

HydroGlen

Supporting Environmental  
Information Report

Appendix C: Landscape & Visual Appraisal



# Glensaugh, Hydroglen

## Landscape and Visual Appraisal

December 2023

 **brindley**  
ASSOCIATES  
creative • environmental



For ITP Energised on behalf of James Hutton Institute

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## 1 Introduction

### 1.1 Introduction and Overview

Brindley Associates Ltd (Brindley), Landscape Architects and Environmental Planners, have been appointed by ITP Energised on behalf of James Hutton Institute (hereafter referred to as The Applicant) to prepare a focussed Landscape and Visual Appraisal (LVA) for a proposed wind turbine, hydrogen electrolyser, Battery Energy Storage System (BESS) and solar array within the Glensaugh farm buildings complex at Glensaugh Farm, Laurencekirk, Aberdeenshire.

The Proposed Development site lies entirely within The Aberdeenshire Council area and is therefore subject to policies within the Aberdeenshire Local Development Plan (Aberdeenshire Council, 2023), as well as national planning policies.

### 1.2 The Proposed Development

This appraisal is based upon the Proposed Development as described below, and as shown on the Viewpoint Location Plan (see Figure 01). The development layout shown has been prepared for a detailed planning permission application.

This appraisal is based on promotion of a hybrid energy production development comprising:

- A single wind turbine of up to a maximum height of 76m to tip;
- 18m electricity transmission poles;
- Access tracks;
- Ancillary structures;
- Security fencing;
- The demolition of agricultural buildings, in place of which some of the following would be installed;
  - Battery Energy Storage System (BESS) units;
  - Hydrogen electrolyser;
  - Hydrogen and oxygen vents;
  - DNO substation; and
  - Private substation.
- Ground-mounted solar PV array;
- Roof-mounted solar PV panels;
- Electric vehicle (EV) charging points;
- Transformer; and
- On-site trenches for cabling.

Where possible, the Proposed Development accords with Aberdeenshire Council Local Development Plan, as well as national planning policy. The Proposed Development aims to contribute to the national response to the

declaration of a Climate Emergency by the Scottish Government and the resultant Climate Change (Emissions Reduction Targets) (Scotland) Act 2019<sup>1</sup>.

### 1.3 Purpose of the Assessment

The purpose of this appraisal is to:

- Describe the key components, features and characteristics that contribute to the landscape character, visual amenity, quality, and perception of the landscape within a 25km radius from the proposed site boundary;
- Identify and evaluate the potential effects of the Proposed Development and associated infrastructure on landscape character, key landscape features and views during the operation of the development;
- Consider the potential implications of the Proposed Development in terms of adverse or beneficial effects on key landscape characteristics and resources, together with the potential effects upon a representative range of visual receptors in the vicinity of the site; and
- Examine how remaining residual landscape or visual effects would influence perception of local character and its implications for wider landscape character and views within the 2km study area.

This appraisal has been prepared with reference to the Third Edition of the Guidelines for Landscape and Visual Impact Assessment (GLVIA<sub>3</sub>) (Landscape Institute in association with the Institute of Environmental Management and Assessment, 2013) and takes the form of a desk-top review, supported by a site visit undertaken by qualified Landscape Architects employed directly by Brindley. The site visit was used to confirm and develop the findings of the review, which has been reviewed by Chartered Landscape Architects employed by Brindley.

There is no requirement for a formal Environmental Statement (ES) to support the Client's application for the approval of matters specified by condition.

The following extract, taken from the GLVIA Statement of Clarification 4 (January 2013), gives guidance on the terminology to be used in non-ES Landscape and Visual Appraisals, such as this:

*"In carrying out appraisals the same principles and process as LVIA may be applied but, in doing so, it is not required to establish whether the effects arising are or are not significant given that the exercise is not being undertaken for EIA purposes. The reason is that should a landscape professional apply LVIA principles and processes carrying out an appraisal and then go on to determine that certain effects would likely be significant, given the term 'significant' is enshrined in EIA regulations, such a judgement could trigger the requirement for a formal EIA. The emphasis on likely 'significant effects' in formal LVIA stresses the need for an approach that is proportional to the scale of the project that is being assessed and the nature of its likely effects. The same principle – focussing on a proportional approach – also applies to appraisals of landscape and visual impacts outside the formal requirements of EIA."*

In line with current guidance contained in the GLVIA<sub>3</sub>, singular terms such as 'significant' and 'not significant' have not been used in this appraisal. Brindley considers it useful however to set out the level of residual effect predicted. In this appraisal, landscape effects are assessed to be either 'potentially adverse' or 'potentially beneficial'. The level of effect is assessed through a combination of two considerations – the sensitivity of the landscape / townscape element or view and the magnitude of effect that will result from the Proposed

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<sup>1</sup> <https://www.legislation.gov.uk/asp/2019/15/enacted>

Development. This evaluation is carried out for each landscape receptor appraised in detail in the report. For visual effects, a comparison is made between the nature of existing views and potential changes to those views following the implementation of the Proposed Development, including any mitigating measures outlined within this appraisal.

Visual representations provided as part of this appraisal have been undertaken with reference to the Technical Guidance Note 06/19: Visual representation of development proposals, published by the Landscape Institute (September 2019). A brief description of the guidance implemented as part of this appraisal is outlined in Appendix C.

This appraisal has been prepared using a bespoke format, due to the particular nature of the Proposed Development. As the Proposed Development comprises a single wind turbine and the other elements of the proposal, it was necessary to include two different scales of assessment. This resulted in the following approach, whereby the elements of the Proposed Development are grouped according to scale:

- A 25km study area being applied for the appraisal of the effects on landscape and visual receptors of the single wind turbine (and associated ancillary structures, security fencing and access roads) within the Proposed Development.
  - This part of the Proposed Development will hereby be referred to as the Wind Development.
- A 2km study area for the appraisal of the effects on landscape and visual receptors of the hydrogen and oxygen vents, Battery Energy Storage System (BESS) units and solar array.
  - This part of the Proposed Development will hereby be referred to as the Solar and Hydrogen Development.

The reason for this rationale was that the potential effects of the proposed wind turbine may occur over a much larger area than the potential effects of the other elements of the Proposed Development. For each landscape and visual receptor included in this appraisal, the effects of the two aforementioned groupings of elements is clearly differentiated within the section associated with it. For reference see the Bareground and Modified Zone of Theoretical Visibility (ZTV) drawings (Figures 04a-07).

As per the Scoping Consultation Letter for the Proposed Extent of this Landscape and Visual Appraisal (LVA), the potential cumulative effects of the Proposed Development have been identified within a 30km radius of the Wind Development site. All operational, consented and proposed wind turbine developments that adhere to the following parameters have been assessed and illustrated within cumulative wireframes:

- All known wind turbine developments within 5km of the Proposed Development; and
- All known wind turbine developments above 70m to blade tip within 25km of the Proposed Development.

The Cumulative Landscape and Visual Assessment (CLVA) undertook a similar process to the LVA and focussed on the additional effects of the Proposed Development within the cumulative landscape. Simultaneous visibility (occurring where one or more developments are visible from a static position) have been included within our assessment from each viewpoint location. Sequential visibility (when a viewer moves between positions), will be assessed within our assessments from key transport and recreational routes.

Cumulative effects are presented in Section 8.0 of this appraisal.

Where no cumulative effects were identified for a landscape or visual receptor, it is excluded from Section 8.0.

## 1.4 Objectives of the Appraisal

The key objectives of this appraisal are to:

- Establish existing baseline conditions by:
  - Identifying and evaluating the existing landscape within the Proposed Development site and the wider landscape within the study area; and
  - Identifying existing views, visual relationships, and key receptors (based on an analysis of theoretical visibility).
- Identify potential effects by:
  - Identifying the main sources of landscape and visual effects associated with the Proposed Development; and
  - Determining the likely effects on landscape and visual resources.

## 1.5 Structure of the Landscape and Visual Appraisal

This appraisal is structured as follows:

- Section 2.0 Baseline Conditions;
- Section 3.0 Visibility Analysis;
- Section 4.0 Identification of Receptors;
- Section 5.0 Design Response and Proposed Mitigation;
- Section 6.0 Appraisal of Landscape Effects;
- Section 7.0 Appraisal of Visual Effects;
- Section 8.0 Summary and Conclusions;
- Section 9.0 References; and
- Section 10.0 Figures.

The contents of this appraisal are supported by a number of figures and appendices. These are referenced throughout the text and included at the end.

## 1.6 Competence

This appraisal has been prepared by Landscape Architects employed by Brindley and has been reviewed by Ross Wilkie CMLI, who has over 20 years' experience as a Chartered Landscape Architect.

## 1.7 Site Visit

The Brindley assessment team undertook a site visit in October 2023 to inform the Client's bid to promote the site as suitable for the type of mixed-use development proposed, taking cognisance of the surrounding baseline landscape conditions and views towards and from within the site. During the site visit, NatureScot / Landscape Institute (LI) compliant photography was undertaken from the assessed viewpoint locations.

## 1.8 Future Baseline

If the Applicant's proposal for a proposed mixed-use development is refused, the site would likely remain as pastoral farmland (the Solar and Hydrogen Development) and heath (the Wind Development).

## 2 Baseline Conditions

### 2.1 Overview

This section provides an overview of the existing baseline conditions, key features and characteristics within the site and wider surrounding landscape of the study area. Informed by desk and field studies, it then identifies landscape and visual receptors that are considered further as part of the LVA.

### 2.2 The Proposed Development Site

The Proposed Development site lies to the north-west of Laurencekirk and is wholly situated within Glensaugh Farm land. The Solar and Hydrogen Development is situated within the farm buildings complex and the Wind Development partly on Loch Hill, due north of the farm buildings. The high point of the site lies to the north-east of the Glensaugh Farm buildings complex, reaching approximately 306m AOD immediately west of the proposed wind turbine hard standing. The site then generally slopes down to the south-southwest, reaching 159m AOD at its south-western corner.

The Solar and Hydrogen Development will be located immediately around the Glensaugh farm buildings complex. The roof-mounted solar PV arrays will be attached to two existing farm buildings to the south-east and south of the farm. The ground-mounted solar PV array would be installed to the south-east of the farm buildings, occupying a portion of a field which adjoins the eastern site boundary.

The Wind Development will be situated due north-northeast of the Glensaugh farm buildings complex on Loch Hill and will be serviced by an access track which will traverse the slopes of the hill in a broadly north-easterly direction, branching off the C-class road linking Glensaugh Farm and Auchenblae at around the latitude of the centre of Loch Saugh.

Views from the immediate surrounding fields are generally open in all directions, with views of Strathfinella Hill and Loch Hill to the north-east and north, and views down the glen towards Fettercairn to the south and south-west. Views are generally only interrupted by the farm and residential buildings which make up Glensaugh Farm and its surroundings.

### 2.3 Landscape Setting

The study area for this LVA has been taken to be land lying within a 25km radius from the proposed site boundary (see Figure 01). Land within the 25km study area lies primarily within the Aberdeenshire Council area, though a large portion to the south-west also falls within Angus, as well as a small area to the north-east which lies within the City of Aberdeen. The extent of the study area includes:

- Braes of the Mearns Special Landscape Area;

- Fasque House Garden and Designed Landscape (GDL);
- The Burn Garden and Designed Landscape (GDL);
- Fettercairn Conservation Area;
- Auchenblae Conservation Area;
- A mixture of arable land in all directions from the site boundary; and
- Hillside and valley commercial forestry land in the wider area surrounding the Proposed Development, particularly around Loch Saugh and Loch Hill.

The small village of Auchenblae is considered to the east of the Proposed Development site; the village of Fettercairn is to the south-southwest and the town of Laurencekirk lies to the south-southeast. Large parts of both Fettercairn and Auchenblae are Conservation Areas. In addition to the villages mentioned, settlements otherwise tend to be of town size (such as Brechin, Stonehaven and Montrose) within the 25km study area.

The study area is located in the south of Aberdeenshire, some 7.7km north-east of the Angus border, and some 20km inland from the North Sea coast. Due to the 25km radius of the study area and the particularly varied geology of the region, the land use and topography is diverse within this area. The Howe of the Mearns, with its rich arable agriculture, terminates somewhat dramatically along its north-western limits as the Summits and Plateaux Landscape Character Types (LCTs) of Aberdeenshire and Tayside shelve upwards steeply. The Proposed Development sits at the point of transition, with Glen Saugh and Glen of Drumtochty forming a loop around Strathfinella Hill, which climbs steeply to 414m AOD, surrounded to the east and south-east by relatively flat farmland interspersed with farm steadings and private estates.

There are many Scheduled Monuments within the study area, the closest of which to the Proposed Development being the Kincardine Deer Dyke and Settlements, some 700m to the west. The Glensaugh farmstead and field system Scheduled Monument also lies some 900m to the north-west of the Proposed Development.

The study area contains a number of Core Paths. No Scotland Great Trails (SGT) are located within the study area, though one section of National Cycle Network (NCN): route 1 traces the coast to the east of the study area.

Overall, the character of land within the 25km study area can best be understood as though the transition outlined above were a kind of fault serving to separate the level coastal corridor and the Howe of the Mearns from the rapidly ascending topography to the west and north-west, with successions of smaller hill and mountain ranges ultimately culminating in the Cairngorms Massif. On the lower ground, the prime arable land gives a rigorous structure of diverse field patterns to the study area, with geometric woodland interspersed throughout. Woodland gives way to managed heaths to the west, north-west and north-east of the study area, and the vast expanses of moorland give a wild and rugged character to this area.

### 3 Visibility Analysis

#### 3.1 Zone of Theoretical Visibility (ZTV) Findings

As outlined in Section 1.3, this appraisal possesses the peculiarity of being performed at two distinct scales. As such, the Background ZTVs were produced with different source data. In the case of the Wind Development, the manufacturer's data for this turbine was utilised in Windfarm software, with a tip height of 76m being used to create the data required for the 25km study area (see Figures 04a and 04b). In the case of the Solar and Hydrogen

Development, the same software was used, with the hydrogen vents being calculated at heights of 17m and 10m, and the solar PV elements at heights of 8.5m (roof-mounted solar PV panels) and 3m (ground-mounted solar PV array) to represent these structures (see Figure 04c).

Following this, Modified ZTVs, which took localised woodland and settlement into consideration (as illustrated on OS VectorMap), were prepared in order to better understand: the topography of the site; the relationship between the Proposed Development and its immediate surroundings; and the influence of localised woodland and settlement when modelled at these aforementioned heights (see Figures 05a-07).

The ZTVs were then used to determine the main areas of theoretical visibility and identify suitable viewpoint locations for inclusion within this appraisal.

As indicated by the Bareground ZTV maps, the Proposed Development has the potential to be theoretically visible from approximately:

- 12.66% of the 25km study area (the Wind Development) - see Figure 04a, of which:
  - 2.40% would be turbine blade tip only; and
  - 10.26% turbine hub (and thus also blade tip).

As indicated by the indicative Bareground ZTV maps, the Proposed Development has the potential to be theoretically visible from approximately:

- 20.59% of the 10km study area (the Wind Development) – see Figure 04b, of which:
  - 3.58% would be turbine blade tip only; and
  - 17.01% turbine hub (and this also blade tip).
- 44.81% of the 2km study area (the Solar and Hydrogen Development) – see Figure 04c, of which:
  - 1.04% would be the solar components only (ground and roof-mounted);
  - 1.26% would be the hydrogen vents only; and
  - 42.51% would be both groupings.

Landform, vegetation, woodlands, shelterbelt planting and intervening built form substantially modify the levels of theoretical visibility predicted. A Modified ZTV comprising the 10km study area was produced. When these elements are factored in the Proposed Development has the potential to be theoretically visible from approximately:

- 13.87 % of the 10km study area (the Wind Development) – see Figure 05a, of which:
  - 2.63% would be turbine tip only; and
  - 11.24% tip and hub.
- 33.73% of the 2km study area (the Solar and Hydrogen Development) – see Figure 05b, of which:
  - 1.17% would be the solar components only (ground and roof-mounted);
  - 1.74% would be the hydrogen vents only; and
  - 30.82% would be both groupings.

Every effort has been made to ensure that both parts of the Proposed Development have been assessed correctly for the scale under consideration for each landscape and visual receptor. Theoretical visibility is largely concentrated upon the following areas:

- The glen in the immediate vicinity of the Proposed Development site;
- Agricultural land surrounding Fettercairn;
- The northern and north-eastern edges of Edzell Woods Estate and Edzell Business Base;
- The northern edge of Luthermuir, and agricultural land surrounding the settlement; and
- An area of agricultural land to the north and east of Auchenblae.

## 4 Identification of Receptors

### 4.1 Landscape Receptors

Assessment of Landscape Character has been undertaken with reference to NatureScot's Landscape Character Assessment (2019). According to this Landscape Character Assessment, the Proposed Development is located entirely within LCT 29: Summits and Plateaux – Aberdeenshire. As such, this LCT is considered to be the 'host' landscape and will be subject to detailed appraisal (see Section 6.2.1).

In addition to the assessment of landscape character, direct landscape effects upon the Proposed Development site have also been assessed.

### 4.2 Visual Receptors

#### 4.2.1 Settlements

There are few residential properties in close proximity to the Proposed Development, with the nearest being a single, long-term unoccupied house (owned by Glensaugh) approx. 348m due north of Glensaugh farm building complex, Glensaugh Lodge 367m to the south-west and Arnbarrow Farm and cottages some 2km to the south-west. The Glensaugh farm complex itself and Glensaugh Lodge are predicted to experience partial visibility of the Proposed Development, though Arnbarrow Farm and cottages are not.

Based upon the Modified ZTV, the following settlements will be taken forward for assessment:

- Fettercairn (Fettercairn is also partially assessed within Section 6.2.11 Fettercairn Conservation Area);
- Auchenblae (Auchenblae is also partially assessed within the areas of Auchenblae with the potential to experience visibility of the Proposed Development are addressed within Section 6.2.12 Auchenblae Conservation Area)
- Edzell;
- Luthermuir; and
- Drumlithie.



#### 4.2.2 Key Transport Routes

Based upon the Modified ZTV (see Figures 05a and 07), the following transport routes will be taken forward as sequential route assessments due to their potential to experience visibility towards the Proposed Development site.

- Old Mains Military Road and Cairn o' Mount Road (B974);
- C-class road between Glensaugh and Auchenblae;
- C-class road between Auchenblae and Glenfarquhar Lodge;
- B966;
- B9120; and
- A90.

#### 4.2.3 Key Recreational Routes

The routes below will be taken forward as short sequential route assessments due to their proximity to and / or potential to experience visibility towards the Proposed Development site:

##### Key Recreational Routes

- Core paths around Auchenblae (including paths 501.2, 501.3 and 508.02);
- Core paths around Fettercairn (including paths 506.01, 506.02, 506.03 and 506.04); and
- Laurencekirk – Fettercairn Circular Recreational Cycling Route.

#### 4.2.4 Representative Viewpoints within the study area

A total of eight viewpoints have been identified and selected as being representative of the range of visual receptors considered within the study area.

**Table 1 – Representative Viewpoints for Visual Assessment**

Viewpoint No.	Viewpoint Name	Grid Reference	Representative of.
1	Loch Saugh	367513, 778502	Recreational users
2	Junction of Old Military Road and C-class road to Glensaugh	366508, 778216	Road users
3	Cairn O Mount Viewpoint	364039, 780484	Road and recreational users
4	Glen Road, adjacent to Auchenblae	372475, 779273	Road users
5	Fettercairn	365147, 773756	Road users

Viewpoint No.	Viewpoint Name	Grid Reference	Representative of.
6	Minor road east of Auchenblae	373684, 778852	Road users
7	B974 south of Fettercairn	365873, 771821	Road users
8	Clachnaben	361535, 786472	Recreational users

## 5 Design Response and Proposed Mitigation

### 5.1 Proposed Mitigation and Enhancement Measures

Given the nature of the Proposed Development, landscape and visual mitigation measures are not proposed. Were these deemed necessary, in the case of the Solar and Hydrogen Development, measures could include the planting of locally appropriate structural woodland.

## 6 Appraisal of Landscape Effects

### 6.1 Potential Direct Effects on Landscape Fabric

The Proposed Development would introduce a single wind turbine into the landscape to the north-east of the Glensaugh farm buildings complex, as well as roof-mounted solar PV panels and a ground-mounted solar PV array into the immediate farm complex. The Proposed Development would, as such, bring about some local changes in the perception of the landscape, further partially altering the essentially agricultural character of Glensaugh Farm by increasing the presence of energy generation elements. As Glensaugh farm already houses the Glensaugh Research Station, the Solar and Hydrogen Development is in keeping with the current use of the complex. The Wind Development would slightly increase the presence of wind energy structures in the local landscape, adding to the existing single turbine in a pastoral field to the north of Glensaugh Farm. There are numerous operational wind farms within the study area, namely Mid Hill 5.6km to the north-northeast of the Wind Development (currently undergoing consented expansion) and Herscha Hill 5.3km to the east-northeast of the Wind Development (also undergoing consented expansion).

The land around Glensaugh Farm would not require substantial grading, though a small area of pastoral land to the east of the site would be utilised for the ground-mounted solar PV array.

The proposals outlined in Section 5 have been designed to mitigate the localised changes to landscape character arising from the Proposed Development, as far as reasonably possible. It is likely that the Solar and Hydrogen Development will be viewed most commonly either from the C-class road to the north-west of its location or from the Loch Saugh viewpoint, as there are no Core Paths in the immediate vicinity of the site, and the land which surrounds it is pastoral farmland which forms a part of Glensaugh Farm.

### Extent of Predicted Visibility

The structures which make up the farm steading will not be permanently modified, as the roof-mounted solar PV panel housings could be detached at a later date. While visibility of the Solar and Hydrogen Development is predicted to occur from higher ground in all directions around the site (see Modified ZTV, Figure 05b), it is worth noting that beyond a certain distance the roof-mounted solar PV panels will be largely indiscernible from other roof cladding materials.

### Sensitivity

The value of the landscape is considered to be High; the Proposed Development falls within the Braes of the Mearns Special Landscape Area (SLA), the winding road to Auchenblae is highly scenic and the nearby Loch Saugh viewpoint attracts visitors on this route. The landscape surrounding the Wind Development is of High susceptibility to changes of the nature proposed, given the exposed nature of the elevated position where the wind turbine would be erected. The existing landscape within the Solar and Hydrogen Development site is considered to be of Low susceptibility to the type of change proposed, as it is conventional agricultural land which would not be modified considerably by the Proposed Development. The landscape within the Solar and Hydrogen Development site is thus considered to be of Medium sensitivity to changes of the nature proposed, where the landscape surrounding the Wind Development is considered to be of High sensitivity to said changes.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a High Magnitude of Change is predicted.
  - Upon completion, a High Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, a Low Magnitude of Change is predicted; The relatively minor change in landcover resulting from the addition of the solar PV panels and array will not diverge greatly from the current conditions.
  - Upon completion, a Low or Negligible Magnitude of Change is predicted.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, **Major** adverse effects are predicted.
  - Upon completion, **Major** adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, Minor adverse effects are predicted.
  - Upon completion, Minor adverse or Negligible effects are predicted.

## 6.2 Potential Effects on Landscape Character Types and Local Landscape Areas

Predicted effects upon landscape character within the study area are described in relation to the landscape type description as provided by NatureScot in the Landscape Assessment (LA) (2019) (illustrated in Figures 02a-02c). Direct quotes from the LCA guidance have been italicised in the following sections.

The Modified ZTV (see Figure 05a) was calculated using a maximum height to tip of 76m for the single wind turbine which makes up the Wind Development. Where an LCT is not taken forward for assessment because it is excluded by lack of theoretical visibility in the Modified ZTV, this has been detailed within its section.

### 6.2.1 LCT 29 – Summits and Plateaux - Aberdeenshire

LCT 29 – Summits and Plateaux – Aberdeenshire encompasses all of the component parts of the Proposed Development, and as such it is considered to be the 'host' landscape.

Viewpoints 01-03 are representative of the LCT (see Figures 09a-11d).

The following key characteristics have been attributed to the LCT by NatureScot (2019) and have been refined to those applicable to the LCT represented within the study area (italics indicate direct quotations from the LA):

*'Lying on the edge of the high mountains of the Cairngorms National Park, the hills of the Summits and Plateaux - Aberdeenshire Landscape Character Type extend almost to the coast at Stonehaven.*

- *An expansive upland plateau with a smooth rolling landform and rounded hill summits. Landform is more complex along the highland Boundary Fault.*
- *Foreground to the Cairngorm massif and Cairngorms National Park.*
- *Backdrop in views from the north from lower Deeside and the fringes of Aberdeen city.*
- *Extensive central and western ridges covered with expansive heather and grass moorland.*
- *Regionally prominent hills.*
- *Coniferous forested lower hills, particularly extensive in the north-east. Wind farm development also present in this area.*
- *A patchwork of green pasture extends high into narrow valleys on the fringes of these uplands.*
- *Unexpected pockets of farmland and isolated farms and estate buildings associated lower ground in part of the core of these uplands.*
- *Derelict grey stone cottages are occasional features amidst open moorland.*
- *Numerous old routeways popular with walkers and these, and the B974 Cairn o'Mount road, offer commanding views to the Howe of the Mearns and the coast, and to Deeside.*
- *Wild character experienced in the less modified central and western parts of this landscape.*
- *Dramatic juxtaposition of the steep scarp slopes of these rugged uplands with the expansive low-lying farmed and settled Howe of the Mearns.*

*The hills have a wild, remote, and windswept character, although this reduces from the higher western parts to the less high eastern areas, which have been affected by wind turbine development. Distant views of the farmed landscape in the Howe of the Mearns emphasise the sense of isolation of the area.'*

Within the study area, this LCT contains numerous specific landscape designations. The broad interpretation of these designations would be that towards the west and north-west they become progressively wilder and less populated, and towards the south and south-east they encompass more cultural and archaeological categories. Some of these include: the Cairngorms Massif Special Protection Area (SPA), with which the LCT overlaps at its western extents. The Lochnagar – Mount Keen area of Wild Land occupies some of the same extents as the Cairngorms Massif SPA, though the latter covers a much larger area.

