Cardiff Parkway Developments Ltd

Cardiff Hendre Lakes

Environmental Statement

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ARUP

13 Landscape and Visual Assessment

13.1 Introduction

13.1.1 This chapter provides an assessment of the landscape and visual effects arising from the proposed Cardiff Hendre Lakes development (proposed development), located on the eastern edge of Cardiff. It considers the likely changes to the character, surrounding landscape, views and visual amenity as a result of the proposed development.

13.1.2 In accordance with the Guidelines for Landscape and Visual Impact Assessment (third edition) (GLVIA3), effects on landscape and visual receptors are closely related but separately assessed, the former relating specifically to characteristics of the landscape and its overall character, and the latter relating to views and the visual amenity of people.

13.1.3 This assessment is also informed by the Ecology and Heritage chapters within this ES (Chapter 7 and Chapter 10 respectively).

13.2 Key Features of proposed development

13.2.1 The full description of the proposed development is provided in Chapter 3 of this ES. Below is a description of project features which are of particular relevance to the landscape and visual assessment.

13.2.2 The project proposals are set in accordance with the “Rochdale Envelope” approach under the Planning Act 2008 (PA2008) as applicable to the Environmental Impact Assessment (EIA) process set out in The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations). This project set the degree of flexibility that would be considered appropriate in order to address uncertainties associated with applications for development at Hendre Lake, refer to Chapter 3 for full details.

13.2.3 This LVIA therefore assesses the worst case impacts which may arise from the worst case parameter (or "envelope") of building dimensions which are described in this section. The information is sufficient to enable the main or likely significant effects on landscape and visual receptors to be assessed, and mitigation measures described.

13.2.4 The site has been organised into three development zones, with different maximum building heights for each zone. The maximum floor-to-floor height is 4m. The Station Zone, southernmost of the three development zones, would have buildings up to 15 storeys which would be a maximum of 60m, with an additional 4m plant at the top (64m). The Main Area, in the centre of the site (north of the railway and Cardiff Parkway station), would have buildings up to 12 storeys in height, which would be a maximum of 48, plus the additional 4m for plant (52m). The Northern Parcels would have buildings up to 6 storeys in height a maximum

height of 20m, plus 4m for plant (24m). The proposed development will have a maximum of 90,000m2 built development. The details of the development will be the subject of Reserved Matters Application and that the assessment provides flexibility for a range of locations for tall buildings.

13.2.5 The development zones as described above have been set out to integrate with the surrounding built development of Cardiff East and St Mellons Business Park, gradually becoming taller and with increased density towards the Hub at the proposed railway station.

13.2.6 Construction of the proposed development has the potential to considerably change the existing landscape character of the Wentloog Levels, part of the wider Gwent Levels. Visual effects are also likely with the introduction of tall built form on the eastern edge of Cardiff, into an otherwise rural setting, appearing out of character to the baseline situation and resulting in visual change.

13.2.7 Across the site, changes to landscape character would occur as a result of replacing open agricultural fields with built development, including:

- **Topography –** raised development plateaux up to 1.6m above baseline AOD levels. A topographical survey shows that there is currently a maximum range of between 4.7m and 6.3m AOD, with no clear patterns of gradient across the site;
- **Land cover** – change in land cover from open agricultural land to built development;
- **Field pattern** – interruption and loss of historic field pattern;
- **Boundary features** and vegetation – loss, replacement and enhancement of hedgerows, hedgerow tree and historic boundaries;
- **Reens** – a combination of removal, replacement and enhancement of reens, integrating into the blue infrastructure;
- **Vegetation and green space** – proposed green infrastructure; and
- **Special or important landscape features** - loss or alteration to features.

13.2.8 Given the height, scale and layout of the proposed buildings, a key part of the assessment is to explore the visual relationship with the surrounding Gwent Levels and the intervisibility between the Levels, neighbouring settlements, the Wales Coastal Path and the coastline.

13.2.9 Likely landscape and visual effects of the proposed development have been considered as part of the design process with appropriate mitigation already incorporated into the proposals, including:

- Site wide green infrastructure strategy which includes areas of natural open spaces, green space, Main Park, Hendre Lake Park, wildlife corridors, green streets and Green Fingers grid, refer to the Design and Access Statement for further details on the green infrastructure strategy;

- Proposed wildlife habitat that forms part of the wider green infrastructure across the site, includes area south of the railway line to be set aside for flood, landscape and ecological mitigation;

- Reen offset areas would include the retention of existing main reens and enhancement of character and condition.

13.2.10 For further details please refer to Chapter 3 of the ES, the Design and Access Statement (DAS) and figures 1 – Illustrative Site Masterplan; 16 – Extract from topographical survey; 57 – Landscape framework; 66 summary of habitat mitigation strategy; 67 – Access routes within and into site; and 102 – Hedgerows retained, removed and proposed.

13.3 Legislation, policy context and guidance

13.3.1 Legislation, policy and guidance relevant to the Landscape and Visual Impact Assessment (LVIA) has been set out below.

Legislation

European Landscape Convention

13.3.2 The following paragraphs are quoted from Institute of Environmental Management and Assessment (IEMA) and the Landscape Institute's GLVIA3.

"*The UK has signed and ratified the European Landscape Convention (ELC) since 2002, when the last edition of this guidance was published. The recognition that government has thus given to landscape matters raises the profile of this important area and emphasises the role that landscape can play as an integrating framework for many areas of policy. The ELC is designed to achieve improved approaches to the planning, management and protection of landscapes throughout Europe and to put people at the heart of this process.*"

13.3.3 The ELC defines landscape as:

"*…an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*."

National Planning Policy

Planning Policy Wales (PPW) and Technical Advice Notes (TAN)

13.3.4 PPW, Edition 10 (Dec 2018) provides the following land use policy relevant to this assessment. Particular attention has been given to the following paragraphs:

- **PPW Paragraph 6.0.2, TAN 5 (Sept 2009) Paragraph 4.3 and TAN 12 (March 2016) Paragraph 4.8** - regarding design, layout, scale, siting, and use of materials in relation to designated and distinctive landscape and heritage assets;

- **PPW Paragraph 6.2.10** - on the importance of conserving and managing linear landscape features for wildlife; and

- **PPW Paragraphs 6.3.11 and 6.3.19 and TAN 12 (March 2016) Paragraph 4.11** - regarding the use of LANDMAP to inform assessment and decision making.

- **TAN 12 (March 2016) Paragraph 4.14** – regarding legibility in relation to views and vistas, landscape features and connectivity of the footpath network.

- **TAN 14 (March 1998) Paragraph 8** "*…any potential visual impact from both land and sea*" (8.i.d), "*the role of physical and biological processes in creating, maintaining and altering features of nature and landscape conservation value*" (8.ii.a) and "*the effects of statutory and other nature and landscape conservation policies in the coastal zone…*" (8.iii.b)

Local Planning Policy

Cardiff Local Development Plan 2006-2026 (adopted January 2016)

13.3.5 Policies relevant to this assessment include:

KP2 (H): Strategic Sites – South of St Mellons Business Park

- Strategic Sites are allocated to help meet the need for new dwellings and jobs. Land is allocated South of St Mellons Business Park, as defined on the Proposals Map, for a strategic employment site together with essential, enabling and necessary supporting infrastructure which will be delivered in a phased manner with specific details formally tied into planning consents including:

- Essential/Enabling Infrastructure:
    - Transport & Highways
    - Walking and Cycling
    - Flood mitigation / defences

- Necessary Infrastructure
    - Retention of green space
    - Compensation for any lost reens or field ditch

- The land meets the qualifying criteria for Special Landscape Area status under the LANDMAP landscape methodology.

Further Policies

- KP4 Masterplanning Approach;
- KP5 Good Quality and Sustainable Design;
- KP16 Green Infrastructure;
- KP18 Natural Resources;
- EN1 Countryside Protection;
- EN3 Landscape Protection;
- EN5 Designated Sites;
- EN8 Trees, Woodlands and Hedgerows;
- C5 Provision for Open Space, Outdoor Recreation, Children's Play and Sport; and
- T1 Walking and Cycling.

13.3.6 Relevant designations and constraints include:

- Strategic Site H: South of St Mellons Business Park;
- Protect & Enhance Special Landscape Area (Wentloog1 Levels); and
- Protect & Enhance Countryside;

NCC Local Development Plan 2011-2026 (adopted January 2015)

13.3.7 In addition to the policies covering the site, as set out by CC, there are some NCC policies which are relevant to the site and the wider landscape within the study area. These include: SP5 Countryside; SP6 Green Belt; SP7 Green Wedges; SP8 Special Landscape Areas; SP9 Conservation of the Natural, Historic and Built Environment; GP5 General Development Principles – Natural Environment; GP6 General Development Principles – Quality of Design; GP7 General Development Principles – Environmental Protection and Public Health; and CE3 Environmental Spaces and Corridors.

[1] Wentlooge is variously spelled as both Wentloog and Wentlooge. Both are technically correct, therefore when referring to a third party document this report will match the spelling used in the source document. In all other cases, the spelling of Wentlooge will be used.

Relevant guidance

13.3.8 This assessment has followed guidance set out in the following documents:

- Guidelines for Landscape and Visual Impact Assessment (GLVIA3), Third Edition, 2013) - Institute of Environmental Management and Assessment (IEMA) and Landscape Institute);
- Technical Advice Note 06/19 Visual Representation of Development Proposals, Landscape Institute (September 2019);
- Professionals Guidance Notes for the Reduction of Obtrusive Light GN01:2011, Institute of Lighting (2011);
- LANDMAP Methodology (2008); and
- LANDMAP and the Cultural Landscape (2013).

13.4 Scoping and consultation

Scoping

13.4.1 The ES Scoping Report was issued to Cardiff Council (CC) and Newport City Council (NCC) in July 2018. A joint ES Scoping Opinion was received on 25th September 2018 (Appendix A1). The responses received relevant to the LVIA are set out in Table 13.1. The full Scoping Opinion is contained in Appendix A1.

Table 13.1: Response to scoping opinion

Scoping opinion comment	Response
Ed Baker at CC.	
Hedgerows on site likely to qualify as important and therefore efforts should be made to preserve them. Landscaping developments (inc. scaled planting plans, planting schedules, planning methodology, aftercare programme and implementation programme).	The development has been sensitively designed to avoid the loss of vegetation and reens where possible. However, there will be a loss of approximately 3.1km of existing hedgerow with a replacement of approximately 4.2km, resulting in the permanent enhancement of 1.1km. Hedgerows are not specifically assessed as an individual landscape feature within the assessment, however impact on hedgerows is considered within the landscape assessment as they are key components of landscape character areas. Where removal of hedgerows impacts on visual amenity, this is addressed in the visual assessment. Hedgerows are also discussed in Chapter 7 Biodiversity (see 7.5.28 and 7.7.36) and Chapter 10 Cultural Heritage (see 10.6.15, 10.8.12, and 10.9.4, 10.10.3-4). The Design and Access Statement (DAS) states that "*Hedgerows are the main form of mature vegetation on the site, forming linear connected habitats around the boundary of fields. They are typically 10m or more in width and 5m or more in height. They are of varying quality, with most being in poor condition. The network of hedgerows is essential to creating*

	connected corridors for local wildlife, particularly dormice, alongside other European Protected Species such as bats and barn owls. Hedgerows also help to create a visual break, screening views of buildings and reducing views of the neighbouring urban area." The DAS further states: "*A significant proportion of the development will be reserved for green space. This will include that:* *• Key natural features of the site are retained and carefully integrated into the new development* *• The new planting and landscapes provide opportunities for people to appreciate nature and the changing seasons* *• Open spaces are inclusive and accessible to everyone* *• Open water and sustainable drainage are key elements in the new landscapes* *• Wildlife species and habitats are integrated into the overall landscape and open space character*." In addition, the Southern Mitigation Area, south of the railway line will be an area set aside for new habitats to compensate and mitigate for proposed changes to the field ditch and hedgerow network and other habitats to the north of the site. Refer to DAS figures 1 – Illustrative Masterplan; 57 – Landscape Framework; 66 – Summary of Habitat Mitigation Strategy; and 102 Hedgerows retained, removed and proposed.
Landscape officer at NCC. Pedestrian and cycle links to: Marshfield Cycle Route, Hendre Lakes, Wales Coast Path should be considered. Railway is currently a barrier to Wales Coast Path as such need to enhance, sign and promote existing access points.	A dedicated access strategy is proposed, please refer to DAS section 7 and figures 1 Illustrative Masterplan; 57 – Landscape Framework; and 67 Access routes within and into site.
Gill Mackley CMLI for Streetscene and City Services. 4 June 2018	
1.0 Para 2.2 'impact should be considered as part of a wider study into the Green Infrastructure of East Cardiff' This should also extend across the local authority boundary into NCC, and look to link existing and proposed residential and business areas by foot and cycle to: I. the cycle route from Marshfield II. access to Hendre Lakes III. access onto the Wales Coast Path	Please refer to the DAS for full details, Section 6.3 sets out the design approach across the site, including the natural open spaces, green space, Main Park public realm spine and wildlife corridor, retention of existing reen features such as Faendre Reen Edge, green streets, green roofs and living facades and planted car parks and figure 69 Proposed green open spaces.
2.0 A considerable body of recent landscape work has been undertaken as part of the RSPB led 'Living Levels' project funded by Heritage Lottery Fund and in which CC Council and NCC are partners. For example the 'Living Levels Green Infrastructure Strategy' by Chris Blandford Associates which may help identify cross-border opportunities.	The project design team met with representatives from Living Levels Partnership on 06/01/20 to discuss their projects and opportunities at Hendre Lakes. The Living levels website has also been a valuable resource discussed in design team meetings. There have been three meetings (21/07/2017, 15/07/2019, 29/10/2019) with Natural Resources Wales (NRW) to discuss the approach to landscape and ecological proposed for the development, as well as additional discussions on drainage/flooding and on Dormice specifically.
3.0 The railway is a barrier to access points from residential and business areas to the Wales Coast	A dedicated access strategy is proposed, please refer to DAS section 7 and figures 1 Illustrative

Path so there is a need to enhance, sign and promote the existing access points.	Masterplan; 57 – Landscape Framework; and 67 Access routes within and into site.
4.0 Adjacent planning policy in the NCC Local Development Plan includes the Wentlooge Levels Special Landscape Area and Green Belt. As part of the Green Infrastructure work the Spatial Framework should review how the 'landscape setting' of these policies can be supported by an appropriate GI response within CC.	See above for response to comment 1.0.

Consultation

13.4.2 Additional consultation with the Landscape Officers at CC was undertaken at scoping stage to agree the scope and approach of the landscape and visual assessment and the study area (see Table 13.2 for summary). As a result of the consultation, viewpoints (VPs) were added at two points on Cypress Drive and at one from the World War I Memorial within Hendre Lake Park.

Table 13.2: Response to representations from stakeholders on scope of landscape and visual assessment

Stakeholder	Comment	Response
CC : Jon Green, Ed Baker, Ian Maddox, Tim Walter	15.03.2019 Emailed LVIA viewpoints for comment. (VPs 1-8, 12-15) 15.03.2019 Include Hendre Lake park WW1 memorial in viewpoint selection. 19.03.2019 Additional viewpoint on Cypress Drive from the northern end and middle/southern end.	Hendre Lake viewpoint (VP 9) and viewpoints on Cypress Drive (VP 10 & VP 11) added.

13.5 Methodology

Study area

Extent of Visibility and Study Area

13.5.1 The assessment study area has been informed by the Zone of Theoretical Visibility (ZTV). This is based on 5m digital terrain modelling (DTM) data, to identify areas from which the proposed development would theoretically be visible. This DTM data was compiled from a combination of 2m and 5m tiles (square units of topographical data) to ensure the wider landscape area was accounted for. As the resolution of the dataset must reflect the coarsest grain of raster tiles, the resolution of the DTM data is 5m. The ZTV was generated by computer software which places virtual columns representing the maximum heights of each Development Zone within the proposed development. These columns are located in the centre and at the corners of each Development Zone. Maximum heights used are as follows:

- The Station Zone: up to a maximum of 15 storeys and a height of 60m.

- The Main Area, in the centre of the site, would have buildings up to a maximum of 12 storeys and 48m in height.
- The Northern Parcels Zone would have buildings up to 6 storeys and 20m in height.
- All buildings would have an additional 4m building plant on their roofs.

13.5.2 These heights are assumed to be the maximum parameters for the tallest elements of the proposed development. Using the ZTV supported by field work, a selection of viewpoints have been chosen for this assessment, and agreed with statutory stakeholders, all bar viewpoints 17 and 18 which were added later to represent views from the Wales Coast Path. This data is presented on Figure 13.1. Figure 13.3 includes the corresponding viewpoint photographs, and Table 13.13 sets out the value of each view.

