

# Wathegar 2 Wind Farm

Volume 1: Environmental Statement

July 2011





## Wathegar 2 Wind Farm: Environmental Statement

---

### PREFACE

This Environmental Statement (ES) has been prepared by Whirlwind Renewables Limited for Highland Council in respect of a wind energy development and associated infrastructure on land at Wathegar Farm, near Wick in Caithness.

The ES has been prepared under the Town and Country Planning (Scotland) Act 1997 and in accordance with the requirements of the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended).

The ES comprises five volumes, as follows:

- Volume 1: Environmental Statement - (this document) is the full text of the Environmental Statement and contains full details of the environmental impact assessment that has been completed following the various technical assessments;
- Volume 2: Figures - contains supporting figures supplementing the findings presented within Volume 1;
- Volume 3: Landscape and Visual Figures – contains visualisations and other figures in support of **Chapter 6: Landscape and Visual**, to illustrate how Wathegar 2 will look, both on its own and in combination with other wind energy developments;
- Non-Technical Summary - provides a summary of the information presented in Volume 1; and
- Design Statement – explains the design principles and concepts that have been applied to this particular scheme.

The application and the full ES are available for inspection at the Highland Council planning offices in Wick and Inverness.

Copies of the ES can be requested from Whirlwind Renewables Limited at the following address (copies on DVD will be provided free of charge; however, a charge will be made for hard copies to cover the cost of printing and postage).

Whirlwind Renewables Limited  
The Media Centre  
Huddersfield  
West Yorkshire  
HD1 1RL

The cover photo shows the view of Wathegar 2 from the access track to Flex Hill Wind Farm.

## Wathegar 2 Wind Farm: Environmental Statement

---

### Table of Contents

ITEM	PAGE NUMBER
<b>Preface</b>	ii
<b>Table of Contents</b>	iii
<b>Chapter 1: Introduction</b>	
1.1 The Landowners	1
1.2 The Developer	1
1.3 The Proposed Development	2
1.4 The Consultation Process	3
1.5 The Environmental Statement	4
1.6 Scoping Report	4
1.7 Approach and Expertise	4
1.8 The Need for the Development	5
<b>Chapter 2: EIA and Design Evolution</b>	
2.1 Introduction	9
2.2 EIA Methodology	10
2.3 The Environmental Statement	10
2.4 EIA Approach	10
2.5 Site Selection	14
2.6 Design Evolution	16
<b>Chapter 3: Project Description</b>	
3.1 Introduction	19
3.2 Site location	19
3.3 Key Components of Wathegar 2 Wind Farm	19
3.4 Construction	25
3.5 Operational Activities	33
3.6 Decommissioning	34
<b>Chapter 4: Planning and Policy Context</b>	
4.1 Relevant Legislation	36
4.2 National Planning Policy	38
4.3 The Highland Structure Plan	43
4.4 The Highland Wide Local Development Plan	48
4.5 Other Issues	49
4.6 The Highland Renewable Energy Strategy	50
4.7 The Caithness Local Plan	53
4.8 Summary and Conclusions	54
<b>Chapter 5: Geology, Hydrology and Hydrogeology</b>	
5.1 The Proposed Development	58
5.2 Methodology	58
5.3 Limitations	59
5.4 Policy, Legislation and Guidance	59

---

## Wathegar 2 Wind Farm: Environmental Statement

---

5.5	Data Sources	59
5.6	Consultation	60
5.7	Baseline Conditions	60
5.8	Significance Criteria	63
5.9	Assessment of Construction Impacts	64
5.10	Assessment of Operational Impacts	74
5.11	Summary and Conclusions	75
5.12	References	75
<b>Chapter 6: Landscape and Visual</b>		
6.1	Introduction	76
6.2	Scope of Assessment	76
6.3	Policy, Legislation and Guidance	78
Landscape Character		
6.4	Introduction	
6.5	Method of Assessment	84
6.6	Landscape Character Baseline	90
6.7	Assessment of Impacts	99
6.8	Wild Land	110
6.9	Summary and Conclusions	111
Visual Impact Assessment		
6.10	Introduction	112
6.11	Method of Assessment	112
6.12	Visual Amenity Baseline	116
6.13	Assessment of Visual Impacts	116
6.14	Summary and Conclusions	117
Cumulative Landscape and Visual Impact		
6.15	Introduction	119
6.16	Method of Cumulative Assessment	119
6.17	Baseline	120
6.18	Assessment of Cumulative Impacts	123
6.19	Summary and Conclusions	133
<b>Chapter 7: Ornithology</b>		
7.1	Introduction	135
7.2	Desk Study and Data Sources	135
7.3	Impact Assessment Methods	136
7.4	Survey Methods	138
7.5	Baseline Conditions	145
7.6	Impact Assessment	164
7.7	Mitigation Measures	179
7.8	Residual Impacts	181

---



## Wathegar 2 Wind Farm: Environmental Statement

---

### Chapter 8: Ecology – Habitats & Species

8.1	Introduction	183
8.2	Methodology	183
8.3	Policy, Legislation and Guidance	192
8.4	Baseline Conditions	196
8.5	Impact Assessment	207
8.6	Mitigation Requirements	214
8.7	Residual Impacts	217

### Chapter 9: Noise and Vibration

9.1	Terms Used	218
9.2	Consultation	218
9.3	Policy, Legislation and Guidance	218
9.4	Prediction and Assessment of Wind Turbine Noise	220
9.5	Methodology	222
9.6	Noise Limits	225
9.7	Significance Criteria	227
9.8	Construction Noise	227
9.9	Baseline Conditions	231
9.10	Assessment of Construction Impacts	232
9.11	Assessment of Operational Impacts	237
9.12	Mitigation	237
9.13	Residual Impact	237
9.14	Cumulative Impact	237
9.15	Summary and Conclusions	237

### Chapter 10: Traffic and Transport

10.1	Introduction	239
10.2	Methodology	240
10.3	Planning Policy and Legislation	241
10.4	Baseline Conditions	241
10.5	Impact Assessment	242
10.6	Mitigation Requirements	248
10.7	Residual Impacts	250
10.8	Statement of Significance and Summary	251

### Chapter 11: Archaeology and Cultural Heritage

11.1	Executive Summary	252
11.2	Introduction	252
11.3	Aims and Objectives	253
11.4	Consultation	253
11.5	Relevant Guidance	254
11.6	Methodology	255
11.7	Historical and Archaeological Baseline	260
11.8	Assessment of Construction Impacts	263
11.9	Assessment of Operational Impacts	265
11.10	Conclusions	288
11.11	Acknowledgements	289

---

## Wathegar 2 Wind Farm: Environmental Statement

---

<b>Chapter 12: Electromagnetic Interference &amp; Air Safeguarding</b>		
12.1	Electromagnetic Interference	290
12.2	Television	291
12.3	Aviation Safety	292
<b>Chapter 13: Air Quality</b>		
13.1	Introduction	295
13.2	Impacts to Air During Construction	295
13.3	The UK Energy Mix	295
13.4	Impact of Peat Lands and Tree Felling	296
13.5	Estimate of the amount of CO <sub>2</sub> displaced by Wathegar 2	297
<b>Chapter 14: Socio-Economic Impacts</b>		
14.1	Tourism	300
14.2	Socio-economic Effects	304
14.3	Conclusions	305
<b>Chapter 15: Shadow Flicker</b>		
15.1	Introduction	307
15.2	Shadow Casting	307
15.3	Possible Health Effects	308
15.4	Methodology	309
15.5	Significance Criteria	310
15.6	Results	311
15.7	Detailed Results for Individual Receptors	311
15.8	Mitigation	312
15.9	Flashing	313
15.10	Conclusions	313
<b>Appendices</b>		
3.1	Draft Construction Method Statement	-
6.1	List of Agreed Viewpoints	-
7.1	Scientific Names	-
7.2	Hen Harrier Collision Risk Calculations	-
7.3	Kestrel Collision Risk Calculations	-
8.1	Quadrat Data	-
8.2	Habitat Map – General Descriptions and Target Notes	-
8.3	<b>Dr K Barlow’s Field Survey Report, July 2008</b>	-
8.4	Text of letter from Dr K Barlow, 20 March 2009	-
8.5	Habitat Designation Citations	-
8.6	Assessment of pond using the standard Habitat Suitability Index	-
9.1	Glossary of Acoustic Terminology	-

---



## **Wathegar 2 Wind Farm: Environmental Statement**

---

9.2	Turbine Noise Emission Data	-
9.3	Noise Assessment	-
11.1	Gazetteer of Sites	-
11.2	Sources Consulted	-
11.3	Photographic Record	-
12.1	Report by Osprey Consulting Services Limited	-
12.2	Report by Spaven Consulting	-
13.1	Background Information & Theory	-
13.2	Factors for Converting From Theoretical Impact To Practical Impact	-
13.3	Graphical Representation of Theoretical Shadow Times for Specific Receptor Location	-
15.1	Calculation of Losses and Gains of Carbon from Soil and Plants for Wind Farms on Peatlands	-

## Wathegar 2 Wind Farm: Environmental Statement

---

### CHAPTER 1: INTRODUCTION

This environmental statement (ES) forms part of a planning application submitted to the Highland Council for a nine turbine wind energy development to be called Wathegar 2 Wind Farm (Wathegar 2). The application is being made by Whirlwind Renewables Limited (Whirlwind) on behalf of four sets of Caithness landowners: Donald and Jane Miller, Danny and Judith Miller, John and Margaret Brims and Paul and Ruth Haley.

#### 1.1 The Landowners

- 1.1.1 The Millers are a farming family who farm in Wick at Bilbster Mains (Donald and Jane Miller) and Netherton Farm (Danny and Judith Miller).
- 1.1.2 Danny and Judith, together with their young family, farm around 170 hectares (Ha). Danny is also the Chairman of North Highland Products, which produces food under the Mey Selections name. Mey Selections has won a number of awards for its produce and Danny has been nominated for his work involving biodiversity on his farm (including the return of grey partridge and increasing numbers of brown hare, swallows and bats).
- 1.1.3 Donald and Jane farm 440 Ha. Their farm employs three full time staff, plus some additional seasonal workers. They are also the landowners of the operational Flex Hill Wind Farm (also known as Bilbster Wind Farm, comprising three turbines) and have an involvement in the consented Wathegar Wind Farm (comprising five turbines).
- 1.1.4 John and Margaret, together with their family, have farmed the 420 Ha at Thuster since 1987 though Margaret was born and brought up here. They have two sons, one at university and the other just started his agricultural apprenticeship on the farm. The farm employs two other people as well as some additional seasonal help. Wathegar 2 is an opportunity to diversify the business and safeguard these jobs. The farm already provides access for the neighbouring Achairn Wind Farm and the consented Camster Wind Farm.
- 1.1.5 The proposed wind farm would provide a further source of income, which would help secure the long-term prospects of each of these farms.
- 1.1.6 Paul and Ruth Haley operate a Christmas tree business from Wathegar Farm and they are also the landowners of the consented Wathegar Wind Farm (five turbines). They plan to scale down their Christmas tree business over the next few years and the Wathegar 2 would provide them with an additional source of income.

#### 1.2 The Developer

- 1.2.1 Whirlwind is an independent wind farm developer based in Huddersfield, West Yorkshire which focuses on developing on-shore wind energy schemes.
- 1.2.2 Whirlwind is currently developing a number of wind energy developments across the UK. Wathegar Wind Farm was granted planning consent in May 2010 (five turbines, around 10 megawatts (MW), Highland Council). It is due to commence construction in early 2012.

## Wathegar 2 Wind Farm: Environmental Statement

---

### 1.3 The Proposed Development

- 1.3.1 Wathegar 2 is to be located on land currently used for commercial Christmas tree farming, near Bilbster, approximately 8km west of Wick in the administrative area of Highland Council (centred at approximately ND 280 505 on Ordnance Survey Explorer Map No 450). The location is shown on the map at **Figure 3.1**.
- 1.3.2 The site of the proposed five turbine wind farm is located between three wind farms: the operational Flex Hill Wind Farm to the northwest (three Nordex N60 1.3MW turbines, 90m tip height), the consented Wathegar Wind Farm to the west (five turbines, 101m tip height) and the operational Achairn Wind Farm to the east (three RePower MM82 2MW turbines, 101m tip height). The site occupies an area of approximately 375 Ha (incorporated by the red line boundary in **Figure 3.1** and **Figure 3.2**). The total area of land which will be permanently occupied by structures and hard surfaces within this area will be approximately 3.3 Ha (32,865m<sup>2</sup>). An additional area of about 0.25 Ha (2,500m<sup>2</sup>) will be temporarily occupied and restored after construction. A breakdown of these areas is provided in **Table 3.1**.
- 1.3.3 The layout of Wathegar 2 is shown in **Figure 3.2**. Each of the nine turbines is expected to have a capacity of approximately 2MW, with the wind farm having an overall generating capacity of around 18MW. Each wind turbine will have a maximum height to blade tip of 101m, identical to the adjacent Achairn and Wathegar wind farms (the exact turbine generating capacity and dimensions for Wathegar 2 will depend upon the final specification of turbine used). The design of a typical turbine is shown in **Figure 3.3**.
- 1.3.4 The development will also comprise the following associated infrastructure, (further details of which are contained in **Chapter 3: Project Description**):
- new on-site access tracks, totalling around 4.5km;
  - underground cable routes;
  - an on-site electrical control building (typical plans and appearance shown in **Figure 3.10** and **Figure 3.11**); and
  - no borrow pits will be established on site.
- 1.3.5 The wind farm will generate electricity for a period of up to 30 years after which time it will either be removed or the life of the wind farm may be extended (subject to a further grant of planning permission).
- 1.3.6 Wathegar 2 will be connected to the local distribution network via an on-site electrical control building. Cables exporting power from each turbine will congregate at the electrical control building, which will house the switchgear and metering equipment. It is intended that the connection from the site to the local distribution network will be made via a short underground connection into the existing 33 kilovolt (kV) network.

## Wathegar 2 Wind Farm: Environmental Statement

---

### 1.4 The Consultation Process

1.4.1 This ES has been prepared following consultation with the Highland Council, statutory consultees and other relevant consultees as detailed in **Table 1.1** below.

REASON CONSULTED	CONSULTEE
Statutory Consultees	Scottish Environment Protection Agency (SEPA)
	Scottish Ministers
	Scottish Natural Heritage (SNH)
	Scottish Water
	The Health and Safety Executive
Archaeology and Cultural Heritage	Caithness Archaeological Trust
	Highland Council – Archaeology Unit
	Historic Scotland
Aviation Interests	Civil Aviation Authority
	Ministry of Defence: Defence Estates
	National Air Traffic Services
	Wick Airport
Ecology	Royal Society for the Protection of Birds
	SNH
Geotechnical	Highland Council – TEC Services
Landscape and Visual Matters	Highland Council – Landscape
	SNH
Noise	Highland Council – TEC Services
Radio and Telecommunications	Arqiva Services Limited
	CSS Spectrum Management Services Limited
	Joint Radio Company
	Ofcom
	Scottish & Southern Energy plc
	T-Mobile
Television reception	British Broadcasting Corporation
Traffic and Transport	Agents for Scottish Executive – Trunk Roads
	Highland Council – TEC Services

*Table 1.1. List of Consultees.*

1.4.2 As part of the wider consultation process, Danny Miller (one of the landowners) has personally visited the following people to introduce the proposed development, discuss the plans, present information and invite feedback/comments:

---



## Wathegar 2 Wind Farm: Environmental Statement

---

- representatives of the two nearest Community Councils: Watten and Tannach; and
- households within 3km of Wathegar 2.

### 1.5 The Environmental Statement

- 1.5.1 This ES presents the findings of technical environmental studies carried out as part of an Environmental Impact Assessment (EIA) and accompanies a planning application to the Highland Council for the development.
- 1.5.2 This ES and planning application have been submitted to the Highland Council for planning permission under the Town and Country Planning (Scotland) Act 1997. The project falls within Schedule 2 of the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended) and as such an EIA of the proposed development has been undertaken.
- 1.5.3 The EIA process is discussed further in **Chapter 2: Environmental Impact Assessment and Design Evolution**.

### 1.6 Scoping Report

- 1.6.1 The EIA Regulations provide that a person who is minded to make an EIA application may ask the relevant planning authority to provide a written opinion as to the information to be provided in the environmental statement. This is known as a "Scoping Opinion".
- 1.6.2 Whirlwind submitted a Scoping Report to Highland Council, and the Council issued its Scoping Opinion on 18 November 2010. This is included in **Appendix 2.2**.
- 1.6.3 Comments received from all consultees have been taken into account in the design, layout and progress of this project. Where relevant, further details of how the project has developed as a result of such comments are provided in each of the technical chapters.
- 1.6.4 The bodies and organisations consulted by Highland Council as part of the scoping process are included in the list of consultees at **Table 1.1**.

### 1.7 Approach and Expertise

- 1.7.1 This ES has been project managed by Whirlwind, with technical input from a range of specialist consultants with expertise in wind farm developments.
- 1.7.2 Whirlwind has provided input on the proposed development, the site selection process and any mitigation measures required to minimise any potential environmental effects of the wind farm. The iterative site layout design process has been led by Whirlwind, but is the result of input from all parts of the project team.
- 1.7.3 Whirlwind has adopted a multidisciplinary approach, appointing and managing a team of expert consultants to provide technical input. **Table 1.2** below identifies the various areas of expertise required to carry out the EIA for Wathegar 2, together with the consultant responsible and the area in which they are based.

