 2**: Landscape Character Types
- **Figure 3**: Sensitivity to Wind Farm Development in Relation to Landscape Character
- **Figure 4**: Landscape Designations
- **Figure 5**: Sensitivity to Wind Farm Development in Relation to Landscape Character and Designations
- **Figure 6**: Visual Compartments
- **Figure 7**: Landscape Character Sensitivity in Relation to Visual Compartments and Designations.

2. METHODOLOGY

Introduction

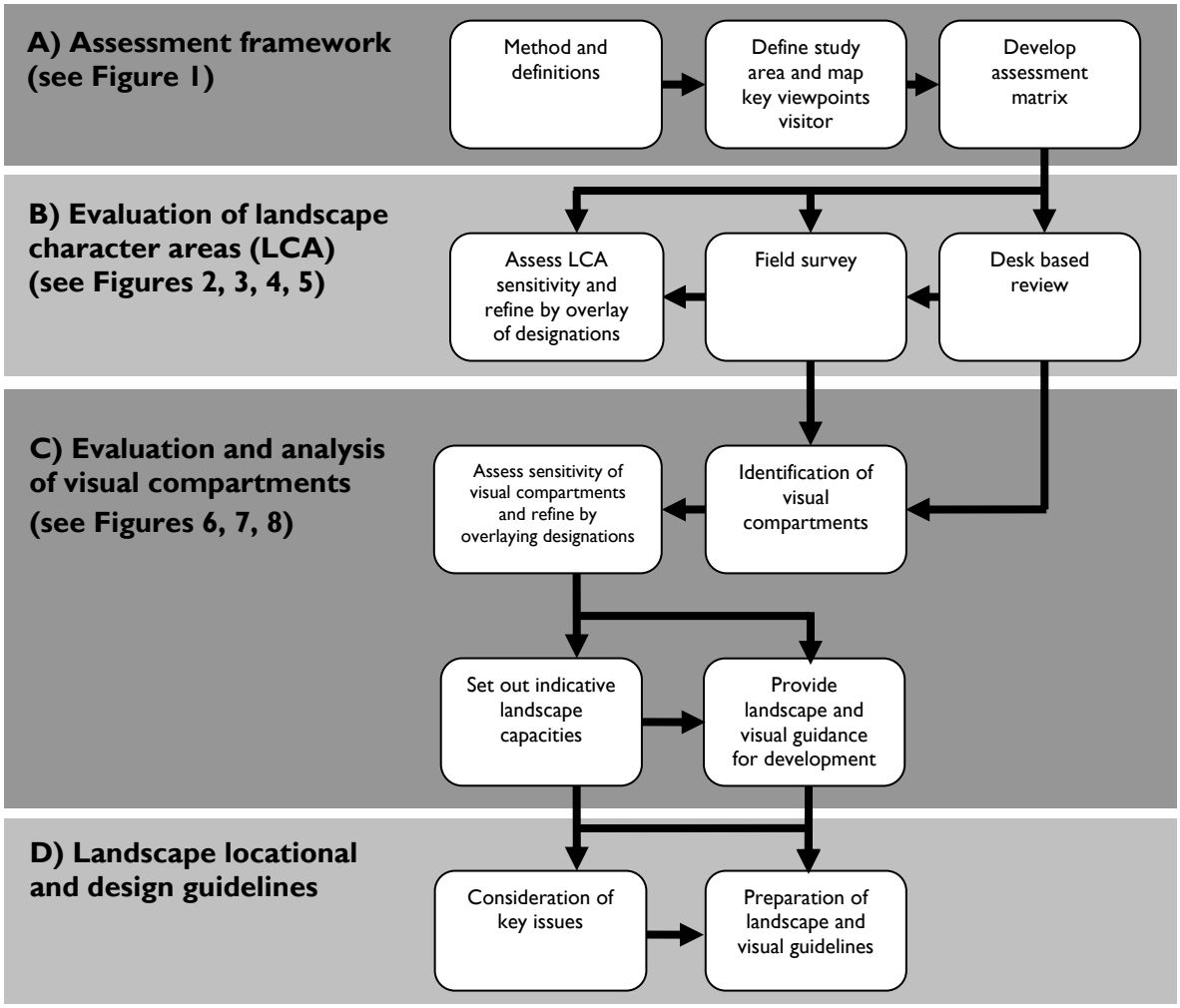
2.1. This section of the report provides a glossary of abbreviations used in the report followed by an overview of the methodology that was developed for the study. The glossary of abbreviations is shown below.

Table 2.1 Glossary of Abbreviations

AOD	Above Ordnance Datum (which equates approximately to sea level)
GDL	Garden and Designed Landscape
LCA	Landscape Character Area
LCT	Landscape Character Type
LVIA	Landscape and Visual Impact Assessment
NSA	National Scenic Area
PAN	Planning Advice Note
SIC	Shetland Islands Council
SPG	Supplementary Planning Guidance
SPP	Scottish Planning Policy
SSSI	Site of Special Scientific Interest
WF	Wind Farm
ZTV	Zone of Theoretical Visibility

2.2. The following diagram indicates the main project stages and processes. These are described in more detail in the following paragraphs.

Diagram 2.1 Project Stages and Processes



A) ASSESSMENT FRAMEWORK

Method and Definitions

2.3. As part of this study, a number of similar reports were reviewed, and used to inform the methodology used here. Key guidance is contained in:

- *Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity* (The Countryside Agency and Scottish Natural Heritage, 2002)
- *Guidance for Landscape and Visual Impact Assessment.* Second Edition (The Landscape Institute and the Institute of Environmental Management and Assessment, 2002)

Further references are listed in **Appendix 5**.

2.4. The following definition was adopted in this study in order to assess the sensitivity of the landscape to wind farm development[2]:

Sensitivity is the extent to which the character of the landscape is susceptible to change as a result of wind farm development. It is an indication of the overall robustness of the landscape and the extent to which it can accommodate wind farm development.

2.5. Where reference is made to landscape character the following definition is used[3]:

Landscape character is the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how this is perceived by people.

2.6. The study makes a judgement about the overall sensitivity of the landscape to wind farm development and recognises that some aspects of the landscape may be more important in defining landscape character than others, and may therefore be more sensitive to change as a result of wind farm development. Landscape sensitivity is a relative term; the scenic quality and wildness of the landscape on the Shetland Islands may be considered of a higher or lower sensitivity than landscapes in other areas in Scotland. This study therefore considers sensitivity within the context of the Shetland Islands.

2.7. The study draws on Gillespies (1998) *A Landscape Assessment of the Shetland Isles,* which provided the baseline information for the assessment.

Study Area

2.8. The whole of the Shetland Islands has been included in the study, including Foula and Fair Isle. The study does not take account of the available wind resource or other technical constraints. Areas with significant landscape constraints, notably the National Scenic Areas (NSAs) (see **Figure 4**), including those that have been

[2] The Countryside Agency and Scottish Natural Heritage (2002) *Landscape Character Assessment: Guidance for England and Scotland. Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity.*
[3] The Countryside Agency and Scottish Natural Heritage (2002) *Landscape Character Assessment: Guidance for England and Scotland* by University of Sheffield and Land Use Consultants.

identified in previous studies were identified early in the desk review process and have not been subject to detailed field survey.

Study Parameters

Assessment Matrix

2.9. Wind farm development will affect different characteristics of the landscape in different ways. It is therefore important to understand the nature and sensitivity of different components of character, and to set these out and assess them in a consistent and transparent fashion. In order to do this, multifaceted criteria were developed to highlight specific landscape and visual characteristics which are most likely to be affected by wind farm development. The criteria are based on current good practice. They include criteria relating to aspects of landscape character and visual amenity as well as others concerning the 'landscape experience'. Criteria were agreed with the Working Group at Shetland Islands Council (SIC).

2.10. **Table 2.2** sets out the criteria which were developed to evaluate each landscape character area. Each area was assessed against these criteria using a three point sensitivity grading: **higher**, **medium** or **lower**. This was illustrated, using shading to indicate how each landscape character area performs against each criterion. In addition, individual characteristics or combinations of particular importance, which contribute to higher sensitivity in a landscape, are shaded in the criteria column.

Table 2.2 Criteria for Assessing Landscape Sensitivity to Wind Farm Development

Landscape Sensitivity Assessment Criteria			
Characteristic	**Aspects indicating lower sensitivity to wind farm development**	⟷	**Aspects indicating higher sensitivity to wind farm development**
LANDSCAPE			
Landform and scale: patterns, complexity and consistency	Large scale landform Simple Featureless Absence of strong topographical variety	⟷	Small scale landform Distinctive and complex Human scale indicators Presence of strong topographical variety
Land cover: patterns, complexity and consistency	Simple Predictable Smooth, regular and convex or flat and uniform	⟷	Complex Unpredictable Rugged and irregular
Settlement and man-made influence	Concentrated settlement pattern Presence of contemporary structures eg utility, infrastructure or industrial elements	⟷	Dispersed settlement pattern Absence of modern development, presence of small scale, historic or vernacular settlement
Movement	Prominent movement, busy	⟷	No evident movement, still
VISUAL			
Skylines	Simple predictable skylines Presence of existing vertical features	⟷	Complex unpredictable skylines Uninterrupted horizons
Inter-visibility with adjacent landscapes	Limited views into and out of landscape Neighbouring landscapes of low sensitivity Weak connections, self contained area and views Simple large scale backdrops	⟷	Prospects into and out from high ground or open landscapes Neighbouring landscapes of high sensitivity Contributes to wider landscape Complex or distinctive backdrops
Key views, vistas and landmark features	Obscured landmarks, views towards/ from landmarks, absence of vistas Indistinctive or industrial settings	⟷	Prominent key landmarks, views towards/ from landmarks or key vistas Distinctive settings or public viewpoints
Receptors	Unpopulated or few receptors Inaccessible	⟷	More densely populated or many receptors Landscape focused recreation and/ or visitor attraction
Natural and cultural heritage features (views to/ from)	Limited association between landscape(s) and/or features	⟷	Strong association between landscape(s) and/or features
Perceptual aspects (sense of remoteness, tranquillity)	Close to visible or audible signs of human activity and development	⟷	Physically or perceptually remote, peaceful or tranquil

2.11. Key characteristics were highlighted for each landscape character area and reviewed against the assessment criteria, using a transparent analysis combined with professional judgement to assign draft overall landscape sensitivities to each area.

Wind Farm Development Typologies

2.12. For the purpose of this study, the key characteristics of each landscape character area were assessed in terms of their potential sensitivity to generic wind farm development typologies.

2.13. Based on contemporary commercial developments and proposals coming forward within the Shetland Islands the following typologies were identified, reflecting different scales of development. Definitions can be given either by considering the number of turbines or by reference to installed capacity, as in SPP6. In this report the following terms are used, broadly with reference to both criteria.

A. **Single turbine to a small group** – a development of 1 turbine to a group of up to about 6 turbines, or with an installed capacity of less than 20MW

B. **Medium group** – a development of approximately 7-12 turbines, and/or with an installed capacity of up to 20MW

C. **Medium-large group** – a development of approximately 13-25 turbines, and/or with an installed capacity of 20-50MW

D. **Large-very large group** – a large development of approximately 25 or more turbines and/or an installed capacity in excess of 50MW

2.14. Note that bandings and capacities are approximate, giving an idea of the size of commercial developments rather than being intended as exact numbers.

2.15. The study does not address smaller scale domestic installations or more distant offshore development. The identified visual compartments (see **Section 5**), extend into inshore waters, allowing consideration of the effects of onshore and inshore development, resulting from the intervisibility between the land and the sea. This approach allowed account to be taken of the recognised importance of the interplay between land and sea, and the way that the orientation of voes and sounds influences the landscape character and views within the Shetland Islands.

2.16. Turbine heights in the 90 - 150m (to blade tip) range have been assumed which are typical of the current generation of commercial turbines. Smaller turbines are generally less efficient and usually rotate faster. However, this should not preclude the possibility of using smaller turbines, in order to ensure development is at an appropriate scale and proportion with the affected landscape.

2.17. The above typologies were considered during site surveys in order to come to a view as to which would be the most suitable scale of development within each landscape character area. Based on these findings, the study provides

locational and typology guidance in relation to key aspects of landscape and visual character in **Section 6**.

2.18. The potential effect of all associated ancillary development which is required as part of wind farm development, including substations and access tracks, was also considered in this sensitivity assessment. Typically, larger wind farm developments require more extensive associated ancillary development including a correspondingly larger length of access track and cabling, and a greater number of anemometry masts.

B) DESCRIPTION AND EVALUATION OF LANDSCAPE CHARACTER AREAS

Desk Based Review

2.19. The desk based review draws on existing data sources to describe defining landscape characteristics. It is based on a comprehensive desktop research exercise, including of the published landscape character assessment, review of GIS datasets and map studies. Examination was undertaken of the following:

- Ordnance Survey maps, to identify landmarks (including topographical, historical and others) and viewpoints (i.e. mapped viewpoints, and other evident locations where people will gather to appreciate the landscape, shown on **Figure 1**);
- land cover (based on the landscape assessment);
- topography (based on the 1:50,000 Ordnance Survey digital contour data);
- settlements, (including consideration of their size) and principal road and ferry transport routes;
- landscape designations and other 'value' or 'perception' information which already exists, including those relating to NSA or Gardens and Designed Landscapes (shown on **Figure 4**);
- Gillespies (1998) *A Landscape Assessment of the Shetland Isles* (see **Figures 2** and **3**).
- existing wind farm developments within the study area including Burradale Wind Farm.

Describing Landscape Character Area Characteristics

2.20. Based on the information outlined above, this part of the study involved identification of key landscape features of the landscape character areas (LCAs) and which of these would be susceptible to change resulting from wind farm development.

2.21. The second stage provided a draft evaluation of each LCA against the assessment criteria to define the extent to which the key characteristics of each are likely to be sensitive to wind farm development.

2.22. In parallel, LCAs, as described in the existing landscape assessment, were reviewed for key landscape and visual characteristics and identified sensitivities to onshore wind farm development. These findings were subsequently tested through field survey, which also enabled recording of intervisibility with key landscape features and viewpoints.

2.23. A sensitivity map (**Figure 3**) of the LCAs was produced based on the results of the desk review, informed by the desk and field surveys, which ensured focus on the testing and corroboration of information through this process.

Field Survey

2.24. Building on the desk based analysis, field visits were used to test the findings. Whilst adopting an approach based on conventional landscape character assessment, this process paid particular attention to those aspects of the landscape which have a bearing on its capacity to absorb wind farm development.

2.25. The fieldwork allowed more qualitative explorations of how various landscape features are experienced, both from fixed points (e.g. see **Figure 1**) and by people travelling through the area. In addition the field survey allowed more detailed understanding of variations within the LCAs and how these variations could be defined. The fieldwork used a survey form comprising three main sections:

- consideration of key features and characteristics of the landscape (irrespective of wind farm developments) and key forces for change;
- analysis of the landscape, in terms of the characteristics and qualities with a bearing on its sensitivity to wind farms developments, including relevant forces for change;
- a brief assessment of the likely implications of different types of wind farm development within the landscape type in question. This distinguished between different aspects of the landscape (e.g. scale, settlement etc.) to define any limiting factors more clearly.

2.26. The results of the field work allowed a refinement of the preliminary classification of landscape sensitivity, identifying those areas with higher, moderate or lower sensitivity (see **Table 2.3**) to wind farm development. These are shown on **Figure 3**. The field survey also provided opportunity to explore issues of intervisibility and sensitivity in terms of different types / scales of wind farm development. **Figure 3** was then further refined to produce **Figure 5**, by overlaying maps of designated landscapes, particularly the NSAs, shown on **Figure 4**. **Figure 5** was then refined again during the final stages of the study, drawing on the findings from the analysis of visual compartments (described in **Sections 2.30-2.34** and shown on **Figure 6),** to produce **Figure 7**.

2.27. The process of refinement of LCA sensitivity, taking on board the location of NSAs in relation to the boundaries of LCAs is explained further here. Where NSAs extended across LCAs, development within these areas would affect the NSA. In some instances it was therefore appropriate to increase

levels of sensitivity accordingly, to allow consideration of value attached to nationally designated landscape.

2.28. Levels of overall sensitivity were assigned using the following definitions:

Table 2.3 Sensitivity Levels

Sensitivity	Definition
Higher	Key characteristics of the landscape would be adversely affected by wind farm development. Such development would result in a significant change in character.
Moderate	Some of the key characteristics of the landscape are vulnerable and may be adversely affected by wind farm development. Although the landscape may have some ability to absorb some types of wind farm development, this may cause a change in character or introduce new characteristics into the landscape.
Lower	Key characteristics of the landscape are robust and would be less affected by wind farm development. The landscape would be able to accommodate appropriately sited and designed development as such development would not significantly alter landscape character.

2.29. The terms used in this report are relative. There is no absolute definition of sensitivity which is appropriate to Scotland as a whole: it is a relative term. When examining sensitivity in Shetland, high was taken to mean 'higher' and low as 'lower'. This is because it is recognised that landscapes in Shetland may generally be of overall different relative sensitivity than those in other parts of the UK, where, for example widespread industrial, developed or degraded land may be present.

Section 4 of this report provides a detailed analysis of landscape sensitivity in the Shetland Islands. This is illustrated on **Figure 3,** with the refined sensitivities (i.e. having taken on board the NSAs), being shown on **Figure 5**.

C) EVALUATION AND ANALYSIS OF VISUAL COMPARTMENTS

Identification and Evaluation of Visual Compartments

2.30. Aspects affecting sensitivity of LCAs, including issues of intervisibility (i.e. the extent and composition of views, which in Shetland, will predominantly be a factor of topography) extend beyond the geographical extent of each LCA. To enable account to be taken of intervisibility between LCAs, across Shetland, they were grouped into visual compartments. These give an understanding of the way topography affects potential visibility across wider areas. Visual compartments are shown in **Figure 6**.

2.31. Visual compartments were identified using information provided in *A Landscape Assessment of the Shetland Isles*; contour information from Ordnance Survey maps; observations made during field studies; and through discussions with the SIC Working Group.

2.32. They are based upon the location of key ridgelines, or watersheds, and their boundaries connect the main highpoints. As such, they approximate to the limits of intervisibility between landscapes within each compartment (see SPP6 guidance provided by Enviros[4]).

2.33. It is acknowledged that this model can only be an approximation, the irregularities of the landscape rendering it inappropriate for such boundaries to be precisely defined for a strategic study. These visual compartments do however provide a guide as to the overall extent of likely visibility which should be further tested using zone of theoretical visibility (ZTV) modelling for individual projects as they come forward.

2.34. The identified visual compartments were analysed and refined, by overlaying designated landscapes, allowing comment to be made on the overall sensitivity of each compartment, based on the underlying sensitivity of the LCAs within each. To facilitate a more refined judgement to be presented, the following additional levels of overall sensitivity were introduced: **moderate/ high and moderate/ low sensitivity**. Compartments with overall moderate/ high or lower levels of landscape sensitivity were examined in terms of the implication of potential wind farm development upon them.

Indicative Landscape Capacity

2.35. Likely development scenarios were described based on providing an indication of appropriate thresholds of development (see **Diagram 5.1** on page 108). Clearly, thresholds of development reflect landscape sensitivity and intervisibility with adjacent landscapes, however thresholds are also influenced by the physical size of each unit. It is also important to recognise that the emphasis placed on the need to accommodate wind farm development within the landscape may be influenced by changing requirements, demands and attitudes in the future.

[4] Enviros (October 2008) *Wind Farm SPG Good Practice Guidance - Landscape and Visual Amenity.* Document available on www.spgadvice.co.uk

2.36. The results of the evaluation are presented in **Section 5** of this document and illustrated on **Figures 6** to **7**.

Guidance

2.37. Specific landscape guidance is provided for each visual compartment, which is intended to help direct development to the most appropriate locations, based on the assessment of sensitivity. It also suggests suitable typologies for development as outlined in **Section 2.13**. Such guidance is neither definitive nor prescriptive, but the principles should be developed and explored further on a case by case basis as individual development proposals come forward. Further generic landscape guidance is provided in **Appendix 4**.

2.38. The indicative landscape capacities and landscape and visual guidance are based on the assessment of landscape sensitivity (**Section 4**). Other factors, including technical and other environmental constraints, need to be taken into account in developing policies and assessing wind farm proposals as they come forward through the development control process.

D) LANDSCAPE LOCATIONAL AND DESIGN GUIDELINES

2.39. More generic landscape and visual guidelines are set out in **Section 6** to provide information about the key issues relating to scheme siting and design in Shetland, the requirement for landscape and visual impact assessment (LVIA), and issues relating to the potential effects of cumulative development.

3. OVERVIEW OF KEY LANDSCAPE CHARACTERISTICS OF THE SHETLAND ISLANDS

Introduction

3.1. The landscape character areas of the Shetland Islands are grouped by key shared characteristics into seven landscape character types[5] (LCTs) as illustrated in **Figure 2**. These groups are examined in order to provide an overview of the landscape and the varying landscape sensitivity to wind farm development of each type. The interaction between geology and subsequent geomorphological processes including glaciation and sea level change has produced a number of distinctive landscapes. The linear landform of ridges and valleys is a key characteristic in the Shetland landscape, becoming more generally undulating with numerous hillocks and hummocks in coastal and low lying areas. The coastal edge provides a variety of features including voes and sounds, cliffs and depositional features. The seven LCTs and the LCAs of which they comprise are shown on **Figure 3** and listed below:

A. Major uplands (LCA: A1, A2, A3, A4)

B. Peatland and moorland (LCA: B1, B2, B3, B4, B5)

C. Undulating moorland with lochs (LCA: C1, C2, C3)

D. Inland valleys (LCA: D1, D2, D3, D4)

E. Farmed and settled lowlands and coast (LCA: E1, E2, E3, E4, E5, E6)

F. Farmed and settled Voes and Sounds (LCA: F1, F2, F3, F4, F5)

G. Coastal edge

Major Uplands

3.2. The major uplands constitute distinctive areas of higher ground that contribute to the overall physical and visual landscape structure of Shetland. The landscape is further characterised by its simple skylines which frequently form a large scale backdrop to surrounding landscapes. Panoramic views can be obtained from highpoints within this landscape.

Peatland and Moorland

3.3. The extensive lower lying areas of peatland and moorland comprise areas of hummocky ground with standing water and exposed peat and rock providing diversity in texture. These areas are traditionally unsettled, although man-made elements such as roads and transmission lines are common. Parts of the coastal edge form the focus of views from localised areas of higher ground.

[5] Set out in Gillespies (1998) *A landscape Assessment of the Shetland Isles*.

Undulating Moorland with Lochs

3.4. The extensive areas of low lying, undulating moorland are characterised by a mosaic of frequent lochs and rocky outcrops, combined with heather moorland and rough grassland. Expansive views of the seascape are afforded from this landscape.

Inland Valleys

3.5. A number of valleys extend inland, in association with upland ridges. The enclosed landform provides a distinct sheltered landscape with views directed along the length of the valleys.

Farmed and Settled Lowlands and Coast

3.6. These areas of gently sloping and undulating farmland form a narrow strip of coastal lowland or coastal plain with areas of rough pasture, arable land and improved grassland. The character and pattern of settlement as well as the artefacts of past and present agricultural practices influence character.

Farmed and Settled Voes and Sounds

3.7. This relatively small scale landscape is strongly associated with sheltered coastal waters and distinct voes and sounds. The landscape is characterised by a long tradition of settlement and activity in these areas, and includes the majority of major settlements and development in Shetland.

Coastal Edge

3.8. The coastal edge consists of distinct coastal features, including cliffs, stacks and depositional features such as tombolas, spits and bars; providing habitat for wildlife and interest for visitors.

Protected Landscapes

3.9. The Shetland landscape is protected by a number of national level designations which are detailed below and shown on **Figure 4**.

National Scenic Areas

3.10. National Scenic Areas (NSA) are areas of exceptional landscape designated for their outstanding scenic interest. The Shetland Islands NSA covers seven areas of coastline. These separate areas lie in the south west and northern extremities of the archipelago and include Fair Isle, Foula, the western edge of South Mainland and the Deeps, part of Muckle Roe, Eshaness, Uyea Isle and Fethaland and Hermaness[6].

