

# Former Ely Brickworks landfill development, Woden Park, Cwrt- yr-Ala Road, Vale of Glamorgan

## Landscape and Visual Impact Assessment (LVIA)

Prepared by Amalgam Landscape Limited on behalf of Ermaer  
Limited

**April 2015**

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## Document Control Sheet

Project Name: Former Ely Brickworks landfill development, Woden Park, Cwrt-yr-Ala Road, Vale of Glamorgan

Project Reference: P0172

Report title: Landscape and visual impact assessment

Date: April 2015

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| Revision | Date    | Description   | Prepared  | Reviewed            |
|----------|---------|---|-----------|---------------------|
| A        | 20/5/15 | Updates to design and incorporation of comments from client | A.J Watts | M. Feakins (client) |
| B        | 27/5/15 | incorporation of comments from client                       | A.J Watts | M. Feakins (client) |
|          |         |   |           |                     |

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## 1. Introduction

### Purpose of this Report

- 1.1. Amalgam Landscape has produced this Landscape and Visual Impact Assessment (LVIA) on behalf of Ermaer Limited for a proposed landfill and restoration development (*the proposed development*) at the former Ely Brickworks, Woden Park, off Cwrt-yr-Ala Road.
- 1.2. The proposed development is located entirely within the Vale of Glamorgan Council (VoGC).
- 1.3. The purpose of the LVIA is to identify and outline the existing landscape character and visual amenity receptors within the study area and to assess the potential magnitude of impact and significance of effect on these receptors as a result of the proposed development. Mitigation measures are proposed, including during the initial design phase, to reduce the impacts and effects of the proposed development. Impacts and effects are assessed at significant stages in the life of the proposed development, including operation as well any residual effects following restoration.

### The Proposed Development

- 1.4. The location of the proposed development and restoration area is illustrated on **Figure 1**.
- 1.5. The proposed phased development of the restoration area will involve the excavation of fill material to create the required cell structure. This will subsequently be filled with inert waste under Natural Resources Wales (NRW) permit and then capped to create the desired landform for the restoration of the hillside.
- 1.6. The works will largely consist of:
  - Access to restoration area will be via existing roadways and on site tracks;
  - Staged development within restoration area, subject to further technical analysis and NRW permitting;
  - Excavation of fill material below existing ground level for cell formation;
  - Cells to be filled with inert waste to create desired landform and capped with clay;
  - Staged landscaping to finished restoration masterplan.
- 1.7. The proposed development will involve the following distinct phases:
  - Operation phase – approximately 5-6years, followed by;
  - Staged restoration phase – where the site will be restored to a mix of native broadleaved woodland and wildflower meadow.

## Scope of the LVIA

### 1.8. The LVIA:

- Identifies the methodology, including defining the extent of the study area and the detailed technical approach. The study area is a minimum of **2km radius** measured from the boundary of the proposed development as this is where the most ‘noticeable’ effects may occur;
- Describes the existing landscape character and visual amenity receptors and their views;
- Proposes mitigation measures which aim to avoid, reduce or compensate for any effects. Mitigation through siting and design during the earliest stages were critical in reducing the potential landscape and visual effects of the proposed development;
- Describes the magnitude of impact and the significance of effect on the existing landscape character and visual amenity receptors and their views as a result of the operation of the proposed development. Panoramic photographs are also used to illustrate the potential impacts and effects from publicly accessible viewpoints within the identified study area;
- Provides information on the staged restoration of the proposed development site as well as any residual impacts and effects; and
- Provide conclusions on the overall landscape and visual effects of the proposed development.

## 2. Methodology

- 2.1 The LVIA follows the guidelines produced by the relevant professional bodies concerned with landscape and visual impact assessment. These are identified in **Appendix A**.

### Existing Conditions Assessment Methodology

- 2.2 The description of the existing conditions establishes the baseline situation against which the effects of the proposed development are assessed.

- 2.3 The description of the baseline conditions includes:

- **Landscape character** - which is the description of the physical characteristics of the landscape (including the proposed development site and restoration area) and their sensitivity to change. The landscape is divided into discrete areas of similar characteristics called ‘landscape character areas.’ Reference is made to previously published landscape character assessments at a national and local scale. Landscape relevant designations, which include areas recognised for their landscape value, at a national, regional and local scale, are also identified to help determine sensitivity;
- **Visual amenity receptors** – which is the identification of people and a description of their views. Views from settlements, individual residential properties and farms, recreational routes, local public rights of way, bridleways and cycleways, open access areas, major and minor roads and railway lines are assessed. The sensitivity of the visual amenity receptors is also described.

- 2.4 Existing information is collected through a combination of desk studies, site surveys and consultation.

*Desk Study*

- 2.5 An initial desk study was undertaken to review existing map and written data, relevant to the study area. Details of sources of information are found in **Appendix A**. A summary of the desk study is outlined below:

- Internet search and review of relevant development plans for policies and designations to gain an understanding of the ‘importance,’ ‘value’ and ‘sensitivity’ of designated features attributed to the landscape and visual resource by the national and local government;
- Previously published landscape character assessments at a national and local scale to gain an understanding of the overall character, quality and sensitivity of the existing landscape within the study area; and
- Maps and internet data to gain an understanding of the landform and landscape pattern as well as for information on location of public rights of way, open access areas and settlement pattern.

*Site Survey*

- 2.6 A site survey, including a photographic survey, was undertaken in fine weather in April 2015. The site survey was undertaken from selected publicly accessible areas, such as public highways and public rights of way in the study area. Views from private properties, such as houses and settlements, were estimated from the closest publicly accessible location and checked using aerial photography.

- 2.7 The site survey helped to gain an understanding of the existing site as well as the wider landscape character and visual amenity receptors and their views within the study area. The site survey also helped to determine the potential impacts and effects as a result of the proposed development as well as the design of the subsequent restoration and any residual impacts and effects. This supplemented the available information collected during the desk study.

*Consultation*

- 2.8 A request for a screening opinion was issued to VoGC on 15<sup>th</sup> December 2014. A response was received on 15<sup>th</sup> January 2015. Issues relevant to the LVIA found in the screening opinion included:

- Concerns were expressed about the scale of the infill proposed and that it could have a significant landscape impact;
- The success of the restoration in enhancing the landscape at the edge of the Special Landscape Area (SLA) will be dependent upon the quality of the proposed landscape masterplan; and
- A landscape and visual impact assessment and detailed landscape proposals, both for the operational lifetime of the proposed development and its restoration, will be a necessary requirement of the planning application.

- 2.9 The potential viewpoints to inform the LVIA were issued to VoGC landscape officer and the City of Cardiff Council (CCC) planning officer for their comments on the 9<sup>th</sup> March 2015.

- 2.10 A response was received from the VoGC landscape officer on the 17<sup>th</sup> March 2015 which stated that overall the selection of potential viewpoints to inform the LVIA were acceptable. The potential viewpoints covered a range of medium and long distance views and included the key recreational and cultural sites within the identified study area.
- 2.11 In addition, it was also suggested that the VoGC woodlands officer should be contacted to advise on suitable planting for the proposed future restoration of the site, to tie into the adjacent woodlands.
- 2.12 The VoGC woodlands officer responded on 28<sup>th</sup> and 29<sup>th</sup> April 2015 and recommended tree and shrub species (including a suggested mix) for the restoration of the proposed development site, following completion of the works. These proposals have been incorporated into the proposed mitigation section and also illustrated on the landscape restoration masterplan.
- 2.13 As of 27<sup>th</sup> April 2015, no response was received from the CCC planning officer so it was assumed that the potential viewpoints were acceptable.