## Wathegar 2 Wind Farm: Environmental Statement

Area of Expertise	Consultant and Location
Project Design	Whirlwind Renewables Limited Huddersfield
Planning	The Energy Workshop Limited Huddersfield
Landscape and Visual Impact Assessment	ASH Design and Assessment Glasgow
Photomontages and Visualisations	The Energy Workshop Limited
Ecology: Habitat	ECUS Limited Sheffield
Ecology: Protected Species	ECUS Limited
Hydrology and Hydrogeology	Dalglish Associates Limited Dunblane
Cultural Heritage	Janet Hooper Caithness
Noise	ARCUS Renewables Glasgow
Ornithology	Wild Caledonia (field work) Argyll & Bute  ECUS Limited (assessment)
Traffic and Transportation	The Energy Workshop Limited
Existing Infrastructure	The Energy Workshop Limited
Tourism and Socio Economics	The Energy Workshop Limited
Shadow Flicker	The Energy Workshop Limited
Aviation	The Energy Workshop Limited

*Table 1.2. The Project Team.*

### 1.8 The Need for the Development

#### Climate Change

- 1.8.1 Energy is essential in almost every aspect of modern life and for virtually every aspect of the economy. However, the burning of fossil fuels such as gas and coal (which currently provide the bulk of our energy) releases greenhouse gases (such

## Wathegar 2 Wind Farm: Environmental Statement

---

as CO<sub>2</sub>) into the atmosphere. Due to factors such as population growth and changes in lifestyle, the demand for energy has increased to levels where the use of fossil fuels is releasing enough greenhouse gases into the atmosphere to directly affect the climate. There is now a scientific consensus that climate change is occurring and that it is significantly influenced by the amount of greenhouse gases which are emitted from human activities.

1.8.2 The Stern Review<sup>1</sup> highlights the cost of failing to tackle climate change:

*"With 5-6°C warming – which is a real possibility for the next century – existing models that include the risk of abrupt and large-scale climate change estimate an average 5-10% loss in global GDP. Whereas the annual cost of stabilising greenhouse gases in the atmosphere is estimated to be around 1% of GDP in 2050."*

1.8.3 One key way to lessen the effects of climate change is to reduce emissions of greenhouse gases, which could be achieved by generating energy from sources that emit low or even zero levels of greenhouse gases, such as renewable sources.

1.8.4 Renewable energy is the term used to describe energy flows that occur naturally and continuously in the environment, such as energy from the sun, wind, waves or tides. The origin of the majority of these sources can be traced back to either **the sun (energy from the sun helps to drive the earth's weather patterns) or the gravitational effects of the sun and the moon**. The key issue is how to extract this energy as effectively as possible and convert it into a useable form.

### International Context

1.8.5 The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing emissions of six greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride). The target levels amount to an average of five per cent against 1990 levels over the five-year period 2008-2012<sup>2</sup>.

1.8.6 The total amount of global wind power increased at a rate of 28.8% in 2008 (compared to 32% in 2006 and 27% in 2007), with over 27,000MW being installed - bringing the total global installed capacity to 120,798MW<sup>3</sup>.

*"I urge you also to look ahead, beyond the Protocol, which takes us only to the year 2012. The longer-term challenge is to promote the use of low-carbon energy sources, low greenhouse gas technology and renewable energy sources."*<sup>4</sup>

Kofi Annan, United Nations Secretary General.

---

<sup>1</sup> "The Stern Review on the Economics of Climate Change" 2006.

<sup>2</sup> United Nations Framework Convention on Climate Change ([www.unfccc.int](http://www.unfccc.int))

<sup>3</sup> Global Wind 2008 Report, Global Wind Energy Council (GWEC)

<sup>4</sup> Message from the UN Secretary General, Kofi Annan, to the 10<sup>th</sup> Session of the Conference of the Parties to the UN Framework Convention on Climate Change, Buenos Aires, 15 December 2004.

---

## Wathegar 2 Wind Farm: Environmental Statement

---

### European Context

- 1.8.7 The EU produces around 22% of global greenhouse gas emissions and has agreed under the Kyoto Protocol to a cut of 8% from 1990 levels by 2008-2012.
- 1.8.8 In January 2008, the European Commission put forward a far-reaching package of proposals that will deliver on the European Union's ambitious commitments to fight climate change and promote renewable energy up to 2020 and beyond.
- 1.8.9 The EU is committed to **reducing its overall emissions to at least 20% below 1990 levels by 2020**, and is ready to scale up this reduction to as much as 30% under a new global climate change agreement when other developed countries make comparable efforts. It has also set itself the target of **increasing the share of renewables in energy use to 20% by 2020**.
- 1.8.10 In 2009, 10,526MW of wind power capacity was installed in Europe, taking the total installed capacity in Europe at the end of 2009 to 76,152MW, representing just over 47% of the global total<sup>5</sup>.

*"Our aim is to limit climate change to 2°C setting a series of ambitious targets on greenhouse gas emissions and renewable energy. We will also aim to cut greenhouse gas emissions by at least 20% by 2020, in particular through energy measures."*

Andris Piebalgs, EU Commissioner for Energy.

### Scotland

- 1.8.11 Energy is a devolved matter and is therefore the responsibility of the Scottish Government, which is committed to promoting its increased use and deployment. The Scottish Government recognises that renewable energy, from sources such as on-shore wind farms, can tackle the causes of climate change and also have the potential to support economic growth.
- 1.8.12 The Climate Change (Scotland) Act 2009 received Royal Assent on 4 August 2009 and introduced ambitious, world-leading, legislation to reduce emissions (when compared to 1990 levels) by:
- **42%** by 2020; and
  - at least **80%** by 2050.
- 1.8.13 In September 2010, First Minister Alex Salmond announced that the Scottish Government's **national target of 80%** of Scottish electricity consumption to come from renewables **by 2020**, with an interim milestone of **31% by 2011**.
- 1.8.14 In May 2011, the Scottish Government made a commitment to generate the equivalent of **100% of Scotland's own electricity demand from renewable sources by 2020**<sup>6</sup>.
- 1.8.15 The main driver behind renewable electricity development in Scotland is the Renewables Obligation (Scotland), or ROS, which was introduced in 2002. This

---

<sup>5</sup> Global Wind 2009 Report, Global Wind Energy Council (GWEC).

<sup>6</sup> <http://www.scotland.gov.uk/News/Releases/2011/05/18093247>

## Wathegar 2 Wind Farm: Environmental Statement

---

mechanism places an obligation on electricity suppliers to provide an increasing amount of their electricity supplied from eligible renewable sources.

### Carbon Emissions Savings

- 1.8.16 Wathegar 2 will comprise nine turbines, each with an expected generating capacity of around 2MW, giving a total capacity of around 18MW.
- 1.8.17 Wathegar 2 will generate enough electricity to supply the equivalent of 13,419 homes (equivalent to 123% of the homes in Caithness and 15% of the homes in the Highlands) with electricity every year for its operating life. Through generating electricity from a renewable source, it could also prevent the emission of around 25,101 tonnes of carbon dioxide each year, or 753,029 tonnes over its lifetime. These issues are discussed in more detail in **Chapter 13: Air Quality and Climate**.

### Community Benefit

- 1.8.18 Whirlwind is committed to a good neighbour development process and in keeping with this would provide a community benefit fund for Wathegar 2. Wathegar 2 would generate an annual community fund equivalent to £4,000 per MW of installed capacity over its operative lifetime (this will be index-linked, to ensure it rises in line with inflation). This would be **£72,000 per annum**, or £1.8 million over a 25 year operating lifetime. The management and operation of the fund would be agreed with local community councils, Highland Council and other stakeholder following determination of the application. The figure of £4,000 per MW represents a 33% increase to the community benefit fund proposed in respect of the consented Wathegar Wind Farm.

### Promotion of Learning and Employment Opportunities in Renewables in Caithness

- 1.8.19 In addition to the community benefit fund, Whirlwind would make a contribution of **£30,000 to £50,000 per annum** (index-linked over the lifetime of the project) from Wathegar 2 revenues towards a joint initiative between Whirlwind and North Highland College (part of the University of the Highlands and Islands). The initiative would support the development of skills and employment opportunities in renewable energy (and related areas) in Caithness.
- 1.8.20 The precise sum to be committed (which will be in range stated above) would be agreed following determination of the planning application and gathering detailed information on project construction costs etc., which will influence the level of funds available to commit. North Highland College would be primarily responsible for administration of the funds in line with a set of agreed objectives. Potential uses of the funds include:
- providing bursaries for students taking part in North Highland College's engineering and (soon to start) renewable energy programmes; and/or
  - to help enable more smaller and medium sized companies in Caithness (particularly those active in renewables and related areas) to offer apprenticeship opportunities.
- 1.8.21 Further details of the community benefit scheme are set out in **Chapter 14: Socio-Economic Impacts**.
-

## **Wathegar 2 Wind Farm: Environmental Statement**

---

### **Chapter 11: Archaeology and Cultural Heritage**

This Chapter was prepared by Janet Hooper and presents the aims and results of an archaeological desk-based assessment and walkover survey commissioned by Whirlwind Renewables Limited (Whirlwind) and undertaken as part of an Environmental Impact Assessment (EIA) for the proposed Wathegar 2 Wind Farm (Wathegar 2).

#### **11.1 Executive Summary**

- 11.1.1 The archaeological assessment comprised a desk-top study and a walkover survey. The farms of Upper and Lower Wathegar lie within the site boundary, while three of six sheepfolds associated with the farms are located within the area of the proposed development. None of these sites will, however, be directly impacted upon by the development. The three sheepfolds, two of which are shown on the Ordnance Survey (OS) Second edition map (1906), were identified on the ground, along with two additional features of archaeological significance, during the course of the field survey for Wathegar 2.
- 11.1.2 The development area consists of improved and drained pasture, nearly all of which has been more recently planted with Christmas trees, reducing the visibility of archaeological sites. However, the desk-based assessment revealed little specific information on the use of this area and it seems probable that the development will have little impact on the archaeological resource of this area.
- 11.1.3 The visual impact of the proposed development on scheduled ancient monuments and historic buildings within the 10km Zone of Theoretical Visibility (ZTV) has also been assessed. Although Wathegar 2 will be highly visible from a number of sites close to the development, particularly those lying to the north and east of Wathegar, the fact that it will be seen in relation to the existing Achairn and Flex Hill wind farms, as well as the consented Wathegar Wind Farm, will reduce the impact of Wathegar 2 markedly.

#### **11.2 Introduction**

- 11.2.1 The potential impacts of the proposed wind farm on cultural heritage assets are assessed within this Chapter. These include scheduled monuments, listed buildings, registered parks and gardens and conservation areas. The presence or absence of recorded archaeological sites in the area has been established, and other previously unrecorded archaeological remains identified. Where required, appropriate mitigation measures have been proposed for the archaeological remains identified within the application area. In addition, an assessment has been made of the potential visual impact of the proposal on legally protected archaeological sites and historic buildings within its vicinity.
- 11.2.2 The application area lies on the south side of the strath containing the Wick river, south east of the village of Watten and approximately 8km west of Wick (centred ND 280 505). It is situated between the Flex Hill Wind Farm (Hooper 2002), the consented Wathegar Wind Farm (Hooper 2010) and the Achairn Wind Farm (Dagg 2004), at a height of around 75m above ordnance datum (AOD). The proposed location of the wind farm consists of an area of open, north facing ground,



## Wathegar 2 Wind Farm: Environmental Statement

---

immediately to the east of Upper Wathegar, with the consented Wathegar Wind Farm lying immediately to the west. A track, shown on the OS First edition map (1877), leads from the main Wick to Watten road (A882) at Quoysakes (ND 29549 52247), through the now abandoned crofts of Thuster to Lower and Upper Wathegar. The preferred access to the wind farm will utilise the track constructed for Flex Hill Wind Farm, which approaches the site from the northwest. This has already been examined by the author (Hooper 2002). Of the buildings on site, Lower Wathegar is still inhabited on a temporary basis but Upper Wathegar is now abandoned. Upper Wathegar, which lies in the centre of the proposed development, is surrounded by young forestry plantations, planted between 1992 and 2002.

- 11.2.3 This report offers the results of this assessment, alongside general recommendations for the mitigation of the effect of the proposed wind farm on the development area. A gazetteer of sites is included within **Appendix 11.1**.

### 11.3 Aims and Objectives

- 11.3.1 This survey was intended to identify the presence or absence of archaeological features in the proposed development area, to assess the likely impact of the development upon them and to also assess potential indirect impacts on the setting of archaeological features in the area surrounding the site.

The objectives of this study were to:

- Collate any known archaeological information on the application area;
- Identify any previously unknown archaeological sites through inspection of the aerial photographic record and the available cartographic and documentary evidence;
- Evaluate the archaeological significance of the area through field inspection;
- Assess the potential impact of the construction of the wind farm on any archaeological interests on site and to evaluate the significance of the impact;
- Assess indirect impacts of the operational wind farm upon listed buildings and Scheduled Ancient Monuments (SAMs) including consideration of their setting;
- Identify measures for avoiding or mitigating potential impacts; and
- Detail any residual impacts that cannot be mitigated.

### 11.4 Consultation

- 11.4.1 The Highland Council Archaeological Unit was consulted with regards to this proposal as were Historic Scotland (HS). Consultation responses from these bodies are included in the Scoping Opinion in **Appendix 2.2**. Desktop consultation included records held by the Royal Commission on Ancient and Historical Monuments of Scotland (RCAHMS) as well as those held by the above organisations.
- 11.4.2 **Key within the Highland Council's** scoping response was the requirement for a comprehensive desk top assessment and walkover survey within the application
-

## Wathegar 2 Wind Farm: Environmental Statement

---

area to include the identification of unrecorded sites. The requirement to address direct, indirect and setting impacts as well as cumulative impacts on sites is addressed further within this Chapter as are mitigation measures considered and implemented in the development of this proposal. The impact on the setting of four particular Scheduled Monuments (Strath Cairn and Hut Circles; Bilbster Chambered Cairn; North Bilbster Standing Stone and Camster Broch) and two particular Listed Buildings (Skirkoke House and Bilbster House) was raised. These are discussed further within **Section 11.9** of this Chapter.

### *Issues raised by Historic Scotland*

- 11.4.3 In their response to the archaeological and cultural heritage chapter for the original Wathegar Wind Farm, Historic Scotland raised concerns about utilising the prominence of the site as an indicator of its importance. A site can be seen to acquire value if its physical remains are relatively easy for the lay visitor to interpret or if it is promoted to the public. In respect of the latter, all of the Scheduled Ancient Monuments and Listed Buildings within 10km of the development are marked on the OS 1:25,000 Explorer maps (with three exceptions). These sites can be thought to be promoted, though not to the extent of those sites on the Yarrows Archaeological Trail or the Grey Cairns of Camster, which are actively presented to the public. However, though a site may be perceived to have acquired significance through its presence in the landscape or awareness of both locals and visitors of its existence, its intrinsic archaeological and historical value has been taken as preeminent in the analysis below.

## **11.5 Relevant Guidance:**

### *Legislation*

- 11.5.1 Statutory protection for archaeology is principally outlined in the Ancient Monuments and Archaeological Areas Act (1979) as amended by the National Heritage Act (1983) and nationally important sites are listed in a Schedule of Monuments. Scheduled Monument Consent (SMC) is required before any work affecting the fabric of a Scheduled Monument can be carried out.
- 11.5.2 The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 details the duties of National and Local Authorities in respect of the listing and protection of Listed Buildings and Conservation Areas.
- 11.5.3 The Historic Environment (Amendment) (Scotland) Act 2011 improves the **management and protection of Scotland's historic environment by** addressing specific gaps and weaknesses in the heritage legislation framework outlined above.
- 11.5.4 Relevant guidance is also contained in *National Planning Policy Guidelines 5 Planning and Archaeology*, *Scottish Planning Policy 23: Planning and the Historic Environment* and advice note *PAN 42 Archaeology* (the Planning Process and Scheduled Monument procedures).

### *Regional and Local Policy*

---

## Wathegar 2 Wind Farm: Environmental Statement

---

- 11.5.5 Structure Plan **Policy G6** states that the Council will seek to conserve and promote all sites and areas that are identified as being high quality with regard to: nature conservation, landscape, archaeology and the built environment.
- 11.5.6 Structure Plan **Policy BC1**, entitled Preservation of Archaeological Sites, states that the Council will ensure that Archaeological sites affected by development proposals should be preserved, or, in exceptional circumstances where **preservation is impossible, the sites will be recorded at the developer's expense** to professional standards. Provision will be made in Local Plans for the appropriate protection, preservation and enhancement of archaeological sites.
- 11.5.7 **Proposal BC3** in the Structure Plan states that Local Plans will identify and zone areas of exceptional archaeological and historic interest and make appropriate provision for the protection and interpretation of features of interest.
- 11.5.8 Historic gardens and designed landscapes are the subject of Structure Plan **Policy BC4**, which states that such sites identified in the published inventory and any subsequent additions will be preserved. The policy also advises that Local Plans will contain policies for their protection.
- 11.5.9 The Local Plan includes supporting policies on listed buildings, conservation areas, historic gardens and designed landscapes, and archaeology. Of those of relevance to the proposal, **Supporting Policy SP19** states that Proposals affecting listed buildings and/or conservation areas will be considered in accordance with Historic Scotland's "Memorandum of Guidance on Listed Buildings and Conservations Areas (1998).
- 11.5.10 **Supporting Policy SP25**, Historic Gardens and Designed Landscapes, states that Proposals will be assessed for any adverse effect on the natural and historic integrity of the areas included in the Inventory Gardens and Designed Landscapes. Such proposals must be the subject of consultation with Historic Scotland and Scottish Natural Heritage.
- 11.5.11 Archaeology is discussed in detail within **Supporting Policy SP26**, which advises that where development potentially affects a site of archaeological interest the **developer should consult with the Council's archaeology unit and Area Planning and Building Control Manager** and that an assessment should be carried out. The policy also advises on actions that should be taken should development affect an archaeological site.