- The remote island of Fair Isle has a great diversity of coastal features and is one of the foremost bird observatories in Europe.
- The island of Foula features a diversity of geological features and its distinct outline forms a feature in views from the West Mainland.

[6] Countryside Commission for Scotland (1978) *Scotland's Scenic Heritage.*

- The South Mainland NSA is designated for its distinct variety of landscapes, including coastal cliffs, fjord-like coastal areas in the voes of Weisdale and Whiteness, numerous small islands and depositional features.

- The characteristic red sandstone cliffs at Muckle Roe as well as the cliffs, skerries and stacks of Eshaness contribute to the wider coastal scene of St Magnus Bay.

- The North Roe peninsula exhibits a range of similar coastal features.

- Further north, Hermaness and Burrafirth display a variety of coastal features that support a significant bird population.

Gardens and Designed Landscapes

3.11. The Shetland Islands include four Designed Landscapes, listed below:

- The 18th century mansion of **Belmont House**, which occupies a prominent location at the south west corner of Unst with scenic views across the Wick of Belmont.

- The 19th century **Brough Lodge**, prominently situated on a low summit on the Ness of Brough in west Fetlar from where it commands views across Colgrave Sound to the island of Hascosay and inland to the east.

- The formal designed landscape of **Lunna House** is sited on high ground, allowing extensive views over Lunna Sound and Vidlin Voe.

- The 18th century **Gardie House** and designed landscape are prominently situated on gently rising ground on the eastern shore of Bressay, intervisible with Bressay Sound and Lerwick.

4. EVALUATION OF LANDSCAPE CHARACTER AREAS AND THEIR SENSITIVITY

INTRODUCTION

4.1. This section sets out the results of the evaluation of the landscape character areas (LCAs) identified in the Shetland Islands landscape assessment[7]. The LCAs within Shetland are listed below. Each LCA is assessed in tabular form against the landscape sensitivity criteria in **Table 2.2** in **Section 2**. Shading in the table highlights key characteristics of each LCA and provides a visual illustration of the degree of sensitivity against each criterion.

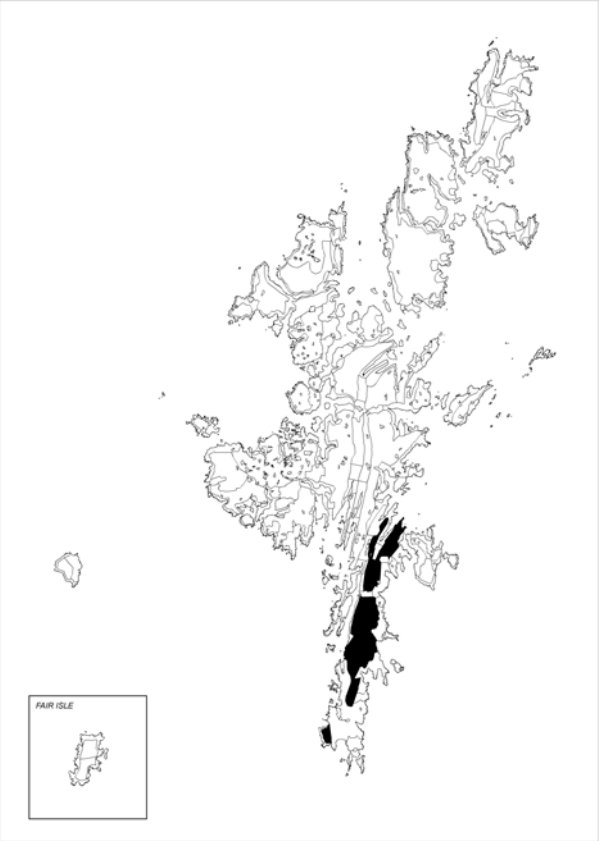
4.2. A summary of the findings is given at the end of this section and the sensitivity of each LCA is illustrated on **Figure 5**.

[7] Gillespies (1998) *A Landscape Assessment of The Shetland Isles*. Scottish Natural Heritage Review No 93.

Table 4.1 Landscape Character Areas

LCA	Name of Landscape Character Area
	MAJOR UPLANDS
A1	South Mainland Spine
A2	East and West Kames
A3	Ronas Hill
A4	Unst Uplands
A5	Sandness Hill, Ward of Bressay/ Noss, The Sneug and Noup (Foula) and Ward Hill (Fair Isle)
	PEATLAND AND MOORLAND
B1	Yell Peatland
B2	Rounded Moorland Hills
B3	Unst and Fetlar Rocky Heathland
B4	South Mainland Coastal Moorland
B5	Eshaness and Papa Stour Maritime Heathland
	UNDULATING MOORLAND WITH LOCHS
C1	West Mainland and Northmavine: Muckle Roe and Mangaster/ Nibon area
C2	Uyea, Braewick, Tingon and North Roe
C3	Lunna Ness and Dragon Ness
	INLAND VALLEYS
D1	Farmed and Settled Inland Valleys: Tingwall and Weisdale
D2	Crofting and Grazing inland Valleys: Cuckron
D3	Crofting and Grazing Isolated Valleys: Wester Quarff (South Mainland) and Dale (West Mainland)
D4	Peatland and Moorland Inland Valley
	FARMED AND SETTLED LOWLAND AND COAST
E1	Farmed Land
E2	South Mainland Scattered Settlement and Grazing Lands
E3	Coastal Crofting and Grazing Lands
E4	Unst and West Mainland Coastal Crofting
E5	West Mainland Lowland Crofting
E6	Developed Areas
	FARMED AND SETTLED VOES AND SOUNDS
F1	Developed Areas
F2	Nucleated Settlements
F3	Farmed Land
F4	Unst and Fetlar Crofting and Grassland
F5	Scattered Settlement/ Crofting and Grazing Lands
	COASTAL EDGE
G	Coastal Edge

A1. SOUTH MAINLAND SPINE



Location and Extent

4.3. The landscape character area extends along the South Mainland spine into the Central Mainland.

Key Characteristics

- Large scale upland landscape
- Peatland and heather moorland
- Forms a backdrop to adjoining landscapes

Assessment of the Landscape Character Area

4.4. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale			
	The South Mainland Spine is a north-south orientated upland landscape made up of a series of **large scale**, **gently rounded hills** which rise above the surrounding landmass at up to 283m above ordnance datum (AOD). More **topographical variety** can be observed on the west side of the spine, adjoining an area of steep coastal cliffs.		
Land Cover			
	Land cover is a simple display of **peatland** with areas of **heather moorland**.		
Settlement and Man-made Influence			
	There are **no settlements** or roads within this area. Various MoD and **telecommunication structures** are evident west of Lerwick and north east of Scousburgh. Burradale **Wind Farm** forms a feature in the landscape south of Veensgarth.		
Movement			
	East of the spine ridge, traffic on the A970 brings frequent movement to the landscape. West of the spine ridge, the landscape is mainly still.		
Skylines			
	Skylines are **open** and **simple**, interrupted occasionally by MoD and telecommunication structures. In views from the west, the spine **appears as a feature in the landscape**.		
Key Views, Vistas, Landmarks			
	Elevated, panoramic views of the surrounding landscape and the sea are available from these uplands.		
Receptors			
	This landscape will be mainly observed by residents of the surrounding lowlands and coastal areas, users of the local road system and receptors on board ships and ferries.		
Inter-visibility with Adjacent Landscapes			
	The landscape has a **strong association with the settled lowlands and coast** of the South Mainland. Western parts of this LCA (designated as an NSA) form a **feature in views** from the West Mainland.		
Natural and Cultural Heritage			
	This upland landscape has few historic remains.		
Perceptual Aspects			
	The frequent presence of developed features and presence of transport routes (A970) give a sense of **activity and development** to areas east of the spine ridge. West of the spine ridge the landscape appears more **remote with a tranquil quality**.		

Sensitivity to Wind Farm Development

4.5. Overall Sensitivity: **Lower** (see **Figure 3**)**.** Note: this was refined during the process of overlaying landscape designations, so parts within the NSA are **Moderate (see Figure 5).**

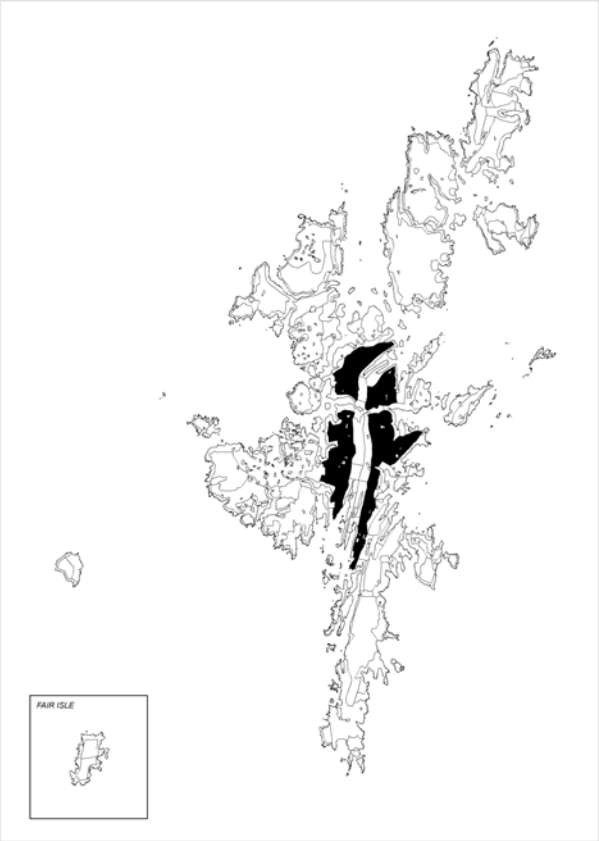
This elevated landscape forms a division between the developed eastern side of the South Mainland and the more remote and less man influenced western side of the South Mainland. As such, it forms the background and skyline to a number of surrounding landscapes and is observed by numerous receptors. The large scale, simple land cover and existing developed features within this landscape lend a **lower** degree of sensitivity (**Figure 3**).

4.6. Western parts of this character area are largely undeveloped and their strong topographical variety forms a feature in views from surrounding landscapes, lending a higher sensitivity which is recognised in the designation of parts of this landscape as a National Scenic Area (NSA) (**Figure 4**). Combined with the above this lends a **moderate** sensitivity to the designated parts of this character area (**Figure 5**).

4.7. Towards the eastern areas of this landscape, the presence of existing man-made influences e.g. roads/ quarrying may allow scope for wind farm development, in association with concentrated settlements in adjacent landscapes. Indirect effects upon the NSA should be considered and reduced by careful siting, aiming to prevent intervisibility with the NSA through seeking to keep any development well east of the main ridge lines.

4.8. Northern parts of this landscape provide scope for smaller developments in association with industrial and developed areas on the outskirts of Lerwick, although care should be taken to avoid visual clutter.

A2. EAST AND WEST KAMES



Location and Extent

4.9. The landscape character area extends along the ridges of East and West Kame, and consists of areas of high ground within the Central Mainland, Lunnasting, Nesting and Delting.

Key Characteristics

- Large scale upland landscape
- Peatland and heather moorland
- Forms a backdrop to adjoining landscapes

Assessment of the Landscape Character Area

4.10. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	This **large scale** landscape of rounded hills forms a system of **north south orientated ridges** rising up to 281m AOD, either side of a linear inland valley through the north Mainland.		
Land Cover	Land cover is a simple display of predominantly **heather moorland** and peatland with a number of lochs.		
Settlement and Man-made Influence	These uplands have a clear **absence of settlement**. The main road (A970) is routed through the inland valley defined by the uplands. **Telecommunication masts** are present on a number of hilltops and **quarries** are evident.		
Movement		Movement in this landscape is **limited** to traffic passing through the area using the existing road system.	
Skylines		Skylines are simple, **open** and mainly **uninterrupted**.	
Key Views, Vistas, Landmarks		**Expansive views** are afforded over a series of rounded hills, inland lochs, settled lowland landscapes and the coastline.	
Receptors		This landscape will be mainly observed by residents of the settled voes and sounds, users of the local road system and receptors on board ships and ferries.	
Inter-visibility with Adjacent Landscapes	This elevated upland landscape forms a **large scale backdrop** to surrounding lowlands and coastal areas. It also forms a simple skyline to the inland valleys of Pettadale, Weisdale and Cuckron by containing and restricting views.		
Natural and Cultural Heritage Features		This upland landscape is historically unsettled. Some historic features remain near Scalloway.	
Perceptual Aspects		The presence of traffic on roads and farming activity in adjacent landscapes reduces the sense of remoteness.	

Sensitivity to Wind Farm Development

4.11. Overall Sensitivity: **Lower**

This landscape is large scale with simple skylines, a range of man-made features and frequent movement, lending it a **lower** degree of sensitivity.

The presence of existing man-made influences e.g. roads/ quarrying allows scope for wind farm development in association with these existing areas of development and concentrated settlements in adjacent landscapes. However, the effect of wind farm development on undeveloped areas, the inland valleys and smaller settlements should be considered in terms of scale and siting of turbines. Setting turbines back from the edges of the hills, where they will not be intervisible with the inland valleys of Kergord and Pettadale, will reduce effects within adjacent landscapes (D4).

A3. RONAS HILL

Location and Extent

4.12. The landscape character area covers the extent of Ronas Hill and an area of strong topographical variety in North Roe.

Key Characteristics

- Large scale upland landscape
- Heather moorland and rough grassland slopes
- Forms a focal point in views from surrounding landscapes

Assessment of the Landscape Character Area

4.13. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	The **large scale** red granite mass of Ronas Hill is forms a distinct **domed outline**, rising up to 450m AOD.		
Land Cover	The exposed landscape at the summit is **rock-strewn** with **little vegetation**. Heather moorland and rough grassland dominate the lower slopes.		
Settlement and Man-made Influence	These uplands are **unsettled**. Communication structures and access tracks are apparent **man-made elements** on Collafirth Hill.		
Movement	The relative **absence of movement** within this landscape gives the area a still character.		
Skylines	Skylines are **open** and **uninterrupted**.		
Key Views, Vistas, Landmarks	**Panoramic views** are afforded to the surrounding landscape, coastline and seascape.		
Receptors	Ronas Hill is widely visible from the surrounding area and viewed by a **large number of receptors** within the surrounding landscape, including residents from numerous settlements, users of the A970 and the local road network.		
Inter-visibility with Adjacent Landscapes	This upland landscape forms a **focal point** in views from surrounding landscapes and forms a **simple backdrop** to the settled coast, voes and sounds and the lower peatlands.		
Natural and Cultural Heritage Features	This area is of considerable **natural heritage interest** (SSSI). A number of historic remains are situated in this landscape, including a chambered cairn on the summit of Ronas Hill.		
Perceptual Aspects	The presence of small scale settlements, local roads and farming activity in adjacent landscapes reduces the sense of remoteness.		

Sensitivity to Wind Farm Development

4.14. Overall Sensitivity: **Moderate**

This landscape is large scale with a domed landform, simple skylines and few man-made elements. Ronas Hill forms a landmark feature in views from the surrounding landscape, lending it a **moderate** sensitivity.

4.15. Any wind farm proposals should avoid the undeveloped uplands, and focus upon lower areas in association with existing development (e.g. masts) where track infrastructure already exists.

A4. UNST UPLANDS

Location and Extent

4.16. The landscape character area covers the Unst uplands, including Valla Field, Hermaness and Saxa Vord.

Key Characteristics

- Large scale upland landscape
- Heather moorland and rough grassland
- Forms a backdrop to adjoining landscapes
- Natural and cultural heritage interest

Assessment of the Landscape Character Area

4.17. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	**Large scale** ridge of high ground to the north and western edges of Unst (up to 216m AOD), and gently **rounded upland** mass to the north at Saxa Vord.		
Land Cover	The predominant vegetation is a simple display of **heather moorland** with **rough grassland** on the lower slopes.		
Settlement and Man-made Influence	There is a general **absence of settlement**. The disused RAF **aerials** and **radar dome** at Saxa Vord are prominent man-made features.		
Movement	The relative **absence of movement** within this landscape gives the area a still character.		
Skylines	Skylines are simple, **open** and **uninterrupted**.		
Key Views, Vistas, Landmarks	**Expansive views** are available of the coastline, cliffs and surrounding lowlands.		
Receptors	This landscape will be observed by **residents** from nearby settlements, users of the local road network, **visitors** to Hermaness and to other local visitor destinations.		
Inter-visibility with Adjacent Landscapes	This LCA appears as a **backdrop in views** from the surrounding settled voes and sounds, and locally **retains views** from inland valleys.		
Natural and Cultural Heritage Features	The area has significant (SSSI) **natural and cultural heritage** associations e.g. ornithological interest around Hermaness, geological interest, local folklore.		
Perceptual Aspects	This is a **fairly remote** landscape, however the presence of communication structures and scattered settlements in the surrounding landscape reduces this sense of remoteness.		

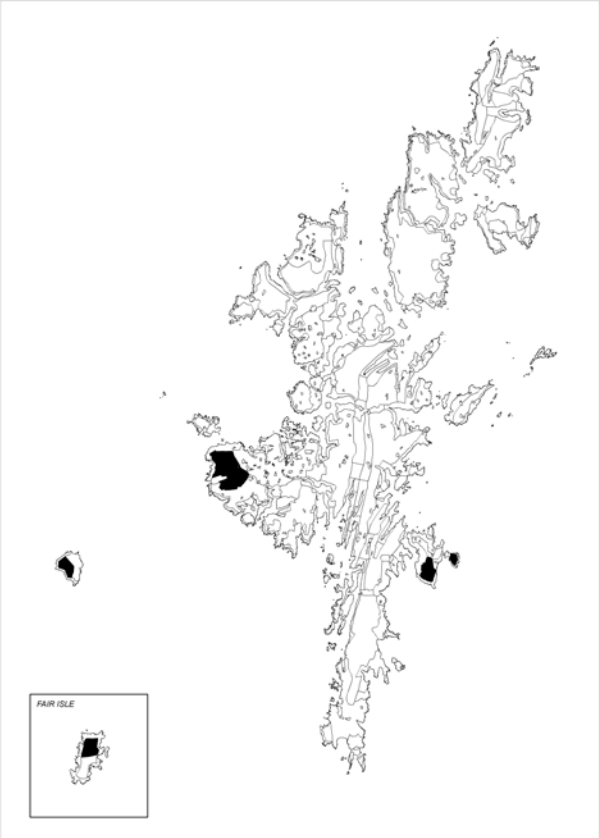
Sensitivity to Wind Farm Development

4.18. Overall Sensitivity: **Moderate**

This large scale upland landscape has a uniform land cover and skyline with modern communication structures (Saxa Vord), lending it an overall **moderate** sensitivity.

Disused communication structures at Saxa Vord lead to locally reduced landscape sensitivity and there may be some scope for wind farm development in association with this.

A5. SANDNESS HILL, WARD OF BRESSAY/ NOSS, THE SNEUG AND NOUP (FOULA) AND WARD HILL (FAIR ISLE)



Location and Extent

4.19. The landscape character area includes a number of small scale upland areas within the West Mainland, Bressay, Foula and Fair Isle.

Key Characteristics

- Large scale upland landscape
- Peatland, rough grassland and heather moorland
- Forms a backdrop to adjoining landscapes
- Natural and cultural heritage interest

Assessment of the Landscape Character Area

4.20. The following table sets out the results of the assessment against the landscape sensitivity criteria.

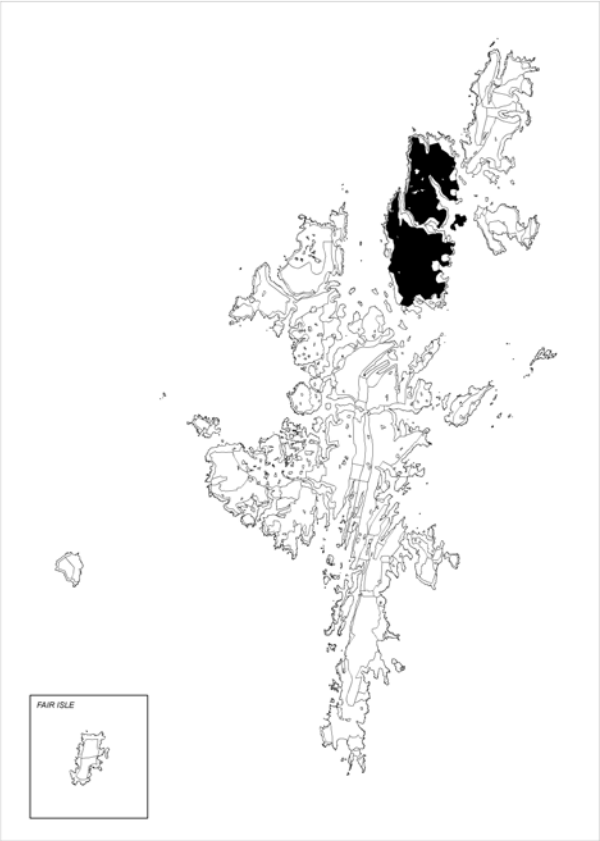
	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	These hill masses appear of **moderate to large scale** and generally have a **gently sloping** or undulating landform.		
Land Cover	The uplands are typified by a simple display of **peatland**, rough grassland and **heather moorland**.		
Settlement and Man-made Influence	This LCA is **unsettled** and man-made influence is limited to communication masts on Bressay and Fair Isle.		
Movement	The relative **absence of movement** within this landscape gives these areas a still character.		
Skylines	Skylines are simple, **open** and **largely uninterrupted**.		
Key Views, Vistas, Landmarks	**Expansive views** are available of the sea and coastline, cliffs and surrounding lowlands.		
Receptors	This landscape will be observed by **residents** from nearby settlements, users of the local road network, **visitors** to local attractions and receptors on board ships and ferries.		
Inter-visibility with Adjacent Landscapes	These upland areas appear as a **simple backdrop** in views from surrounding landscapes.		
Natural and Cultural Heritage Features	The area has significant **natural and cultural heritage** associations e.g. bird habitat, geological interest.		
Perceptual Aspects	The presence of settlements and human activity in adjoining landscapes reduces the sense of remoteness.		

Sensitivity to Wind Farm Development

4.21. Overall Sensitivity: **Moderate**

These upland landscapes are generally of a moderate to large scale and simple landform with occasional man-made structures. Proximity to areas of settlement in adjacent landscapes reinforces the **moderate** degree of sensitivity.

B1. YELL PEATLAND



Location and Extent

4.22. The landscape character area incorporates extensive areas of peatland and moorland in the interior of Yell.

Key Characteristics

- Extensive undulating landscape
- Peatland and heather moorland
- Natural and cultural heritage interest

Assessment of the Landscape Character Area

4.23. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	**Extensive** landscape with a **gently rounded** and undulating landform.		
Land Cover	Landcover is dominated by peatland and **heather moorland**. **Inland lochs** are frequent in North Yell.		
Settlement and Man-made Influence	The interior of this landscape is **unsettled**. Evident man-made interventions are **roads** (A968 and B9081), electricity transmission lines and peat cutting.		
Movement		Traffic on local roads brings **localised movement** to this landscape.	
Skylines	Skylines are **simple** and **uninterrupted**.		
Key Views, Vistas, Landmarks		**Expansive views** are afforded from this landscape across undulating peatlands and towards lower lying coastal areas, Yell Sound, Unst and Fetlar.	
Receptors		This landscape is observed by residents from adjacent settled lowlands, voes and sounds, users of the local road system and receptors on board ships and ferries.	
Inter-visibility with Adjacent Landscapes	This landscape forms a simple, **large scale backdrop** to lower lying areas of settlement. Its elevated landform frequently limits views inland from these areas of settlement.		
Natural and Cultural Heritage Features			**Historic settlement remains** are frequent in this landscape and very frequent in settled coastal areas. Moorlands and rare areas of blanket peat provide significant **natural vegetation** (SSSI) and **wildlife habitat**.
Perceptual Aspects			The presence of **expansive undeveloped areas** give this landscape a sense of remoteness.

Sensitivity to Wind Farm Development

4.24. Overall Sensitivity: **Moderate**

This landscape is of a large scale with undulating landform and evident man-made features. The elevated landform provides a simple backdrop to lower lying settled areas on the coastal fringe. The expansive nature of this landscape allows a sense of remoteness in its interior, which reduces with proximity to the A968 and settlements on the coastal fringe, lending a **moderate** degree of sensitivity.