13.5.3 The analysis does not include digital surface model (DSM) data, such as existing buildings and vegetation. In reality, these elements will provide additional screening and the ZTV therefore shows a worst-case scenario in terms of the predicted extent of visibility.

13.5.4 As a result of the analysis of visibility within the surrounding landscape, the study area was set and agreed with stakeholders at 3km from the site boundary, with a smaller, focused 1km area from the site boundary where it is likely that effects from the proposed development would be higher. The 3km study area is the distance within which it is considered that there are potentially significant landscape and visual effects from the proposed development.

Methodology for establishing baseline conditions

Desk study

13.5.5 A desk study review of possible sources of information to establish the baseline conditions of the study area has been undertaken. These include land use data and policies detailed in relevant documents and sources cited above and the additional sources listed below:

13.5.6 Existing baseline information on the study area has been sourced from:

- Field work undertaken in March, August and September 2019;
- Ordnance Survey – 1:50,000 and 1:25,000 scale maps;
- Google Earth Pro and Street View;
- Bing Maps;
- GIS designation data sets; and
- LANDMAP Visual and Sensory mapping data sets.

13.5.7 To help identify landscape and visual receptors that are likely to be affected by the proposed development, a preliminary desktop study area was based relevant policy areas and designations using a basic 3D wireframe model of the proposed development in Google Earth and Google Street View.

Receptors

13.5.8 The types of receptors included in the assessment are described below.

Landscape receptors

13.5.9 NRW's working definition of landscape is as follows:

> *"The physical reality of the environment around us, the tangible elements that give shape and diversity to our surroundings. But landscape is also the environment perceived, predominantly visually but additionally through our senses of smell, touch and hearing. Our appreciation of landscape is affected, too, by our cultural backgrounds, and by personal and professional interests. For the Countryside Council for Wales's purposes, landscape is defined as the sum of all these components"* (CCW, 2001).

13.5.10 The LANDMAP system has been developed specifically for the assessment of character in the landscape of Wales. The system was promoted by CCW and implemented in partnership with Local Planning Authorities throughout Wales. The Welsh landscape is characterised into Aspect Areas defined as:

> *"...single unique areas which are discrete geographical areas of a particular landscape type…."*

13.5.11 Aspect areas include Visual and Sensory, Cultural Landscape, Geological Landscape, Historical Landscape and Landscape Habitat.

13.5.12 LANDMAP Guidance Note 3; Guidance for Wales (Natural Resources Wales, 2013) notes that:

> *"Where no LCAs have been defined and assessors wish to use these as the primary basis for reporting, all five LANDMAP aspects should be used as a basis for deriving them… The Visual and Sensory aspect areas are normally the starting point but they should be refined by the other four aspects as appropriate and can include other information and structured site surveys."*

13.5.13 For this assessment, effects on the landscape as a resource will be assessed and reported in terms of LANDMAP visual and landscape aspects, and be further informed by the CC and NCC Landscape Character Assessments (LCAs).

13.5.14 Effects on the landscape may arise where the character of the character area is modified by the proposed development. It is important to place the application site in its context.

13.5.15 Aspects of the landscape considered in the assessment as receptors that may be affected by the proposed development include:

- Direct effects on landscape elements include physical features such as trees and hedgerows, topography, water courses, landforms, boundaries, transport corridors and recreation routes. Effects on these elements may arise where valued features are lost, gained or substantially modified as a result of the proposed development;
- Indirect effects on the aesthetic and perceptual characteristics of the landscape such as scale, texture and complexity, openness, tranquillity and remoteness; historic and cultural aspects and darkness at night;
- Indirect effects on the overall character of the LANDMAP visual and landscape aspect areas made up of the components and characteristics above; and
- Indirect effects on the character and settings of any areas designated specifically for their landscape or seascape value.

13.5.16 The loss or depletion of important landscape features can adversely affect the condition, and quality of the landscape as a resource in its own right as well as its overall character. Conversely, the addition of significant beneficial features can constitute an improvement to the landscape and its overall character.

13.5.17 LCA receptors have been determined using a combination of desktop study, information available from LANDMAP which CC use to define landscape character areas, the Gwent Levels Historic Landscape Characterisation, the Gwent Levels Landscape Character Assessment (2017) and from field work carried out by landscape architects. Historic landscape character areas are assessed in the Cultural Heritage Chapter 10 of this ES.

Visual receptors

13.5.18 Visual receptors are people at locations from which it is possible to obtain views of the site, including:

- private viewpoints represented by views from nearby publicly accessible areas, such as views from residential communities or places of work; and
- public viewpoints like roads or railway lines, Public Rights of Way (PRoW) or other footpaths in areas of open space or recreational places with public access.

13.5.19 These views may be partial or full, glimpsed or direct. Impacts on the visual amenity of a particular receptor may arise where features intrude into or obstruct views, or where there is some other qualitative change to the view.

13.5.20 Types of viewpoints that can be selected for LVIA include:

- Representative viewpoints, which represent the experience of different types of visual receptors. The majority of viewpoints are representative viewpoints;
- Specific viewpoints, chosen because they are key, promoted viewpoints within the landscape, such as VP9 which was requested by CCC to record the extent of visibility from Hedre Lake Park war memorial; and
- Illustrative viewpoints, to demonstrate a specific visual issue - none included for this assessment.

13.5.21 For this assessment, the majority of viewpoints are representative viewpoints representing, for example, views from several residential communities, a PRoW, and views available from the Wales Coast Path.

13.5.22 The visual receptors included in this assessment are described in the baseline conditions. Photographs from the viewpoints selected to represent these are mapped on a plan in Figure 13.1 and presented on the Photosheets in Figure 13.3.

13.5.23 The scope and locations of these representative viewpoints was agreed with CC in March 2019 (see Table 13.2: Response to representations from stakeholders on scope of landscape and visual assessment).

13.5.24 It is notable that there is no right in planning law to a private view. This has been accepted by various appeal decisions determined by the Planning Inspectorate. However, private views are commonly considered as receptors of visual effects in LVIA. This assessment does include the visual amenity of private residential properties as receptors. Judgements on the significance of such effects is based on the criteria provided in Appendix 1.

Assessment methodology

13.5.25 The formation of judgements regarding the significance of landscape and visual effects requires consideration of the nature of the receptors (sensitivity) and the nature of the effects on those receptors (magnitude). Below is a summary of the methodology used to assess the landscape and visual effect, including key tables which set out how the author has formed judgements on the sensitivity of receptors, likely magnitude of change/effect and how these separate judgements

are combined to form a judgement on the level of significance of each effect. The detailed methodology for the assessment of the receptors is set out in Appendix 1.

13.5.26 In accordance with GLVIA3, the sensitivity of receptors is arrived at by assessing their susceptibility to the type of change proposed and then combining this with judgement of value of the receptor.

13.5.27 Value is determined with reference to the relative important quality and condition attached to the receptor. For landscape, this references landscape character assessment key characteristics, or LANDMAP visual and sensory dataset, then confirmed during site visits. Visual value is determined if it is identified in the national planning policy or national landscape character assessment or a designed views recorded in citations for historic parks and gardens or views from historic landscape features (e.g. scheduled monuments) or if it is associated with a local designation or conservation area appraisal, or if only valued at a community level from green space or informal footpaths. Visual value is assessed as either of national, local or community value.

13.5.28 Susceptibility to change refers to the degree to which a particular receptor is able to accommodate the type of change being proposed without significant effects on its features/components, characteristics for landscape or changes in views is derived from evaluation of the expectations and occupation or activity of the viewer and the extent to which their attention may be focused on the view or their visual amenity.

Landscape and Visual Sensitivity

13.5.29 Judgements on the value of the receptor and its susceptibility to the type of change proposed will be combined to give its overall sensitivity to change and reported as either high, medium or low, as set out in Table 13.3 for landscape receptors and Table 13.4 for visual receptors, below:

Table 13.3: Sensitivity of landscape receptor

Sensitivity	Typical Criteria
High	Landscapes that are nationally or internationally designated for landscape value such as World Heritage Site, National Park, Area of Outstanding Natural Beauty (AONB), or Heritage Coast. Key characteristics of landscape are very vulnerable to change and are unable to accommodate development without significant character change; thresholds for significant change are very low. Development conflicts directly with and would dominate landscape character or the objectives of the area's management plan or reason for designation.
Medium	Highly valued local landscape designation such as AGLV or Special Landscape Area. Key characteristics of landscape are susceptible to change but with some ability to absorb development in some situations without significant character change; thresholds for significant change are intermediate.
Low	An undesignated and relatively robust landscape, possibly with some locally valued features. Key characteristics of landscape are resilient to change and are able to absorb development in many situations without significant character change; thresholds for significant change are high.

Table 13.4: Sensitivity of visual receptor

Sensitivity	Typical Criteria
High	Views from within internationally and nationally designated high-quality landscapes (National Parks, AONB Areas of Great Landscape Value), parks or gardens listed in the National Gardens Register, Grade I and II* listed buildings and their visual settings. Views from well used public rights of way often known to and used by people from beyond the local area where the attractive nature of the countryside is the main factor in the enjoyment of the experience, such as National Trails, Long Distance Routes or National Cycle Routes. Views from small communities (typically groups of 10 or so dwellings). Viewers have a medium to high susceptibility to changes in views.
Medium	Views from within medium quality non-designated but locally important landscapes, outdoor sports or recreation (where the landscape is not a significant factor in the enjoyment of the sport). Views from locally valued public rights of way often passing through rural landscapes. Views from passenger trains, or people within cars on local roads. Views from some isolated communities, which are typically smaller groups of dwellings (fewer than 10). Viewers have a low to moderate susceptibility to changes in views.
Low	Views from within medium-low quality non-designated but potentially locally valued landscapes. Views from less well used public rights of way which pass through less attractive landscapes or townscapes and are not used specifically for enjoyment of the scenery. Views from or near to motorways, main roads, or business premises. Viewers have a low susceptibility to changes in their views.

13.5.30 Further details for the value and susceptibility judgements are set out in Tables 2 and 4 for landscape receptors and Tables 9 and 10 for visual receptors of Appendix K1.

13.5.31 Judgements on magnitude of change are made by considering the nature of the effect on each receptor (magnitude) reported in terms of its size and scale, geographical extent, duration and reversibility, with criteria for each set out in Appendix K1.

Magnitude of change

13.5.32 The nature of the effect on each landscape receptor (magnitude) is reported in terms of its size and scale, geographical extent, duration and reversibility.

13.5.33 Magnitude of the change to existing landscape character and features is assessed in accordance with the criteria set out in Tables 13.5 below and is described as high, medium, low and negligible, with the criteria being applied to both positive and negative effects.

Table 13.5: Magnitude of Change to the Landscape

Magnitude	Typical Criteria
Major	The proposed development will cause either a major improvement or deterioration of one or more key elements/features/characteristics of the landscape, typically over a large area including much of a character area or possibly spanning several character areas. Introducing elements that may be considered to be largely uncharacteristic, dominant or which substantially strengthen the landscape character. Effects are likely to be long or medium term and irreversible or only partly reversible.

Magnitude	Typical Criteria
Moderate	A prominent change causing a deterioration or improvement to the characteristic elements of a landscape, resulting in a partial change to the landscape characteristics. Change would typically be to the site and its immediate setting or may influence a small part of a landscape character area. Change will normally be short to medium term and irreversible or partly reversible.
Minor	The proposed development will cause a noticeable improvement or deterioration to one or more characteristics of the landscape causing changes to the character of the landscape at a site level and/or immediate surroundings. Change will be localised and often (partially) reversible.
Negligible	The proposed development mostly fits with the existing landscape character or does not change the characteristics or perception of a very localised area. Any effects would be barely perceptible over a relatively short term and often reversible.

13.5.34 Magnitude of the change to views and visual amenity is assessed in accordance with the criteria set out in Table 13.6 and is described as high, medium, low or negligible. These criteria can be applied to both positive and negative impacts.

13.5.35 The magnitude of change to visual amenity is assessed using the criteria given below at Table 13.6.

Table 13.6: Magnitude of Visual Change

Visual Impact Magnitude	Typical Criteria
Major	The proposed development will contrast with or largely alter key features or characteristics of the views, resulting in a dominant improvement or deterioration of the view. These changes to often open and direct views may be medium or long-term and are likely to be irreversible or only partly reversible. New elements will occupy a large proportion of the view.
Moderate	The proposed development will be visually prominent within the view and will result in either a noticeable improvement or deterioration of the view. The change will be moderate in scale, contrast with the view and be medium term permanent, sometimes irreversible, or partly reversible.
Minor (noticeable)	Minor, often temporary and reversible alterations to the view that are small in scale or do not overtly contrast with the key features or characteristics of the view, such that post-development the existing view will be largely unchanged despite discernible or noticeable differences.
Negligible (barely perceptible change)	Minimal alteration to the features or characteristics of the existing view such that post-development there will be barely discernible changes, or no change to the view.

13.5.36 Judgements on magnitude of change consider all the proposal associated with the development including embedded mitigation. Therefore, residual effects will not be further mitigated and reassessed.

13.5.37 Judgements on sensitivity and magnitude of change are then combined to give an overall assessment of level of the effect (large, moderate, slight or negligible/neutral) and their direction of effect stated (adverse or beneficial).

13.5.38 For this assessment, any effect assessed as having a level of moderate or greater is considered to be significant. Any effect assessed to have a level of effect less than moderate is considered not to be significant.

Table 13.7: Level of landscape effect

Level of effect	Definition
Large	These effects are generally, but not exclusively, associated with sites or features of international or national importance that are likely to experience dominant detrimental or beneficial changes of medium to high magnitude leading to long-term irreversible loss or enhancement of resource integrity. However, a high magnitude of change to a site or feature of local importance may also enter this category. The proposed development will cause substantial degradation or enhancement of the landscape characteristics or features. These effects are key factors in the decision-making process.
Moderate	These effects are generally, but not exclusively, associated with sites or features of regional or local importance that are likely to experience detrimental or beneficial changes of moderate magnitude, often leading to irreversible or partially reversible long- or medium-term loss or enhancement of resource integrity. The proposed development will cause noticeable degradation or enhancement of the landscape characteristics or elements. These effects are material factors in the decision-making process. These effects are important in influencing the subsequent design of the project.
Slight	The proposed development will cause perceivable degradation or enhancements of low to medium magnitude to landscape characteristics or elements of local importance. These adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process but are used in optimising the design of the project.
Negligible / Neutral	The proposed development will cause barely perceptible degradation or enhancement of the landscape characteristics or elements. Beneficial and adverse effects on the same receptor balance each other out, such that there is no overall beneficial or adverse effect.