### 11.6 Methodology

- 11.6.1 This cultural heritage assessment consists of a desk top study and walkover survey which is followed by an assessment of the potential direct and indirect impacts of the construction, operation and decommissioning phases of this proposal. Mitigation measures are identified and specified where appropriate and the significance of any residual impacts assessed.

## Wathegar 2 Wind Farm: Environmental Statement

---

### *Study Areas*

- 11.6.2 Three areas have been considered as part of the study area (**Figure 11.4**):
- The Application Boundary. This includes all sites within the site boundary and considers potential direct impacts. The potential for unrecorded sites is also considered.
  - An Area extending out to 5km from the outermost turbines within which indirect impacts are assessed. This area includes sites of national importance (**SAM's, LB's, registered parks and gardens and registered battlefields**). The potential operational impact on setting includes consideration of conservation areas.
  - An Outer Area extending from 5km to 10km from the outermost turbines. Sixty eight SAMs and LBs lie within this study area. The number of sites involved - as well as their distance from the development - has necessitated a less detailed account for most of these monuments. Those selected by Historic Scotland (HS) and Highland Council (HC) in their scoping opinion have been assessed in detail (see **Section 11.9**).
- 11.6.3 A Wider Study Area has also been identified which covers the area of the ZTV extending between 10km and 35km from the site. A general discussion has been undertaken of those sites over 10km away from the development, where the impact of the proposed wind farm is likely to be limited. Beyond 20km, visibility of the development is restricted largely to an area of the Flow Country to the west (**Figure 6.5**).

### *Data Sources*

- 11.6.4 An initial desk-top study involved consultation of known archaeological sites, recorded in the National Monument Record for Scotland (NMRS), held by The Royal Commission on Ancient and Historical Monuments of Scotland (RCAHMS) in Edinburgh, and in the local Historic Environment Record (HER) for Highland, held **by the Highland Council Archaeology Unit in Inverness. Historic Scotland's** Schedule of Ancient Monuments, Statutory List of Buildings of Special Architectural or Historic Interest, and Inventory of Gardens and Designed Landscapes and Historic Battlefields, available through PASTMAP, were also consulted in order to identify those sites with legal protection. All the cartographic sources held by the National Map Library in Edinburgh and available on their website, were examined. Particular emphasis was placed on the First and Second Edition Ordnance Survey maps, but maps dating from the late sixteenth century to the early twentieth century were also checked (**Appendix 11.2.1** and **Figures 11.2 and 11.3**). The vertical stereo aerial photographic record, held by the Highland Council Archaeology Unit, was examined for any sites of potential archaeological interest (**Appendix 11.2.2**), as was more recent aerial imagery, available online. A brief search was conducted of the material contained in the North Highland Archive in Wick, while readily available secondary material for the area was also consulted (**Appendix 11.2.3-4**).

## Wathegar 2 Wind Farm: Environmental Statement

---

### *Field Survey Methodology*

11.6.5 A walkover survey was conducted of the development area on 13 January 2011. The weather was dry and still, misting over as the day progressed. The age of the trees meant that the planted areas could not be examined, while the rides were also hidden under long vegetation and 8-10cm of snow. In consequence, it was felt that only a limited picture of any potential surface remains - beyond the relatively recent sheepfolds and field boundaries - could be obtained, even though other sources of evidence (particularly the early OS maps and the aerial photographic coverage) somewhat rectified this situation. The archaeological sites identified were described, photographed and plotted on the 1:10,000 map, using a Garmin hand-held GPS, as appropriate (**Appendices 11.1 and 11.3; Figure 11.1**).

### *Significance Criteria: Construction Impacts*

11.6.6 The construction phase has the potential to directly impact on cultural sites within the site boundary. This could be due to site removal or damage, or indirect impacts due to changes in hydrology which in turn may affect archaeological deposits. Setting impacts with regards to the construction phase have not been assessed as these are considered as being short term only.

11.6.7 The *Scottish Planning Policy 23: Planning and the Historic Environment* defines the historic environment as including ancient monuments, archaeological sites and landscapes, historic buildings, townscapes, parks, gardens and designed landscapes and other features (2008, 2). It therefore comprises sites with both statutory and non-statutory designations.

11.6.8 SPP23 states that 'archaeological assets... are finite and non-renewable and therefore should be preserved *in situ wherever feasible*' (ibid., 5). If this is not possible, then preservation by record is the preferred option (ibid., 11).

11.6.9 The archaeology of the proposal area has been classified according to its perceived archaeological significance in accordance with legislative guidelines. For the purposes of this assessment, features of cultural heritage significance have been gauged against the criteria given below in terms of their *sensitivity*:

- **High:** Sites of national Importance, including Category A Listed Buildings and Scheduled Ancient Monuments;
- **Medium:** Archaeological sites or buildings of regional importance, including Category B Listed Buildings;
- **Low:** Archaeological sites or buildings of local importance, including category C (S) Listed Buildings; and
- **Negligible:** A badly preserved or extremely common type of archaeological site/building of little value at local, regional or national levels.

11.6.10 The sensitivity of the archaeological sites within the application area are shown in **Table 11.3**.

11.6.11 The magnitude of impacts on features of archaeological interest will principally depend on the effect on the integrity of the site or feature, the proportion of the

---

## Wathegar 2 Wind Farm: Environmental Statement

---

site or feature which will be affected and the impact on its setting, given that the individual sites can only be understood and appreciated as part of the wider historic landscape.

11.6.12 The magnitude of these impacts has been determined in accordance with the following criteria:

- **High:** total loss or major alteration to key elements or features of the pre-development conditions, such that its post-development character or composition would be fundamentally changed;
- **Medium:** loss or alteration of one of the key elements or features of the pre-development conditions such that its post-development character would be partially changed;
- **Low:** minor shift away from pre-development conditions. Changes arising from the loss or alteration of features would be discernible, but the underlying character, composition or attributes of its condition would be similar to pre-development circumstances and patterns; or
- **Negligible:** very slight damage from pre-development condition. Change barely distinguishable, approximating to the 'no change' situation.

### *Operational Impacts*

11.6.13 During the operational phase of the proposal, setting of cultural sites may be affected.

11.6.14 Setting is considered integral to determining whether or not an archaeological site or historic building is of enough significance to warrant scheduling or listing:

*'The context or setting in which specific historic features sit and the patterns of past use are part of our historic environment. The historical, artistic, literary, linguistic, and scenic associations of places and landscapes are some of the less tangible elements of the historic environment. These elements make a fundamental contribution to our sense of place and cultural identity' (Scottish Historic Environment Policy July 2009 (2009a, 5)).*

11.6.15 There is currently no statutory definition of the term 'setting' and HS considers that there are no fixed criteria for determining the setting of particular sites, only a number of factors which will influence the impact of any development on an archaeological site:

*'Much will depend upon the circumstances of the individual case, including such variables as the nature, extent, design, location of the development proposed, the nature, extent and significance of the asset in question, its current relationship with its surroundings and the degree to which that would be altered by the development proposed. Different attributes will be important both singly and in combination for different sites and situations. In general it is the relationship of the historic environment asset with its current surroundings, not with any hypothetical sense of "original" (i.e. historic) setting which is of concern, ...' (Historic Scotland 2009b).*



## Wathegar 2 Wind Farm: Environmental Statement

---

11.6.16 Alongside the relative weight attached by statute and policy to each site, a number of factors are important in determining the sensitivity of setting of a particular SAM or listed building. Historic Scotland (2009b and c), suggest that these include:

- the importance of topographic location in understanding the function and location of the site;
- the relevance of current or past land use to the understanding of the site;
- the association of the site with other archaeological features;
- the contribution of the site to local diversity and distinctiveness;
- the recreational, educational and experiential values of the site;
- the visual prominence of the site in relation to the potential visual dominance of the development;
- the relative scales and extent of the site and the development;
- the nature of views both to and from the site, even where the site and the development are not intervisible; and
- the nature and scale of the surrounding landscape.

11.6.17 None of these factors are mutually exclusive and it should not be thought of as an exhaustive list. Viewed in this context, the impact of any development will be greater on those features where their siting has been most influenced by topography (e.g. a burial cairn located on the crest of a hill), particularly if that site has been constructed to command views of the surrounding landscape or to be visible from a distant viewpoint. Equally, the appreciation of the site may be enhanced if the landuse of the surrounding area preserves elements of its historic use – and will be influenced by whether the development is in keeping with that landuse history. Later sites may be located in relation to an earlier monument, whilst the ways in which the site was approached in the past may also be important to its understanding. The grouping of sites – not all of which may have the same level of intrinsic value – may yield further information as to their function and use.

11.6.18 Distance from the development will be critical to determining the significance of its impact on an archaeological site. PAN 45 *Renewable Energy Technologies* provides advice on the effect which distance has on the perception of developments such as wind farms in an open landscape:

- Up to 2km: prominent;
- 2-5km: relatively prominent;
- 5-15km: part of the wider landscape; and
- 15-30km: minor element in the landscape.

11.6.19 The magnitude of any impacts will be determined by the size and visual attributes of the development in relation to the site. This will be of particular significance where intervisibility between sites is important to their understanding and where both development and site are caught in important views. Similarly, the nature and scale of the landscape, which comprises the setting of the site, will determine its ability to absorb new development without eroding the key characteristics and value of the site. Clearly, the permanency of the development will also become a factor here.

## Wathegar 2 Wind Farm: Environmental Statement

---

### *The Significance of Operational Impacts*

11.6.20 The *significance* of an impact on a cultural heritage site, either direct (physical) or indirect (setting) is assessed by combining the *sensitivity* of the site and the *magnitude* of the impact. This is summarised in **Table 11.2** below.

Magnitude of Impact	Sensitivity of Archaeological Feature			
	Negligible	Low	Medium	High
High	Negligible	Moderate	Major	Major
Medium	Negligible	Minor	Moderate	Major
Low	Negligible	Minor	Minor	Moderate
Negligible	Negligible	Negligible	Negligible	Minor

*Table 11.2. Criteria for assessing the significance of impacts on archaeological sites.*

### *Decommissioning Impacts*

11.6.21 These can be considered as of similar nature and scale to those associated with construction impacts.

## **11.7 Historical and Archaeological Baseline**

11.7.1 A full review of both the HER and NMRS revealed no previously recorded sites within the inner study area, though the sites identified for Wathegar 1 have now been added to the HER.

11.7.2 A number of other remains - ranging from prehistoric settlement and burial monuments to the traces of much more recent land use and settlement - lie within the Wick valley. These range from the cluster of prehistoric sites, including burial cairns, a broch, hut-circles and clearance cairns in the valley of the Strath Burn (NMRS no. ND25SE3, HER no. MHG2340, ND 258 509), to the south west of the farm of Flex, to a number of chance finds, again of prehistoric date, discovered around the later settlements along the main Wick to Watten road. Evidence for more recent agricultural use is a prominent feature of the landscape.

11.7.3 The following section is intended to provide a brief historical context for the physical remains identified during the survey, their nature necessitating its emphasis on the post-medieval period. Full details of the sites identified are provided in the site gazetteer (**Appendix 11.1**).

11.7.4 The present appearance of much of the inner study area has clearly been determined by its very recent transformation from rough pasture to commercial forestry plantation. Both phases of land use must in large part reflect the poor fertility of the underlying soils, which consist of boulder clay overlying limestones of the Caithness Flagstone group (Middle Old Red Sandstone) (Institute of Geological Sciences, Sheet 116, 1957). Parts of the area have been intensively drained, probably from the nineteenth century onwards, producing relatively good grassland. Small areas of land around Upper Wathegar have been classified, in terms of modern Land Capability, as 4<sub>2</sub>, though, in practice, this would be limited

## Wathegar 2 Wind Farm: Environmental Statement

---

by the wetness of the climate (Soil Survey of Scotland, Sheet 12, 1987). The cluster of prehistoric monuments on Flex Hill lie at a similar altitude just to the west, but, in general, the distribution of prehistoric sites and chance finds suggests that settlement was concentrated in the more sheltered valley of the Strath Burn and along the level ground at the base of the valley in earlier periods. It seems likely that the higher ground around Wathegar, located on a north facing slope, was only suitable for pasture or the exploitation of peat, at least until parts of it were improved in the nineteenth century.

- 11.7.5 The settlements of Bilbster and Thersterwyck (Thuster) are shown on the earliest map of Caithness - by Robert Gordon (1642) - which is of sufficient scale to depict this level of detail. By this period, the difference in spelling of the name (Bilbster/Bylbster) between the two parishes of Wick and Watten is apparent, while three settlements with the name - Bylbouster, O. Bilbouster and Nether Bilbuster - are shown. In the early nineteenth century, the frequency with which the **-ster** ending was associated with large farms such as these, was noted by the authors of the Statistical Accounts for Wick (Sutherland 1791, 32; Thomson 1841, **131, 1**). On Roy's map (c. 1747-55), **Bilpster**, lying close to the south bank of the river, is represented as an isolated building within an enclosure; this sets it apart from the neighbouring settlements to the east, which consist merely of small clusters of buildings, suggestive of unimproved townships. Roy also depicts a broad strip of cultivation extending along the lower ground at the bottom of the valley; much grain was apparently exported from Watten to the western parishes at the end of the same century, although all the bere (barley) was distilled for alcohol (Taylor 1792, 269-70). The contrast between improved and unimproved settlements is confirmed by the authors of the first and second Statistical Accounts for Watten and Wick; it is clear that in the earlier accounts, the process of improvement had only just begun (Sutherland 1791; Taylor 1792), but that 40 years later it was advancing quickly (Gunn 1840, 55; Thomson 1841, 145-9).
- 11.7.6 As a whole, the strath was believed to provide very rich grazing for cattle (Thomson 1841, 127) and the importance of this area in a predominantly pastoral economy would seem to be confirmed by the placename, Bilbster. It appears as **Bylebyster** in 1527, indicating that it derives from the Gaelic word, **buaille**, meaning cattle fold, in conjunction with the Old Norse word, **bólstaðr**, for a settlement (Nicolaisen 1982, 82; Watson nd). Equally, the placename, **Sean-airidh**, 'old shieling', which is present on the OS First edition map between Bilbster and Flex (NB, Caithness, Book 12, 172), also suggests the importance of an animal based economy, exploiting the summer grazing on the higher slopes. Wathegar, according to Omand, means the 'enclosure at the ford', from the Old Norse words **vath**, a ford and **garthr**, enclosure (172, 228). The track leading up to Wathegar, which is one of a number which run up on to the higher ground from the valley bottom, may have originally provided access to the hill ground, with the farms growing up along its length. The track would also have facilitated the extraction of peat, the importance of which was emphasised in an account of Watten parish written as long ago as 1726 (Anon. 1726, 180).
- 11.7.7 Though detailed historical research has not been undertaken as part of this assessment, it is clear that - though there appear to be no early references to Wathegar - **it was in existence by 1785, when 'the lands and bow-room and steel-bow goods of Wathiger' formed part of the estate of Stirkoke, sold to satisfy the**
-

## Wathegar 2 Wind Farm: Environmental Statement

---

creditors of George Sinclair of Stirkoke, who had died 50 years earlier in 1735 (Anon. 1863). In 1821, a summons of division of the 403 acres comprising the commonty of Wathegar, was raised by John Horne of Stirkoke against Sir Ralph Anstruther of Balcaskie and others (Adams 1971, 64). The commonty is described as lying between the farm of Wathegar and the commonty of Bylbster. The plan of the disputed area, made by Peter Manson in 1822, is now lost, but the boundary between the two commonties was the parish boundary, just as it forms the western boundary of Wathegar today (ibid.; **Figure 11.3**). It seems possible that the commonty consisted of the area around what is now known as Upper Wathegar (Site 1) and that the farm only came into being following its division in 1823.

- 11.7.8 Even though the name, *Thersterwyck*, first appears on Gordon's map, dating to 1642, the Thuster crofts are probably nineteenth century in date (**Appendix 11.1, Sites 14-18**). In the latter part of the century, the OS Name Book describes Thuster as a 'district comprising a number of large and small farmsteadings', which was – like Wathegar – the property of Major Horne of Stirkoke. In the 1841 census, twelve households at Thuster are mentioned, while in the earliest Valuation Roll for Caithness, there were five smallholdings, in addition to the Farm of Thuster (now Thuster House). It is these five crofts which appear on the north side of the track (**Appendix 11.1, Site 12**) leading to Wathegar on the OS First edition map (1877), though three had gone by the time the map was revised for the Second edition in 1907. Like Wathegar, this group of crofts illustrate the nature of late nineteenth century agriculture in this area, but none – particularly the three which are no longer upstanding – appear to be of more than local significance.
- 11.7.9 Upper Wathegar – and the two undocumented farmsteads just to the west of Lower Wathegar (Hooper 2002, **Sites 1 and 2**) – may well reflect the expansion of settlement in the nineteenth centuries, following the division of the commonties (Bylbster was sub-divided in 1851 (Adams 1971, 62)). The six sheepfolds around Upper Wathegar (**Appendix 11.1, Sites 2-4, 7, 8 and 10**), as well as the *airigh* place name to the west, suggests that grazing remained the primary function of the higher ground even after the improvements – and in spite of the fact that the first of the introduced breeds of sheep did not find the climate particularly congenial (Sutherland 1791, 24; Taylor 1792, 263; Gunn 1840, 53-4). On the OS First edition map (**Figure 11.3**) only one of the sheepfolds is present (1877), though all are present on the Second edition map of 1906. On the early editions of the OS maps, not all of the regularly enclosed fields are shown as improved ground and they are surrounded by rough ground. The aerial photographs, taken in 1946, which show these fields as still being worked, also show peat cuttings just beyond their boundaries. The fact that Lower Wathegar (**Appendix 11.1, Site 13**) was used as a shooting lodge in the later nineteenth century (NB, Caithness, Book 13, 133) also implies there was a fair amount of open moorland in the vicinity. It is the landscape of the later nineteenth century which largely determines the appearance of the area today.