B2. ROUNDED MOORLAND HILLS

Location and Extent

4.25. The landscape character area comprises areas of rounded moorland on Fetlar, Northmavine, and parts of the Central and West Mainland.

Key Characteristics

- Small scale undulating landscape
- Peatland and heather moorland
- Cultural and natural heritage interest

Assessment of the Landscape Character Area

4.26. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	This LCA is of a **smaller scale** undulating landform including **rounded hills** (up to 173m) and **smooth hummocky land**.		
Land Cover	Land cover is made up of a simple display of peatland or **moorland vegetation**.		
Settlement and Man-made Influence	There is a relative **absence of settlement** in this landscape. Man-made interventions are limited and include few roads, telecommunication masts and a quarry.		
Movement	Movement is limited to traffic on local roads.		
Skylines	Skylines are **simple** and **mostly uninterrupted**.		
Key Views, Vistas, Landmarks	**Expansive views** are afforded of undulating peatlands, surrounding landscapes and coastal features.		
Receptors	This LCA will be observed by residents from adjacent settled lowlands, voes and sounds, users of the local road system and receptors on board ships and ferries.		
Inter-visibility with Adjacent Landscapes	These rounded hills form a **simple backdrop** and contribute to the wider landscape of the cultivated and settled lowlands.		
Natural and Cultural Heritage Features	This landscape has localised areas of **natural heritage interest** e.g. parts of Fetlar, Gluss Voe, Ward of Culswick. Historic remains in this LCA include defence structures on Bressay, various settlement remains and cairns.		
Perceptual Aspects	The proximity to settled areas reduces the sense of remoteness.		

Sensitivity to Wind Farm Development

4.27. Overall Sensitivity: **Moderate**

This landscape is of a smaller scale with undulating landform and occasional man-made features. Its smooth, convex land cover and presence of existing vertical features lend this landscape a **moderate** degree of sensitivity.

B3. UNST AND FETLAR ROCKY HEATHLAND

Location and Extent

4.28. The landscape character area comprises areas of rocky heatland on Unst and Fetlar.

Key Characteristics

- Undulating high ground
- Heathland and rocky outcrops
- Natural and cultural heritage interest

Assessment of the Landscape Character Area

4.29. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	Relatively **large scale** areas of higher ground, broadly **undulating** with **small areas of standing water**, rock and boulders.		
Land Cover	Land cover is characterised by **heathland**, **rocky outcrops** and plant communities associated with the serpentine bedrock.		
Settlement and Man-made Influence	This landscape has a relative **absence of settlement**. Man-made interventions are limited and include roads and electricity transmission lines.		
Movement	The presence of traffic on local roads gives movement to parts of this landscape.		
Skylines	Skylines are **simple** and **uninterrupted**.		
Key Views, Vistas, Landmarks	**Expansive views** are afforded of heather moorland, surrounding landscapes and the sea.		
Receptors	This LCA will be observed by residents from adjacent settled lowlands, voes and sounds, users of the local road system and receptors on board ships and ferries.		
Inter-visibility with Adjacent Landscapes	These elevated areas form a simple **backdrop to the cultivated and settled lowlands**, and locally retain views from inland valleys on Unst.		
Natural and Cultural Heritage Features	Significant areas of **natural heritage interest** e.g. bird habitat and botanical interest (SSSIs). Settlement remains and cairns are frequent in this landscape. **Drystane dykes** form typical features in the landscape.		
Perceptual Aspects	The presence of **traffic** on local roads and visual links with **settlements** in adjacent landscapes reduces the sense of remoteness.		

Sensitivity to Wind Farm Development

4.30. Overall Sensitivity: **Moderate**

This landscape includes areas of varied scale with a generally undulating landform and occasional man-made features. The smooth, convex land cover in large scale areas lends a **moderate** sensitivity in association with roads and transmission lines.

B4. SOUTH MAINLAND COASTAL MOORLAND

Location and Extent

4.31. The landscape character area comprises small areas of coastal moorland on the South Mainland.

Key Characteristics

- Coastal location
- Gently sloping landscape
- Peatland

Assessment of the Landscape Character Area

4.32. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	**Small scale**, gently **sloping landform** with **inland lochs** and localised elevations up to 105m AOD.		
Land Cover	Land cover in this landscape consists of a simple display of **peatland** and **heather moorland**.		
Settlement and Man-made Influence	There is a general **absence of settlement** in this landscape. The main man-made features are roads and electricity transmission lines.		
Movement	**Frequent traffic** on main roads bordering these areas brings movement to this landscape.		
Skylines	Skylines are **simple** and **uninterrupted**.		
Key Views, Vistas, Landmarks	**Expansive views** are afforded across this LCA, surrounding landscapes and the sea.		
Receptors	This landscape will be observed by residents from adjacent settlements, users of the local road system and receptors on board ships and ferries.		
Inter-visibility with Adjacent Landscapes	There is a high degree of inter-visibility between this landscape and the **settled lowlands and coast**, with the south mainland spine forming a large scale, simple backdrop to this LCA.		
Natural and Cultural Heritage Features	The LCA has few historic remains. Some peat workings are still in use.		
Perceptual Aspects	The presence of roads and settlements in adjacent landscapes removes the sense of remoteness.		

Sensitivity to Wind Farm Development

4.33. Overall Sensitivity: **Moderate**

This landscape is of relatively small scale with a regular and convex landform. The presence of man-made features and nearby settlements lends a moderate sensitivity in association with concentrated settlements.

B5. ESHANESS AND PAPA STOUR MARITIME HEATHLAND

Location and Extent

4.34. The landscape character area comprises areas of maritime heathland in parts of Eshaness and Papa Stour.

Key Characteristics

- Outlying location
- Maritime vegetation
- Cultural and natural heritage interest

Assessment of the Landscape Character Area

4.35. The following table sets out the results of the assessment against the landscape sensitivity criteria.

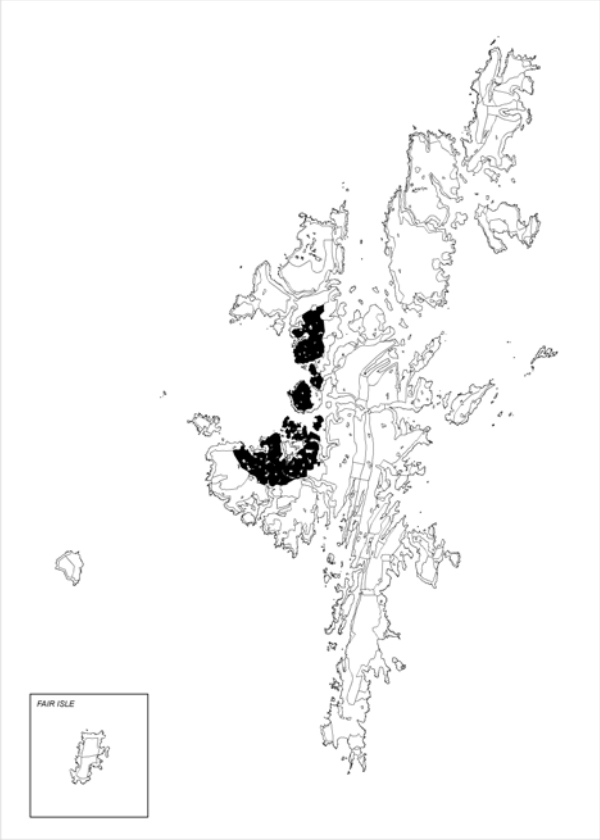
	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	These relatively **small scale** areas are of a **gently rolling** nature with a number of **lochs**.		
Land Cover	The land cover on Papa Stour consists of **maritime heathland**, punctuated intermittently by small areas of standing water. Eshaness is typified by a mixed land cover, including areas of maritime heathland alongside maritime **grassland** and **peatland**.		
Settlement and Man-made Influence	This landscape has few **scattered dwellings**. Single track roads form the main man-made influence.		
Movement	A lack of movement gives this landscape a still character.		
Skylines	Skylines are **simple** and **uninterrupted**.		
Key Views, Vistas, Landmarks	**Expansive views** are afforded across this LCA, mainly towards the sea and frequent coastal features.		
Receptors	This landscape will be observed by residents in nearby settlements, users of the local road system and receptors on board the Papa Stour ferry.		
Inter-visibility with Adjacent Landscapes	This landscape forms a simple **elevated hinterland** in views from adjacent landscapes and coastal areas.		
Natural and Cultural Heritage Features	This LCA is rich in **historic settlement remains** and is of considerable **natural heritage interest** in terms of bird habitat and natural vegetation (SSSI).		
Perceptual Aspects	The **outlying**, **scenic location** of these areas and presence of few man-made features give this landscape an undeveloped character.		

Sensitivity to Wind Farm Development

4.36. Overall Sensitivity: **Higher**

This landscape is small scale with a regular and gently rolling landform. The presence of man-made features is limited to single track roads and few scattered dwellings, lending a relatively **higher** degree of sensitivity.

C1. WEST MAINLAND AND NORTHMAVINE: MUCKLE ROE AND MANGASTER/ NIBON AREA



Location and Extent

4.37. The landscape character area comprises a mosaic of heather moorland, rocky outcrops and lochs fringing the coastal edge of St Magnus Bay.

Key Characteristics

- Strongly undulating landform
- Frequent lochs
- Heather moorland
- Coastal location
- Cultural and natural heritage interest

Assessment of the Landscape Character Area

4.38. The following table sets out the results of the assessment against the landscape sensitivity criteria.

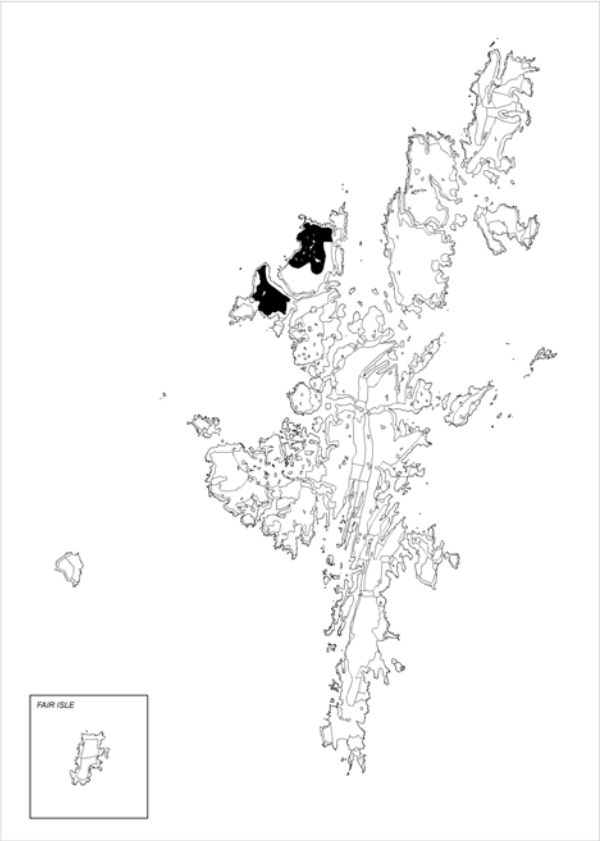
	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	This area forms a **large scale** undulating, low lying landscape with **broad rounded hummocks**. The undulating topography rises locally up to 169m AOD on Muckle Roe.		
Land Cover	This area is characterised by an interplay of predominantly **heather moorland**, **rocky outcrops** and numerous **lochs**.		
Settlement and Man-made Influence	Settlement in this area is limited to **few dwellings**. The main man-made elements are the roads through the area, electricity transmission lines, the few croft houses and areas of agricultural improvement.		
Movement	Movement in this landscape is limited to traffic on local roads.		
Skylines	Skylines are **strongly undulating** and **uninterrupted**.		
Key Views, Vistas, Landmarks	On occasion, expansive views are afforded across the undulating landform.		
Receptors	This landscape will be observed by few residents and more frequently by users of the local road system.		
Inter-visibility with Adjacent Landscapes	This landscape forms a **backdrop to lower lying settled areas**. Visual links are apparent with nearby uplands. On lower ground this is an intimate landscape enclosed by the varied topography.		
Natural and Cultural Heritage Features	**Historical settlement remains** are frequent in this landscape.		
Perceptual Aspects	The relative absence of settlements enhances the sense of remoteness.		

Sensitivity to Wind Farm Development

4.39. Overall Sensitivity: **Moderate**

This is an expansive landscape with a varied land cover punctuated by occasional man-made features, lending a **moderate** degree of sensitivity.

C2. UYEA, BRAEWICK, TINGON AND NORTH ROE



Location and Extent

4.40. The landscape character area comprises areas of peatland and rock outcrops in Uyea, Braewick, Tingon and North Roe.

Key Characteristics

- Large scale, rounded landscape
- Frequent lochs
- Peatland

Assessment of the Landscape Character Area

4.41. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	This area has a relatively **large scale** character with a **rounded landform**, locally rising up to 174m AOD, with rocky outcrops and numerous lochs.		
Land Cover	Land cover in this landscape consists of a simple display of **peatland**.		
Settlement and Man-made Influence	This LCA has a relative **absence of settlement**. The main man-made elements are the minor roads and tracks through the area.		
Movement	A lack of movement gives this landscape a still character.		
Skylines	Skylines are **simple** and **uninterrupted**.		
Key Views, Vistas, Landmarks	**Expansive views** are afforded to the surrounding coastal landscape and to Ronas Hill.		
Receptors	This landscape will be observed by residents from adjacent landscapes and local road users.		
Inter-visibility with Adjacent Landscapes	There is some association with settled coastal areas and the coastal edge. Ronas Hill forms a simple large scale backdrop.		
Natural and Cultural Heritage Features	There are large areas of **natural heritage interest** (SSSI). Relatively few historic features remain in this landscape.		
Perceptual Aspects	The **remote** location and lack of settlement and modern development gives this area a sense of remoteness and **tranquillity**.		

Sensitivity to Wind Farm Development

4.42. Overall Sensitivity: **Moderate**

This landscape is of a large scale, with simple land cover and occasional man-made features, which lend it a **moderate** sensitivity.

C3. LUNNA NESS AND DRAGON NESS

Location and Extent

4.43. The landscape character area comprises areas of heather moorland and rock outcrops in Lunnasting, Nesting and Whalsay.

Key Characteristics

- Small scale rounded landscape
- Areas of agricultural improvement

Assessment of the Landscape Character Area

4.44. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	This LCA is of a relatively **small scale** and characterised by a **rounded landform**, locally rising up to 106m AOD.		
Land Cover	Land cover consists of a simple display of **heather moorland** and **rough grassland**, interspersed with rocky outcrops and a number of **lochs**.		
Settlement and Man-made Influence	This landscape has **few settlements**. The main man-made elements are the minor roads through the area, electricity transmission lines, the few croft houses and areas of agricultural improvement.		
Movement	The presence of traffic on local roads gives some movement to this landscape.		
Skylines	Skylines are **simple** and **uninterrupted**.		
Key Views, Vistas, Landmarks	**Expansive views** are afforded to the surrounding settled lowlands and coast.		
Receptors	This landscape will be observed by residents from adjacent LCA's, users of the local road system and receptors on board ships and ferries.		
Inter-visibility with Adjacent Landscapes	This LCA is inter-visible with settled coastal areas.		
Natural and Cultural Heritage Features	Some historic settlements remain in association with coastal locations.		
Perceptual Aspects	The association of this area with farmed and settled land gives a reduced sense of remoteness.		

Sensitivity to Wind Farm Development

4.45. Overall Sensitivity: **Moderate**

This landscape is of a small scale with scattered settlement, lending a **moderate** degree of sensitivity.

D1. FARMED AND SETTLED INLAND VALLEYS: TINGWALL AND WEISDALE

Location and Extent

4.46. The landscape character area comprises the valleys of Tingwall and Weisdale.

Key Characteristics

- Sheltered inland valley
- Large scale agricultural improvement
- Historically settled
- Distinctive woodland blocks
- Cultural heritage interest

Assessment of the Landscape Character Area

4.47. The following table sets out the results of the assessment against the landscape sensitivity criteria.

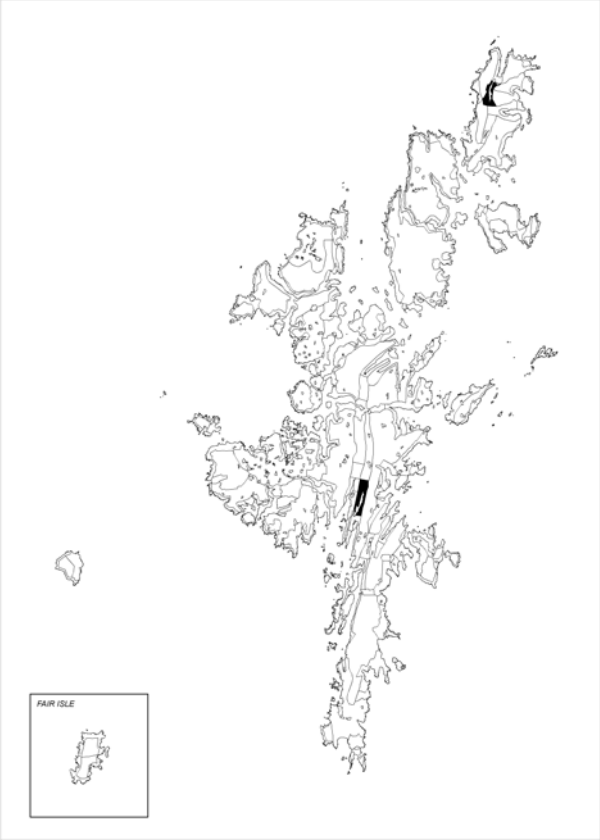
	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	These landscapes form **large scale** linear **inland valleys**, enclosed by the surrounding uplands.		
Land Cover	Land cover consists of **improved grassland**, areas of **woodland** and streams, with rough grassland and **heather moorland** on higher ground.		
Settlement and Man-made Influence	This landscape is **historically settled**; dwellings and farmhouses are **dispersed** along a single track road. The main man-made influences in this area are the single track roads through the area, and the effects of agricultural improvement and management.		
Movement	The presence of traffic on the local road system (B9074 and B9075) and nearby routes brings movement to this landscape.		
Skylines	Immediate skylines are large scale and mainly **undisturbed**. Turbines at Burradale are locally visible from the Tingwall valley.		
Key Views, Vistas, Landmarks	Views are available along the **valleys** to the north and south, taking in parts of **extensive voes**.		
Receptors	This landscape will be observed by residents, users of the local road system and visitors to local attractions.		
Inter-visibility with Adjacent Landscapes	Inter-visibility is limited as views are contained by the **ridges of high ground** which define the valleys. There is a strong association with adjacent uplands and settled voes and sounds.		
Natural and Cultural Heritage Features	Over the centuries, the sheltered, fertile valleys have been a focus for agricultural improvement and **land management**. Further strong **cultural associations** are evident in the Tingwall valley e.g. Law Ting Holm.		
Perceptual Aspects	The well developed, farmed character and presence of settlement in this landscape gives a reduced sense of remoteness.		

Sensitivity to Wind Farm Development

4.48. Overall Sensitivity: **Higher**

This is a relatively large scale concave landscape with views contained within and along the valleys. The enclosed character, dispersed settlement and absence of modern development lend a **higher** degree of sensitivity.

D2. CROFTING AND GRAZING INLAND VALLEYS: CUCKRON



Location and Extent

4.49. The landscape character area comprises the Cuckron and Loch of Cliff valleys.

Key Characteristics

- Sheltered valley
- Long linear loch
- Crofting and agricultural improvement
- Cultural heritage interest

Assessment of the Landscape Character Area

4.50. The following table sets out the results of the assessment against the landscape sensitivity criteria.

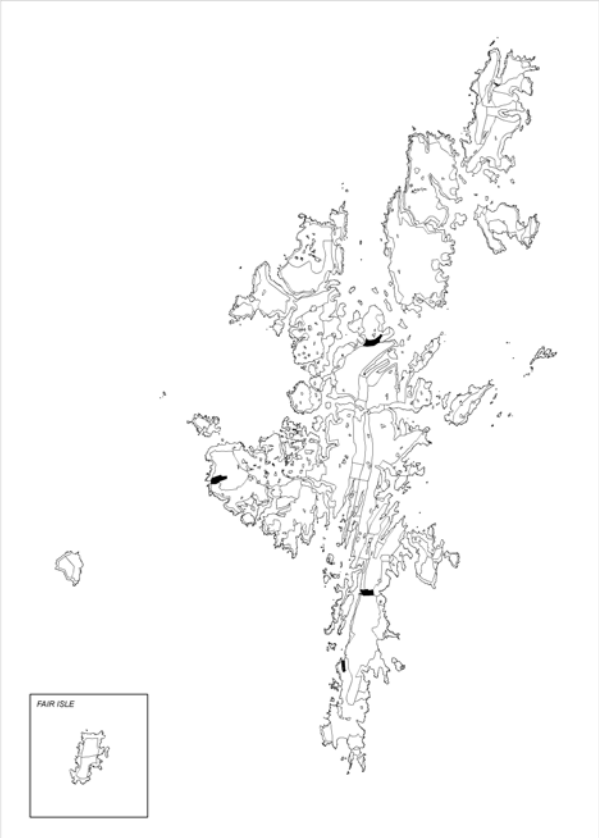
	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	These linear **inland valleys** are characterised by long **lochs** and partial enclosure by adjacent uplands.		
Land Cover	Land cover consists of **improved land**, areas of rough grassland and heather moorland on higher ground, occasional **trees** surround farmhouses.		
Settlement and Man-made Influence	The **few settlements** in this landscape, including derelict croft houses, are dispersed along single track roads. The main man-made influence in these areas are single track roads and the effects of agricultural improvement on the landscape.		
Movement	Traffic on the single track road through the valleys brings some movement to this landscape.		
Skylines	Skylines are **simple** and **uninterrupted**.		
Key Views, Vistas, Landmarks	Views are **contained** to the east and west by adjacent uplands, although **extensive views** are available from Cuckron to the south, taking in Whiteness Voe.		
Receptors	This landscape will be observed by residents and users of the local road network.		
Inter-visibility with Adjacent Landscapes	There is a **strong association with** adjacent **uplands** and settled **voes and sounds**.		
Natural and Cultural Heritage Features	Many elements of **historic farming** and crofting remain.		
Perceptual Aspects	Agricultural improvements and scattered dwellings reduce the sense of remoteness.		

Sensitivity to Wind Farm Development

4.51. Overall Sensitivity: **Higher**

These landscapes are characterised by their concave landform and extensive lochs; Loch of Strom within the Cuckron Valley and Loch of Cliff on Unst. Their contained views, limited settlement and absence of modern development lend a **higher** degree of sensitivity.

D3. CROFTING AND GRAZING ISOLATED VALLEYS: WESTER QUARFF (SOUTH MAINLAND) AND DALE (WEST MAINLAND)



Location and Extent

4.52. The landscape character area comprises the isolated valleys of Quarff, Dale and Laxobigging.

Key Characteristics

- Isolated valleys
- Agricultural improvement
- Dispersed settlement
- Association with coastal edge

Assessment of the Landscape Character Area

4.53. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	These **small to medium scale** enclosed **valleys** are adjoined by upland landscapes and bounded at one end by coastal waters.		
Land Cover	Land cover consists of a simple display of **improved land**, areas of **rough grassland** and **heather moorland** on higher ground.		
Settlement and Man-made Influence	Settlements are **dispersed** along the single track roads in these valleys. The main man-made influences in this area are the local roads and the effects of agricultural improvement on the landscape.		
Movement	Movement is limited to infrequent traffic on local roads.		
Skylines	Skylines are **simple** and **uninterrupted**.		
Key Views, Vistas, Landmarks	Views are contained by **undeveloped upland** areas and **scenic coastal landscapes**.		
Receptors	This landscape will be observed by residents and users of the local road network.		
Inter-visibility with Adjacent Landscapes	Adjacent upland landscapes contain some views within the valleys. Views along the length of the valleys provide strong links with **coastal landscapes**.		
Natural and Cultural Heritage Features	This part of the South Mainland is designated for its scenic qualities and **undisturbed landscapes**. Few historic features remain.		
Perceptual Aspects	The presence of dwellings and improved agricultural land reduces the sense of remoteness in these areas.		