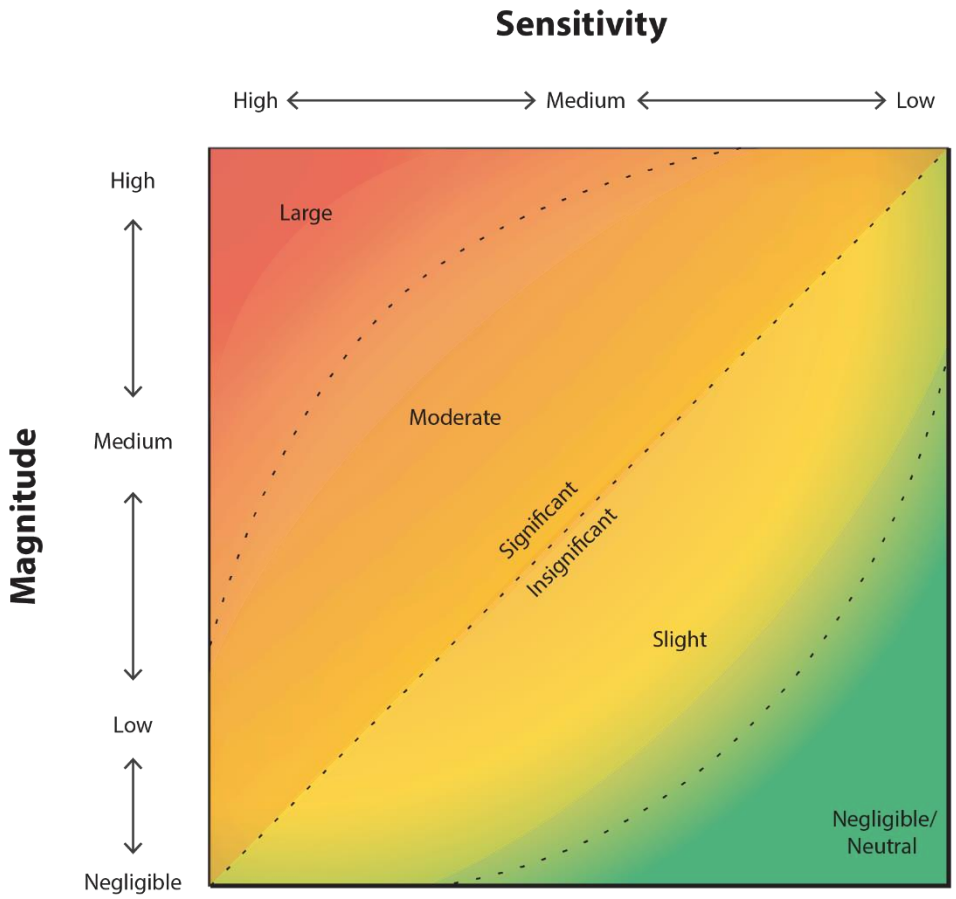
Table 13.8: Level of visual effect

Level of effect	Definition
Large	These effects are generally, but not exclusively, associated with views of international or national importance that are likely to receive dominant detrimental or beneficial changes of high magnitude, leading to long term irreversible loss or enhancement of resource integrity. However, a high magnitude of change to a view or important visual feature of local importance may also enter this category. The proposed development will cause substantial degradation or enhancement of the existing view. These effects are key factors in the decision-making process.
Moderate	These effects are generally, but not exclusively, associated with views of regional or local importance that are likely to receive detrimental or beneficial changes of moderate magnitude. This often leads to irreversible, or partially reversible long- or medium-term loss or enhancement of resource integrity. The proposed development will cause noticeable degradation or enhancement of the view or key elements within the view. These effects are material factors in the decision-making process. These effects are important in influencing the subsequent design of the project.
Slight	The proposed development will cause degradation or enhancements of low magnitude to views of local importance. These adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process but are used in optimising the design of the project.
Negligible / Neutral	The proposed development will cause barely perceptible degradation or enhancement of the view. Beneficial and adverse effects on the same receptor balance each other out, such that there is no overall beneficial or adverse effect.

Statement of Significance

13.5.39 The significance of impacts is assessed using the appropriate national and international quality standards and professional judgement. For clarity and transparency, criteria have been used to attribute levels of significance. Broadly, significance is a function of the magnitude of the impact and the sensitivity of receptors. The reversibility and duration of the effect are also important considerations.

13.5.40 For each assessment factor the sensitivity of the effect is combined with magnitude to give an overall score for the significance of the impact as set out in the diagram below. The area highlighted in orange or red identifies effects assessed as having a level of moderate or greater which are considered to be significant and should be taken into consideration of any planning decision. The yellow and green area identifies effects assessed to have a level of slight or less which are not considered to be significant.



Matrix Diagram used as guidance in combining judgements on sensitivity and magnitude of change to determine the significance of Landscape and Visual Effects.

Temporal Scope

13.5.41 The landscape and visual effects of the proposed development would vary through time. The assessment therefore considers the effects on landscape character and visual amenity arising over the life of the project, through its construction and operation.

13.5.42 It is important to distinguish between temporary and permanent landscape and visual effects from construction and set out how these are reported in the assessment. The assessment of construction landscape and visual effects only identifies and assesses effects that are unique to the construction phase. The effects from the construction phase are temporary, short term and on the whole reversible.

13.5.43 Vegetation loss, is a direct, permanent and irreversible effect and is assumed to occur at the start of the construction phase. Direct changes to the character of the landscape and on views as a result of the physical loss of vegetation and other landscape elements would occur throughout the construction and operation of the project. However, in order to avoid double counting of effects, the resulting permanent effects on receptors is reported only once as part of the operational effects assessment.

13.5.44 Landscape and visual effects as a result of the works, such as the disruption caused by large items of construction plant used during site clearance (such as excavators and cranes) are assessed as part of the construction phase. The assessment of construction effects does take into account increased visibility of construction activities arising indirectly as a result of vegetation loss. The effect of this increased visibility is accounted for in the assessment of construction phase effects.

13.5.45 Another example is proposed landforms, which are permanent features of the operational phase. Landscape and visual effects arising from their presence are assessed and reported under operational effects. The temporary earthworks required to form them, including excavation, aggregate and earth movements, and stock piling during the works are assessed as construction effects in this section.

13.5.46 As the proposed development is built throughout the construction phase over 8 years, permanent effects would increasingly become part of the landscape and views. These effects are assessed as part of the operational phase in Section 1.12, below. They include, for example, permanent removal of trees or hedgerows, introduction of permanent earthworks and the presence of the proposed built elements, such as the railway station and access roads.

13.5.47 The summer photographic survey work was undertaken during August and September 2019 at a time of year when the deciduous trees were in leaf and the screening effect of vegetation is most effective. Visibility across the landscape is greater in winter and this is captured in the winter photographic survey undertaken

in January 2020. Allowance for variability in visibility has been included within the assessments of visual effects throughout the year.

Photography and imaging

13.5.48 The photographic surveys were carried out by qualified landscape architects experienced with the methods and best practice required to produce verifiable photographs to be used in LVIA and visual representations, to the Landscape Institute TGN 06/19.

13.5.49 Photographs illustrating views from each viewpoint were taken with a full frame Nikon D610 digital camera using a fixed lens with a 50 mm focal length. Each frame was taken in portrait format, and a full 360 degrees has been taken and stitched together using the 'Rotating Motion' and 'Cylindrical Projection' settings in Microsoft Image Composite Editor software, which the horizontal field of view of 90 degrees was then calculated by cropping the 360 stitch to a fourth of its size.

13.5.50 The wide panoramic views are intended to give an understanding of the visual context. Theoretically, when printed at the correct size on an un-scaled A1 page and viewed at a comfortable arm's length, the photographs closely represent the view experienced from each viewpoint by the viewer's naked eye. However, in practice it is difficult to view the photographs at the exact viewing distance.

13.5.51 The photographs provide a tool for assessment that can be compared with an actual view in the field; they should never be considered as a substitute to visiting a viewpoint in the field.

Visualisations

13.5.52 The method for preparing photomontages accords with the guidance contained in the Landscape Institute TGN 06/19 (Visual Representation of Development Proposals).

13.5.53 A three-dimensional (3D) model of the proposed development is built in computer aided design software (CAD). The camera positions and surveyed reference points are also modelled in CAD. The virtual camera is located at equivalent co-ordinates and height, and with the same 'lens', orientation and projection settings as used in the photograph at each viewpoint. The virtual 'reference points' such as built form and boundary features (for which the actual heights and co-ordinates are known from site survey work) are placed in the model.

13.5.54 Virtual images of the model are taken or 'rendered' with virtual cameras in the 3D CAD software in positions equivalent to the locations from which the actual photographs were taken at each representative viewpoint. Each virtual view is rendered twice; once with associated reference points and another without.

13.5.55 The virtual photograph of the model is matched to the equivalent baseline photograph from the representative viewpoint, with particular emphasis on ensuring the correct alignment of the 'reference points' to align the model correctly in the image. Once the alignment is made using Adobe Photoshop

software, the virtual photograph of the model is superimposed onto the photograph. The parts of the model that would be masked by intervening land, trees, buildings or other structures has been removed, so that the visualisation only shows parts of the model that would in reality be visible.

13.5.56 Presentation of photomontages includes a baseline photograph displayed above the relevant photomontages for 18 viewpoints, as agreed through consultation with CC in March 2019 (see Table 13.2: Response to representations from stakeholders on scope of landscape and visual assessment). Viewpoint OS grid coordinates and viewpoint height above ordnance datum (AOD) are noted on the photomontage figure. Additional information on the photomontage figure (or elsewhere in this chapter including the Section above on Photography and Imaging) includes details of the camera, the lens focal length, the horizontal field of view, the orientation of the view, and the distance of the viewpoint.

13.6 Significance Criteria

13.6.1 The LVIA uses the significance criteria as set out below in Table 13.9, which follows the guidelines set out in GLIVA3. Significance of effect are identified as either neutral/negligible, slight, moderate or large, with large and moderate effects judged to be significant, any effect assessed to have a level of effect less than moderate is judged not significant.

Table 13.9: Level of effect

Level of effect	Definition
Large	These effects are generally, but not exclusively, associated with views of international or national importance that are likely to receive dominant detrimental or beneficial changes of high magnitude, leading to long term irreversible loss or enhancement of resource integrity. However, a high magnitude of change to a view or important visual feature of local importance may also enter this category. The proposed development will cause substantial degradation or enhancement of the existing view. These effects are key factors in the decision-making process.
Moderate	These effects are generally, but not exclusively, associated with views of regional or local importance that are likely to receive detrimental or beneficial changes of moderate magnitude. This often leads to irreversible, or partially reversible long- or medium-term loss or enhancement of resource integrity. The proposed development will cause noticeable degradation or enhancement of the view or key elements within the view. These effects are material factors in the decision-making process. These effects are important in influencing the subsequent design of the project.
Slight	The proposed development will cause degradation or enhancements of low magnitude to views of local importance. These adverse effects may be raised as local factors. They are unlikely to be critical in the decision-making process but are used in optimising the design of the project.
Negligible / Neutral	The proposed development will cause barely perceptible degradation or enhancement of the view. Beneficial and adverse effects on the same receptor balance each other out, such that there is no overall beneficial or adverse effect.

13.7 Limitations and assumptions

Limitations

13.7.1 Details of the proposed development will be submitted as an Outline Planning Application, with some caveats where details of the proposal are limited or not fully understood at this stage, as set out in Chapter 3 under the Rochdale Envelope approach. However, all judgements within the assessment have been based on a maximum parameters to ensure that the 'worst-case scenario' has been assessed, within the Rochdale Envelope. Due to following this conservative approach, the level of effect is likely to be lower than assessed.

13.7.2 The ZTV shows the theoretical visibility of outline blocks for each of the development zones, extruded to the maximum height parameters. It does not take account of building form, scale, massing or layout. It also does not indicate visibility of any other proposed feature such as roads, the railway lines or platform, the car park or vegetation.

Assumptions

13.7.3 The ZTV assumes the proposed raised development platforms will be a consistent level across the whole site at approximately 1.6m above existing baseline height. From this level, the development zones were extruded to their maximum proposed height.

13.7.4 For the future assessment scenario of the operation phase year 15, consideration has been given to the likely height of proposed mitigation planting. Published information on annual tree and shrub growth is not consistent with stated growth heights varying greatly between species and depends on favourable planting conditions and appropriate maintenance practices being followed.

13.7.5 This assessment estimates healthy tree and shrub growth to be between approximately 0.3-0.5m per year. To achieve a suitable height of vegetation screening of between approximately 9.2m – 12m at year 15, a mix of mature and immature tree and shrub planting should be implemented with mature trees planted at 5m tall and whips or transplants at 0.6m – 0.8m high.

13.8 Baseline Environment

Landscape Baseline

13.8.1 The following paragraphs and tables describe the LANDMAP aspect areas and designated landscapes. Refer to Figure 13.2 for a plan showing the LANDMAP visual and landscape aspect areas.

13.8.2 The proposed development includes aspects which are located within or in close proximity to the following landscape receptors:

- NCLA 34: Gwent Levels; and
- NLCA 35: Cardiff, Barry and Newport.

13.8.3 The LVIA baseline summarises and highlights the key characteristics as set out in the relevant character assessments or LANDMAP aspect areas located within the study area.

NLCA 34 Gwent Levels

13.8.4 This description of the NLCA is included for context. The assessment of landscape character is carried out at a local scale in a proportional level of detail, as set out below.

13.8.5 Key relevant characteristics taken from NRW's published national landscape character assessment and confirmed by field work are:

- **"*Alluvium*** *– former marsh and inter-tidal areas from the Severn Estuary. Triassic mudstones beneath.*
- ***Reclaimed landscape*** *– drained, improved, enclosed, historical, agricultural landscape.*
- ***Divided by the Usk estuary*** *– into two distinct parts: the Wentlooge levels to the west and the Caldicot Level to the east. Collectively they occupy all the coastal levels between Cardiff and the England border by the Severn crossings. The Wye also flows out across the eastern end of this area.*
- ***Reens and willows or hedgerows*** *- a network of straight drainage ditches known as reens, acting also as field boundaries; still very extensive patterns but there are only remnant lines of willows on their banks. Hedgerows with less regular field shapes are on the slightly higher ground, reflecting different phases of reclamation and enclosure.*
- ***Fertile soils and agriculture*** *- supporting a variety of crops including cereal, sheep grazing, dairying, lowland beef production and equestrian husbandry.*

- ***Wet pasture*** *- one of the largest areas of reclaimed wet pasture in Britain. The reens support rare aquatic plants are home to a diverse range of invertebrates.*

- ***Archeologically important*** *- one of the finest examples of a 'hand crafted' landscape, it is on the Register of Landscape of Outstanding Historic Interest. Some of the drainage and reclamation works still present in today's landscape date from the Roman period, while buried under the alluvium are archaeological deposits of immense potential and spanning the prehistoric to Medieval periods.*

- ***Comparatively little settlement*** *- away from the urban fringes, the Levels have comparatively little settlement, with small nucleated and ribbon settlements linked by narrow roads.*

- ***Open views between hills in Wales and England*** *– an exposed landscape in places with long views to surrounding areas and (from only areas with slight elevation) to the Severn Estuary and Bristol Channel.*

- ***Major developments on fringes*** *– Llanwern Steelworks, a power station and pylons stand out in the flat landscape, while disproportionately large modern factory units outside Newport are also visible for long distances, and main motorways and rail lines are heard. Suburban development has enlarged settlements and urban development has spread from the adjacent Cardiff and Newport areas*." [NLCA34 Gwent Levels, pages 2 and 3)

13.8.6 The 3km study area is primarily made up of the Wentlooge Levels, a composite part of the larger Gwent Levels. This is largely comprised of reclaimed grazing marsh, delineated by channels, known as 'reens', which have the dual purpose of draining the land and acting as stock boundaries. The reens are commonly lined with hedgerows and hedgerow trees and form a patchwork of relatively enclosed fields. Settlement within the Levels is sparse and tense to coalesce in linear settlements, such as Peterstone. The Levels are bisected by the Cardiff – London rail corridor, and edged by the M4/A48 road corridor further north.

13.8.7 The Wentlooge Levels are flanked by the settlements of Newport to the northeast, and of Cardiff and St Mellons to the southeast. To the north, the land rises into the Caerphilly Ridge. Of particular note are the peaks of (from west to east) Craig Llysfaen, Craig Ruperra, Coed Mawr, and Maes Arthur.

13.8.8 To the south and southwest, lie the Severn Estuary and the Somerset Coast beyond. The exposed tidal mudflats and salt marshes of the Estuary with its high tidal range have valued views inland to Wales, across the Estuary itself, and to the English coastline.

NLCA 35: Cardiff, Barry, and Newport

13.8.9 Key relevant characteristics taken from NRW's published national landscape character assessment and confirmed by field work are:

- *"**Busy, heavily urbanised areas** - containing Cardiff, and other large settlements including Penarth and Barry to the south to the west and the city of Newport and new town of Cwmbran to the east.*

- ***Cardiff** – capital city, largest urban area and principle administrative centre for Wales. The Romans established a settlement at Cardiff, remains visible in Cardiff Castle. Mid C19th growth as the most important port in the world for coal export. Cardiff Bay has since regenerated as a secondary focus in the city. The urban form of Cardiff expands across much of the surrounding landscape.*

- ***Urban fringe / peri-urban areas – for example land between Penarth and Barry, which contains linear settlement linked by rural roads but has an urban fringe character in parts.*

- ***Green belt with lush fieldscapes and woodlands** - rural pastures and woodlands provide a contrasting peaceful, providing a green setting. Cardiff has the only green belt in Wales. Medium sized fields are mainly enclosed by hedgerows with frequent hedgerow trees.*

- ***The M4 motorway** - forms a noisy, busy corridor between and bypassing the two cities, together with the main railway.*

- ***Lowland river corridors** - Rivers Taff and Ely drain into Cardiff Bay and the tidal River Rhymney runs through east Cardiff; the tidal River Usk forms the focus of Newport with the River Ebbw meandering to the south east."*

Local Landscape Character Areas/LANDMAP Aspect Areas

13.8.10 This assessment uses LANDMAP which covers the whole study area. All five aspect areas within LANDMAP are used to define the local landscape character, however only the visual and sensory aspect has been used to name the local landscape character area. There are 11 local visual and landscape aspect areas as detailed on LANDMAP.