Landscape Character and Visual Amenity Receptor Sensitivity Methodology

- 2.14 Landscape character and visual amenity receptors are assessed according to their sensitivity to change.
- 2.15 The landscape character areas are assessed for their sensitivity based on a review and analysis of the elements, designations and previously published descriptions. The sensitivity of the visual amenity receptors is dependent on the location, context and importance of the viewer.
- 2.16 The sensitivity of both landscape character and visual amenity receptors are evaluated according to a five-point scale, with reference to LANDMAP<sup>1</sup>. The criteria used to assess the sensitivity of landscape character and visual amenity receptors are outlined in **Table 1**.

**Table 1 Broad criteria for assessing the sensitivity of landscape and visual receptors**

| Sensitivity | Landscape character description  | Visual amenity receptor description   |
|-------------|--|---|
| High        | <p>Distinctive landscape elements and/or character, susceptible to change. Includes areas with a very strong positive character with valued features that combine to give an experience of unity, richness and harmony.</p> <p>These are landscapes that may be considered to be of particular importance to conserve and which may be particularly sensitive to change. No detractors present. Designations are likely to be present. It is a landscape of importance, or rarity on a regional or national scale. Broadly comparable to the LANDMAP defined 'outstanding' category.</p> | <p>Residents of residential properties and settlements.</p> <p>Users of public rights of way/open access land in nationally designated areas of landscape value (AONB's).</p> |

<sup>1</sup> LANDMAP website [www.landmap.ccw.gov.uk](http://www.landmap.ccw.gov.uk)



| Sensitivity | Landscape character description   | Visual amenity receptor description   |
|-------------|---|---|
| Medium-high | Medium to highly valued landscape elements and/or character with low tolerance to change.<br>May be designated with few/no detractors present.<br>Broadly comparable to the LANDMAP defined 'high' category.  | Users of public rights of way/open access land in regionally/locally designated areas (SLA's).<br>Users of outdoor recreational facilities with high interest in surrounding environment.<br>Users of national cycle routes.                |
| Medium      | Moderately valued landscape elements and/or landscape character, reasonably tolerant to change. Includes areas that exhibit positive character but which may have evidence of alteration, degradation and erosion of features resulting in areas of more mixed character.<br>Some detractors likely to be present.<br>Broadly comparable to the LANDMAP defined 'moderate' category.  | Users of public rights of way/open access land.<br>Recreational users travelling at low speeds on bridleways/cycle paths.<br>Outdoor sporting facilities and users of recreational facilities with low interest in surrounding environment. |
| Medium-low  | Weak landscape structure, partly degraded with frequent detractors and potentially tolerant of significant changes.<br>Non-designated landscape but with some locally valued elements and/or character.<br>Broadly comparable to the LANDMAP defined 'low' category.  | Users of 'B' or unclassified roads, travelling at speed.<br>Static office workers.  |
| Low         | Generally developed landscape, tolerant of substantial change. Includes elements and/or areas that are generally negative in character with few, if any, valued features.<br>There is a weak landscape structure and the land use dominates. The landscape is tolerant of substantial change.<br>The area could consist of industrial, derelict and randomly arranged developments with no aesthetic value or evidence of effective mitigation.<br>No landscape designations apply. | Users of 'A' roads travelling at speed.<br>Workers in industrial facilities/indoor non-static environments.   |

### Assessment of Impacts and Effects Methodology

- 2.17 The existing conditions descriptions and the determination of sensitivity help to assess the magnitude of impact and significance of effect on the landscape character and visual amenity receptors as a result of the proposed development.

#### Magnitude of Impact Methodology

- 2.18 An 'impact' is defined as a change likely to occur as a result of the operation and restoration of the proposed development.

2.19 The magnitude of impact on both landscape character and visual amenity receptors are evaluated according to a six-point scale. The broad criteria for assessing the magnitude of impacts are outlined in **Table 2**.

**Table 2 Broad criteria for assessing the magnitude of impact on landscape character and visual amenity receptors**

| Magnitude of impact | Landscape character description   | Visual amenity receptor description   |
|---------------------|---|---|
| High                | High levels of change to landscape elements/ landscape character.<br>The proposed development will be very prominent in the landscape and will be perceived as a determining factor of the landscape character.<br>The proposed development will lead to a major alteration to the landscape character. | Receptors would experience an immediately apparent change to their views, arising from major alteration to the key characteristics of the existing view or the introduction of elements that will be totally uncharacteristic of the view.<br>The proposed development will dominate the field of view and be impossible not to notice. |
| Medium-high         | Prominent level of change to landscape elements/landscape character.<br>The proposed development will be obvious in the landscape and will generally be perceived as a determining factor in local landscape character.   | Receptors would experience an apparent change to their views.<br>The proposed development would be prominent in views or would be perceived as the determining factor within the field of view and be difficult not to notice.  |
| Medium              | Partial levels of change to landscape elements/landscape character.<br>The proposed development will be noticeable but not necessarily a determining factor of the landscape character.<br>The proposed development would lead to a change to the landscape character.                                  | Receptors would experience a readily apparent change to their view, arising from partial alteration to the key characteristics of the existing view or the introduction of elements that may be prominent but will not dominate the field of view.  |
| Medium-low          | Minor levels of change to landscape elements/landscape character.<br>The proposed development will be perceived but will not be a determining factor of the landscape character.  | Receptors would experience an apparent but minor change in their view, arising from an alteration to the view.<br>The proposed development will be present in views but will form only a minor element.   |
| Low                 | Low levels of change to landscape elements/landscape character.<br>The proposed development will be present and will be perceived as a background feature of the wider landscape character.<br>The proposed development would lead to a minor change to the landscape character.                        | Receptors would experience a low level of change to views. The proposed development will be present in the wider landscape but will be perceived as a background component of views and easily go unnoticed.<br>The proposed development would lead to a minor change to the view.  |
| No change           | Indiscernible level of change. Equivalent to no change.   | Indiscernible level of change. Equivalent to no change.   |

Significance of Effect Methodology

2.20 An ‘effect’ is defined as the degree of change likely to occur as a result of the operation and restoration of the proposed development.

2.21 The significance of the effects on landscape character and visual amenity receptors is determined by balancing the sensitivity of the receptor and the magnitude of impact as a result of the operation and restoration of the proposed development.

2.22 The correlation between the sensitivity of the landscape character and visual amenity receptor, and the magnitude of impact to determine the significance of effect is summarised in **Table 3**. The matrix is however not a prescriptive tool and the analysis of the significance of effects requires the exercise of professional judgement.

**Table 3 Overall determination of significance of effect on landscape character and visual amenity receptors**

|                     |             | Sensitivity of receptor |             |            |            |            |
|---------------------|-------------|-------------------------|-------------|------------|------------|------------|
|                     |             | High                    | Medium-high | Medium     | Medium-low | Low        |
| Magnitude of impact | High        | Major                   | Major       | Moderate   | Moderate   | Minor      |
|                     | Medium-high | Major                   | Moderate    | Moderate   | Minor      | Minor      |
|                     | Medium      | Moderate                | Moderate    | Minor      | Minor      | Negligible |
|                     | Medium-low  | Moderate                | Minor       | Minor      | Negligible | Negligible |
|                     | Low         | Minor                   | Minor       | Negligible | Negligible | Negligible |
|                     | No change   | Neutral                 | Neutral     | Neutral    | Neutral    | Neutral    |

2.23 The significance of effect on both landscape character and visual amenity receptors are evaluated according to an five-point scale. The broad criteria for assessing the significance of effect are outlined in **Table 4**.