Sensitivity to Wind Farm Development

4.54. Overall Sensitivity: **Higher**

This landscape is characterised by its relatively small scale concave landform and dispersed settlement. Views are contained by undeveloped upland areas and coastal landscapes which lends a **higher** degree of sensitivity.

The presence of large scale infrastructure near Sullom Voe may lead to locally reduced landscape sensitivity.

D4. PEATLAND AND MOORLAND INLAND VALLEYS

Location and Extent

4.55. The landscape character area extends along the inland valleys of Burn of Caldback, Burn of Houlland, Burn of Sandgarth, and Burn of Dale. It includes the low and distinctive ridge of Mid Kame which separates the valleys of Pettadale (70m AOD) and Valley of Kergord (70m AOD), and which rises to 160m AOD.

Key Characteristics

- Inland valley
- Peatland and heather moorland
- Few settlements
- Cultural and natural heritage interest

Assessment of the Landscape Character Area

4.56. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	These **medium scale inland valleys** are characterised by their simple **concave landform** and inland **lochs**.		
Land Cover	Land cover consists of a simple display of **peatland** and **heather moorland**, with occasional areas of **improved grassland** and standing water.		
Settlement and Man-made Influence	There are **few settlements**. The main man-made elements include electricity transmission lines, roads and disused quarries. Some peat cutting occurs.		
Movement	Traffic along the main roads of Shetland (A968 and A970) brings **frequent movement** to this landscape.		
Skylines	Skylines are **simple** and occasionally **punctuated by vertical features**, including electricity transmission lines and turbines at Burradale.		
Key Views, Vistas, Landmarks	Views are **contained** by ridges of high ground, but extensive **views** are afforded **along the valleys**.		
Receptors	This landscape will be observed by few residents and mainly by users of the road network.		
Inter-visibility with Adjacent Landscapes	**Adjacent** upland **landscapes contain views** within the valleys. Mid Kame contains views between valleys.		
Natural and Cultural Heritage Features	Some historic settlements remain in the valley on Unst. The inland lochs and associated vegetation is of **ecological interest**.		
Perceptual Aspects	The presence of traffic on main roads and nearby settlement reduces the sense of remoteness.		

Sensitivity to Wind Farm Development

4.57. Overall Sensitivity: **Moderate**

This landscape is of a medium scale with a concave landform and simple predictable skylines, formed by the distinctive West and East Kames which are mart of adjacent upland LCAs (A2), and Mid Kame, which lies within LCA D4. Prominent movement (in Pettadale), the presence of existing vertical features and relative absence of settlement lend this area a **moderate** sensitivity.

E1. FARMED LAND

Location and Extent

4.58. The landscape character area comprises areas of farmland in the South and West Mainland.

Key Characteristics

- Large scale farming landscape
- Frequent settlement
- Cultural heritage interest

Assessment of the Landscape Character Area

4.59. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	This is a **large scale** undulating **farming landscape** with few inland lochs.		
Land Cover	Land cover consists of a mosaic of intensively **farmed grazing lands** and **arable fields**.		
Settlement and Man-made Influence	**Settlements** are **frequent**. Man-made influence is evident in this closely managed landscape, the local road system, electricity transmission lines and communication masts.		
Movement	Traffic along the local road system brings movement to the landscape.		
Skylines	Skylines are **simple** and occasionally **punctuated by settlements** on higher ground.		
Key Views, Vistas, Landmarks	Views take in the surrounding coastal landscape and are **locally contained** by the undulating landscape.		
Receptors	This landscape will be observed by numerous residents, users of the road system and visitors of local attractions.		
Inter-visibility with Adjacent Landscapes	There is a strong **association with the coastal fringe**. Adjacent upland landscapes form a simple, large scale backdrop against parts of this LCA.		
Natural and Cultural Heritage Features	This landscape is rich in **historic remains**. Inland lochs provide **natural heritage** interest and parts of this landscape are designated for their **scenic interest**.		
Perceptual Aspects	The landscape is well developed as a result of its long farming history. Frequent settlement and the presence of well visited tourist attractions reduce the sense of remoteness.		

Sensitivity to Wind Farm Development

4.60. Overall Sensitivity: **Moderate**

This is a large scale farming landscape with an undulating landform, frequent movement and modern development. The presence of dispersed settlements and the potential effects on the setting of landscape features lend a **moderate** degree of sensitivity.

E2. SOUTH MAINLAND SCATTERED SETTLEMENT AND GRAZING LANDS

Location and Extent

4.61. The landscape character area comprises areas of scattered settlement within eastern parts of the South Mainland coastal edge.

Key Characteristics

- Areas of traditional crofting landscape
- Frequent settlement
- Cultural heritage interest

Assessment of the Landscape Character Area

4.62. The following table sets out the results of the assessment against the landscape sensitivity criteria.

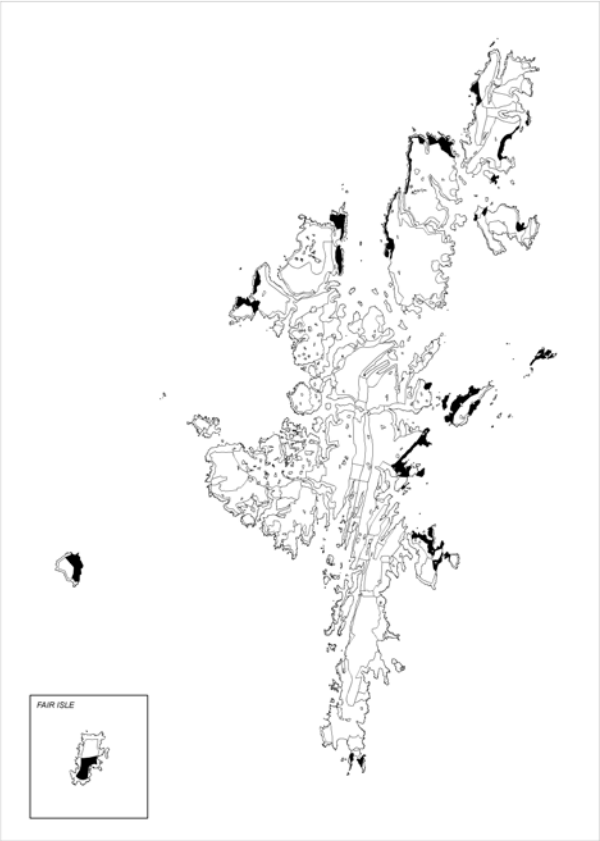
	Lower sensitivity	←→	Higher sensitivity
Landform and Scale		**Medium scale** gently **undulating**, sloping land and coastal plain with scattered **agricultural**, **crofting** and more recent **settlement** of a suburban character.	
Land Cover		Land cover is characterised by **housing**, fragmented areas of traditional **grazing lands** and remaining areas of **lowland crofting landscape**.	
Settlement and Man-made Influence		These areas are relatively **closely settled**. Man-made influence is evident in the local land use, road system and electricity transmission lines.	
Movement		Traffic along the local road system brings movement to the landscape.	
Skylines		Skylines are **simple** and occasionally **punctuated by settlements** on higher ground.	
Key Views, Vistas, Landmarks		Views are directed towards the **coastal fringe** and are **occasionally contained** by the undulating landscape.	
Receptors		This landscape will be observed by numerous residents, users of the road system and visitors to local attractions.	
Inter-visibility with Adjacent Landscapes		The adjacent upland landscape forms a large scale backdrop against this LCA. There is a strong **association with the coastal fringe**. Views to the sea are open and include Mousa and parts of Bressay.	
Natural and Cultural Heritage Features		This landscape is rich in **historic remains** and various **visitor destinations** provide an insight into local cultural heritage.	
Perceptual Aspects		The landscape is well developed as a result of its long settlement history. Frequent **settlement** and the presence of well visited **tourist attractions** reduce the sense of remoteness.	

Sensitivity to Wind Farm Development

4.63. Overall Sensitivity: **Moderate**

This is a medium scale farming and crofting landscape with an undulating landform. The presence of infrastructure and modern development in association with roads lends a **moderate** sensitivity.

E3. COASTAL CROFTING AND GRAZING LANDS



Location and Extent

4.64. The landscape character area extends along the coastal edge of parts of Unst, Fetlar and Yell, Whalsay and Out Skerries. It includes further parts of Northmavine, Nesting, Bressay, Foula, and South Mainland.

Key Characteristics

- Coastal lowlands landscape
- Grazing lands
- Historic settlement pattern
- Cultural heritage interest

Assessment of the Landscape Character Area

4.65. The following table sets out the results of the assessment against the landscape sensitivity criteria.

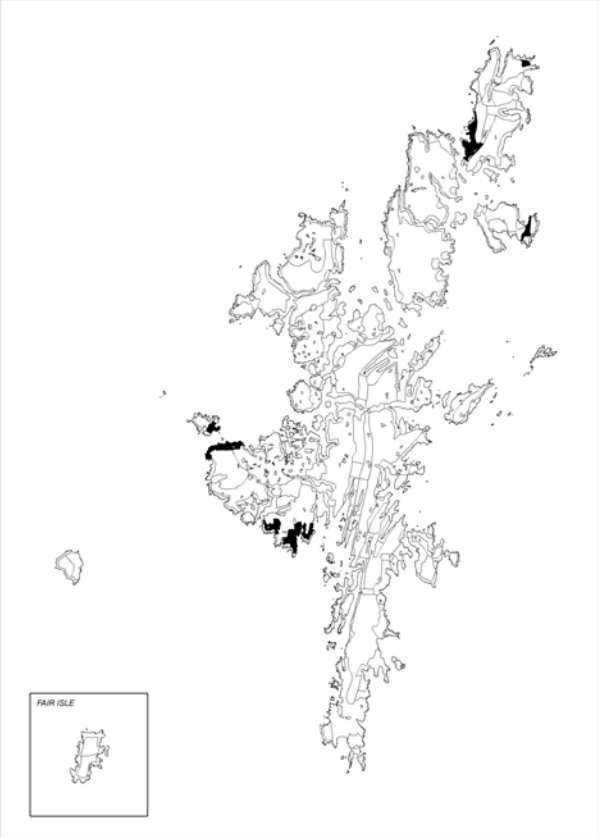
	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	These coastal lowlands have a **gently undulating** character of relatively **small scale**.		
Land Cover	Land cover consists of a simple display of **rough grazing land**, degraded heather moorland and **abandoned improved land**.		
Settlement and Man-made Influence	These areas are relatively **undeveloped**, maintaining the **traditional** pattern of **crofting settlement**. Man-made influence is evident in the local road system, electricity transmission lines and traditional crofting land use.		
Movement	Traffic along the local road system brings some movement to the landscape.		
Skylines	Skylines are **simple** and occasionally **punctuated by settlements** on higher ground.		
Key Views, Vistas, Landmarks	Views are mainly directed towards the sea and include **panoramic views of the coastal fringe**.		
Receptors	This landscape will be observed by local residents, users of the road system, visitors of local attractions and receptors on board ships and ferries.		
Inter-visibility with Adjacent Landscapes	There is a strong **association with the sea**, **coastal landscapes and islands**. This landscape forms a foreground to inland landscapes when approaching from the sea.		
Natural and Cultural Heritage Features	This landscape is rich in **historic remains** that bear witness to the historic occupation pattern which is typical of Shetland.		
Perceptual Aspects	The presence of settlement and crofting activity in this landscape reduces the sense of remoteness.		

Sensitivity to Wind Farm Development

4.66. Overall Sensitivity: **Higher**

This landscape is of a small scale with occasional settlements maintaining the traditional pattern of crofting settlement. There is a strong association with the coastal fringe and significant historic interest, lending a **higher** degree of sensitivity.

E4. UNST AND WEST MAINLAND COASTAL CROFTING



Location and Extent

4.67. The landscape character area comprises areas of coastal crofting landscape on Unst, Fetlar and the West Mainland.

Key Characteristics

- Coastal lowlands landscape
- Traditional crofting
- Historic settlement pattern
- Cultural heritage interest

Assessment of the Landscape Character Area

4.68. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	These coastal lowlands have a **gently undulating** character and **relatively small scale**.		
Land Cover	Land cover is typified by **crofting** with **grazing land** on low lying relatively fertile coastal ground and higher ground with **peatland** or **moorland** cover.		
Settlement and Man-made Influence	These areas are relatively **undeveloped**, maintaining the **traditional** pattern of **crofting settlement**. Man-made influence is limited to the local road system, electricity transmission lines and traditional crofting landuse.		
Movement	A lack of movement gives this landscape a still character.		
Skylines	Skylines are **simple** and occasionally **punctuated by settlements** on higher ground.		
Key Views, Vistas, Landmarks	Views are mainly directed towards the sea and include **panoramic views** of nearby islands.		
Receptors	This landscape will be observed by local residents, users of the road system and receptors on board ships and ferries.		
Inter-visibility with Adjacent Landscapes	There is a **strong association with the sea**, **coastal landscapes** and **islands** across the sounds.		
Natural and Cultural Heritage Features	This landscape is rich in **historic remains** that bear witness to the historic occupation pattern which is typical of Shetland.		
Perceptual Aspects	The presence of settlement and crofting activity in this landscape reduces the sense of remoteness.		

Sensitivity to Wind Farm Development

4.69. Overall Sensitivity: **Higher**

This landscape is of a small scale with occasional settlements maintaining the traditional pattern of crofting settlement. There is a strong association with the coastal fringe and significant historic interest, lending a **higher** degree of sensitivity.

E5. WEST MAINLAND LOWLAND CROFTING

Location and Extent

4.70. The landscape character area comprises areas of scattered settlement and crofting landscape in the West Mainland.

Key Characteristics

- Expansive grazing lands
- Scattered settlement
- Cultural heritage interest

Assessment of the Landscape Character Area

4.71. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	These are **expansive** areas of **broadly rolling** land.		
Land Cover	The landscape has a uniform cover of **grazing land**.		
Settlement and Man-made Influence	**Dwellings** are **limited** and are **scattered** throughout the landscape. Man-made influence is evident in the local road system, electricity transmission lines and traditional crofting landuse.		
Movement	A lack of movement gives this landscape a still character.		
Skylines	Skylines are **simple** and occasionally **punctuated by settlements** on higher ground.		
Key Views, Vistas, Landmarks	Views are afforded across undulating grazing lands and across the seascape.		
Receptors	This landscape will be observed by local residents, users of the road system and receptors on board the local ferries.		
Inter-visibility with Adjacent Landscapes	This landscape forms a simple **backdrop** against the coastal edge. The uplands of Sandness Hill form a large scale backdrop against parts of this LCA.		
Natural and Cultural Heritage Features	Frequent **historical features**, including settlement remains at Scord of Brouster, Burn of Setter and loch of Grunnavoe.		
Perceptual Aspects	This landscape is **physically remote**.		

Sensitivity to Wind Farm Development

4.72. Overall Sensitivity: **Moderate**

This is a large scale landscape with a uniform land cover, few dispersed settlements and occasional man-made features, lending it a **moderate** degree of sensitivity.

E6. DEVELOPED AREAS

Location and Extent

4.73. The landscape character area comprises the developed areas of Sumburgh Airport and its immediate surroundings.

Key Characteristics

- Developed coastal landscape
- Airport infrastructure
- Cultural heritage interest

Assessment of the Landscape Character Area

4.74. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	This is a **medium scale** area of relatively **flat coastal land**.		
Land Cover	The landscape is dominated by **Sumburgh Airport** and there is little evidence of the previous vegetative cover.		
Settlement and Man-made Influence	**Dwellings are limited**. Man-made influence is prominent as a result of **airport infrastructure** and roads.		
Movement	Airport activity and the presence of traffic on local roads bring movement to this landscape.		
Skylines	Skylines are **simple** and frequently **punctuated by airport infrastructure**.		
Key Views, Vistas, Landmarks	**Views** are afforded across this flat landscape **towards the sea** and nearby uplands, taking in much of the airport infrastructure.		
Receptors	This landscape will be observed by local residents, users of the road system and airport facilities, and visitors to well known places of interest.		
Inter-visibility with Adjacent Landscapes	The flat nature of this landscape allows a high degree of **inter-visibility** with adjacent landscapes, particularly the nearby **uplands** and surrounding **seascape**.		
Natural and Cultural Heritage Features	Frequent **historical features** remain. Jarlshof settlement and Old Scatness broch are of notable archaeological interest.		
Perceptual Aspects	The high degree of development in this landscape is such that it lacks a sense of remoteness.		

Sensitivity to Wind Farm Development

4.75. Overall Sensitivity: **Lower**

This landscape is characterised by large scale infrastructure associated with Sumburgh Airport. The absence of settlement and high degree of development lend an overall **lower** sensitivity.

F1. DEVELOPED AREAS

Location and Extent

4.76. The landscape character area comprises areas of clustered development at Lerwick and Sullom Voe.

Key Characteristics

- Sheltered coastal location
- Large scale clustered development
- Harbour facilities
- Contrast between developed areas and surrounding landscape
- Cultural heritage interest

Assessment of the Landscape Character Area

4.77. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale			
	This landscape is characterised by **large scale**, **built up areas** along sheltered voes and sounds.		
Land Cover			
	Land cover is dominated by **modern development**, and there is little evidence of the previous vegetative cover.		
Settlement and Man-made Influence			
	Lerwick and Sullom Voe form a dense cluster of development in these landscapes. **Man-made influences dominate** in the form of built elements, industrial development, harbours and extensive hard surfaces.		
Movement			
	Industrial activity and the frequent **presence of road and shipping traffic** bring movement to these landscapes.		
Skylines			
	Immediate skylines are **gently rolling** and **densely settled**. Adjacent uplands form a secondary skyline that appears simple and which is occasionally punctuated by communication masts.		
Key Views, Vistas, Landmarks			
	Expansive views are afforded to and from nearby settled voes and sounds and adjacent uplands.		
Receptors			
	This landscape will be observed by local residents, users of the road system, visitors and receptors on board ships and ferries.		
Inter-visibility with Adjacent Landscapes			
	The location of these areas allow a high degree of intervisibility with adjacent landscapes. There is a **strong association with** the **surrounding uplands and sheltered coastal areas**.		
Natural and Cultural Heritage Features			
	Lerwick has a rich **cultural history**. The landscape surrounding Sullom Voe is of **natural heritage interest**.		
Perceptual Aspects			
	The high degree of development in these landscapes is such that they do not give rise to a notable sense of remoteness.		

Sensitivity to Wind Farm Development

4.78. Overall Sensitivity: **Lower**

This landscape is generally of a large developed scale. Settlement and modern development are densely clustered with vertical structures and prominent movement on roads lending a **lower** sensitivity.

Residential parts of Lerwick are more sensitive to wind farm development and potential effects on views from these areas and public viewpoints may form a constraint to development.

F2. NUCLEATED SETTLEMENTS

Location and Extent

4.79. The landscape character area comprises small scale settlement at voe heads and sheltered coastal areas across the islands.

Key Characteristics

- Sheltered coastal location
- Nucleated development
- Harbour facilities
- Cultural heritage interest

Assessment of the Landscape Character Area

4.80. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	These are **relatively small scale**, gently sloping **coastal landscapes** with sheltered coastal waters and small areas of **concentrated settlement**.		
Land Cover	Land cover consists mainly of **residential development**, surrounded by rough grassland and **heather moorland**.		
Settlement and Man-made Influence	Settlements are typically small and **nucleated**. Man-made influences include roads, fish farms and harbour facilities with ancillary developments.		
Movement	The presence of local road and harbour traffic brings movement to these landscapes.		
Skylines	Skylines are **simple** and **mostly uninterrupted**.		
Key Views, Vistas, Landmarks	Views are afforded of the immediate **coastal areas** and surrounding landscapes.		
Receptors	These landscapes will be observed by local residents, users of the road system, visitors and receptors on board ships and local ferries.		
Inter-visibility with Adjacent Landscapes	These landscapes have a strong association with the **coastal edge**. As a result of settlement along sheltered voes, this LCA frequently forms a **foreground to other landscapes** when approaching from the sea.		
Natural and Cultural Heritage Features	These areas are **historically settled** and are of **cultural heritage** interest.		
Perceptual Aspects	The presence of modern development in these landscapes reduces the sense of remoteness.		

Sensitivity to Wind Farm Development

4.81. Overall Sensitivity: **Higher**

These landscapes are of a small scale, with concentrated settlements and a strong association with the sea, as a result of the sheltered situation at voe heads, lending a **higher** degree of sensitivity.

F3. FARMED LAND

Location and Extent

4.82. The landscape character area comprises farmed land around Laxfirth.

Key Characteristics

- Sheltered coastal location
- Agricultural landscape
- Scattered settlement

Assessment of the Landscape Character Area

4.83. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	This is a landscape of **medium scale** occupying an area of gently **sloping coastal landscape** around Laxfirth.		
Land Cover	Land cover consists of areas of agriculture, including **grazing land** and areas of **arable farming** with scattered crofting and agricultural settlement.		
Settlement and Man-made Influence	This landscape is well settled with scattered **crofting and agricultural settlements** around Laxfirth and more concentrated settlement at Veensgarth. Man-made influences include roads, electricity transmission lines and Tingwall airport.		
Movement	The presence of frequent traffic on roads brings movement to this landscape.		
Skylines	Skylines are **simple** and occasionally **punctuated by dwellings**.		
Key Views, Vistas, Landmarks	Views are afforded across grazing lands, **Laxfirth**, and towards the surrounding upland areas and Tingwall valley.		
Receptors	This landscape will be observed by local residents and users of the road system.		
Inter-visibility with Adjacent Landscapes	The situation of this area allows a strong association with adjacent **upland landscapes** and the sheltered voe of **Laxfirth**.		
Natural and Cultural Heritage Features	**Historic remains** are frequent, including remnant farm buildings and associated structures, and remains of a broch at Hawks Ness.		
Perceptual Aspects	The presence of settlements and farming practices reduces the sense of remoteness.		

Sensitivity to Wind Farm Development

4.84. Overall Sensitivity: **Moderate**

This is a medium scale farming landscape with a simple land form and frequent contemporary structures. Concentrated settlement and prominent movement around Veensgarth lend a **moderate** sensitivity.

F4. UNST AND FETLAR CROFTING AND GRASSLAND

Location and Extent

4.85. The landscape character area comprises crofting land situated around the sheltered voes and sounds of Unst and Fetlar.

Key Characteristics

- Crofting and grassland
- Few settlements
- Cultural heritage interest

Assessment of the Landscape Character Area

4.86. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	These are relatively **small scale** areas of gently **sloping coastal landscape**.		
Land Cover	Land cover consists mainly of **grassland**.		
Settlement and Man-made Influence	These areas are mainly **undeveloped**, maintaining the traditional pattern of **crofting settlement**. Man-made influences include single track roads and electricity transmission lines.		
Movement	The presence of traffic on the local road system brings some movement to this landscape.		
Skylines	Skylines are **simple** and occasionally **punctuated by dwellings**.		
Key Views, Vistas, Landmarks	Views are afforded across grazing lands, coastal landscapes and surrounding heathland.		
Receptors	This landscape will be observed by local residents, users of the road system and visitors to popular destinations on the islands.		
Inter-visibility with Adjacent Landscapes	The situation of this area allows a high degree of inter-visibility with adjacent landscapes and the **seascape**.		
Natural and Cultural Heritage Features	The area is rich in **historic buildings** and **associated landscape features** e.g. Munness Castle, Belmont House Gardens and Designed Landscape.		
Perceptual Aspects	This landscape is **physically remote**.		

Sensitivity to Wind Farm Development

4.87. Overall Sensitivity: **Higher**

This landscape is of a small scale with occasional settlements maintaining the traditional pattern of crofting settlement. There is a strong association with the coastal fringe and significant historic interest, lending a **higher** degree of sensitivity.

F5. SCATTERED SETTLEMENTS/ CROFTING AND GRAZING LAND

Location and Extent

4.88. The landscape character area comprises areas of scattered settlement, extending along the sheltered voes and sounds of the archipelago.