## Wathegar 2 Wind Farm: Environmental Statement

---

### 11.8 Assessment of Construction Impacts

11.8.1 The direct impact which individual turbines and ancillary services would have on the archaeological resource of the Wathegar proposal area is given in **Table 11.3**. This has been assessed on the basis of the final plan submitted as part of the EIA. If subsequent changes to this plan mean that more archaeologically sensitive areas are forced to undergo ground disturbance, any groundworks necessary in this construction work may need to be subject to an archaeological watching brief. This should be maintained by an appropriately qualified field archaeologist and time and resources should be dedicated to the elucidation of any archaeological remains exposed during such works.

Site	Name	Description	Grid Ref. (All ND)	Sensitivity	Impact
007	Wathegar	Sheepfold	28330 50133	Low	Negligible
008	Wathegar	Sheepfold	28794 50916	Low	Negligible
009	Wathegar	Clearance heaps	28222 50250	Negligible	Negligible
010	Wathegar	Sheepfold	29062 50293	Low	Negligible
011	Wathegar	Field boundary	28688 51033	Low	Negligible
012	Thuster-Wathegar	Trackway	29527 52250 28177 50650	Low	Negligible
013	Lower Wathegar	House; steading	28410 51288	Low	Negligible
014	Thuster	Croft	29397 51980	Negligible	Negligible
015	Thuster	Croft	29266 51902	Negligible	Negligible
016	Thuster	Croft	29167 51844	Negligible	Negligible
017	Thuster	Croft	28955 51720	Low	Negligible
018	Thuster	Croft	28832 51670	Low	Negligible

*Table 11.3 Magnitude of Direct Impacts of the Proposal on the Archaeological Resource within the Application Area*

11.8.2 It must be recognised that in light of the extensive forestry plantations, and their potential for hiding archaeological remains, the probable impacts of the wind farm proposal on the archaeological resource become more difficult to evaluate. This is discussed in more detail below (see **Section 11.9**).

#### Proposed Mitigation Measures and Recommendations

11.8.3 On the basis of the assessment of the significance of the individual elements of the archaeological resource, and the potential impact of the proposed development, mitigation measures to protect identified archaeological features are proposed. Mitigation measures which refer to specific archaeological sites are dealt with in **Appendix 11.1**, but more general recommendations relating to the proposal area are given here.

11.8.4 The twelve archaeological sites within the planning application site boundary will be subject to a high degree of visual impact. None of these sites are individually

## Wathegar 2 Wind Farm: Environmental Statement

---

or collectively of enough archaeological significance in their local and regional context for this visual impact to be a particular concern.

- 11.8.5 If any of the recorded archaeological sites were to be directly affected by the siting of turbines, access roads or any other ancillary services associated with this development, their presence would have to be taken into account. In all cases where the location of any of the works associated with the development would pass close to an area of identifiable archaeological activity, a 20m exclusion zone should be placed around the periphery of the site. These exclusion zones should be marked out on the ground by unique and readily visible means prior to the commencement of any works. Care should be taken to minimise disturbance in the vicinity of these areas, but - given their already disturbed state as a result of the forestry planting - none of the sites are considered to be of enough importance to be recorded archaeologically prior to work being undertaken in their vicinity.
- 11.8.6 Not used
- 11.8.7 In order to minimise the potential for damage to the archaeological resource outside the immediate development footprint of the wind turbines, construction sites and access roads, activity during the development of the wind farm should be restricted to the line of the site roads and to the immediate locations of the turbines and construction areas.
- 11.8.8 The majority of the application site is devoid of 'visible' archaeological remains. While this may indicate a lack of past human activity in these areas, it must be stressed that the presence of the tree plantations makes it very difficult to be certain that there are no sub-surface remains present. If any archaeological features are discovered during groundworks, they would have to be subject to an archaeological watching brief. It is, however, considered that, since the area has already been ploughed in advance of the forestry plantations, there would be little benefit in carrying out further evaluation (by trial trenching) prior to groundworks taking place or in maintaining an archaeological watching brief during the construction phase.
- 11.8.9 Stray finds - such as the fairly recent discovery of Mesolithic flint scatters at Oliclett, near the Loch of Yarrows, found during forestry planting - do highlight the potential for discoveries to be made during any sub-surface works. Contractors working on the implementation of the scheme should be made aware of the identified sites and the potential for the discovery of additional features or finds within this area. Any discoveries should be notified immediately to the Highland Council Archaeology Unit.

### **Significance of Residual Effects**

- 11.8.10 The construction of the project within the application boundary could lead to the discovery of currently unknown archaeological sites. The residual impacts of construction could include changes in drainage levels or possible damage to sites within the wind farm area through vibration. It is considered that these effects are *negligible* in all cases.



## Wathegar 2 Wind Farm: Environmental Statement

---

### 11.9 Assessment of Operational Impacts

- 11.9.1 There will be no threat to the archaeological resource during the operational phase of the development. It is believed that operational traffic is unlikely to cause damage to these sites through vibration, even over a number of years.
- 11.9.2 The eight scheduled ancient monuments (SAMs) and two Category A Listed Buildings (LBs) that are located within 5km of the proposed development have been assessed in accordance with the principles laid out below. The results of this assessment are presented in **Table 11.6**. Five further SAMs within 10km of the wind farm were highlighted by Historic Scotland in their Scoping Opinion for Wathegar Wind Farm (**Table 11.8**). Of these, discussion of only Camster, broch 275m E of (SAM 536) was specifically requested by Historic Scotland for Wathegar 2.
- 11.9.3 Highland Council specifically requested discussion of three of the SAMs within 5km of the application boundary: Strath, Cairn and Hut Circles; Bilbster Chambered Cairn and North Bilbster Standing Stone. They also requested analysis of two further Listed Buildings, of regional importance, which lie within 5km of the development: Stirkoke House and Bilbster House. The other regionally important LBs that is located within 5km from the proposal, Bridge of Haster, has also been included in the assessment (**Table 11.7**).
- 11.9.4 The location of the SAMs and Listed Buildings within 5km and 10km on which indirect impacts have been assessed are shown in **Figure 11.4**.
- 11.9.5 An assessment of whether the development will be visible from the remaining SAMs and LBs within 10km is included in **Table 11.9**. In total, there are sixty-eight SAMs and LBs within 10km of Wathegar 2, so generally only where these sites are found in association with those sites selected by Historic Scotland, have they been considered in the discussion below.
- 11.9.6 **In addition, there are three Conservation Areas in Caithness. These are 'areas which the planning authority considers to be of special architectural or historic interest, the character of which it is desirable to preserve or enhance' (Highland Council, Planning & Building Standards Help & Advice Leaflets, Leaflet 13 Conservation Areas).** Of the three Conservation Areas in Caithness - Thurso, Wick (Pultneytown) and Lybster - the development will only be visible from Pultneytown and this is discussed briefly below.
- 11.9.7 **All of the three Gardens and Designed Landscapes on Historic Scotland's Inventory (Castle of Mey, Dunbeath Castle and Langwell House, Berriedale) lie more than 20km from the development and do not have visibility to it.**
- Mitigation**
- 11.9.8 No mitigation of operational impacts is possible as these relate to wind turbine visibility. The wind turbines have gone through a landscape and visual design process to deliver a best fit and balanced site within its surrounding landscape. This is discussed in more detail within **Chapter 2: EIA & Design Evolution**.
-

## Wathegar 2 Wind Farm: Environmental Statement

---

### *Residual Operational Impacts*

11.9.9 The indirect impacts on the archaeological resource are detailed in **Table 11.4**. These relate to the visual intrusion of wind turbines into the setting of a nationally or regionally important monument or groups of monuments when the wind farm is in operation.

11.9.10 The significance of the indirect impacts identified in this study are also detailed in **Table 11.4**. The assigned significance is related to the perceived importance of the archaeology involved, and is intended as a guide in the assessment of the impact of the proposed wind farm.

Site ID	Name	Nature	Grid Ref. (all ND)	Sensitivity	Magnitude	Significance
007	Wathegar	Sheepfold	28330 50133	Low	High; visual impact	Minor significance (indirect)
008	Wathegar	Sheepfold	28794 50916	Low	High; visual impact	Minor significance (indirect)
009	Wathegar	Clearance heaps	28222 50250	Negligible	High; visual impact	Negligible significance (indirect and possibly direct)
010	Wathegar	Sheepfold	29062 50293	Low	High; visual impact/ possible ground disturbance during construction work	Minor significance (indirect and possibly direct)
011	Wathegar	Field boundary	28688 51033	Low	High; visual impact	Minor significance (indirect and possibly direct)
012	Thuster-Wathegar	Trackway	29527 52250 - 28177 50650	Low	High; visual impact/	Minor significance (indirect and possibly direct)
013	Lower Wathegar	House; steading	28410 51288	Low	High; visual impact	Minor significance (indirect)
014	Thuster	Croft	29397 51980	Negligible	High; visual impact	Negligible significance (indirect and possibly direct)
015	Thuster	Croft	29266 51902	Negligible	High; visual impact	Negligible significance (indirect and possibly direct)
016	Thuster	Croft	29167 51844	Low	High; visual impact	Negligible significance (indirect and possibly direct)
017	Thuster	Croft	28955 51720	Low	High; visual impact	Minor significance (indirect and possibly direct)

## Wathegar 2 Wind Farm: Environmental Statement

Site ID	Name	Nature	Grid Ref. (all ND)	Sensitivity	Magnitude	Significance
018	Thuster	Croft	28832 51670	Low	High; visual impact	Minor significance (indirect and possibly direct)

*Table 11.4. Magnitude and Sensitivity of Indirect Impacts of the Proposal on the Archaeological Resource.*

### *Assessing the Significance of Indirect Effects on Archaeological Features*

11.9.11 Given that there is no generally accepted methodology for the assessment of the indirect impact of the development on the setting of archaeological sites and listed buildings – particularly where the cumulative impact of similar developments is concerned – all the factors mentioned above can clearly be crucial to the understanding of an individual site. The criteria for determining the significance of the development in relation to the sensitivity of the site and magnitude of the impact are the same as those used to assess the impact of the development on sites within the proposal area (see **Table 11.2**). The results are given in **Tables 11.6-11.8** and the reasoning behind these judgements have been discussed in more detail below. This is prefaced by a more general discussion of sites within the 35km Zone of Theoretical Visibility.

### *Predicted Visual Impacts*

11.9.12 Archaeological sites and historic buildings, whether abandoned or still lived in and used, cannot be divorced from the landscape in which they are situated. No landscape is entirely 'natural', and will be a palimpsest of human and natural features, some old and some new. The historic environment is dynamic and will be constantly changing. It is within this context that the subsequent discussion should be read.

11.9.13 The 35km Zone of Theoretical Visibility (**Figure 6.5**) reveals wide-ranging areas of visibility, extending approximately 20km to the north, 10km to south and east, with patchier visibility up to 30km to the west. In an open, undulating landscape with long views in all directions, such as Caithness, wind farm developments will be highly visible and may have a considerable visual impact on the surrounding landscape. Given that many of the most prominent archaeological sites are on higher ground, the impact of any new development on some of the best preserved archaeological landscapes in the Highlands has the potential to be significant.

11.9.14 In Caithness, these landscapes include Yarrows (c. 8km to the S), which is discussed in more detail below, and Warehouse (c. 10km to the S). On the open moorland of Warehouse Hill and around Loch Watenan, there are important clusters of prehistoric monuments (for details of these sites, see **Table 11.9**). These form one of the best preserved archaeological landscapes in the Highlands and Scotland as a whole, comprising early prehistoric burial and ritual monuments, as well as later prehistoric settlement sites, such as brochs and hut circles. However, the wind farm would only be visible from the group of burial cairns at the north end of Warehouse Hill (SAM 436), c. 8.8km to the south east

## **Wathegar 2 Wind Farm: Environmental Statement**

---

of the development (**Figure 11.5**). At this distance, the wind turbines will appear as a small component of the wider landscape, one of a number of similar developments visible to the northwest of the site beyond the higher Hill of Yarrows.

- 11.9.15 To the north west of the Wathegar developments, visibility will extend as far as Spittal Hill, just over 10km away, while - slightly further to the north - Sordale Hill, 15km away, with its cluster of prehistoric monuments, would have views of the wind farm (**Figure 11.6**). From the similar concentration of prehistoric monuments on Ben Dorrery, the wind farm development would also be visible, though at a distance of over 20km. Wathegar 2 will, therefore, add little to the existing landscape.

## Wathegar 2 Wind Farm: Environmental Statement

**Table 11.6 Significance Assessment of Scheduled Ancient Monuments and Category A Listed Buildings within 5km of the Development**

SAM/ HB no.	Name	NMRS no.	NGR	Approx. distance from Upper Wathegar	Tip visibility	Sensitivity of setting	Magnitude of impact	Significance
SAM 431	Bilbster, chambered cairn 1040m NNE of Bylbster Bridge	ND25SE 10	ND 2695 5472	4.0km	7-9	Medium; on edge of terrace above river, so intended to be a prominent feature in landscape	Low; Wathegar 2 will be one of a number of wind farms in the foreground of views to the S	Minor
SAM 3520	Strath, cairn and hut circles 1070m S of	ND25SE 3	ND 258 509	2.5km (nearest turbine)	1-3	Medium; surviving prehistoric landscape within open ground	Negligible; the blade tips of 1 turbine will be a negligible addition to Wathegar and Flex Hill in the foreground of views to the E	Negligible
SAM 8484	North Bilbster, standing stone 120m W of	ND25SE 11	ND 2829 5381	2.7km	7-9	Medium; on edge of terrace above river, so intended to be prominent in landscape. Close to later prehistoric sites	Low; Wathegar 2 will be one of a number of wind farms in the foreground of views to the S	Minor

## Wathegar 2 Wind Farm: Environmental Statement

SAM/ HB no.	Name	NMRS no.	NGR	Approx. distance from Upper Wathegar	Tip visibility	Sensitivity of setting	Magnitude of impact	Significance
SAM 3666	Achalipster, corn kiln and barn	ND24NW 5, 6	ND 2420 4910	4.5km	7-9	Low; surrounded by other ruined buildings and improved fields. Large areas of forestry to S. On higher ground than Wathegar development	Low; Wathegar 2 will be one of a number of wind farms forming a prominent element in views to the NE, with Camster in the foreground to the SE	Negligible
SAM 583	Stemster, broch 300m SSE of	ND35SW 5	ND 3384 5029	4.6km	7-9	Low; ploughed out remains of a broch, not marked on the OS map. Within enclosed, intensively farmed landscape, so little sense of contemporary land use	Low; Wathegar 2 will be one of a number of wind farms visible to the W	Negligible

## Wathegar 2 Wind Farm: Environmental Statement

SAM/ HB no.	Name	NMRS no.	NGR	Approx. distance from Upper Wathegar	Tip visibility	Sensitivity of setting	Magnitude of impact	Significance
SAM 553	Green Hill, broch 300m W of Mordwall	ND35SW 10	ND 3266 5445	4.9km	7-9	Medium; a prominent site on sloping ground. Within enclosed, intensively farmed landscape, so little sense of contemporary land use	Low; Wathegar 2 will be one of a number of wind farms visible to the SW and W	Minor
SAM 10105	Thrumster, settlement beside Burn of Swartigill	ND34NW 42	ND 31019 45524	4.9km	0	Medium; Low mound, surmounted by substantial stonework. Surrounded by rough, unenclosed ground, allowing numerous archaeological sites of various periods to survive. Not on OS map	Negligible; the Wathegar turbines will be invisible behind Tannach Hill	Negligible



## Wathegar 2 Wind Farm: Environmental Statement

SAM/ HB no.	Name	NMRS no.	NGR	Approx. distance from Upper Wathegar	Tip visibility	Sensitivity of setting	Magnitude of impact	Significance
SAM 586	Tannach Mains, broch 275m N of	ND34NW 5	ND 3236 4748	4.1km	7-9	Medium; though damaged, still a prominent mound close to the road	Negligible; Wathegar 2 will be one of a number of wind farms visible to the NW, beyond forest plantations	Negligible
LB 14088	Sibster Farm Steading (Sibster Farm, Farmhouse, Farmsteading, West Range, Kiln and Horse Engine House, South Range, Dwelling) (Listed A)	ND35SW 17.00 ND35SW 17.01 West Range ND35SW 17.02 South Range ND35SW 17.03 Dwelling ND35S W 17.04 East Range	ND 32307 52994 ND 32361 52986 ND 32362 52950 ND 32378 52985 ND 32423 52973	3.8km	7-9	Medium; designed to be an impressive feature in the centre of its associated agricultural landscape	Low; Wathegar 2 will lie in front of a number of wind farms to the S and SW of the site, but will add little to their cumulative impact	Minor
LB 14976	Achingale Mill (Listed A)	ND25SW 27	ND 24053 53471	5km	7-9	Medium; surrounded by landscape containing elements of contemporary land use. On low ground by burn	Low; Wathegar 2 will be one of a number of wind farms visible in views to the SE and when approaching the site	Minor