**Table 4 Broad criteria for assessing the significance of effect on landscape character and visual amenity receptors**

| Significance of effect | Landscape character description   | Visual amenity receptor description  |
|------------------------|---|--|
| Major                  | Where the proposed development would be noticeably out of scale with the character or noticeably alter a recognised landscape or landscape feature. | Where the proposed development would be uncharacteristic or would substantially alter a valued/ very important view or view of high quality. |
| Moderate               | Where the proposed development would be at variance with the character and/or landscape elements.   | Where the proposed development would be readily apparent and at variance with existing view.   |
| Minor                  | Where the proposed development would be at slight variance with the character and/or landscape elements.  | Where the proposed development would be noticeable but only at slight variance with the existing view.                                       |
| Negligible             | Where the proposed development would have a slightly discernible effect on the landscape character and/or landscape elements.                       | Where the proposed development would provide a small change to the existing view.  |
| Neutral                | No change   | No change  |

2.24 It is important to note that effects can be adverse (negative) or beneficial (positive).

### 3. Existing Conditions

- 3.1 The description of existing conditions establishes the landscape character and visual amenity context within the study area and forms the basis of the LVIA. The baseline for the LVIA is taken as the existing situation on the 27<sup>th</sup> April 2015. The existing conditions include descriptions of landscape relevant designations, landscape character and visual amenity receptors and their views within the study area.

#### Landscape Character

##### Landscape Relevant Designations

- 3.2 There are landscape relevant designations within the study area. These are identified on **Figure 2** and are described below.

- The proposed development site is located on the northern fringes of the Cwrt-yr-Ala Basin Special Landscape Area (SLA).

The Dyffryn Basin and Ridge Slopes SLA also occurs to the west and south-west, on the fringes of the study area.

The SLAs are recognised by the Vale of Glamorgan Council (VoGC) in Policy ENV4<sup>2</sup> where “*new development within or closely related to the following Special Landscape Areas will be permitted where it can be demonstrated that it would not adversely effect the Landscape Character, Landscape Features or Visual Amenities of the Special Landscape Area.*”

The VoGC also recommends that development within SLAs will be strictly controlled in order to protect their special landscape character. Any development proposed within or on land closely related to a defined SLA will need to have regard to the characteristics and features of the surrounding landscape. Any proposed development will need to demonstrate that their proposals have been designed to minimise the impact upon the landscape.

- There are five Registered Parks and Gardens within the study area including:
  - Victoria Park, Grade II, approximately 1.5km to the north-east, is a small but intact Victorian public park retaining most of its original layout;
  - Cwrt-yr-Ala, Grade II, approximately 1.6km to the south, is notable for the fine landscaping in the park of a string of ponds which appear as one sinuous piece of water. It also has a formal 20<sup>th</sup> century garden with terraces and a canal;
  - Thompson’s Park, Grade II, approximately 2.1km to the north-east, is a well-preserved Victorian urban public park.
  - Pontcanna Fields and Llandaff Fields, Grade II\*, approximately 2.5km to the north-east, is a well-preserved central urban park which, with Bute Park and Sophia Gardens, gives Cardiff an unusually large area of open space in the heart of the city; and
  - St Fagans Castle, Grade I, approximately 2.5km to the north-west, is one of the most important historic gardens in Wales. It is a multi-period, extensive garden in compartments and terraces with underlying Tudor structure, now predominantly Victorian and Edwardian, retaining much of its layout.

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<sup>2</sup> The Vale of Glamorgan Unitary Development Plan, 1996-2011, Adopted April 2005

Registered Parks and Gardens are recognised by VoGC in Policy ENV17 where “*the environmental qualities of the built and historic environment will be protected. Development which has a detrimental effect on the special character appearance or setting of.... designated landscapes, parks or gardens of historic, cultural or aesthetic importance will not be permitted.*”

The City and County of Cardiff (CCC) also recognised Registered Parks and Gardens in Policy 4<sup>3</sup> where “*development proposals within or which may affect historic gardens, parks and landscapes will be required to respect the character, setting and historic value of such areas.*”

- There are five Conservation Areas within the study area. These include:
  - St Fagans, approximately 1.7km to the north-west;
  - Cardiff Road, approximately 2.2km to the north-east;
  - Conway Road, approximately 2.4km to the north-east;
  - Michaelston-le-Pit, approximately 2.1km to the south-east; and
  - Wenvoe, approximately 2.2km to the south-west.

Conservation Areas are recognised by the VoGC in Policy ENV17 where “*the environmental qualities of the built and historic environment will be protected. Development which has a detrimental effect on the special character appearance or setting of.... a building or group of buildings, structure or site of architectural or historic interest, including Listed Buildings and Conservation Areas will not be permitted.*”

Conservation Areas are also recognised by CCC in Policy 3 where “*development proposals within Conservation Areas will only be permitted if they preserve or enhance the character and appearance of the area.*”

- There are small clusters of Listed Buildings within St Fagans and Michaelston-le-Pit.

Listed Buildings are recognised by the VoGC in Policy ENV17 where “*the environmental qualities of the built and historic environment will be protected. Development which has a detrimental effect on the special character appearance or setting of.... a building or group of buildings, structure or site of architectural or historic interest, including Listed Buildings and Conservation Areas will not be permitted.*”

Listed Buildings are also recognised by CCC where they are afforded statutory protection.

- There are four Scheduled Ancient Monuments (SAMs) in the study area including:
  - Caerau Camp, approximately 100m to the west;
  - Ely Roman Villa, approximately 600m to the north-east;
  - Leckwith Ridge, approximately 1.4km to the east; and
  - Greave Round Barrow, approximately 1.7km to the south-west.

SAMs are recognised by the VoGC in Policy ENV17 where “*the environmental qualities of the built and historic environment will be protected. Development which has a detrimental effect on the special character appearance or setting of.... Scheduled Ancient Monuments will not be permitted.*”

SAMs are also protected by CCC in Policy 1 which states that “*there will be a presumption against development proposals which would cause harm to ancient*

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<sup>3</sup> City and County of Cardiff Local Plan, including Waste Policies, Adopted January 1996

*monuments or other nationally important archaeological remains, whether scheduled or not, or which would have an adverse impact on their setting.”*

- There are numerous Ancient Woodlands within the study area, including immediately to the south and east of the proposed development as well as scattered further to the east, south-east, south, south-west and west, including to the north and north-west within Cardiff.