13.8.11 The study area is partially covered by a 2008 Landscape Character Assessment review, undertaken by TACP Consultants on behalf of CC, which characterises the landscape of the area. There is some overlap between the CC character assessment and the LANDMAP local landscape character areas, however this is at a coarser grain than LANDMAP and does not include the whole area, therefore

LANDMAP is given hierarchical importance above the CC character assessment landscape areas.

13.8.12 In order to keep the assessment proportionate, only character areas/aspect areas which would receive direct effect or indirect effect to their key elements or qualities, on their settings have been scoped in and will form the basis of the assessment. These include:

Table 13.10: Character Area or Aspect Area scoped into the landscape assessment

Local Landscape/Aspect Area	Reason for scoped in
LANDMAP Estuary Saltmarsh	The proposed development is sited within this character area or would be directly affected, or there is clear and prominent intervisibility with the site.
LANDMAP Hendre Lake Park	The proposed development is sited within this character area or would be directly affected, or there is clear and prominent intervisibility with the site.
LANDMAP Wentlooge Level	The proposed development is sited within this character area or would be directly affected, or there is clear and prominent intervisibility with the site.
LANDMAP Wentlooge Levels North West	The proposed development is sited within this character area or would be directly affected, or there is clear and prominent intervisibility with the site.
LANDMAP Wentlooge Levels South West	The proposed development is sited within this character area or would be directly affected, or there is clear and prominent intervisibility with the site.

13.8.13 The following character area has been scoped out based on its geographical overlap and shared landscape features and characteristics. This will reduce duplication or double counting as part of the assessment.

Table 13.11: Character Area or Aspect Area scoped out of the landscape assessment

Character Area/Aspect Area	Reason for scoped out
LCA 10 – Wentloog Levels	Key landscape features and characteristics are covered within the following LANDMAP areas: Cardiff East, Hendre Lake Park, Wentloog Levels North West, and Wentloog Levels South West

13.8.14 The following character areas have been scoped out on the basis that they would not receive any significant direct or indirect effects to their key elements or qualities, or to their settings.

Table 13.12: Character Area or Aspect Area scoped out of the landscape assessment

Character Area/Aspect Area	Reason for scoped out
LANDMAP Cardiff East	The proposed development is not sited within this character area and would not be directly or indirectly affected.
LANDMAP Castleton	The proposed development is not sited within this character area and would not be directly or indirectly affected, and there is no visual connection.
LANDMAP Castleton Environs	The proposed development is not sited within this character area and would not be directly or indirectly affected.
LANDMAP Estuary Mudflats	The proposed development is not sited within this character area and would not be directly or indirectly affected, and there is no visual connection.
LANDMAP Marshfield	The proposed development is not sited within this character area and would not be directly or indirectly affected.
LANDMAP Michaelston-y-Fedw	The proposed development is not sited within this character area. Only a very limited area is publicly accessible from which there is no visual connection.
LANDMAP Nash Wetlands	The proposed development is not sited within this character area and would not be directly or indirectly affected.

LANDMAP Pwll Coch Ridge	The proposed development is not sited within this character area and would not be directly or indirectly affected.
LANDMAP Rumney Great Wharf	The proposed development is not sited within this character area and would not be directly or indirectly affected, and there is no visual connection.
LANDMAP Rhymney Valley Floor Urban Fringe	The proposed development is not sited within this character area and would not be directly or indirectly affected.
LANDMAP Severn Estuary	The proposed development is not sited within this character area and would not be directly or indirectly affected, and there is no visual connection.
LANDMAP St Mellons Golf Course	The proposed development is not sited within this character area and would not be directly or indirectly affected, and there is no visual connection.
LANDMAP Wentlooge Levels SLA	The proposed development is not sited within this character area and would not be directly or indirectly affected, and there is no visual connection.

LANDMAP Estuary Saltmarsh

13.8.15 The narrow area of saltmarsh is criss-crossed with water channels bordering the Severn estuary. The linear areas are very exposed, submerged at high tide. The area is generally inaccessible. Outstanding views across the Severn estuary exist.

13.8.16 Viewpoints 5, 6 and 7 are on the boundary of this aspect area.

13.8.17 **Table 13.13** describes the relevant LANDMAP aspect areas and their attributed values.

Table 13.13: Landscape Character Summary of Estuary Salt Marsh

Aspect	Aspect Area No.	Value
Geological Landscapes	This narrow, linear character area has three geological landscape aspect areas within. NWPRTGL036 (Peterstone Great Wharf) moderate value, fair condition. System constrained by seawall. Area of saltmarsh, the most significant in Newport, mainly above Mean High Water level. NWPRTGL035 (Wentlooge saltmarsh) moderate value, fair condition. Narrow fringe of saltmarsh on seaward side of seawall surrounding Wentlooge levels. No notable sites or landforms and forms small part of a larger feature. NWPRTGL032 (Goldcliff saltmarsh) moderate value, fair condition. No notable sites/ landforms recorded, small area. Narrow fringe of surviving saltmarsh seasward of swawall marking the limits of Caldicot Levels.	Moderate
Landscape Habitats	NWPRTLH053 (no name) outstanding value, good condition. The Severn estuary. Important for wintering wildfowl and waders, providing undisturbed refuge. Internationally important.	Outstanding
Visual and Sensory	NWPRTVS006 (Estuary Saltmarsh) high value, fair condition. A semi-natural edge landscape-seascape with a strong sense of place with attractive views across the Severn estuary.	High
Historic Landscapes	NWORTHL017 (Nash/ Goldcliff coastal zone). outstanding value, condition unassessed. Area south of Newport with nucleated settlements. “A complex diverse irregular landscape characterised by a well-preserved network of small irregular fields, sinuous lanes, large commons. Abundance of intertidal archaeology dating back to prehistoric period.	Outstanding
Cultural Landscapes	NWPRTCL004 (Gwent Levels) outstanding value, poor condition. Unique to Britain multi-period evolved historic reclaimed landscape of exceptional integrity dating back to Roman era. Now compromised by development and poorly managed. NWPRTCL006 (Newport Wetlands Reserve) outstanding value, fair condition. Example of deliberate environmental and social engineering. Regional recognition.	Outstanding

(The reference numbers in the table refer to the discrete aspect areas identified)

13.8.18 All separate LANDMAP aspect areas value judgements are combined, the average value of Estuary Saltmarsh is assessed in section 13.13 Assessment of construction effects.

LANDMAP Hendre Lake Park

13.8.19 Hendre Lake Park is a well-used informal park to the south of St Mellons with a small fishing lake surrounded by paths and grassland with ruderal species. The mainline railway to the south reduces the tranquillity of the area. The rail freight depot is visible to the south of the railway, but generally the park is enclosed from wider views by the flatness of the landform and intervening vegetation.

13.8.20 Viewpoint 9 is from within this aspect area, and viewpoint 8 is on the boundary of this aspect area.

13.8.21 Table 13.8 describes the relevant LANDMAP aspect areas and their attributed values.

Table 13.14: Landscape Character Summary of Hendre Lake Park

Aspect	Aspect Area No.	Value
Geological Landscapes	CRDFFGL002 (Pilldu) moderate value, fair condition. “Inland part of reclaimed marshland of Severn terrace, Wentlooge Levels.”	Moderate
Landscape Habitats	CRDFFLH008 (Wentlooge levels south of St Mellons) outstanding value, condition unassessed. SSSI and local wildlife site. Ditches that form the Levels are home to many rare species, unique habitat as hedgerow is not present in similar habitat areas elsewhere in the UK.	Outstanding
Visual and Sensory	CRDFFVS057 (Hendre Lake Park) moderate value, fair condition. Informal park built to accommodate needs of new housing development of St Mellons, on the edge of the distinctive flat levels landscape.	Moderate
Historic Landscapes	CRDFFHL010 (Northwest Wentloog Level) high value, condition unassessed. Well preserved regular fieldscape of late medieval date, small rectangular fields defined by reens and hedges. Characterised by an almost complete lack of settlement activity, with moderate intrusion of industrial and urban development to the west and north.	High
Cultural Landscapes	CRDFFCL004 (Wentlooge and Gwent Levels) outstanding value, poor condition. Internationally recognised historic reclaimed landscape although deteriorating through encroachment and lack of management of the reens. The Wentlooge and Gwent levels represent an evolved landscape of exceptional integrity with rich archaeological evidence of Bronze Age settlement. Is a Registered Historic Landscape of Outstanding Historic Interest and SSSI.	Outstanding

13.8.22 All separate LANDMAP aspect areas value judgements are combined, the average value of Hendre Lake Park is assessed in section 13.13 Assessment of construction effects.

Wentlooge Level

13.8.23 The Wentlooge Levels SSSI is an extensive flat landscape and is large in scale, primarily pastoral with few arable fields. The distinctive rectangular fields are enclosed by dense overgrown hedges and willows and all bounded by reens and ditches of varying sizes. These have strong reed and other marginal vegetation which contributes to the lowland character. The settlement pattern focuses on a few minor roads which cross the area., with linear development such as Peterstone Wentlooge. The Wentlooge Levels are very tranquil away from the roads, the railway is an occasional source of noise. There are few rights of way and relatively few accesses to the flood embankment making the area mostly

inaccessible. The 5m tall flood embankment to the south limits further views to the Severn estuary.

13.8.24 Viewpoints 3, 4 and 13 are from within this aspect area, and viewpoints 2, 5, 6, 7, 14 and 15 are on the boundary of this aspect area.

13.8.25 Table 13.9 describes the relevant LANDMAP aspect areas and their attributed values.

Table 13.15: Landscape Character Summary of Wentlooge Level

Aspect	Aspect Area No.	Value
Geological Landscapes	NWPRTGL034 (Wentlooge Level) high value, fair condition. This area is a section of the broad coastal plain which dominates southern Newport and includes Caldicot Levels, which record former coastline processes. RIGS potential status.	High
Landscape Habitats	NWPRTLH057 (no name) outstanding value, condition unassessed. The area is part of the Gwent Levels, one of the most extensive areas of reclaimed wet pasture in the UK. A species rich area due to the variety of reen types and their varying levels of management. A number of nationally rare plat species and invertebrates are recorded within this area. 91% of the area falls within some or multiple RAMSAR sites, SAC, SPA, SSSI and a local wildlife site.	Outstanding
Visual and Sensory	NWPRTVS001 (Wentlooge Level) high value, fair condition. This encompasses the Wentlooge Levels in the Newport county boundary. A rare, distinctive landscape of rectangular pastoral fields bounded by reens, with hedges and willows provide a strong sense of place. Some detractors and instances of degradation of the landscape reduce this area's value from outstanding, such as urban fringe uses and the presence of Japanese knotweed.	High
Historic Landscapes	NWPRTHL021 (Wentlooge Level) outstanding value, condition unassessed. Part of the greater reclaimed landscape of the Gwent levels. An extremely well preserved visually coherent regular landscape, the result of several phases of wetland reclamation during the Roman and medieval periods.	Outstanding
Cultural Landscapes	NWPRTCL026 (Newport Hinterland) high value, fair condition. Just short of 'Outstanding' value due to erosion of historic cultural features. Large aspect area stretching from Cardiff to Newport. Contains eclectic mix of cultural attributes with considerable cultural importance such as Roman Fortress town of Caerleon, Penhow and Pencoed Castles on the edge of Wentwood, the Gwent and Wentlooge levels. Motorways and major highways and railways dominate the central part of this landscape. NWPRTCL004 (Gwent Levels) outstanding value, poor condition. Unique to Britain multi-period evolved historic reclaimed landscpe of exceptional integrity dating back to Roman era. Now compromised by development and poorly managed. NWPRTCL002 (Cardiff-London Railway) outstanding value, good condition. The Cardiff to London railway is an important passenger and freight transport link to England. A 19th Century product of the industrial age that requires fast and efficient transport for goods and passengers that still performs that original function.	Outstanding

13.8.26 All separate LANDMAP aspect areas value judgements are combined, the average value of Wentlooge level is assessed in section 13.13 Assessment of construction effects.

LANDMAP Wentlooge Levels North West

13.8.27 The Wentlooge Levels is an extensive flat landscape and is large in scale, primarily pastoral with few arable fields. The distinctive rectangular fields are enclosed by hedges, occasional mature willow trees and are predominantly bounded by reens and ditches of varying sizes. These have strong reed and other

marginal vegetation which contributes to the lowland character. There is no settlement within the aspect area and opportunities for access are restricted to one public right of way through the area, and perimeter roads on the border of the aspect area, which define the boundary of the settlement of St Mellons to the west, and St Mellon's business park to the north. The Great Western railway crosses the south of the aspect area east to west. The lack of access and development contribute towards high levels of tranquillity which are periodically lowered by the presence of passing trains.

13.8.28 Viewpoint 1 is from within this aspect area, and viewpoints 2, 10, 11 and 12 are on the boundary of this aspect area.

13.8.29 Table 13.16 describes the relevant LANDMAP aspect areas and their attributed values.

Table 13.16: Landscape Character Summary of Wentlooge Levels North West

Aspect	Aspect Area No.	Value
Geological Landscapes	CRDFFGL002 (Pilldu) moderate value, fair condition. "Inland part of reclaimed marshland of Severn terrace, Wentlooge Levels."	Moderate
Landscape Habitats	CRDFFLH008 (Wentlooge levels south of St Mellons) outstanding value, condition unassessed. SSSI and local wildlife site. Ditches that form the Levels are home to many rare species, unique habitat as hedgerow is not present in similar habitat areas elsewhere in the UK.	Outstanding
Visual and Sensory	CRDFFVS029 (Wentlooge Levels north west) high value, poor condition. The area encompasses the Wentlooge Levels in the Cardiff country boundary. A rare, distinctive landscape of rectangular pastoral fields bounded by reens, with hedges and willows provide a strong sense of place. Difficult to access with few usable footpaths lends to an isolated and remote atmosphere. Some detractors and instances of degradation of the landscape reduce this area's value from outstanding, such as urban fringe uses (fly tipping) and the presence of Japanese knotweed.	High
Historic Landscapes	CRDFFHL010 (Northwest Wentloog Level) high value, condition unassessed. Well preserved regular fieldscape of late medieval date, small rectangular fields defined by reens and hedges. Characterised by an almost complete lack of settlement activity, with moderate intrusion of industrial and urban development to the west and north.	High
Cultural Landscapes	NWPRTCL002 (Cardiff-London Railway) outstanding value, good condition. The Cardiff to London railway is an important passenger and freight transport link to England. A 19th Century product of the industrial age that requires fast and efficient transport for goods and passengers that still performs that original function. CRDFFCL004 (Wentlooge and Gwent Levels) outstanding value, poor condition. Internationally recognised historic reclaimed landscape although deteriorating through encroachment and lack of management of the reens. The Wentlooge and Gwent levels represent an evolved landscape of exceptional integrity with rich archaeological evidence of Bronze Age settlement. Is a Registered Historic Landscape of Outstanding Historic Interest and SSSI. CRDFFCL015 (Rhymney Valley Corridor) low value, poor condition. The landscape is severely compromised by urban fringe influences and changes in farming practices and was previously a coherent landscape. The important green corridor provides a link between urban Cardiff and rural areas north of the M4.	High

13.8.30 All separate LANDMAP aspect areas value judgements are combined, the average value of Wentlooge Levels North West is assessed in section 13.13 Assessment of construction effects.

LANDMAP Wentlooge Levels South West

13.8.31 Description: The Wentlooge Levels South West aspect area is a distinctive flat area to the east of the river Rhymney encompassing the urban footprint of east

Cardiff and the levels to the south within the Cardiff county boundary. The LANDMAP's assessment describes the non-urban areas. Landcover consists of small pastures close to the coast to larger arable fields to the north where boundaries have been removed, these fields are bounded by reens and ditches of varying sizes and include hedgerows and mature trees which provide a sense of enclosure. Development has encroached on the levels to the north, and associated traffic reduces the tranquillity of the area. Urban fringe activity and associated preventative bunds and inaccessibility due to limited footpaths give it a marginal and unwelcome feel. The freight terminal that encompasses a large area to the east side of the non-urban area further reduces tranquillity levels through constant activity and flood lighting. Including the urban areas, landcover includes mostly residential areas interspersed with supporting services to the north, and a prevalence of business parks to the south and east, and industry to the south in proximity to the railway and waterfront.