Key Characteristics

- Sheltered coastal location
- Managed crofting landscape
- Scattered settlements
- Cultural heritage interest

Assessment of the Landscape Character Area

4.89. The following table sets out the results of the assessment against the landscape sensitivity criteria.

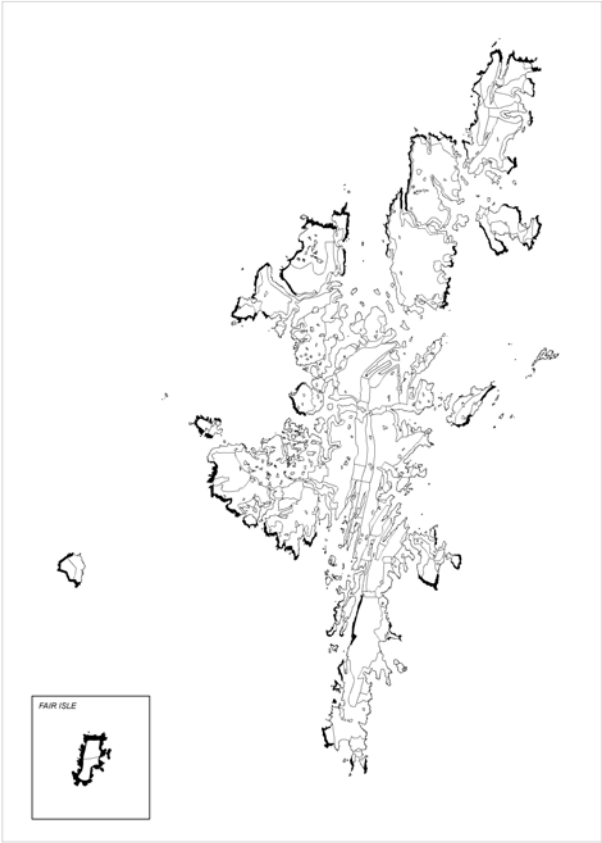
	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	This **small scale** character area forms an irregular, gently sloping coastal landscape, **fringing** frequent **voes and sounds**.		
Land Cover	Land cover consists of a mixture of improved and unimproved **grazing land**.		
Settlement and Man-made Influence	These areas are typified by a **scattered** pattern of settlement. Man-made influences include roads and electricity transmission lines.		
Movement	The presence of traffic on the local road system brings some movement to these landscapes.		
Skylines	Skylines are **simple** and occasionally **punctuated by dwellings**.		
Key Views, Vistas, Landmarks	Views are afforded along distinct **voes**, to upland landscapes, **coastal features** and islands.		
Receptors	This landscape will be observed by local residents, users of the road system and the visiting public.		
Inter-visibility with Adjacent Landscapes	The situations of these areas allow a strong association with **sheltered voes** and forms a **foreground to neighbouring upland landscapes**.		
Natural and Cultural Heritage Features	The area is rich in **historic buildings** and **associated landscape features**.		
Perceptual Aspects	The presence of settlements and farming practices reduces the sense of remoteness.		

Sensitivity to Wind Farm Development

4.90. Overall Sensitivity: **Higher**

This landscape is characterised by a small scale crofting landscape, strongly associated with the sheltered voes and neighbouring uplands. The limited modern development and significant historic interest in this landscape, lend a **higher** degree of sensitivity.

G. COASTAL EDGE



Location and Extent

4.91. The landscape character areas extend along the coastal fringe of the archipelago, comprising frequent cliffs, stacks and geo.

Key Characteristics

- Frequent coastal features
- Rough grassland and heather moorland
- Natural heritage interest

Assessment of the Landscape Character Area

4.92. The following table sets out the results of the assessment against the landscape sensitivity criteria.

	Lower sensitivity	←→	Higher sensitivity
Landform and Scale	This is an extensive landscape of **dramatic coastal features**, including cliffs, stacks, natural arches and sandy beaches.		
Land Cover	Land cover consists mainly of **rough grassland** and heather moorland, combined with **rugged cliffs**, stacks and rocky outcrops.		
Settlement and Man-made Influence	These areas are **unsettled**. Man-made influences are limited and may include lighthouses, beacons and coastal paths.		
Movement	Waves and the motions of the sea bring movement to this landscape.		
Skylines	Where cliffs shape the skyline these are generally **complex** and **uninterrupted**.		
Key Views, Vistas, Landmarks	**Extensive views** are afforded across the sea, punctuated by frequent **coastal features**.		
Receptors	This landscape will be observed by residents of adjacent landscapes, receptors on ships and ferries, and the visiting public.		
Inter-visibility with Adjacent Landscapes	This landscape has a strong association with the **sea** and forms a distinct **foreground to inland landscapes**.		
Natural and Cultural Heritage Features	The areas are rich in coastal features and provide **ornithological and marine interest**. Large sections of the coastline are designated for their **scenic quality**.		
Perceptual Aspects	The remote and rugged nature of these landscapes gives a sense of **wildness**.		

Sensitivity to Wind Farm Development

4.93. Overall Sensitivity: **Higher**

This landscape has a rugged and irregular landform made up of complex coastal features. There is an absence of settlement and modern development that lends a **higher** degree of sensitivity.

Table 4.2 Summary of Sensitivity by Landscape Character Area

LCA	Name	Sensitivity
	MAJOR UPLANDS	
A1	South Mainland Spine	Lower (NSA Moderate)
A2	East and West Kames	Lower
A3	Ronas Hill	Moderate
A4	Unst Uplands	Moderate
A5	Sandness Hill, Ward of Bressay/ Noss, The Sneug and Noup (Foula) and Ward Hill (Fair Isle)	Moderate
	PEATLAND AND MOORLAND	
B1	Yell Peatland	Moderate
B2	Rounded Moorland Hills	Moderate
B3	Unst and Fetlar Rocky Heathland	Moderate
B4	South Mainland Coastal Moorland	Moderate
B5	Eshaness and Papa Stour Maritime Heathland	Higher
	UNDULATING MOORLAND WITH LOCHS	
C1	West Mainland and Northmavine: Muckle Roe and Mangaster/ Nibon Area	Moderate
C2	Uyea, Braewick, Tingon and North Roe	Moderate
C3	Lunna Ness and Dragon Ness	Moderate
	INLAND VALLEYS	
D1	Farmed and Settled Inland Valleys: Tingwall and Weisdale	Higher
D2	Crofting and Grazing Inland Valleys: Cuckron	Higher
D3	Crofting and Grazing Isolated Valleys	Higher
D4	Peatland and Moorland Inland Valleys	Moderate
	FARMED AND SETTLED LOWLAND AND COAST	
E1	Farmed Land	Moderate
E2	South Mainland Scattered Settlementand Grazing Lands	Moderate
E3	Coastal Crofting and Grazing Lands	Higher
E4	Unst and West Mainland Coastal Crofting	Higher
E5	West Mainland Lowland Crofting	Moderate
E6	Developed Areas	Lower
	FARMED AND SETTLED VOES AND SOUNDS	
F1	Developed Areas	Lower
F2	Nucleated Settlements	Higher
F3	Farmed Land	Moderate
F4	Unst and Fetlar Crofting and Grassland	Higher
F5	Scattered Settlement/ Crofting and Grazing Lands	Higher
G	Coastal Edge	Higher

5. EVALUATION OF VISUAL COMPARTMENTS

Overview

5.1. This section identifies a number of visual compartments which consider groups of LCAs across which there is a broad degree of intervisibility. Areas of strong landscape and visual association were grouped together into visual compartments, informed by a strategic analysis of topography, including ridgelines and water-sheds, and were agreed upon in consultation with the SIC Working Group. Information sources included landform and hydrology maps in **Chapter 2** of *A Landscape Assessment of the Shetland Isles*, Ordnance Survey maps and field work. **Sections 2.30 – 2.34** provide further detail.

Overall Landscape Sensitivity

5.2. The broad scale visual compartments which were identified within Shetland are set out in **Figure 6**. The following sections comment on the overall sensitivity of each visual compartment, drawing on the assessment of the LCAs which lie within them (**Section 4**). These were refined in a similar way as for LCAs, by overlaying NSAs (**Figure 4**) and examining areas where development within the same visual compartment could potentially affect nearby designated areas, leading to the production of **Figure 7** (see **Section 2.27**). Refinement this time concentrated on identifying areas within the same visual compartment which have close or significant intervisibility with an NSA, and, where considered appropriate, increasing the given levels of sensitivity from lower to moderate, thus taking account where needed of the settings to NSAs.

Table 5.1 Visual Compartments and LCAs

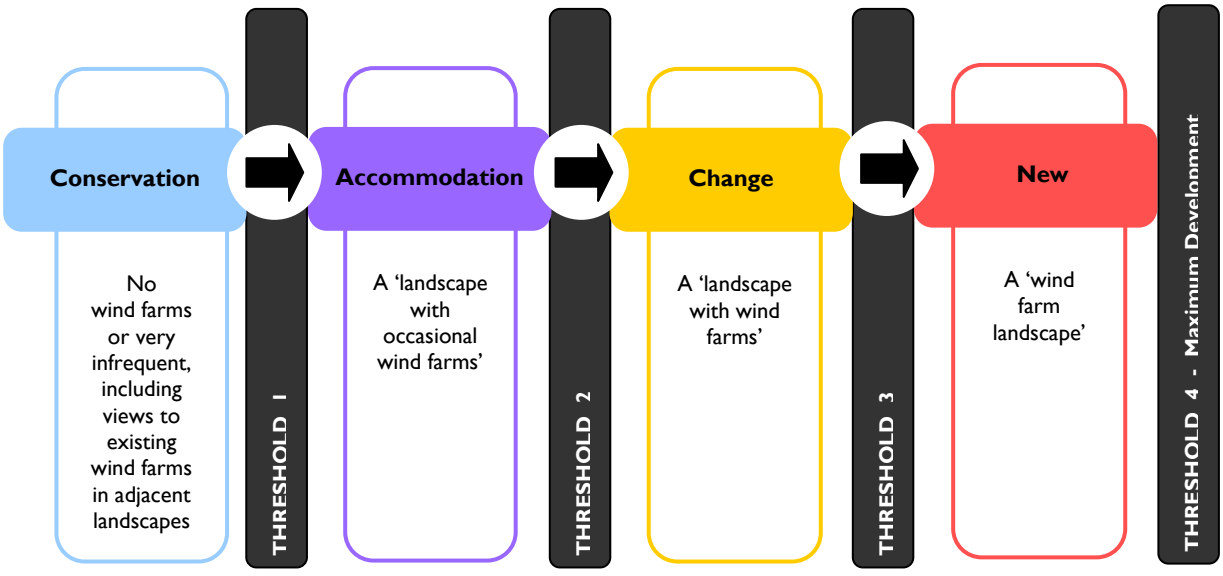
	Name of Visual Compartment	LCAs in Compartment
A	East Unst and North Fetlar	A4, B3, D2, D3, D4, E3, E4, F2, F4, F5, G
B	Bluemull Sound/ West Unst	A4, B1, B3, E3, E4, F5, G
C	Mid and North Yell	B1, E3, F5, G
D	Colgrave Sound	B1, B2, B3, E3, F2, F4, F5, G
E	Yell Sound and South Yell	A2, B1, B2, D3, E3, F5, G
F	North Roe/ Yell Sound	A3, B2, D4, E3, F5, G
G	North Roe and Ronas Voe	A3, B2, C1, C2, E3, F2, F5, G
H	Sullom Voe	B2, C1, F1, F2, F5
I	St Magnus Bay	B2, B5, C1, C2, E3, E4, F2, F5, G
J	West Kame	A2, C1, E1, F2, F5
K	Lunnasting, North Nesting, Whalsay and Out Skerries	A2, B2, C3, D4, E3, F2, F5, G
L	West Mainland	A5, B2, C1, D3, E4, F2, F5, G
M	Mid Kame and Whiteness	A2, D1, D2, D4, F2, F5
N	Central Mainland – East	A1, A2, A5, B2, C3, D4, E3, F2, F3, F5, G
O	South Mainland – West	A1, A2, D1, D3, E1, F2, F5, G
P	South Mainland – East and South Bressay	A1, A5, B2, B4, D3, E1, E2, E3, E6, F1, F2, G
Q	Foula	A5, E3, G
R	Fair Isle	A5, E3, G

Landscape Capacity

5.3. Professional judgement was applied to determine landscape capacity for each visual compartment. Key characteristics, landscape sensitivity and designated landscapes were considered together and are shown on **Figure 7.** Capacity was determined by looking at the extent and distribution of areas of lower or moderate sensitivity (reflecting the extent of LCAs), whilst taking on board issues to do with intervisibility, and potential cumulative effects.

5.4. It should be noted that, ultimately, landscape capacity will be affected not only by the location and extent of areas of lower and moderate sensitivity, but by the size of the LCA, and visual compartment, current levels of development, and by other factors, including technical feasibility, which are not considered in this report. It is important to recognise that the thresholds (or tipping points) between levels of landscape change, and therefore the landscape capacity of an area for development, before each threshold is reached, will depend upon the nature of each individual landscape and specific proposals in every case. Landscape capacity also varies with the perception of need for development, and will change with changing technology.
Diagram 5.1 indicates, theoretically, how the relationship between different thresholds of landscape change can vary with the desired landscape objective (see www.spgadvice.co.uk), and therefore how landscape capacity would vary accordingly. The assumption made in this study is one whereby it is taken that change will be best accommodated in areas of lower sensitivity, and that areas of higher sensitivity, particularly areas which are designated, should be conserved. Areas of moderate sensitivity are generally taken to have capacity to accommodate some change.

Diagram 5.1 Thresholds of Landscape Change



5.5. In a larger compartment, there may be scope for a greater number of developments before each threshold is reached.

5.6. Capacity refers to the **maximum extent of development** (i.e. when thinking about **multiple wind farm developments** in the landscape), whereas the typology refers to the likely appropriate nature of **each individual development**.

Landscape and Visual Guidance

5.7. Guidance is provided to help direct development to the most appropriate locations, in landscape and visual terms, and should be read in conjunction with the guidance notes in **Table 5.2**. Potentially suitable scales of development are indicated for each visual compartment, based on the wind farm development typologies described in **Section 2.13**.

5.8. Additional generic guidance from *Shetland Structure Plan*[8], *Shetland Local Plan*[9] and the landscape assessment, which is relevant to the development of wind farms in the landscape, is presented in **Appendix 4**.

Table 5.2 Landscape and Visual Guidance Notes

No.	Landscape and Visual Guidance Note
1	Locate developments in areas of large scale landscape and in association with existing activity or development (e.g. quarries, roads and existing sources of movement in the landscape).
2	Respect sensitive skylines; consider setting back turbines from ridges or ensure that wind farm layout enhances the skyline, providing a focal point/ lending a strong composition.
3	Consider landform and topography when developing wind farm proposals of more than one turbine. Layout to reflect the shape of the landform, to optimise screening opportunities and to avoid visual confusion.
4	Locate away from steep valley sides and areas that form a distinct foreground within key views.
5	Locate wind farm developments away from the most remote and undisturbed areas.
6	Avoid areas of fragile vegetation (deep peat, blanket bog) which are difficult to restore.
7	Protect sensitive habitats and areas of natural heritage or conservation importance.
8	Consider views from public viewpoints and residential areas. Aim to achieve good composition from key viewpoints and to reduce the occurrence of very close views from residential properties.
9	Minimise adverse effects on the setting of smaller or dispersed traditional settlements.
10	Avoid areas of scenic importance and limit visual effects on such areas, using ridge lines and topography to contain views.
11	Respect the context of historic features and valued landscape components. Promote restoration where necessary.
12	Consider the composition of views from main road corridors and national cycle routes.
13	Ensure development contributes positively to the visitor potential of the area.
14	Minimise the effects of accompanying infrastructure and ancillary development by making use of existing tracks for the access tracks, burying cabling underground, careful location and screening of ancillary buildings or use of existing buildings.
15	Avoid incompatibility of design between developments in adjacent visual compartments, where these are intervisible.

[8] Shetland Islands Council (2000) *The Shetland Structure Plan 2001-2016*.
[9] Shetland Islands Council (2004) *Shetland Local Plan.*

A. EAST UNST AND NORTH FETLAR

Location and Extent

5.9. The visual compartment comprises eastern parts of Unst, extending along the ridge of Hermaness and Valla Field, and northern parts of Fetlar.

Description

5.10. The landscape within the compartment is of large scale with extensive areas of **higher ground**, interspersed by **inland valleys** and sheltered areas of lower lying ground. Settlement is limited to a number of small **nucleated villages** situated along sheltered parts of the coastline and occasional scattered farmhouses associated with crofting land. Modern developments within this landscape mainly consist of communications infrastructure.

5.11. There is a **strong association with the sea** and **frequent panoramic views** include **coastal features** and islands. Hermaness and the shores of Burrafirth are part of the Shetland Islands NSA. The scenic quality and natural heritage interest of this landscape attracts **frequent visitors**.

Intervisibility

5.12. Elevated parts of this landscape allow a **high degree of intervisibility** with surrounding visual compartments. Lower lying areas have limited intervisibility with adjoining visual compartments as a result of topography. Frequent views of this landscape may be obtained from ferry routes.

Conclusions

<table>
<tr><td colspan="2">Overall Sensitivity: Moderate/ High</td></tr>
<tr><td colspan="2">The coastal fringe, small scale settlements and crofting land within this visual compartment are considered of higher sensitivity. More extensive upland areas are of moderate sensitivity, lending an overall moderate/ high sensitivity.</td></tr>
<tr><td>Indicative Landscape Capacity
This visual compartment is likely to have landscape capacity for a single small wind farm.</td><td>Potentially Suitable Development Typology – see Section 2.13
The simple landform and developed character of parts of this landscape provides scope to accommodate development of Typology A, provided that it is sited away from the most sensitive areas.</td></tr>
<tr><td colspan="2">Landscape Guidance
Wind farm development could be accommodated within localised parts of this landscape, however careful consideration should be given to potential effects on the NSA in the north of the area. The location of wind farm developments within this landscape should avoid immediate proximity to sensitive habitats and coastal landscapes, focusing on areas of lower sensitivity, in association with existing development and the A968 corridor. Consideration should be given to the composition of views from key viewpoints, including views from the NSA, small scale settlements and visitor destinations. Siting of turbines should reflect the shape of the landform and where possible optimise screening opportunities within the landscape. Smaller sized turbines may be more suitable to the landscape scale in this area.

Relevant Landscape Guidance Notes: 1, 3, 6, 7, 8, 9, 10, 11, and 14.</td></tr>
</table>

B. EAST BLUEMULL SOUND / WEST UNST

Location and Extent

5.13. Extending along the coastline of western parts of Unst, this visual compartment comprises areas of coastal fringe along Bluemull Sound and parts of North Yell.

Description

5.14. The landscape comprises areas of significant **coastal features** and **upland landscape**. Settlements are distributed along the coastal edge and are backed by higher ground.

5.15. **Scenic views** can be obtained of frequent coastal features and across Bluemull Sound. The coastal edge of Hermaness and Burrafirth form part of the Shetland Islands NSA. The scenic qualities and **natural heritage interest** of this landscape attract **frequent visitors**.

Intervisibility

5.16. Elevated parts of this landscape allow a high degree of **intervisibility** with surrounding visual compartments. Lower lying areas have limited intervisibility with adjoining visual compartments as a result of topography. Frequent views of this landscape may be obtained from ferry routes.

Conclusions

<table>
<tr><td colspan="2">Overall Sensitivity: Moderate/ High</td></tr>
<tr><td colspan="2">The coastal fringe, small scale settlements and crofting land within this visual compartment are considered of higher sensitivity. More extensive upland landscapes associated with neighbouring compartments are of moderate sensitivity, lending an overall moderate/ high sensitivity.</td></tr>
<tr><td>Indicative Landscape Capacity
This visual compartment is likely to have landscape capacity for a single small wind farm.</td><td>Potentially Suitable Development Typology – see Section 2.13
The scale and simple landform of localised areas of higher ground may be suitable for development of Typology A, provided that development is sited away from the most sensitive areas.</td></tr>
<tr><td colspan="2">Landscape Guidance
Wind farm development could be accommodated within localised parts of this landscape, however careful consideration should be given to potential effects on the NSA and sensitive coastal landscapes. Smaller sized turbines may be more suitable to the landscape scale in this area. The location of wind farm developments within this landscape should avoid immediate proximity to settlements and sensitive coastal landscapes, focusing on areas of lower sensitivity in association with the A968 corridor, and simple, large scale landscapes in neighbouring compartments. Consideration should be given to the composition of views from key viewpoints, including views from the NSA and small scale settlements; and potential effects on the context of the designed landscape of Belmont House. Areas to the north east and those with close intervisibility with the NSA are unlikely to be able to accommodate development.

Relevant landscape guidance notes: 5, 6, 7, 9, and 10.</td></tr>
</table>

C. MID AND NORTH YELL

Location and Extent

5.17. Comprising western parts of North Yell, this visual compartment extends into the interior of South Yell, bound to the south by the Hill of Arisdale.

Description

5.18. This visual compartment consists of **extensive** areas of elevated and undulating **peatland and moorland**, deeply incised by Whalefirth and bounded by a rocky coastal edge. The landscape is largely undeveloped and settlement is sparse.

5.19. The **simple skylines** of The Camb provide a background to the lower lying coastal parts of this landscape. Views from this landscape are mainly directed towards the sea. Views are locally contained inland, taking in expansive areas of undulating moorland. There is a relative absence of features and **lack of visual focus**.

Intervisibility

5.20. Elevated parts of this landscape allow a high degree of intervisibility with surrounding visual compartments. Lower lying areas have limited intervisibility as a result of topography.

Conclusions

<table>
<tr><td colspan="2">Overall Sensitivity: Moderate</td></tr>
<tr><td colspan="2">This is an expansive landscape with a simple landform and relative absence of development. Scattered settlement and coastal crofting land give rise to areas of higher sensitivity. Expansive areas of upland moorland are of moderate sensitivity, lending an overall moderate sensitivity.</td></tr>
<tr><td>Indicative Landscape Capacity
This visual compartment is likely to have capacity to accommodate several small wind farms or one medium-large wind farm.</td><td>Potentially Suitable Development Typology – see Section 2.13
The landscape extent, simple landform and lack of apparent scale references within this landscape provide scope for development of Typologies A, B or C.</td></tr>
<tr><td colspan="2">Landscape Guidance
Wind farm development could be accommodated within parts of this landscape, however this should avoid effects on areas of sensitive vegetation. Wind farm developments should be sited away from the more sensitive coastal edge and areas designated for their natural heritage value, focusing on the A968 corridor.

Relevant landscape guidance notes: 1, 6, 7, 8, and 9.</td></tr>
</table>

D. COLGRAVE SOUND

Location and Extent

5.21. This visual compartment extends from the shores of Bastavoe along Colgrave Sound and includes southern parts of Fetlar.

Description

5.22. The landscape in this compartment comprises extensive areas of **upland moorland** and **coastal fringe** around Colgrave Sound. Settlement is limited to a number of **nucleated villages** situated along the sheltered parts of the coastline.

5.23. The **simple skylines** of The Camb, Hill of Reafirth and Hill of Arisdale provide a background to the lower lying coastal parts of this landscape. There is a **strong association with the sea** and frequent **panoramic views** are drawn to Fetlar and island of Hascosay.

Intervisibility

5.24. Elevated parts of this landscape allow a high degree of intervisibility with surrounding visual compartments. Lower lying areas are frequently intervisible with landscapes across Yell Sound. Views of this landscape can be obtained from ships and ferries.

Conclusions

<table>
<tr><td colspan="2">Overall Sensitivity: Moderate</td></tr>
<tr><td colspan="2">This is an expansive landscape with a simple landform and small scale settlement associated with coastal grazing lands. Small scale areas of coastal settlement and features provide localised higher sensitivity. Large scale areas of upland moorland are of moderate sensitivity, lending an overall moderate sensitivity.</td></tr>
<tr><td>Indicative Landscape Capacity
This visual compartment is likely to have capacity to accommodate several small wind farms or one medium wind farm.</td><td>Potentially Suitable Development Typology – see Section 2.13
The scale and simple landform of localised areas of higher ground on Yell may be suitable for development of Typologies A or B, provided that development is sited away from the most sensitive areas.</td></tr>
<tr><td colspan="2">Landscape Guidance
The expansive character and simple landform of this landscape are considered suitable characteristics for accommodating wind farm development. The location of wind farm developments within this landscape should avoid immediate proximity to settlements and sensitive coastal landscapes, focusing on areas of lower sensitivity in association with main road corridors. Sensitive siting of turbines, away from ridge summits and sensitive habitats, will be required. Consideration should be given to the composition of views from key viewpoints, including views from small scale settlements; and potential effects on the context of the designed landscape of Brough Lodge.