## Wathegar 2 Wind Farm: Environmental Statement

**Table 11.7 Significance Assessment of other Listed Buildings within 5km of the Development**

SAM/ HB no.	Name	NMRS no.	NGR	Approx. distance from Upper Wathegar	Tip visibility	Sensitivity	Magnitude of impact	Significance of impact
14076	Billbster House (Listed C(S))	ND25SE 16	ND 28196 53368	2.3km	7-9	Medium; occupied laird's house in a sheltered location, surrounded by trees	Low; Wathegar 2 will fill in the gap between Achairn and Wathegar in views to the S from the environs of the house	Minor
14089	Stirkoke House and Adjoining Service Range (Stirkoke House) (Listed B)	ND35SW 18.00	ND 31799 50626	2.5km	7-9	Medium; baronial mansion, now a ruin. Surrounded by a designed landscape	Low; though it will extend the array of turbines to the S, Wathegar 2 will be one of a number of wind farms visible in views to the W from the environs of the house	Minor
14077	Haster, Bridge of Haster over Achairn Burn (Listed B)	ND35SW 19	ND 3276 5119	3.3km	7-9	Medium; still in use	Low; Achairn will be a more prominent element in views to the SW	Negligible

## Wathegar 2 Wind Farm: Environmental Statement

**Table 11.8 Significance Assessment of selected Scheduled Ancient Monuments within 10km of the Development**

SAM/ HB no.	Name	NMRS no.	NGR	Approx. distance from Upper Wathegar	Tip visibility	Sensitivity	Magnitude of impact	Significance
SAM 536	Camster, broch 275m E of	ND24NE 5	ND 2555 4558	5.4km	On boundary	Medium; surrounded by sites of various periods, including another scheduled broch. On a knoll on the edge of an escarpment. Already compromised by surrounding forestry plantations	Negligible; greater impact from nearby consented Camster development	Negligible
SAM 551	Green Hill, broch, West Watten	ND25NW 9	ND 2299 5502	6.8km	7-9	Medium; grass covered mound within garden of house	Negligible; Wathegar 2 will be one of a number of wind farms to the S and E, visible in views to the SE when approaching the site	Negligible
SAM 589	Thrumster Little, broch, Thrumster	ND34NW 2	ND 3384 4583	6.3km	7-9	Medium; the farm forming its immediate setting will be dominant feature	Low; turbines will appear beyond forest plantations in views inland	Minor

## Wathegar 2 Wind Farm: Environmental Statement

SAM/ HB no.	Name	NMRS no.	NGR	Approx. distance from Upper Wathegar	Tip visibility	Sensitivity	Magnitude of impact	Significance
SAM 609	Nether Banks, broch 220m NNE of	ND25SW 13	ND 2410 5397	5.3km	7-9	Medium; on edge of terrace on W side of Acharole Burn. Survives as a tall grass covered mound within intensively famed landscape	Low; Wathegar 2 will be one of four wind farms to the S and E, visible in views to the SE and when approaching the site	Minor
SAM 721	Scouthal Burn, chapel and The Clow	ND25SW 3.00	ND 2331 5245	5.1km	1-3	Medium; rising ground between site and wind farms to east. Chapel and associated later features well known locally	Negligible; Wathegar 2 will be one of four wind farms visible in views to the SE when approaching the site, though invisible from the site itself	Negligible

## Wathegar 2 Wind Farm: Environmental Statement

**Table 11.9 Scheduled Ancient Monuments and Listed Buildings within 10km of the Development, showing their approximate distance from the development and tip visibility**

N.B. Excludes Wick's Listed Buildings, at a distance of c. 8km from the development, most of which would have 7-9 turbine tips visible

HS no.	Name	Statutory Designation	NMRS no.	NGR	Approx. distance from Upper Wathegar	Tip visibility
435	Cairn Reain, chambered cairn, North Yarrow, Thrumster	SAM	ND34SW 32	ND 31093 44295	7km	0
436	Cairns of Warehouse, cairns at N end of Warehouse Hill	SAM	ND34SW 41 ND34SW 69 ND34SW 70 ND34SW 71 ND34SW 72	ND 30567 42276 ND 30919 42324 ND 30573 42081 ND 30507 42107 ND 30931 42339	8.8km	7-9
450	Gallow Hillock, cairn on Backlass Hill	SAM	ND25SW 2	ND 2049 5411	8.4km	7-9
451	Gansclet School, standing stone 275m WNW of, Thrumster	SAM	ND34SW 21	ND 33824 44731	8.1km	7-9
452	Grey Cairn, broch 475m SE of Lynegar	SAM	ND25NW 3	ND 2304 5662	7.5km	7-9
455	Barns of Hempriggs, chambered cairn 550m SSE of	SAM	ND34NE 1	ND 3617 4680	9.2km	7-9
463	Loch of Camster, stone rows 400m WSW of S end of	SAM	ND24SE 3	ND 2602 4377	7.2km	0
465	Lynegar, cairn 610m NE of	SAM	ND25NW 5	ND 2330 5740	8.5km	7-9
466	Mains of Ulbster, chambered cairn 900m NNW of	SAM	ND34SW 2	ND 33220 42941	9.2km	0
467	<b>McCole's Castle</b> , chambered cairn	SAM	ND34SW 40	ND 31612 43364	8km	7-9
472	Oslie, chambered cairn S of Lynegar House	SAM	ND25NW 1	ND 2271 5679	8.4km	7-9
506	Loch of Yarrow, stone rows 350m SE of North Yarrow	SAM	ND34SW 22	ND 31290 44019 ND 31291 44125	7.1km	0
507	South Yarrow, long cairn 220m NW of	SAM	ND34NW 6	ND 30492 43464	7.5km	7-9
508	South Yarrow, long cairn 210m SW of	SAM	ND34SW 5	ND 30463 43195	7.7km	7-9
527	Borrowston, broch 260m S of	SAM	ND34SW 8	ND 32881 43536	8.4km	0

## Wathegar 2 Wind Farm: Environmental Statement

HS no.	Name	Statutory Designation	NMRS no.	NGR	Approx. distance from Upper Wathegar	Tip visibility
533	Cairn of Humster, broch 200m N of Northfield	SAM	ND34NE 3	ND 3529 4848	7.4km	0
537	Camster, broch S of	SAM	ND24NE 4	ND 2520 4518	6.2km	7-9
540	Castle Linglas, broch, Keiss Links	SAM	ND35NW 4	ND 3385 5831	9.6km	0
548	Garrywhin, fort and settlement, Ulbster	SAM	ND34SW 3 ND34SW 56	ND 31253 41377 ND 31245 41418 ND 31261 41448	9.8km	0
549	Gearsay Cairn, broch 240m SW of West Gersa	SAM	ND25NE 2	ND 2726 5819	7.6km	7-9
591	Toftgun, broch 365m SSE of, Loch of Camster	SAM	ND24SE 6	ND 2798 4241	8.2km	7-9
605	Warehouse, hut circles 800m N of, Ulbster	SAM	ND34SW 52	ND 30370 41924 ND 30406 41831	9km	0
610	Loch of Yarrows, hut circles and cairns 500m SSE of South Yarrows	SAM	ND34SW 44 ND34SW 45 ND34SW 51	ND 30896 42869 ND 30941 42762 ND 30983 42891	8.3km	4-6
611	Loch of Yarrows, broch on SW side of, Thrumster	SAM	ND34SW 1	ND 30832 43497	7.6km	On boundary
612	South Yarrows, hut circle and kiln barn 450m W of	SAM	ND34SW 13  ND34SW 91	ND 30300 43325 ND 3029 4331 ND 30246 43371	7.5km	1-3
664	Warehouse, broch and outworks 100m N of, Ulbster	SAM	ND34SW 43	ND 30348 41227	9.6km	0
883	Hempriggs House Lodge, broch	SAM	ND34NE 4	ND 3511 4717	7.7km	7-9
2659	<b>Kirk o'Moss, site of St Duthac's Chapel, Moss of Killimster</b>	SAM	ND25NE 7	ND 2928 5632	5.9km	7-9
3986	Scottag Cairn	SAM	ND25NE 5	ND 2566 5699	6.9km	7-9
5732	Chapel of Dunn, chapel, 300m SW of Oldhall House	SAM	ND25NW 12	ND 2023 5602	9.6km	On boundary
5799	Toftgun, cairn and shieling 1950m SSE of	SAM	ND24SE 8	ND 2852 4093	9.6km	0
8516	Loch of Yarrows, hut circle 450m SSE of S end of loch	SAM	ND34SW 50	ND 31239 42722	8.5km	7-9
8520	Loch of Yarrows, cairn 550m ENE of South Yarrows	SAM	ND34SW 48	ND 31225 43367	7.8km	3-6

## Wathegar 2 Wind Farm: Environmental Statement

HS no.	Name	Statutory Designation	NMRS no.	NGR	Approx. distance from Upper Wathegar	Tip visibility
8521	Loch of Yarrows, two cairns 700m ENE of South Yarrows	SAM	ND34SW 46 ND34SW 47 ND34SW 231	ND 31401 43329 ND 31373 43332 ND 31387 43329	7.8km	7-9
8533	Loch of Yarrows, hut circle 300m ESE of South Yarrows	SAM	ND34SW 53	ND 30968 43208	7.9km	1-3
14064	Thrumster House	Listed B	ND34NW 20	ND 33150 45270	7.3km	7-9
14068	Wester Bridge of Wester over Wester River (Bridge of Wester)	Listed B	ND35NW 18	ND 33110 58692	9.5km	0
14072	Ackergill Tower, Garden Walls, Walled Gardens And Stable Range (Ackergill Tower, Stables and Walled Garden)	Listed A	ND35SE 16.00 ND35SE 16.04 Stables ND35SE 16.05 Gardens	ND 3528 5466  ND 35176 54727  ND 35228 54669	8.2km	0
14073	Ackergill Tower Dovecotes (Ackergill Tower, Dovecotes)	Listed B	ND35SE 16.02 ND35SE 16.03	ND 35208 54590 ND 35297 54549	8.1km	7-9
14074	Ackergill Mains (Ackergill Mains, East And West Ranges)	Listed B	ND35SE 63	ND 35271 54025	7.9km	7-9
14075	Ackergill Shore, Former Life Boat House (Ackergillshore, Boathouse)	Listed B	ND35SE 75	ND 35879 54513	8.5km	On boundary
14078	Hempriggs, Cottage opposite main entrance drive, facing A9 road (Hempriggs House, Cottage)	Listed C(S)	ND34NE 7.06	ND 35029 47123	7.7km	7-9
14079	Hempriggs House and Stable / Carriage House (Hempriggs House)	Listed B	ND34NE 7.00, 7.03	ND 35488 47234	8km	7-9
14090	Tannach Mains	Listed B	ND34NW 39	ND 32431 47201	5.4km	7-9
14975	Achingale Bridge Over The Wick River (Achingale Bridge)	Listed B	ND25SW 50	ND 24358 54307	5.2km	1-3
14978	Watten Cross Roads Thor House (Watten, Cross Roads, Thor House)	Listed B	ND25SW 24	ND 24165 54407	5.5km	7-9
14979	Watten Mains	Listed B	ND25NE 30.00	ND 25215 56154	6.3km	7-9



## Wathegar 2 Wind Farm: Environmental Statement

HS no.	Name	Statutory Designation	NMRS no.	NGR	Approx. distance from Upper Wathegar	Tip visibility
42304	26 Broadhaven (W McDonald)	Listed B	ND35SE 288	ND 3802 5140	9.8km	0
42306	Coastguard Station, Old Lookout Tower (Wick, Coastguard Station)	Listed B	ND34NE34.00	ND 37401 49875	9.2km	On boundary
42315	Hillhead Farm East and West Kilns and Abutting Ranges of Farm Buildings	Listed B	ND35SE 210	ND 3728 5144	9.1km	7-9
50835	Thrumster, South Yarrows Croft House, Byres And Boundary Walls	Listed C(S)	ND34SW 474	ND 30694 43298	7.7km	7-9
90056	Grey Cairns of Camster	SAM	ND24SE 1, 16	ND 2601 4420 ND 2608 4403	6.7km	0
90065	Wick, Castle of Old Wick	SAM	ND34NE 2	ND 3692 4883	8.9km	On boundary

## Wathegar 2 Wind Farm: Environmental Statement

---

- 11.9.16 Large areas to the west of the A9, less well known archaeologically, could also have no views of the wind farm. In all of these views, Wathegar 2 would form another element in the built landscape, either behind the Flex Hill and Wathegar Wind Farms or filling in the gap between the neighbouring Flex Hill/Wathegar and Achairn wind farms and adding relatively little to the cumulative impact of these developments. At such a distance, the turbines will just break the skyline and become one of a number of features, adding both horizontal and vertical elements to the landscape.
- 11.9.17 To the north and east, the impact of the Wathegar 2 will be greater, but in all cases, will be in addition to the Flex Hill, Wathegar and Achairn developments. Archaeological sites tend to be clustered on low lying ground around the coast (particularly around **Sinclair's Bay**) and along river valleys such as that of the Rivers Thurso and Wick, where the amount of human activity will have resulted in a densely occupied landscape from the prehistoric period onwards. To the north, visibility does not extend as far as the coast, except around Dunnet, over 20km away, but to the east visibility ranges from just north of Keiss around to Thrumster, with another band of visibility to the north of Freswick Bay, again at a distance of just over 20km.
- 11.9.18 The shoreline round **Sinclair's Bay**, with the exception of the length between Ackergill Tower and the south end of Keiss Links, will have uninterrupted views south east towards Wathegar 2, which will also include the neighbouring Flex Hill, Wathegar and Achairn wind farms. Views from Keiss, with its collection of listed buildings and impressive brochs, will be mitigated both by distance (all are over 10km from the development) and by the proximity of other buildings and sharper changes in topography close to the coast.
- 11.9.19 The main areas of settlement in Caithness would have some visibility to the development, though this does not include Castletown, Thurso, Halkirk or much of the Thurso river valley to the north and south of Halkirk. All of Wick, including the Conservation Area of Pultneytown, which lies much nearer to the development (c. 8km), would have views towards Wathegar 2. However, the turbines would only just break the skyline and views are likely to be further broken up by other intervening features.

### Indirect Effects within 5km (Table 11.6)

#### *Strath, cairn & hut circles 1070m S of (SAM 3520)*

- 11.9.20 To the west of the development area is a cluster of archaeological sites, including Carn Liath, a large cairn in which human remains were found in the nineteenth century, and a group of ten hut circles, collectively known as Strath. Though there are no associated cultivation remains, there is another stony mound, which may be a cairn and a possible burnt mound within the group. They form a good example of an Iron Age settlement, which includes a possibly earlier burial cairn. The sites are on a west facing slope, looking down over the Strath Burn, where there are further prehistoric sites. The hubs of two of the consented Wathegar turbines, along with the blade tips of the other three turbines, will break the skyline behind them to the east - with the existing Flex Hill turbines further north
-

## Wathegar 2 Wind Farm: Environmental Statement

---

(**Figure 11.7a** and **11.7b**). The blade tips of one of the proposed Wathegar 2 turbines will be only just visible behind those of Wathegar 1. The consented Stroupster and Camster wind farms would appear towards the edge of the view, to the north and south respectively, though at a much greater distance. In the opposite direction, Causeymire wind farm will be over 10km away. The nearest Wathegar 2 turbine will be 2.5km away from the grid reference given for the site, further away than the closest of the Flex Hill turbines at 1.5km or those of Wathegar at 1.68km. Given that the hut circles are likely to have been oriented on the more low-lying ground running down to the valley of the Wick river and the burns feeding into it, and that the blade tips of only one turbine will add to cumulative impact of the existing and consented wind farms, the significance of the development on these monuments has been assessed as *negligible*.

*Bilbster, chambered cairn 1040m NNE of Bylbster Bridge (SAM 431)*  
*North Bilbster, standing stone 120m W of (SAM 8484)*

11.9.21 Prehistoric and later sites are clustered along the Wick river valley. Amongst them are two burial and ritual monuments which date back to the Neolithic and Bronze Age periods - the chambered cairn near Bylbster Bridge and the standing stone at North Bilbster, which are located 4.2km and 3.2km respectively from Upper Wathegar. Both will have open views to the development, which lies to the south. The standing stone at North Bilbster is 2.5m high and stands on the edge of a terrace just to the south of the Wick River. Although much of its context will have been lost over time, there are later features close by, including a broch, another possible broch mound to the south and a circular enclosure, thought locally to be a graveyard, to the south east. All of these sites suggest the importance of this area for prehistoric settlement, with the standing stone perhaps its focal point. The chambered cairn is a large grass covered mound, with numerous depressions in its top. It too lies on a river terrace, this time on the south side of the Wick River. It is surrounded by undulating ground, which preserves traces of structures and cultivation remains, though these are again probably of much later date. From the standing stone, the most westerly of the Wathegar turbines will lie immediately behind the easternmost turbine of the Flex Hill Wind Farm, with the three turbines of Achairn visible some distance to the east (**Figure 11.10**). The nine turbines of Wathegar 2 would fill in the gap between Wathegar and Achairn. The proposed Burn of Whilk wind farm would be just visible behind Wathegar 2, with the Camster development similarly visible behind Wathegar 1/Flex Hill. From the chambered cairn at Bylbster Bridge, the hubs and blade tips of Wathegar 2 will just break the skyline and, as from the standing stone, would fill in the gap between Achairn and Wathegar, while the Camster development will appear to extend the array of turbines along the skyline to the west (**Figure 11.11**). Causeymire would be visible to the south west, but at a distance of over 10km. From these two sites, the existing and consented wind farms form a relatively prominent element in the landscape, **which would affect the visitor's appreciation** of these sites. However, even though the addition of Wathegar 2 will mean an almost continuous array of turbines along the skyline to the south, it will add relatively little to the cumulative impact of these developments and so its significance has been assessed as *minor*.