13.8.32 Viewpoints 8, 9, 11 and 12 are on the boundary of this aspect area.

13.8.33 Table 13.17 describes the relevant LANDMAP aspect areas and their attributed values.

Table 13.17: Landscape Character Summary of Wentlooge Levels South West

Aspect	Aspect Area No.	Value
Geological Landscapes	CRDFFGL001 (Newton) high value, fair condition. The large aspect area covers Cardiff and levels and estuary to the east of the Rhymney River. Includes the Gwent Levels SSSI. The Severn wetland terrace is a prominent feature and comprises largely rural and agricultural landuse. There are threats to the geomorphology from industrial development.	High
Landscape Habitats	CRDFFLH002 (Wentlooge Levels (S. of Rhymney) outstanding value, condition unassessed. This area encompasses improved grassland dominated habitat that is distinct and warrants a separate aspect area due to it being part of the Levels. There is an argument that this rating should be high due to the areas of lower ecological value and some parts of the area have no landscape designations. 91% of the site contains protected sites including RAMSAR, SAC, SPA, SSSI and a local wildlife site.	Outstanding
Visual and Sensory	CRDFFVS030 (Wentlooge Levels south west) moderate value, poor condition. Distinctive flat regular landscape with reens and ditches with large arable fields to the north and smaller pastures to the south. Development has encroached on the levels from the north and traffic noises reduce the tranquillity of the area. Urban fringe activity and associated preventative bunds and perceptual neglect further reduces tranquillity.	Moderate
Historic Landscapes	CRDFFHL008 (River Rhymney Corridor) moderate value, condition unassessed. The Rhymney corridor is an important river used for settlement, conquest and communication, with early castle sites at Cae Castell, Rhymney and Pen-y-Pil, St Mellons attesting its military significance. The area has maintained its function as a communication corridor although the irregular pastoral fieldscape interspersed with pockets of woodland has been disrupted in the southern and central parts of the area by the A48 and modern housing and leisure development. North of the A48 the pastoral fieldscape survives relatively intact. CRDFFHL011 (Southwest Wentloog Level) outstanding value, fair condition.This is one of the three identified areas of the Wentloog Levels within Cardiff which forms part of the Gwent Levels. Due to the Historic Landscape Characterisation Study carried out the eastern two thirds of this aspect area has been placed on the national Register of Landscapes of Outstanding Historic Interest in Wales. Comprises a large area of reclaimed estuarine alluvium handcrafted by human action since the Roman period.	High
Cultural Landscapes	NWPRTCL002 (Cardiff-London Railway) outstanding value, good condition. The Cardiff to London railway is an important passenger and freight transport link to England. A 19th Century product of the industrial age that requires fast and efficient transport for goods and passengers that still performs that original function.	High

	CRDFFCL004 (Wentlooge and Gwent Levels) Outstanding value, poor condition. Internationally recognised historic reclaimed landscape although deteriorating through encroachment and lack of management of the reens. The Wentlooge and Gwent levels represent an evolved landscape of exceptional integrity with rich archaeological evidence of Bronze Age settlement. Is a Registered Historic Landscape of Outstanding Historic Interest and SSSI. CRDFFCL015 (Rhymney Valley Corridor) Low value, poor condition. The landscape is severely compromised by urban fringe influences and changes in farming practices, and was previously a coherent landscape. The important green corridor provides a link between urban Cardiff and rural areas north of the M4. CRDFFCL016 (Lamby Landfill) Low value, poor condition. The site holds Cardiff's domestic waste, an alien feature on the western edge of the Wentlooge Level adjacent to the mouth of the Rhymney River. It has been the subject of campaigning by local residents. Attracts thousands of sea birds and vermin.	

13.8.34 All separate LANDMAP aspect areas value judgements are combined, the average value of Wentlooge Levels South West is assessed in section 13.13 Assessment of construction effects.

13.8.35 Table 13.12 below, summarises the landscape receptors to be assessed.

Table 13.18: Landscape receptors to be assessed

Landscape Receptor	Effect (Direct or Indirect)	VPs within receptor boundaries	Value
Estuary Saltmarsh	Indirect	5, 6, 7	Outstanding
Hendre Lake Park	Direct	8. 9	High
Wentlooge Level	Indirect	2, 3, 4, 5, 6, 7, 13, 14, 15	Outstanding
Wentlooge Levels North West	Direct	1, 2, 10, 11, 12	High
Wentlooge Levels South West	Indirect	8, 9, 11, 12	High
Gwent Levels Historic Landscape of Outstanding Historic Interest in Wales HLW(GT) 2	Direct	1, 2, 3, 4, 5, 6, 7, 8, 13	High (National)

Designations

Landscape and historic designations and important landscape features

13.8.36 Within the study area there are the following landscape and historic designations and important landscape features which contribute to the area's landscape character. Refer to Figure 13.2:

- Gwent Levels Historic Landscape of Outstanding Historic Interest in Wales HLW(GT) 2 [LOHIW];
- Wales Coast Path National Trail
- Scheduled Monuments; and
- Listed buildings.

13.8.37 The landscape of Gwent Levels is subject to a national scale designation and is thus of high value on a national scale.

13.8.38 The effects on the setting of the Wales Coast Path National Trail will be dealt with as a visual receptor and included in the assessment of VP 5 and 17.

13.8.39 These designations largely reflect the region's coast and less common estate features. Heritage assets are valued landscape features. The extent to which Listed Buildings and Scheduled Monuments contribute to the cultural and historic aspects and overall character of the landscape is considered in the baseline assessment of non-visual aspect areas within the landscape character areas where there is specific reference to landscape character, views or visual resource.

13.8.40 The significance and settings of scheduled monuments listed buildings and listed places will be considered in the Cultural Heritage Chapter 10 of this ES.

Visual Baseline

13.8.41 The site is located to the southeast of St Mellons and east of Trowbridge, immediately north of the railway. The land form at this location is very flat, historically reclaimed from the flood plain with reens and ditches defining a network of small, regular pasture fields. Pylons are prominent features that cross the site.

13.8.42 Views in the local landscape from the north and east are generally enclosed and foreshortened by intervening field boundary vegetation.

13.8.43 From the south, looking towards the proposed development, the elevated settlement of St Mellons is visible in the background, with further views to the prominent hill Craig Llysfaen to the northwest. St Mellons Business Park is a low-lying development to the north of the site, with views north towards the business park over and through field boundary vegetation. There is mature vegetation along

the West Coast Mainline railway line and associated electricity infrastructure, and sporadic views of overhead electricity powerline equipment is afforded.

13.8.44 A selection of specific and representative viewpoints (VPs) were identified from a desktop study and field work and was consulted upon and agreed with CC in March 2019 (see Table 13.2: Response to representations from stakeholders on scope of landscape and visual assessment). Viewpoint locations are mapped on Figure 13.1 and the photographs for each presented as Figure 13.3. Each numbered VP is also referenced below in respect of which receptors they relate to. The baseline views from each receptor and the sensitivity of each receptor's visual amenity are described in the Visual Assessment Tables.

Recreational receptors

13.8.45 Recreational receptors which may experience changes to views or their visual resource include:

- Users of St Mellons footpath 4A between Cypress Drive and St Mellons Road, the only footpath to cross the site (currently inaccessible);
- Users of nearby footpaths; St Mellons footpaths 33 and 34 are located to the north beyond St Mellons Business Park;
- Users of Wentlooge footpath 412/3/1, north of Wentlooge to the south east of the site;
- Users of nearby Green Lane 911 to the south east of the site, off Heol Las; and
- Users of the Wales Coast Path to the south of the site.

13.8.46 These recreational facilities are likely to be used and valued by a mix of receptors from individuals and the local community to tourists, and they range from local designations to being part of the national coastal path. Their value is therefore assessed as being medium to high.

Heritage receptors

13.8.47 There are a number of Listed Buildings, Scheduled Monuments (SMs) and undesignated heritage features within the study area. The significance and setting of listed buildings and listed places has been considered in the Cultural Heritage assessment (ES Chapter 10). Heritage assets are valued landscape features. The extent to which Listed Buildings and Scheduled Monuments contribute to the cultural and historic aspects and overall character of the landscape is considered in the landscape baseline as set out above.

13.8.48 There is no public access to the Scheduled Monuments and these historic features are not prominent in views available to nearby visual receptors and so no viewpoints have been taken from scheduled monuments within the study area.

Viewpoints

13.8.49 The desktop study and field work identified visual receptors which may potentially be significantly affected by the proposed development. To assess these effects representative viewpoints were selected for each receptor group.

13.8.50 All visual receptors likely to experience visual effects are shown on Figure 13.1 and the selection of viewpoints chosen to represent the receptors is listed below.

Table 13.19: Visual receptors being assessed

Viewpoint (Refer to Figures 1-4)	Location	Receptors represented	Description of Existing View	Value
Viewpoint 1 Grid Ref.: ST 25039 81288	View from junction of primary reens looking northest towards St Mellons.	Users of the St Mellons footpath 4a	Flat small pasture field bounded with mature unmanaged hedgerow vegetation. A pylon line crosses the field directly overhead. Small field terminates in the midground bounded by a mature deciduous tree belt that forms the skyline and foreshortens further views. A further pylon line is seen above the tree line.	Local
Viewpoint 2 Grid Ref.: ST 25558 80931	View from railway overbridge looking north towards St Mellons	Recreational and transport users of Heol Las	Overbridge falls away to grade to the north, bounded by post and pale fencing. Unmanaged field boundary vegetation obscures small pasture fields. A substation bounded by palisade fencing is prominent in the foreground. The topography levels out in the midground. Unmanaged field boundary vegetation continues into the midground and background forming the perception of a woodland. A pylon line crosses the view from north east to south west in the midground. Views of the wooded background continue to an elevated skyline to the north-west revealing the settlement of St Mellons. Long distance views of a high ridge to the north reveals Craig Llysfaen.	Local
Viewpoint 3 Grid Ref.: ST 26059 80430	View from Ton-yr-heol-las looking northwest towards St Mellons	Residential properties and recreational users along Ton yr Heol Las	Open view of flat large pasture fields bounded by gappy hedgerow and intermittent post and pale fence. Occassional hedgerow trees obscure further views. Large pasture fields continue, a pylon line crosses the view. Overhead line equipment associated with the railway is intermittently visible through mature railside vegetation. Pasture fields continue into the background where they are obscured by boundary vegetation. A pylon line crosses the background, the white render of St Mellons Business Park is clearly visible in the distance, to the north. Where the land rises to the north-west, the settlement of St Mellons is visible. Longer	Local

Viewpoint (Refer to Figures 1-4)	Location	Receptors represented	Description of Existing View	Value
			distance views are afforted to the north where a wooded high ridge forms the skyline.	
Viewpoint 4 Grid Ref.: ST 26670 80741	View from Rosog Fawr Reen looking northwest towards St Mellons	Residential properties along the B4239. Recreational users of the Wentlooge footpath 412/3/1. Road users of the B4239.	Open view of flat large pasture fields bounded by gappy hedgerow and intermittent post and pale fence. Occassional hedgerow trees obscure further views. Large pasture fields continue, a pylon line crosses the view. Overhead line equipment associated with the railway is intermittently visible through mature railside vegetation. Pasture fields continue into the background where they are obscured by boundary vegetation. A pylon line crosses the background, the white render of St Mellons Business Park is clearly visible in the distance, to the north. Where the land rises to the north-west, the settlement of St Mellons is visible. Longer distance views are afforted to the north where a wooded high ridge forms the skyline.	Residential & recreational receptors: Local Transport receptors: Community
Viewpoint 5 Grid Ref.: ST 26973 79907	View north west from Wales Coastal Path	Users of the Wales Coastal Path south of Peterstone Wentlooge.	Elevated view from flood defences of Wales Coastal path over small scale pastures heavily obscured by tall vegetation boundaries. Wooded midground and background. The flat topography and wooded setting of the foreground and midground screens the majority of the background although higher ground is visible such as St Mellons and the high ridge skyline in the far distance.	National
Viewpoint 6 Grid Ref.: ST 25721 79549	View north from Broadstreet Common	Residential properties along Broadstreet Common, recreational users of Wentloog footpath 7. Road users along Broadstreet Common	Open views of small fields of permanent pasture grazed by sheep, bounded by post and wire fences and reens, across a flat landscape. Sluice House Farm is seen to the east of the view. Open views of pastures continue, vegetation cover increases. Wood poles and pylon infrastructure cross the view parallel to the road. Long distance views to Craig Llysfaen and a high wooded ridge are afforded by the lack of tall vegetation and very flat landscape.	Residential & recreational receptors: Local Transport receptors: Community
Viewpoint 7 Grid Ref.: ST 25099 79170	View north-east from Broadstreet Common	Residential properties along Broadstreet Common, recreational users of Wentloog footpath 7. Road users along Broadstreet Common	Open views of small fields of permanent pasture grazed by sheep, bounded by post and wire fences and reens, across a flat landscape. Sluice House Farm is seen to the east of the view. Open views of pastures continue, vegetation cover increases. Wood poles and pylon infrastructure cross the view parallel to the road. Long distance views to Craig Llysfaen and a high wooded ridge are afforded by the lack of tall vegetation and very flat landscape.	Residential & recreational receptors: Local Transport receptors: Community
Viewpoint 8	View east from Matthysens Way	Residential properties on the southern edge of St Mellon's,	The foreground consists of a recreational space with walking routes through overgrown scrubby vegetation and mature trees. There are glimpsed views of railway overhead line equipment beyond vegetation.	Residential & recreational receptors: Local

Viewpoint (Refer to Figures 1-4)	Location	Receptors represented	Description of Existing View	Value
Grid Ref.: ST 24074 80127		recreational users of St Mellons footpath 6A. Road users along Matthysens Way	Flood lighting infrastructure is visible beyond the railway in the industrial park. In winter distant filtered views of the proposed development may be possible.	Transport receptors: Community
Viewpoint 9 Grid Ref.: ST 24431 80604	View south east from Hendre Lake memorial	Recreational users of the Hendre Lakes Memorial site, recreational users of the Hendre Lakes public open space.	Open views of scrubland across a flat landscape around the memorial. Housing is seen to the east of the view. The lake is framed with large hedges and scrubby trees that afford framed further views to the background Glimpsed views to pylons and rail infrastructure.	Local
Viewpoint 10 Grid Ref.: ST 24663 80825	View east from Cypress Drive	Transport users of Cypress Drive along the south east edge of St Mellon's, residential properties along the south east edge of Cypress	The foreground consists of road verge and post and pale fencing. Street lights are present. Scrubby vegetation and tall trees filter the majority of further views. Filtered views to scrubby vegetation. In winter distant filtered views of the proposed development may be possible.	Community
Viewpoint 11 Grid Ref.: ST 24634 81475	View south east from Cypress Drive	Transport users of Cypress Drive driving south	The foreground consists of road infrastructure and overgrown roadside vegetation that filters further views into the midground and beyond. Sign posts, street lighting and street lighting and safety bollards are present. Overhead lines are visible indicating a pylon line are out of view. A large scale arable field is visible above the roadside vegetation bounded by tall scrubby vegetation. Palisade fencing around a substation is visible. A pylon line crosses the view in the background visible above a wooded skyline.	Community
Viewpoint 12 Grid Ref.: ST 24774 81582	View south from Fortran Road	Transport users of Fortran Road, the workers within St Mellon's Business Park with views south.	The foreground consists of road infrastructure and overgrown roadside vegetation that filters further views into the midground and beyond. Sign posts, street lighting and wooden post bollards are present. Overhead lines are visible indicating a pylon line in close proximity although pylons are out of view. A large scale arable field extends from the midground into the background bounded by reens and overgrown scrubby vegetation and mature trees that screen further views. Veteran field trees and mature trees in the background are scenic rural features of the view. Pylons are visible on the skyline.	Community

Viewpoint (Refer to Figures 1-4)	Location	Receptors represented	Description of Existing View	Value
Viewpoint 13 Grid Ref.: ST 26262 81472	View north west from Wentlooge Footpath 412/3/1 over railway	Recreational users of the Wentlooge Footpath 412/3/1	Elevated view from footpath with the railway corridor extending from the foreground to the background westwards. Railside vegetation filters some views. A distinct network of small scale pastures bounded by dense hedgerows and occassional field trees. A pylon line crosses the view from the midground into the distance. Further views to a more wooded network of fields are afforded that screens most views into the distance. The land rises in the distance where St Mellon's settlement is visible to the north west.	Local
Viewpoint 14 Grid Ref.: ST 26120 81678	View west from southern edge of Marshfield		The view is enclosed by garden vegetation and tall mature trees that filter further views to the midground and background. The landform is flat.	Local
Viewpoint 15 Grid Ref.: ST 25840 81813	View west from Blacktown sports fields.	Peripheral residential properties in Blacktown. Recreational users of the Marshfield footpath 399/46/1, and recreational sports ground.	The land form is very flat and slopes to the south providing screening for longer distance elements. Foreground consists of sports ground and playing fields bounded by robust continuous hedgerows. Housing and everygreen vegetation to the road on the west of the sports ground obscure further views. Little views to the background, a pylon line is visible on the skyline that crosses the south west of the view.	Community
Viewpoint 16 Grid Ref.: ST 25453 82605	View south west from Marshfield Footpath 399/16/1 / Sandy Lane Farm	Residential properties on the edge of Castleton, users of the Marshfield Footpath 399/16/1, Marshfield Footpath 399/12/1. Road users of Marshfield Road.	The foreground consists of flat permanent pastures around the settlement edge of Castleton and Blacktown, bounded by mature gappy hedgerow and post and pale fencing. Mature trees in the small scale field boundaries obscure the majority of further views when in full leaf. Housing in Blacktown visible in the view to the south. Further views of mature field boundary vegetation are afforded above the rooftops and midground field vegetation. A pylon line crosses the view to the south and extends east.	Residential & recreational receptors: Local Transport receptors: Community
Viewpoint 17 Grid Ref.: ST 21848 76327	View north east from Wales Coastal Path by Pengam Moors	Users of the Wales Coastal Path	The foreground consists of steeply sloping scrubby grassland and dunes with low growing scrubby hedgerow along the coastline. The coastline extends to the north, where land falls out of view as the land recedes to the west. A pylon line extends into the far distance along the coastline where grassland is the predominant visible landcover. In the far distance, the white render of the Imperial Park is a dominant feature on the skyline in addition to a single wind turbine. Along the coast, the old steelworks chimneys are visible where the Newport Wetlands Centre is situated.	National

Viewpoint (Refer to Figures 1-4)	Location	Receptors represented	Description of Existing View	Value
Viewpoint 18 Grid Ref.: ST 32758 82911	View south west from Newport Wetlands Centre	Users of the Wales Coastal Path, visitors to the Newport Wetland Centre	The foreground consists of the waterfront of the river Usk. Vegetation cover consists of scrubby hedgerow and saltmarsh with post and wire fencing marking the boundary of the edge of the Newport Wetlands Centre. The saltmarsh and tidal flats continue into the background. A pylon line defines the skyline to the south.	National

13.9 Assumed construction practices

13.9.1 The construction phase will include best practice construction practices which are set out in the outline Construction Environment Management Plan (Appendix A1) and Chapter 3 of this ES.