The Braes of the Mearns Special Landscape Area (SLA), which runs south-west to north-east across the south of the LCT, incorporates numerous Scheduled Monuments, and these are concentrated in the hills to the north of Fettercairn. Among these Scheduled Monuments are two large, linked areas: the Kincardine Deer Dyke and Settlements – twelfth and thirteenth century constructions which also include prehistoric settlement remains.

Several surviving examples of more ancient systems of agriculture are also classified as Scheduled Monuments within this LCT, as are some prehistoric earthworks to the south-east of Kincardine Deer Dyke and Settlements. The Clachnaben and Forest of Birse Special Landscape Area (SLA) is also almost entirely contained within the north-western quadrant of the LCT.

A small area of the Fasque House Garden and Designed Landscape (GDL) enters the southern limits of the LCT, though only the arable field boundaries along the perimeter of the estate enter this designation. The LCT also contains large tracts of Ancient Woodland, concentrated along its northern, eastern, and southern boundaries. The LCT features neither Core Paths nor Scotland Great Trails, though it is popular with hikers and cyclists.

### **Extent of Predicted Visibility**

With reference to the Modified ZTVs for the Wind Development (see Figures 05a and 06), theoretical visibility of the Wind Development is predicted to occur in an arc from the glen at the centre of the study area to the north-west and west, encompassing most of the highest peaks within it. During the construction period, construction machinery and compounds may be visible within the locale of the Wind Development. This will be viewed within a context in which the Mid Hill Wind Farm to the north-northeast is currently undergoing expansion, as well as occasional isolated wind turbines associated with farm steadings (Glensaugh itself, and the approved turbine at Chapelton Farm to the north-east).

The Modified ZTV for the Solar and Hydrogen Development (See Figure 05b) indicates that theoretical visibility of both the Solar and Hydrogen components of the Development will occur, primarily on the peaks which surround the glen (Arnbarrow Hill, Redstone Hill, Birnie Hill and Strathfinella Hill). Additionally, some of this predicted visibility is fringed with occasional instances of theoretical visibility only of the Solar or Hydrogen components. Said instances are logically linked to distance from elements: in and around the Glensaugh farm buildings complex there may be points at which only the Solar Development is visible, and to the north of the farm there are points at which only the Hydrogen Development will enter the view. Modified ZTV data which extends beyond the ZTV map also indicates that theoretical visibility may extend beyond the defined 2km radius, though actual visibility is likely to be greatly reduced by distance and intervening vegetation.

The Proposed Development would result in either no overall change in built form, or a slight net decrease in the presence of built form within the LCT, though the most notable change would be in the addition of the single wind turbine associated with the Wind Development.

### **Sensitivity**

Due to the many designations within the LCT, the value of the landscape is considered to be High. As the LCT has successfully incorporated medium-scale wind energy developments to the north-east of the Proposed Development, it is considered of Medium susceptibility to changes of the nature proposed. Taking into consideration the high value of the landscape and its Medium susceptibility to the type of changes proposed, the landscape is considered to be of overall high / Medium sensitivity to the type of changes proposed.

### **Magnitude of Change**

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted.
  - Upon completion, a Medium / Low Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, a Low Magnitude of Change is predicted.

- Upon completion, a Low Magnitude of Change is predicted.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Moderate / Minor adverse effects are predicted.
  - Upon completion, Moderate adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, Moderate / Minor adverse effects are predicted.
  - Upon completion, Moderate / Minor adverse effects are predicted.

### 6.2.2 LCT 22: Broad Valley lowlands – Aberdeenshire

LCT 22: Broad Valley lowlands – Aberdeenshire borders LCT 29 to the south in the centre of the study area.

Viewpoints 05-07 are representative of the LCT (see Figures 13a-15d).

The following key characteristics have been attributed to the LCT by NatureScot (2019) and have been refined to those applicable to the LCT represented within the study area (italics indicate direct quotations from the LA):

*'The Broad Valley lowlands - Aberdeenshire are located in the south of the county, comprising the area known as the "Howe of Mearns". It forms an extremely broad and gently undulating strath and is an extension of Strathmore in Angus which is classified as the Broad Valley lowlands - Tayside Landscape Character Type.*

- *A broad and generally gently undulating strath with some flatter basins.*
- *Steep scarp of the Mounth uplands rising steeply to the north-west and low rounded ridge of Garvock Hill provides a lesser degree of containment along the south-eastern boundary.*
- *Predominantly intensive agriculture with distinctive patchwork of large open fields divided by ditches and fences interspersed with small conifer woodlands.*
- *More folded terrain at the foot of The Mounth uplands, with a number of small rounded hills and small incised valleys, supporting diverse policy woodlands and well-managed farmland.*
- *Mature beech woodlands and avenues with stone walls associated with estates at the base of slopes.*
- *Pockets of rowan and birch woodland along watercourses stand out within this expansive plain.*
- *Small traditional villages and numerous farms, constructed of warm red stone, dotted throughout the countryside.*
- *Landscape forms a major communications corridor accommodating the A90, the East Coast railway and transmission line.*
- *Striking contrast of open, expansive strath and adjacent uplands.*

*The distinctive character of this landscape derives from its large pattern of fields, crops and woodlands, this particularly appreciated from elevated locations. The juxtaposition of this expansive and, in places, very open and low-lying farmed strath and the distinct upland scarp of The Mounth is striking.'*

Within the study area, this LCT contains numerous specific landscape designations. The largest-scale designation present is the Braes of the Mearns Special Landscape Area (SLA), which runs south-west to north-east across the LCT, encompassing Fasque House GDL in the centre of the LCT. The larger north-western portion of this SLA is contained within LCT 29, with the south-eastern portion forming the upper slopes of The Howe of the Mearns, a

locally distinct area of productive farmland. The LCT is generally characterised by its high agricultural quality, containing relatively few settlements, the largest of which being Laurencekirk. The LCT also incorporates two former RAF bases, both now redeveloped for industrial and residential purposes. The LCT has seen the successful deployment of polytunnel agriculture and renewable energy in the form of numerous small to medium wind turbines and clusters.

The Fasque House Garden and Designed Landscape (GDL) is almost entirely contained within this LCT, and it is surrounded by belts of well-defined woodland, much of which is classified as Ancient Woodland. The village of Fettercairn lies to the south of Fasque House GDL, and the settlement is predominantly a Conservation Area. Isolated farm buildings have Listed status throughout the LCT, as well as Thornton Castle and numerous buildings within Laurencekirk to the south-east.

The Core Path network within the LCT is relatively limited, essentially restricted to link routes surrounding settlements such as Laurencekirk, Fettercairn, Luthermuir and Edzell. There is one longer section of Core Path in the north-eastern corner of the LCT: the Auchenblae – Fordoun link route, which passes the B-Listed Monboddo House estate.

The Eslie Moss Site of Special Scientific Interest (SSSI) lies to the west of the centre of the LCT. For the most part this LCT is characterised by intensive agriculture, with the more rigid field layouts of the north-eastern portion giving way to less regular patterns to the south-west, due in part to natural features such as burns to the south of Fettercairn, though human-made elements such as RAF Edzell also dictate field layouts within this portion.

### **Extent of Predicted Visibility**

With reference to the Modified ZTVs (see Figures 05a and 06), theoretical visibility of the Wind Development will be confined to two strips of mainly agricultural land to the west and north-east of the LCT. During the construction period, construction machinery and compounds are unlikely to be visible throughout the LCT within the study area, due to simple proximity.

The Modified ZTV for the Solar and Hydrogen Development (See Figure 05b) indicates that theoretical visibility of both the Solar and Hydrogen components of the Development will occur within the LCT, with both the Solar and Hydrogen components potentially being visible for an area of arable farmland to the east of Fettercairn. Additionally, the Hydrogen and Solar components may be theoretically visible to the west and east of this narrow arc, respectively. This LCT falls outwith the 2km study area, and theoretical visibility would occur from around 2.6 to 6.3km from the ground-mounted solar PV array; for elements of this scale the distance and intervening vegetation and other features are such that they are unlikely to impact greatly on the landscape.

The Proposed Development would add a slight increase in the presence of renewable energy infrastructure within the LCT, with the most notable change being the potential additional visibility of the proposed single wind turbine.

### **Sensitivity of receptor**

Taking into consideration the multitude of designations and features of interest within the LCT, the landscape is considered to be of high value, and of Medium susceptibility to changes of the nature proposed. The reason for this evaluation being that the LCT has shown evidence of its capability to incorporate development of the type proposed directly, and thus its inclusion in a neighbouring LCT is not likely to impact greatly on the landscape.

The landscape is considered to be of High / Medium sensitivity to changes of the nature proposed.

## Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted.
  - Upon completion, a Low Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted.
  - Upon completion, a Low Magnitude of Change is predicted.

## Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Moderate / Minor adverse effects are predicted.
  - Upon completion, Moderate / Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Moderate / minor adverse effects are predicted.

### 6.2.3 LCT 24: Coastal Farmed Ridges and Hills -Aberdeenshire

LCT 24: Coastal Farmed Ridges and Hills - Aberdeenshire covers the eastern portion of the study area, extending from the lower slopes of Strathfinella Hill almost to the coast, and from north of Stonehaven to near St. Cyrus.

Viewpoint 04 is representative of the LCT (see Figures 12a-12d).

The following key characteristics have been attributed to the LCT by NatureScot (2019) and have been refined to those applicable to the LCT represented within the study area (italics indicate direct quotations from the LA):

*'The Coastal Farmed Ridges and Hills - Aberdeenshire Landscape Character Type is located in southern Aberdeenshire, to the south and south-west of Stonehaven. It comprises an extensive area of broadly rolling farmland and the long, rounded Hill of Garvock as well as the farmland around Glenbervie which lies at the edge of the highland Boundary Fault.*

- *A large scale and open landscape of smoothly rolling ridges and shallow valleys.*
- *Narrow ravines cutting through the ridges towards the coast.*
- *Large fields of arable land and pasture with red-pink soils present a rich tapestry of colours with the strong patchwork pattern influenced by different crops and ploughed fields.*
- *Few hedges or dykes.*
- *Sparse woodland with coniferous shelterbelts planted on some ridges. Broadleaf woodlands, although small, commonly emphasise the landform, tracing water courses or planted on knolls.*
- *Scattered settlement pattern with varied architectural styles including some large stately homes, farms and traditional cottages, often built of local red sandstone.*
- *Comprehensive network of minor roads, as well as the main A90 which provides glimpses of the sea.*
- *A concentration of Bronze Age burial cairns often focussed on hilltops with views to the sea.*
- *Telecommunication masts located on the highest hills.*



- *Frequent single and small groups of large wind turbines.*
- *Strong coastal influence particularly where more open slopes fall gently to the top of cliffs or raised beach allowing views of the sea.*
- *Sea views to the east and views westwards across the Howe of the Mearns.*

*From the east, views into the Mearns and across to Strathfinella Hill and the Kincardine Plateau are dramatic and emphasise the scale of this landscape.'*

Views from within the LCT, particularly from its centre and north, feature several existing wind farm developments amidst farmland.

Within the study area, this LCT contains numerous specific landscape designations. The character of the LCT is partly derived from that of the east coast, tending towards greater human activity and settlement building and expansion. The contrast between LCT 24 and the adjacent LCT 29 is particularly noticeable on the western and north-western boundaries of the landscapes. Agriculture ceases completely as the topography climbs sharply, being substituted immediately with coniferous plantation.

The A90 enters the LCT in two places, traversing it from south-west to north-east to link Stonehaven with Laurencekirk and Aberdeen. The Edinburgh to Aberdeen Railway Line runs loosely parallel to the A90 across this portion of the LCT, linking more minor settlements not connected directly by the A90.

Two Garden and Designed Landscapes (GDL) lie within the LCT: Arbuthnott House in the centre and Glenberrie House to the north-west. Multiple Scheduled Monuments are located throughout the LCT, and mainly constitute prehistoric cairns. The South East Aberdeenshire Coast Special Landscape Area (SLA) is also partially within this LCT.

The LCT features limited Core Paths, and those present tend to run along the coast, weaving in and out of the adjacent coastal LCTs. No Scotland Great Trails are present, though one long section of National Cycle Network (NCN) 1 runs parallel to the coast from Mains of Dunnottar to adjoin a section of Core Path north of Inverbervie.

In light of the many intersecting layers of designations within the LCT, the value of the landscape is considered to be High.

### **Extent of Predicted Visibility**

With reference to the Modified ZTVs (see Figures 05a and 06), fragmented theoretical visibility of the Wind Development, mainly of the turbine blade tips may occur from farmland to the north of Herscha Hill and Droop Hill. South of this point, a broad segment of theoretical visibility of the proposed turbine hub may occur on either side of the A90 to as far south as the Plantation of Hillhead block of Ancient Woodland. This visibility will occur on Herscha Hill, which features an operational turbine and a consented expansion, as well as in close proximity to the operational Jacksbank, Clochnahill and Hillhead of Auquhirie Wind Farms.

The Proposed Development would thus add a slight increase in the visibility of wind energy infrastructure from the LCT, though this would occur in a context of operational wind farms to the north and centre of the landscape.

During the construction period, construction machinery and compounds are unlikely to be visible throughout the LCT within the study area because of the distance to the Wind Development.

The Modified ZTV (see Figure 05b) shows that for reasons of distance, no visibility of the Solar and Hydrogen Development is predicted to occur from within the LCT.

### Sensitivity of receptor

Taking into consideration the multitude of designations and features of interest within the LCT, the landscape is considered to be of high value, and of Low susceptibility to changes of the nature proposed. The reason for this evaluation being that the LCT has shown evidence of its capability to incorporate development of the type proposed directly at a greater scale than that which is proposed, at no detriment to its key characteristics.

The landscape is considered to be of Medium sensitivity to changes of the nature proposed.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted.
  - Upon completion, a Low Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - No changes are predicted.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Minor adverse effects are predicted.
  - Upon completion, Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - No effects are predicted.

#### 6.2.4 LCT 384: Broad Valley lowlands - Tayside

LCT 384: Broad Valley lowlands - Tayside enters the study area in the south and south-west.

Viewpoint 07 is broadly representative of the LCT (see Figures 15a-15d), though technically outwith it.

The following key characteristics have been attributed to the LCT by NatureScot (2019) and have been refined to those applicable to the LCT represented within the study area (italics indicate direct quotations from the LA):

*'South of the highland Boundary Fault in Tayside lies broad lowland valleys or straths which comprise the Broad Valley lowlands – Tayside Landscape Character Type in Tayside. They are broad, settled lowland agricultural valleys, with fertile soils. These share a range of common characteristics which set them apart from other valleys and glens. There are, however, significant variations in landscape character within this type, primarily relating to topography, and these are described below.*

*The five areas of Broad Valley lowlands - Tayside are:*

- *Strathmore;*
- *Strathearn;*
- *Strathallan;*
- *The lower South and North Esk river valleys; and*
- *The Pow Water Valley between the Gask Ridge and Keillour Forest.*

### Key Characteristics

- *Broad straths formed by glacial erosion, loosely enclosed by the foothills and massif to the north, and lower local hill ridges to the south.*
- *Overriding southwest to northeast orientation.*
- *Undersized, misfit rivers which typically from adjacent low elevations do not read as dominant landscape features.*
- *Complex local topography caused by glacial deposition, including outwash terraces, eskers and dry valleys.*
- *Distinctive red soils and red building stone, contribute to a colourful mosaic of large fields particularly in the earlier months when crops are immature.*
- *Influence of large estates, particularly in terms of mature woodland and policies defined field boundaries and enclosed estate houses.*
- *Dominance of arable and root crops, in large fields typically enclosed by post and wire fencing, which contribute to the overriding horizontal landform and large to medium scale. Some specialist crops such as fruit orchards and bulb fields are adding diversification, with expansion of highly visible poly-tunnels an increasingly common feature.*
- *Tree and hedge loss weakening landscape character increasing openness of landscape, and increasingly ineffective in mitigating the dust bowls in dry months.*
- *Significant network of roads running through landscape, with main trunk roads including the A9 and A90 roads running along the straths linking a number of large towns.*
- *Well-settled landscape with strong hierarchy of settlement types from large towns, to small villages, located within a well-populated agricultural landscape.*
- *Rich historic landscapes with features including standing stones, hillforts, Roman camps and medieval castles and tower houses.*
- *Tall vertical structures are prominent in this landscape and adjacent elevated hills including views to pylon lines both within and on the adjacent foothills, and a small numbers of clusters and small wind farms. Single large commercial turbines are located infrequently along the strath itself.*
- *Wide, panoramic views across the breadth of the strath, running along and up to the enclosing hills. In particular there are unrivalled views from Strathmore up to the foothills and uplands of the Grampian Mountains to the north.*

*It is in Strathmore that the distinctive character of the landscape is most evident. From a distance, the area appears as a very broad, flat-bottomed valley enclosed by the highland Foothills to the north and the rising sweep of the Sidlaws' north-facing dip slope to the south.*

*Where estate planting survives, for example around Glamis, the strath landscape is rich and textured and particularly colourful during spring and autumn. Where the trees have been lost it is an open and expansive landscape of rectangular fields punctuated with a scatter of large farmsteads. The landscape of the strath contrasts strongly with neighbouring areas of upland, particularly where the woodland structure has survived.'*

This LCT is heavily characterised by intensive agriculture, and the field patterns of the portion which enters the study area is influenced by the River South Esk and lesser rivers flowing laterally across the region to the sea. The A90 runs south-west to north-east through the LCT, linking Forfar (just outwith the study area to the south-west) and Brechin with the north-east coast, including Aberdeen and beyond.

The presence of Ancient Woodland, largely of plantation origin, characterises the organised field pattern layout throughout much of the LCT, though particularly towards the north within the study area.

The Core Path network is strong towards the south of the LCT, notably around Coupar Angus and smaller towns through which the River Tay flows to the south-west of the LCT. The Core Path network diminishes gradually towards the north of the LCT, reducing essentially to link routes around Brechin and Edzell.

The LCT contains many Gardens and Designed Landscapes (GDL), including Scone Palace at its southern limits, Glamis Castle in the centre, a portion of Cortachy Castle GDL to the north of the centre, Brechin Castle, as well as a number of smaller estates scattered throughout and along its boundaries. The LCT also contains a wide array of Scheduled Monuments, including at least four Roman camps. One of these Roman camps is located at Stracathro, which is a hub of cultural designations, from two Neolithic cursuses to the Category B-Listed Stracathro House belvedere and walled garden from the early nineteenth century. More recently, the Second World War Stracathro Hospital complex is a functioning example of emergency healthcare infrastructure of great importance to the local community.

The LCT does not contain Core Paths or Scotland Great Trails. In light of the many intersecting layers of designations within the LCT, the value of the landscape is considered to be High.

### **Extent of Predicted Visibility**

With reference to the Bareground ZTV (see Figure 04a) it would appear that theoretical visibility of the Wind Development is likely to occur. Upon consultation of the Modified ZTV (see Figure 06), however, the more detailed 10km study area in fact excludes this ZTV. The visibility pattern identified in Figure 06 suggests that theoretical visibility of the Wind Development may occur across the northern segment of the LCT, but is likely to be greatly reduced with respect to the Bareground ZTV.

The Proposed Development would thus add a slight increase in the visibility of wind energy infrastructure from the LCT, though this would occur in a context of operational wind turbines adjacent to farm steadings throughout the landscape.

During the construction period, construction machinery and compounds are unlikely to be visible throughout the LCT within the study area because of the distance to the Wind Development.

The Modified ZTV (see Figure 05b) shows that for reasons of distance, no visibility of the Solar and Hydrogen Development is predicted to occur from within the LCT.

### **Sensitivity**

Taking into consideration the multitude of designations and features of interest within the LCT, the landscape is considered to be of high value, and of Low susceptibility to changes of the nature proposed. The reason for this evaluation being that the LCT currently features many wind energy developments of a similar scale to the Proposed Development; those which are operational and consented tend to be either individual turbines or small groupings within agricultural land adjacent to farm buildings.

The landscape is considered to be of Medium sensitivity to changes of the nature proposed.

### **Magnitude of Change**

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted.

- Upon completion, a Low Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - No changes are predicted.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Minor adverse effects are predicted.
  - Upon completion, Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - No effects are predicted.

### 6.2.5 LCT 379: Foothills – Tayside

LCT 379: Foothills – Tayside occurs in two fragments adjacent to one another to the south-west of the study area, with a further three to the south-west.

Viewpoint 07 is broadly representative of the LCT (see Figures 15a-15d), though technically outwith it.

The following key characteristics have been attributed to the LCT by NatureScot (2019) and have been refined to those applicable to the LCT represented within the study area (italics indicate direct quotations from the LA):

*'Along the highland Boundary Fault, at the foot of the Mounth highlands, a series of foothills mark the transition to the lowland of Strathmore. Dissected by the rivers that flow out of the highland glens, the Foothills - Tayside Landscape Character Type forms a series of units running eastwards from Dunkeld to Edzell.*

- *Narrow series of foothills at the base of the highland Boundary Fault.*
- *Small to medium scale landscapes.*
- *Complex geological structure typically reflected in an elongated linear alignment of rounded hills and ridges ranging in elevation between 100 and 400 metres, orientated south-west to north-east.*
- *Hills are defined by and act as a transition, between the much more extensive and large scale summits and plateau which extend into the Cairngorm massif to the north, and the relatively abrupt change in elevation to low valley to the south.*
- *Steep whale-backed hills and south-west to north-east valleys.*
- *Winding, gorge-like main river valleys flowing off the highlands along major fault lines.*
- *Predominantly agricultural land use of fertile grasslands and arable fields on flatter areas.*
- *Limited woodland cover, with broadleaf woodland on steeper slopes of the valleys and dens which cut through the hills and a small number of conifer forests on the hills themselves.*
- *Gateway to the Angus Glens with a rich historic heritage.*
- *Rich heritage of archaeological sites and relict landscapes of various periods, with hill forts including the Brown and White Caterthuns and Roman camps.*
- *Limited modern settlement comprising scattered farmsteads and hamlets, and some large houses.*
- *Building materials reflecting geological transition, with both grey schists and granites, and lowland red sandstone.*
- *Complex, sometimes disorientating landscape with glimpses of highland and lowland areas.*

- *Varied views, from the expansive lowland views across Strathmore to the panoramic views north to the highland massif, and as a series of overlapping horizons viewed east and west along the foothills.*
- *Very important backdrop and setting to low lying settled landscapes to the south.*

*In contrast to the apparent simplicity of lowland Strathmore and the clear structure of the Mounth highlands and glens, this is a confusing, disorientating landscape. The hills and their intervening valleys mean that it is relatively well contained, with only occasional glimpses to the heath moorland above, or open lowland below. Valleys appear to run in all directions, twisting up into the highlands, running along the fault line and leading down to Strathmore.'*

The LCT marks a transition towards the north-west; from the coast to the adjacent lowlands, the topography climbs steadily towards the Cairngorms National Park in the centre of the Grampian Mountains. Though still characterised by intensive agriculture and silviculture, including widespread Ancient Woodland, the most significant shift in land use as the LCT extends north-west is the reduction in the presence of settlements. Little more than hamlets and some estates can be considered within this LCT, though many castles and other estates with Listed Buildings are dispersed throughout.

Airlie Castle Garden and Designed Landscape (GDL) extends into the centre of the LCT. There are many Scheduled Monuments within the LCT, largely Prehistoric remains, of which perhaps the most notable are the Brown and White Caterthuns, two related hill forts on adjacent hills to the north-west of Brechin. A multitude of other Scheduled Monuments in the form of cairns, barrows and castle ruins can be considered throughout the entire LCT.

The two southernmost segments of the LCT contain several Core Paths and also Scotland Great Trails (SGT), though the three northernmost segments (including the two within the study area) feature only sparse sections of Core Path serving forestry routes and the Den of Ogil Reservoir.

In light of the many intersecting layers of designations within the LCT, the value of the landscape is considered to be High.

### **Extent of Predicted Visibility**

With reference to the Modified ZTV (see Figure o6), theoretical visibility of the Wind Development, primarily of the proposed turbine hub, may occur across the northern segment of the LCT. This visibility may extend across farmland to the north of Edzell, encompassing an area bounded by the Colt Hill Ancient Woodland and the Mains of Edzell Scheduled Monument. Similarly, the next most southerly segment of the LCT may experience visibility of the Wind Development, including from the hilltops which feature the Caterthuns Scheduled Monuments.

The Proposed Development would thus add a slight increase in the visibility of wind energy infrastructure from the LCT, though this would occur in a context of operational wind turbines adjacent to farm steadings throughout the landscape.

During the construction period, construction machinery and compounds are unlikely to be visible throughout the LCT within the study area because of the distance to the Wind Development.

The Modified ZTV (see Figure o5b) shows that for reasons of distance, no visibility of the Solar and Hydrogen Development is predicted to occur from within the LCT.

## Sensitivity

Taking into consideration the many intersecting layers of designations and features of interest within the LCT, the landscape is considered to be of high value, and of Low susceptibility to changes of the nature proposed. The reason for this evaluation being that the LCT is beginning to incorporate small-scale wind energy developments, mainly in the form of single turbines or small groupings within agricultural land adjacent to farm buildings.

The landscape is considered to be of Medium sensitivity to changes of the nature proposed.

## Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted.
  - Upon completion, a Low Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - No changes are predicted.

## Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Minor adverse effects are predicted.
  - Upon completion, Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - No effects are predicted.

### 6.2.6 LCT 376: Summits and Plateaux – Tayside

LCT 376: Summits and Plateaux – Tayside represents an intermediate transition towards the north-west which continues from north-west from the coast, then LCT 379: Foothills – Tayside, abutting the Upland Glen LCTs 370 and 126. The LCT occupies much of the west of the study area, creating an island effect comprised of hilltops in the region.

Viewpoints 01-03 are representative of the LCT (see Figures 09a-11d).

The following key characteristics have been attributed to the LCT by NatureScot (2019) and have been refined to those applicable to the LCT represented within the study area (italics indicate direct quotations from the LA):

*'The Summits and Plateaux - Tayside Landscape Character Type comprises the highest and most remote upland parts of western and northern Perth and Kinross and Angus Council areas. In places they border the Cairngorms, and Loch Lomond and the Trossachs, National Parks. This is an extensive Landscape Character Type present in 13 different areas.*

*The West highlands can be described as a series of comparatively discrete hills or ranges as follows:*

- Forest of Glenartney, south of Loch Earn;
- Ben Chonzie/Sron Mhor/Meall nam Fuaran between Strathearn and Loch Tay/Strath Tay;
- Ben Lawers and Beinn Heasgarnich range south of Glen Lyon;
- Cairn Gorm/Schiehallion range between Glen Lyon and Loch Rannoch;
- Mean Tairneachan Group between Strath Tay and Loch Tummel;

- *Talla Bheith and Craiganour Forest between Lochs Rannoch and Tummel and Glen Garry.*

*A series of spurs between the principal Angus Glens, extending southwards towards Strathmore and which form part of the more continuous upland area of Mounth highlands which extend into the Cairngorms National Park, comprise the other areas of this Landscape Character Type.*

- *Areas of upland incised by and separating the principal Tayside glens.*
- *Western areas comprising distinct summits and ranges, separated by fault line lochs; the hills are sharply defined and often craggy.*
- *Areas of the Mounth highlands in the east comprising the southern extents of a more extensive area of upland with spurs extending southwards; the hills are more rounded than those to the west and rock outcrops are fewer.*
- *Large scale vegetation patterns closely reflecting altitude and exposure and including heather, grassland, blanket bog and arctic alpine plant communities; variations reflecting the underlying geology.*
- *Most of the area managed as open moorland, with characteristic muirburn patterns.*
- *Little or no settlement, with minor tracks used for sporting, forestry and some recreation access, as well as newer more visible tracks for access to wind farms, pylon construction and forestry.*
- *A few patches of semi-natural broadleaf woodland on slopes up to about 600 metres.*
- *Remote and wild character.*
- *Important scenic and dramatic backdrop to lower glens and straths.*
- *Panoramic views both into and out of adjacent mountainous areas, such as the Cairngorm Massif, and lower lying areas like Strathmore.*

*Despite active management which favours heather moorland over other forms of sub-arctic vegetation, the Summits and Plateaux - Tayside comprise landscapes with strong wild character, despite their relative proximity to centres of population. Dramatic mountains, sweeping moorlands, extensive views throughout southern Scotland and constant exposure to changing, often extreme weather conditions, all shape perceptions of the landscape. Hidden from view are the more sheltered, fertile and settled glens. Remoteness is another important factor. With just a few roads climbing out of the glens onto the high moorland, these are relatively inaccessible areas requiring commitment on the part of those visiting them.'*

The LCT represents a further step in the upward topographic transition towards the north-west; from the coast to the adjacent lowlands, the topography climbs steadily towards the Cairngorms National Park in the centre of the Grampian Mountains. Exposure to the elements on the high ground has resulted in agriculture being replaced by extensive moorlands and forestry plantations. Wind energy developments are beginning to enter the LCT, with some of the highest ridges in the landscape being subject to Planning applications and Proposal of Application Notice (PAN) for large-scale wind farms. For example, Hill of Garbet/Peat Hill ridge to the south-west of the study area is currently subject to a Planning application for a 17-turbine wind farm (Nathro). Outwith the study area to the south-west, both Bodandere Hill and Black Hill are currently subject to PANs for wind farms of 14 turbines.

The north-easternmost segments of the LCT overlap with both the Cairngorms Massif Special Protection Area (SPA) and the Lochnagar – Mount Keen Wild Land Area. As such, the landscape is of Outstanding value.



### Extent of Predicted Visibility

With reference to the Modified ZTV (see Figure o6), theoretical visibility of the Wind Development, primarily of the proposed turbine hub, may occur across the northern segment of the LCT. This visibility is likely to encompass the ridges formed by the highest peaks within the LCT, such as from Hill of Corathro north-west to Hill of Wirren, and also from Berry Cairn north-west to Laidwinley. It is worthy of note that the latter of these two is mentioned above as being subject to a large-scale wind farm Planning application.

The Proposed Development would thus add a slight increase in the visibility of wind energy infrastructure from the LCT, though this would occur in a context of ongoing wind farm planning applications, as well as distant visibility of operational wind farms to the east and north-east of the designation.

During the construction period, construction machinery and compounds are unlikely to be visible throughout the LCT within the study area because of the distance to the Wind Development.

The Modified ZTV (see Figure o5b) shows that for reasons of distance, no visibility of the Solar and Hydrogen Development is predicted to occur from within the LCT.

### Sensitivity of receptor

Taking into account the importance of the specific designations which feature in this landscape, as well as its intrinsic wild qualities, it is considered to be of high value, and of Medium susceptibility to small-scale wind energy developments such as the type proposed.

The landscape is considered to be of High / Medium sensitivity to changes of the nature proposed.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted.
  - Upon completion, a Low Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - No changes are predicted.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Moderate / Minor adverse effects are predicted.
  - Upon completion, Moderate / Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - No effects are predicted.

#### 6.2.7 LCT 387: Dipslope Farmland

LCT 387: Dipslope Farmland covers two segments at the south of the study area.

The following key characteristics have been attributed to the LCT by NatureScot (2019) and have been refined to those applicable to the LCT represented within the study area (italics indicate direct quotations from the LA):

*'The Dipslope Farmland Landscape Character Type in Tayside is located to the south-east of the Sidlaws and the Forfar Hills, and north of the Montrose basin. It forms an extensive area of lowland farmland sloping gently towards the Angus coast.*

- *Extensive area of lowland farmland running parallel to the coastline, generally sloping from Sidlaws and Forfar Hills in north-west to near sea level in the south-east.*
- *Dominated by productive agricultural land, it has an open, medium-scale character which is predominantly productive arable land use with simple geometric field patterns.*
- *low woodland cover, except on large estates which have pine shelter belts and hedgerows, and along river corridors. Where located on the slopes it reinforces the change in gradient.*
- *Variety of historic sites from different eras ranging from prehistoric, Roman to Medieval, including castles, a number of historic estates and designed gardens which create a rich diverse character and strong local cultural identity.*
- *Dispersed settlement pattern, including some suburban development which extends outwith the historic settlement confines*
- *Infrequent single and small clusters of a range of domestic and medium scale commercial turbines along the elevated slopes, prominent due to their elevation and the lack of significant woodland cover.*

#### **Nature of Views**

*Variety of views from within the landscape, but typically, given the broad fall of slope to the east, there is a strong visual relationship with views along the coast and wide panoramas out to open sea. Intervisibility across the Tay firth to the Fife coast is pronounced around Dundee and reduces in clarity with distance and prominence further north.'*

Within the study area, this LCT contains few specific designations, and perhaps the most important of which being an isolated ecosystem which is categorised as forming a part of Montrose Basin set amidst farmland in the northernmost portion of the LCT. This area is simultaneously designated as the Dun's Dish Site of Special Scientific Interest (SSSI), Montrose Basin Special Protection Area (SPA) and Montrose Basin Ramsar Site. The main area of Montrose Basin lies to the south-east within LCT 390: lowland Basins. Aside from this, three Gardens and Designed Landscapes (GDLs) fall fully or partly within the study area of the LCT: House of Dun, Craig House and Dunninald garden (only the northernmost tip of the site enters the 25km study area).

The LCT features a limited number of Core Paths within the study area. Given that this is a conventional agricultural landscape with few remarkable features, the value of the landscape within the study area is medium.

#### **Extent of Predicted Visibility**

With reference to the Modified ZTV (see Figure o6), theoretical visibility of the Wind Development, primarily of the proposed turbine hub, may occur across the northern segment of the LCT. This visibility is likely to occur across the Muir of Pert and Hill of Stracathro, extending south within this northernmost segment of the LCT to bound but not reach the Montrose Basin SSSI / SPA / Ramsar Site.

The Proposed Development would thus add a slight increase in the distant visibility of wind energy infrastructure from the LCT, though this would occur in a context of operational wind turbines in the immediate vicinity (a standalone turbine is in operation 1.6km north of Montrose Basin SSSI / SPA / Ramsar Site, with a grouping of three approximately 2km to the north-east).

During the construction period, construction machinery and compounds are unlikely to be visible throughout the LCT within the study area because of the distance to the Wind Development.

The Modified ZTV (see Figure 05b) shows that for reasons of distance, no visibility of the Solar and Hydrogen Development is predicted to occur from within the LCT.

### Sensitivity of receptor

Taking into account the medium value of the landscape and its expanding capacity for wind energy development of a type consistent with that of the Wind Development, it is considered to be of Low susceptibility to changes of the nature proposed.

The landscape is considered to be of Medium / Low sensitivity to changes of the nature proposed.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted.
  - Upon completion, a Low Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - No changes are predicted.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - No effects are predicted.

## 6.2.8 Braes of the Mearns Special Landscape Area (SLA)

The Braes of the Mearns Special Landscape Area (SLA) is located at the boundary between LCT 29 and LCT 22, and occupies much of the centre of the study area, extending some 10km to the south-west from the Proposed Development. Given the overlap between the SLA and LCT 29 and LCT 22, some aspects of the evaluation of this landscape will be similar.

Viewpoints 01-05 are representative of the SLA (see Figures 09a-13d).

The following key characteristics have been attributed to the LCT by NatureScot (2019) and have been refined to those applicable to the LCT represented within the study area (italics indicate direct quotations from the LA):

*'This SLA includes the south-facing slopes of the Mounth and the northern part of the Howe of the Mearns, where these two distinct landscapes come together. The northern boundary follows the ridgeline from Sturdy Hill (544 m AOD) in the south west to Coyle Hill (464 m AOD) in the north east, and includes Cairn o' Mount, the summit above the scenic viewpoint on the B974. The eastern boundary crosses the Drumtochty Forest via a forest track, and then follows minor roads and tracks between Bogburn and the B966 south of Auchenblae. The southern boundary follows the B966 along the Howe of the Mearns until the boundary with Angus at Gannochy. The western boundary follows the Aberdeenshire - Angus border. These boundaries include the wooded farmlands at the foot of the highland Boundary Fault, and the steep hills which form the backdrop of the Howe of the Mearns. The boundary therefore contains this important combination of landscapes, but does not cover the broader and less visually diverse farmland*

*of the Howe of the Mearns. The Howe of the Mearns is a uniformly flat landscape, which slopes steeply up into the Mounth, marking the line of the highland Boundary Fault. Designation of part of the Howe of the Mearns and the enclosing ridge of the Mounth recognises the contrast between the distinctive flat farmed valley of the Howe, with its beech woodland and avenues, and the rugged upland ridge which forms its backdrop. Designation also recognises the highly visible nature of the landscape, and commanding views from its summits including the Cairn o' Mount Scenic Viewpoint, a popular resting place for passers-by.<sup>2'</sup>*

### **Nature of Views**

Views are characterised by;

- *'Strong contrast between the distinctive flat Howe and the dramatic ridge of the Mounth to the north.*
- *Intact farmed landscape of the Howe of the Mearns, with a strong structure of beech woodland and avenues along the foot of the slopes.*
- *highly visible ridge viewed from across the landscape to the south east, including from the A90, which defines the Howe of the Mearns.*
- *Cairn o' Mount scenic viewpoint, a popular stopping place on the hill road with views across the Howe.*
- *Strath Finella, an intimate wooded glen leading into the hills.*
- *Wooded estate landscapes including Fasque, Fettercairn and Drumtochty.<sup>3'</sup>*

The Braes of the Mearns Special Landscape Area (SLA), comprises a proportion of the Howe of the Mearns to the south and south-east, but is principally made up of the hill formations which straddle LCT 29 and LCT 22. The Clachnaben and Forest of Birse Special Landscape Area (SLA) commences along a boundary running from Cairn O' Mount Scheduled Monument to Sturdy Hill to the south-west.

The SLA encompasses a wide range of features, occupying as it does a strategic position between The Howe of the Mearns and the Cairn o' Mount, the traditional pass into the mountains of Aberdeenshire.

Of these many features of interest, some include the Kincardine Deer Dyke and Settlements Scheduled Monument, as well as numerous smaller ones which surround it.

The Gannochy Gorge Site of Special Scientific Interest (SSSI) to the north of Edzell is partially contained within the SLA, lying on its south-western boundary with LCT 379. This SSSI also partly overlaps with The Burn Garden and Designed Landscape (GDL), which extends into the SLA to the north-east parallel to the River North Esk.

The remainder of the SLA is made up of high quality largely arable farmland sloping broadly upwards to the higher ground to the north and north-west. This transition is particularly evident on breaching the boundary between LCT 22: Broad Valley lowland – Aberdeenshire and LCT 29: Summits and Plateaux – Aberdeenshire. For example, such as west of Auchenblae or north-west of Fasque House GDL, agricultural land climbs steeply then stops somewhat abruptly as the topography continues to rise and forestry land uses take prominence.

### **Extent of Predicted Visibility**

With reference to the Modified ZTV (see Figure 07), theoretical visibility of the Wind Development is predicted to occur throughout much of the central area of the SLA, with the turbine hub being visible from most elevated areas. At the lower fringes of these instances of visibility, a brief period of turbine blade tip visibility can also be

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<sup>2</sup> [special-landscape-areas-consultation-01-april-2016.pdf \(aberdeenshire.gov.uk\)](https://www.aberdeenshire.gov.uk/consultations/2016/special-landscape-areas-consultation-01-april-2016.pdf)

<sup>3</sup> [special-landscape-areas-consultation-01-april-2016.pdf \(aberdeenshire.gov.uk\)](https://www.aberdeenshire.gov.uk/consultations/2016/special-landscape-areas-consultation-01-april-2016.pdf)

expected to occur, prior to valleys and depressions providing screening. A central fan of additional theoretical visibility may also occur to the east and west of Hunter's Hill, partially affecting Fasque House GDL and the north-eastern outskirts of Fettercairn.

With reference to the Modified ZTV (see Figure 05b) theoretical visibility of the Solar and Hydrogen Development is predicted to occur throughout a localised central portion of the SLA, focussed on the immediate locale of the Proposed Development and the highest peaks which surround it. Broadly, both The Solar Development (ground-mounted solar PV array and the roof-mounted solar PV panels) and The Hydrogen Development are visible throughout, though in places only one or the other would be visible. On the higher slopes to the north of Glensaugh Farm and to the east of the existing wind turbine, the hydrogen vents are likely to be visible from both sides of the road to Auchenblae.

The Proposed Development would thus add a slight increase in the distant visibility of wind energy infrastructure within the SLA, as well as increasing more localised visibility of solar energy infrastructure from the vicinity of the Proposed Development.

During the construction period, construction machinery and compounds are likely to be visible throughout the SLA within the study area, depending on the specific location of receptors.

### Sensitivity of receptor

Taking into consideration the many overlapping layers of designations and features of interest, as well as the open and expansive character of the SLA, it is considered to be a landscape of Outstanding value. Furthermore, when the very limited presence of wind energy developments within the SLA is taken into account, it is considered to be of High susceptibility to the type of changes proposed. As such, the landscape is considered to be of overall Very high / High sensitivity to the type of changes proposed.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted.
  - Upon completion, a Medium Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, a Low Magnitude of Change is predicted.
  - Upon completion, a Low Magnitude of Change is predicted.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Moderate adverse effects are predicted.
  - Upon completion, **Major** adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, Moderate adverse effects are predicted.
  - Upon completion, Moderate adverse effects are predicted.

### 6.2.9 Fasque House Garden and Designed Landscape (GDL)

Fasque House Garden and Designed Landscape (GDL) is located approximately 5.2km south-west of the Wind Development. Viewpoint 05 is representative of the GDL (see Figures 13a-13d).

Fasque House GDL encompasses numerous buildings set in around 278 hectares (ha) of woodland, parkland and designed gardens. Consultation was made of the Historic Environment Scotland site (*italics indicate direct quotations from HES assessment*).

Considerable areas of arable farmland are incorporated into the structure of the estate, surrounding Fasque House on all sides, though the western boundary of the gardens adjacent to the main building are screened by dense woodland belts. Built in the early nineteenth century, Fasque House is well preserved and most of the structure planting and forest on the site is classified as Ancient Woodland. The GDL also features a small loch near its southern boundary, which in part contributes to the Historic Environment Scotland evaluation that *'The variety of relatively undisturbed wildlife habitats, including loch, burn sides and woodland gives the site some nature conservation value'*<sup>4</sup>.

Fasque House is oriented south-east, commanding fine views across parkland enclosed by structure planting and large specimen trees. The Apple House and walled garden are visible amidst woodland to the south. Medium distance views are generally contained within the arable farmland of the estate and its boundary woodland to the south, though the ridge line made up of Kirkton Hill and Hill of Garvock is visible above the tree line to the south-east.

#### Extent of Predicted Visibility

With reference to the Modified ZTV (see Figure 07), theoretical visibility of the Wind Development is predicted to occur throughout the GDL, at points either where shelter belt planting is absent, or within the large open areas of parkland to the south-west, north-east and east of Home Farm. Similarly, theoretical visibility of the turbine hub is predicted to occur on the main lawn to the south of Fasque House, fringed to the north-east by turbine blade tip visibility alone. Taking into consideration that receptors are likely to be focussed on the many features of the estate, the proposed turbine situated at more than 5km to the north-east seems unlikely to detract from such surroundings.

The Proposed Development would thus add a slight increase in the distant visibility of wind energy infrastructure from within the GDL.

During the construction period, construction machinery and compounds are unlikely to be visible throughout the GDL within the study area, given its distance from the Wind Development site.

The Modified ZTV (see Figure 05b) indicates that for reasons of distance, no visibility of the Solar and Hydrogen Development is predicted to occur from within the GDL.

#### Sensitivity of receptor

Taking into consideration the Outstanding value of the landscape and the High susceptibility to the type of changes proposed, the landscape is considered to be of overall Very high / High sensitivity to the type of changes proposed.

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<sup>4</sup> [FASQUE HOUSE \(GDL00178\) \(historicenvironment.scot\)](https://historicenvironment.scot)

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted.
  - Upon completion, a Low Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - No change is predicted to occur.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Moderate adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - No effects are predicted.

#### 6.2.10 The Burn Garden and Designed Landscape (GDL)

The Burn Garden and Designed Landscape (GDL) is located to the north of Edzell, some 11.4km south-west of the Wind Development. This GDL was initially included at the Scoping stage, as the Bareground ZTV (see Figure 04a) indicated that theoretical visibility would occur along its northern perimeter. Upon updating of the Modified ZTV (see Figure 05a), the GDL was subsequently excluded from this appraisal, on the basis that no visibility was predicted to occur from within it.

#### 6.2.11 Fettercairn Conservation Area

Fettercairn Conservation Area is located approximately 6.6km south-west of the Wind Development. Viewpoint 05 is representative of the receptor (see Figures 13a-13d).

Views from within the designation are largely of the narrow streets of the village, though some wider views are afforded to the north-east from the Old Military Road loop to the north of Fettercairn. From the B966 and B974 to the south of the designation, views are characterised by mature shelter belt trees lining the roads, with filtered views over arable farmland to the south-east and south.

The Conservation Area encompasses much of the village of Fettercairn, including the historic centre and Fettercairn Parish Church and its churchyard. All the Listed Buildings, including The Royal Arch at the southern entrance to the village, fall within the designation. As such, the designation serves to protect the architectural heritage of Fettercairn, with the Fettercairn House Scheduled Monument lying just outwith it to the north-east.

#### Extent of Predicted Visibility

With reference to the Modified ZTV (see Figure 07), theoretical visibility of the Wind Development is predicted to be limited to the southern portion of the Conservation Area, with a section of Burnside Road (B974) around 210m in length experiencing very fragmented visibility of the turbine hub, fringed occasionally with blade tip only visibility. Theoretical visibility to the north will be entirely screened by vegetation on the north and north-eastern banks of the Crichtie Burn as it flows through the village.

The Proposed Development would thus add an almost imperceptible increase in the distant visibility of wind energy infrastructure from within the designation.

The Modified ZTV (see Figure 05b) indicates that for reasons of distance, no visibility of the Solar and Hydrogen Development is predicted to occur from within the designation.

### **Sensitivity of receptor**

Taking into consideration the high value of the landscape and the High susceptibility to the type of changes proposed the landscape is considered to be of overall High sensitivity to the type of changes proposed.

### **Magnitude of Change**

- As a result of the Wind Development:
  - During the construction phase, no changes are predicted.
  - Upon completion, a Low Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - No change is predicted to occur.

### **Predicted Effects**

- As a result of the Wind Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, Moderate / Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - No effects are predicted.

## **6.2.12 Auchenblae Conservation Area**

Auchenblae Conservation Area lies 4.6km to the east of the Wind Development. Viewpoints 04 is representative of the Conservation Area (see Figures 12a-12d).

Views from within the designation are largely of the narrow streets of the village, though wider views are afforded to the north, west and south-west from the open areas to the west of the designation, as well as from its northern outskirts.

The Conservation Area encompasses much of the village of Auchenblae, including the historic centre, as well as arable land, Morgan Park and Auchenblae cemetery to the west, and land extending out of the village to the north-northwest which encompasses Fungo Hillock and Galloquhine Farm steading. All the Listed Buildings, including Fordoun Parish Church Auchenblae, as well as St Palladius' Chapel Scheduled Monument are encompassed by the designation. The Conservation Area is therefore considered to be of high value.

### **Extent of Predicted Visibility**

With reference to the Modified ZTV (see Figure 07), theoretical visibility of the Wind Development is predicted to be limited within the Conservation Area, with turbine blade tip visibility occurring throughout Fungo Hillock, with restricted opportunities for visibility also occurring within Galloquhine Farm to the north-west. The northernmost portion of the designation, where the Glen Road is intersected by another minor road to the north, may also briefly experience limited turbine hub visibility.

The Proposed Development would thus add an almost imperceptible increase in the distant visibility of wind energy infrastructure from within the designation.



The Modified ZTV (see Figure 05b) indicates that no visibility of the Solar and Hydrogen Development is predicted to occur from within the designation.

### Sensitivity of receptor

Taking into consideration the high value of the landscape and its High susceptibility to the type of changes proposed, the landscape is considered to be of overall High sensitivity to the type of changes proposed.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, no changes are predicted.
  - Upon completion, a Low Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - No change is predicted to occur.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, Moderate / Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - No effects are predicted.

## 7 Appraisal of Visual Effects

### 7.1 Settlements

#### 7.1.1 Fettercairn

The village of Fettercairn is located approximately 7km south-west of the Wind Development. Viewpoint 05 is representative of the receptor (see Figures 13a-13d).

Views from within the designation are largely of the narrow streets of the village, though some wider views are afforded to the north-east from the Old Military Road loop to the north of Fettercairn. From the B966 and B974 to the south of the village, views are characterised by mature shelter belt trees lining the roads, with filtered views over arable farmland to the south-east and south.

#### Extent of Predicted Visibility

With reference to the Modified ZTV (see Figure 07), theoretical visibility of the Wind Development is predicted to be limited to the southern portion of the Conservation Area, with a section of Burnside Road (B974) around 210m in length experiencing very fragmented visibility of the turbine hub, fringed occasionally with blade tip only visibility. While much of the village of Fettercairn falls within the Conservation Area, Fettercairn Distillery lies outwith it to the north-west, as does the largest residential area. The former will experience theoretical visibility of the turbine hub on its northern façades, where the latter may experience very scattered turbine blade tip visibility. Theoretical visibility to the north will be entirely screened by vegetation on the north and north-eastern banks of the Crichtie Burn as it flows through the village.

The Proposed Development would thus add an almost imperceptible increase in the distant visibility of wind energy infrastructure from within the designation.

The Modified ZTV (see Figure 05b) indicates that for reasons of distance, no visibility of the Solar and Hydrogen Development is predicted to occur from within the village.

### **Sensitivity of receptor**

Taking into consideration the high value of the landscape and the High susceptibility to the type of changes proposed, the landscape is considered to be of overall High sensitivity to the type of changes proposed.

### **Magnitude of Change**

- As a result of the Wind Development:
  - During the construction phase, no changes are predicted; and
  - Upon completion, a Low Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - No change is predicted to occur.

### **Predicted Effects**

- As a result of the Wind Development:
  - During the construction phase, no effects are predicted; and
  - Upon completion, Moderate / Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - No effects are predicted.

## **7.1.2 Auchenblae**

The village of Auchenblae lies 5.2km to the east of the Wind Development. Viewpoint 04 is representative of the Conservation Area (see Figures 12a-12d).

Views from within Auchenblae are largely of the narrow streets of the village, though wider views are afforded to the north, west and south-west from the open areas to the west of the village, as well as from its northern outskirts.

### **Extent of Predicted Visibility**

With reference to the Modified ZTV (see Figure 07), theoretical visibility of the Wind Development is predicted to be quite limited within the Conservation Area and the northern area of Auchenblae, with turbine blade tip visibility occurring throughout Fungo Hillock, with restricted opportunities for visibility also occurring within Galloquhine Farm to the north-west. The northernmost portion of the village, where the Glen Road is intersected by another minor road to the north, may also briefly experience limited turbine hub visibility. Newer residential development extends in a loop to the east from the northern to southern end of Inverurie Street / High Street, and lies outwith the Conservation Area. This residential area is predicted to experience very limited theoretical visibility of the Wind Development, with perhaps glimpses of turbine hub and tip occurring sporadically.