## Wathegar 2 Wind Farm: Environmental Statement

---

### Achalipster, corn kiln & barn (SAM 3666)

11.9.22 There are three post-medieval buildings, within 5km of the development, two of which are Category A LBs and one of which is a SAM. The corn kiln and barn at Achalipster, lie c. 4.5km to the SW of Upper Wathegar, just to the west of the road linking Watten and Lybster. There are a number of other ruined crofts on the west facing slopes above the Strath Burn, along with the occupied Badlipster, and the improved fields associated with them stand out as very green amidst the surrounding moorland. The wind farms at Wathegar and Flex Hill will be relatively prominent when approaching the site from north and south, and in views north east from the site itself (**Figure 11.12**). When viewed from the site, Wathegar 2 will overlap with the more easterly of the Wathegar turbines and with the just visible Achairn turbines. However, the proposed Camster Wind Farm is likely to be the more dominant development in these views, as it lies at a similar height. At a distance of over 10 km, the developments at Stroupster, Bower Quarry, and Durran Mains would be just visible to the north east, but, in the opposite direction, Causeymire would not be visible. Given the presence of the existing and consented developments, as well as the large forestry plantations to the east and south of the site, the significance of the impact of the Wathegar 2 development is considered to be *negligible*.

### Achingale Mill (HB 14976)

### Sibster Farm Steading (HB 14083)

11.9.23 Achingale Mill, described as one of the best mills in Caithness (Hume 1977, quoted in NMRS record), lies c. 5km from Upper Wathegar. It is still roofed and retains some of its machinery, including the wheel, while the lade is also clearly recognisable. Like the broch at Nether Banks (see below), the mill would have similar views to the south east to Wathegar 2 and the neighbouring developments (**Figure 11.13**). Two of the Wathegar 2 turbines will extend just beyond (north) of the Wathegar and Achairn turbines. The Camster and Burn of Whilk developments will also be visible further to the west, at a similar distance, with Stroupster to the north east at a distance of over 10km. The mill lies on low ground by the Strath Burn, and is built into the river terrace containing the burn. To the north east of the development (c. 4km from Upper Wathegar), the Square of Sibster lies on slightly higher ground, but with open views to a number of wind farms on the higher ground to the south and west (**Figure 11.14**). The buildings, which form the farmsteading, include an 18thC kiln barn, early 19thC horse mill and later steam powered boiler house. They reflect the changes which have taken place in agricultural practice from the 18th to the 20th centuries. Wathegar 2 will add relatively little to the almost continuous array of turbines including Achairn, Camster, Wathegar, Flex Hill, Causeymire, Spittal Hill, Bower Quarry, Baillie Hill and Durran Mains, if these were all constructed. Separated from these wind farms, the proposed development at Burn of Whilk would lie to the south. Most of these wind farms are more than 10km from Sibster, but Wathegar 2 would be located between the existing Achairn and consented Wathegar developments, with the nearest turbine being approximately 3.4km to the south east. These buildings are both important features of the historic working landscape; the wind farm can be seen simply as another element in a continually evolving landscape.

## Wathegar 2 Wind Farm: Environmental Statement

---

The significance of the Wathegar 2 development has been assessed as *minor* in both cases.

### B and C Listed Buildings within 5km of Wathegar (Table 11.7)

11.9.24 Within 5km of the proposed wind farm are three Listed Buildings, which have been assessed as of local or regional importance. The closest Listed Buildings to the development are the C Listed Bilbster House (HB 14076, to the N) and the B Listed Stirkoke House (HB 14089, to the E). **Figures 11.25** and **11.24** illustrate the views from these houses using wirelines and photomontages. Though both are c. 2.7km and c. 3.6km from Upper Wathegar respectively, the nearest turbine would be slightly closer in each case. Both houses are surrounded by trees, though open views to Wathegar, very similar to those described above for other sites in the Wick river valley, will be possible from their vicinity. Bilbster House is **a laird's house, the core of which is probably early 18thC** in date, though it could have a much longer history. Wathegar 2 would fill in the gap between Achairn and Wathegar, with the blade tips of Burn of Whilk just visible behind it. Stirkoke House, built by the Horne family who owned Wathegar, is a large baronial mansion dating to 1858-9; it burnt down in 1894 and is now a roofless shell, but the designed landscape of which it was the focal point is still extant. From its vicinity, three of the Wathegar 2 turbines would extend the tight array of turbines created by Achairn, Wathegar and Flex Hill to the south. Spittal Hill will be visible behind them. Largely because of the designed landscapes immediately around them, the significance of the impact of Wathegar 2 has been assessed as *minor* for both houses.

11.9.25 The only other Listed Building within 5km of Wathegar 2, Haster Bridge (HB14077, c. 4.6km to the E), would have similarly uninterrupted views towards the development. Two other Listed structures, just over 5km from Wathegar are also discussed here: Achingale Bridge (HB14975, c. 5.2km to the NW of Upper Wathegar), and Thor House, Watten (HB 14978, 5.5km to the NW). The two bridges date to the development of the current road system in the early nineteenth century; Achingale Bridge was built to a Thomas Telford design, though it has subsequently been widened. The early C19th Thor House has a prominent location on the cross roads at the centre of Watten. As structures which have remained in use, all of these buildings are firmly part of the contemporary landscape and, as such, it is considered that the proposed development at Wathegar will have a *negligible* impact upon them.

### Indirect Impacts within 10km (Tables 11.8 and 11.9)

#### Camster, broch 275m E of (SAM 536)

11.9.26 The forestry plantations on Tannach Hill, along with those on the Hill of Yarrows, the Hill of Toftgun, and along the Camster Burn, will affect the visibility of the Wathegar 2 Wind Farm from the prehistoric monuments which run along the Camster Burn. Of these, only the broch to the east of Camster (c. 5.6km to the S) has been selected by Historic Scotland for particular consideration. This broch exploits a natural knoll, which lies on the edge of an escarpment. It is further defended by a ditch, which is now apparent on the west, north and east of the broch and within which there may have been associated outbuildings. This broch

---

## Wathegar 2 Wind Farm: Environmental Statement

---

must once have been intervisible with the other broch at Camster, which lies to the south of the farm (SAM 537, c. 6.2km to the S), though this relationship has now been obscured by the more recent forestry plantations. In the unplanted area are a number of other prehistoric and later monuments, reflecting the more sheltered, better drained ground along the burn. These sites do have value as a group and some - including the more southerly broch - will have views to the wind farm. However, the more easterly broch lies in a pocket of invisibility (**Figure 11.15**), while the much closer Camster Wind Farm will be far more prominent in any views to the north. The impact of Wathegar 2 has, therefore, been assessed as *negligible*. The Grey Cairns of Camster (SAM 90056, c. 6.7km to the S) and the stone rows just to the south of them (SAM 463, c. 7.2km to the S), would also be invisible from Wathegar 2, but the broch at Toftgun (SAM 591, c. 8.2km to the S) and the cairn and shieling to the south of Toftgun (SAM 5799, c. 9.6km to the S), theoretically do have visibility, again with the Camster development in the foreground.

### Scouthal Burn, chapel & The Clow (SAM 721) Nether Banks, broch 220m NNE of (SAM 609)

11.9.27 Along the Strath Burn and the Burn of Acharole are clusters of prehistoric and later sites, of which two are scheduled. The broch at Nether Banks, which is a 3m high grass covered mound with some stone projecting from its base, and the **medieval St Mary's chapel, with associated post-medieval settlement**, at The Clow lie along the Burn of Acharole (**Figures 11.8 and 11.9**). The Clow was excavated in the 1970s, revealing a number of small cists containing skulls and is well known locally. Along the burn itself, where both sites are located, visibility to the turbines will be quite limited - and it will not be visible at all from The Clow, where any views are blocked by rising ground to the east. However, from the Nether Banks broch, the four wind farms of Achairn, Wathegar, Wathegar 2 and Flex Hill will be visible as a tight knit group at a distance of c. 5.3km, with the proposed Camster wind farm, visible to the south east c. 5.1km away; the consented Burn of Whilk wind farm would lie behind Camster and overlap it. The consented Stroupster development would appear to the north east at a much greater distance. Even though all the wind farms to the south and east will be visible when approaching these sites, including from the minor road running along the east side of the Burn of Acharole, it is considered that they will be at such a distance as to appear as part of the wider landscape. There are likely to be strategic and defensive factors underlying the location of the broch. It is positioned right on the edge of the terrace containing the burn and was clearly intended to command views of its surroundings, perhaps an indication of some of overlordship over nearby settlements and fertile land. In spite of its prominence, the impact of the proposal has been assessed as *minor*, its impact mitigated by distance and the number of intervening features. The significance of the impact of the development at Wathegar 2 on The Clow, which is located by the burn itself and is surrounded by higher ground, has been assessed as *negligible*.

### Green Hill, broch, West Watten (SAM 551)

11.9.28 To the west of the Burn of Acharole, is another broch on which the impact of the proposed and existing wind farms to the south and east will also be felt. The

---



## Wathegar 2 Wind Farm: Environmental Statement

---

broch at Green Hill, West Watten is a large grass covered mound, with a partly cleared out entrance passage. It lies within the garden of a house and is surrounded by trees, so its prominence in the landscape is considerably reduced - particularly from the nearby Thurso-Wick road. However, when approaching the site, there will be similarly open views of the existing and proposed wind farms to the south and east (**Figure 11.16**). The four wind farms of Wathegar, Wathegar 2, Achairn and Flex Hill would appear as a single group (Wathegar 2 would be c. 6.8km away), with the consented Burn of Whilk and consented Camster Wind Farms as another group further to the south. The consented Stroupster development would just be visible to the north east, with - in the opposite direction - the wind farm at Causeymire, c. 7km away to the south west. Both the immediate surroundings and the distance mean that the development at Wathegar 2 will have a *negligible* impact on this site. Though in a more prominent location, the impact on Gallow Hillock, a burial cairn on Backlass Hill (SAM 450, c. 8.4km SE), will be similar.

*Green Hill, broch 300m W of Mordwall (SAM 553)*  
*Stemster, broch 300m SSE of (SAM 583)*

11.9.29 To the north and east of the development at Wathegar are another two brochs. The broch known as Green Hill, near Mordwall (c. 5.9km to the NE), lies on a gentle NE-facing slope and has been cut off from higher ground by a very substantial ditch. The broch has been partly excavated, exposing the entrance passage and 'the remains of considerable outbuildings', though it is now entirely grassed over and the outbuildings are no longer visible. Higher ground immediately to the south of the broch will block out all but the tips of the Achairn Wind Farm. The blade tips of Wathegar 2 will extend to the south, infilling the gap between Achairn and the Wathegar and Flex Hill turbines, the hubs of which will also be visible (**Figure 11.17**). Some of the Camster turbines will be visible behind those of Wathegar. To the west of this, a number of existing and proposed wind farms will be visible, of which the most prominent would be the proposed Spittal Hill Wind Farm. The broch at Stemster (c. 5.5km to the E) survives as a low stony mound on top of a natural hillock. Like Green Hill, near Mordwall, this broch also lies within an enclosed agricultural landscape, but in this case, it appears to have been ploughed in the past. Along with Wathegar, Wathegar 2 will lie behind the three Achairn turbines, but two of the Wathegar 2 turbines will extend the array of turbines further to the south (**Figure 11.18**). The Flex Hill turbines lie just to the north and slightly further away. To the south, though Causeymire will only just be noticeable, both the consented Camster and proposed Burn of Whilk wind farms would be visible. To the north, a number of proposed and consented wind farms will also be visible at a distance of over 10km, of which the most prominent would again be Spittal Hill. To the north, Stroupster would be visible at the limit of an 180° view. The significance of the Wathegar development on Green Hill and Stemster has been assessed as *minor* and *negligible* respectively.

11.9.30 Though not highlighted by Historic Scotland in their scoping response, a number of SAMs which lie on the north side of the Wick River will also have open views to the south and east towards the wind farms at Wathegar, Flex Hill and Achairn, as well as the consented development at Camster and proposed development at Burn of Whilk. This includes the group of three sites around Lynegar (**Figure**

---



## Wathegar 2 Wind Farm: Environmental Statement

---

**11.19**), which include a Neolithic chambered cairn (SAM 472), another cairn (SAM 465) and a broch (SAM 452), the closest of which will be c. 7.5km from the Wathegar development. In this case, the consented Wathegar turbines will lie **behind the three Flex Hill turbines, with Wathegar 2 and Achairn's turbines to the east and Camster to the west, all at similar distances.** The development at Burn of Whilk will be visible, partly behind Camster, with the existing Causeymire wind farm, to the west and at a greater distance. This will also apply in the case of the cairn at Scottag (SAM 3986, c. 6.9km to the NW) and the broch at Gersa (SAM 549, c. 7.6km to the N). Unlike the hut circles and cairn at Strath, which lie in rough pasture, all these monuments lie within a more intensively farmed landscape, in which the four closest wind farms will form additional elements. Their distance from the wind farms means that the impact of the turbines will be reduced by the other vertical and horizontal elements in the landscape, of which **the turbines form just one. The exception is Kirk o' Moss in the Moss of Killimster (SAM 2659),** which may be an early Christian chapel later re-used as a shieling site. Here, the sense of separateness suggested by the surrounding open ground and the history of the site (the local people used to resort to the site before sunrise on Christmas to leave an offering of bread, cheese, and a silver coin) would be reduced by any modern development. However, as the site lies c. 5.9km to the N, any impact will be reduced by distance.

*Tannach Mains, broch 275m N of (SAM 586)*  
*Thrumster Little, broch, Thrumster (SAM 589)*

11.9.31 To the south east of Wathegar, the brochs at Tannach Mains and Thrumster Little lie close to the southern and eastern boundaries of the areas of visibility. The broch at Tannach Mains is still a substantial mound, though wartime structures have been built upon it and it has also been dug into, probably on more than one occasion, perhaps during the building of the nearby building cluster or the adjacent road. From Tannach Mains, the three turbines at Achairn would be closest to the site (**Figure 11.20**). Bower Quarry and Durran Mains would be visible beyond them, but at a far greater distance. The hubs of the Wathegar, Wathegar 2 and Flex Hill turbines would be visible just to the west, Wathegar 2 at a distance of c. 5.2km. The proposed developments at Stroupster and Burn of Whilk would lie at the edges of the view, to north and south respectively, at distances of over 10km. Though also grass covered, the outer and part of the inner circumference of the broch at Thrumster Little are visible, along with the 2.5m long entrance passage. From this broch, the arrangement of the wind farms would be similar, with the hubs of the Achairn turbines in the foreground and the blade tips and some of the hubs of the Wathegar, Wathegar 2 and Flex Hill turbines (as well as some of the Camster blade tips) visible behind (**Figure 11.21**). Upper Wathegar lies at a distance of c. 7.4km from Thrumster Little. However, to the south, the Burn of Whilk development would be more prominent from this site, at a distance of about 6km. Both of these monuments lie within an intensively farmed landscape, in which there are now few visible traces of the contemporary Iron Age landscape. The significance of the impact of the Wathegar 2 development on these two sites is, therefore, considered to be *negligible*.

11.9.32 This will also apply to another three scheduled monuments located in their vicinity, all of which are slightly further away; the broch behind Hempriggs House

## Wathegar 2 Wind Farm: Environmental Statement

---

Lodge (SAM 883, c. 7.7km to the SE), the standing stone near Gansclet School (SAM 451, c. 8.1km to the SE) and the chambered cairn at Barns of Hempriggs (SAM 455, c. 9.2km to the SE).