13.9.2 The construction phase of the proposed development is expected to last approximately 8 years, separated in a number of phases in response to market conditions. Please refer to section 3.2 of the ES for further details.

13.9.3 The phasing of construction (with indicative dates) is anticipated to be:

- **Enabling works:** over the period 2021- 2028:
- **Infrastructure:** Prior to construction of buildings, it is necessary to create development plateaux consistent with the flood mitigation strategy, and associated habitat mitigation.

  The initial phase will be to the south of Ty Ffynnon Reen and north of the railway line, which will facilitate construction of the station building and first commercial buildings. Associated with this will be construction of the main highway and associated buried services.
- **Early phases:** The new station will be supported by the development of new buildings around the Station Square, creating a sense of arrival and ensuring that new development benefits from public transport access. The north eastern corner could be developed independently, and earthworks in this area could be undertaken as an early phase or in parallel.
- **Middle and later phases:** Earthworks will be completed across the whole development area in a phased manner creating plateaux for future buildings

and public realm. The phasing of these earthworks is to be finalised. In total, earthworks across the site are expected to take a minimum of 4-5 years.

- **Commercial development**: Commercial development (i.e. buildings) across the site will be phased in response to market condition but is anticipated to be approximately eight years (2021 – 2028).

13.9.4 Figure 3.9 sets out the illustrative phasing for the proposed development.

13.9.5 Sources of construction effects will include:

- Construction activities to erect a new railway station comprising up to four platforms on the South West Main Line;
- Construction activities to erect the station building up to four storeys and implement the surface car parking;
- The construction of a business park comprising development zones between six and 15 storeys, associated road infrastructure, central plaza, a series of public squares, Hendre Park, and connecting Community Spine;
- Ground disturbance, topsoil striping and vegetation removal will occur across the full working area of the development zones and station, within the Site Boundary (the maximum extent of land in which the proposed development would take place);
- Extensive earthworks movements for the construction of raising the floodplain for the development zones;
- Removal of approximately 3.1km of hedgerows across the works area;
- Removal of 4.3km of secondary reens north of the railway;
- The reinstatement of 4.3km of secondary reens north and south of the railway;
- Removal of 63 trees across the works area;
- The clearance of 4.98ha of SINC grassland area;
- Presence and movement of HGVs, low-loader and cable drum, deliveries and transportation of materials, and other construction traffic on the local road network, with numerous two-way vehicles movements per day across the works area;
- A construction compound consisting of a large area of hardstanding, welfare facilities, porta cabin office, car parking, spoil storage, waste, security and laydown area; and
- On-site plant at the construction compound site will including chainsaws and excavators for site clearance. Articulated dump trucks, excavators, dozers and

roller for bulk earthworks. Cranes, telescopic boom lifts, piling rigs and telescopic forklifts will be used for construction of structures and lighting.

13.9.6 The construction sequence and programme are described in more detail in Chapter 3 of this report.

13.10 Potential operational effects

13.10.1 Sources of operational effects to landscape and visual receptors include:

- Raised development plateaux up to 1.6m above baseline levels. A topographical survey shows that there is currently a maximum range of between 4.7m and 6.3m AOD, with no clear patterns of gradient across the site;
- Presence of tall buildings, up to 15 storeys (including plant, approximately 64m in height), proposed railway station, with four platforms, and public transport interchange creating an urban character;
- Presence of a large surface car park at the station park and ride to accommodate up to 650 cars. The visual impact of sunlight reflecting off car windscreens creating glint and glare in views;
- Increased movement of people and vehicles through the area;
- Permanent loss of mature vegetation, including hedgerows and hedgerow trees, and change in land cover from agriculture to built form; and
- Formalised green infrastructure with the presence of more trees, designated green space such as the wildlife corridor along the spine.

13.11 Embedded mitigation

13.11.1 Mitigation which has been developed during the design of the development, is known as embedded mitigation. Embedded Mitigation is set out below:

- Arrangement and layout of buildings with taller and higher density development to the south of the site, reducing in height and density to the north to better integrate with the edge of Cardiff East and St Mellons Business Park;
- Building mass broken up by large areas of open green space to reduce the visual prominence to the built form;
- PRoW and Access Strategy, including management of people and vehicles across the site;

- Site wide green infrastructure strategy which includes areas of natural open spaces, green space, Main Park, Hendra Lake Park, public realm spine, green streets and Green Fingers grid;

- Planted car parks with trees and SuDs to reduce the visibility of the car park and vehicles within it;

- Proposed and enhanced wildlife habitat that forms part of the wider green infrastructure across the site, includes the following:

    - Wildlife corridor: 6.35ha;

    - Dry woodland 1.8ha;

    - Wet woodland: 0.8ha;

    - New secondary reens: 0.7ha or 3724m;

    - Dry species-rich grassland: 1.92ha;

    - Hedgerows (both proposed and retained): 1.13ha (assumed an average width of 5m) or 4200m proposed; and

    - Scrub: 0.4ha.

  While 63 individual trees will be lost, these will be replaced at a ratio of 1:1.95 for dry woodland, and 1:1.62 for wet woodland (see Table 11 Habitat Loss compared to proposed habitat planting, Chapter 7 Biodiversity).

- The reen offset area would include the retention of existing main reens (Faendre, Ty Ffynnon, Green Lane and central) and enhancement of character and condition, including wildlife corridor, Faendre Reen Edge, Ty Ffynnon Reen and Green Lane Reen. Overall, there would be an increase in reens, by maintaining the larger existing reens and providing additional new secondary reens within the southern mitigation area, south of the main development;

- An increase in tree cover combined with additional hedgerows will provide visual screening to views into the site from the east and the south, particularly from the Wales Coast Path;

- Overall the landscape and ecological proposals provide a Biodiversity Net Gain for the site, for further information please refer to Chapter 7- Biodiversity.

13.11.2 The embedded mitigation as set out above will reduce the overall impact of the proposed development on the receiving landscape and visual receptors. However, there will remain some residual effects which are reported below.

13.12 Overview of relationship of Development to Relevant Policy

13.12.1 The design of the Proposed Development incorporates the features identified within CC Policy KP 2 (H) South of St Mellons Business Park, including transport, highways, walking, and cycling provisions. The development also addresses flood mitigation requirements and includes necessary infrastructure, in particular green space and compensation for any lost reens, grips, and field ditches. The design also integrates reens, hedgerows and other natural landscape features where possible to enhance and strengthen landscape character and habitat connectivity.

13.12.2 In accordance with CC Policy KP4: Masterplanning Approach, the Proposed Development design has been developed in conversation with key stakeholders, including CC and NRW (see Table 13.2. Response to representations from stakeholders on scope of landscape and visual assessment). The design includes a range of public amenities and new connections, in order to provide a suitable level of active transport, green space and recreational infrastructure to the community (also addressing requirements in T1: Walking and Cycling and C5 Provision for Open Space, Outdoor Recreation, Children's Play and Sport). The proposals strongly address climate change challenges and create new built environments with a distinctive character that is sympathetic to the local context. These measures also help the Proposed Development to address the requirements in CC Policy KP5 Good Quality and Sustainable Design regarding local character, diversity of land use, connectivity, and climate resilience. The attention in the proposals to healthy and sustainable green and blue systems address stipulations laid out in KP16: Green Infrastructure, KP18: Natural Resources, and EN8: Trees, Woodlands and Hedgerows.

13.12.3 EN1: Countryside Protection requires the scale, and design of development proposals to be sensitive and appropriate to the landscape context. The Proposed Development places importance on the integration of the development with the surrounding land uses, particularly around its boundaries.

13.12.4 In light of the inclusion of the site within the Wentloog Levels Special Landscape Area under EN3: Landscape Protection, and the wider protection of designated sites of conservation importance (Policy EN5: Designated Sites), this LVIA provides a landscape assessment of the impact of the Proposed Development on the Area.

13.13 Assessment of construction effects

Assessment of landscape effects from construction

Estuary Saltmarsh

Relationship to Proposed Development

13.13.1 This landscape receptor is outside of the development area, but within the study area located at Peterstone Great Wharf, southeast of the site.

Value

13.13.2 The quality and condition of the landscape is good according to LANDMAP, and when all separate LANDMAP aspect areas value judgements are combined, the average value of Estuary Saltmarsh is considered to be outstanding, with regional recognition.

Susceptibility

13.13.3 The sandy beach provides an attractive and unspoilt coastal feature and contributes to the exposed and wild feel to the landscape. The sound of the waves also contributes to the tranquillity and remoteness, whilst the dunes provide a more sheltered feel. This helps to create a distinct sense of place.

13.13.4 There is currently some loss of tranquillity from the presence of people and traffic, however the public road through the dunes respects the alignment of the dunes and much of it is not visible due to the low-lying ground. This contributes to the sense of remoteness of the landscape.

13.13.5 Susceptibility to change is considered to be high, as this landscape receptor is less able to accommodate this type of development due to the naturalistic character of the sand dunes and high levels of tranquillity.

Sensitivity

13.13.6 Combining the receptor's outstanding value with its high susceptibility to change, it is assessed as having a high sensitivity to change.

Nature of effects

Size/ Scale of change

13.13.7 No construction activity will take place within this aspect area, with a small scale of change being perceived indirectly from the Wentlooge Levels North West aspect area, to the north west of this aspect area resulting from the presence of cranes and other tall construction plant on the skyline north of this aspect area. The vegetation and resultant more visible construction activity will affect the scenic quality of the rural area over a small geographical extent, as the majority of lower lying construction activity will be screened by intervening vegetation within the flat landscape at this distance.

Geographical extent

13.13.8 There is no construction activity within this aspect area. As this is a fragmented landscape, only the western-most areas of this aspect area will be impacted as the visual connection is limited to the fragment south of Peterstone Wentlooge, resulting in a small geographical extent.

Direct or indirect

13.13.9 Indirect effect to the character of this aspect area.

Duration

13.13.10 Construction effects will last for a duration of 8 years (medium term).

Reversibility

13.13.11 The effects of construction would be reversible, in that the construction equipment/ activity will be removed at the end of the construction phase, eliminating effects on tranquillity and remoteness.

Magnitude of change

13.13.12 A small scale of change, indirect effect of medium duration which would be reversible, over a small geographical extent will result in a negligible magnitude of change to Estuary Saltmarsh aspect area.

Significance

13.13.13 For the receptor at this location the construction works are predicted to result in a moderate adverse and indirect effect, due to a negligible magnitude of change to a landscape affecting high sensitivity receptors. This is a significant effect.

Table 13.20: Construction effects for Estuary Saltmarsh Aspect Area.

Susceptibility	**High**	Medium	Low	
Value	**Outstanding**	High	Moderate	Low
Sensitivity	**High**	Medium	Low	
Size/ scale of change	Large	Medium	**Small**	Imperceptible
Geographical extent	Large	Medium	**Small**	
Duration	Long	**Medium**	Short	
Reversibility	Not reversible	Partially reversible	**Reversible**	
Magnitude of change	Major	Moderate	Minor	**Negligible**
Overall effect	Large	Moderate	**Slight**	Negligible / Neutral

Note: Blue highlighted boxes indicate judgements for each criteria.

Hendre Lake Park

Relationship to Proposed Development

13.13.14 A small portion of this landscape receptor is partly within of the development area.

Value

13.13.15 The quality and condition of the landscape is moderate according to LANDMAP, and when all separate LANDMAP aspect areas value judgements are combined,

the average value of Hendre Lake Park is considered to be high. The aspect area is a small, intimate, country park with a strong sense of place and relatively high levels of tranquillity which are reduced by the audible and visual presence of the railway.

Susceptibility

13.13.16 This aspect area is a popular country park with a parkland character and the ability to accommodate change of the type proposed is increased by the influence of the St Mellon's urban fringe and freight railway depot to the south of railway. Susceptibility to change is therefore considered to be medium.

Sensitivity

13.13.17 Combining the receptor's high value with its medium susceptibility to change, it is assessed as having a medium sensitivity to change.

Nature of effects

Size/ Scale of change

13.13.18 The likely scale of change to this aspect area is medium as there will be effects perceived indirectly from the neighbouring Wentlooge Levels North West aspect area, to the east. This results from the presence of cranes and other tall construction plant on the skyline to the east. This low-lying aspect area will be little impacted by vegetation clearance and other low-lying activity due to its wooded intimate character and will have little visual connection with low lying features. The construction of 15 storey buildings will alter the skyline and decrease the tranquillity of the landscape, increasing the urbanising influence on the aspect area already experienced due to the presence of St Mellon's.

Geographical extent

13.13.19 The redline boundary crosses the eastern edge of the aspect area, however, no construction works are proposed within the aspect area. The geographical extent is medium in comparison to this aspect area, affecting part of this aspect area and its neighbouring aspect area to the east.

Direct or indirect

13.13.20 Indirect effect to the character of this aspect area, due to no construction work taking place within this aspect area.

Duration

13.13.21 Construction effects will last for a duration of 8 years (medium term).

Reversibility

13.13.22 The effects of construction would be reversible, in that the construction equipment/ activity will be removed at the end of the construction phase from the neighbouring aspect area.

Magnitude of change

13.13.23 A medium scale of change and indirect effect of medium duration which is reversible, over a medium geographical extent will result in a moderate adverse magnitude of change to Hendre Lake Park aspect area.

Significance

13.13.24 For this aspect area, the construction works are predicted to result in a moderate adverse and indirect effect at this location, due to a moderate magnitude of change to a landscape affecting medium sensitivity receptors. This is a significant effect.

Table 13.21: Construction effects for Hendre Lake Park Aspect Area.

Susceptibility	High	**Medium**	Low	
Value	Outstanding	**High**	Moderate	Low
Sensitivity	High	**Medium**	Low	
Size/ scale of change	Large	**Medium**	Small	Imperceptible
Geographical extent	Large	**Medium**	Small	
Duration	Long	**Medium**	Short	
Reversibility	Not reversible	Partially reversible	**Reversible**	
Magnitude of change	Major	**Moderate**	Minor	Negligible
Overall effect	Large	**Moderate**	Slight	Negligible / Neutral

Note: Blue highlighted boxes indicate judgements for each criteria.