The Proposed Development would thus add an almost imperceptible increase in the distant visibility of wind energy infrastructure from within the designation.

The Modified ZTV (see Figure 05b) indicates that for reasons of distance, no visibility of the Solar and Hydrogen Development is predicted to occur from within the designation.

### **Sensitivity of receptor**

Taking into consideration the high value of the landscape and its High susceptibility to the type of changes proposed, the landscape is considered to be of overall High sensitivity to the type of changes proposed.

### **Magnitude of Change**

- As a result of the Wind Development:
  - During the construction phase, no changes are predicted; and
  - Upon completion, a Low Magnitude of Change is predicted.
- As a result of the Solar and Hydrogen Development:
  - No change is predicted to occur.

### **Predicted Effects**

- As a result of the Wind Development:
  - During the construction phase, no effects are predicted; and
  - Upon completion, Moderate / Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - No effects are predicted.

## **7.1.3 Edzell**

The village of Edzell is located approximately 13km to the south-west of the Wind Development. The village lies immediately south-west of the River North Esk, which marks the boundary between Angus and Aberdeenshire, and has a population of just under 900.

The B966 bisects the village, linking it with Brechin to the south and Fettercairn to the north-east. Edzell is entirely enclosed from the south by dense coniferous plantation woodland, which is felled rotationally, and the entrance to the village from this direction is monumentally framed within the Dalhousie Memorial Arch.

### **Extent of Predicted Visibility**

Theoretical visibility of the hub of the proposed wind turbine is predicted to occur throughout much of the surroundings of Edzell, particularly to the east and north-east of the settlement (see Background ZTV, Figure 04a and Modified ZTV, Figure 05a). Additionally, theoretical visibility of the turbine tip is predicted to expand slightly along the western fringes of the areas of hub visibility. Actual visibility within Edzell itself is likely to be very limited, as most of the eastern boundary of the village features mature tree cover, especially along the River North Esk.

The Modified ZTV (see Figure 05b) indicates that for reasons of distance, no visibility of the Solar and Hydrogen Development is predicted to occur from within the village.

### **Sensitivity of Receptors**

It is considered that residents of Edzell are of High susceptibility to the type of change proposed. This is due to the relatively low density of wind farm developments in the surrounding area. There are, however, a number of

operational wind farms and standalone turbines in the more immediate vicinity than the Proposed Development, with many more at varying stages within the planning process.

The value of views from the settlement is considered to be High. Outward views from the settlement, where permitted by plantation forestry, include farmed hillslopes and more distant hillsides to the north and north-west, as well as the scenic wooded River North Esk, are considered likely to be of value to the local community.

The sensitivity of receptors of the settlement to the type of development proposed is therefore considered to be High.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted, given the improbability of construction equipment being visible during the erection of the wind turbine and ancillary structures.
  - Upon completion, theoretical visibility of the proposed wind turbine is predicted on the outskirts of the settlement. Actual visibility is predicted to be restricted to peripheral properties to the south-east and north of the village, as well as the central area of Edzell Muir and Edzell Parish Church. Given the distance to the proposed wind turbine of over 13km, as well as the complexity of intervening topography, vegetation and other factors influencing views, the Magnitude of Change on views from the settlement of Edzell is considered to be Negligible.
- As a result of the Solar and Hydrogen Development:
  - No changes are predicted.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Negligible effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - No effects are predicted.

#### 7.1.4 Luthermuir

The village of Luthermuir is located approximately 11.5km to the south of the Wind Development. The village is bounded to the south-west by arable farmland influenced by the Luther Water. To the north-east, within the village, the Caldhome plantation characterises the settlement, as does the larger Inverury Wood to the west and south-west of the village. The population of Luthermuir is approximately 300.

The B974 passes close to the village, linking it with Fettercairn to the north, as well as providing access to the wider road network by connecting to the A90.

### Extent of Predicted Visibility

Theoretical visibility of the hub of the proposed wind turbine is predicted to occur along the north-western edge of Luthermuir, most likely affecting the most outlying properties, though most of the settlement would be unaffected (see Modified ZTV, Figure 05a). Broken theoretical visibility of the turbine tip and hub could occur

immediately south and south-east of the settlement, though these areas are arable farmland from which it is anticipated there would be very few receptors.

The Modified ZTV (see Figure 05b) indicates that for reasons of distance, no visibility of the Solar and Hydrogen Development is predicted to occur from within the village.

### **Sensitivity of Receptors**

It is considered that residents of Luthermuir are of Medium susceptibility to the type of change proposed. This is due to the lack of views afforded to residents towards the Proposed Development along the main axial street (School Road) through the settlement, given the large Caldhame Plantation to the north-west of this avenue.

The value of views from the settlement are considered to be medium. Outward views from the settlement include mainly arable farmland and more distant hill ranges to the south-east, and these views are considered likely to be of value to the local community.

The sensitivity of receptors of the settlement to the type of development proposed is therefore considered to be Medium.

### **Magnitude of Change**

- As a result of the Wind Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted, given the improbability of construction equipment being visible during the erection of the wind turbine and ancillary structures.
  - Theoretical visibility of the proposed wind turbine is predicted only on the outskirts of the settlement. Actual visibility is predicted to be restricted to peripheral properties to the north-west of the village. Given the distance to the proposed wind turbine of over 10km, as well as the complexity of intervening topography, vegetation and other factors influencing views, the Magnitude of Change on views from the settlement of Luthermuir is considered to be Negligible.
- As a result of the Solar and Hydrogen Development:
  - No changes are predicted.

### **Predicted Effects**

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Negligible effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - No effects are predicted.

## **7.1.5 Drumlithie**

The village of Drumlithie is located approximately 11.2km to the east of the Wind Development. The village is bounded on all sides by arable fields, and the Edinburgh to Aberdeen Railway Line passes some 200m to the south-west of the settlement. The population of Drumlithie is approximately 350.

A section of minor road less than a kilometre in length links the village with the A90, thereby connecting it to the wider road network.

### **Extent of Predicted Visibility**

Theoretical visibility of the tip of the proposed wind turbine is predicted to occur along the western and southern edges of Drumlithie, likely affecting the most outlying properties, though most of the settlement would be unaffected (see Bareground ZTV, Figure 04a and Modified ZTV, Figure 05a). Fragmented theoretical visibility of the turbine tip could occur immediately south and south-west of the settlement, though these areas are arable farmland from which it is anticipated there would be very few receptors.

The Modified ZTV (see Figure 05b) indicates that for reasons of distance, no visibility of the Solar and Hydrogen Development is predicted to occur from within the village.

### **Sensitivity of Receptors**

It is considered that residents of Drumlithie are of Medium susceptibility to the type of change proposed. This is due to the presence of existing wind farm developments to the north and north-east of the settlement in close proximity to the village, as well as the relatively limited opportunities for long-distance views from within Drumlithie.

The value of views from the settlement are considered to be medium. Outward views, where afforded by the built form of the settlement, include mainly arable farmland which rises rapidly to the north-west towards Mid Kinmouth Farm, limiting longer-distance views considerably.

The sensitivity of receptors of the settlement to the type of development proposed is therefore considered to be Medium.

### **Magnitude of Change**

- As a result of the Wind Development:
  - Theoretical visibility of the proposed wind turbine is predicted only on the outskirts of the settlement. Actual visibility is predicted to be restricted to peripheral properties to the west and south of the village. Given the distance to the proposed wind turbine of over 10km, as well as the complexity of intervening topography, vegetation and other factors influencing views, the Magnitude of Change on views from the settlement of Drumlithie is considered to be Negligible.
- As a result of the Solar and Hydrogen Development:
  - No changes are predicted.

### **Predicted Effects**

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Negligible effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - No effects are predicted.

## 7.2 Key Transport Routes

### 7.2.1 Old Mains Military Road and Cairn O' Mount Road (B974)

The Old Mains Military Road and Cairn o' Mount Road (B974) begins in Fettercairn, some 4.6km south of the Proposed Development. The route travels north-northeast out of Fettercairn, and shortly after it winds east. The Old Military Road branches off it to the north-east. The Cairn o' Mount Road continues east and then north around a large block of Ancient Woodland plantation atop Hunter's Hill.

From this point the route runs broadly north, and approximately 525m further in this direction The Old Military Road completes its skirting of Arnbarrow Farm to the north-east and then west, and it rejoins the B974. The route is highly scenic throughout, the narrow road allowing for time to appreciate the surrounding terrain. On crossing the Clattering Bridge, the route veers north-west shortly after the Drumtochty Glen turn-off towards the Cairn O' Mount viewpoint and Scheduled Monument. The route then descends in altitude as it continues north and skirts Kircram (405m AOD), from which point it descends further as it crosses the Spital Burn and wends its way through Glen Dye. Maintaining a northerly bearing, the route traces the western slopes of Ord of Tillyfumerie. The B974 runs the remainder of its course parallel to the Water of Feugh, before it branches to the north-west to cross the River Dee and terminates in Banchory.

#### Extent of Predicted Visibility

The Modified ZTV and site visits confirmed that visibility of the Wind Development along the route will be sporadic and will occur mainly along the northern sections of the route. Predicted visibility is limited by intervening topography and vegetation from the outskirts of Fettercairn until the north-eastern limits of Hunter's Hill. Following around 340m of the route with no predicted visibility, intermittent views of the proposed turbine tip will occur until just beyond the turn-off for Glensaugh Farm. Approximately 540m to the north-west of this point, intermittent visibility will resume for the length of two sections.

When considering predicted visibility of the Solar and Hydrogen Development, theoretical visibility commences slightly further north of the bend to the north which rounds Hunter's Hill. A further section of around 400m in length to the north of Hunter's Hill would likely experience visibility of both parts, with perhaps only the Solar components visible for the last 100m stretch. Visibility would reoccur some 520m north-west of the Glensaugh Farm turn-off. The remaining section of around 850m would experience visibility of both parts of the Solar and Hydrogen Development. While visibility of both parts of the Proposed Development may occur in the direction of travel, drivers' attention will be focused on navigating the winding road into the hills.

During the construction stage, visibility of construction machinery and compounds may occur at the points identified above. In the case of the Wind Development, ZTV calculations have been made with the tip height of 76m, and as such construction equipment will be considerably lower in the field of view than this.

#### Sensitivity of Receptors

Receptors travelling on the route are considered to be of Medium susceptibility to the type of development proposed, as changes in the landscape are likely to be registered by alert drivers, who may also be in the area for recreational purposes.

The value of views from the route is considered to be High, as it is an attractive mountain road set amidst fields. The sensitivity of road users of this route to the type of development proposed is thus considered to be High / Medium.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted, given the possibility for visibility of construction equipment during the erection of the wind turbine and ancillary structures.
  - Upon completion, a Medium / Low Magnitude of Change is predicted, as the turbine will become visible.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, a Low Magnitude of Change is predicted, as construction and delivery machinery is likely to be visible intermittently.
  - Upon Completion, a Low Magnitude of Change is predicted. In the case of the roof-mounted solar PV panels, this could arguably be Negligible, given that their appearance may not be discernibly different from conventional roofing materials.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Moderate / Minor adverse effects are predicted.
  - Upon completion, Moderate adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, Moderate / Minor adverse effects are predicted.
  - Upon completion, Moderate / Minor adverse effects are predicted.

#### 7.2.2 C-class road between Glensaugh and Auchenblae

The route will be considered as commencing at the turn-off for Auchenblae on the B974. The route is a noticeably more rural track, descending to the east to cross the Slack Burn on a raised road surface which acts as a ford, with raised pedestrian decking to the south and a low footbridge to the north.

The route climbs the relatively steep valley slopes, quickly affording excellent views along the glen created between Redstone Hill to the north-west and Birnie Hill to the north-northwest. The tree cover thus far is largely coniferous plantation. The complex of cottages to the west and north of Glensaugh Farm introduce scenic interest to the route, which skirts the northern edge of the Proposed Development site before turning due north-east to bound Loch Saugh along its western shores. By this point, the terrain has become significantly more enclosed, with the Gyle Hill and Cleek Hillock rising to merge with Loch Hill, forming a steep valley side clad with tussocky grasses and gorse bushes, occasionally dotted with birch trees, and crisscrossed with post-and-wire fences.

Beyond the mixed woodland to the north of Loch Saugh, the route emerges into a more open landscape of pastoral fields to the south-east and north-west, though a very steep embankment shields this from view for the approximately 270m that this section runs prior to entering Holeglen Wood. The road continues to broadly trace an arc which runs from Loch Saugh to Auchenblae through Glen of Drumtochty. The route cleaves to the



northern edge of Garrold Wood, before emerging at Todlarknap Wood and continuing south-east into Auchenblae.

### **Extent of Predicted Visibility**

Analysis of the Modified ZTVs (see Figures 05a and 07) and site visit findings identified that visibility of the Wind Development along the route will be sporadic and confined largely to the initial section of the route from the Clattering Bridge turn-off from the Old Military Road (B974). Immediately following the turn-off, visibility will be intermittent and will take in the turbine hub and blade tips as road users cross the ford and begin to climb steeply to the north. On rounding the bend to the east, shelter belt planting will entirely screen the proposed wind turbine from view for slightly over 200m, at which point drivers will approach Glensaugh Farm and the proposed wind turbine will be perpendicular to their direction of travel to the north-east. Limited visibility of the wind turbine hub may occur on two sections to the east.

When considering predicted visibility of the Solar and Hydrogen Development (see Figure 05b), it is anticipated that both parts will be visible for around 285m as road users draw level with and pass Glensaugh Farm. Beyond this point, The Hydrogen Development would remain in view for approximately another 305m to the north-east.

During the construction stage, visibility of construction machinery and compounds may occur at the points identified above, though this is likely to be more reduced than the component parts of the Proposed Development themselves, given their scale.

### **Sensitivity of Receptors**

Receptors travelling on the route are considered to be of High susceptibility to the type of development proposed, as changes in the landscape are likely to be registered by alert drivers, who may also be in the area for recreational purposes.

The value of views from the route is considered to be High, as it is an attractive road through a wooded glen, and branches off the Old Military Road, which receives a large volume of recreational road users. The sensitivity of road users of this route to the type of development proposed is thus considered to be high.

### **Magnitude of Change**

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted, given the possibility for visibility of construction equipment during the erection of the wind turbine and ancillary structures.
  - Upon completion, a Medium / Low Magnitude of Change is predicted, as the turbine will become visible.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, a Low Magnitude of Change is predicted, given the possibility for visibility of construction equipment during the installation of the solar PV components and erection of the hydrogen vent and other structures; and
  - Upon Completion, a Low Magnitude of Change is predicted. In the case of the roof-mounted solar PV panels, this could arguably be Negligible, given that their appearance may not be discernibly different from conventional roofing materials.

## Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Moderate / Minor adverse effects are predicted; and
  - Upon completion, Moderate adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, Moderate / Minor adverse effects are predicted.
  - Upon completion, Moderate / Minor adverse effects are predicted.

### 7.2.3 C-class road between Auchenblae and Glenfarquhar Lodge

The route commences to the north of Auchenblae, initially on a north-eastern bearing, but heads north-west some 450m from the village. The route cuts straight between long, regular arable fields which abut the road. Burnie Shag characterises the route boundary to the south, where the northern boundary features well-kempt mature or juvenile hedgerows and post-and-wire fencing. The approach to the Mains of Glenfarquhar farm steading is also partly characterised by electricity pylons which traverse the view from the south-west to the north-east. Midway along this 1.4km section, a solitary wind turbine close to the summit of Herscha Hill provides a point of interest in an otherwise conventional agricultural landscape.

The route turns north-east as it cuts through Mains of Glenfarquhar, climbing steadily up a shallow valley between Temple Hill to the north-west and Herscha Hill to the west. The road maintains this approximate bearing, zigzagging slightly as it bisects Paldyfair Wood; almost immediately on entering said woodland the Glenfarquhar Lodge branches off the main route to the north-east.

#### Extent of Predicted Visibility

Analysis of the Modified ZTV (see Figure 07) and site visit findings identified that visibility of the Wind Development along the route will be sporadic but will commence to the north of Auchenblae on Glenfarquhar Road, with a break of some 225m when the route branches north-west, following which another approximately 460m of largely turbine hub visibility will occur. A long, straight section ensues with no visibility, but topographical gain results in around 150m with theoretical turbine hub visibility, after which only the turbine blade tips remain in view until the route enters Paldyfair Wood around 550m to the north-east, thereby terminating the predicted visibility for this route.

Visibility of the Wind Development may occur in the direction of travel when heading south-west towards Mains of Glenfarquhar from Paldyfair Wood.

During the construction stage, visibility of construction machinery and compounds are unlikely to occur from this route, because of the distance to the Wind Development.

The Modified ZTV (see Figure 05b) indicates that there will be no visibility of the Solar and Hydrogen Development along the route.

#### Sensitivity of Receptors

Receptors travelling on the route are considered to be of Low susceptibility to the type of development proposed, as the route already feature a solitary wind turbine in an arable field to the north-east, as well as large electricity pylons running both parallel and perpendicular to the route from Mains of Glenfarquhar. Additionally, when

travelling towards Auchenblae, isolated turbines and wind farms such as Tullo are visible to the south-east; renewable energy production thus forms a part of the local landscape.

The value of views from the route is considered to be High / Medium, as they feature a range of elements from conventional agricultural land to the summits of Goyle Hill to the north-west and Strathfinella Hill to the south-west. The sensitivity of road users of this route to the type of development proposed is thus considered to be medium.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted, given the low probability of visibility of construction equipment during the erection of the wind turbine and ancillary structures.
  - Upon completion, a Low Magnitude of Change is predicted, as the turbine will become partly visible.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no change is predicted, as the Solar and Hydrogen Development will not be visible from this route.
  - Upon Completion, no change is predicted, as theoretical visibility of The Solar Development will similarly not occur on completion.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

#### 7.2.4 B966

The B966 links Brechin to the south-east of the Proposed Development with Fordoun to its north-east, covering a total of around 30km. Commencing at the Distillery Road / Southesk Street roundabout, Clerk Street heads north and converts into Trinity Road, thereby forming the north-easterly route out of the town. The route links to the A90 at a roundabout due east of the dual carriageway.

The route maintains an essentially northerly bearing for around 3.7km from the A90 turn-off to Edzell Wood, adapting to the topography here and there as it passes through the hamlet of Inchbare and crosses the Westwater Bridge. Upon entering Edzell Wood, the B966 turns north-northwest and runs for around 1.7km towards the entrance to the village, which is framed by the impressive Dalhousie Memorial Arch. The route maintains its north-northwesterly bearing as it bisects the village of Edzell, emerging to the north of Edzell Muir park.

The route turns north-east at a bridge over the River North Esk, running along the southern boundary of The Burn Garden and Designed Landscape (GDL). A publicly accessible walkway along the River North Esk can be accessed from the B966 by parking at this point and passing through the Category B-Listed Screen Wall with Moulded Footgate, known locally as 'The Blue Door'.

Continuing north-east towards Fettercairn, the route cuts through arable farmland. The route continues north-east into Fettercairn, passing through arable farmland, briefly entering the village before continuing on a straighter north-easterly bearing. The B966 continues through arable farmland to slightly north of Fordoun, twice passing through the former RAF Fordoun airfield. At this point it branches both north-east and south-west and runs parallel to the A90 into the village, where it terminates. The northern branch terminates a short distance to the north-east at an interchange with the A90.

### **Extent of Predicted Visibility**

For technical reasons, the Modified ZTV produced for the Wind Development is limited to a 15km radius from the site boundary. For consideration of receptors outwith this radius, reference will be made to the Bareground ZTV (see Figure 04a). The Bareground ZTV indicates that the Wind Development turbine hub will be visible continuously between Brechin and Edzell. Taking into consideration the distance between receptors on this first southern section of the route and the Wind Development, it seems likely that the turbine will form an exceptionally small part of the frame, where visible. As the route enters Edzell through Edzell Wood, the plantation and the settlement structure provide complete screening of the Proposed Development from the route. Bar one short section of perhaps 180m at the north end of the settlement, and another of 370m prior to the Colt Hill Ancient Woodland plantation, the route in the vicinity of Edzell will experience little visibility of the proposed wind turbine. The settlement provides complete screening of the Proposed Development until the route exits Fettercairn and heads north-east; a 1.4km section of the road features several instances of hub and blade tip visibility. The final section of the B966 to the north-east will experience first blade tip visibility and then the hub will theoretically become visible for the remainder of its trajectory to the A90. The final southern branch is predicted to experience around 110m of blade tip visibility.

The Modified ZTV (see Figure 05b) indicates that there will be no visibility of the Solar and Hydrogen Development along the route.

### **Sensitivity of Receptors**

Receptors travelling on the route are considered to be of Medium susceptibility to the type of development proposed, as it travels through a very scenic, but also dynamic and productive landscape which is already undergoing many infrastructure changes.

The value of views from the route is considered to be High, as they are variable and encompass a wide range of features, from settlements of architectural interest, conventional and modern agriculture, and also emerging renewable energy projects. The sensitivity of road users of this route to the type of development proposed is thus considered to be High / Medium.

While visibility of both parts of the Proposed Development may occur in the direction of travel, drivers' attention will be focused on navigating the winding road into the hills, as well as on the spectacular views of the immediate and wider landscape.

During the construction stage, visibility of construction machinery and compounds may occur at the points identified above, though this is likely to be more reduced than the component parts of the Proposed Development themselves, given their scale. In the case of the Wind Development, ZTV calculations have been made with the tip height of 76m, and as such construction equipment will be considerably lower in the field of view than this. Similarly in the case of the Solar and Hydrogen Development, which will not require large

construction equipment; it is improbable that any required would exceed the final height of the roof-mounted solar panels included in the ZTV calculations for this part of the Proposed Development.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted, given the reduced probability of visibility of construction equipment during the erection of the wind turbine and ancillary structures.
  - Upon completion, a Low Magnitude of Change is predicted, as the turbine will become visible.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this route.
  - Upon Completion, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this route.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Moderate / Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

#### 7.2.5 B9120

The B9120 is a minor road linking the A92 north-east of St. Cyrus with Fettercairn to the north-west, passing through Laurencekirk enroute. The route branches off the A92 at around 1.3km from the coast between St. Cyrus and Johnshaven. The route bears generally north-west, climbing steadily up the north-eastern slopes of the Hill of Garvock. Sporadic wind turbines are present in the primarily arable landscape.

The Laurencekirk Viewpoint lies on a steep bend to the south-west at sits at around 240m AOD, affording impressive panoramic views, particularly to the north-east towards Laurencekirk and the Braes of the Mearns Special Landscape Area (SLA) beyond, incorporating Strathfinella Hill to the north, as well as Clachnaben to the north within Clachnaben and Forest of Birse SLA.

The route traverses Laurencekirk before passing the dense plantation woodland to the north-east of the Category B-Listed Thornton Castle estate. Continuing north-west, the B9120 maintains long, straight sections amidst arable farmland, bounded by plantation in places. The route enters Fettercairn at a roundabout towards the south of the village, where it terminates.

### Extent of Predicted Visibility

Analysis of the Modified ZTV (see Figure 07) and site visit findings identified that visibility of the Wind Development along the route will be concentrated on the first 2km stretch of the route, from where the road branches off the B966 to the south-east. A portion of this first section some 1.8km in length will predominantly experience visibility of the proposed turbine hub, with occasional blade tips visibility. Blocks of plantation

woodland serve to screen the Proposed Development, creating this intermittent effect for road users travelling in both directions.

The Modified ZTV (see Figure 05b) indicates that there will be no visibility of the Solar and Hydrogen Development along the route.

### Sensitivity of Receptors

Receptors travelling on the route are considered to be of Medium susceptibility to the type of development proposed, as it travels through a scenic, but also dynamic and productive landscape which is already undergoing many infrastructure changes.

The value of views from the route is considered to be Medium, as they are mainly of a ordinary agricultural landscapes and plantation woodland, with some longer-range vistas to the hills in the north and north-west. The sensitivity of road users of this route to the type of development proposed is thus considered to be medium.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted, given the possibility for visibility of construction equipment during the erection of the wind turbine and ancillary structures.
  - Upon completion, a Medium / Low Magnitude of Change is predicted, as the turbine will become visible.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this route.
  - Upon Completion, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this route.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Minor adverse effects are predicted.
  - Upon completion, Moderate / Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

## 7.2.6 Ago

The Ago is the principal road route within the region, and thus the study area, linking Edinburgh and much of the east coast of Scotland. The route enters the study area in the south-west and bypasses Brechin to the north, maintaining a north-easterly bearing as it bounds Stracathro Hospital and Laurencekirk. Skirting Stonehaven, the route then heads due north towards Aberdeen, exiting the study area a short distance to the north of the Red Moss of Netherley Wildlife Reserve.

Due to the long-distance nature of the route, views along its length are susceptible to considerable variation. Within the study area, however, the Ago is strongly characterised by the generally arable farmland through which

it passes, punctuated periodically by secondary roads connecting the towns and villages dispersed along the route.

### Extent of Predicted Visibility

The Modified ZTV (see Figure 05a) and site visit findings confirm that visibility of the the Wind Development will occur along two sections of the route. The first and more reduced instance will occur for around 830m to the south-west of Laurencekirk, at the north-eastern limits of Balmakewan Wood. Road users travelling north-east on the route would be able to perceive the wind turbine hub briefly and then only the turbine tip for the remaining 700m of predicted visibility. The second instance of predicted visibility on the route will occur along a 1.4km stretch to the east of the study area, at around the latitude of Monboddie House. In this case road users travelling north-east will experience around 265m of visibility of the wind turbine tip, followed by approximately 1.12km of intermittent visibility, principally of the turbine hub.