Ancient Woodlands are protected by VoGC in Policy ENV11 where “*development will be permitted if it does not unacceptably affect features of importance to landscape or nature conservation including trees, woodland, hedgerows...*” In addition Policy ENV12 also states that “*the improvement, management and extension of woodland, tree cover and hedgerows, particularly of broadleaf native species, will be favoured, especially where it ... makes a significant improvement to the landscape such as derelict land, the urban fringes or in the vicinity of major road/rail corridors and quarries; or it helps to diversify and extend wildlife habitats...*”

### Landscape Character

- 3.3 The Natural Resources Wales (NRW) *Landscape Character Map for Wales* is referred to for a strategic understanding of landscape character within the study area. This outlines the wider setting for the proposed development site and provides a context for the description of local landscape character.
- 3.4 Within the study area, there are two national landscape character areas.
- 3.5 The proposed development site and the majority of the study area, extending to the north and east is within the *Newport, Cardiff and Barry national landscape character area (35)*. To the south and west is within the *Vale of Glamorgan national landscape character area (36)*.
- 3.6 The national landscape character descriptions are summarised in **Table 5**.

**Table 5 National landscape character areas**

| No. | National landscape character area | Description   |
|-----|-----------------------------------|---|
| 35  | Newport, Cardiff and Barry        | <p>Containing the proposed development and extending to the north and east, this is described as:</p> <ul style="list-style-type: none"> <li>- An urban corridor (with 2 cities including Wales’s Capital), and intervening countryside and transport links;</li> <li>- The Taff, Ely, Rhymney, Ebbw and Usk rivers flow through the area, entering the mouth of the Severn at various points along the coast;</li> <li>- The landscape is dominated on the one side by Cardiff and its satellites Penarth and Barry, and on the other by the conurbations of Newport, Cwmbran and Pontypool;</li> <li>- Rural land in between is mainly used for pasture, with broadleaved woodlands that occasionally extend into the urban areas. There are linear settlements linked by rural roads between Barry and Penarth;</li> <li>- Medium sized fields are mainly enclosed by hedgerows with frequent hedgerow trees; and</li> <li>- Overall, this is a busy and vibrant landscape, and home to the capital city of Wales. Rural landscapes and woodlands provide more peaceful green edges and retreats.</li> </ul> |

| No. | National landscape character area | Description  |
|-----|-----------------------------------|--|
| 36  | Vale of Glamorgan                 | <p>Extending to the south and west, this is described as:</p> <ul style="list-style-type: none"> <li>- A distinctive undulating lowland landscape between adjacent uplands, coastline and urban areas;</li> <li>- A variety of land uses is present including dairying, sheep rearing, arable, equine pursuits and pig rearing;</li> <li>- Woodland clumps, in-field trees, riparian (streamside) woodlands and small plantations are prevalent;</li> <li>- Fields of varying patterns and sizes are bounded by hedgerows or hedgebanks, often with hedgerow trees;</li> <li>- Anglo-Norman influences were particularly strong in shaping the area's historic character with Norman castles and small, Medieval nucleated villages centred on churches being key features;</li> <li>- Many of the Vale's villages have retained their historic character, but there are several where unsympathetic, modern housing detracts; and</li> <li>- The overall rural and historic character of the Vale engenders strong senses of enclosure, tranquillity, intimacy and timelessness.</li> </ul> |

*Local Landscape Character*

- 3.7 The NRW LANDMAP landscape character information is referred to for an understanding of landscape character within the study area. This outlines the setting for the proposed development site within the study area.
- 3.8 The location of the landscape character areas is illustrated in **Figure 3** and the undulating landform of the proposed development site and the wider context of the study area is illustrated in **Figure 4**.
- 3.9 Within the study area, there are 15 landscape character areas<sup>4</sup>, as defined by the 'visual and sensory' layer of the LANDMAP assessment.
- 3.10 The proposed restoration area is within the *Southern Ely Valley landscape character area* and extends to the east and south-east, following the boundary of the A4232 road corridor to the north and east, towards the fringes of the study area. The access road section of the proposed development is within the *Cwrt-yr-Ala Valley landscape character area*, which extends broadly southwards towards the fringes of the study area.
- 3.11 The *Southern Ely Valley landscape character area* is a steep north-east facing scarp slope, falling from around 115m AOD towards the Ely river at around 15m AOD with Cardiff beyond. The slopes are dominated by broadleaf and mixed woodland giving way to riverside vegetation and limited commercial development by the river. The valley slope forms a distinctive edge to Cardiff and presents a strong topographical and vegetated landform visible from the city. Settlement is sparse consisting of scattered farms and houses. The B4267 bisects the area at its midpoint and runs along its boundary in the south-west section. **The busy A4232 Western Cardiff bypass forms the area's eastern boundary and is a major influence in reducing tranquillity.** The woodland appears to be unmanaged in parts. **Some detractors are present including derelict land,** electricity lines cutting through the woodland, the A4232 and the commercial sites adjacent to the river's edge.

<sup>4</sup> The majority of the built up area of Cardiff immediately to the north, east and west of the proposed development site has not been described within the 'visual and sensory' layer of LANDMAP.

- 3.12 The *Southern Ely Valley landscape character area* presents distinctive views to a wooded hillside and has, for the most part, maintained a high integrity with only partial development to the base of the hillside. It possesses a strong character due to its strong topographical form and almost continuous vegetation cover. The area therefore has a **medium-high** sensitivity.
- 3.13 The key objectives of the *Southern Ely Valley landscape character area*, as defined by LANDMAP, in its recommendations are:
- Prepare woodland management plan in conjunction with owners and implement;
  - Reuse derelict land with appropriate use and landscape measures; and
  - Screen and improve commercial sites
- 3.14 The *Cwrt-yr-Ala landscape character area* occurs mainly to the south of the proposed development site and includes the access road to the proposed restoration area. It is a rolling and undulating area forming the headwaters of the Cadoxton valley. The highest point is Cock Hill to the north at 115m AOD, the lowest to the south at approximately 20m AOD. The landcover is broadly a mosaic of pastoral fields, with hedgerows often containing trees and numerous woodlands present. The latter generally set on the steeper upper slopes of valleys or ridgelines. Settlement is focussed on Michaelston-le-Pit which is a small village but otherwise settlement is dispersed and includes farms and scattered houses. It has a strong sense of place where vernacular buildings, broadleaf woodland and well-treed hedgerows complement well-managed farmland. Whilst vegetation presently integrates the settlements into their surroundings, recent development is beginning to unbalance the relationship.
- 3.15 The *Cwrt-yr-Ala landscape character area* maintains a high integrity with little inharmonious development and exhibits a distinctive character through its topography and tree cover, creating a strong sense of place. The quality of these elements is relatively uncommon, certainly this close to an urban area. The area therefore has a **medium-high** sensitivity.
- 3.16 The key objectives of the *Cwrt-yr-Ala landscape character area*, as defined by LANDMAP, in its recommendations are:
- Improve management of deciduous woodland to maintain cover and improve access; and
  - Maintain hedgerows as strong visual framework.
- 3.17 Further to the west, the landscape becomes more settled within the **medium-low** sensitivity *Wenvoe landscape character area* and the **medium** sensitivity *Wenvoe Environs landscape character area* and to the south-east towards the **medium** sensitivity *Penarth landscape character area* and the *Penarth and Dinas Powys Urban Fringe landscape character area*.
- 3.18 The urban fringes of Cardiff dominate the landscape to the north, beyond the corridor of the A4232, leading towards the **medium-high** and **high** sensitivity landscapes focussed around St Fagans.
- The Proposed Development Site, including the Proposed Restoration Area and Surrounds*
- 3.19 The proposed development site lies on southern side of the A4232 on the south-eastern edge of the settlement of Caerau and immediately opposite Ely Distribution Centre (industrial estate), located on the western fringes of Cardiff. It consists of a linear strip of



land situated adjacent to Leckwith wooded slopes rising above the A4232 on the urban fringes of Cardiff.