### Thrumster, settlement beside Burn of Swartigill (SAM 10105)

- 11.9.33 Visibility from the lower ground around the Loch of Yarrows, one of the most important archaeological landscapes in Scotland and the focus of an archaeological trail, is patchy, with a large area of invisibility to the north of the loch, running up to Tannach Hill. This includes the late prehistoric wag beside the Burn of Swartigill (c. 5.7km to the SE), from which only the blade tips of the proposed Camster development would be visible (**Figure 11.22**). Wathegar 2 is not visible from this location.
- 11.9.34 Wags are unique to Caithness and this site, in conjunction with the lithic scatters of Mesolithic date found in 2001 at nearby Oliclett, highlights the archaeological significance of the area to the north of the Loch of Yarrows. Most of the more prominent archaeological sites are located on the higher ground to the west, south and south east of the loch. These include the Neolithic burial cairns at South Yarrows (SAM 507, c. 7.5km to the SE; SAM 508, c. 7.7km to the SE; SAM 8520, c. 7.8km to the SE), on the high ground west of the loch, and the hut circles and cairns at the southern end of the loch (SAM 610, c. 8.3km to the SE). However, the immediate setting of these monuments – especially the more sheltered, fertile ground around the loch – is likely to have been more important to the builders of the burial cairns and the occupiers of the hut circles – than the wider landscape. In particular, the South Yarrows cairns are not intervisible with each other and they appear to focus eastwards on the area around the loch. All the existing and proposed wind farms would lie in the opposite direction. Wathegar, Wathegar 2 and Flex Hill would be just visible to the north west, beyond the shoulder of Tannach Hill, with its large areas of forestry plantations. They would appear directly behind each other, with Achairn to the east. In the distance, to the north west of Wathegar 2, the proposed Durran Mains Wind Farm would be visible, with Stroupster to the north east. Part of the Causeymire Wind Farm would be visible in the foreground to the west, but the closer developments at Camster and Burn of Whilk will have considerably more impact. Therefore, Wathegar 2 would form a relatively small and distant element in the wider landscape, amongst a number of other similar developments.
- 11.9.35 As with Bilbster and Stirkoke Houses, the impact on a number of other country houses close to the development will also be limited by the designed landscapes surrounding them (Thrumster House, HB 14064, c. 7.3km to the SE, Hempriggs House, HB 14079, c. 8km to the SE and the cottage opposite the entrance to Hempriggs House, HB 14078, c. 7.7km to the SE). Views from Tannach Mains (HB 14090, c. 5.4km to the SE), which, though not itself surrounded by trees, will be in reality limited by the intervening forestry plantations, while Wathegar 2 will be only one of a number of wind farms visible to its north and west. The substantial farms of Watten Mains (HB14979, c. 6.3km to the NW) and Ackergill Mains (HB14074, c. 7.9km to the NE), will have uninterrupted views towards Wathegar 2, but again it will form a relatively small component amidst the surrounding developments. **Around Sinclair's Bay, Castles Sinclair and Girnigoe (SAM 622, c. 10.6km to the NE), the Listed A lighthouse at Noss Head (HB 14087, c. 11.5km to**

## Wathegar 2 Wind Farm: Environmental Statement

---

the NE) both lie on the edge of patches of invisibility, as does Ackergill Tower, also Listed A, and its associated features (HBs 14072, 14073, c. 8.2km to the NE). See **Figure 11.23**. However, the wind farm (as with those at Flex Hill and Achairn and, at a greater distance, several other proposed and existing developments) will be visible in all views inland from these sites. At this distance, the effect of the development on these sites is considered to be limited. The effect on The Castle of Old Wick (SAM 90065, c. 8.9km to the E), will be similar. Though closer to Wathegar 2, the built features in the environs of Wick are likely to be far more prominent in any views to the west and north from this site.

### 11.10 Conclusions

- 11.10.1 As it should be possible to avoid direct impacts on the recorded archaeological sites within the proposal area during the construction and operation of the Wathegar 2 wind farm, direct impacts on known cultural heritage features should not arise although care must be taken not to accidentally damage features close to construction areas. It is believed that a good understanding of the archaeological significance of the area potentially affected by the proposal has been gained from the surviving structural remains. These upland areas have been utilised over many hundreds of years, but it is unlikely that traces of more ephemeral features, such as cultivation remains, will be easily recoverable, particularly following damage through forestry ploughing. It is doubtful, therefore, that archaeological supervision of groundworks during the construction phase will yield information of archaeological significance, but contractors should be made aware of the potential for stray finds.
- 11.10.2 Much of the historical and cultural significance of archaeological and historical sites is derived from their setting. Natural, and apparently untouched, elements of the landscape are integral to this, perhaps particularly in the case of ruined and abandoned monuments. The archaeological sites recorded within the planning application site boundary will be subjected to a high degree of visual impact, but all of these are considered to be of only local significance. All the buildings and settlements now recognised as scheduled monuments and listed buildings have always formed part of an inhabited, ever changing landscape. The group of hut circles at Strath (SAM 3520) demonstrate that even ritual and burial monuments become firmly part of the living and working landscape. This part of Caithness is principally comprised of enclosed farmland and forestry plantations. Within it there are already a number of prominent vertical features, such as silos and overhead lines. Wathegar 2 can perhaps be seen as another (relatively temporary) element in the history of these landscapes.
- 11.10.3 Though the visibility of the turbines will be high to the south west of the development, the wind farm will simply form another element within the diverse natural and human aspects of the Caithness landscape. As such its impact will be lessened. To the west, north and east of the Wathegar 2, extensive views of the proposed development would occur and the impact on scheduled monuments and listed buildings in this area will be more significant. In archaeological terms, the significance of this site rests on the fact that it represents the survival of a more or less intact prehistoric landscape. However, for all the monuments which lie within 5km of the development, the Wathegar 2 development has to be seen in

## **Wathegar 2 Wind Farm: Environmental Statement**

---

the context of existing and consented developments, of which the Achairn, Flex Hill and consented Wathegar Wind Farms are the most significant.

### **11.11 Acknowledgements**

11.11.1 Thanks are extended to Donald Miller for information on the area. Thanks are also due to the staff of the Highland Council Archaeology Unit, the North Highland Archive, and the Inverness Reference Library for their assistance in making available the resources consulted in this study.

**Appendices 11.1 - 11.3**

**Gazetteer of Sites**



---

## Appendices

### 11.1 Gazetteer of sites

For sites 001-006, see Hooper 2010.



View of sheepfold (Site 007) from SW

**Site 007** Wathegar Sheepfold HER no: MHG53416 ND 28326 50113  
A circular sheepfold, similar to those recorded as Sites 2, 4 and 8, is shown on the OS Second edition map (1906), in an area of rough ground just outside the enclosed fields to the south east of Upper Wathegar. It is clearly visible on the vertical air photographs from 1946 and now lies on the edge of a forestry ride, which appears to have removed most of its southern arc. The sheepfold was probably approximately 12m in diameter. Where best preserved, the coursed block walling stands to 0.7m in height and is 1m wide at the base, tapering slightly upwards. One terminal of an entrance on the east side survives.

*Recommendations* Alongside the other examples recorded at Wathegar, this sheepfold forms an element in the history of post-medieval land use of this area. It lies some distance from the nearest turbines (8 and 9) and associated infrastructure and should not be directly affected by the development. If there are any modifications to the layout of the development, an exclusion zone of 20m should be maintained around it.

**Site 008** Wathegar Sheepfold HER no: MHG53417 ND 28798 50897  
A circular sheepfold, similar to those recorded as Sites 2, 4 and 7, is shown on the OS Second edition map (1906), in a field containing rough pasture to the north east of Upper Wathegar. Like Site 007, it is clearly visible on the vertical air photographs from 1946. The walling stands to 1.2m high for the majority of its northern and eastern arcs, but is much more tumbled alongside the track on its south side. The walling is neatly built of coursed blocks and has a slight batter externally so that it tapers towards the top. The sheepfold is 13m in diameter. There is no obvious entrance

*Recommendations* Alongside the other examples recorded at Wathegar, this sheepfold forms an element in the history of post-medieval land use of this area. It lies some distance from the track linking turbines 2, 3 and 5 and should not be directly affected by the development. If there are any modifications to the layout of the development, an exclusion zone of 20m should be maintained around it.



View of sheepfold (Site 008) from SE

**Site 009** Wathegar Clearance heaps ND 28222 50250

Two piles of cleared stone lie within 20m of the track to the south and 20m to the west of a post and wire fence. The pile closest to the fence is roughly circular in shape and approximately 2m in diameter. c.3m to the west is a linear clearance heap, running 3m N-S and 1m wide. Each heap is only 0.3m in height. Both are located at the end of a plough ridge and, given their proximity to the track and its associated ditches, it is possible that they are of recent occurrence.

*Recommendations* These piles of stone probably relate to the formation of the track or the post and wire fence. They lie some distance from any of the turbines or associated infrastructure and should not be directly affected by the development. If there are any modifications to the layout of the development, an exclusion zone of 20m should be maintained around them.



View of more easterly clearance cairn (Site 009) from the SE

**Site 010** Wathegar Sheepfold ND 29062 50293

Though not shown on the earlier editions of the OS map (1877, 1906), a circular feature is apparent on the large scale current edition OS maps and on the recent aerial



---

photographs available online. It is located to the east of the improved fields associated with the farm, but close to a trackway shown on the OS First edition map running from Upper Wathegar eastwards to Lower Achairn. The walling stands to 1m in height, though it is more broken down in the western quadrant. The entrance was probably in the SE quadrant. The walling is very similar to that of the other sheepfolds and it appears to be 15m in diameter.

*Recommendations* Alongside the other examples recorded at Wathegar, this sheepfold forms an element in the history of post-medieval land use of this area. It lies close to the proposed line of the track providing access to turbine 6. An exclusion zone of 20m should be maintained around it.



View of sheepfold (Site 010) from SE

**Site 011** Wathegar Field boundary ND 28688 51033

Though most of the field boundaries within the Christmas tree plantation are now post and wire fences, often with large ditches adjacent, a 10m long stretch of slab walling does survive near Lower Wathegar. It consists of nine slabs, all of which lean into the ditch on its east side – plus one lying flat. Some of the slabs just slightly overlap (though not all for all of their height), but one slab abuts its neighbour perfectly. To the south, the post-and-wire fence is set back from the ditch, but to the north of the slightly offset junction with an east-west ride, the present post-and-wire fence continues on the same line. The large rounded stones next to the slab fence have probably come out of the adjacent ditches.

*Recommendations* Though only a remnant, this slab fence probably preserves the character of the field boundaries which once enclosed the fields around Wathegar and so a 20m exclusion zone should be maintained around it.

**Site 012** Thuster-Wathegar Trackways ND 29527 52250 - ND 28177 50650

On the earlier editions of the OS map (1877, 1906), a trackway, enclosed by walls or fences, runs from the road at Thuster, to Lower Wathegar and then onto Upper Wathegar. This remains in use as a metalled track, bounded partly by stone walls and partly by post-and-wire fences. As it provides the main access to the Christmas tree plantation between Lower and Upper Wathegar, it has been heavily modified along this part of its length. A large area of hardstanding has been created where it enters the plantation, at its junction with a track running west to Lower Wathegar. A trackway which runs east from Upper Wathegar to Lower Achairn (ND 30347 50177) is also present on the 1877 map. Though no trace of it was recognised within the plantation, it



---

does reappear on the current edition of the map beyond the site boundary - and is visible on the recent aerial photographs available online.

*Recommendations* The improvements for the Christmas tree plantation and the length of the vegetation within the rides have ensured that there are no recognisable traces of these tracks. Therefore, contractors working on the implementation of the scheme should be made aware of their existence and the potential for the discovery of additional features or stray finds in their vicinity.



View of flagstone fence (Site 012) from SW

**Site 013** Lower Wathegar Lodge; steading ND 28410 51288  
Lower Wathegar was used as a shooting lodge in the later nineteenth century (NB, Caithness, Book 13, 133). It is present on the OS First edition map (1877), as a large building, with a substantial U-shaped steading adjacent to it, suggesting that it was originally built as a farm. As it is still in use, it was not visited as part of this field assessment.

*Recommendations* This is an occupied building and should not be affected by the development.

**Site 014** Thuster Croft ND 29397 51980  
A large croft consisting of an L-shaped building, with a garden attached, and two smaller buildings, all of which are roofed, are shown on the north side of the road leading from Thuster to Wathegar on the OS First edition map (1877). The improved area around the buildings appears to correspond to an area of rough ground visible on the recent aerial photographs in this location, though no buildings are shown on the OS Second edition map (1907). There is also a small area of rough ground on the First edition map on the opposite side of the road, though this is no longer visible. The area on the west side of the track is now used as a feeding station for animals as it is slightly mounded and very stony.

*Recommendations* Though there are no obvious remains, it is recommended that any groundworks along this part of the track are avoided. If the track has to be widened, the existing surface should be built up.

**Site 015** Thuster Croft ND 29266 51902  
A single roofed building - at right angles to the road - is shown on the OS First edition map (1877), within a small enclosure. Nothing is apparent in this location on the OS Second edition map (1907) or on current aerial photographs.

---

*Recommendations* Though there are no visible remains, it is recommended that any groundworks along this part of the track are avoided. If the track has to be widened, the existing surface should be built up.



View of fields on N side of Thuster track, in general vicinity of Sites 15 and 16, from SE

**Site 016** Thuster Croft HER no: MHG18389 ND 29167 51844  
NMRS no: ND25SE 28

Two unroofed buildings within a much larger area of rough ground are shown on the OS First edition map (1877). These have been recorded in the National Monuments Record of Scotland and in the Highland Historic Environment Record on the basis of the OS map evidence. Nothing is apparent in this location on the OS Second edition map (1907) or on the current aerial photographs, though a slight mound is visible on the ground.

*Recommendations* Though there are no visible remains, it is recommended that any groundworks along this part of the track are avoided. If the track has to be widened, the existing surface should be built up.



General view of buildings (Site 17) from SW



---

**Site 017** Thuster Croft

ND 28955 51720

A group of three roofed buildings are depicted on the north side of the road on the OS First edition map (1877). One of the buildings has an OS benchmark at its SE corner, whilst the more easterly building has an attached garden which directly borders on the road. A track runs NW from the building towards a well. In addition, there is a further building, with an enclosed garden, lying at right angles to it, on the south side of the road. All four buildings are visible on the OS Second edition map (1907), though the enclosures are slightly more regular. Only the two more easterly buildings are still roofed, but the complex is still in agricultural use, though not lived in and in poor condition. Plasterwork and panelling is present in what would have been the house (the most easterly building on the north side of the road), though its west gable has been removed to convert it into a machinery shed.

*Recommendations* It is recommended that any groundworks along this part of the track are avoided. If the track has to be widened, the existing surface should be built up.

**Site 018** Thuster Croft

ND 28832 51670

A long building on a N-S alignment, with a track leading to it, and a smaller building, aligned E-W, with an enclosed garden immediately to the south, are shown on the OS First edition map (1877). The garden borders on the north side of the road. Both buildings are depicted as roofed on the First edition map. On the OS Second edition map (1907), the long building seems to have been incorporated into a U-shaped complex. The footings of two small buildings are still extant; that closest to the road may correspond to the building forming the south side of the U-shaped complex on the Second edition map.

*Recommendations* It is recommended that any groundworks along this part of the track are avoided. If the track has to be widened, the existing surface should be built up.



General view of buildings (Site 18) from E

## 11.2 Sources Consulted

### 11.2.1 Cartographic Sources

All references are to the National Library of Scotland collections.

Ainslie, J., 1789. *Scotland, drawn from a series of angles and astronomical observations...* Newman 986/EMS.s.26A.

---

Arrowsmith, A., 1807. *Map of Scotland constructed from original materials*. EMS.s.253.

Blaeu, J., 1654a. *Cathenesia*. Auct. *Timotheo Pont.* WD3B/40.

Blaeu, J., 1654b. *Extima Scotiae septentrionalis ora, ubi Provinciae sunt Rossia, Sutherlandia, Cathenesia, Strath-Naverniae, cum vicinis regiunculis quae eis subsunt, etiamque Moravia*. WD3B/36.

Dorret, J., 1751. *A correct map of Scotland from new surveys*. EMS.s.16A.

Gordon, R., 1642. *Cathenesia descripta ex magna ejusdem charta quam lustravit et descripsit Timoth. Pont. / Opera R. Gordonii*. Adv.MS.70.2.10 (Gordon 9).

Institute of Geological Sciences. 1913 (1957). One-Inch Series. *Wick. Drift Edition*. Sheet 116.

Institute of Geological Sciences. 1913 (1957). One-Inch Series. *Wick. Solid Edition*. Sheet 116.

Moll, H., 1745. *The Shires of Caithness and Sutherland. With Strath Navern which is Part of Sutherland Shire*. EMS.b.2.1(30).

Ordnance Survey, 1871 (1877). *Caithness*. First edition. 1:2,500. Sheets XXIV.1, 2, 5, 6, 9, and 10.

Ordnance Survey, 1906. *Caithness*. Second edition. 1:2,500. Sheets XXIV. 1, 2, 5, 6, 9, and 10.

Ordnance Survey, 1871 (1877). *Caithness*. First edition. 1:10,560. Sheet XXIV.

Ordnance Survey, 1905 (1906-7). *Caithness*. Second edition. 1:10,560. Sheet XXIV.

Ordnance Survey, 2007. *Wick & The Flow Country. Lybster, Latheron & Dunbeath*. 1:25,000. Explorer 450.

Roy, W. 1747-55 (1790). *The Military Survey of Scotland*. Sheet 38/2f.

Soil Survey of Scotland. 1987. 1:50,000. Sheet 12. *Thurso and Wick. Land Capability for Agriculture*. The Macaulay Institute for Soil Research Aberdeen.

Taylor, G., and Skinner, A., 1776. *Road from Wick to Thurso*. EMS.b.3.48.

Thomson, J., and Johnson, W., 1820. *Caithness Shire*. Edinburgh: J. Thomson & Co. EMS.s.712(27).

### 11.2.2 Aerial Photographs

9.5.1946	SCOT/106G/UK70	3042-3037 3460-3456	1:10,000
----------	----------------	------------------------	----------

### 11.2.3 Manuscript Sources

Ordnance Survey, 1875. *Original Object Name Books*. County of Caithness, 1875, Books 12 and 13. National Archives of Scotland RH4/23.

1841 *Census Returns*. Held by North Highland Archive.



---

*Valuation Rolls, County of Caithness. 1855-6. Held by North Highland Archive.*

#### **11.2.4 Published Sources**

Adams, I.H., 1971. *A Directory of Former Scottish Commonities*. SRS NS 2.

Anon., 1726. 'Description Parish of Wattin in Caithness, June 1726'. In W. Macfarlane, ed., *Geographical Collections relating to Scotland made by Walter Macfarlane. Vol. II.* edited from Macfarlane's transcript held in the Advocates Library by Sir Arthur Mitchell. 1906. Scottish History Society LI, 179-81.

Anon., 1863. 'Land Rents and Prices of Farm Produce in the end of the Last Century.' *John O'Groat Journal*, March 26 1863. Extract contained in Agricultural Folder in North Highland Archive.