The Modified ZTV (see Figure 05b) indicates that no visibility of the Solar and Hydrogen Development is predicted to occur along the route.

### Sensitivity of Receptors

Road users on the route are considered to be of Low susceptibility to the type of development proposed, as it is expected that they will be more cognisant of their immediate surroundings than distant views.

The value of views from the route is considered to be Medium; while it travels through an ordinary agricultural landscape, the A90 itself and its associated traffic and signage elements dominate views from the road. The sensitivity of road users on the A90 to the type of development proposed is considered to be Medium/low.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted, given the possibility for visibility of construction equipment during the erection of the wind turbine and ancillary structures.
  - Upon completion, a Medium / Low Magnitude of Change is predicted, as the turbine will become visible.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this route.
  - Upon Completion, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this route.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Minor adverse effects are predicted.
  - Upon completion, Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

## 7.3 Key Recreational Routes

### 7.3.1 Core paths around Auchenblae (including paths 501.02, 501.03 and 508.02)

This group of Core Path sections forms a partial network in and around the village of Auchenblae, to the east of the Proposed Development. Core Path 501.2 follows a minor road which branches off the High Street to the north-west, extending out into the countryside to the north-west towards Drumelzie Farm. The southern branch of the route traces the lower slopes of Fordoun Hill and Temple Hillock to link up with the southern limits of the village. This section terminates as soon as it enters the village from the west. A short distance to the east Core Path 501.03 commences, following a track between arable fields to the west. At the eastern end of this track, the route crosses a minor road which heads south-west to link the outskirts of Auchenblae and Fordoun. Upon crossing this minor road, the route continues on the same north-easterly bearing between large arable fields.

At the eastern end of this section, the route bifurcates to become Core Path 501.03R and Core Path 501.03. Core Path 501.03R traces a large rectangular arable field on a minor road to the east of Auchenblae, before terminating at a junction. Core Path 501.03 continues generally south-east, transforming into Core Path 508.02 at the southern tip of the Stoneybelt Plantation.

Core Path 508.03 skirts the western boundary of Monboddie House estate before heading south to intersect the B966, before branching off it once more. The route skirts the Fordoun Manufacturing Facility before branching onto the minor road linking nearby Fordoun with Auchenblae to the north-east.

#### Extent of Predicted Visibility

Analysis of the Modified ZTV (see Figure 07) and site visit findings identified that visibility of the Proposed Development will be restricted to parts of sections 501.03R and 501.03. In the case of section 501.03R, visibility of the Proposed Development is predicted to be limited to the turbine tip throughout much of its length, though at its northern extents the turbine hub may also briefly be visible. Section 501.03 is predicted to experience two instances of turbine tip visibility of around 175m and 55m respectively, on the part of the route which is intersected by section 501.03R from the north-west.

The Modified ZTV (see Figure 05b) indicates that there will be no visibility of the Solar and Hydrogen Development along the route.

#### Sensitivity of Receptors

Recreational users on the route are considered to be of Medium susceptibility to the type of development proposed, as they will be aware of their surroundings as they travel around the outskirts of Auchenblae, though the immediate views and local architectural features of interest are likely to absorb most of their attention.

The value of views from the route is considered to be High, as it travels through an ordinary agricultural landscape with panoramic views in all directions, in particular towards the Braes of the Mearn Special Landscape Area (SLA) to the north-west. The sensitivity of recreational users of this route to the type of development proposed is thus considered to be High / Medium.



## Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted, given the possibility for visibility of construction equipment during the erection of the wind turbine and ancillary structures.
  - Upon completion, a Medium / low Magnitude of Change is predicted, as the turbine will become visible.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this route.
  - Upon Completion, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this route.

## Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Moderate / Minor adverse effects are predicted.
  - Upon completion, Moderate adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

### 7.3.2 Core paths around Fettercairn (including paths 506.01, 506.02, 506.03 and 506.04)

This group of Core Path sections forms a short loop around arable fields to the west of the village of Fettercairn, with one branch to the east and another to the north-east. The main loop to the west is approximately 1.7km in length and heads out of the Conservation Area of the village from School Road. This first section (Core Path 506.04) follows the course of a small burn which marks the boundary between fallow and arable fields, around which these Core Paths trace their route. Section 506.04 terminates at Distillery Road, branching south-west to become 506.03, running past Fettercairn Distillery before continuing to skirt the fields to the south-east. On passing Fettercairn Cemetery, the section terminates at the B966, converting into section 506.02. This final section ends just outwith the Conservation Area. Section 506.01 runs from close to Fettercairn Parish Church around parkland to the east of the village, before turning north through woodland to terminate at a minor road.

#### Extent of Predicted Visibility

Analysis of the Modified ZTV (see Figure 05a) and site visit findings identified that visibility of the Wind Development will occur throughout approximately half of the route; sections 506.03P and 506.02 (1.02km in length) will experience visibility of the turbine hub and tip throughout. At the north-western and north-eastern limits of these two sections, visibility will reduce to turbine tip only, with 506.03R experiencing no visibility and 506.04 intermittent hub and tip visibility.

The Modified ZTV (see Figure 05b) indicates that there will be no visibility of the Solar and Hydrogen Development along the route.

## Sensitivity of Receptors

Recreational users on the route are considered to be of Medium susceptibility to the type of development proposed, as they will be aware of their surroundings as they travel around the outskirts of Fettercairn, though the immediate views and local architectural features of interest are likely to absorb most of their attention.

The value of views from the route is considered to be High, as it travels through an ordinary agricultural landscape with excellent views in all directions, in particular towards the Braes of the Mearn Special Landscape Area (SLA) to the north, as well as the Fettercairn Arch to the north-east of the terminus of section 506.02. The sensitivity of recreational users of this route to the type of development proposed is thus considered to be High / Medium.

## Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted, given the possibility for visibility of construction equipment during the erection of the wind turbine and ancillary structures.
  - Upon completion, a Medium / Low Magnitude of Change is predicted, as the turbine will become visible.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this route.
  - Upon Completion, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this route.

## Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Moderate / Minor adverse effects are predicted.
  - Upon completion, Moderate adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

### 7.3.3 Laurencekirk – Fettercairn Circular Recreational Cycling Route

This route links the village of Laurencekirk to the south-east of the study with the village of Fettercairn. As the route is circular, it will be considered as commencing and terminating in Laurencekirk. The route originates at the south-western end of the High Street and travels its length, turning north-northwest crossing the Edinburgh to Aberdeen Railway Line. The route follows Fordoun Road for around 1km, before branching off it at Mains of Haulkerton Farm. On passing the farm, the route crosses the Ducat Water and passes between arable fields lined with trees. At the junction beyond Eastwood House, the route maintains its bearing for another 700m.

West of Pitnamoon Farm and Cottages, the route veers north-northwest and bounds a block of Ancient Woodland interspersed with newer plantation. North of this plantation, polytunnel agriculture partially characterises the landscape to the south-west. The route maintains a similar trajectory at the next junction, at the end of which the route bears west and adjoins the B974, sharing its trajectory south-west along the eastern boundary of the Fasque House Garden and Designed Landscape (GDL) and then south into Fettercairn.

At the southern end of the village, the route follows the B966 south-east past Fettercairn Parish Church, diverging from it onto the B9120 around 560m from the church grounds. At around the latitude of a large area of Ancient Woodland, the route turns east-southeast for approximately 1.8km, before turning south-east for 1.5km. The route then passes Blackiemuir and into Laurencekirk.

### **Extent of Predicted Visibility**

Analysis of the Modified ZTV (see Figure 05a) and site visit findings identified that visibility of the Wind Development will be restricted to a short section of around 185m to the north-east of the junction with the B974 due south-east of Hunter's Hill. Coming from Laurencekirk, it is predicted that the turbine tip would come into view, followed to a limited extent by the turbine hub. Visibility will reoccur around five times on a stretch of the route south-east of Fettercairn, between the turnoff onto the B9120 from the B966 and the latitude of Greenbottom Wood.

Theoretical visibility of the Solar and Hydrogen Development is likely to be very limited, with two sections of around 45 and 105m of the route to the south-east of Fettercairn experiencing visibility of both parts of this portion of the development.

### **Sensitivity of Receptors**

Recreational users on the route are considered to be of Medium susceptibility to the type of development proposed, as they will be aware of their surroundings but will probably be travelling at higher speeds than those on foot, as this is a cycle route.

The value of views from the route is considered to be High, as it travels through an ordinary agricultural landscape with panoramic views in all directions, in particular towards the Braes of the Mearn Special Landscape Area (SLA) to the north-west, but also towards the south and south-east. The sensitivity of recreational users of this route to the type of development proposed is thus considered to be High / Medium.

### **Magnitude of Change**

- As a result of the Wind Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted, given the low possibility for visibility of construction equipment during the erection of the wind turbine and ancillary structures from this route.
  - Upon completion, a Low Magnitude of Change is predicted, as the turbine will become visible.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this route.
  - Upon Completion, practically no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this route.

### **Predicted Effects**

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Moderate / Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.

- Upon completion, no effects are predicted.

## 7.4 Representative Viewpoints

A total of eight viewpoints were identified and selected as being representative of the range of visual receptors considered within the study area. One of these (VPo8: Clachnaben) was not taken forward, in light of potential health and safety concerns associated with obtaining the photography during winter months at the summit of Clachnaben. As such, no photography was taken from this vantage point. Predicted visibility of the proposed turbine is of blade only, and the turbine hub would be screened by topography.

In a number of cases, a viewpoint features two distinct views from the same approximate position. The reason being for this that the distance between the Wind Development and the Solar and Hydrogen Development is such that it is not possible to accurately depict the visual impact of The Proposed Development from a single vantage point. Where this occurs, it has been indicated so as to avoid confusion.

For the purposes of this assessment, unless otherwise stated, all recreational receptors are considered to be either of **Medium sensitivity** to the typology of development proposed, whilst road users are considered to be of varying sensitivity depending on a number of factors (see **Appendix B**). Where recreational activities could be considered passive, such as walking, receptors are considered to be of **High sensitivity**. For activities which are more active, such as mountain biking or other sports, receptors would be considered to be of **Medium sensitivity**. All effects during the construction stage are assumed to be temporary in nature and of short duration, whilst effects post-completion are assumed to be permanent.

**Table 1: Representative Viewpoints for Visual Assessment** (see Section 4.2.4 above) includes the detailed position of each representative viewpoint location. These are also illustrated on Figures 01, 04a, 04b and 05a. A key component of the site appraisal process is the micro-siting of viewpoint locations to ensure supporting visualisations demonstrate attributable effects of the Proposed Development most representative of the receptor it represents. Panoramic photographs and photomontages are provided to illustrate the existing view at each viewpoint location and the likely extent of the Proposed Development within the view (see Figures 08a – 14d).

### 7.4.1 VPo1a: Loch Saugh (see Figures 09a – 09d)

This viewpoint was taken from the south-eastern end of the access track, at the southern limits of Loch Saugh, approximately 1.5km south of the proposed wind turbine, at an altitude of 167m AOD.

#### Existing View

The immediate foreground is characterised by the southern extents of Loch Saugh, with dense mixed woodland bounding the steep south-eastern banks of the water body rising up to open moorland beyond. To the left of the view, the lacustrine vegetation is less dense on the south-western shore of the loch, with its banks rising less steeply to become grassland with sparse conifer growth on its lower slopes. Along the road boundary to the left of the view in the middle distance, a fairly uniform stand of conifers runs parallel to the road. Towards the centre of the view, the bend in the water body to the north-east is dominated by very dense deciduous tree cover down to the water level, interspersed with tall conifers on the higher ground. Above the canopy line of this naturalised woodland running along the western edge of Loch Saugh, more distant coniferous plantation on the south-eastern slopes of Cleek Hillock come to form the background to the view towards the horizon. On the higher slopes of Cleek Hillock, which merges to the north-east with Loch Hill to form the ridge visible for almost the

width of the horizon of the view, patchy heather and scrub makes up the only cover. To the right of the horizon, the plantation woodland on The Hill of Annahar comes into view briefly.

### Proposed View

The Wind Development would result in the addition of a single wind turbine being added to the centre of the view, rising at the bend to the north-east in Loch Saugh identified previously. The turbine would appear as an entirely standalone intervention, with no other wind energy developments entering the frame. In addition, some of the electricity transmission poles associated with the wind turbine would be visible to the right of its base, descending the slope to the south, before being screened by intervening tree cover.

### Sensitivity of Receptors

Recreational users are likely to be in the area to enjoy Loch Saugh and its surroundings and are considered to be of High susceptibility to changes which may occur. The value of the view is High, being scenic and relatively lacking in built form. Recreational users are therefore considered to be of High sensitivity to changes of the nature proposed.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Medium Magnitude of Change is predicted, given the likelihood of visibility of construction equipment during the erection of the wind turbine and ancillary structures from this viewpoint.
  - Upon completion, a Medium Magnitude of Change is predicted, as the turbine will come to be the focal point of the view.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this route.
  - Upon Completion, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, **Major / Moderate adverse effects** are predicted.
  - Upon completion, **Major / Moderate adverse effects** are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

#### 7.4.2 VP01b: Loch Saugh (see Figures 09e – 09g)

This viewpoint was taken from the south-eastern end of the access track, at the southern limits of Loch Saugh, approximately 1.5km south of the proposed wind turbine, at an altitude of 167m AOD.

### Existing View

The immediate foreground is characterised by dense coniferous ground cover, rising to mature conifers which frame the view to beyond the horizon. The centre of the frame is occupied by mixed deciduous and coniferous shrub and small tree cover growing freely on both banks of the Glen Burn as it flows south-east out of Loch Saugh. A dense block of mature coniferous plantation to the centre-left of the frame contrasts starkly with the more naturalised vegetation which crosses the view. There are also coniferous saplings of a uniform age suggestive of plantation origin to the centre-left of the foreground, on the valley floor to the south-east of Loch Saugh.

The middle distance is made up of a pastoral field to the north-east of Glensaugh Farm which slopes gently upwards from the viewpoint to the steading. The mature conifers which line most of the northern perimeter of Glensaugh Farm provide screened views through to the farm buildings, and their canopies merge with more distant woodland on either side of the previously mentioned block of plantation.

### Proposed View

The Solar and Hydrogen Development would result in the demolition of some agricultural buildings to the north-east of the complex, and the hydrogen electrolyser facility and other elements being constructed in their place. This would slightly reduce the presence of built form in the view (compare Figures ogf and ogg), thereby allowing visibility of existing woodland currently screened by buildings to be removed. A number of the electricity transmission poles associated with the Wind Development may be faintly perceptible to the right of the view, though they are likely to be absorbed into the view by the mature conifers which occupy this portion of the frame.

### Sensitivity of Receptors

Recreational users are likely to be in the area to enjoy Loch Saugh and its surroundings and are considered to be of High susceptibility to changes which may occur. The value of the view is High, being scenic and relatively lacking in built form. Recreational users are therefore considered to be of High sensitivity to changes of the nature proposed.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted, as only brief visibility of construction equipment is likely to occur during the erection of electricity transmission poles.
  - Upon completion, a Negligible Magnitude of Change is predicted, as visibility of electricity transmission poles will be very limited.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, a Medium Magnitude of Change is predicted, as construction vehicles and equipment will be visible periodically at the centre of the frame.
  - Upon Completion, the Solar and Hydrogen Development is predicted to reduce the presence of built form from this viewpoint – this would constitute a Low, beneficial Magnitude of Change.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Negligible effects are predicted.

- As a result of the Solar and Hydrogen Development:
  - During the construction phase, **Major / Moderate adverse effects** are predicted.
  - Upon completion, Moderate / Minor beneficial effects are predicted.

### 7.4.3 VPo2: Junction of Old Military Road and C-class road to Glensaugh (see Figures 10a – 10d)

This viewpoint was taken from slightly north of the ford over the Slack Burn, to the north-east of the B974 on crossing the Clattering Bridge, approximately 2.1km south-west of the proposed wind turbine, at an altitude of 126m AOD.

#### Existing View

The foreground of the view is comprised of the glen into which the Slack Burn flows, visible at the right of the view by a damaged footbridge. A metal gate and post-and-wire fence marks the boundary of a flat field running up to the middle distance of the view, its tall riparian vegetation merging to the right of the image with tall ferns and compact gorse bushes colonising the steep inclines leading upwards to the C-class road to Glensaugh. This vegetation pattern continues on the eastern boundary of the C-class road, with the addition of tall conifers along the roadway rising above the horizon line. Towards the centre of the view the undulating topography is crisscrossed with post-and-wire fencing, and as it climbs out of the glen an area of steeper grassland meets a block of uniform coniferous plantation woodland, beyond which a narrow strip of Ancient Woodland of semi-natural origin which flanks the Birnie Burn is embedded. At around this point in the view, the glen beyond is framed by woodland, the stark contrast between the foreground and the barer heath in the background highlighting the progressive increase in altitude in this direction. The sparsely heather-clad lower reaches of Cleek Hillock climb abruptly from the centre of the glen to merge with Loch Hill at the horizon to the centre-right of the frame. The remainder of the horizon view is made up of plantation woodland occupying a depression between Kircram in the west and Goyle Hill in the east.

#### Proposed View

The Wind Development would result in the blades and hub of a single wind turbine being added to the centre of the view. The lower portion of the turbine would be screened by intervening topography (see Figure 10d). The electricity transmission poles associated with the Wind Development would be entirely screened by topography from this angle.

#### Sensitivity of Receptors

Road users will be relatively few in number, given the narrowness of the road and the challenges of using it (at times of peak flow it may be hazardous to cross the ford over the Slack Burn. It is anticipated that the majority of road users will be accessing farm steadings and residences such as Glensaugh, though some may be heading to Loch Saugh or along the glen to Auchenblae. As such, receptors are considered to be of Medium susceptibility overall to changes of the nature proposed. The value of the landscape is High, being a scenic glen with few human-made interventions; road users are considered to be of High / Medium sensitivity to the type of changes associated with the Wind Development.

## Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted, given that it is relatively unlikely that visibility of construction equipment will occur during the erection of the wind turbine from this viewpoint.
  - Upon completion, a Medium Magnitude of Change is predicted, as the turbine will come to occupy part of the focal point of the view.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.
  - Upon Completion, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.

## Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Moderate / Minor adverse effects are predicted.
  - Upon completion, Moderate adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

### 7.4.4 VP03: Cairn O Mount Viewpoint (see Figures 11a – 11d)

The photograph is located within the car park some 220m south-east of the Cairn O' Mount Scheduled Monument, approximately 2.6km north-west of the proposed wind turbine, at an altitude of 410m AOD.

#### Existing View

The immediate foreground comprises the long grasses which bound the car park, beyond which they give way on the steep slopes to the patchwork of heathers which clad the hillsides of the Cairn o' Mount and surrounding peaks, with the distinctive dark patches of heather contrasting with the paler areas of low scrub. The Old Military Road winds down to the valley at the left of the image, though the roadway is imperceptible in the frame. To the right of the view, Redstone Hill forms a ridge, down which the Old Military Road runs, entering the frame briefly to the right-hand side as it descends through the glen.

The middle distance is made up principally of the valley floor around Glensaugh Farm, its vibrant green pastoral fields contrasting starkly with the brown and umber tones of the heaths at higher altitudes. The single existing wind turbine to the north of Glensaugh Farm serves to orientate the viewer, as do the white façades of the various cottages which are embedded in woodland around the Proposed Development site. Strathfinella Hill rises steeply to the north-east of Glensaugh Farm, as does the smaller, conjoined peak of Smart's Cairn to its south. These two features appear as a single ridge sloping downwards towards the centre of the frame; the characteristic forestry clearing patterns of their slopes serving to accentuate the topography where they have been left bare.

The operational Tullo wind Farm between Laurencekirk and Gourdon forms a landmark beyond Strathfinella Hill to the east. Constructed at the northern end of a ridge running from the north-east to the south-east of



Laurencekirk, terminating in Garvock Hill, this wind farm encroaches visually to some extent on Strathfinella Hill at its northern extents. The remainder of the middle distance up to the horizon line formed by where this ridgeline means the North Sea is comprised of The Howe of the Mearns, its neat framework of largely arable fields bounded by and interspersed with dense woodland throughout. At around the centre of the frame, Laurencekirk can be seen on the lower slopes of Garvock Hill, with the large rectangular block of Ancient Woodland called Denlethen Wood serving to identify the south-western limits of the settlement.

### Proposed View

The Wind Development would result in the addition of the view of almost the entirety of the proposed wind turbine at the centre of the frame, slightly to the right of where the plantation woodland on Hill of Annahar terminates on adjoining Loch Hill. The ridge line would be altered visually by the introduction of this vertical element, as would the clear perception of the northern slopes of Strathfinella Hill climbing out of Glen of Drumtochty. The Wind Development would appear as a standalone installation, with its hard standing and ancillary components screened from view by topography from this angle.

### Sensitivity of Receptors

Road users would be of High susceptibility to changes of the nature proposed, as they are likely to making use of this historic pass largely for leisure purposes, and the necessary low speed of the winding road will encourage them to pause and appreciate the views. Similarly, recreational users, who may overlap with road users given the provision of two car parking facilities, would be of High susceptibility to said changes. The views are of Outstanding value; the viewpoint is situated within a Scheduled Monument which dates partly from the Neolithic and the views are breathtaking in all directions. Both road and recreational users are thus considered to be of Very high / High sensitivity to the type of changes proposed.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Low Magnitude of Change is predicted, given that it is relatively unlikely that visibility of construction equipment will occur during the erection of the wind turbine from this viewpoint.
  - Upon completion, a Medium / Low Magnitude of Change is predicted, as the turbine will come to occupy a part of the focal point of the view.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.
  - Upon Completion, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Moderate / Minor adverse effects are predicted.
  - Upon completion, Moderate adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

#### 7.4.5 VPo4: Glen Road, adjacent to Auchenblae (see Figures 12a – 12d)

This viewpoint was taken from a grass verge at the side of Glen Road, to the north-west of Auchenblae, approximately 4.9km south-east of the proposed wind turbine, at an altitude of 118m AOD.

##### Existing View

The foreground of the view is of a post-and-wire fence, beyond which two pastoral fields on Fungo Hillock are bisected at the centre of the frame by juvenile deciduous shelter belt planting. Fungo Hillock rises to form a ridgeline in the centre of the view, screening the Luther Water as it flows south-east through Auchenblae. The trees which line the water body, however, cross the centre of the view and indicate its course. Progressing uphill to the west, a number of arable fields lined with mature shelter belt planting occupy the lower slopes of Strathfinella Hill, with woodland commencing just above Drumelzie Farm to the centre-left of the frame. To the right of this point, three large electricity pylons breach the skyline amidst forestry as the topography shelves downwards into Glen of Drumtochty to the north-west of the viewpoint location.

##### Proposed View

the Wind Development would result in the almost imperceptible addition of the wind turbine hub and blades to the centre of the view, set amidst woodland between the two left-most electricity pylons. At the current height of the plantation woodland immediately surrounding the wind turbine within the view, the blade tips are likely to breach the vertical treeline. The electricity transmission poles associated with the wind turbine will be entirely screened by intervening topography and vegetation from this angle.

##### Sensitivity of Receptors

Road users are considered to be of Low susceptibility to changes of the nature proposed, as they will be focussed on the narrow road ahead in both directions. The Wind Development will appear as a distant element perpendicular to their direction of travel. The landscape is considered to be of medium value, being a well-maintained agricultural landscape with few extraordinary features. As such, road users are considered to be of medium/Low sensitivity to changes of the type proposed.

##### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted, given that it is unlikely that visibility of construction equipment will occur during the erection of the wind turbine from this viewpoint.
  - Upon completion, a Negligible Magnitude of Change is predicted, as the turbine will be only faintly perceptible within the view.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.
  - Upon Completion, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.

##### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.

- Upon completion, Negligible effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

#### 7.4.6 VPO5: Fettercairn (see Figures 13a – 13d)

This viewpoint was taken from the side of a small area of parkland within the Fettercairn Conservation Area on the Old Military Road, approximately 6.7km south-west of the proposed wind turbine, at an altitude of 68m AOD.

##### Existing View

The foreground of the view consists of a large pastoral field which runs the width of the frame, adjoining an arable field to the north which is visible as a narrow strip of pale yellow above it. At the northern boundary of this field, a deciduous shelter belt serves to link the north-western and south-eastern portions of Broom / Crow Wood to the north of Fettercairn. The middle distance is heavily characterised by the mature deciduous woodland, occasionally overtopped by conifers.

The smooth, rounded peak of Hunter's Hill lies at the centre of the frame, forming the horizon of the view as it rises above Broom / Crow Wood. From this vantage point, Hunter's Hill is clad with coniferous plantation woodland.

##### Proposed View

The Wind Development wireframe (see Figure 13c) indicates that the wind turbine blades would breach the skyline above the hills at the centre of the frame; however, the photomontage (Figure 13d) indicates that there would be negligible visibility of it from the viewpoint location. The electricity transmission poles associated with the wind turbine will be entirely screened by intervening topography and vegetation from this angle.

##### Sensitivity of Receptors

Road users are considered to be of Low susceptibility to changes of the nature proposed, as their attention is likely to be focused on their immediate surroundings. Views are considered to be of high value, as the village of Fettercairn is picturesque. Road users are thus determined to be of Medium sensitivity to changes such as those proposed.

##### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted, given that it is unlikely that visibility of construction equipment will occur during the erection of the wind turbine from this viewpoint.
  - Upon completion, a Negligible Magnitude of Change is predicted, as the turbine will be only faintly perceptible within the view.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.