- 3.20 The proposed restoration area consists of predominantly bare ground, earth banks with areas of scree and rock exposure, enclosed by broad leaved woodland and scrub. An analysis of the proposed development site, its immediate surrounds and the proposed restoration area, including photographic views, are illustrated in **Figures 6-9**.
- 3.21 Broadly:
- **To the north**, the landscape consists predominantly of residential housing and associated gardens, industrial units and warehousing associated with the Ely Distribution Centre and open recreational spaces, separated from the proposed development site by the busy A4232, with its well-vegetated verges;
  - **To the east**, dense woodland cloaks the sloping landform and restricts any wider views, including from the A4232, which sweeps around the fringes of Cardiff and separates the sloping wooded landform from the adjacent urban fringes;
  - **To the south**, the present topography created by the brick clay excavations forms a steep escarpment ranging from 10–30m high on the southern edge of the proposed restoration area. A strong network of mature woodlands, trees and hedgerows cover the sloping land at the top of the quarried slopes, before the landform gently slopes down to the predominantly well-vegetated farmland landscape; and
  - **To the west**, mature vegetation encloses the A4232 and separates the agricultural landscape from the urban fringes of Cardiff. A series of small hills and ridges, including Caerau Camp, on the northern side of the A4232, punctuate the landscape surrounding the busy road corridor and provide occasional elevated and open views across the surrounding landscape.

### **Visual Amenity Receptors and their Views**

- 3.22 An overview of the visual amenity receptors and their views within the study area is described below. The location of principal visual amenity receptors is illustrated on **Figure 5**.

#### *Settlements*

- 3.23 The main settlement of Cardiff extends broadly to the north, east and west of the proposed development site, separated by the busy A4232. Consisting of the residential, commercial and industrial areas of Ely and Caerau, the majority of views within the settlement are focussed within the immediate vicinity, largely screened by the adjacent buildings and infrastructure. However, the settlement is interspersed with large expanses of open areas including parks and playing fields, informal open areas, such as the elevated Caerau Camp and cemeteries, which although generally well-vegetated with mature trees, shrubs and woodland, allow occasional open views into the surrounding urban expanse as well as to the wooded ridges, broadly to the south.
- 3.24 Broadly to the south of the proposed development site, there are scattered small towns and villages including Wenvoe to the south-west, Michaelston-le-Pit to the south and Llandough, on the fringes of Penarth to the south-east. The smaller towns and villages are nestled within the undulating farmland landscape often enclosed by the surrounding

mature vegetation, including numerous woodlands, trees and hedgerows that are characteristic of the landscape.

*Individual residential properties and farms*

- 3.25 Individual residential properties and farms are scattered within the undulating agricultural farmland that broadly covers the southern section of the study area. Nestled within the undulating and well-vegetated landscape, many of the scattered houses and farms have restricted views into the surrounding landscape from a combination of vegetation enclosing many properties as well as subtle variations in landform and mature vegetation in the immediate and wider landscape.

*Recreational routes*

- 3.26 A short stretch of the Taff Trail recreational route occurs to the north-west on the fringes of the study area, near St Fagans. Crossing the undulating farmland landscape, views from the recreational route are contained by the surrounding undulating landform and the immediate and wider hedgerows and woodland as well as the dominant presence of Cardiff to the south and east.

*Local public rights of way, bridleways and cycleways*

- 3.27 Public rights of way, bridleways and cycleways cross the study area. Within the undulating farmland broadly to the south of the study area, the public rights of way, bridleways and cycleways are often enclosed by a combination of mature woodland and hedgerow vegetation, as well as undulating landform, which restrict the majority of views. It is from selected high points, from gaps in the enclosing vegetation, such as at field gates or when the routes cross open fields that views across the surrounding undulating farmland landscapes are possible.
- 3.28 Broadly to the north of the study area, the public rights of way, bridleways and cycleways that cross the urban expanse of Cardiff are largely enclosed by surrounding development, with associated restricted views into the wider landscape. Selected open views are however possible from the large expanses of open areas including parks and playing fields, informal open areas, such as the elevated Caerau Camp and cemeteries, which although generally well-vegetated with mature trees, shrubs and woodland, allow occasional open views into the surrounding urban expanse as well as to the wooded ridges, broadly to the south.

*Open access areas*

- 3.29 There is only one open access area within the study area, a small area near Leckwith, to the south-east of the proposed development. Set within the undulating landscape and enclosed by surrounding mature woodland, any views are very restricted.

*Major roads*

- 3.30 A number of major 'A' roads cross the study area. These include:
- A4232, immediately to the north of the proposed development site, passing from the east to the west of the study area. Passing through many vegetated cuttings, the busy road provides a physical 'barrier' between Cardiff and the Vale;
  - The A48 and A4161 pass through the urban expanse of Cardiff and are largely enclosed by surrounding development; and

- A4050, connects with the A4232 to the west, before heading broadly southwards through the undulating and well-vegetated farmland passing through Wenvoe.

*Minor 'B' roads and unclassified roads*

- 3.31 Minor roads cross the study area linking the scattered farms, houses and small settlements, broadly to the south of the study area as well as bisecting Cardiff broadly to the north of the study area.
- 3.32 Broadly to the south, the minor roads crossing the undulating farmland landscape are largely enclosed by linear roadside vegetation, hedgerows and woodlands. It is only from selected high points, or from gaps in the enclosure, that views across the undulating farmland landscape are possible.
- 3.33 Broadly to the north, the minor roads are largely enclosed by surrounding development and it is only from selected breaks in the enclosure, that occasional views, across the intervening settlement, towards the distant wooded ridges are possible.

*Railway lines*

- 3.34 A railway line passes from the north-west to the north-east of the study area, skirting the fringes of St Fagans, before passing through the urban expanse of Cardiff, with associated restricted views provided by a mix of undulating and well-vegetated landform and the dense enclosure by surrounding development.

## **4. Mitigation Measures during Design, Operation and Restoration**

- 4.1 Mitigation measures to help minimise the potential impacts and effects have been incorporated into the distinct phases of the proposed development, including during the design process (designed in mitigation), the operational phase of the proposed development and its subsequent restoration.

### **Mitigation through selection and siting of the proposed development**

- 4.2 The proposed development site was selected as a potential landfill site because of its current 'brownfield' status.
- 4.3 The proposed development, which is located within a former industrial site, will not disrupt the surrounding and established landscape pattern. The proposed development will 'fit' into the existing landscape pattern. By 'fitting in' with the existing landscape pattern, the proposed development will not be out of scale with the character of the local landscape and will be easily absorbed within the wider landscape.
- 4.4 The proposed restoration area is also very well-enclosed by sloping landform and existing mature vegetation which will help to limit the wider landscape and visual effects during its relatively short operational period. Its location will help to restrict its visual profile in the immediate and wider landscape, particularly to the south and will help to reduce the proposed development site's visibility and wider effects on landscape character.
- 4.5 In addition, the proposed development is designed to minimise direct effects on landscape elements. The proposed development site will be accessed via an existing

entrance and well-enclosed road, thereby minimising disruption on landscape elements, landscape character and views from the few surrounding visual amenity receptors. Existing mature vegetation will be retained on the boundaries of the proposed development site and **no** existing boundary vegetation will be lost during the construction and operation of the proposed development.