Dagg, C., 2004. *Archaeological Assessment of a Proposed Windfarm Development at Achairn, Stirkoke, Caithness*. Unpublished report, undertaken as part of EIA and deposited with Highland Council's Historic Environment Record.

Gunn, A., 1840. Watten. *The New Statistical Account of Scotland*. Caithness, vol. 15, 49-59.

Historic Scotland, 2009a. *Scottish Historic Environment Policy July 2009*. Crown Copyright.

Available at:

<http://www.historic-scotland.gov.uk/index/heritage/policy/shep.htm>

Historic Scotland, 2009b. *Scoping of Development Proposals. Assessment of Impact on the Setting of the Historic Environment Resource - Some General Considerations*.

Available at:

<http://www.historic-scotland.gov.uk/index/heritage/policy/environmental-assessment.htm>

Historic Scotland, 2009c. *Managing Change in the Historic Environment. Setting*. Consultation draft August 2009.

Available at:

<http://www.historic-scotland.gov.uk/managing-change-consultation-setting.pdf>

Hooper, J., 2002. *Bilbster, Caithness. Proposed Anemometer Mast Location. An Archaeological Assessment*. Unpublished report, undertaken as part of EIA and deposited with Highland Council's Historic Environment Record.

Hooper, J., 2010. *Wathegar, Caithness. Proposed Wind Farm. Archaeology and Cultural Heritage*. Unpublished report, undertaken as part of EIA and deposited with Highland Council's Historic Environment Record.

Nicolaisen, W. F. H., 1982. 'Scandinavians and Celts in Caithness: The Place-name Evidence'. in J. R. Baldwin, ed. *Caithness. A Cultural Crossroads*. Edinburgh: The Scottish Society for Northern Studies, 75-85.

Omand, D., 1972. 'Some Caithness Place Names'. in D. Omand., ed., 1972. *The Caithness Book*. Inverness: Highland Printers Ltd, 222-8.

Scottish Government, 2008. *Scottish Planning Policy 23: Planning and the Historic Environment*. Crown Copyright.

Available at:

<http://www.scotland.gov.uk/Publications/2008/02/13134354/0>

Sutherland, W., 1791. Wick. *The Statistical Account of Scotland*. Caithness, vol. x, 1-33.

Taylor, J., 1792. Wattin. *The Statistical Account of Scotland*. Caithness, vol. xi, 259-275.

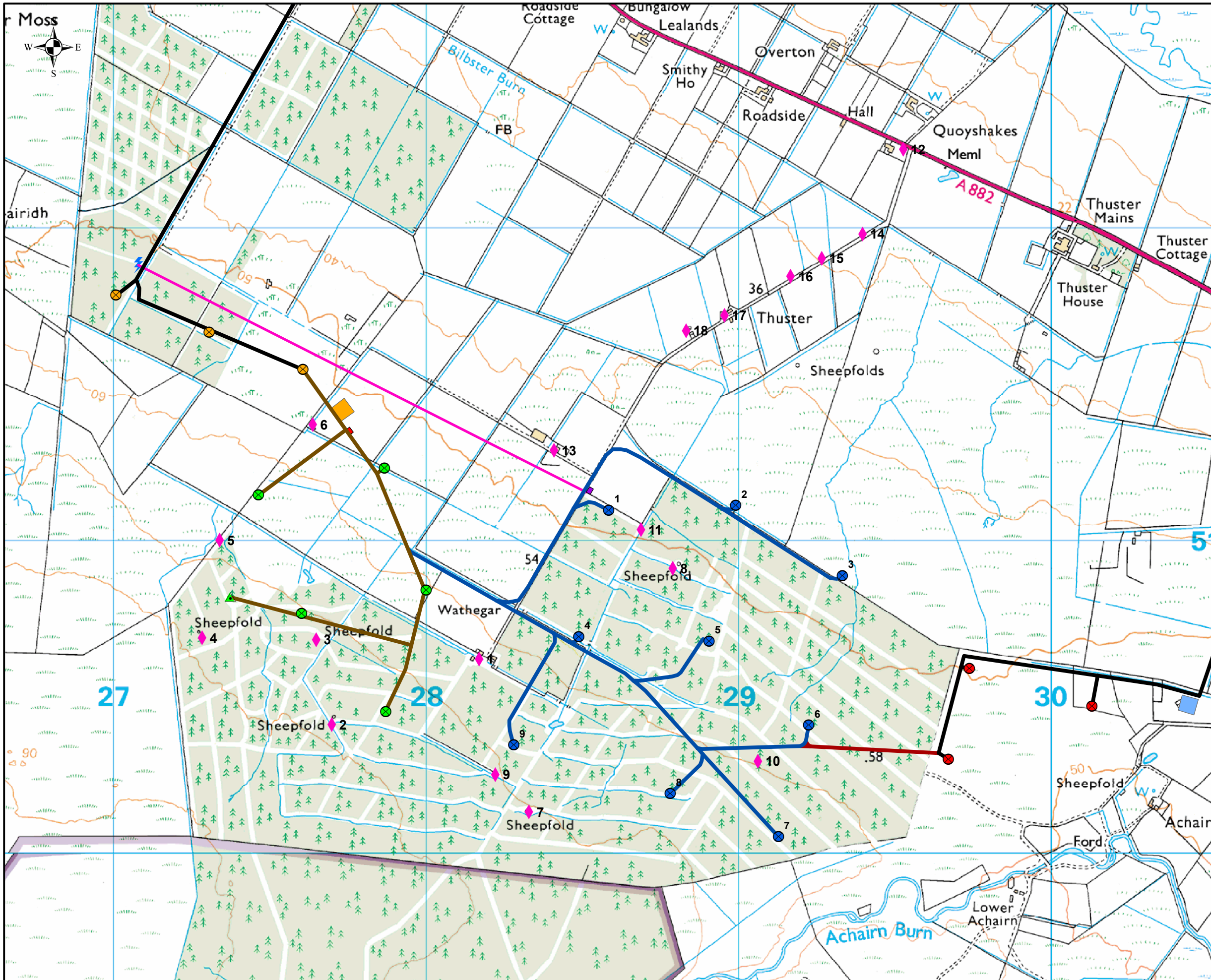
Thomson, C., 1841. Wick. *The New Statistical Account of Scotland*. Caithness, vol. 15, 117-79.

Watson, G., nd. *Caithness Place-Names*. ?

### 11.3 Photographic Record

No.	Description	Direction from
1	View of watch tower SW of Upper Wathegar	SE
2	View of clearance cairns, with the ranging pole in the centre (Site 9)	SE
3	View of more easterly clearance cairn (Site 9)	SE
4	View of sheepfold (Site 7)	SW
5	View of sheepfold (Site 7)	S
6	View of sheepfold (Site 10)	SE
7	View of sheepfold (Site 10)	SE
8	View of bus and watchtower, W of Upper Wathegar	E
9	View of bus and watchtower, W of Upper Wathegar	W
10	View SE to Achairn wind farm, from the southern boundary of development	NW
11	View of sheepfold (Site 8)	SE
12	View of flagstone fence (Site 11)	SW
13	General view of buildings (Site 18)	SE
14	General view of buildings (Site 18)	E
15	General view of buildings (Site 17)	SW
16	General view of buildings (Site 17)	SW
17	View of ruined buildings to S of crofthouse (Site 17)	E
18	View of ruined buildings to S of crofthouse (Site 17)	E
19	View of former crofthouse (Site 17)	SE
20	View of interior of crofthouse, showing plaster and timber lining of ceiling (Site 17)	SW
21	View of former crofthouse (Site 17)	SE
22	View of former crofthouse (Site 17)	NE
23	View of building on E side of track (Site 17)	NW
24	View of building on E side of track (Site 17)	SW
25	View along track, N of Site 17 (Site 12)	SW
26	View of fields on N side of Thuster track, in general vicinity of Sites 15 and 16	SE
27	View of location of Site 14	SE





**Figure 11.1**  
**Archaeological Sites**  
**within the**  
**Site Boundary**

- ◆ Archaeological site
- Achair Turbine (existing)
- Achair Access Track (existing)
- Flex Hill Turbine (existing)
- Flex Access Track (existing)
- Wathegar Turbine
- ▲ Permanent Anemometer Mast
- Wathegar Access Track
- Wathegar Construction Compound
- Wathegar Electrical Control Building
- Wathegar 2 Turbine
- Wathegar 2 Tracks
- Wathegar 2 Alt. Access
- Wathegar 2 Alt. Construction Compound
- Wathegar 2 Electrical Control Building
- Indicative Connection Route
- ⚡ Wathegar 2 Connection Point (Indicative)

PROJECTION SYSTEM OSGB 1935 BNG	AUTHOR TC
------------------------------------	--------------

COPYRIGHT TO WHIRLWIND RENEWABLES LTD.  
ALL RIGHTS RESERVED.

SCALE

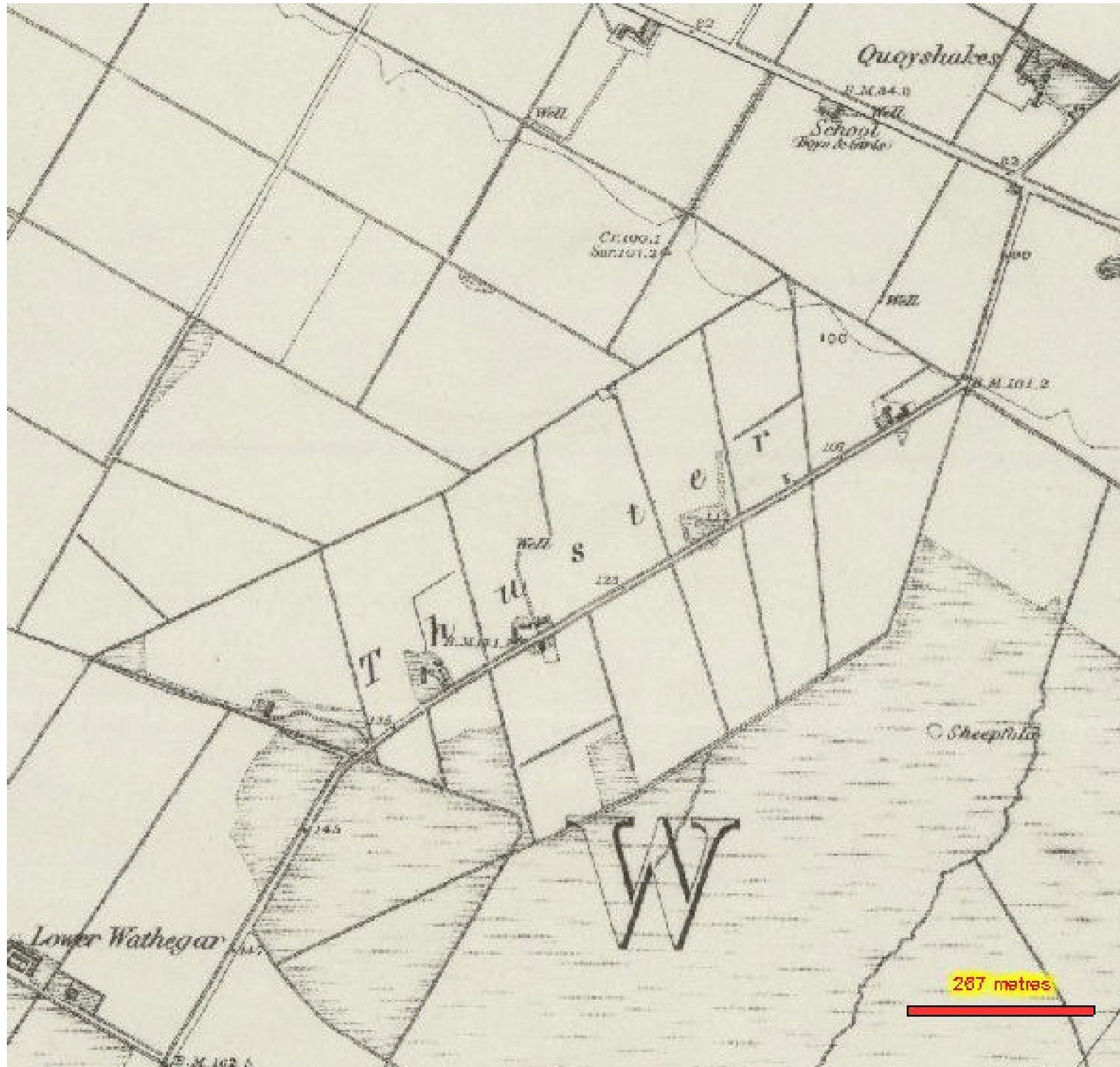
1:12,000

Whirlwind  
Renewables

THE MEDIA CENTRE  
7, NORTHUMBERLAND STREET  
HUDDERSFIELD  
HD1 1RL

Drawing Number	
Date Of Drawing	

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown Copyright and database right 2009. All rights reserved. Ordnance Survey Licence number 10001998



**Figure 11.2**

**Excerpt from OS First Edition map,  
Sheet XXIV (1877) ©NLS**

Referenced in Wathegar Archaeological  
Assessment



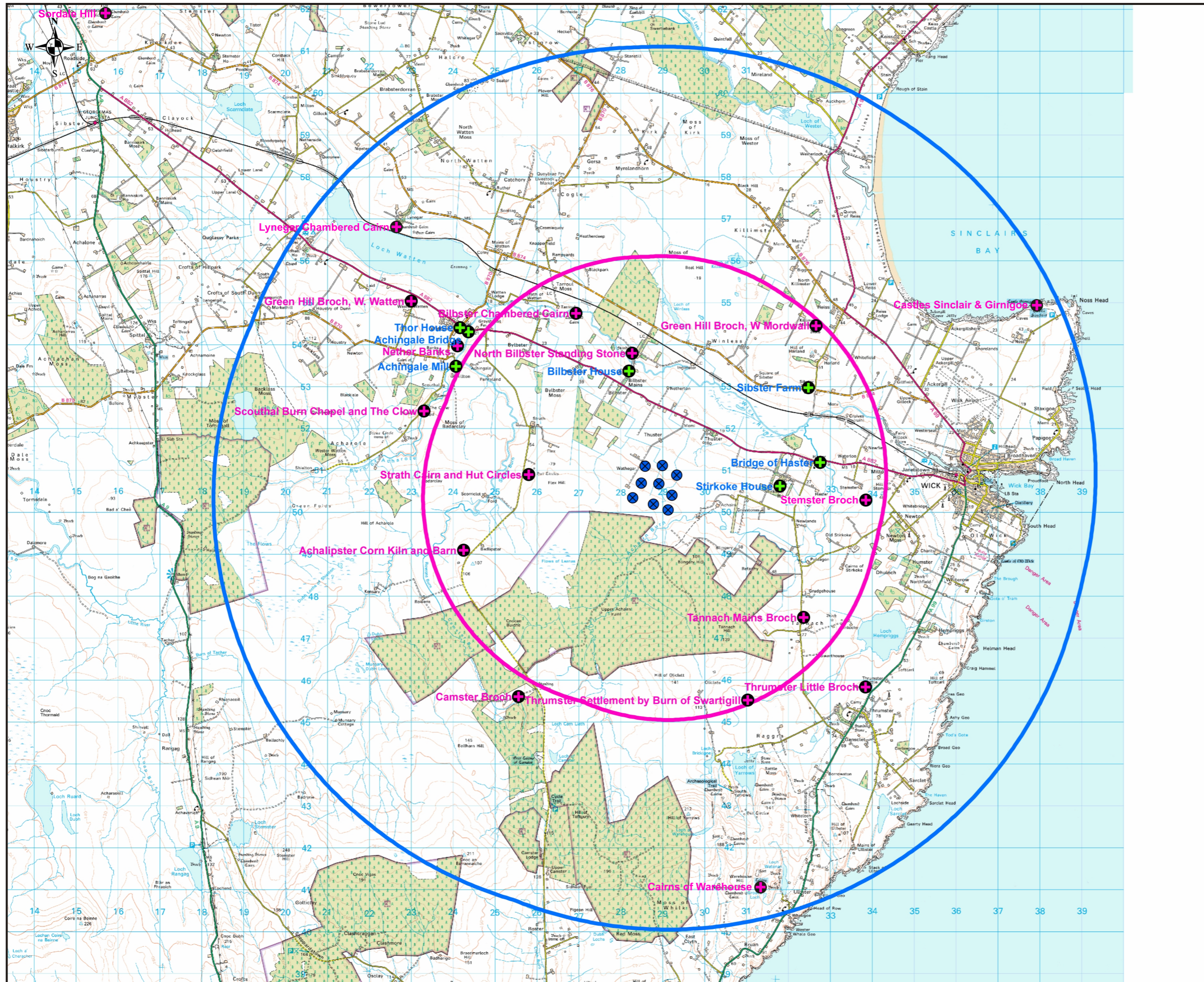


**Figure 11.3**

**Excerpt from OS First Edition map,  
Sheet XXIV (1877) ©NLS**

Referenced in Wathegar Archaeological  
Assessment





**Figure 11.4**

**SAMs and Listed Buildings on which Indirect Impacts have been Assessed**

- + SAM
- + Listed Building
- Wathegar 2 5km Buffer
- Wathegar 2 10km Buffer
- Wathegar 2 Turbine

PROJECTION SYSTEM OSGB 1935 BNG	AUTHOR TC
------------------------------------	--------------

COPYRIGHT TO WHIRLWIND RENEWABLES LTD.  
ALL RIGHTS RESERVED.

**SCALE**

**1:90,000**

**THE MEDIA CENTRE**  
**7, NORTHUMBERLAND STREET**  
**HUDDERFIELD**  
**HD1 1RL**

Drawing Number	
Date Of Drawing	