- Upon Completion, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Negligible effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

#### 7.4.7 VPo6: Minor road east of Auchenblae (see Figures 14a – 14d)

This viewpoint was taken from a grass verge at the side of the minor road leading east out of Auchenblae, almost directly due north of Monboddie House, approximately 6.2km south-east of the proposed wind turbine, at an altitude of 113m AOD.

### Existing View

The foreground of the view comprises arable fields which runs the width of the view up until the middle distance. Auchenblae is visible in the middle distance for much of the centre of the frame. Beyond Auchenblae to the west, arable fields lined with mature shelter belt planting occupy the lower slopes of Strathfinella Hill, with woodland commencing just above Drumelzie Farm to the centre of the frame. This woodland extends to cover the entirety of the hill sides from this point to the left of the horizon.

To the right of this point, two large electricity pylons breach the skyline amidst forestry, serving to indicate where the Glen of Drumtochty winds through the landscape. The right-hand portion of the horizon is characterised by the dense and uniform coniferous plantation rising from the north-western edge of Glen of Drumtochty northwards up the steep slopes of Hill of Burnieshag.

### Proposed View

The Wind Development wireframe (see Figure 14c) indicates that the wind turbine blades and hub would be visible through Glen of Drumtochty; however, the photomontage (Figure 14d) indicates that existing tree cover would provide considerable screening. As such, there would be negligible visibility of the wind turbine from the viewpoint location. The electricity transmission poles associated with the wind turbine will be entirely screened by intervening topography and vegetation from this angle.

### Sensitivity of Receptors

Road users are considered to be of Low susceptibility to changes of the nature proposed, as they will be focused on the road ahead as they approach Auchenblae. The value of the view is Medium, as it looks across an ordinary agricultural landscape. Road users are thus considered to be of Medium / Low sensitivity to changes of the type proposed.

## Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted, given that it is unlikely that visibility of construction equipment will occur during the erection of the wind turbine from this viewpoint.
  - Upon completion, a Negligible Magnitude of Change is predicted, as the turbine will be a distant and not dominant component within the view.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.
  - Upon Completion, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.

## Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Negligible effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

### 7.4.8 VP07: B974 south of Fettercairn (see Figures 15a – 15d)

This viewpoint was taken from a grass verge at the side of the B974, at the junction of the minor road leading north-east to Craigmoston Mains Plump, approximately 8.3km south-southwest of the proposed wind turbine, at an altitude of 63m AOD.

#### Existing View

The foreground comprises headland vegetation around the edge of an arable field to the centre-right of the view. The minor road to Craigmoston Mains Plump, though largely not visible, acts as the boundary between it and another to the north-west. The terrain up to the middle distance is flat and unremarkable, with field boundaries to the north and north-east highlighted in places by large deciduous trees and hedgerows. At around the centre of the view, a block of Ancient Woodland is flanked by polytunnel agriculture which abuts the B9120 to the north-east. Beyond this point, many clusters of Ancient Woodland and plantation woodland merge to form a continuous backdrop to the widespread polytunnel agriculture present in the frame.

At the centre of the view, the single existing wind turbine to the north of Glensaugh Farm is faintly visible, framed by Hunter's Hill to left and Smart's Cairn / Strathfinella Hill to the right. Beyond this point, the sharp edge formed by the geometric felling of plantation woodland on the eastern slopes of Loch / the lower, western slopes of Hill of Annahar provide a reference point. Besides this patch of woodland, the slopes of Loch Hill, as well as Thorter Hill and Redstone Hill to the west, are largely devoid of tree cover and feature fragmented heather and scrub.

### Proposed View

The Wind Development would see the introduction of the wind turbine into the centre-right of the view, where it would be seen just below the horizon, slightly to the right of the existing wind turbine north of Glensaugh Farm. The electricity transmission poles associated with the wind turbine on the upper slopes close to its base will be faintly perceptible, and these will be progressively screened by intervening topography and vegetation as they descend south and south-west towards Glensaugh Farm.

### Sensitivity of Receptors

Road users are considered to be of Low susceptibility to changes of the nature proposed, as they will be focused on the road ahead as they approach Fettercairn. The complex surrounding views would not be materially altered by the introduction of a single wind turbine. The value of the view is Medium, as it looks across an ordinary agricultural landscape. Road users are thus considered to be of Medium / Low sensitivity to changes of the type proposed.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted, given that it is unlikely that visibility of construction equipment will occur during the erection of the wind turbine from this viewpoint.
  - Upon completion, a Low Magnitude of Change is predicted, as the turbine will be a distant and not dominant component within the view.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.
  - Upon Completion, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Minor adverse effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

#### 7.4.9 VPo8: Clachnaben (see Figures 19a – 19c)

This viewpoint was scheduled to be taken from close to the summit of Clachnaben, approximately 8.9km north-west of the proposed wind turbine, at an altitude of 566m AOD.

As outlined in Section 7.1, this viewpoint was initially proposed to be taken from the viewpoint on the summit of Clachnaben. Due to potential health and safety concerns associated with obtaining the photography during winter months it was agreed at Scoping that wireframes only would be produced for this viewpoint.

### Sensitivity of Receptors

Recreational users would be in the area to experience the views, so they are considered to be of High susceptibility to changes of the nature proposed. The value of the landscape is Outstanding, and as such, the sensitivity of recreational users to changes of the type associated with the Wind Development is Very high / high.

### Magnitude of Change

- As a result of the Wind Development:
  - During the construction phase, a Negligible Magnitude of Change is predicted, given that it is unlikely that visibility of construction equipment will occur during the erection of the wind turbine from this viewpoint.
  - Upon completion, a Negligible Magnitude of Change is predicted, as only the turbine blades would be faintly perceptible in the distance, against a backdrop of operational wind farms such as Tullo and the consented turbine at Mains of Bridgeton.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.
  - Upon Completion, no theoretical visibility of the Solar and Hydrogen Development is predicted to occur from this viewpoint.

### Predicted Effects

- As a result of the Wind Development:
  - During the construction phase, Negligible effects are predicted.
  - Upon completion, Negligible effects are predicted.
- As a result of the Solar and Hydrogen Development:
  - During the construction phase, no effects are predicted.
  - Upon completion, no effects are predicted.

## 8 Appraisal of Cumulative Effects

As per the Scoping Consultation Letter for the Proposed Development, a series of cumulative ZTVs (see Figures 08a-11) have been prepared to:

- Determine meaningful cumulative overlap within the extents of the study area; and
- Assist in the evaluation of cumulative effects upon the baseline landscape and visual resource.

The potential cumulative effects of the Proposed Development will be identified within a 25km radius of the Proposed Development site. It is proposed that all operational, consented and proposed wind turbine developments that adhere to the following parameters will be assessed and illustrated within cumulative wireframes:

- All known wind turbine developments within 5km of the Proposed Development; and
- All known wind turbine developments above 70m to blade tip within 25km of the Proposed Development.

In addition to the cumulative ZTVs above, the assessment will be supported by a Modified ZTV (see Figure 06), which provides a more realistic representation of the actual visibility which could be expected as a result of the Wind Development. Due to the technical limitations of preparing a Modified ZTV model of the entire 25km study area, reference will be made to both sets of ZTVs in the subsequent assessment.

Wind turbine developments at the scoping stage were assessed on a case-by-case basis, with those considered appropriate (due to proximity and publicly available information) to be included within the assessment. At the time of undertaking the assessment, however, no scoping or planning sites were considered which met the above criteria.

The Cumulative Landscape and Visual Assessment (CLVA) undertook a similar process to the LVA and focussed primarily focus on the additional effects of the Proposed Development within the cumulative landscape. Simultaneous visibility (occurring where one or more developments are visible from a static position) was included within our assessment from each viewpoint location. Sequential visibility (when a viewer moves between positions), was assessed within our assessments from key transport and recreational routes.

As no developments comparable to the Solar and Hydrogen Development were found within the study area, no cumulative effects associated with it were considered to exist. No interaction with proposed turbines is predicted, as none were identified within the 25km study area.

The following section briefly describes theoretical cumulative interaction between the Proposed Development (the Wind Development) and those operational, consented or proposed wind energy developments with potential to give rise to cumulative landscape and visual effects within a 25 km radius of the Site (the study area).

### 8.1 Appraisal of Cumulative Landscape Effects

#### 8.1.1 LCT 29 – Summits and Plateaux – Aberdeenshire

With reference to Figures 09-11, simultaneous cumulative interaction between the Wind Development and operational and consented turbines within the study area would occur from within this LCT; as this LCT is the 'host' landscape, both parts of the Proposed Development are located within it. It is worthy of mention that Figures 09-11 depict cumulative effects based on Bareground Zone of Theoretical Visibility (ZTV) maps; actual



visibility is likely to be substantially less than what is illustrated on these graphics. As such, reference will be made to the Modified ZTV (Figure o6), which demonstrates that actual visibility will be substantially reduced to hilltops in the immediate locale of the Wind Development.

With reference to the Bareground ZTV (see Figure o9), cumulative interaction between the Proposed Development and operational turbines at assessed wind energy sites in the north and east of the study area would occur in combination and/or succession. This can be summarised as follows: 71.68% of the entire 25km study area may experience theoretical visibility, of which:

- Cumulative sites only theoretically visible (58.78% of 25km study area);
- Both proposed turbine and cumulative sites theoretically visible (12.73% of 25km study area);  
and
- The Proposed turbine only theoretically visible (00.18% of 25km study area).

What can be deduced from this data is that from approximately 59% of the study area cumulative visibility of operational turbines would already occur; the Wind Development would interact with the existing baseline across 12.73% of the study area. Throughout 00.18% of the study area the Wind Development would be viewed independently; while not relevant to cumulative assessment, this data was included for completeness.

Factoring in the screening effect of intervening topography and vegetation, it is considered likely that cumulative interactions between the Wind Development and operational and consented wind turbines will be limited to locations at higher altitudes, such as the Cairn O' Mount Viewpoint (see VP03, Figures 14a-14d).

### Sensitivity

As stated in Section 6.2.1, due to the many designations within the LCT, the value of the landscape is considered to be High. Taking into consideration the high value of the landscape and its Medium susceptibility to the type of changes proposed the landscape is considered to be of overall High / Medium sensitivity to the type of changes proposed.

### Magnitude of Change

A low Magnitude of Change is predicted overall from this LCT as a result of the introduction of the Wind Development; the introduction of a single wind turbine is unlikely to materially alter the character of such an expansive landscape, especially when views to the north-east, east and south-east already contain well-integrated wind energy developments.

### Predicted Effects

As a result of the introduction of the Wind Development, Moderate / Minor cumulative effects are predicted.

#### 8.1.2 LCT 22: Broad Valley lowlands – Aberdeenshire

With reference to Figures o9-11, simultaneous cumulative interaction between the Wind Development and operational and consented turbines within the study area would occur from within this LCT, which at its closest point lies approximately 3.7km to the south-east of the Wind Development. It is worthy of mention that Figures o9-11 depict cumulative effects based on Bareground Zone of Theoretical Visibility (ZTV) maps; actual visibility is likely to be substantially less than what is illustrated on these graphics. As such, reference will be made to the Modified ZTV (Figure o6), which demonstrates that actual visibility will be substantially reduced to the western and south-western portion of the LCT.

With reference to the Bareground ZTV (see Figure 09), cumulative interaction between the Proposed Development and operational turbines at assessed wind energy sites in the north and east of the study area would occur in combination and/or succession. This can be summarised as follows: 71.68% of the entire 25km study area may experience theoretical visibility, of which:

- Cumulative sites only theoretically visible (58.78% of 25km study area);
- Both proposed turbine and cumulative sites theoretically visible (12.73% of 25km study area);  
and
- The Proposed turbine only theoretically visible (00.18% of 25km study area).

What can be deduced from this data is that from approximately 59% of the study area cumulative visibility of operational turbines would already occur; the Wind Development would interact with the existing baseline across 12.73% of the study area. Throughout 00.18% of the study area the Wind Development would be viewed independently; while not relevant to cumulative assessment, this data was included for completeness.

Factoring in the screening effect of intervening topography and vegetation, and the minimum distance of 3.7km between the Wind Development and the LCT, it is considered likely that cumulative interactions between the Wind Development and operational and consented wind turbines will be limited primarily to farmland to the east, south and west of Fettercairn. For an instance of how this may occur, see VP05: Fettercairn (Figures 16a-16d).

### **Sensitivity**

As stated in Section 6.2.2, due to the the multitude of designations and features of interest within the LCT, the landscape is considered to be of high value, and of Medium susceptibility to changes of the nature proposed. The reason for this evaluation being that the LCT has shown evidence of its capability to incorporate development of the type proposed directly, and thus its inclusion in a neighbouring LCT is not likely to impact greatly on the landscape.

The landscape is considered to be of High / Medium sensitivity to changes of the nature proposed.

### **Magnitude of Change**

A Negligible Magnitude of Change is predicted overall from this LCT as a result of the introduction of the Wind Development; the introduction of a single wind turbine is unlikely to materially alter the character of such an expansive landscape, especially when views to the north-east, east and south-east already contain well-integrated wind energy developments.

### **Predicted Effects**

As a result of the introduction of the Wind Development, Negligible cumulative effects are predicted.

#### **8.1.3 LCT 24: Coastal Farmed Ridges and Hills – Aberdeenshire**

With reference to Figures 09-11, simultaneous cumulative interaction between the Wind Development and operational and consented turbines within the study area would occur from within this LCT, which at its closest point lies approximately 3km to the east of the Wind Development. It is worthy of mention that Figures 09-11 depict cumulative effects based on Bareground Zone of Theoretical Visibility (ZTV) maps; actual visibility is likely to be substantially less than what is illustrated on these graphics. As such, reference will be made to the Modified ZTV (Figure 06), which demonstrates that actual visibility will be substantially reduced to the northern portion of the LCT.

With reference to the Bareground ZTV (see Figure 09), cumulative interaction between the Proposed Development and operational turbines at assessed wind energy sites in the north and east of the study area would occur in combination and/or succession. This can be summarised as follows: 71.68% of the entire 25km study area may experience theoretical visibility, of which:

- Cumulative sites only theoretically visible (58.78% of 25km study area);
- Both proposed turbine and cumulative sites theoretically visible (12.73% of 25km study area);  
and
- The Proposed turbine only theoretically visible (00.18% of 25km study area).

What can be deduced from this data is that from approximately 59% of the study area cumulative visibility of operational turbines would already occur; the Wind Development would interact with the existing baseline across 12.73% of the study area. Throughout 00.18% of the study area the Wind Development would be viewed independently; while not relevant to cumulative assessment, this data was included for completeness.

Factoring in the screening effect of intervening topography and vegetation, and the minimum distance of 3km between the Wind Development and the LCT it is considered likely that cumulative interactions between the Wind Development and operational and consented wind turbines will be limited primarily to farmland to the north-east of the Ago, coinciding logically with raised topography featuring operational and consented turbines.

### **Sensitivity**

As stated in Section 6.2.3, due to the multitude of designations and features of interest within the LCT, the landscape is considered to be of High value, and of Low susceptibility to changes of the nature proposed.

The landscape is considered to be of Medium sensitivity to changes of the nature proposed.

### **Magnitude of Change**

A Negligible Magnitude of Change is predicted overall from this LCT as a result of the introduction of the Wind Development; the introduction of a single wind turbine is unlikely to materially alter the character of such an expansive landscape, as this LCT has successfully incorporated both small and medium-scale wind farm development.

### **Predicted Effects**

As a result of the introduction of the Wind Development, Negligible cumulative effects are predicted.

#### **8.1.4 LCT 384: Broad Valley Lowlands – Tayside**

With reference to Figures 09-11, simultaneous cumulative interaction between the Wind Development and operational and consented turbines within the study area would occur from within this LCT, which at its closest point lies approximately 12km to the south-west of the Wind Development. It is worthy of mention that Figures 09-11 depict cumulative effects based on Bareground Zone of Theoretical Visibility (ZTV) maps; actual visibility is likely to be substantially less than what is illustrated on these graphics. As such, reference will be made to the Modified ZTV (Figure 06), which demonstrates that actual visibility will be substantially reduced to the northern portion of the LCT.

With reference to the Bareground ZTV (see Figure 09), cumulative interaction between the Proposed Development and operational turbines at assessed wind energy sites in the north and east of the study area would

occur in combination and/or succession. This can be summarised as follows: 71.68% of the entire 25km study area may experience theoretical visibility, of which:

- Cumulative sites only theoretically visible (58.78% of 25km study area);
- Both proposed turbine and cumulative sites theoretically visible (12.73% of 25km study area);  
and
- The Proposed turbine only theoretically visible (00.18% of 25km study area).

What can be deduced from this data is that from approximately 59% of the study area cumulative visibility of operational turbines would already occur; the Wind Development would interact with the existing baseline across 12.73% of the study area. Throughout 00.18% of the study area the Wind Development would be viewed independently; while not relevant to cumulative assessment, this data was included for completeness.

Factoring in the screening effect of intervening topography and vegetation, and the minimum distance of 12km between the Wind Development and the LCT it is considered likely that cumulative interactions between the Wind Development and operational and consented wind turbines will be limited to farmland between Edzell and Brechin.

### Sensitivity

As stated in Section 6.2.4, due to the multitude of designations and features of interest within the LCT, the landscape is considered to be of High value, and of Low susceptibility to changes of the nature proposed.

The landscape is considered to be of Medium sensitivity to changes of the nature proposed.

### Magnitude of Change

A Negligible Magnitude of Change is predicted overall from this LCT as a result of the introduction of the Wind Development; this LCT already incorporates numerous operational single turbines and small groupings, including within the northern portion from where the limited cumulative interaction is predicted to occur.

### Predicted Effects

As a result of the introduction of the Wind Development, Negligible cumulative effects are predicted.

#### 8.1.5 LCT 379: Foothills – Tayside

With reference to Figures 09-11, simultaneous cumulative interaction between the Wind Development and operational and consented turbines within the study area would occur from within this LCT, which at its closest point lies approximately 11.4km to the south-west of the Wind Development. It is worthy of mention that Figures 09-11 depict cumulative effects based on Bareground Zone of Theoretical Visibility (ZTV) maps; actual visibility is likely to be substantially less than what is illustrated on these graphics. As such, reference will be made to the Modified ZTV (Figure 06), which demonstrates that actual visibility will be substantially reduced to the northern portion of the LCT.

With reference to the Bareground ZTV (see Figure 09), cumulative interaction between the Proposed Development and operational turbines at assessed wind energy sites in the north and east of the study area would occur in combination and/or succession. This can be summarised as follows: 71.68% of the entire 25km study area may experience theoretical visibility, of which:

- Cumulative sites only theoretically visible (58.78% of 25km study area);

- Both proposed turbine and cumulative sites theoretically visible (12.73% of 25km study area); and
- The Proposed turbine only theoretically visible (00.18% of 25km study area).

What can be deduced from this data is that from approximately 59% of the study area cumulative visibility of operational turbines would already occur; the Wind Development would interact with the existing baseline across 12.73% of the study area. Throughout 00.18% of the study area the Wind Development would be viewed independently; while not relevant to cumulative assessment, this data was included for completeness.

Factoring in the screening effect of intervening topography and vegetation, and the minimum distance of 11.4km between the Wind Development and the LCT it is considered likely that cumulative interactions between the Wind Development and operational and consented wind turbines will be limited to farmland and coniferous plantation to the north-west of Edzell.

### Sensitivity

As stated in Section 6.2.5, due to the many intersecting layers of designations and features of interest within the LCT, the landscape is considered to be of High value, and of Low susceptibility to changes of the nature proposed.

The landscape is considered to be of Medium sensitivity to changes of the nature proposed.

### Magnitude of Change

A Negligible Magnitude of Change is predicted overall from this LCT as a result of the introduction of the Wind Development; this LCT already incorporates numerous operational single turbines and small groupings, including within the northern portion from where the limited cumulative interaction is predicted to occur.

### Predicted Effects

As a result of the introduction of the Wind Development, Negligible cumulative effects are predicted.

#### 8.1.6 LCT 376: Summits and Plateaux – Tayside

With reference to Figures 09-11, simultaneous cumulative interaction between the Wind Development and operational and consented turbines within the study area would occur from within this LCT, which at its closest point lies approximately 8.2km to the south-west of the Wind Development. It is worthy of mention that Figures 09-11 depict cumulative effects based on Bareground Zone of Theoretical Visibility (ZTV) maps; actual visibility is likely to be substantially less than what is illustrated on these graphics. As such, reference will be made to the Modified ZTV (Figure 06), which demonstrates that actual visibility will be substantially reduced to the northern portion of the LCT.

With reference to the Bareground ZTV (see Figure 09), cumulative interaction between the Proposed Development and operational turbines at assessed wind energy sites in the north and east of the study area would occur in combination and/or succession. This can be summarised as follows: 71.68% of the entire 25km study area may experience theoretical visibility, of which:

- Cumulative sites only theoretically visible (58.78% of 25km study area);
- Both proposed turbine and cumulative sites theoretically visible (12.73% of 25km study area); and
- The Proposed turbine only theoretically visible (00.18% of 25km study area).

What can be deduced from this data is that from approximately 59% of the study area cumulative visibility of operational turbines would already occur; the Wind Development would interact with the existing baseline across 12.73% of the study area. Throughout 00.18% of the study area the Wind Development would be viewed independently; while not relevant to cumulative assessment, this data was included for completeness.

Factoring in the screening effect of intervening topography and vegetation, and the minimum distance of 8.2km between the Wind Development and the LCT it is considered likely that cumulative interactions between the Wind Development and operational and consented wind turbines will be limited to the summits of the highest peaks in the north-eastern portion of the LCT, such as Hill of Wirren (678m AOD).

### **Sensitivity**

As stated in Section 6.2.6, due to the importance of the specific designations which feature in this landscape, it is considered to be of High value, and of Medium susceptibility to small-scale wind energy developments such as the type proposed.

The landscape is considered to be of High / Medium sensitivity to changes of the nature proposed.

### **Magnitude of Change**

A Negligible Magnitude of Change is predicted overall from this LCT as a result of the cumulative interaction between the Wind Development and operational and consented turbines.

### **Predicted Effects**

As a result of the introduction of the Wind Development, Negligible cumulative effects are predicted.

#### **8.1.7 LCT 387: Dipslope Farmland**

According to Figures 09-11, simultaneous cumulative interaction between the Wind Development and operational and consented turbines within the study area would occur from within this LCT, which at its closest point lies approximately 14.2km to the south of the Wind Development. It is worthy of mention that Figures 09-11 depict cumulative effects based on Bareground Zone of Theoretical Visibility (ZTV) maps; actual visibility is likely to be substantially less than what is illustrated on these graphics. As such, reference will be made to the Modified ZTV (Figure 06), which demonstrates that actual visibility will be substantially reduced to farmland within the northern island of the LCT, to the north-east of Brechin.

With reference to the Bareground ZTV (see Figure 09), cumulative interaction between the Proposed Development and operational turbines at assessed wind energy sites in the north and east of the study area would occur in combination and/or succession. This can be summarised as follows: 71.68% of the entire 25km study area may experience theoretical visibility, of which:

- Cumulative sites only theoretically visible (58.78% of 25km study area);
- Both proposed turbine and cumulative sites theoretically visible (12.73% of 25km study area);  
and
- The Proposed turbine only theoretically visible (00.18% of 25km study area).

What can be deduced from this data is that from approximately 59% of the study area cumulative visibility of operational turbines would already occur; the Wind Development would interact with the existing baseline across

12.73% of the study area. Throughout 00.18% of the study area the Wind Development would be viewed independently; while not relevant to cumulative assessment, this data was included for completeness.

Factoring in the screening effect of intervening topography and vegetation, and the minimum distance of 14.2km between the Wind Development and the LCT it is considered likely that cumulative interactions between the Wind Development and operational and consented wind turbines will be limited to farmland to the south-east of the Ago (Brechin Bypass).

### Sensitivity

As stated in Section 6.2.7, the value of the landscape is considered to be Medium, and as it has an expanding capacity for wind energy development of a type consistent with that of the Wind Development, it is considered to be of Low susceptibility to changes of the nature proposed.

The landscape is considered to be of medium/Low sensitivity to changes of the nature proposed.

### Magnitude of Change

A Negligible Magnitude of Change is predicted overall from this LCT as a result of the cumulative interaction between the Wind Development and operational and consented turbines.

### Predicted Effects

As a result of the introduction of the Wind Development, Negligible cumulative effects are predicted.

## 8.2 Appraisal of Cumulative Visual Effects

### 8.2.1 Old Mains Military Road and Cairn O' Mount Road (B974)

With reference to Figures 08a-11, sequential cumulative interaction between the Wind Development and operational and consented turbines within the study area would occur from this route. No interaction with proposed turbines is predicted, as none were identified within the 25km study area. It is worthy of mention that Figures 09-11 depict cumulative effects based on Bareground Zone of Theoretical Visibility (ZTV) maps; actual visibility is likely to be substantially less than what is illustrated on these graphics.

With reference to Figure 09, cumulative interaction between the Proposed Development and operational and consented turbines at assessed wind energy sites in the north of the study area would occur in combination and/or succession (71.68% of the 25 km study area). This can be summarised as follows:

Cumulative sites only theoretically visible (58.78% of the study area), including:

- The first section of the route from Fettercairn to the bend to the north beyond Hunter's Hill; and
- Long sections of the route from the Cairn O' Mount to Banchory.

Both the Wind Development and Cumulative sites theoretically visible (12.73% of the study area), including:

- The locale of Fettercairn; and
- Much of the route from the bend to the north beyond Hunter's Hill to the Cairn O' Mount viewpoint.