#### **Mitigation during construction and operation**

- 4.6 The existing boundary vegetation will be protected during construction and maintained during the operation of the proposed development. The protection and retention of the existing landscape boundary features, including extensive areas of woodland, will provide immediate screening, retain the landscape character and help reduce the wider effects of the proposed development, particularly to the north.
- 4.7 In addition, mitigation measures, relevant to the LVIA during the operational period, include:
- There will be **no** vegetation loss, including hedgerows, trees and shrubs;
  - Existing entrances and access roads will be used, thereby minimising direct effects on landscape elements; and
  - An immediate planting scheme will be undertaken to screen the entrance to the proposed restoration area, prior to commencement of the landfill operations.

#### **Mitigation for restoration**

- 4.8 The proposed development will be operational for a relatively short period of time, at the end of which it will be restored.
- 4.9 Conforming to the VoGC Policy ENV12, the proposed restoration area will be restored to a combination of woodland, separated by areas wildflower meadow, so it connects both visually and physically to the surrounding generally broadleaved woodlands, including many Ancient Woodlands. This will provide not only beneficial effects towards screening, particularly from Cardiff broadly to the north but also in terms of landscape and ecological enhancement of the former brownfield site.
- 4.10 Through consultation with the VoGC woodlands officer, a suitable native woodland mix has been proposed which not only promotes local species but is also intended to provide rapid vegetative cover for the site.
- 4.11 Further details on the restoration of the proposed development site are illustrated in **Figure 14**.

## 5. Operational Impacts and Effects, including Residual Impacts and Effects

### Operational Impacts and Effects on Landscape Character, including Residual Impacts and Effects

#### Landscape Relevant Designations

5.1 The operation of the proposed development will involve both direct and indirect impacts on the landscape relevant designations in the study area, as follows:

- The proposed development is situated on the northernmost fringes of the Cwrt-yr-Ala Basin Special Landscape Area (SLA) and will directly affect this locally recognised landscape.

However, situated within a brownfield site and largely screened, particularly when perceived from within the majority of the SLA, to the east, south and west, the proposed development will be enclosed by the immediate and wider woodland and hedgerow vegetation, as well as the undulating landform. As illustrated in **Viewpoint 1 (Figure 10)**, even from an open location, in close proximity, the proposed development will be screened from within the SLA by the intervening sloping landform and the surrounding mature vegetation.

Therefore, the proposed development location, on a brownfield site and enclosed by existing mature vegetation demonstrates that it has *“been designed to minimise the impact upon the landscape.”*

The immediate and wider enclosure by undulating landform and mature vegetation, when perceived from within the SLA, also ensures that the proposed development will not influence the special characteristics of this locally recognised landscape. The proposed development *“would not adversely affect the Landscape Character, Landscape Features or Visual Amenities of the Special Landscape Area.”* At worst, the proposed developments location within the SLA may have **negligible** effects, however, for the majority of the SLA, the magnitude of impact will be **no change**, the significance of effect will be **neutral**.

In addition, the restoration of the site with extensive native woodland planting and wildflower meadows, in keeping with the surrounding landscape, following completion of the works, will ensure that there will be positive improvements to the landscape of the SLA by reintroducing and extending the native woodland cover.

A combination of distance, undulating landform, intervening development and infrastructure and mature vegetation both in the immediate and wider landscape will ensure that there will be no indirect influence on the Dyffryn Basin and Ridge Slopes SLA, which occurs to the west and south-west, on the fringes of the study area. The magnitude of impact will be **no change**, the significance of effect will be **neutral**.

- A combination of distance and separation by development, undulating landform and mature vegetation will ensure that the proposed development will not influence the setting of the Registered Parks and Gardens within the study area. The magnitude of impact will be **no change**, the significance of effect will be **neutral**.
- A combination of distance and separation by development, undulating landform and mature vegetation will ensure that the proposed development will not influence the setting of the five Conservation Areas within the study area. The magnitude of impact will be **no change**, the significance of effect will be **neutral**.

- A combination of distance and separation by development, undulating landform and mature vegetation will ensure that the proposed development will not influence the setting of the Listed Buildings focussed within the settlements of St Fagans to the north-west and Michaelston-le-Pit to the south within the study area. The magnitude of impact will be **no change**, the significance of effect will be **neutral**.
- It will only be the closest Scheduled Ancient Monuments (SAMs) to the proposed development, including Caerau Camp, approximately 100m to the west and Ely Roman Villa, approximately 600m to the north-east that have the potential for their setting to be indirectly influenced by the proposed development.

As illustrated in **Viewpoint 2 (Figure 10)**, the majority of the Caerau Camp SAM is covered with mature vegetation which restricts many views from its elevated location. It will only be from gaps in this enclosure and from selected elevated locations, that open views across the adjacent residential, industrial and commercial expanses of Cardiff, the A4232 as well as the adjacent wooded ridges, including glimpsed views of the operational solar park will be possible. A busy view, already influenced by diverse development, the proposed development will be extremely difficult to perceive with any views towards the proposed restoration area restricted by the intervening mature vegetation and sloping landform. At worst, the proposed developments may have **negligible** effects on the setting of the SAM.

However, the restoration of the site with extensive native woodland planting, in keeping with the surrounding landscape, following completion of the works, will ensure that there will be **positive improvements** to the landscape and the setting of the SAM by reintroducing and extending the native woodland cover.

As illustrated in **Viewpoint 6 (Figure 12)**, in close proximity to the site of the Ely Roman Villa, it will only be from selected open locations that the proposed development will be glimpsed on the adjacent wooded ridge, above and beyond the surrounding development that encloses the SAM, set within the urban expanses of Cardiff. The proposed development will largely be screened by the existing retained mature vegetation and will form, at worst, a very minor element of the view. The proposed development will be extremely difficult to perceive with any views towards the proposed restoration area restricted by the intervening mature vegetation and sloping landform. At worst, the proposed developments may have **negligible** effects on the setting of the SAM.

However, the restoration of the site with extensive native woodland planting, in keeping with the surrounding landscape, following completion of the works, will ensure that there will be **positive improvements** to the landscape and the setting of the SAM by reintroducing and extending the native woodland cover.

In summary, although elements of the proposed development may be selectively perceived from the SAMs, their setting has already been influenced by closer and more prominent development. The proposed development will not have “*a detrimental effect on the special character appearance or setting of... Scheduled Ancient Monuments.*”

- No Ancient Woodlands will be directly affected by the proposed development. The magnitude of impact will be **no change**, the significance of effect will be **neutral**.

#### Landscape Character Areas

- 5.2 The operation of the proposed development will introduce a new built element within the landscape, albeit on a previous brownfield site and largely enclosed by existing mature

vegetation. With reference to the viewpoints (**Figures 10-13**) the proposed development will be potentially perceived over a very limited area, mainly from a few selected open locations within the urban expanse of Cardiff, broadly to the north.