Relevant landscape guidance notes: 1, 6, 7, 8, 9, 11, and 12.</td></tr>
</table>

E. YELL SOUND AND SOUTH YELL

Location and Extent

5.25. This visual compartment extends along the shores of Yell Sound, incorporating western parts of South Yell and areas of coastal fringe on the shores of Tofts Voe and Firths Voe.

Description

5.26. This visual compartment comprises extensive areas of **upland moorland** and **coastal fringe** around Yell Sound. Settlement is limited to a number of **nucleated villages** situated along parts of the coastline.

5.27. The **simple skylines** of Kame of Sandwick and Ward of Arisdale provide a background to the lower lying parts of this landscape. There is a **strong association with Yell Sound** and related **coastal features** as panoramic views are directed towards North Roe by extensive uplands.

Intervisibility

5.28. Elevated parts of this landscape allow a high degree of intervisibility with surrounding visual compartments. Lower lying areas are frequently intervisible with landscapes across Yell Sound. Views of this landscape can be obtained from ships and ferries.

Conclusions

<table>
<tr><td colspan="2">Overall Sensitivity: Moderate</td></tr>
<tr><td colspan="2">This is an expansive landscape with a simple landform and scattered settlement associated with Yell Sound. Coastal areas of small scale settlement and crofting land provide areas of higher sensitivity. Large scale areas of upland moorland are of moderate sensitivity, lending an overall moderate sensitivity.</td></tr>
<tr><td>Indicative Landscape Capacity
This visual compartment is likely to accommodate several small wind farms or one medium-large wind farm.</td><td>Potentially Suitable Development Typology – see Section 2.13
The scale and simple landform of localised areas of higher ground on Yell may be suitable for development of Typologies A, B or C, provided that development is sited away from the most sensitive areas.</td></tr>
<tr><td colspan="2">Landscape Guidance
The expansive character and simple landform of this landscape are considered suitable characteristics for accommodating wind farm development. The location of wind farm development within this landscape should avoid immediate proximity to settlements and sensitive coastal crofting landscapes, focusing on areas of large scale and simple landform in association with the A968 corridor. Sensitive siting of turbines, away from ridge summits and sensitive habitats, will be required and consideration should be given to the composition of views from small scale settlements and the NSA at Fethaland.
Relevant landscape guidance notes: 1, 3, 5, 6, 7, 9, and 12.</td></tr>
</table>

F. NORTH ROE / YELL SOUND

Location and Extent

5.29. This visual compartment extends from Fethaland to Collafirth and includes eastern parts of North Roe on the shores of Yell Sound.

Description

5.30. The landscape within this visual compartment comprises relatively **small scale** areas of **crofting lowlands**, bounded by a **coastal edge** with frequent geological features. Settlement is limited to a number of small **nucleated villages** situated along sheltered parts of the coastline.

5.31. The shores of Fethaland and Ness of Burravoe are designated for their **scenic value** and are part of the Shetland Islands NSA. Views from this landscape are mainly directed towards Yell Sound and its coastal fringe.

Intervisibility

5.32. This is a highly visible landscape which can be seen from adjoining visual compartments, including from Yell, localised areas around Sullom Voe and elevated parts of North Roe. The elevated landmass of North Roe directs views from this compartment towards the coastal fringe of Yell.

Conclusions

Overall Sensitivity: Higher	**Landscape Guidance**
The small scale, scenic quality and relative absence of modern development within this coastal landscape lend an overall higher sensitivity.	Wind farm development within this compartment would compromise the scenic value of this landscape and would be highly visible from surrounding areas, including from the NSA. The landscape is therefore considered unsuitable for commercial wind farms developments, as such development would significantly alter the landscape character.

G. NORTH ROE AND RONAS VOE

Location and Extent

5.33. The visual compartment encompasses the main part of North Roe, and includes Ronas Hill and Ronas Voe.

Description

5.34. This landscape comprises a combination of large scale **upland** and **peatland interspersed with lochs**, deeply incised by Ronas Voe and bounded by a **rugged coastal edge**.

5.35. This landscape is largely **undeveloped** and the northern part is designated as an NSA for its **scenic value**. The domed outline of Ronas Hill forms a **focal point** in views from the surrounding landscape.

Intervisibility

5.36. This is a highly visible landscape, in which Ronas Hill forms a focal point in views from adjoining visual compartments and landscapes at greater distance.

Conclusions

Overall Sensitivity: Higher	**Landscape Guidance**
The distinct landform, scenic quality and relative absence of modern development within this coastal landscape lend an overall higher sensitivity.	Wind farm development within this compartment would compromise the scenic value and undeveloped quality of this landscape and would potentially be highly visible from surrounding areas, including from the NSA. The landscape is therefore considered unsuitable for commercial wind farm development, as such development would significantly alter the landscape character.

H. SULLOM VOE

Location and Extent

5.37. This visual compartment extends along the shores of Sullom Voe, bound by a series of hills and ridgelines associated with Dalescord Hill to the east and south, and a series of lower hills along the A970 to the west.

Description

5.38. The landscape comprises a mosaic of **uplands**, **undulating moorland** and **crofting landscapes** with scattered settlements, and an airfield and large scale industrial development on the shores of Sullom Voe. **Large scale development** at Sullom Voe oil terminal forms a prominent **landmark** in this landscape. Extensive parts of Sullom Voe are designated for their natural heritage value.

Intervisibility

5.39. Elevated parts of this landscape allow a high degree of intervisibility with surrounding visual compartments. Lower lying areas are frequently screened in views from surrounding areas by localised topography and the ridgeline formed by Dalescord Hill.

Conclusions

<table>
<tr><td colspan="2">Overall Sensitivity: Moderate</td></tr>
<tr><td colspan="2">This is a moderate to large scale landscape with a simple landform and localised scattered settlement. Areas of small scale settlement and crofting land are of higher sensitivity. Large scale areas of upland moorland are of lower sensitivity, lending an overall moderate sensitivity.</td></tr>
<tr><td>Indicative Landscape Capacity

This visual compartment is likely to have landscape capacity for several small wind farms or one medium large wind farm. Due to its elevation, development in the upland areas of this landscape will potentially be widely visible from adjacent visual compartments.</td><td>Potentially Suitable Development Typology – see Section 2.13

Localised areas of lower sensitivity around Sullom Voe oil terminal could accommodate development of Typologies A, B or C.</td></tr>
<tr><td colspan="2">Landscape Guidance

The scale, simple landform and localised developed nature of this landscape are considered suitable characteristics for accommodating wind farm development. The location of wind farm development within this landscape should avoid immediate proximity to settlements and sensitive habitats for wildlife, focusing on areas of lower sensitivity, particularly in association with existing development at Sullom Voe oil terminal. Sensitive siting of turbines, away from ridge summits, will be required and consideration should be given to the composition of views from key routes and viewpoints. The position of this landscape, extending out into Yell Sound means that it may be widely visible across compartments E, F and H. Any development in this area needs to be carefully examined in terms of the cumulative effects with development in nearby visual compartments, and by examining the extent of the effects upon the Northern Mainland as a whole.

Relevant landscape guidance notes: 1, 2, and 12</td></tr>
</table>

I. ST MAGNUS BAY

Location and Extent

5.40. Extending along the coastal fringes of St Magnus Bay this visual compartment comprises Eshaness, western parts of Muckle Roe, Papa Stour and northern parts of the West Mainland.

Description

5.41. The landscape in this compartment consists of extensive areas of undulating **moorland with lochs**, coastal crofting lands and **maritime heathland**, fringed by a complex coastline with **coastal features** and the island of Papa Stour. Settlement is scattered along the sheltered voes.

5.42. Frequent **panoramic views** can be obtained of this varied **coastal landscape** and large parts within the centre and the north of the area are designated as NSA for their **scenic value**, natural and cultural heritage interest.

Intervisibility

5.43. This is a **highly visible** landscape which can be seen from adjoining visual compartments in views from high ground and along voes. The coastal features of Eshaness, Muckle Roe and Papa Stour form recognisable features in views from the surrounding area and from ships and ferries.

Conclusions

Overall Sensitivity: Moderate/ High	**Landscape Guidance**
The large scale, complex landform and scenic quality of this coastal landscape lend an overall moderate/ high sensitivity.	Wind farm development within this compartment would compromise the scenic quality and largely undeveloped character of this area. The landscape is therefore considered unsuitable for commercial wind farm development, as such development would significantly alter the landscape character.

J. WEST KAME

Location and Extent

5.44. This visual compartment extends south from Brae, comprising a series of hills and voes, and eastern parts of Muckle Roe. The eastern boundary of the compartment is formed by the ridge of West Kame which extends south to Russa Ness. The western boundary is made up by a series of lower hills, running from Aith along Sandsound Voe.

Description

5.45. The landscape in this visual compartment consists of extensive areas of **upland moorland** fringed by **crofting land** along the **sheltered voes**. Settlement is concentrated in the villages of Brae and Aith, becoming more scattered in association with coastal crofting land.

5.46. The **simple skylines** of the West Kame ridge provide a background to the lower lying parts of this landscape. There is a **strong association with the seascape** as views are directed along incised voes and towards coastal islands by extensive uplands. The southern most tip of this landscape forms part of the NSA.

Intervisibility

5.47. Elevated parts of this landscape allow a **high degree of intervisibility** with surrounding visual compartments. Lower lying areas are frequently screened in views from the surrounding landscape by localised topography and the ridgeline extending from West Kame.

Conclusions

<table>
<tr><td colspan="2">Overall Sensitivity: Moderate/ Low</td></tr>
<tr><td colspan="2">The large scale, simple landform and relative absence of development within this landscape lend an overall moderate sensitivity.</td></tr>
<tr><td>Indicative Landscape Capacity

This visual compartment is likely to have landscape capacity for several small or one medium-large wind farm. Because of its elevation, development in this landscape will potentially be widely visible from adjacent visual compartments and from areas of higher landscape sensitivity within the compartment.</td><td>Potentially Suitable Development Typology – see Section 2.13

The extensive scale and simple landform of parts of this landscape may be suitable for development of Typologies A, B or C.</td></tr>
<tr><td colspan="2">Landscape Guidance

Wind farm development could be accommodated within this large scale, open landscape. The location of wind farm development in this area should avoid immediate proximity to settlement and should optimise screening opportunities within the landscape, to prevent potential effects on the adjacent NSA. Sensitive siting of turbines away from ridge summits, and the edges of upland areas will be required, and consideration should be given to the composition of views from public viewpoints. Areas to the south and those with close intervisibility with the NSA are unlikely to be able to accommodate development. Any development needs to be carefully assessed in terms of cumulative effects with development in nearby visual compartments, by examining the extent of the effects upon the Northern Mainland as a whole, including focussing upon examining intervisibility between these upland areas.

Relevant landscape guidance notes: 2, 3, 6, 8, 9, 10, 11, 12, 14 and 15.</td></tr>
</table>

K. LUNNASTING, NORTH NESTING, WHALSAY AND OUT SKERRIES

Location and Extent

5.48. This visual compartment extends from Dalescord Hill to North Nesting, and out towards the islands of Whalsay and Out Skerries.

Description

5.49. The landscape consists of extensive areas of **upland moorland**, incised **voes and inland valleys**, fringed by coastal **crofting land** and **undulating moorland with rocky outcrops**. Settlements are scattered throughout the crofting land and are locally concentrated in the sheltered valley at Voe and the settlements of Laxo and Vidlin.

5.50. The **simple skylines** of the upland moorlands provide a background to the lower lying parts of this landscape. There is a **strong association with the seascape** as views are directed along deeply incised voes and towards coastal features and islands by extensive uplands. This landscape will be frequently observed from **ferries** to and from Whalsay, Out Skerries and Yell.

Intervisibility

5.51. Elevated parts of this landscape allow a high degree of intervisibility with surrounding visual compartments. Lower lying areas are frequently screened in views from western parts of the Central Mainland by localised topography and the ridgeline extending from East Kame. Frequent views of this landscape can be obtained from ships and ferries.

Conclusions

<table>
<tr><td colspan="2">Overall Sensitivity: Moderate</td></tr>
<tr><td colspan="2">This is an expansive landscape with a simple landform and scattered settlement associated with sheltered voes. Coastal areas of small scale settlement and crofting land provide areas of higher sensitivity. Large scale areas of upland moorland are of lower sensitivity, lending an overall moderate sensitivity.</td></tr>
<tr><td>Indicative Landscape Capacity
This visual compartment is likely to have capacity to accommodate several small wind farms or one medium-large wind farm in upland areas of lower sensitivity. Development in this landscape will potentially be widely visible from adjacent visual compartments.</td><td>Potentially Suitable Development Typology – see Section 2.13
Localised areas of upland landscape could potentially accommodate development of Typologies A, B or C.</td></tr>
<tr><td colspan="2">Landscape Guidance
Wind farm development could be accommodated within large scale areas of lower sensitivity. The location of wind farm development within this landscape should avoid immediate proximity to settlements and sensitive coastal landscapes, focusing on areas of lower sensitivity in association with main road corridors. Sensitive siting of turbines away from ridge summits will be required. Consideration should be given to the composition of views from key viewpoints, including views along Dales Voe, and potential effects on the context of the designed landscape of Lunna House. Proposed developments need to be carefully examined for cumulative effects with development in nearby visual compartments, in order to understand the effects upon the Northern Mainland as a whole.

Relevant landscape guidance notes: 1, 2, 3, 6, 9, 11, 12 and 15.</td></tr>
</table>

L. WEST MAINLAND

Location and Extent

5.52. The visual compartment comprises the southern half of the West Mainland, largely bound to the north by the A971.

Description

5.53. This landscape consists of a mixture of **uplands**, elevated **undulating moorland**, extensive areas of lowland and coastal **crofting** along sheltered voes, bounded by a **rocky coastal edge**. Settlement is scattered throughout the crofting land and locally concentrated at Walls and Easter Skeld.

5.54. Views within the interior of this compartment are fairly contained and frequently lack focus. However, coastal locations allow panoramic views of **coastal features and islands**. The south eastern parts of this compartment are designated for their **scenic value** and are part of the Shetland Islands NSA. Localised areas are of historic interest.

Intervisibility

5.55. Areas of high ground and coastal fringe have a higher level of visibility with adjacent landscapes than undulating areas of lowland crofting and rounded moorland.

Conclusions

<table>
<tr><td colspan="2">Overall Sensitivity: Moderate/ High</td></tr>
<tr><td colspan="2">The landscape is of a large scale, with a simple landform with areas of high ground providing localised enclosure. Coastal areas of small scale settlement and crofting land provide areas of higher sensitivity, some of which are designated as an NSA. Large scale areas of moorland and lowland crofting landscape associated with higher ground are of lower sensitivity, lending an overall moderate/ high sensitivity.</td></tr>
<tr><td>Indicative Landscape Capacity
This visual compartment is likely to have landscape capacity for a single small wind farm. However, siting should consider potential cumulative effects with development in visual compartments to the east.</td><td>Potentially Suitable Development Typology – see Section 2.13
This is a large scale, undeveloped landscape, however the presence of scattered crofting settlements provides a reference scale. Therefore developments of a wind farm of Typology A would be most appropriate in this landscape.</td></tr>
<tr><td colspan="2">Landscape Guidance
Wind farm development could be accommodated within localised parts of this landscape, however careful consideration should be given to potential effects on the NSA and sensitive coastal landscapes. Wind farm developments should be sited away from the more sensitive coastal edge, towards areas of lower sensitivity within the interior of this compartment, focusing on the A971 corridor. The undulating topography in these areas should be considered in order to use it to contain views and limit visual effects on sensitive receptors and areas of scenic importance. More detailed siting guidance can be found in the assessment of landscape character areas (Section 4). Areas to the south east and those with close intervisibility with the NSA are unlikely to be able to accommodate development.
Relevant landscape guidance notes: 3, 5, 8, 9, 10, 11, and 14.</td></tr>
</table>

M. MID KAME AND WHITENESS

Location and Extent

5.56. This compartment comprises a series of north to south orientated ridgelines (the Kames) and valleys between them, which extend north from the tip of Whiteness to the settlement of Voe.

Description

5.57. The landscape in this visual compartment contains the **distinct linear valleys** of Pettadale, the Valley of Kergord and Weisdale, separated by the low **linear upland ridges** of Mid Kame (160m AOD) and Hill of Moustoft (176m AOD) which extends out into the **fjord-like landscape** of Whiteness. Settlement is scattered along the valleys in association with **farming** and **crofting land**.

5.58. Views in this landscape, as well as the main roads (A970 and B9075), extend along the sheltered valleys and along Weisdale Voe and Loch of Strom. The distinct landscape of low upland ridges and incised voes in south western parts of this landscape is designated for its **scenic value** and forms part of the Shetland Islands NSA.

Intervisibility

5.59. Intervisibility with other landscapes (particularly N, K and J) is locally limited by the ridges of East and West Kame, and within the area itself by Mid Kame. Long distance views of adjacent visual compartments can be obtained from along the valleys and include frequent views from the main road (A970).

Conclusions

Overall Sensitivity: Moderate/ High	
The distinct linear landform of the Kames and valleys, the enclosed nature of the valleys themselves, the simple land cover and dispersed settlement pattern lend an overall moderate/ high sensitivity to this landscape.	
Indicative Landscape Capacity This visual compartment is likely to have landscape capacity for **a single small wind farm**. Any development should be of suitable scale and should be designed to fit with the linear character of the Kames. Due to its elevation, development in this landscape will potentially be widely visible from adjacent visual compartments.	***Potentially Suitable Development Typology – see Section 2.13*** The visual compartment could potentially accommodate development of **Typology A**. Careful consideration is required with regard to turbine sizes to prevent any apparent dwarfing of the low upland ridges through diminishing the perceived scale of distinctive landscape features.
Landscape Guidance Wind farm development could be accommodated within this landscape, however the distinct low linear upland ridge landform and prominent visibility along key routes requires careful consideration of turbine siting and scale. The location of wind farm developments within this landscape should avoid immediate proximity to settlement and turbines should be set back from steep valley sides. The topography of the Mid Kame ridge may be able to accommodate a carefully composed linear development of appropriate sized turbines. Effects on the composition of views, seen focussed along valleys towards the sea should be taken on board. Any development needs to be designed so that it fits with the scale of the landscape, the distinctive land forms within it, and the shape of the landform, to prevent effects such as the landscape being visually 'flattened', or the way the distinctive linear form of the ridges reads in the landscape being altered. Areas to the south west and those with close intervisibility with the NSA are unlikely to be able to accommodate development. Proposed development in this area needs to be carefully assessed by examining potential cumulative effects with development in adjacent visual compartments, and by examining the extent of the effects upon the Northern Mainland as a whole. Development within adjacent visual compartments with which there would be intervisibility would need to reflect the linear design of development on Mid Kame. Intervisibility with development with a different design response to the landscape (e.g. a group, cluster) would not be appropriate. Development giving rise to incompatible cumulative effects may compromise the scenic quality of this area. ***Relevant landscape guidance notes: 1, 2, 3, 4, 6, 8, 9, 10, 11, 12 and 15.***	

N. CENTRAL MAINLAND – EAST

Location and Extent

5.60. This visual compartment extends from South Nesting to Dales Voe, bound inland by a number of ridges and hills, and includes northern parts of Bressay and Noss.

Description

5.61. The landscape consists of large scale **upland ridges**, rounded moorland and areas of **coastal crofting** and **farming land** fringing a number of **sheltered voes**. Settlement is scattered throughout crofting landscapes and locally concentrated at Gott and Veensgarth.

5.62. Views within this landscape are directed along the incised voes of Wadbister Voe, Laxfirth and Dales Voe to which the uplands provide a backdrop. This landscape will also be observed from approaching ships and ferries. This is a considerably **developed landscape** with frequent **infrastructure**, settlement and **man-made features**.

Intervisibility

5.63. Intervisibility with adjacent visual compartments is locally limited by a series of north east to south west orientated ridges. Frequent views of this landscape can be obtained from ships and ferries.

Conclusions

<table>
<tr><td colspan="2">Overall Sensitivity: Moderate</td></tr>
<tr><td colspan="2">This is an expansive landscape, with a comprehensive pattern of upland moorland interspersed with settled farming and crofting land. The developed character and frequent presence of settlement lends an overall moderate sensitivity.</td></tr>
<tr><td>Indicative Landscape Capacity
This visual compartment is likely to have capacity to accommodate several small wind farms or one medium wind farm. Due to its elevation, development in this landscape will potentially be widely visible from adjacent visual compartments.</td><td>Potentially Suitable Development Typology – see Section 2.13
The scale and simple landform of localised areas of higher ground may be suitable for development comprising Typologies A or B.</td></tr>
<tr><td colspan="2">Landscape Guidance
The expansive character and developed nature of this landscape are considered suitable characteristics for accommodating wind farm development. The screening properties of a number of ridges suggest that wind farm developments may be accommodated without causing detrimental effects to the adjacent NSA, if sensitively sited and laid out. Wind farm developments should be sited away from the more sensitive coastal edge and set back on higher ground or in association with existing areas of development (i.e. roads and quarries). There may be scope for synergy between new developments and the existing wind farm at Burradale, if considered carefully in views. Care should be taken to avoid the direct juxtaposition of large scale turbines and small scale landscape features and scattered settlements at the coastal edge. Proposed development in this area needs to be carefully assessed in terms of potential cumulative effects with development in adjacent visual compartments, by examining the effects upon the Northern Mainland as a whole. More detailed siting guidance can be found in the assessment of LCAs (Section 4).
Relevant landscape guidance notes: 1, 2, 3, 6, 8, 9, 11, 12, 13 and 15.</td></tr>
</table>

O. SOUTH MAINLAND – WEST

Location and Extent

5.64. This compartment extends from Scalloway and the islands of Trondra, East and West Burra, along the South Mainland spine to the rocky cliffs at Fitful Head.

Description

5.65. The landscape in this visual compartment consists of large scale areas of **upland ridge**, numerous small **islands**, rocky **cliffs** and **coastal features**. Settlement in this landscape is dispersed along the coastal edge and on the islands of East and West Burra, becoming more scattered in areas of farmland around Loch of Spiggie.

5.66. The distinct combination of coastal features, cliffs and islands is of great **scenic value** and forms part of the Shetland Islands NSA. **Cultural heritage** features attract frequent visitors to this landscape.

Intervisibility

5.67. This is a highly visible landscape which can be seen from adjoining coastal landscapes to the north and north west. The rugged Clift Hills and island group of Trondra, East and West Burra form a recognisable feature when seen from the surrounding area. The elevated landform of the South Mainland spine limits intervisibility and directs views from this landscape to the west and north west.

Conclusions

Overall Sensitivity: Higher	**Landscape Guidance**
The complex, distinctive landform and presence of historic and natural features lend an overall higher sensitivity.	Wind farm development within this compartment would compromise the scenic value of this area and the NSA. The landscape is therefore considered unsuitable for commercial wind farm developments, as such development would significantly alter the landscape character.

P. SOUTH MAINLAND - EAST AND SOUTH BRESSAY

Location and Extent

5.68. Extending along the South Mainland spine, this visual compartment stretches from Lerwick to Sumburgh Head and includes parts of Bressay and Noss.

Description

5.69. This landscape in this compartment comprises extensive areas of **crofting and farming land**, interspersed by small areas of **coastal moorland**, backed by an upland ridge. This is a considerably **developed landscape** with frequent **infrastructure**, concentrated settlements and **man-made features**.

5.70. The South Mainland spine directs views from this landscape towards the serrated coastal edge and immediate seascape, and includes **panoramic views** from frequent settlements and **visitor attractions**. The landscape is rich in historic features.

Intervisibility

5.71. The elevated landform of the South Mainland spine limits intervisibility with adjacent visual compartments and directs views towards the coastal edge and the sea. Frequent views of this landscape can be obtained from ships and ferries.