Given theoretical visibility of the Proposed Development and theoretical visibility of Cumulative operational and consented wind developments within the study area, there is potential for sequential cumulative effects upon receptors as they travel across the landscape. For more precise information about the likely theoretical visibility

of the Wind Development between the Clattering Brig and the Cairn O' Mount, see VP02 (Figures 13a-13d). Similarly, for an indication of the extent of predicted cumulative interaction along the route, see Section 8.2.2 VP03: Cairn O' Mount Viewpoint.

A Low Magnitude of Change is predicted overall from this route as a result of the introduction of the Wind Development; where visible the Wind Development will be largely perpendicular to the direction of travel, and most of the route will experience only minor theoretical visibility.

Moderate/minor cumulative effects are therefore predicted from this viewpoint as a result of the Wind Development.

### 8.2.2 VP03: Cairn O' Mount Viewpoint

With reference to Figures 14a-14d, simultaneous cumulative interaction between the Wind Development and operational and consented turbines in the east of the study area would occur from this viewpoint. No interaction with proposed turbines is predicted, as none were identified within the 25km study area. For the purposes of the assessment of viewpoints, only the field of view encompassed by the photography and wireframes has been considered. Were receptors to change direction at a viewpoint, the following assessment would not include theoretical visibility they may experience in other directions.

With reference to Figure 14c, cumulative interaction between the Wind Development and operational turbines, mainly the St John's Hill wind farm at the centre of the view, complemented by isolated turbines which appear to form a part of it at this scale (Upper Pitforthie and Cluseburn, for example). The Wind Development will appear as a standalone turbine in the middle distance, framed by Glen of Drumtochty. It is anticipated that the Wind Development would come to form the most prominent wind energy element in the view, with some blade tip interaction expected with the more distant turbines beyond.

To the right of Strathfinella Hill on the right-hand side of the view, the Tullo wind farm and extension are visible on the horizon as a distinct grouping, with which the Wind Development does not interact.

As previously mentioned, both road and recreational users are considered to be of Very high / High sensitivity to the type of changes proposed. A Medium / Low Magnitude of Change is predicted from this viewpoint as a result of the introduction of the Wind Development; wind energy will enter the middle distance in the form of a single turbine, where at present it is almost completely confined to more distant arrays close to the coast.

Moderate cumulative effects are therefore predicted from this viewpoint as a result of the Wind Development.

### 8.2.3 VP07: B974 south of Fettercairn

With reference to Figures 18a-18d, no simultaneous cumulative interaction will occur between the Wind Development and operational and consented turbines in the north-east of the study area from this viewpoint. The Wind Development would, however, slightly increase the presence of wind energy development within the view. The consented turbines (Herscha Hill) and operational turbines (Droop Hill to Hillhead of Auquhirie) to the right of the frame (see Figure 18b) would appear entirely separate to the Wind Development. The topographic separation created by Strathfinella Hill and those beyond it to the north and north-east create a visual separation between the Wind Development and these other groupings within the view.

The only cumulative interaction would occur between the smaller operational turbine to the north of Glensaugh Farm and the Wind Development (see Figure 18c); its introduction would increase the prominence of wind energy



development within the central portion of the view. While it is unlikely that the turbine blade tips will breach the skyline from this vantage, it is probable that the combined effect of the operational Glensaugh turbine and the Wind Development will be an increased perception of wind development on the otherwise largely wild heathland of the horizon.

No interaction with proposed turbines is predicted, as none were identified within the 25km study area.

As previously mentioned, both road and recreational users are considered to be of Medium / Low sensitivity to the type of changes proposed. A Low Magnitude of Change is predicted from this viewpoint as a result of the introduction of the Wind Development.

Minor cumulative effects are therefore predicted from this viewpoint as a result of the Wind Development.

#### 8.2.4 VPo8 Clachnaben

With reference to Figures 19a-19c, very limited simultaneous cumulative interaction between the Wind Development and operational and consented turbines in the east of the study area would occur from this viewpoint. The extent of this interaction is likely to be the possibility of turbine blade tip visibility being added to the centre of the frame (see Figures 19b-19c). Given the relative prevalence of wind energy developments down the east coast, across the width of the frame from this viewpoint, it is considered unlikely that the Wind Development will produce adverse effects.

No interaction with proposed turbines is predicted, as none were identified within the 25km study area.

A Negligible Magnitude of Change is predicted from this viewpoint as a result of the introduction of the Wind Development; while the turbine blade tips may enter the frame, the horizon view is so heavily characterised by wind energy developments with the backdrop of the sea that the addition of the turbine blade tips of a single turbine is not considered likely to be perceived from this distance.

Negligible cumulative effects are therefore predicted from this viewpoint as a result of the Wind Development.

#### Cumulative sites included within appraisal

The following cumulative sites, agreed at the Scoping stage, have been included in this appraisal:

Name	Status	No. of Turbines	Tip Height (m)
Glensaugh	Operational	1	32.5
West Cairnbeg	Operational	1	77
Herscha Hill	Operational	1	80
Mid Hill (including extension)	Operational	33	28 at 125, 5 at 110
Fordoun Sawmill	Operational	1	77

Name	Status	No. of Turbines	Tip Height (m)
Droop Hill	Operational	2	100
Brigton Farm	Operational	1	81
Jacksbank	Operational	3	100
Tullo (including extensions)	Operational	17	100
East Town Farm	Operational	1	79
Steelstrath	Operational	1	84
Brownieleys	Operational	3	100
Brandshill North	Operational	1	79.6
Upper Pitforthie	Operational	1	79
Nether Tulloch	Operational	1	79.6
Criggie Farmhouse	Operational	1	79.6
Clochnahill	Operational	4	81
Paul Matthew Hill	Operational	2	99.5
Peattie	Operational	1	79.6
Cluseburn	Operational	1	78
Pitbeadlie	Operational	1	76
Hillhead of Auquhirie	Operational	3	92.5
St John's Hill	Operational	9	80
Mains of Woodstone Farm	Operational	1	79.6
Craig Garbil	Operational	1	79.6
Millplough Farmhouse	Operational	1	78
Dendoldrum Farm	Operational	1	79.6

Name	Status	No. of	
		Turbines	Tip Height (m)
Mains of Bridgeton	Operational	1	77
Hill of Stracathro	Operational	1	79
Wardhead	Operational	1	77
Meikle Carewe	Operational	12	70
Cantlayhills	Operational	1	86.5
Mid Hill Extension	Consented	1	125
Herscha Hill	Consented	4	2 at 79, 2 at 79.6
Moss Side of Esslie	Consented	1	80
Wairds of Alpity	Consented	1	79
Craigneil	Consented at Appeal	11	135
Witton Farm	Consented	2	74
Dunswood	Consented	1	77

## 9 Summary and Conclusions

Brindley Associates Ltd (Brindley), Landscape Architects and Environmental Planners, have been appointed by ITP Energised on behalf of James Hutton Institute (hereafter referred to as The Applicant) to prepare a focussed Landscape and Visual Assessment (LVA) for a proposed wind turbine, hydrogen electrolyser, Battery Energy Storage System (BESS) and solar array at Glensaugh Farm, to the north-west of Laurencekirk in Aberdeenshire.

This appraisal has considered the key characteristics, sensitivities, and opportunities in terms of the local landscape and visual resource within a 25km study area from the proposed site boundary. It has outlined potential landscape effects that may result from the Proposed Development and described potential changes on visual amenity.

### 9.1 Landscape Effects

The Proposed Development would introduce a single wind turbine measuring up to a maximum of 76m from ground to tip height into the landscape near the summit of Loch Hill, some 1.8km to the north-northeast of Glensaugh Farm; a ground-mounted solar PV array would also be installed immediately east of the farm complex, and roof-mounted solar panels would be installed atop structures within its confines. Ancillary structures such as a hydrogen electrolyser and Battery Energy Storage System (BESS) units would necessarily be installed within close proximity to the farm buildings for the purposes of storing energy generated. Access roads would be constructed where those in existence were considered to be insufficient for reaching the aforementioned installations safely, and security fencing erected to ensure their protection from theft and vandalism.

While no specific mitigation measures have been proposed as part of the Proposed Development within this LVA, planting could be used to screen the ancillary structures and hard standing surrounding the base of the proposed wind turbine. For mitigation measures relating to the Proposed Development, see the related Outline Biodiversity Enhancement Plan – ITP Energised.

These proposals would somewhat change the character of the land within the Proposed Development site, given the necessary landform modifications required to level and terrace the access road and hard standing of the Wind Development, as well as minor modifications to landform to permit the installation of the ground-mounted solar panels within the Solar and Hydrogen Development.

This would change the character of the land within the proposed site boundary, but has the potential to complement the surrounding area, as well as benefit local biodiversity via the introduction of native planting.

In the case of the Solar and Hydrogen Development, the Magnitude of Change is considered to be Low during the construction stages, as well as upon completion. The relatively minor change in landcover resulting from the addition of the solar PV panels and array will not diverge greatly from the current conditions. With regard to the Wind Development, the Magnitude of Change is considered to be High during the construction stages and once the turbine is in operation.

Overall, the effects upon the landscape fabric are therefore considered to be minor adverse in the case of the Solar and Hydrogen Development, and major adverse during the construction and operational stages of the Wind Development.

**Table 2** summarises the assessment of effects on landscape character and resources identified in the foregoing assessment.

**Table 2 – Summary of Predicted Effects on Landscape Receptors within the study area**

Landscape Receptor	Predicted Effect – Wind Turbine Development	Predicted Effect – Solar & Hydrogen Development
Landscape resources within the site boundary	<b>Major</b> adverse	Minor adverse
LCT 29: Summits and Plateaux – Aberdeenshire	Moderate / Minor adverse	Moderate / Minor adverse
LCT 22: Broad Valley lowlands – Aberdeenshire	Moderate / Minor adverse	Moderate / Minor adverse (Negligible effects during construction stage)
LCT 24: Coastal Farmed Ridges and Hills - Aberdeenshire	Minor adverse	No effects
LCT 384: Broad Valley lowlands – Tayside	Minor adverse	No effects
LCT 379: Foothills – Tayside	Minor adverse	No effects
LCT 376: Summits and Plateaux – Tayside	Negligible	No effects
LCT 387: Dipslope Farmland	Negligible	No effects
Braes of the Mearns Special Landscape Area (SLA)	<b>Major</b> adverse (Moderate adverse during construction stage)	Moderate adverse
Fasque House Garden and Designed Landscape (GDL)	Moderate adverse (Negligible during construction stage)	No effects
The Burn Garden and Designed Landscape (GDL)	No effects	No effects
Fettercairn Conservation Area	Moderate / Minor adverse (No effects during construction stage)	No effects
Auchenblae Conservation Area	Moderate / Minor adverse (No effects during construction stage)	No effects

Landscape Receptor	Predicted Effect – Wind Turbine Development	Predicted Effect – Solar & Hydrogen Development
	stage)	

## 9.2 Visual Effects

A total of five settlements were identified as being representative of the range of visual receptors considered within the study area. Of these, Auchenblae and Fettercairn enter the appraisal within Section 6.0 – Appraisal of Landscape Effects, as both settlements feature a Conservation Area. As such, some overlap is to be expected in the evaluation of these areas. Table 3 below summarises the visual effects on each of the settlements considered in the foregoing assessment.

**Table 3 – Summary of Predicted Residual Effects on Settlements**

Route name	Predicted Effect – Wind Turbine Development	Predicted Effect – Solar & Hydrogen Development
Fettercairn	Moderate / Minor adverse (No effects during construction stage)	No effects
Auchenblae	Moderate/minor adverse	No effects
Edzell	Negligible	No effects
Luthermuir	Negligible	No effects
Drumlithie	Negligible	No effects

A total of nine routes were identified and selected as being representative of the range of visual receptors considered within the study area. Table 4 below summarises the visual effects on each of the routes considered in the foregoing assessment.

**Table 4 – Summary of Predicted Residual Effects on Sequential Routes**

Route name	Predicted Effect – Wind Turbine Development	Predicted Effect – Solar & Hydrogen Development
Old Mains Military Road and Cairn o' Mount Road (B974)	Moderate adverse (Moderate / Minor adverse during the construction stage)	Moderate / Minor adverse

Route name	Predicted Effect – Wind Turbine Development	Predicted Effect – Solar & Hydrogen Development
C-class road between Glensaugh and Auchenblae	Moderate adverse (Moderate / Minor adverse during the construction stage)	Moderate / Minor adverse
C-class road between Auchenblae and Glenfarquhar Lodge	Minor adverse (Negligible during the construction stage)	No effects
B966	Moderate / Minor adverse (Negligible during the construction stage)	No effects
B9120	Minor adverse (Moderate / Minor adverse during the construction stage)	No effects
A90	Minor adverse (Minor adverse during the construction stage)	No effects
Core paths around Auchenblae (including paths 501.2, 501.3 and 508.02)	Moderate adverse (Moderate / Minor adverse during the construction stage)	No effects
Core paths around Fettercairn (including paths 506.01, 506.02, 506.03 and 506.04)	Moderate adverse (Moderate / Minor adverse during the construction stage)	No effects
Laurencekirk – Fettercairn Circular Recreational Cycling Route	Moderate/minor adverse (Negligible during the construction phase)	No effects

A total of eight viewpoints were identified and selected as being representative of the range of visual receptors considered within the study area. Table 5 below summarises the visual effects on each of the Viewpoints considered in the foregoing assessment.

**Table 5 – Summary of Effects on Representative Viewpoints**

No.	Name / Location	Predicted Effect – Wind Turbine Development	Predicted Effect – Solar & Hydrogen Development
o1a	Loch Saugh (View across Loch Saugh)	<b>Major / moderate</b> adverse	No effects
o1b	Loch Saugh (View towards Glensaugh)	Negligible	Moderate/minor beneficial <b>(Major / moderate</b> adverse during the construction stage)
o2	Junction of Old Military Road and C-class road to Glensaugh	Moderate adverse (Moderate / Minor adverse during the construction stage)	No effects
o3	Cairn O Mount Viewpoint	Moderate adverse (Moderate / Minor adverse during the construction stage)	No effects
o4	Glen Road, adjacent to Auchenblae	Negligible	No effects
o5	Fetterncairn	Negligible	No effects
o6	Minor road east of Auchenblae	Negligible	No effects
o7	B974 south of Fetterncairn	Minor adverse (Negligible during the construction stage)	No effects
o8	Clachnaben	Negligible	No effects



### 9.3 Summary of Cumulative Effects

Following the appraisal of cumulative effects in Section 8.0, Table 6 below summarises the predicted cumulative effects associated with the Wind Development.

**Table 6 – Summary of Cumulative Effects (Wind Turbine Development)**

Landscape / Visual Receptor	Predicted Cumulative Effect – Construction Stage	Predicted Cumulative Effect – Operational Stage
LCT 29	No cumulative effects	Moderate / Minor
LCT 22	No cumulative effects	Negligible
LCT 24	No cumulative effects	Negligible
LCT 384	No cumulative effects	Negligible
LCT 379	No cumulative effects	Negligible
LCT 376	No cumulative effects	Negligible
LCT 387	No cumulative effects	Negligible
Old Mains Military Road and Cairn O' Mount Road (B974)	Moderate / Minor adverse	Moderate / Minor adverse
VP03	Moderate adverse	Moderate adverse
VP07	Minor adverse	Minor adverse
VP08	Negligible	Negligible

### 9.4 Conclusion

The carefully considered placement of the elements of The Proposed Development would minimise the effect on landscape character to an area including the site boundary and the areas outlined in Section 9.2 - **Table 2**.

Visually, the Proposed Development would result in some adverse effects (outlined in Section 9.2 – **Tables 3-5** and Section 9.3 – **Table 6**), though these would be offset considerably by the gains associated with the sustainability experiments being undertaken at the Glensaugh Research Station.

The Proposed Development has been considered carefully and weighed against relevant policy and design guidelines. It is our professional opinion that the site would be capable of accommodating the Proposed Development without leading to unacceptable effects on landscape character and visual amenity.

## 10 References

- Guidelines for Landscape and Visual Impact Assessment. Third Edition (GLVIA3) (Landscape Institute & Institute of Environmental Management & Assessment, 2013);
- Landscape Character Assessment (NatureScot, 2019);
- National Planning Framework 4 (Scottish Government, 2023)
- Aberdeenshire Local Development Plan (Aberdeenshire Council, 2023);
- Scotland's Environment Interactive Map (Scotland's Environment, 2023), accessed 14/11/2023, <<https://map.environment.gov.scot/sewebmap/>>;
- Landscape Character Types (LCTs) (NatureScot 2019);
- Historic Environment Scotland Portal (Historic Environment Scotland, 2023), accessed 14/11/2023, <<http://portal.historicenvironment.scot/designation/GDL00178>>;
- Canmore – National Record of the Historic Environment (Historic Environment Scotland, 2023), accessed 14/11/2023, <<https://canmore.org.uk/site/141949/clattering-bridge>>;
- Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 (Scottish Government), accessed 14/11/2023, <<https://www.legislation.gov.uk/asp/2019/15/enacted>>; and
- Visual Representation of Development Proposals: Technical Guidance Note 06/ 19 (Landscape Institute, 2019).

## Appendix A Policy and Guidance

This appendix provides a brief summary of the local planning policies relevant to landscape and visual amenity.

### National Planning Context

#### Fourth National Planning Framework (NPF4)

NPF4 sets out national policies which reflect the Scottish Government's priorities for operation of the planning system and for the development and use of land. The following elements of NPF4 are considered particularly relevant to the Proposed Development in the context of this LVA:

Part 1 – National Spatial Strategy, which states that *"Planning is a powerful tool for delivering change on the ground in a way which brings together competing interests so that decisions reflect the long-term public interest. Past, present and future challenges mean that we will need to make the right choices about where development should be located. We also need to be clear about the types of infrastructure we will need to build, and the assets that should be protected to ensure they continue to benefit future generations."*

#### **Spatial principles**

*We will plan our future places in line with six overarching spatial principles:*

- **Just transition.** *We will empower people to shape their places and ensure the transition to net zero is fair and inclusive.*
- **Conserving and recycling assets.** *We will make productive use of existing buildings, places, infrastructure and services, locking in carbon, minimising waste, and building a circular economy.*
- **Local living.** *We will support local liveability and improve community health and wellbeing by ensuring people can easily access services, greenspace, learning, work and leisure locally.*
- **Compact urban growth.** *We will limit urban expansion so we can optimise the use of land to provide services and resources, including carbon storage, flood risk management, blue and green infrastructure and biodiversity.*
- **Rebalanced development.** *We will target development to create opportunities for communities and investment in areas of past decline, and manage development sustainably in areas of high demand.*
- **Rural revitalisation.** *We will encourage sustainable development in rural areas, recognising the need to grow and support urban and rural communities together.*

*These principles will play a key role in delivering on the United Nations (UN) Sustainable Development Goals (SDGs) and our national outcomes."*

NPF4 highlights the need for a collaborative approach to planning and development, where environmental considerations are clearly prioritised:

- Part 1 – National Spatial Strategy, which states that *"Applying these principles in practice. We want our future places to work for everyone. Rather than compromise or trade-offs between environmental, social and economic objectives, this is an integrated strategy to bring together cross-cutting priorities and achieve sustainable development."*

*By applying these spatial principles, our national spatial strategy will support the planning and delivery of:*

- **sustainable places**, where we reduce emissions, restore and better connect biodiversity;

- **liveable places**, where we can all live better, healthier lives; and
- **productive places**, where we have a greener, fairer and more inclusive wellbeing economy.”

In addition to the six qualities of a successful place as set out in NPF<sub>4</sub> mentioned in [Section 1.2](#): Liveable Places – Policy 14, Annex D expands on the general ideas introduced in Policy 14. Within this Annex, the following points are considered especially relevant to the Proposed Development:

**5. Sustainable: Supporting the efficient use of resources that will allow people to live, play, work and stay in their area, ensuring climate resilience and integrating nature positive biodiversity solutions.**

Designing for:

- **transition to net-zero** including energy/carbon efficient solutions, retrofitting, reuse and repurposing and sharing of existing infrastructure and resources
- **climate resilience and nature recovery** including incorporating blue and green infrastructure, integrating nature positive biodiversity solutions
- **active local economy** including opportunities for local jobs and training, work spaces, enabling working from home, supporting community enterprise and third sector
- **community and local living** including access to local services and facilities, education, community growing and healthy food options, play and recreation and digital connectivity

**6. Adaptable: Supporting commitment to investing in the long-term value of buildings, streets and spaces by allowing for flexibility so that they can meet the changing needs and accommodate different uses over time.**

Designing for:

- **quality and function**, ensuring fitness for purpose, design for high quality and durability
- **longevity and resilience** including recognising the role of user centred design to cater for changing needs over time and to respond to social, economic and environmental priorities
- **long-term maintenance** including effective engagement, clarity of rights and responsibilities, community ownership/stewardship, continuous upkeep and improvements

With regard to quality 5 above, the Proposed Development will make a positive local contribution by repurposing existing structures, adding blue and green infrastructure in the form of two SuDS features and locally-appropriate mitigation planting, as well as creating workshops which will benefit the economy. In terms of quality 6, the Proposed Development demonstrates a clear commitment to the long-term preservation of the Crail Airfield Sites by absorbing and regenerating currently declining assets for the future.

## Local Planning Context

### Aberdeenshire Council Local Development Plan (LDP)

Adopted in January 2023, Aberdeenshire Council Local Development Plan (LDP) fits into a planning framework for the region, outlined as follows in Section 1.1: *This Plan is part of a set of documents which make up the statutory development plan for the area. We share the Aberdeen City and Shire Strategic Development Plan with Aberdeen City Council, who themselves also produce a Local Development Plan.*

Section 1.3 explains the hierarchy within the Planning system for the region: *The Aberdeenshire Local Development Plan interprets and implements the Strategic Development Plan 2020, providing specific information on how the principles established in the SDP will be applied at a local level.* This is further elaborated in Section 1.4: *The Local Development Plan sets out the policies we will use for determining planning applications. It sets out exactly where development is expected to take place over the next five years, and beyond, up to 2031.*

Section 13 Climate Change of the LDP makes specific reference to the type of development proposed, and the following Policies are considered to be relevant. It is worth noting that no direct provision is made for a hybrid scheme such as the Proposed Development, though no indication is given that incompatibility exists between its component parts.

The introduction states the following:

*Climate change is possibly the greatest challenge facing the world today. The Scottish Government's declaration of a Climate Emergency and the enactment of the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 are responses to this. These have influenced and are reflected in the policies set out in this local development plan. Scottish Planning Policy favours development that contributes to sustainable development and policies and decisions are needed to support action to tackle climate change and adaptation, including taking account of flood risk. For Aberdeenshire, this means reducing the use of energy (both in the distribution of development and within developments themselves), conserving water, promoting energy generation by renewable sources, sustaining existing carbon stores (such as peat and wood), and dealing with long-term flood risks.*

### **Policy C2 Renewable Energy**

**C2.1** *We will support renewable energy developments, including solar, wind, biomass (energy from biological material derived from living, or recently living organisms) and hydroelectricity projects, as well as energy storage projects, which are in appropriate sites and of the appropriate design. Assessment of the acceptability of such developments will take account of any effects on: socio-economic aspects; renewable energy targets; greenhouse gas emissions; communities; landscape and visual aspects; natural heritage; carbon rich soils; the historic environment; tourism and recreation; aviation, defence, telecommunications and broadcasting interests; road traffic; hydrology; and opportunities for energy storage. We treat biomass schemes as industrial processes suitable for business land. These may be hazardous developments through their impact on air quality. This support is not at the expense of other policies regarding Natural Heritage, the Historic Environment and Protecting Resources.*

#### **Wind Energy**

**C2.2** *We will approve wind energy developments in appropriate locations taking into account the spatial framework mapping at the end of this section. Detailed guidance is set out in the Strategic Landscape Capacity Assessment for*

*Wind Energy in Aberdeenshire Final Report 2014<sup>5</sup>. This guidance remains relevant but is not a substitute for detailed assessment of the landscape impact of specific development proposals.*

***C2.3** All wind farms must be appropriately sited and designed and avoid unacceptable environmental effects, taking into account the cumulative effects of existing and approved wind turbines. All wind turbines sites must be appropriate for use in perpetuity at the scale being proposed. Amendments to include larger blades or towers are likely to require a new application. Full repowering, where the wind turbines are dismantled and new wind turbines are installed, is likely to require revision of environmental information and a new planning application. Lifetime extension, where new technology is installed, or components are upgraded and replaced but the overall external layout of a wind farm remains unchanged (e.g. hub height, siting, size), may not require a new application provided the scale and predicted impacts are no greater than those anticipated from the original proposal. Existing infrastructure, including turbine bases, should be reused where possible. The existence of a planning permission for a wind turbine will be a material consideration for proposals for repowering existing wind turbines.*

***C2.4** Turbines must not compromise health and safety or adversely affect aircraft or airfields (including radar and air traffic control systems, flight paths and Ministry of Defence low flying areas) and/or telecommunications. Unacceptable significant adverse effects on the amenity of dwellinghouses, such as from noise, or on tourism and recreation interests including core paths and other established routes used for public walking, riding or cycling, or to protected species should also be avoided<sup>6</sup>.*

<sup>5</sup> It is anticipated that Strategic Landscape Capacity Assessment guidance will be updated during the lifetime of the Plan.

<sup>6</sup> Protected species are covered by policy E1.6.