- 5.3 A combination of distance, undulating landform and enclosure by mature woodland and hedgerow vegetation will ensure that the proposed development will largely not influence the *Cwrt-yr-Ala Valley landscape character area*, which extends broadly southwards towards the fringes of the study area or the *Southern Ely Valley landscape character area* which extends to the east and south-east, following the boundary of the A4232 road corridor to the north and east, towards the fringes of the study area.
- 5.4 As illustrated in **Viewpoint 1 (Figure 10)**, even from an open location, in close proximity, the proposed development will be screened from within the *Cwrt-yr-Ala Valley landscape character area* by the intervening sloping landform and the surrounding mature vegetation.
- 5.5 The immediate and wider enclosure by undulating landform and mature vegetation, when perceived from within these areas, also ensures that the proposed development will not influence the wider landscape character. At worst, the proposed developments location within these areas may have **negligible** effects, however, for the majority of these landscape character areas, the magnitude of impact will be **no change**, the significance of effect will be **neutral**.
- 5.6 In addition, the restoration of the site with extensive native woodland planting, in keeping with the surrounding landscape, following completion of the works, will ensure that there will be **positive improvements** to the landscape character areas by reintroducing and extending the native woodland cover.
- 5.7 The restoration of the proposed development following completion of operations also conforms to the key objectives of these landscape character areas, as defined by LANDMAP, including:
- **Improve management of deciduous woodland to maintain cover and improve access;**
  - **Maintain hedgerows as strong visual framework;**
  - **Prepare woodland management plan in conjunction with owners and implement;**
  - **Reuse derelict land with appropriate use and landscape measures; and**
  - **Screen and improve commercial sites.**
- 5.8 Further to the east, south-east, south-west, west and north-west, a combination of undulating landform and screening by mature vegetation and landform will restrict the indirect influence of the proposed development on the landscape.
- 5.9 The proposed development also has the potential to be perceived from selected open locations within the urban fringes of Cardiff that dominate the landscape to the north, beyond the corridor of the A4232. As illustrated in **Viewpoints 2-8 (Figures 10-13)**, it will only be from selected open locations between gaps in development or from open or elevated locations within the scattered parks, playing fields or more informal open spaces that the wooded ridge within which the proposed development will be situated will be perceived.
- 5.10 Even if perceived, the proposed development will be largely screened by the existing retained woodland vegetation and lost within the expansive and distant views of the

wooded ridge. At worst, the proposed development may be selectively perceived from the urban dominated landscape and have **negligible** effects, however, for the majority of the urban dominated landscape, although potentially selectively perceived, it will not affect or influence the wider character. The magnitude of impact will be **no change**, the significance of effect will be **neutral**.

- 5.11 In addition, the restoration of the site with extensive native woodland planting, in keeping with the surrounding landscape, following completion of the works, will ensure that there will be **positive improvements** to the landscape by reintroducing and extending the native woodland cover.

### **Operational Impacts and Effects on Visual Amenity Receptors and their Views, including Residual Impacts and Effects**

#### Viewpoint Analysis

- 5.12 Eight viewpoints have been selected to inform the LVIA and help determine and describe the magnitude of impact and significance of effect of the proposed development. The viewpoints represent potentially the most 'exposed' views of the proposed development, from the most 'sensitive' receptors, broadly surrounding the proposed development from all directions of view. Details of the preparation of the viewpoint graphics are included in **Appendix B**.
- 5.13 However, for the majority of viewpoints, the proposed development will not be perceived, as a result of screening by mature vegetation, undulating landform or development.
- 5.14 More detailed analysis of **Viewpoints 1 – 8** is provided in the overview of visual amenity receptors and their views below.

#### An Overview of Visual Amenity Receptors and their Visibility within the Study Area

##### *Settlements*

- 5.15 The proposed development has the potential to be perceived from selected open locations within the urban fringes of Cardiff that dominate the landscape broadly to the north, beyond the corridor of the A4232. As illustrated in **Viewpoints 2-8 (Figures 10-13)**, it will only be from selected open locations between gaps in development or from open or elevated locations within the scattered parks, playing fields or more informal open spaces that the wooded ridge on which the proposed development will be situated will be perceived. Even if perceived, the proposed development will be largely screened by the existing retained woodland vegetation and 'lost' within the expansive and distant views of the wooded ridge. At worst, the proposed development may be selectively perceived from the **high** sensitivity settlement and have **negligible** effects, however, for the majority of the urban dominated landscape, although potentially selectively perceived, the proposed development will not affect the views from this largely residential settlement, interspersed with transport corridors, commercial and industrial development and areas of parks, playing fields and more informal open space. The magnitude of impact will largely be **no change**, the significance of effect will be **neutral**.
- 5.16 In addition, the restoration of the site with extensive native woodland planting, in keeping with the surrounding landscape, following completion of the works, will ensure that there



will be **positive improvements** to many views by reintroducing and extending the native woodland cover.

- 5.17 The separation of the proposed development by undulating and well-vegetated landform from the scattered small towns and villages including Wenvoe to the south-west, Michaelston-le-Pit to the south and Llandough, on the fringes of Penarth to the south-east will ensure that there will be no change in views, even from the few selected open areas on the fringes of these **high** sensitivity settlements. The magnitude of impact will be **no change**, the significance of effect will be **neutral**.

*Individual residential properties and farms*

- 5.18 The individual residential properties and farms that are scattered within the undulating agricultural farmland, that broadly covers the southern section of the study area, are nestled within the undulating and well-vegetated landscape. They would experience restricted views into the surrounding landscape towards the proposed development from a combination of vegetation enclosing many properties as well as subtle variations in landform and vegetation in the immediate and wider landscape. The magnitude of impact will be **no change**, the significance of effect will be **neutral**.

*Recreational routes*

- 5.19 A combination of distance and separation by the urban expanse of Cardiff would ensure there will be no change of views for the short stretch of the Taff Trail recreational route which occurs to the north-west on the fringes of the study area, near St Fagans. The magnitude of impact will be **no change**, the significance of effect will be **neutral**.

*Local public rights of way, bridleways and cycleways*

- 5.20 Within the undulating farmland broadly to the south of the study area, the public rights of way, bridleways and cycleways are often enclosed by a combination of mature woodland and vegetation, as well as undulating landform which will restrict views towards the proposed development, as illustrated in **Viewpoint 1 (Figure 10)**.
- 5.21 It is largely only from selected high points, from gaps in the enclosing vegetation or from open areas within the urban expanses of Cardiff broadly to the north, that the proposed development has the potential to be perceived from the complex network of public rights of way. As illustrated in **Viewpoint 2 (Figure 10)**, **Viewpoint 6 (Figure 12)** and **Viewpoint 8 (Figure 13)**, it will only be from selected open locations between gaps in development or from open or elevated locations within the scattered parks, playing fields or more informal open spaces that the wooded ridge on which the proposed development will be situated will be perceived. Even if perceived, the proposed development will be largely screened by the existing retained woodland vegetation and lost within the expansive and distant views of the wooded ridge. At worst, the proposed development may be selectively perceived from the **medium** sensitivity public rights of way and have **negligible** effects, however, for the majority of the public rights of way, although potentially selectively perceived, the proposed development will not affect the views. The magnitude of impact will largely be **no change**, the significance of effect will be **neutral**.
- 5.22 In addition, the restoration of the site with extensive native woodland planting, in keeping with the surrounding landscape, following completion of the works, will ensure that there will be **positive improvements** to many views by reintroducing and extending the native woodland cover.

*Open access areas*

- 5.23 A combination of distance and separation by undulating landform and extensive woodland areas would ensure there will be no change of views for the small open access area near Leckwith, to the south-east of the proposed development. The magnitude of impact will be **no change**, the significance of effect will be **neutral**.