Conclusions

<table>
<tr><td colspan="2">Overall Sensitivity: Moderate/ Low</td></tr>
<tr><td colspan="2">This is an expansive landscape, with a simple landform comprising moorland and farming land. The developed character and frequent presence of settlement lends an overall moderate/ low sensitivity.</td></tr>
<tr><td>Indicative Landscape Capacity
This visual compartment is likely to have capacity to accommodate several medium wind farms or one medium-large wind farm.</td><td>Potentially Suitable Development Typology – see Section 2.13
The scale and simple landform of localised areas of higher ground may be suitable for development of Typologies A, B, or C.</td></tr>
<tr><td colspan="2">Landscape Guidance
The expansive, simple character and developed nature of this landscape are considered suitable characteristics for accommodating wind farm development. The potential topographical screening properties of the South Mainland Spine suggest that wind farm development may be developed without causing detrimental effects to the adjacent NSA, if sensitively sited. Consideration should be given to the positioning of wind farm development in respect to the adjacent NSA. Wind turbines should be set back from ridgelines of the South Mainland Spine, focusing on the A970 corridor. Consideration should be given to the composition of views from key viewpoints, including views from coastal settlements, main road corridors, historic features and visitor destinations, and potential effects on the context of the designed landscape of Gardie House.

Relevant landscape guidance notes: 1, 2, 3, 7, 8, 10, 11, 12, 13 and 15.</td></tr>
</table>

Q. FOULA

Location and Extent

5.72. The island of Foula is situated approximately 29km west of Walls on the West Mainland.

Description

5.73. The landscape in this visual compartment comprises relatively small areas of **upland landscape** and **coastal crofting lands**, bounded by rocky coastal edge.

5.74. The largely undisturbed island is of great **scenic value** and forms part of the Shetland Islands NSA. Natural heritage designations safeguard the island as a haven for wildlife.

Intervisibility

5.75. The elevated nature of the landscape allows a high level of intervisibility with the surrounding seascape. The varied topography around The Sneug and Noup limits visibility across the island from north to south.

Conclusions

Overall Sensitivity: Higher	**Landscape Guidance**
The dramatic character of this small island, scenic quality and sensitive nature of the islands coastal edge and crofting land lend an overall higher sensitivity.	Wind farm development within this small scale but dramatic landscape would compromise the scenic value of the island and the NSA. The landscape is therefore considered unsuitable for commercial wind farm development, as such development would significantly alter the landscape character.

R. FAIR ISLE

Location and Extent

5.76. The remote island of Fair Isle is situated approximately 39km south west of Sumburgh Head.

Description

5.77. This visual compartment comprises relatively small areas of **upland landscape** and **traditional crofting land**, bounded by **rocky coastal edge**.

5.78. Fair Isle is a haven for wildlife and the largely undisturbed island forms part of the Shetland Islands NSA, recognising its outstanding **scenic value**.

Intervisibility

5.79. The island is fairly flat and rises to the north west, allowing a high level of intervisibility with the surrounding seascape.

Conclusions

Overall Sensitivity: Higher	**Landscape Guidance**
The dramatic character of this small island, scenic quality and sensitive nature of the coastal edge and crofting land lend an overall higher sensitivity.	Wind farm development within this small scale, yet dramatic landscape would compromise the scenic value of the island and the NSA. The landscape is therefore considered unsuitable for commercial wind farm development, as such development would significantly alter the landscape character.

Table 5.3 Summary of Overall Sensitivity and Indicative Landscape Capacity

	Name of Visual Compartment	Overall Sensitivity	Indicative Landscape Capacity of Compartment	Suitable Typologies (Section 2.13)
A	East Unst and North Fetlar	Moderate/ High	Single small wind farm	**A**
B	Bluemull Sound/ West Unst	Moderate/ High	Single small wind farm	**A**
C	Mid and North Yell	Moderate	Several small wind farms or one medium-large wind farm	**A - B - C**
D	Colgrave Sound	Moderate	Several small wind farms or one medium wind farm	**A - B**
E	Yell Sound and South Yell	Moderate	Several small wind farms or one medium-large wind farm	**A - B - C**
F	North Roe/ Yell Sound	Higher	Unsuitable for commercial development	-
G	North Roe and Ronas Voe	Higher	Unsuitable for commercial development	-
H	Sullom Voe	Moderate	Several small wind farms or one medium-large wind farm	**A - B - C**
I	St Magnus Bay	Moderate/ High	Unsuitable for commercial development	-
J	West Kame	Moderate/ Low	Several small wind farms or one medium-large wind farm	**A - B - C**
K	Lunnasting, North Nesting, Whalsay and Out Skerries	Moderate	Several small or one medium-large wind farm	**A - B - C**
L	West Mainland	Moderate/ High	Single small wind farm	**A**
M	Mid Kame and Whiteness	Moderate/ High	Single small wind farm	**A**
N	Central Mainland – East	Moderate	Several small wind farms or one medium wind farm	**A - B**
O	South Mainland – West	Higher	Unsuitable for commercial development	-
P	South Mainland – East and South Bressay	Moderate/ Low	Several medium wind farms or one medium-large wind farm	**A - B - C**
Q	Foula	Higher	Unsuitable for commercial development	-
R	Fair Isle	Higher	Unsuitable for commercial development	-

6. LANDSCAPE LOCATIONAL AND DESIGN GUIDELINES

Introduction

6.1. This chapter sets out recommended planning and design guidelines for the consideration of wind farm development proposals. Additional landscape and visual guidance for developers can be found in the following publications:

- Scottish Natural Heritage (September 2008) *Designing Wind Farms in the Landscape – Consultation Draft* (due to be finalised in 2009);
- Scottish Natural Heritage (2001) *Guidelines on the Environmental Impacts of Wind Farms and Small Scale Hydro-electric Schemes*;
- Scottish Natural Heritage (2005) *Cumulative Effect of Wind Farms.* Appendix 5 – Guidance on Cumulative Landscape and Visual Impact Assessments for Wind Farm Developments;
- Gillespies (1998) *A Landscape Assessment of The Shetland Isles.* Scottish Natural Heritage Review No 93.

Key Principles that Should Guide Consideration of Landscape Issues in Wind Farm Site Selection, Scheme Design and the Development of Ancillary Infrastructure

6.2. The size and modern appearance of wind turbines means that all wind farm developments will result in some degree of landscape and visual effects. It is, however, possible to minimise the scale of these effects by careful consideration of:

- The sensitivity of existing landscapes, and their ability to accommodate appropriately sited and designed wind farm development without significantly altering their landscape character;
- Patterns of intervisibility and key views and viewpoints;
- The design of wind farm developments so that they respond to the nature of the landscape and are carefully composed in key views. Design principles include:
    - Avoidance of groups of overlapping turbines which can lead to visual confusion, and an inconsistent turbine density in the landscape;
    - Avoidance of the incidence of outlying turbines, which appear remote from the rest of the group, or which are separated from the main development area;
    - Avoidance of significant or discordant irregularity in turbine positioning, both horizontally and vertically, so that turbine spacings appear balanced;

- Where larger groups of turbines are proposed, aim to achieve a relatively compact clustered development, to limit the extent of effects upon the wider landscape and views, provide a clear and coherent image, and give the appearance of development which is composed and designed, rather than scattered through the landscape;

- Ensure compatibility of design and balance between intervisible wind farm developments or between different groups or clusters of turbines which make up a larger development, thereby reducing cumulative effects.

6.3. Further guidance upon design is provided in Scottish Natural Heritage (September 2008) *Designing Wind Farms in the Landscape – Consultation Draft* (due to be finalised in 2009), and in Scottish Natural Heritage (2001) *Guidelines on the Environmental Impacts of Wind Farms and Small Scale Hydro-electric Schemes.*

6.4. The following paragraphs explore some of the key principles that should guide such consideration. This landscape guidance is meant as a starting point for detailed Landscape and Visual Impact Assessment work during scheme development. Each scheme is different, and the relative importance of factors and principles described in this section will vary considerably. It is important that the development of wind farm proposals is undertaken with the advice of experienced landscape designers and landscape planners. It should include GIS based intervisibility analysis to identify those areas from which a scheme would be visible, and the development of wireframes and photomontages to consider how the wind farm development would appear from specific locations. An understanding of landscape character, and issues of visibility, should inform an iterative process of site selection, scheme layout and design, and the development of appropriate mitigation.

Existing Landscapes

6.5. The focus should be on those landscapes more easily able to accommodate wind farm development, and to use an understanding of landscape character, topography and grain to influence the layout of the scheme, tying it into its context. The following principles will help ensure that landscape character is reflected fully in the process:

- Avoid locating wind farm developments in the most sensitive landscapes. In these locations it is most likely that a wind farm development would adversely affect key landscape characteristics.

- Avoid locating wind farm developments in places where there is likely to be an effect on nearby sensitive landscapes with which there is intervisibility. The scale of modern wind farm developments means they can quite easily affect the character of adjoining landscapes.

- Use patterns of landform and landscape character to inform the broad layout and shape of the wind farm development, following the flow and direction of the landscape, wrapping around hills rather than blanketing slopes and summits. Reflecting prominent ridgelines in a linear layout may work in landscapes where topography is distinctive. While this will not 'hide' the wind farm, it means that the observer may be better able to 'read' the development in the landscape. The

consideration of the scale of turbines in relation to the scale of the landform is important to prevent apparent 'flattening' of the landscape.

- Use the finer grain of the landscape to inform the detailed layout of the wind farm development, for example taking cues from the underlying topography, the alignment of built infrastructure (e.g. roads), enclosures and field patterns. Again, this kind of alignment may help tie the development into the landscape, and reduce the potential for creating conflicting, discordant or confusing patterns.

- Wherever possible, locate the wind farm development within a single visual compartment, or within a grouping of closely related landscape character areas. This will help facilitate a consistent relationship between the layout of the wind farm and key characteristics and features, and help prevent 'spill' of effects into adjacent visual compartments.

- Be aware of potential cumulative effects when designing wind farm developments, or when designing distinct groups of turbines within a larger wind farm. Designs should be compatible where they are intervisible, or can be seen together from the same viewpoint, and should have an appropriate and related design response to the landform.

6.6. **Section 4** of this report provides a detailed analysis of landscape sensitivity in the Shetland Islands. The analysis describes key characteristics of each LCA, highlighting those that could be affected by wind farm development. **Section 5** identifies a number of visual compartments. It explores the visual relationship between compartments and comments on their overall sensitivity. Based on the underlying sensitivity of LCAs, **Section 5** sets out indicative landscape capacities and locational landscape guidance for parts of the Shetland Islands, judged to be of moderate/high or lower sensitivity to wind farm development. This provides a starting point for the consideration of landscape issues in relation to specific wind farm development proposals, which should then be examined in more detail as part of the landscape and visual impact assessment process.

Visibility

6.7. Unless the development is specifically designed to be seen as a strong or sculptural feature in the landscape, it will normally make sense to select locations which minimise the area from which a proposed wind farm development would be visible. However, it is also important to consider the relative sensitivity of different viewpoints or receptors, and to use such an understanding to influence the layout and design of the scheme.

- All other things being equal, the aim should be to minimise the area from which a wind farm development would be visible. This can be achieved, for example, by setting wind farm developments, and the turbines themselves back from the steep sides of ridges or valley sides, or placing them where ridgelines or concave areas of plateaux will provide a degree of screening. Tools such as 'bare ground analysis' can be useful to identify areas of low visibility.

- The analysis of views of a wind farm development from key locations including viewpoints, settlements and transport corridors should play a key role in

influencing the design and layout of the development. The design process should explore the implications of different layouts, turbine numbers and turbine sizes and seek to create a good composition in the landscape from key static viewpoints. Issues to consider include:

- Try to avoid conflict with other important landscape elements such as distinctive landforms, monuments or other landmarks within key views;
- Aim to ensure that the wind farm development is visible as a contiguous element within key views, rather than being broken into separate, or seemingly unrelated sections, which could lead to an impression of there being multiple wind farm developments (and give rise to an impression of cumulative effects);
- Aim to achieve 'balance' within key views, for example avoiding views made up of a larger number of turbines on one side of hill, and a smaller number on the other; where turbines in one part of the view are spread out, but concentrated in another; or where turbines create a linear form in one part of a view, and a clustered or grouped form in another;
- Consider how wind farm developments will appear from different locations – for example will they be silhouetted against the sky or backdropped against a hillside? Will the turbines be sunlit and more prominent at key times of day?

6.8. A selection of potential key viewpoints and visitor attractions for consideration is presented in **Figure1**.

6.9. The visual analysis should also consider all other elements of the wind farm development, including crane hard standings, access tracks, drainage ditches, electricity substations, cable trenches and anemometry masts. In the case of access tracks there is likely to be a need to balance the objective of minimising their length with the importance of fitting them to the natural topography and minimising the need for cuttings and embankments.

6.10. The landscape and visual aspects of wind farm development are closely related. Considering these two aspects together will, for example, help ensure that the sensitivity of those landscapes from which the scheme would be visible is taken into account. It will also help inform the decision whether to have a smaller number of larger, higher output turbines, or a larger number of smaller turbines, with blades which may rotate faster.

The Role of LVIA as a Tool in Understanding and Reducing Potential Landscape and Visual Effects

6.11. Landscape and Visual Impact Assessment (LVIA) forms part of the wider Environmental Impact Assessment process and, as the title suggests, is designed to identify and evaluate the effects of a proposal on landscape features, character and visual amenity. LVIA should include the proposed wind farm development in conjunction with existing sites and sites under construction, and every effort should be taken to use the assessment process to help inform the development of an

appropriate wind farm design and effective mitigation measures, throughout the whole process.

6.12. Key steps in LVIA are as follows:

- The collection and analysis of baseline information relating to:
    - Landscape and related policies;
    - The existing landscape of the site and its context, including designated landscapes;
    - The existing visual relationship between the site and the surrounding area;
    - Any existing and other proposed wind farm developments in the surrounding landscape.
- The identification of potential effects of the wind farm development on the landscape and views of the site and the surrounding areas.
- Consideration of the nature and sensitivity of those areas from which a wind farm development would be visible. Sensitive receptors and locations, including key viewpoints, heritage sites and recreation areas should be considered in terms of the likely effects of a wind farm development.
- The evaluation of the significance of these potential effects. This is based on an analysis of the magnitude of change and the sensitivity of the landscape or visual receptor in question.
- The identification of potential mitigation measures to reduce these effects.
- The identification of residual effects that will remain once mitigation measures have been implemented.

6.13. The LVIA process can make use of a range of tools including:

- Computer generated maps showing 'zones of theoretical visibility' (ZTVs) from within which a wind farm development is likely to be visible. These maps use digital contour information to calculate areas from which turbines of particular heights will be visible. They are usually based on 'bare ground topography' and do not, therefore, show the screening provided by localised landform, trees or buildings.
- Wireframe drawings representing the view from key viewpoints, receptors transport corridors or settlements. These provide a simple representation of how the wind farm development would be seen from the location in question.
- Photomontages, which are more realistic representations of the wind farm development in a given view.

6.14. LVIA should be used as iterative process throughout the processes of selecting suitable sites, developing and refining the scheme design and mitigation measures. Key inputs include:

- Identifying broad locations that are likely to be suitable for wind farm development, based on an analysis of the sensitivity of different landscape character types or areas and the influence of existing wind farm developments, or those under construction / with planning consent (see below).
- Carrying out detailed analysis of potential sites based on more detailed landscape character analysis, site survey and computer based ZTV analysis to identify a preferred site.
- Carrying out detailed analysis of the preferred site and key views to inform scheme layout and design, including the size and location of turbines, access tracks and all other associated infrastructure. The aim is to maximise landscape fit and minimise visual effects on sensitive receptors.
- Developing mitigation measures and land management proposals to seek to reduce effects, and identifying residual landscape and visual effects.

6.15. The LVIA will be reported in the Environmental Statement submitted alongside the planning application. This should provide the planning authority, its consultees and the wider community with a clear and accurate description of the landscape and visual implications of the wind farm proposal. It should also provide an account of the design development and how mitigation measures have been taken on board to reduce effects (e.g. through design). It should provide an account of how the proposed wind farm development fits with relevant policy and appropriate landscape design guidance.

Outline of Issues Relating to Cumulative Assessment

6.16. Cumulative effects occur due to the combined effects of a number of different wind farm developments. As each new proposal comes forwards, developers are required to assess the additional effects of adding their proposed wind farm development to the overall pattern of existing and proposed development. Cumulative effects on the landscape occur when a number of wind farm developments, and the relationship between them, begins to influence the overall character and perception of a particular landscape. Cumulative visual effects occur where the observer is aware of more than one wind farm, within a single view (combined effects), in different views from the same location (successive effects) or when seen sequentially when moving through a landscape.

6.17. The issue of cumulative effects can be complex. Firstly, there may be circumstances when a planning authority is willing to accept cumulative landscape and visual effects where, for example, this means that other, more sensitive areas can be protected from development. Secondly, depending on the number of wind farm developments and their status (existing or under construction, consented, the subject of a valid planning application or subject to a scoping report), there can be many permutations to consider. The size of Shetland is such that the whole of the area could be affected by a very small number of proposals.

6.18. Cumulative assessments are normally carried out in stages:

- firstly considering the application site in conjunction with existing sites and those under construction;
- secondly by considering sites that have planning consent; and
- finally by considering sites that are the subject of a valid but as yet undetermined planning application. This last category will be more speculative than the others.

6.19. The assessment can also include sites where wind farm proposals have been subject of scoping reports, although these will usually be far less well developed.

6.20. The process is normally informed by combining different wind farm development ZTVs to identify those locations from where more than one development would be visible. Further wire frame analysis and the preparation of photomontages may be required to examine the cumulative visual effects.

6.21. Factors to consider in interpreting the results of the cumulative visual assessment include:

- the arrangement, balance, and composition of wind farm developments in the view, e.g. in one direction or part of the view, or seen in all directions;
- the relationship and compatibility of design and scale of wind farm developments (or several distinct groups of turbines within an overall larger wind farm development), including the number, size and design of turbines;
- the relationship and compatibility between the layout of different wind farm developments, e.g. where one wind farm development may be a group or a line of turbines, and another may be a laid out on a grid, and the way aspect can influence how turbines are lit or silhouetted in the landscape;
- the position of the wind farm developments in the view, e.g. on the skyline, or against the backdrop of land;
- the sense of distance between the wind farm developments and the distance between the viewer and different wind farm developments;
- the extent to which different wind farm developments appear to merge to create the impression of much larger developments, further raising issues of size and the compatibility of different layouts and designs;
- the relative prominence of the wind farm developments within key views, taking into account the composition of the view and the nature of foregrounds and any backdrops;
- the extent to which there are cumulative effects with other vertical elements, for example prominent or skylined communications infrastructure.

6.22. Analysis should also explore the extent to which particular landscape character types or areas are affected directly (as the location of wind farm developments) or

indirectly (forming part of the ZTV), taking account of their relative sensitivity to wind farm development and the extent to which their key characteristics may be adversely affected by cumulative development.

APPENDIX I

FIGURES

APPENDIX 2

WIND FARM DEVELOPMENT CHARACTERISTICS AND TYPICAL EFFECTS ON THE LANDSCAPE AND VISUAL AMENITY

Introduction

1. The purpose of this section is to discuss the different types of wind turbines, and the associated development making up wind farms, which are currently in operation in the UK and to provide an understanding of the technology and typical effects on the landscape. It should be noted that *SPP 6* states that '*the design and location of any development must reflect the scale and character of the landscape*'. The information in this chapter is therefore intended to present a broad generic guide. The chapter does not consider the advantages or disadvantages of wind power in relation to other renewable energy sources and is concerned primarily with onshore wind farm developments, although inshore waters are considered as part of visual compartments. It is based on the typical turbine types currently operational within Scotland, although it is recognised that technologies are continually evolving.

Wind Turbine Characteristics

The principle characteristics of a wind turbine are discussed below:

2. **Vertical and Horizontal Axis:** There are two types of wind turbine: vertical axis machines with blades that rotate about a vertical axis, and horizontal axis machines with rotating shafts aligned horizontally. It is the latter type which currently prevails in landscapes across Britain and which is discussed in detail throughout this section. The movement of the blades and swivelling (or 'yawing') of the turbines, depending on wind direction, are unique features of wind farm developments, setting them apart from other stationary tall structures in the landscape, such as masts. The blades are attached at the hub, within which the power generating components may be located.

3. **Power Rating:** Wind turbines are usually categorised according to the diameter of their blades and their power in kilowatts or megawatts. Currently the largest new generation machines are rated at around 3.6MW, but it is acknowledged that this is changing rapidly.

4. **Turbine towers and generators:** Turbine towers may be solid or lattice in appearance. While it is possible to see through a lattice tower, they generally have a more complex appearance than solid towers. Solid towers are more typical. Generators may be located within the hub, within the tower, or in a box adjacent to the tower, at ground level.

5. **Height:** A typical onshore turbine being installed today has a height to tip of between 90m and 150m with a tower height in excess of 60m to 80m, and blades in excess of 30m to 45m in length.

6. **Arrangement - Single Turbines and Groups:** Turbines may be located singly, in small groups or large groups. The largest grouping of on-shore turbines

with planning permission in the UK[10] consists of 152 x 2.5MW turbines near Abington in South Lanarkshire.

7. **Colour:** The colour of the turbine tower can vary. White, grey and off-white are currently the most common colours in the UK (sometimes with a logo along the tower side), with a matt finish being preferable to reduce glint. Towers with a graded colour scheme are also in use.

8. **Turbine Spacing:** Turbines are arranged so that energy loss through wind shadowing is lessened. Wind turbines need to be positioned a minimum of 3 to 10 blade diameters apart. Consistent spacing in a group of turbines is recognised as being important to avoid visual confusion and allow turbines to appear as one cohesive group.

9. **Lifespan**: Turbines typically have a lifespan of 20 – 25 years and planning permission is generally for the current development, with a requirement for wind farms to be decommissioned, removed and sites reinstated once they have reached the end of their working life.

Associated Infrastructure

10. **Anemometry mast:** Often before a wind farm development is erected a temporary anemometry mast may be positioned on site to test wind speeds. A separate permanent anemometry mast, or for larger development, a series of masts, is left in place once the wind farm is operational.

11. **Substations:** Substations house transformers which are used to either step up or step down the voltage of power generated by turbines, to match the voltage in the grid they are being linked to. The nature of a substation for a wind farm development will vary according to the size and location of the development. Typically the cables from the turbines to the substation will be laid underground, although on occasions they can be overground or a combination of both. Substations tend to be located on the edge of a proposed development and on the side closest to where the grid connection will be. In large developments the substation tends to be housed within the control building. This development can make use of existing redundant buildings where available.

12. Other **supporting infrastructure** includes road access for wide loads, on site tracks for routine maintenance, overhead lines, underground electrical cabling and a control building, although this can also be located off site, for example in relation to existing built development. Drainage ditches, bridges and culverts may be required alongside tracks and at burn crossings. Signage and gates are frequently used to manage access.

13. Further associated infrastructure is required in relation to **construction** including a temporary construction compound, lay down areas, and crane hard standings. The size and depth of crane hardstandings will depend on the number and height of turbines and the site characteristics. The crane hardstandings (typically two are required per turbine) can be reinstated once the development is operational depending on their likely need for ongoing maintenance purposes, although in practice this does not always happen.

[10] Clyde Wind Farm was approved by Scottish Ministers in July 2008.

14. **Turbine foundations** are also required which are usually square or hexagonal in shape. The depth of foundation will be dependent on the foundation type and bedrock. The preparation of foundations will require the excavation of spoil which may be utilised on site or removed off site. The creation of spoil bunds can provide local low level screening but requires careful shaping, appropriate topsoiling (often with peat) and re-vegetating in order to fit in with the landscape.

15. **Quarries and borrow pits** are usually required on site or nearby to source rock and hardcore for foundations, crane hardstandings and tracks.

Generic Effects on the Landscape and Visual Amenity due to Wind Farm Development

16. Wind turbines are substantial vertical structures, which through their installation may cause direct effects on the landscape, as well as indirect effects on landscape character and visual amenity. The extent of the effects on the landscape and on views is dependent on the nature of individual landscapes, the size and number of turbines, as well as upon the location and design of all the ancillary infrastructure associated with wind farm developments.

17. The perception of wind farm developments by people depends on their experience, field of view, backgrounds and expectations, as well as weather conditions. Wind farm developments are often located on relatively high or exposed ground due to the need for a good wind resource. Open plateaux, moorlands or fields often also have appropriate wind resources. The following section discusses the generic effects that wind farm developments can have on the landscape. The information is drawn from a variety of sources, noted in the references at the end of this section.