## **Solar Panels**

***C2.5** We will approve applications for solar panel arrays greater than 4kW if:*

- their cumulative impact with other arrays, including siting and design, has been assessed and can be dismissed;*
- account has been taken of glint and glare issues;*
- it has been demonstrated that any significant impacts will have a duration of less than five minutes on any receptor in any one day;*
- there are no objections from the Ministry of Defence, the National Air Traffic Services or civil airport operators;*
- boundary treatments limit vehicular access to the site through means designed to make any security fencing unobtrusive and screen the development.*

## Other Guidance

### Visual representation of development proposals (Landscape Institute, 2019)

This guidance builds on principles outlined within the Third Edition of the Guidelines for Landscape and Visual Impact Assessment (GLVIA3) (Landscape Institute in association with the Institute of Environmental Management and Assessment, 2013) and is aimed at helping landscape architects, planning officers and other stakeholders select a proportionate type of visualisation to meet the circumstances in which they will be used.

For a non-Environmental Impact Assessment (EIA) Landscape and Visual Impact Assessment, such as this report, Type 4 photomontage and photowire visualisations are considered suitable as they illustrate the scale, location, materiality, and colours of the Proposed Development.

### Visual Representation of Wind Farms (Version 2.2) (NatureScot, 2017)

This guidance is aimed at those producing visual representations of wind farm developments and was revised in 2017 to make the information more accessible to both the public and decision makers. The guidance includes a comprehensive description of ZTV mapping, including its uses and limitations. It includes guidance on viewpoints and their selection and siting as part of an LVIA. All ZTVs prepared in support of this LVA have been produced in accordance with this guidance.

## Appendix B Assessment Methodology

### Introduction

This Landscape and Visual Appraisal (LVA) has been prepared with reference to the Third Edition of the Guidelines for Landscape and Visual Impact Assessment (GLVIA3) (Landscape Institute and the Institute of Environmental Management and Assessment, 2013).

The purpose of this appraisal is to consider potential changes resulting from the Proposed Development on landscape character and visual amenity. Although, there is no requirement for a formal Environmental Impact Assessment (EIA), this appraisal has been prepared with reference to GLVIA3 (Landscape Institute in association with the Institute of Environmental Management and Assessment, 2013) and the GLVIA Statement of Clarification 4 (January 2013), which provides guidance on the terminology to be used in non-EIA Landscape and Visual Appraisals, such as:

*"In carrying out appraisals the same principles and process as LVIA may be applied but, in doing so, it is not required to establish whether the effects arising are or are not significant given that the exercise is not being undertaken for EIA purposes. The reason is that should a landscape professional apply LVIA principles and processes carrying out an appraisal and then go on to determine that certain effects would likely be significant, given the term 'significant' is enshrined in EIA regulations, such a judgement could trigger the requirement for a formal EIA. The emphasis on likely 'significant effects' in formal LVIA stresses the need for an approach that is proportional to the scale of the project that is being assessed and the nature of its likely effects. The same principle – focussing on a proportional approach – also applies to appraisals of landscape and visual impacts outside the formal requirements of EIA."*

In line with the guidance, the terms "significant" and "not significant" are not used. Instead, the landscape assessment considers proposed changes in terms of being "adverse" or "beneficial" on the baseline landscape resource, whilst the visual assessment focusses upon changes resulting from the Proposed Development on visual amenity.

### Assessment Procedures

Landscape assessment and visual impact assessments are separate, though linked, procedures. Assessment of likely effects on the landscape considers the potential for effects on the environmental resource (i.e. the landscape), whereas assessment of likely visual effects considers the potential for inter-related effects on visual receptors.

Landscape effects derive from changes in the physical landscape which may give rise to changes in its character and how this is experienced, including consideration of landscape perception, which may in turn affect the perceived value ascribed to the landscape. Visual effects meanwhile relate to changes that arise in the composition of available views as a result of changes: to the landscape; to people's responses to the changes; and to the overall effects with respect to visual amenity.

The assessments of landscape and visual effects are presented separately within the LVA.

### Relevant Terminology

Key terms and definitions used in the assessment, as provided in (GLVIA3), are listed below.



- Direct effects are those directly to the Proposed Development;
- Indirect effects are those resulting indirectly from the Proposed Development as a consequence of the direct effects, often occurring away from the site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the source of the effects;
- Landscape capacity is the degree to which a particular Landscape Character Type (LCT) or area is able to accommodate change without unacceptable effects on its character. Capacity varies according to the type and nature of the change being imposed, and will reflect both the sensitivity of the landscape resource and its visual sensitivity;
- Landscape character is the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape that makes one landscape different from another, rather than better or worse;
- Landscape quality (or condition) is a measure of the physical state of the landscape. It may include the extent to which typical character is represented in individual areas, the intactness of the landscape from visual, functional, and ecological perspectives and the condition of individual elements;
- Landscape receptors are aspects of the landscape resource that have the potential to be affected by the Proposed Development;
- Landscape value is the relative value or importance attached to different landscapes by society. A landscape may be valued by different stakeholders for a variety of reasons (often as a basis for designation or recognition), because of its quality, special features including perceptual aspects such as scenic beauty, tranquillity or wildness, cultural associations or other conservation issues;
- Magnitude (of change) combines judgements about the size and scale of the potential effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration;
- Residual effects are those attributable to the Proposed Development following assessment of any proposed design mitigation / enhancements;
- Sensitivity is related to the specific receptors' (landscape or visual) vulnerability to change. Sensitivity is assessed by combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor. Viewpoint sensitivity depends on the context of the viewpoint, its importance, the current occupation and viewing opportunity of the people and groups of people being considered, and the number of people affected;
- Visual amenity refers to the overall pleasantness of views enjoyed by people of their surroundings or to the visual setting or backdrop to the activities they enjoy whilst living, working, recreating, visiting or travelling through an area; and
- Visual receptors are individuals and / or groups of people who have the potential to be affected by the Proposed Development.

## Key Steps in the Methodology

The key steps in the methodology were as follows:

- Preliminary desk study of the baseline landscape and visual characteristics of the site and the 2km study area, including production of Zone of Theoretical Visibility (ZTV) mapping, through the use of computer modelling to visualise the potential visibility pattern;
- Site visits during October 2022, where qualified Landscape Architects employed by Brindley Associates Ltd:
  - Undertook photography from representative viewpoint locations;

- Drove and walked access tracks and paths within the 2km study area; and
- Recorded and photographed important landscape features on and around the Proposed Development site.
- Identification of planning policy of relevance to landscape character and visual amenity;
- Description of the relevant landscape types present in the study area taking into account: key characteristics and value (including landscape designations); landform; settlement pattern; distinguishing features (such as vegetation and land cover); nature of views available; and setting;
- Selection of viewpoints across the ZTV to best represent the range of views and types of receptors likely to be affected by the Proposed Development;
- Production of visualisations of the Proposed Development from various viewpoints;
- Prediction of likely effects on landscape resources and visual amenity resulting from the Proposed Development;
- Identification of measures to mitigate potential impacts attributable to the Proposed Development;
- Evaluation of Magnitude of Change on the landscape (taking on board mitigation measures) for LCTs and designated landscape features in the study area with the potential to experience significant effects. Prediction of the Magnitude of Change in visual amenity as perceived from each viewpoint; and
- Evaluation of the residual effects (assuming the identified mitigation measures are adopted) upon selected LCTs, designated features and viewpoints.
- Findings of desk and field-based research, and initial assessment are fed into the design evolution with mitigation measures refined and adapted in order to develop the best possible proposal for the development.

### Assessment of Sensitivity, Magnitude of Change and Significance of Effects

The assessment of landscape and visual effects is typically based on three stages:

- Classification of the sensitivity of the landscape and visual receptors to the Proposed Development;
- Prediction of the Magnitude of Change in the landscape or the view; and
- Evaluation of the landscape and visual effects depending on the sensitivity of the landscape or viewer to change and the Magnitude of Change resulting from the Proposed Development.

### Sensitivity / Importance of Landscape and Visual Receptors

The sensitivity of a receptor is considered to be a combination of its susceptibility to the type of change proposed and the value attached to the receptor.

The susceptibility of a landscape receptor is judged on the extent to which the landscape can accommodate change without effects upon its key characteristics. Susceptibility varies according to the type of development proposed, including whether it will have direct or indirect effects on the landscape, and the landscape's:

- Individual elements;
- Key characteristics; and
- Inherent quality or condition.

The proximity of the Proposed Development has no bearing on the susceptibility of a landscape receptor.

The table below defines landscape susceptibility.

**Table 6.1 – Landscape Receptor Susceptibility.**

Landscape Receptor Susceptibility	Definition
<p><b>Very high</b></p>	<p>Landscape receptors with key characteristics that are very highly vulnerable to the type of development / change proposed. For example, wildland areas where there is no or very little evidence of human activity. Typically, these are defined by low-scale, naturalistic elements where no or limited human-made features are present.</p> <p>Very High susceptibility is considered where the Proposed Development may have direct effects upon the landscape.</p>
<p><b>High</b></p>	<p>Landscape receptors with key characteristics that are highly vulnerable to the type of development / change proposed. Typically, these landscape receptors are defined by medium to low-scale elements, mostly of a naturalistic nature with some human-made features present.</p> <p>High susceptibility is considered where the Proposed Development may have direct effects upon the landscape and/or where the Proposed Development may have indirect effects on views from the landscape that are noted as a key characteristic.</p>
<p><b>Medium</b></p>	<p>Landscape receptors with key characteristics that are of moderate vulnerability to the type of development / change proposed. Typically, these landscape receptors which are defined by medium-scale elements, with a mixture of human-made and naturalistic features.</p> <p>Medium susceptibility is considered where the Proposed Development may have indirect effects on views from the landscape that are noted as a key characteristic.</p>
<p><b>Low</b></p>	<p>Landscape receptors with key characteristics that are unlikely to be affected by the type of development / change proposed.</p> <p>Low susceptibility is considered where the Proposed Development may have indirect effects on views from the landscape.</p>

The value of a landscape receptor is judged by the importance of the receptor to the people who experience it. This includes designations that may apply to it, such as local, national and global designations. The table below defines landscape value.

**Table 6.2 – Landscape Value.**

Landscape Value	Definition
<b>Outstanding</b>	Iconic and highly scenic landscape of international or nationally important landscape such as a World Heritage Site. The cultural associations of the landscape receptors are widely recognised in literature or other media.
<b>High</b>	Highly scenic landscape of national or local importance, the cultural associations of which are regularly recognised in art, literature, or other media. Landscape noted for its importance through local authority landscape/townscape assessments or local designation reviews.
<b>Medium</b>	A landscape which may be of value to a local community but has no formal designation. An ordinary or good quality landscape but unlikely to be visited by people to experience the landscape.
<b>Low</b>	A landscape of low quality and/or has been left derelict, this includes industrial estates and busy main roads which may be of minimal local community value and has no formal planning status.

Visual receptors' susceptibility is determined by the amount of change that can be accommodated within a view. Susceptibility of the receptor varies dependent upon:

- The context of the view;
- Its relative importance;
- The duration of the viewing opportunity;
- The number of people potentially affected; and
- Any activity they may be engaged in (e.g. leisure activities, driving, working).

The proximity of the Proposed Development has no bearing on the susceptibility of a visual receptor.

Susceptibility is described as very high, high, medium or low according to the following criteria.

**Table 6.3 – Visual Susceptibility.**

Visual Receptor Susceptibility	Definition
<p><b>Very high</b></p>	<p>Viewers whose attention or interest is highly focused on their surroundings, typically with a prolonged viewing opportunity, including:</p> <ul style="list-style-type: none"> <li>• Communities with outstanding views of the highest scenic quality (e.g. towards or within/ across nationally designated landscapes);</li> <li>• People engaged in outdoor recreation with outstanding views of the highest scenic quality (for example users of rights of way including national trails and promoted routes with views within, across, or of nationally designated landscapes); and</li> <li>• Visitors to heritage assets or other attractions where views are of the highest scenic quality and an important contributor to experience.</li> </ul>
<p><b>High</b></p>	<p>Viewers whose attention or interest is focused on their surroundings, typically with a prolonged viewing opportunity including:</p> <ul style="list-style-type: none"> <li>• Communities where views contribute to the landscape setting enjoyed by residents;</li> <li>• People engaged in outdoor recreation (for example users of rights of way including national trails and promoted routes, whose interest is likely to be focused on the landscape or views from nationally or locally designated landscapes);</li> <li>• Visitors to heritage assets or other attractions where views of the surroundings are an important contributor to experience; and</li> <li>• People travelling on scenic routes and tourist routes, where attention is focused on the surrounding landscape.</li> </ul>
<p><b>Medium</b></p>	<p>Viewers whose attention or interest is focused on their surroundings to some extent including:</p> <ul style="list-style-type: none"> <li>• People travelling on local road routes, where attention may be focused on the surrounding landscape, but is transitory; and</li> <li>• People at their place of work whose attention is focused on the surroundings and where setting is important to the quality of working life (for example farmers and estate rangers).</li> </ul>
<p><b>Low</b></p>	<p>Viewers whose attention or interest is less focused on their surroundings, including:</p> <ul style="list-style-type: none"> <li>• People travelling more rapidly on major road, rail or transport routes (not recognised as scenic routes);</li> <li>• People engaged in outdoor sport or recreation which does not involve or depend upon appreciation of views of the landscape; and</li> <li>• People at their place of work whose attention is not on their surroundings (and where setting is not important to the quality of working life).</li> </ul>

The value of a view is judged importance of the receptor to people. This includes views noted for their importance, such viewpoints and locally, nationally and globally designated views. The table below defines the potential value associated with a view.

**Table 6.4 – Value of a View.**

Value of a View	Definition
<b>Outstanding</b>	Iconic, and highly scenic view, of national or international importance, or a view which is associated with a nationally or internationally designated landscape or heritage asset, the cultural associations of which are widely recognised in art, literature, or other media.
<b>High</b>	<p>Highly scenic view, associated with a landscape or heritage asset of national or regional value, the cultural association of which are regularly recognised in art, literature, or other media.</p> <p>Views associated with local authority designated landscapes or recorded as of importance on long distance walking routes, in Conservation Area Appraisals or local authority landscape / townscape assessments.</p> <p>The value of such views may have been identified as part of the consultation process and through site visits. Elements or features within the view are likely to be in good condition, with few detracting features.</p>
<b>Medium</b>	<p>Although the view may be valuable to the local community, the location has no formal planning status, is in an area of ordinary landscape value or reasonably good landscape value but with detracting elements or features.</p> <p>People are unlikely to visit the viewpoint to experience the view.</p>
<b>Low</b>	<p>View is of an area of low landscape quality that has very few positive characteristics and numerous or dominant detracting features (e.g. industrial estate / busy main road).</p> <p>The view may be of minimal value to the local community and the location has no formal planning status.</p>

The overall sensitivity of a receptor is the culmination of susceptibility and value. The below table sets out the criteria used in this assessment to determine the sensitivity of receptors.

The following table provides a guide for the assessor and is not intended to be prescriptive. It has been included to illustrate how the combination of receptor susceptibility and receptor value can determine receptor sensitivity. The application of professional judgement means there may be some instances where the predicted effect does not align with the grade illustrated below.

Table 6.5 – Sensitivity of Receptors.

		Landscape Value / Value of View					
		Outstanding	High	High / Medium	Medium	Medium / Low	Low
Susceptibility of Receptor	Very high	Very high	Very high / high	High	High	High / Medium	High / Medium
	High	Very high / high	High	High	High / Medium	Medium	Medium
	High / Medium	High	High	High / Medium	Medium	Medium	Medium
	Medium	High	High / Medium	Medium	Medium	Medium	Medium / Low
	Medium / Low	High / Medium	Medium	Medium	Medium	Medium / Low	Low
	Low	High / Medium	Medium	Medium	Medium / Low	Low	Low

As the sensitivity of landscape and visual receptors can vary depending on the correlation of several factors, the determined sensitivity of each receptor is determined by the assessor on a case-by-case basis. As such, intermediate grades such as high/ medium are possible.

For landscape receptors their sensitivity can be described as follows:

- **High** – A landscape of particularly distinctive character, which may be designated for its scenic quality, or where its: character; land use; pattern and scale offer very limited opportunities for the accommodation of change, or development of successful mitigation;
- **Medium** – A landscape of notable character, where its nature, land use, pattern and scale offer some opportunities for the accommodation of change, or for development of successful mitigation; or
- **Low** – A landscape which is of low scenic quality or where its character, existing land use, pattern and scale are tolerant of change and offer opportunities for successful mitigation.

The sensitivity of a visual receptor at a given location depends on the extent to which the receptor can accept change without adverse effects occurring upon the view. This is influenced by: the context of the view; its importance; viewing opportunity; the activity the viewer may be engaged in; and the number of people/ groups of people that may be affected by the proposed changes in the view.

The sensitivity of visual receptors can be described as:

- **High** – When viewers have a proprietary interest and prolonged viewing opportunities (such as experienced by residential receptors or visitors to popular recreational/ scenic destinations);
- **Medium** – When viewers have a moderate interest in their environment (e.g., when travelling along local routes or engaged in recreational activities); or
- **Low** – When viewers have a passing interest in their surroundings or when their interest is not specifically focussed on the landscape, e.g., at working premises or when travelling along key roads or railway routes.

As the susceptibility of landscape and visual receptors can vary depending on the correlation of several factors, the determined sensitivity of each receptor is determined by the assessor on a case-by-case basis. As such, intermediate grades such as high / medium are possible.

### Magnitude of Change

The change experienced in a view will depend on: the extent of visibility; the nature of a view (e.g., framed / open or back clothed / skyline view) and its context; degree of obstruction by existing features and contrast with the existing view; the angle of view; the duration of the view; and the distance from the Proposed Development.

The Magnitude of Change experienced by landscape receptors can be described as:

- **High** – When major loss or alteration to key elements/ features/ characteristics are predicted to occur, resulting in a substantial change in landscape characteristics;
- **Medium** – When partial loss or alteration to one or more key elements/ features/ characteristics is predicted to occur, resulting in moderate changes in landscape characteristics;
- **Low** – When minor loss or alteration to one or more key elements/ features/ characteristics is predicted to occur, resulting in a small, yet discernible change in landscape characteristics; or
- **Negligible** – When a virtually imperceptible change in characteristics is predicted to affect the landscape.

The Magnitude of Change in views and visual amenity is described as:

- **High** – Where there are predicted to be substantial changes in the view, which may be visible for a long duration, facing the change, or which may be in stark contrast with the existing view, or obstruction of a substantial part or important elements of views beyond the Proposed Development area;
- **Medium** – Where there are predicted to be moderate changes in the view, or visible for a moderate duration, perhaps at a slight angle, where changes may be in contrast with the existing view, or obstruction of a noticeable part or elements of views beyond the Proposed Development area;
- **Low** – Where there are predicted to be slight changes in the view, or visible for a short duration, perhaps at an oblique angle, or which may blend to an extent with the existing view; or
- **Negligible** – Where the change in view is barely visible, or visible for a very short duration, perhaps at an oblique angle, or which may blend with the existing view, usually at some distance from the Proposed Development.



Judgements on the Magnitude of Change rely, to a great extent, on professional judgement. The Magnitude of Change is determined on a case-by-case basis with consideration given to the weighting of the variable parameters described above. As a result, intermediate grades such as high / medium are possible.

The Magnitude of Change is described as high, medium, low, negligible or none based on the interpretation of various parameters, including:

- Distance: the distance between the receptor and the Proposed Development. Generally, the greater the distance, the lower the magnitude;
- Extent: the extent of the Proposed Development which is visible;
- Proportion: the arc of view occupied by the Proposed Development in proportion to the overall field of view. A panoramic view, where the Proposed Development takes up a small part of it, would generally experience a lower magnitude than a framed or focussed view, even if the arc of view occupied by the Proposed Development is similar in both;
- Geographical extent: the extent of geographical area influenced. Generally, a larger area would result in a higher Magnitude of Change;
- Duration: the duration of the effect. An effect experienced in a single location over an extended period of time is likely to result in a higher Magnitude of Change than a similar visual effect which is of a short duration, such as a brief view from a road;
- Reversibility: whether change associated with the Proposed Development could be fully or partially reversed or is irreversible;
- Orientation: the angle of the view in relation to the main receptor orientation, where there is a dominant direction to the vista;
- Context: the elements which provide the setting and context to the Proposed Development such as other built development; and
- Backdrop: the elements which provide the backdrop to the Proposed Development. Generally, where landform or woodland forms the background to the view, the Magnitude of Change is lower.

Judgements on the Magnitude of Change rely, to a great extent, on professional judgement. The Magnitude of Change is determined on a case-by-case basis with consideration given to the weighting of the variable parameters described above. As a result, intermediate grades such as high/medium are possible.

Table 6.6 sets out the criteria used in this assessment to determine the Magnitude of Change.

**Table 6.6 – Magnitude of Change.**

Magnitude of Change	Landscape	Visual
High	Total loss of or major alteration to key elements / features / characteristics of the baseline conditions such that character / composition / attributes of the existing baseline would be fundamentally changed.	Major influence on the focus of the view, resulting in the Proposed Development becoming the eye-catching focus of the view.
Medium	Partial loss of or alteration to one or	Clearly visible element, but not an

	more key elements / features / characteristics of the baseline conditions such that character / composition / attributes of the existing baseline would be partially changed.	overriding or defining element in the view.
<b>Low</b>	Minor loss or alteration to one or more key elements / features / characteristics of the baseline conditions.  Change arising from the loss / alteration would be discernible but underlying character / composition of the baseline condition would be similar existing circumstances / patterns.	Partial view of Proposed Development, with other features in the view being the defining elements.
<b>Negligible</b>	Very minor loss or alteration to one or more key elements / features / characteristics of the baseline conditions. Change barely distinguishable – approximating to the 'no change' situation.	The Proposed Development may be visible but would not noticeably alter the view.
<b>None</b>	No change.	No change.

### Level of Effect

The level of effect is determined by consideration of each effect that has been identified; its Magnitude of Change; and the sensitivity of the affected receptor. Whilst similar in approach, assessments on the significance of residual effects appraise the resultant effects following the establishment of the proposed design mitigation / enhancements.

Effects are described as being:

- **Major** – When the Proposed Development results in changes that substantially affect the character or views of the landscape or the elements therein. For example, a major effect is likely when a receptor of High sensitivity is affected by a high Magnitude of Change;
- **Moderate** – When the Proposed Development results in changes that affect, to a lesser degree, the character or views of the landscape or the elements therein. For example, a moderate effect is likely when a receptor of Medium sensitivity is affected by a medium Magnitude of Change;
- **Minor** – When the Proposed Development results in a slight change that affects the character or views of the landscape or specific elements therein. For example, a minor effect is likely when a receptor of Low sensitivity is affected by a low Magnitude of Change; or

- **Negligible** – When the Proposed Development results in no or a barely perceptible change, that affects the character or views of the landscape or specific elements therein.

There are gradual transitions between levels of effects, which reflect the complex relationship between the different variables under consideration. Professional judgement and experience are applied in order to identify those effects that are likely to be significant. Each case is assessed on its own merits as factors unique to each circumstance, are considered.

This LVA includes assessments of likely landscape and visual effects as a result of the Proposed Development during:

- During the construction phase;
- In year 1, when the construction phase is complete but before the additional landscape mitigation and enhancement measures have established (assessment of significant effects); and
- Once the additional landscape mitigation and enhancement measures are well established (assessment of significant residual effects).

**Table 6.7 – Matrix for Determining the Level of Effects.**

		Sensitivity of Receptor					
		Very high	High	High / Medium	Medium	Medium / Low	Low
Magnitude of Change	high	Major	Major	Major	Major / moderate	Moderate	Moderate
	High / Medium	Major	Major	Major / moderate	Moderate	Moderate	Moderate / Minor
	Medium	Major	Major / moderate	Moderate	Moderate	Moderate / Minor	Minor
	Medium / Low	Major / moderate	Moderate	Moderate	Moderate / Minor	Minor	Minor
	Low	Moderate	Moderate / Minor	Moderate / Minor	Minor	Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible
	None	None	None	None	None	None	None

This matrix is not used as a prescriptive tool and the methodology and analysis of potential effects at any particular location must take account of professional judgement. Occasionally, analysis may not reflect the effects predicted by the grid; the table is used as a guide only.

### Assessment of Effects upon Routes

Potential effects that occur in views from main vehicular and marked recreational routes, paths and trails are assessed primarily from roads and footpaths that face the Proposed Development. Views from routes are however generally restricted to the direction of travel. Potential views are dependent on local circumstances including: extent and type of vegetation; boundary types; and close and mid-distance topography.

The assessment of effects upon routes includes the following, which are undertaken through desk-top study and field work:

- An analysis of views along main vehicular and marked routes;
- An assessment of the existing characteristics of the route; and
- Interrogation of other visualisation tools such as ZTV mapping.

### Nature of Effects

Effects can be direct or indirect. Direct effects are generally limited to those parts of the site physically affected by the footprint of the Proposed Development. Potential indirect effects generally relate to the introduction of elements of the Proposed Development to the context of the existing landscape and visual baseline.

Effects may be short term / temporary (i.e., those occurring during construction of the Proposed Development) or long term / permanent (i.e., those lasting for the lifetime of the Proposed Development).

Effects attributable to the Proposed Development can be regarded as positive / beneficial or negative / adverse and in some cases may be considered to be neutral. Generally, changes in the landscape that result in the loss of rural characteristics are generally considered to be negative / adverse. However, developments of the nature proposed also have the potential to generate beneficial effects such as landscape improvements, mitigation measures or as well-designed elements, which add value to the landscape experience or to the sense of place.

Some may consider the visual effects as positive / beneficial or negative / adverse depending upon their predisposition towards landscape, landscape change and their subjective opinion to the type of change proposed.

Assuming a precautionary approach in making an assessment of the 'worst case scenario', this assessment considers all potential effects which would arise from the Proposed Development to be negative / adverse, unless specifically identified as being beneficial / neutral in the assessment. Again, depending on the receptor's predisposition, not all people would consider the effects to be negative / adverse, or that negative / adverse effects would necessarily be considered unacceptable.



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