*Major roads*

- 5.24 The closest major road, the A4232, which passes immediately to the north of the proposed development site, passing from the east to the west of the study area would experience restricted views towards the proposed development. As illustrated in **Viewpoint 3 (Figure 11)**, even from an elevated bridge crossing the A4232, the proposed development will be screened by the intervening sloping landform and mature vegetation in the immediate and wider landscape. However, largely due to its proximity, glimpsed and fleeting views of elements of the proposed development may be possible for travellers passing at speed along the road, although the majority of views will be restricted by the retained woodland vegetation on the fringes of the proposed development. At worst, elements of the proposed development may be selectively perceived from the **low** sensitivity busy road and have **negligible** effects, however, for the majority of the road, the proposed development will not affect the views. The magnitude of impact will largely be **no change**, the significance of effect will be **neutral**.
- 5.25 Such fleeting and glimpsed views of the proposed development, as illustrated in **Viewpoint 4 (Figure 11)** and **Viewpoint 7 (Figure 13)**, will also be possible from the A48 and A4161, which passes through the urban expanse of Cardiff and are largely enclosed by surrounding development.
- 5.26 In addition, the restoration of the site with extensive native woodland planting, in keeping with the surrounding landscape, following completion of the works, will ensure that there will be **positive improvements** to many views by reintroducing and extending the native woodland cover.

*Minor 'B' roads and unclassified roads*

- 5.27 The minor roads that cross the study area linking the scattered farms, houses and small settlements, broadly to the south of the study area as well as bisecting Cardiff, broadly to the north of the study area, are largely enclosed by a diverse mix of surrounding development, undulating landform and dense vegetation which will restrict views towards the proposed development.
- 5.28 However, glimpsed and fleeting views of elements of the proposed development may be possible for travellers mainly to the north within the urban expanse of Cardiff, although the majority of views will be restricted by the intervening landform and the retained woodland vegetation on the fringes of the proposed development. At worst, elements of the proposed development may be selectively perceived from the **medium-low** sensitivity minor road network and have **negligible** effects. However, for the majority of the minor roads to the north as well as to the south of the proposed development, the proposed development will not affect the views. The magnitude of impact will largely be **no change**, the significance of effect will be **neutral**.
- 5.29 In addition, the restoration of the site with extensive native woodland planting, in keeping with the surrounding landscape, following completion of the works, will ensure that there

will be **positive improvements** to many views by reintroducing and extending the native woodland cover.

*Railway lines*

- 5.30 A combination of distance, undulating and well-vegetated landform as well as the separation by the urban expanse of Cardiff would ensure there will be no change of views for the railway line passes from the north-west to the north-east of the study area, skirting the fringes of St Fagans, before passing through Cardiff. The magnitude of impact will be **no change**, the significance of effect will be **neutral**.

## **6. Conclusions**

- 6.1 The proposed development site is situated within a 'brownfield' site and is largely enclosed by mature tree, shrub and woodland vegetation.
- 6.2 Although situated within a Special Landscape Area (SLA), the proposed development has been designed to minimise the wider influence on this locally recognised landscape as well as not affect landscape elements (such as trees, shrubs and woodland) and will use existing entrances and access points during its relatively short operational phase.
- 6.3 The proposed developments position on a wooded ridge, facing away from the attractive wooded farmland of the wider landscape that dominates the southern fringes of the study area, will also reduce its influence on the more sensitive landscape character areas and views from the scattered visual amenity receptors.
- 6.4 The proposed development, during its operational phase, will only be potentially perceived from the more urban dominated landscape, broadly to the north of the study area. However, although potentially perceived, the retention of existing mature vegetation on its boundaries and set within an expansive wooded ridge, perceived above the expansive urban landscape, any influence the proposed development may have on the setting of landscape relevant designations, landscape character or views from visual amenity receptors will be minimal.
- 6.5 In addition, the restoration of the proposed development site, following completion of the works, to native woodland that will tie both visually and physically to the adjacent landscape, offering both landscape and ecological improvements, will provide beneficial effects.

## **Appendix A - References**

### **LVIA References**

*Guidelines for Landscape and Visual Impact Assessment (GLVIA), Third Edition, 2013,* The Landscape Institute and the Institute of Environmental Management and Assessment

*Advice Note 01/11: Photography and photomontage in landscape and visual impact assessment,* The Landscape Institute

*LANDMAP Methodology: Guidance for Wales: Visual and Sensory, 2013,* Natural Resources Wales

### **General LVIA Designation References**

CADW website ([www.cadw.wales.gov.uk](http://www.cadw.wales.gov.uk))

Natural Resources Wales website for Landscapes of Historic Interest in Wales information ([www.ccg.gov.uk](http://www.ccg.gov.uk))

Royal Commission on the Ancient and Historical Monuments of Wales ([www.coflein.gov.uk](http://www.coflein.gov.uk))

Historic parks and gardens ([www.parksandgardens.ac.uk](http://www.parksandgardens.ac.uk))

National Trust website ([www.nationaltrust.org.uk](http://www.nationaltrust.org.uk))

Ancient Woodland – Forestry Commission GIS dataset

### **Local Plan References**

*The Vale of Glamorgan Unitary Development Plan, 1996-2011, Adopted April 2005*

*City and County of Cardiff Local Plan, including Waste Policies, Adopted January 1996*

### **Landscape Character References**

National Landscape Character Areas for Wales ([www.ccw.gov.uk](http://www.ccw.gov.uk))

LANDMAP website ([www.landmap.ccw.gov.uk](http://www.landmap.ccw.gov.uk))

### **Visual Amenity References**

SUSTRANS website for important cyclepaths ([www.sustrans.org.uk](http://www.sustrans.org.uk))

Natural Resources Wales website for open access land information ([www.ccg.gov.uk](http://www.ccg.gov.uk))

## **Appendix B – Technical Information**

### **Introduction**

The Landscape Institute '*Advice Note 01/11: Photography and photomontage in landscape and visual impact assessment*,' was referenced for guidance on the use of the camera and photography.

### **Photographs**

Photographs included in the assessment were taken when conducting the site survey.

The photographs were taken with a Nikon D610 camera with a Nikon AF-S Nikkor 50mm f/1.8g fixed lens.

The photographs were taken with the aid of a tripod with the head fixed on a vertical and horizontal axis also incorporating a spirit level to ensure 'level' photographs.

The photographs were taken in landscape format.

The camera was positioned at 1.5m above ground level, unless otherwise specified (such as a hedge, tree or other obstruction in the view).

GPS co-ordinates and height data (AOD), using a hand-held GPS device was taken at every photographic location. A compass bearing was taken to ensure the direction of view was correct. The horizontal field of view was also recorded.

The series of overlapping photographs were taken, with each photographic frame overlapping between 30-50% and stitched together using Adobe Photoshop software to provide panoramic views.

### **Viewpoints**

A number of viewpoints from which the proposed development may be visible were selected. These were issued to the relevant Unitary Authorities for their comments.

The viewpoint photographs were taken in fine weather with good visibility in April 2015.

Each viewpoint is illustrated as an annotated panoramic photograph.

The viewpoints meet the following criteria:

- A balance of viewpoints from the main directions of view;
- Provide a representative selection of views and receptors towards the proposed development; and
- For receptors most likely to experience the greatest change of view.