Generic Landscape Effects of Wind Farm Developments

- Direct effects on the landscape, including **loss or disturbance of landscape and surface vegetation**, may occur in relation to the construction of turbines and associated infrastructure, and requirements for tracks, cabling or overhead lines. Natural habitats may be particularly affected by changes to the underlying hydrology. Erosion caused by removal of surface vegetation and peat, and deposition of spoil or bunding can also have an adverse effect.

- Indirect effects may result in a **change in the landscape character** or the introduction of **new characteristics**. The sensitivity of the landscape and its capacity to accommodate change as a result of the introduction of wind farm development will largely determine the significance of such effects.

Generic Visual Effects of Wind Farm Development

- As tall, vertical and moving structures wind turbines are likely to be a **highly prominent feature in views,** especially as they are difficult to conceal. However, the extent to which a turbine will appear in a view will depend on the character of the landform and land cover. Research carried out by the University of Newcastle in their *Visual Assessment of Windfarms Best Practice* (2002) and Scottish Natural Heritage in *Visual Representation of Windfarms Good Practice Guidance* (2006) suggests that, assuming absolute clarity of view,

the outer limit of human visibility in clear conditions of a pole of 5m in diameter will be in the order of 50km; that blade movement could be detected from up to 15km away in clear conditions; but that a casual observer may find blade movement unnoticeable beyond 10km away.

- Wind farm developments are unique, in relation to other tall structures, in that they introduce **a source of movement into the landscape**. The rotating blades, sometimes moving at different speeds catch the eye, drawing attention to the development and increasing turbine visibility. As well as drawing attention, movement of the blades can have a particular effect on landscapes that are otherwise perceived as still. Associated with this is the noise created by air movement, which can affect the perception of a landscape within close proximity to the development.

- Depending on the **colour of the turbine tower and landscape background**, a turbine may be more or less visible. A metallic finish to the turbine tower may reflect light and heighten visibility. Visibility is affected by the backdrop (i.e. against sky or against the landscape) and by the lighting that falls upon the turbines through their relationship with the sun. Lights are usually only required on structures that are over 150m high. However, **lighting**, which may be flashing, may be needed for security purposes or in relation to military or local aviation requirements. Light pollution of 'dark skies' therefore could be an issue. Lighting is typically needed for offshore developments.

- Lights are usually only required on structures that are over 150m high. However, **lighting**, which may be flashing, may be needed for security purposes or in relation to military or local aviation requirements. Light pollution of 'dark skies' therefore could be an issue. Lighting is typically needed for off-shore developments.

- Wind farm developments may **conflict with the perceptions of 'wildland'**, remoteness or tranquillity. Turbines can introduce visual intrusion (of a perceived industrial character) and movement within 'natural' environments valued for their qualities of remoteness, solitude and 'stillness'.

- Development can affect the **landscape setting** to features of cultural heritage importance, by changing the landscape within which the monument is located.

Generic Effects on the Landscape due to Accompanying Infrastructure & Ancillary Development

18. As noted, wind farm developments typically require a range of ancillary structures. It is difficult to generalise about the effects of these aspects of the development and it is advisable to consider them on a case-by-case basis. Some broad generic effects are indicated below:

- Direct effects on the landscape may occur as a result of cut slopes, tracks and drainage ditches, which can give rise to erosion and leave scars in the

landscape. It can be difficult to achieve restoration of vegetation on slopes which are cut into peat.

- Access tracks can give rise to significant visual effects and may disrupt the appearance of a landscape, particularly one in which the character is essentially perceived as a remote or wild, such as expanses of moorland or where land cover is uniform and consistent, or where cut or fill is required to achieve desired gradients.

- Visual effects may result from introducing further features into the landscape. Associated grid connection infrastructure, such as poles and overhead lines, may have a disjointing affect. Underground cabling may result in direct effects on the landscape and may affect surface vegetation in some sensitive landscapes, notably those that are undisturbed with semi-natural vegetation cover, or where peat is present.

- Visual effects may occur as a result of the introduction of ancillary buildings (which may form solid structures separate to the turbines) and which can seem out of place in exposed areas and those areas where the absence of built features is a characteristic. Security requirements for ancillary structures, such as fencing and signage, may also have an effect on the landscape and visual amenity.

- Activity associated with long term operation of wind farm developments can add a level of increased disturbance in the landscape.

References/Further Reading

British Wind Energy Association (BWEA) Briefing Sheets http://www.bwea.com/energy/briefing-sheets.html;

Scottish Executive (revised 2002) Planning Advice Note 45 - Renewable Energy Technologies;

Scottish Natural Heritage (2001) Guidelines on the Environmental Impacts of Wind Farms and Small-scale Hydroelectric Schemes;

Scottish Natural Heritage (2008) Designing Wind Farms in the Landscape – Consultation Draft.

APPENDIX 3

SCOTTISH PLANNING POLICY 6 AND PLANNING ADVICE NOTE 45 ANNEX 2:

Extract from Scottish Executive (March 2007) *Scottish Planning Policy SPP6: Renewable Energy*

"The Scottish Ministers have set a target of generating 40% (since quantified as 6GW) - this was recently increased to 50% [11]- *of Scotland's electricity from renewable sources by 2020 and confirmed that this target should not be regarded as a cap. The importance of using clean and sustainable energy from renewable sources will continue to increase as a result of global imperatives to tackle climate change and the need to ensure secure and diverse energy supplies.*

SPP6 sets out how the planning system should manage the process of encouraging, approving and implementing renewable energy proposals when preparing development plans and determining planning applications. Planning authorities should use the development plan process to support and encourage the continued growth of all renewable technologies. In particular, plans should set out a spatial approach for considering wind farm proposals over 20 megawatts.

Spatial policies should not be used to restrict development on sites where the technology can operate efficiently and environmental and other impacts can be addressed. In all instances, development plans should provide clarity on the criteria that should be met to enable development to take place in a satisfactory manner. Plans should, however, use spatial policies to afford significant protection to areas designated for their national or international natural heritage value; green belts and those areas where further development would result in unacceptable cumulative impacts.

Wind Farms

During the lifetime of SPP6, onshore wind power is likely to make the most substantial contribution towards meeting renewable targets. Scotland has considerable potential to accommodate this technology in the landscape although, increasingly, careful consideration must be given to the need to address cumulative impacts. Development plans should set out a spatial framework, supported by broad criteria, for the consideration of wind farm proposals over 20 megawatts.

… applications should be assessed in relation to criteria based policies to provide clarity on the issues that must be addressed to enable development to take place. This criteria will vary depending on the scale of development and its relationship to the characteristics of the surrounding area but are likely to include impacts on landscapes and the historic environment; ecology (including birds), biodiversity and nature conservation; the water environment, communities; aviation; telecommunications; noise; shadow flicker; and any cumulative impacts that are likely to arise."

[11] The Scottish Government (November 2008) *Planning Advice Note PAN45 – Annex 2: Spatial Frameworks and Supplementary Planning Guidance for Wind Farms.*

SPP6 - ANNEX A

Spatial Framework for Wind Farms over 20 Megawatts

1. "*It is important that up-to-date development plans provide clarity to developers and communities alike on the support to be provided for renewable energy developments. For onshore wind farm developments over 20 megawatts in size, development plans should set out:*

   a) those broad areas of search where proposals are likely to be supported subject to specific proposals satisfactorily addressing all other material considerations;
   b) those areas that can be afforded significant protection through spatial policies; and
   c) the criteria to be followed in the remainder of the plan area where the approach will be to consider applications on their merits, against clear criteria and mindful of the support given in this policy to the promotion of renewable energy developments.

2. *Delivery of revised spatial and criteria-based policies must be part of a comprehensive and inclusive process which takes account of views of all stakeholders including community and developer interests.*

3. *Development plan policies should be based on the principle that wind farms should be accommodated where the technology can operate efficiently and environmental and cumulative impacts can be addressed satisfactorily. The circumstances in which spatial policies must be used to identify areas that will be afforded significant protection are:*

   Areas designated for their national or international natural heritage value

   NPPG 14: Natural Heritage provides guidance on the approach to be adopted in relation to protecting sites of national and international importance including those protected in compliance with European Directives. Further advice is given in Planning Advice Note 60: Planning for Natural Heritage. Planning authorities should identify and protect areas designated for their international and national heritage value in their development plans. Policies should seek to facilitate the meeting of national targets away from these locations in recognition of the strength of protection afforded to them by law.

   Green belts

   SPP 21: Green Belts confirms there is a strong presumption against inappropriate development in green belts. If a proposed use would not normally be consistent with green belt designation, it may still be considered appropriate in exceptional circumstances, either as a national priority or to meet an established need but only if no other suitable site is available. If relevant, planning authorities should consider the appropriateness of wind farm developments through the development plan process to allow for wide publicity and engagement.

   Cumulative impacts

   Development plans should identify those areas where there are existing wind farm developments and set out, in relation to the scale and proximity of further development, the critical factors which are likely to present an eventual limit to development. Consideration may need to be given to whether, in some instances, such limits have already have been reached and, if this is the case, planning authorities should use spatial policies to identify the extent of those areas which will be afforded significant protection from further development.

4. *Elsewhere, development plan policies should recognise that the existence of constraints should not, in themselves, lead to blanket restrictions on development. Where constraints exist, policies should ensure that individual proposals are still assessed within the context of a "plan-led" approach so that developers, the public and other interested parties are provided with a clear*

understanding of the extent of constraint and the factors that must be satisfactorily addressed to enable development to take place. Such criteria should be consistent with other development plan policies and supported, where appropriate, by spatial policies identifying the area to which the criteria applies. The circumstances in which this approach should be used include:

Historic environment

Development plan policies should set out how development can be accommodated without damaging the character of the historic environment.
Further guidance is given on the relative weight which attaches to the protection of different types and categories of site in NPPG 5: Archaeology and Planning and NPPG 18: Planning and the Historic Environment. PAN 42 Archaeology and the Scheduled Monument Procedures provides more detailed advice.

Areas designated for their regional and local natural heritage value

Planning authorities should identify areas designated for their regional and local natural heritage value in their development plans. NPPG 14 confirms that such areas are important although the level of protection afforded to them should not be as high as that given to internationally or nationally designated sites. Planning authorities should use appropriate criteria to ensure that proposals satisfactorily address any impacts on the particular interest that a regional or local designation is intended to protect. In some instances, such designated areas may represent those places most valued for their scenic character within a local authority area.
This leads to a higher value being placed on them and, in such circumstances, a more cautious approach to development may be confirmed through criteria based policies. In doing so, planning authorities should ensure that policies do not unreasonably restrict the ability of the plan area to contribute to national targets.

Tourism and recreational interests

Tourism is an important element in the economic, social, environmental and cultural well-being of Scotland. The beauty of Scotland's landscape attracts many visitors and sustainable tourism supports many small businesses and remote rural and island communities. Those areas which have been designated for their scenic importance are covered by other policies in this SPP. When considering development plan policies, views on whether there are other locations where there is likely to be particular sensitivities requiring carefully consideration should be sought from tourism and recreational bodies in the area and, if appropriate, broad criteria should be set out to ensure that wind farm developments are not incompatible with tourism and recreational interests.

Communities

Broad criteria should be used to set out the considerations that developers should address in relation to local communities. These should ensure that proposals are not permitted if they would have a significant long term detrimental impact on the amenity of people living nearby. When considering spatial policies, planning authorities may consider it helpful to introduce zones around communities as a means of guiding developments to broad areas of search where visual impacts are likely to be less of a constraint. PAN 45 confirms that development up to 2 km is likely to be a prominent feature in an open landscape. The Scottish Ministers would support this as a separation distance between turbines and the edge of cities, towns and villages so long as policies recognise that this approach is being adopted solely as a mechanism for steering proposals to broad areas of search and, within this distance, proposals will continue to be judged on a case-by-case basis.

Buffer zones

Planning authorities should not impose additional zones of protection around areas designated for their landscape or ecological value including sites of national and international importance. However, the potential impact of proposals on such areas may be a material consideration to be taken into account when determining planning applications. Where there are potential significant effects on a Natura 2000 site the competent authority will require to undertake an appropriate assessment under the Habitats Regulations.

Aviation and defence interests

Development plan policies should, following consultation with the relevant bodies, take account of the need to address impacts on airport operation, flight activity, aviation and defence radar and seismological recording and confirm that it is a matter for developers to address these impacts through discussion with the relevant bodies. Planning authorities should undertake consultation with the relevant bodies when considering applications to ensure that impacts have been satisfactorily addressed.

Broadcasting installations

Development plans should take into account the location of radio and television broadcasting installations within the area and include criteria to ensure that the protection or reprovision of transmission links is maintained. Where applicable, applicants should consult with network owners to ensure that no material impact will occur, or alternatively that a technical solution is available and will be provided as part of the scheme.

Outwith protected and potentially constrained areas

5. *The above process should enable planning authorities to identify those areas where there are no significant constraints on development. This should be reflected in the criteria set out in development plans. There may be scope to consider whether these areas can be further refined to provide developers, communities and other interested parties with a stronger steer towards broad areas of search where development is favoured. The issues that should be considered include:*

Other natural heritage interests

There may be locations within the plan area that, although not formally designated, include habitats or landscape characteristics that are considered to be more sensitive to development than others. These areas should not be afforded the same protection as designated sites. However, in line with Article 10 of the Habitats Directive and the European Landscape Convention, it may be appropriate, particularly where significant development opportunities exist elsewhere in the area, to use the development plan process to steer development to other sites that are considered within the area to be more suitable for development.

Project viability

Planning authorities should consider, in consultation with the wind farm industry, issues such as wind speed, site access, ground suitability and other key environmental factors which could impact on development. This should ensure that broad areas of search are capable of accommodating a viable wind farm project.

Grid

Planning authorities may consider steering developments to areas where existing and approved grid capacity can be maximised and wind farm developments are likely to be able to be accommodated. This is intended to facilitate early achievement of the Executive's 2020 target.

However, policies should also recognise that upgrade of the grid is essential if Scotland is to realise fully its renewable energy ambitions. Grid constraints should not, therefore, be used to exclude the identification or safeguarding of appropriate broad areas of search where renewable energy potential exists and there is likely to be developer interest in bringing forward proposals."

Extract from Scottish Government (November 2008) Planning Advice Note 45: Annex 2 *Spatial Frameworks and Supplementary Planning Guidance for Wind Farms*

"Cumulative impacts

30. SPP6 says: "Development plans should identify those areas where there are existing wind farm developments and set out, in relation to the scale and proximity of further development, the critical factors which are likely to present an eventual limit to development. Consideration may need to be given to whether, in some instances, such limits have already been reached and, if this is the case, planning authorities should use spatial policies to identify the extent of those areas which will be afforded significant protection from further development."

31. Two or more wind farms or the extension of a wind farm can have cumulative impacts. These will most frequently involve changes to the landscape (landscape impacts) and changes affecting views and visual amenity (visual impacts), but it may also affect natural heritage designations, protected species and aviation interests. Cumulative impacts on bird populations should be considered at the Natural Heritage Zone (NHZ) level.

32. Assessing cumulative landscape/visual impacts is not straightforward and is a specialist field (see reference to SNH guidance below). Cumulative effects may be perceived when more than one wind farm is visible from one viewpoint, when several are seen during a journey and when there is a gradual increase in the number or size of wind farms over time. It cannot however always be assumed that a cumulative impact will necessarily be negative. Strategic Environmental Assessments have to consider the negative and positive effects as well as cumulative effects. Assessment may show for example that a cluster of wind farms is preferable to a more widely distributed pattern. The map prepared by SNH of wind farms installed or approved, subject of an application and at scoping stage can be seen at http://www.snh.org.uk/strategy/renewable/sr-rt01.asp

33. It may be appropriate to provide significant protection to the areas between wind farms or clusters of wind farms when analysis shows that their visual separation should be maintained. The scale and pattern of the turbines plus the tracks, power lines and ancillary development will be relevant to the 'critical factors' such as:

- *landscape and visual impacts;*
- *the significance of the landscape and the views;*
- *proximity and inter-visibility;*
- *the sensitivity of visual receptors;*
- *other combined adverse effects on specific constraints.*

34. Further sources of information and advice include the following:

- *Planning Advice Note 45 – Renewable Energy Technologies. SEDD. 2002. http://www.scotland.gov.uk/library/pan/pan45-00.asp*
- *Cumulative Effect of Wind Farms. SNH Guidance. April 2005 www.snh.org.uk/pdfs/strategy/cumulativeeffectsonwindfarms.pdf*
- *Cumulative Effects of Wind Turbines; A Guide to Assessing the Cumulative Effects of Wind Energy Developments. ETSU for DTI. 2000.*
- *See also SPP6 paragraph 51.*

Additional advice is contained in the section below on Landscape Assessment and further guidance on designing wind farms in the landscape is expected from

SNH during 2008 which will include consideration of cumulative effects.

35. The detailed visual representation of a proposed wind farm, often as part of an EIA environmental statement is an important aid to decision-making for specific applications, though this level of work is unlikely to be relevant at the SPG stage.
A Good Practice Guide has been issued by SNH and can be seen at:
http://www.snh.org.uk/pubs/detail.asp?id=846

36. Cumulative impacts may arise in relation to Natura 2000 sites. Article 6(3) of the Habitats Directive requires authorities to consider the impact of a development on a Natura 2000 interest "either individually or in combination with other plans or projects" (see paragraph 4.3.3 of European Commission guidance "Managing Natura 2000 sites" European Commission 2000. Further advice is available from SNH.

LANDSCAPE/VISUAL ASSESSMENTS

63. Impacts on landscapes and communities are recognised as criteria for assessing applications in paragraph 25 of SPP6. PAN 45 provides advice on landscape and visual impact issues. The assessments will have to be based on an assumed turbine size and may indicate how policy might need to respond to the interaction between size and impact. While visual and landscape assessments, including work on Landscape Character and Capacity Assessments, are not specifically identified in Annex A as a discrete stage in the process of preparing a spatial framework they will provide important information for the consideration of several issues and the development of policy for them, including:

- *green belts;*
- *cumulative impacts;*
- *areas of regional and local natural heritage value;*
- *historic environment;*
- *tourism and recreational interests;*
- *communities; and*
- *other natural heritage interests.*

Sources of Information

- *PAN 45 paragraphs 71 – 83.*
- *Landscape Character Assessment – Guidance for England and Scotland,*
- *Countryside Commission and Scottish Natural Heritage*
  http://www.snh.org.uk/wwo/sharinggoodpractice/cci/cci/guidance/Main/Content.htm
  (This also references and has hyperlinks to Topic Papers on practice, methods and techniques)
- *Strategic Locational Guidance for On-shore Wind farms. SNH. May 2005.*
  http://www.snh.org.uk/strategy/pd02b.asp
- *PAN 45, paragraphs 70 – 77*
- *Visual Representation of Wind Farms – Good Practice Guidance. SNH. 2007.*
  http://www.snh.org.uk/pubs/detail.asp?id=846
- *University of Newcastle (2002) Visual Assessment of Windfarms Best Practice. Scottish Natural Heritage Commissioned Report F01AA303A.*
  http://www.snh.org.uk/pdfs/publications/commissioned_reports/f01aa303a.pdf"

APPENDIX 4

GENERIC LANDSCAPE AND VISUAL GUIDANCE

INTRODUCTION

1. This section provides a summary of relevant generic landscape and visual guidance to siting of commercial scale wind farm developments on the Shetland Islands, based on existing documents.

SHETLAND STRUCTURE PLAN 2001-2016

2. The following Shetland Structure Plan policies provide essential landscape and visual guidance towards the siting of wind farm developments:

Table A4.1

GDS4	General Development Policy The policy states that new development should conserve and, where possible, improve the quality of life and the environment by controlling the location, scale and design of new development to respect, protect and conserve the natural and built environment.
SP NE1	General Development Policy The policy encourages developers to produce a high standard of design to ensure developments are sympathetic to the landscape and built environment of which they will form a part.
SP ENG3	Energy Proposals for the generation of power from renewable energy sources will be encouraged subject to other relevant policies in the Structure and Local Plans.

SHETLAND LOCAL PLAN 2004

3. The following Shetland Local Plan policies provide landscape and visual guidance about the siting of wind farm developments:

Table A4.2

NE10	Development and the Environment Proposals should take account of the potential impacts of the development, including cumulative impacts, on the environment, landscape character and visual amenity. They should respect the integrity and character of National Scenic Areas, Gardens and Designed Landscapes, areas designated for their natural or cultural heritage importance.
NE13	Biodiversity Development proposals should seek to contribute to the delivery of the Local Biodiversity Action Plan (LBAP).

BE5	Blending associated infrastructure into the landscape: *"Opportunities for the enhancement and re-use of existing buildings will be sought, through proposals for re-building, re-use or change of use to maintain the fabric of the building and its value to the community".*
ENG6	Energy Proposals Proposals for renewable energy developments will be assessed in accordance with Policy NE10 and require suitable site restoration and enhanced biodiversity.
ENG7	Control of Potential Nuisance from Energy Generators Requires proposals to be sited at a suitable distance from schools, houses, roads, well-used paths, aircraft activity, migratory paths of wild birds and other animals. "*The development, including associated buildings and infrastructure, permanent access roads and tracks, is sensitively designed and sited to have minimum impact".*
ENG8	Energy Proposals Affecting Designated Environmental Sites Development proposals within or adjacent to designated sites (i.e. National Scenic Area, SSSI, SPA) should not have a distinct adverse effect on the underlying objectives and overall integrity of the designated area.
MIN7*	Borrow Pits The policy requires borrow pits to be located within the immediate vicinity of the construction site and so as to minimise its landscape and visual impact. The impact of the development on water flows and quality need to be evaluated and suitable restoration of the site is required upon completion.
IND9	Services infrastructure Special reference is made in the policy to the protection of trees, natural heritage sites and cultural heritage features in relation to trenching and cabling. Detailed proposals for the reinstatement of land and vegetation are required.

*MIN7 in the Local Plan has been amended and included as SPG MIN 11 in the Interim Planning Policy (draft) Minerals.

LANDSCAPE CHARACTER ASSESSMENT

4. *A landscape assessment of the Shetland Isles*[12] provides valuable guidelines for development whilst respecting the integrity and character of the landscape types. The following table summarises guidelines relevant to wind farm developments.

[12] Gillespies (1998) *A Landscape Assessment of the Shetland Isles*. Scottish Natural Heritage Review No 93.

Table A4.3

	Guidelines	Landscape Character Type (LCT)						
	CONSERVATION AND ENHANCEMENT	**A**	**B**	**C**	**D**	**E**	**F**	**G**
1	The natural vegetation of these areas should be carefully protected.	■	■	■				■
2	Traditional crofting and fishing features such as stone walls, hill dykes, stone crus, and planticrubs should be maintained and measures for restoration promoted.				■	■	■	
3	Heritage features and their setting should be carefully protected and restoration promoted where necessary.	■	■	■	■	■	■	■
4	Designated natural heritage features (SSSI, SPA, SAC) should be carefully protected.	■	■	■				■
5	Existing woodland should be protected, enhanced and extended.				■		■	
6	The retention of heather and other moorland and heathland vegetation should be encouraged.	■	■	■	■			
7	Delineation of the traditionally unenclosed upland peatland and moorland by fencing should be avoided. Derelict or redundant post and wire fencing should be removed.	■	■	■	■			
8	Where derelict structures are identified, reinstatement and restoration should be considered.	■			■	■	■	
	DEVELOPMENT	**A**	**B**	**C**	**D**	**E**	**F**	**G**
9	Retention of the existing landscape character, natural vegetation and sensitive habitats is a priority.	■	■	■				■
10	Development should be sensitive to minimise physical effects on natural vegetation and visual effects on the landscape character.	■	■	■				■
11	Effects on the visual quality of the landscape should be considered from the surrounding land and the sea.	■	■	■	■	■	■	■
13	Where disruption due to development will occur, measures for vegetation reinstatement or re-establishment should be agreed.	■	■	■	■	■	■	■
14	Adequate drainage should be provided along access roads and tracks to prevent erosion and verge treatment suitably designed and implemented to ensure successful reinstatement of the surrounding natural vegetation.	■	■	■	■	■	■	■
15	Cuttings or embankments should be carefully formed to match natural landform gradients.	■	■	■	■	■	■	■

APPENDIX 5

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