Wentlooge Level

Value

13.13.25 The quality of the landscape is high and the condition of the landscape is fair according to LANDMAP, and when all separate LANDMAP aspect areas value judgements are combined, the average value of Wentlooge Level is considered to be outstanding.

Susceptibility

13.13.26 The aspect area's relative lack of development and high scenic quality and high levels of tranquillity result in a high susceptibility to change of the type proposed.

Sensitivity

13.13.27 Combining the receptors outstanding value with its high susceptibility to change, its setting is assessed as having a high sensitivity to change.

Nature of effects

Size/ Scale of change

13.13.28 The likely scale of change as a result of the proposed construction activity is medium as the effects would perceived indirectly from works taking place in the neighbouring Wentlooge Levels North West aspect area, to the west. This results from the presence of cranes and other tall construction plant, which will intensify the urbanising effect of neighbouring St Mellons and St Mellons business park on the large scale, flat aspect area, decreasing the tranquillity of part of this aspect area and the wider landscape.

Geographical extent

13.13.29 The redline boundary aligns along the western boundary of the aspect area, and, no construction works are proposed within the aspect area. The geographical extent is medium in comparison to this aspect area.

Direct or indirect

13.13.30 Indirect effect to the character of this aspect area.

Duration

13.13.31 Construction effects will last for a duration of 8 years (medium term).

Reversibility

13.13.32 The effects of construction would be reversible, in that the construction equipment/ activity will be removed at the end of the construction phase.

Magnitude of change

13.13.33 A medium scale of change and indirect effect of medium duration which is reversible, over a medium geographical extent will result in a moderate adverse magnitude of change to Wentlooge Level aspect area.

Significance

13.13.34 For the receptor at this location the construction works are predicted to result in a large adverse and indirect effect at this location, due to a medium adverse magnitude of change to a landscape affecting high sensitivity receptors. This is a significant effect.

Table 13.22: Construction effects for Wentlooge Level Aspect Area.

Susceptibility	**High**	Medium	Low	
Value	**Outstanding**	High	Moderate	Low
Sensitivity	**High**	Medium	Low	
Size/ scale of change	Large	**Medium**	Small	Imperceptible
Geographical extent	Large	**Medium**	Small	
Duration	Long	**Medium**	Short	
Reversibility	Not reversible	Partially reversible	**Reversible**	

Magnitude of change	Major	**Moderate**	Minor	Negligible
Overall effect	**Large**	Moderate	Slight	Negligible / Neutral

Note: Blue highlighted boxes indicate judgements for each criteria.

Wentlooge Levels North West

Value

13.13.35 The quality of the landscape is high and the condition of the landscape is poor according to LANDMAP, and when all separate LANDMAP aspect areas value judgements are combined, the average value of Wentlooge Levels North West is considered to be high, due to high levels of tranquillity, historic field pattern and presence of reens and hedgerows.

Susceptibility

13.13.36 The aspect area's lack of development and high tranquillity result in a high susceptibility to change of the type proposed.

Sensitivity

13.13.37 Combining the receptor's high value with its high susceptibility to change, it is assessed as having a high sensitivity to change.

Nature of effects

Size/ Scale of change

13.13.38 The scale of change, within this aspect area is judged to be large, as a result of the majority of the construction activity occurring within this aspect area. Including the construction of a new railway station up to four platforms and carpark, extensive earthworks movements and ground disturbance to raise the land within the development zones, then the subsequent construction of a business park up to 12 storeys with associated road infrastructure, and public realm areas. Extensive vegetation removal of 4.3km of secondary reens within the SSSI, 3.1km of hedgerows and 93 trees and the removal of 4.98ha of SINC grassland areas all result in drastic changes to landcover within the landscape. The presence of HGVs and other construction traffic on the local road network and presence of construction compounds will further disrupt the tranquillity of the landscape.

Geographical extent

13.13.39 The redline boundary follows the aspect area boundary for all but a small portion, resulting in changes to a medium geographical extent, as construction effects will be experience over the site and parts of the wider landscape.

Direct or indirect

13.13.40 Direct effect to the character of this aspect area.

Duration

13.13.41 Construction effects will last for a duration of 8 years (medium term).

Reversibility

13.13.42 The effects of construction would be partially reversible, in that the construction equipment/ activity will be removed at the end of the construction phase, however the loss of vegetation and historical drainage systems will not be reversible.

Magnitude of change

13.13.43 A large scale of change and direct effect of medium duration which is partially reversible, over a medium geographical extent will result in a major adverse magnitude of change to Wentlooge Levels North West aspect area.

Significance

13.13.44 For this aspect area, the construction works are predicted to result in a large adverse and direct effect at this location, due to a major adverse magnitude of change to a landscape affecting high sensitivity receptors. This is a significant effect.

Table 13.23: Construction effects for Wentlooge Level North West Aspect Area.

Susceptibility	**High**	Medium	Low	
Value	Outstanding	**High**	Moderate	Low
Sensitivity	**High**	Medium	Low	
Size/ scale of change	**Large**	Medium	Small	Imperceptible
Geographical extent	Large	**Medium**	Small	
Duration	Long	**Medium**	Short	
Reversibility	Not reversible	**Partially reversible**	Reversible	
Magnitude of change	**Major**	Moderate	Minor	Negligible
Overall effect	**Large**	Moderate	Slight	Negligible / Neutral

Note: Blue highlighted boxes indicate judgements for each criteria.

Wentlooge Levels South West

Value

13.13.45 The quality of the landscape is moderate and the condition of the landscape is poor according to LANDMAP, and when all separate LANDMAP aspect areas

value judgements are combined, the average value of Wentlooge Levels South West is considered to be high.

Susceptibility

13.13.46 The aspect area's prominence of development and high levels of activity from urban and industrial areas and their influence on non-urban areas result in a low susceptibility to change of the type proposed.

Sensitivity

13.13.47 Combining the receptors high value with its low susceptibility to change, its setting is assessed as having a medium sensitivity to change.

Nature of effects

Size/ Scale of change

13.13.48 The scale of change as a result of the proposed construction activity is medium in comparison to the aspect area. Construction activity within the aspect area is limited to construction traffic on the local road network, accessing the site in the neighbouring Wentlooge North West aspect area. The urban area is enclosed by virtue of wooded landscape bunds to the eastern perimeter which limit outward views that would be impacted by construction activity.

Geographical extent

13.13.49 The redline boundary is adjacent to the aspect area boundary on its eastern edge in an urban area, resulting in changes to a small geographical extent.

Direct or indirect

13.13.50 Direct and indirect effect to the character of this aspect area. Direct effect is limited to the construction traffic on the local road network in the residential and business park area immediately adjacent to the site. Indirect effect would constitute the impacts of outward views and disturbance to the relative levels of tranquillity in the residential and business park area.

Duration

13.13.51 Construction effects will last for a duration of 8 years (medium term).

Reversibility

13.13.52 The effects of construction would be reversible, in that the construction equipment/ activity will be removed at the end of the construction phase.

Magnitude of change

13.13.53 A medium scale of change and indirect effect of medium duration which is reversible, over a small geographical extent will result in a minor adverse magnitude of change to Wentlooge Levels South West aspect area.

Significance

13.13.54 Overall, and combining the level of effect on the aspect area is considered to be a slight adverse and indirect effect.

13.13.55 For the receptor at this location the construction works are predicted to result in a slight adverse non-significant effect to this aspect area, due to the busy nature of the landscape and the little change the construction activity will have on its qualities and character.

Table 13.24: Construction effects for Wentlooge Level Aspect Area.

Susceptibility	High	Medium	**Low**	
Value	Outstanding	**High**	Moderate	Low
Sensitivity	High	**Medium**	Low	
Size/ scale of change	Large	**Medium**	Small	Imperceptible
Geographical extent	Large	Medium	**Small**	
Duration	Long	**Medium**	Short	
Reversibility	Not reversible	Partially reversible	**Reversible**	
Magnitude of change	Major	Moderate	**Minor**	Negligible
Overall effect	Large	Moderate	**Slight**	Negligible / Neutral

Note: Blue highlighted boxes indicate judgements for each criteria.

13.14 Assessment of visual effects during construction

Table 13.25: Assessment of visual effects during construction

Viewpoint (Refer to Figures 13.1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Construction Impact	Effect in winter during construction[2]
Viewpoint 1 Grid Ref.: ST 25039 81288	View from junction of primary reens looking northest towards St Mellons.	Flat small pasture field bounded with mature unmanaged hedgerow vegetation. A pylon line crosses the field directly overhead. Small field terminates in the midground bounded by a mature deciduous tree belt that forms the skyline and foreshortens further views. A further pylon line is seen above the tree line.	Users of the St Mellons footpath 4a	Users of the PRoW are considered to have a **medium susceptibility** to visual change because users' interest is likely to be focussed on the landscape. The views are valued at a **local level** due to the PRoW located within the rural designated landscape of the Gwent Levels. Overall recreational users have a **medium sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks, would occupy a moderate portion (scale of change) of the view in the near and middle distances. Views through the development are currently partially filtered by vegetation. However, through the construction phase these would become far more open through vegetation clearance. Construction activity would therefore be prominent and at times dominate the view. However, these changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **moderate**.	**Moderate adverse significant**
Viewpoint 2 Grid Ref.: ST 25558 80931	View from railway overbridge looking north towards St Mellons	Overbridge falls away to grade to the north, bounded by post and pale fencing. Unmanaged field boundary vegetation obscures small pasture fields. A substation bounded by palisade fencing is prominent in the foreground. The topography levels out in the midground. Unmanaged field boundary vegetation continues into the midground and background forming the perception of a woodland. A pylon line crosses the view from north east to south west in the midground. Views of the wooded background continue to an elevated skyline to the north-west revealing the settlement of St Mellons. Long distance views of a high ridge to the north reveals Craig Llysfaen.	Recreational and transport users of Heol Las	Road users and recreational users of the public access route are considered to have a **medium susceptibility** to visual change because users' interest is partially focused on the landscape, but attention is diverted towards the road network. The views are valued at a **local level** due to the public access route along the road on the periphery of the Gwent Levels designated landscape. Overall recreational users have a **medium sensitivity** to the proposed development.	Construction activities including vegetation clearance, earthworks, and construction of the train station building, and rail embankments would occupy a large proportion of the view in the near and middle distances. Views towards the development are currently partially filtered by vegetation. Through the construction phase, these would become more open through vegetation clearance. Construction activity would therefore be prominent and at times dominant within the view. However, these changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of recreational and road users during construction would be **moderate**.	**Moderate adverse significant**
Viewpoint 3 Grid Ref.: ST 26059 80430	View from Ton-yr-heol-las looking northwest towards St Mellons	Open view of flat large pasture fields bounded by gappy hedgerow and intermittent post and pale fence. Occassional hedgerow trees obscure further views. Large pasture fields continue, a pylon line crosses the view. Overhead line equipment associated with the railway is intermittently visible through mature railside vegetation. Pasture fields continue into the background where they are obscured by boundary vegetation. A pylon line crosses the background, the white render of St Mellons Business Park is clearly visible in the distance, to the north. Where the land rises to the north-west, the settlement of St Mellons is visible. Longer distance views are afforded to	Residential properties and recreational users along Ton yr Heol Las	Road users and recreational users of the public access route are both considered to have a **medium susceptibility** to visual change because users' interest is likely to be only partially focused on the landscape with attention diverted onto the road network. The views are valued at a **local level** due to the public access route along the road which connects into the wider local footpath and cycle network across the Gwent Levels designated landscape. Overall recreational and transport users have a **medium sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks would occupy a moderate portion of the view in the middle distance. Views towards the development are currently partially filtered by vegetation. However, through the construction phase these would become slightly more open through vegetation clearance. Construction activity would therefore at times become more noticeable within the view. However, these changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **minor**.	**Slight adverse insignificant**

[2] The effect in winter during construction is used as the temporal assessment point, as this is when the effects will be at their most visible, due to the lack of foliage on vegetation.

Viewpoint (Refer to Figures 13.1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Construction Impact	Effect in winter during construction[2]
		the north where a wooded high ridge forms the skyline.				
Viewpoint 4 Grid Ref.: ST 26670 80741	View from Rosog Fawr Reen looking northwest towards St Mellons	Open view of flat large pasture fields bounded by gappy hedgerow and intermittent post and pale fence. Occassional hedgerow trees obscure further views. Large pasture fields continue, a pylon line crosses the view. Overhead line equipment associated with the railway is intermittently visible through mature railside vegetation. Pasture fields continue into the background where they are obscured by boundary vegetation. A pylon line crosses the background, the white render of St Mellons Business Park is clearly visible in the distance, to the north. Where the land rises to the north-west, the settlement of St Mellons is visible. Longer distance views are afforded to the north where a wooded high ridge forms the skyline.	Residential properties along the B4239. Recreational users of the Wentlooge footpath 412/3/1. Road users of the B4239.	Residents and users of the PRoW are considered to have a **medium susceptibility** to visual change because users' interest is likely to be focussed on the landscape. The views are valued at a **local level** due to the rural context of the PRoW within the Gwent Levels designated landscape. Overall recreational users and residents have a **medium sensitivity** to the proposed development. Road users of the B4238 are considered to have a **low susceptibility** to visual change because users' interest is likely to be diverted from the landscape and focused on the road network. The views are valued at a **community level** due to the local road network. Overall road users have a **low sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks would occupy a moderate portion of the view in the middle distance. Views towards the development are currently partially filtered by vegetation. However, through the construction phase these would become slightly more open through vegetation clearance. Construction activity would therefore at times become more noticeable within the view. However, these changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **minor**.	Residential and recreational receptors: **Slight adverse insignificant** Transport Receptors: **Negligible adverse insignificant**
Viewpoint 5 Grid Ref.: ST 26973 79907	View north west from Wales Coastal Path	Elevated view from flood defences of Wales Coastal path over small scale pastures heavily obscured by tall vegetation boundaries. Wooded midground and background. The flat topography and wooded setting of the foreground and midground screens the majority of the background although higher ground is visible such as St Mellons and the high ridge skyline in the far distance.	Users of the Wales Coastal Path south of Peterstone Wentlooge.	Users of the PRoW are considered to have a **high susceptibility** to visual change because users' interest is likely to be focussed on the landscape. The views from the path are valued at a **national level** due to the Wales Coastal Path being a National Trail, with this section located within the Gwent Levels. Overall walkers on the Wales Coastal Path have a **high sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks would occupy a small portion of the view in the distance. Views towards the development are currently partially screened by topography and partially filtered by vegetation. Through the construction phase these would become slightly more open through vegetation clearance and construction activity would at times become more noticeable within the view. However, these changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **negligible**.	**Slight adverse insignificant**
Viewpoint 6 Grid Ref.: ST 25721 79549	View north from Broadstreet Common	Open views of small fields of permanent pasture grazed by sheep, bounded by post and wire fences and reens, across a flat landscape. Sluice House Farm is seen to the east of the view. Open views of pastures continue, vegetation cover increases. Wood poles and pylon infrastructure cross the view parallel to the road. Long distance views to Craig Llysfaen and a high wooded ridge are afforded by the lack of tall vegetation and very flat landscape.	Residential properties along Broadstreet Common, recreational users of Wentloog footpath 7, transport users along Broadstreet Common	Residents and users of the PRoW are considered to have a **high susceptibility** to visual change because users' interest is likely to be focussed on the landscape. The views are valued at a **local level** due to the PRoW located within the designated landscape of the Gwent Levels. Overall recreational users and residents have a **medium sensitivity** to the proposed development. Road users of the B4238 are considered to have a **low susceptibility** to visual change because users' interest is likely to be diverted away from the view and focused on the local road network. The views are valued at a **community level** due to the road network. Overall road users have a **low sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks would occupy a moderate portion of the view in the middle distance. Views towards the development are currently partially filtered by vegetation. However, through the construction phase these would become slightly more open through vegetation clearance. Construction activity would therefore at times become more noticeable within the view. However, these changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **minor**.	Residential and recreational receptors: **Slight adverse insignificant** Transport Receptors: **Negligible adverse insignificant**
Viewpoint 7 Grid Ref.: ST 25099 79170	View north-east from Broadstreet Common	Open views of small fields of permanent pasture grazed by sheep, bounded by post and wire fences and reens, across a flat landscape. Sluice House Farm is seen to the east of the view. Open views of pastures continue, vegetation cover increases. Wood poles and pylon infrastructure cross the view parallel to the road.	Residential properties along Broadstreet Common, recreational users of Wentloog footpath 7, transport users along Broadstreet Common	Residents and users of the PRoW are considered to have a **medium susceptibility** to visual change because users' interest is likely to be focussed on the landscape. The views are valued at a **local level** due to the PRoW located within the designated landscape of the Gwent Levels. Overall recreational users and residents have a **medium sensitivity** to the proposed development. Road users of the B4238 are considered to have a **low susceptibility** to visual change because users' interest is likely to be diverted away from the view and focused on the local road network. The views are valued at a **community level** due to the road network. Overall road users have a **low sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks would occupy a moderate portion of the view in the middle distance. Views towards the development are currently partially filtered by vegetation. However, through the construction phase these would become slightly more open through vegetation clearance. Construction activity would therefore at times become more noticeable within the view. However, these changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **minor**.	Residential and recreational receptors: **Slight adverse insignificant** Transport Receptors: **Negligible adverse insignificant**

Viewpoint (Refer to Figures 13.1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Construction Impact	Effect in winter during construction[2]
		Long distance views to Craig Llysfaen and a high wooded ridge are afforded by the lack of tall vegetation and very flat landscape.				
Viewpoint 8 Grid Ref.: ST 24074 80127	View east from Matthysens Way	The foreground consists of a recreational space with walking routes through overgrown scrubby vegetation and mature trees. There are glimpsed views of railway overhead line equipment beyond vegetation. Flood lighting infrastructure is visible beyond the railway in the industrial park. In winter distant filtered views of the proposed development may be possible.	Residential properties on the southern edge of St Mellon's, recreational users of St Mellons footpath 6A, road users along Matthysens Way	Residents and users of the PRoW are considered to have a **medium susceptibility** to visual change because users' interest is likely to be focussed on the landscape. The views are valued at a **local level** due to the PRoW network and connection through the Hendre Lake Park. Overall recreational users and residents have a **medium sensitivity** to the proposed development. Road users along Matthysens Way are considered to have a **low susceptibility** to visual change because users' interest is likely to be focused on the local road network. The views are valued at a **community level** due to the local road network. Overall road users have a **low sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks would occupy a very small portion of the view in the middle distance. Views towards the development are currently partially screened by topography and built form, and largely filtered by vegetation. Through the construction phase these would become slightly more open through vegetation clearance and construction activity would at times become more noticeable within the view. However, these changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **negligible**.	**Negligible adverse insignificant**
Viewpoint 9 Grid Ref.: ST 24431 80604	View south east from Hendre Lake memorial	Open views of scrubland across a flat landscape around the memorial. Housing is seen to the east of the view. The lake is framed with large hedges and scrubby trees that afford framed further views to the background Glimpsed views to pylons and rail infrastructure.	Recreational users of the Hendre Lakes Memorial site, recreational users of the Hendre Lakes public open space.	Recreational users of Hendre Lake Park are considered to have a **medium susceptibility** to visual change because users' interest is likely to be focussed on the landscape and memorial site within the park. The views are valued at a **local level** due to public access routes and connectivity of the park into the wider landscape. Overall recreational users have a **medium sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks would occupy a small portion of the view in the middle distance. Views towards the development are currently partially screened by topography and partially filtered by vegetation. Through the construction phase these would become slightly more open through vegetation clearance and construction activity would at times become more noticeable within the view. However, these changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **negligible**.	**Negligible adverse insignificant**
Viewpoint 10 Grid Ref.: ST 24663 80825	View east from Cypress Drive	The foreground consists of road verge and post and pale fencing. Street lights are present. Scrubby vegetation and tall trees filter the majority of further views. Filtered views to scrubby vegetation. In winter distant filtered views of the proposed development may be possible.	Residential properties along the south east edge of Cypress Drive, transport users of Cypress Drive along the south east edge of St Mellon's,.	Residents along Cypress Drive are considered to have a **medium susceptibility** to visual change because residents' interest is likely to be focussed on the landscape setting. The views are valued at a **community level** due to the road network. Overall residents have a **medium sensitivity** to the proposed development. Road users along Cypress are considered to have a **low susceptibility** to visual change because users' interest is likely to be focused on the local road network. The views are valued at a **community level** due to the local road network. Overall road users have a **low sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks would occupy a moderate portion of the view in the middle distance. Views towards the development are currently partially filtered by vegetation. However, through the construction phase these would become slightly more open through vegetation clearance. Construction activity would therefore at times become more noticeable within the view. However, these changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **minor**.	Residential receptors: **Slight adverse insignificant** Transport Receptors: **Negligible adverse insignificant**
Viewpoint 11 Grid Ref.: ST 24634 81475	View south east from Cypress Drive	The foreground consists of road infrastructure and overgrown roadside vegetation that filters further views into the midground and beyond. Sign posts, street lighting and street lighting and safety bollards are present. Overhead lines are visible indicating a pylon line are out of view. A large scale arable field is visible above the roadside vegetation bounded by tall scrubby vegetation. Palisade fencing around a substation is visible. A pylon line crosses the view in the background visible above a wooded skyline.	Transport users of Cypress Drive driving south	Road users along Cypress Drive are considered to have a **low susceptibility** to visual change because users' interest is likely to be focused on the local road network. The views are valued at a **community level** due to the local road network. Overall road users have a **low sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks, would occupy a moderate portion of the view in the near and middle distances. Views through the development are currently partially filtered by vegetation. However, through the construction phase these would become far more open through vegetation clearance. Construction activity would therefore be prominent and at times dominate the view. However, these changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **moderate**.	**Slight adverse insignificant**

Viewpoint (Refer to Figures 13.1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Construction Impact	Effect in winter during construction[2]
Viewpoint 12 Grid Ref.: ST 24774 81582	View south from Fortran Road	The foreground consists of road infrastructure and overgrown roadside vegetation that filters further views into the midground and beyond. Sign posts, street lighting and wooden post bollards are present. Overhead lines are visible indicating a pylon line in close proximity although pylons are out of view. A large scale arable field extends from the midground into the background bounded by reens and overgrown scrubby vegetation and mature trees that screen further views. Veteran field trees and mature trees in the background are scenic rural features of the view. Pylons are visible on the skyline.	Transport users of Fortran Road, the workers within St Mellon's Business Park with views south.	Working at St Mellon's Business Park and road users along Cypress Drive are considered to have a **medium susceptibility** to visual change because users' interest is likely to be focused on the local road network or work at hand. The views are valued at a **community level** due to the local road network and commercial setting. Overall workers at St Mellons Business Park and road users have a **low sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks, would occupy a moderate portion of the view in the near and middle distances. Views through the development are currently partially filtered by vegetation. However, through the construction phase these would become far more open through vegetation clearance. Construction activity would therefore be prominent and at times dominate the view. However, these changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **moderate**.	**Slight adverse insignificant**
Viewpoint 13 Grid Ref.: ST 26262 81472	View north west from Wentlooge Footpath 412/3/1 over railway	Elevated view from footpath with the railway corridor extending from the foreground to the background westwards. Railside vegetation filters some views. A distinct network of small scale pastures bounded by dense hedgerows and occassional field trees. A pylon line crosses the view from the midground into the distance. Further views to a more wooded network of fields are afforded that screens most views into the distance. The land rises in the distance where St Mellon's settlement is visible to the north west.	Recreational users of the Wentlooge Footpath 412/3/1	Users of the PRoW are considered to have a **medium susceptibility** to visual change because users' interest is likely to be focussed on the landscape. The views are valued at a **local level** due to the rural context of the PRoW within the Gwent Levels designated landscape. Overall recreational users and residents have a **medium sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks would occupy a moderate portion of the view in the middle distance. Views towards the development are currently partially filtered by vegetation. However, through the construction phase these would become slightly more open through vegetation clearance. Construction activity would therefore at times become more noticeable within the view. However, these changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **minor**.	**Slight adverse insignificant**
Viewpoint 14 Grid Ref.: ST 26120 81678	View west from southern edge of Marshfield	The view is enclosed by garden vegetation and tall mature trees that filter further views to the midground and background. The landform is flat.	Recreational users of the Wentlooge Footpath 412/3/1	Users of the PRoW are considered to have a **medium susceptibility** to visual change because users' interest is likely to be focussed on the landscape. The views are valued at a **local level** due to the rural context of the PRoW within the Gwent Levels designated landscape. Overall recreational users and residents have a **medium sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks would occupy a small portion of the view in the far distance. Views towards the development are currently largely filtered by vegetation, however through the construction phase these would become slightly more open through vegetation clearance and these activities would at times become more prominent within the view. However, the changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **negligible**.	**Negligible adverse insignificant**
Viewpoint 15 Grid Ref.: ST 25840 81813	View west from Blacktown sports fields.	The land form is very flat and slopes to the south providing screening for longer distance elements. Foreground consists of sports ground and playing fields bounded by robust continuous hedgerows. Housing and everygreen vegetation to the road on the west of the sports ground obscure further views. Little views to the background, a pylon line is visible on the skyline that crosses the south west of the view.	Peripheral residential properties in Blacktown. Recreational users of the Marshfield footpath 399/46/1, and recreational sports ground. Road users along Matthysens Way.	Residential receptors are considered to have a **medium susceptibility** to visual change because users' interest is likely to be focussed on the landscape. The views are valued at a **community level** due to the sports ground. Overall residents have a **medium sensitivity** to the proposed development. Recreational users of the PRoW and sports ground are considered to have a **medium susceptibility** to visual change because users' interest is likely to be focussed on the landscape. The views are valued at a **community level** due to the sports ground. Overall recreational users of the PRoW have a **medium sensitivity** to the proposed development. Transport users of Mathysens Way are considered to have a **low susceptibility** to visual change because users' interest is likely to be focused on the local road network.	Construction activities including vegetation clearance and earthworks would occupy a small portion of the view in the far distance. Views towards the development are currently largely filtered by vegetation, however through the construction phase these would become slightly more open through vegetation clearance and these activities would at times become more prominent within the view. However, the changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **negligible**.	**Negligible adverse insignificant**

Viewpoint (Refer to Figures 13.1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Construction Impact	Effect in winter during construction[2]
				The views are valued at a **community level** due to the local road network. Overall road users have a **low sensitivity** to the proposed development all recreational users have a **low sensitivity** to the proposed development.		
Viewpoint 16 Grid Ref.: ST 25453 82605	View south west from Marshfield Footpath 399/16/1 / Sandy Lane Farm	The foreground consists of flat permanent pastures around the settlement edge of Castleton and Blacktown, bounded by mature gappy hedgerow and post and pale fencing. Mature trees in the small scale field boundaries obscure the majority of further views when in full leaf. Housing in Blacktown visible in the view to the south. Further views of mature field boundary vegetation are afforded above the rooftops and midground field vegetation. A pylon line crosses the view to the south and extends east.	Residential properties on the edge of Castleton, users of the Marshfield Footpath 399/16/1, Marshfield Footpath 399/12/1, transport users of Marshfield Road.	Residents and users of the PRoW's are considered to have a **medium susceptibility** to visual change because users' interest is likely to be focussed on the landscape. The views are valued at a **local level** due to the PRoW network. Overall residential and recreational users have a **medium sensitivity** to the proposed development. Road users along Marshfield Road are considered to have a **low susceptibility** to visual change because users' interest is likely to be focused on the local road network. The views are valued at a **community level** due to the local road network. Overall road users have a **low sensitivity** to the proposed development.	Construction activities including vegetation clearance and earthworks would occupy a small portion of the view in the far distance. Views towards the development are currently largely filtered by vegetation, however through the construction phase these would become slightly more open through vegetation clearance and these activities would at times become more prominent within the view. However, the changes would be temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **negligible**.	**Negligible adverse insignificant**
Viewpoint 17 Grid Ref.: ST 21848 76327	View north east from Wales Coastal Path by Pengam Moors	The foreground consists of steeply sloping scrubby grassland and dunes with low growing scrubby hedgerow along the coastline. The coastline extends to the north, where land falls out of view as the land recedes to the west. A pylon line extends into the far distance along the coastline where grassland is the predominant visible landcover. In the far distance, the white render of the Imperial Park is a dominant feature on the skyline in addition to a single wind turbine. Along the coast, the old steelworks chimneys are visible where the Newport Wetlands Centre is situated.	Users of the Wales Coastal Path	Users of the PRoW are considered to have a **high susceptibility** to visual change because users' interest is likely to be focussed on the landscape. The views from the path are valued at a **national level** due to the Wales Coastal Path being a National Trail. Overall walkers on the Wales Coastal Path have a **high sensitivity** to the proposed development.	Due to the distance from the development and the intervening landscape features, much of the construction activity and compounds would be obscured from view. Construction activities including vegetation clearance and earthworks would occupy an imperceptible portion of the view in the extreme far distance. With changes taking place being temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **negligible**.	**Slight adverse insignificant**
Viewpoint 18 Grid Ref.: ST 32758 82911	View south west from Newport Wetlands Centre	The foreground consists of the waterfront of the river Usk. Vegetation cover consists of scrubby hedgerow and saltmarsh with post and wire fencing marking the boundary of the edge of the Newport Wetlands Centre. The saltmarsh and tidal flats continue into the background. A pylon line defines the skyline to the south.	Users of the Wales Coastal Path, visitors to the Newport Wetland Centre	Users of the PRoW are considered to have a **high susceptibility** to visual change because users' interest is likely to be focussed on the landscape. The views from the path are valued at a **national level** due to the Wales Coastal Path being a National Trail, with this section located within the Gwent Levels. Overall walkers on the Wales Coastal Path have a **high sensitivity** to the proposed development.	Due to the distance from the development and the intervening landscape features, much of the construction activity and compounds would be obscured from view. Construction activities including vegetation clearance and earthworks would occupy an imperceptible portion of the view in the extreme far distance. With changes taking place being temporary, medium term (8 years) and reversible. The magnitude of change to the visual amenity of these receptors during construction would be **negligible**.	**Slight adverse insignificant**

13.15 Assessment of landscape effects from operation

Estuary Saltmarsh

13.15.1 The baseline description of the aspect area would remain the same as that for construction.

13.15.2 Judgements on the sensitivity of the Estuary Saltmarsh aspect area would remain the same as reported at construction. Estuary Saltmarsh would have a high sensitivity to the type of change proposed.

Nature of effects

Size/ Scale of change

13.15.3 At year 1 and 15, the scale of change to the character of this aspect area would be small, as a result of the limited change in perceptible characteristics, with some inter-visibility, between the proposed development and the Estuary Saltmarsh aspect area, limited to upper storeys of the development. There will be effects perceived indirectly from the Wentlooge Levels North West aspect area, to the north west, resulting from the presence of buildings up to 15 storeys, and a four-storey railway station on the skyline to the north, raised higher on a development platform 1.6m above existing ground level. Increases in traffic movement and numbers to the proposed transport interchange and rail station activity will affect the tranquillity of this aspect area, although this is at a distance from the coast. Therefore, landscape mitigation (tree and field boundary treatment) would not further reduce the scale of change in this instance.

Geographical extent

13.15.4 There is no development proposed within this aspect area. As this is a fragmented landscape, only the western-most areas of this aspect area will be impacted as the visual connection is limited to the fragment south of Peterstone Wentlooge, resulting in effects over a small geographical extent.

Direct or indirect

13.15.5 Indirect effect to the character of this aspect area.

Duration

13.15.6 Operational effects will last for a duration of over 15 years (long term).

Reversibility

13.15.7 The effects of operation would be not reversible, in that the proposed development will form a permanent feature in the landscape.

Magnitude of change

13.15.8 At year 1, small scale, indirect effect of long duration which is not reversible, over a small geographical extent will result in a minor adverse magnitude of change to Estuary Saltmarsh aspect area. This will remain at year 15.

Significance

13.15.9 At year 1, overall, and combining the level of effect on the aspect area is considered to be slight adverse and indirect effect.

13.15.10 For this aspect area the presence of the development is predicted to result in a slight adverse effect at this location, due to a minor magnitude of change to a landscape affecting high sensitivity receptors. This would not be a significant effect.

13.15.11 At year 15, the level of effect would remain slight adverse and not significant.

Table 13.26: Operation effects for Estuary Saltmarsh Aspect Area.

Susceptibility	**High**	Medium	Low	
Value	**Outstanding**	High	Moderate	Low
Sensitivity	**High**	Medium	Low	
Size/ scale of change year 1	Large	Medium	**Small**	Imperceptible
Size/ scale of change year 15	Large	Medium	**Small**	Imperceptible
Geographical extent	Large	Medium	**Small**	
Duration	**Long**	Medium	Short	
Reversibility	**Not reversible**	Partially reversible	Reversible	
Magnitude of change year 1	Major	Moderate	**Minor**	Negligible
Magnitude of change year 15	Major	Moderate	**Minor**	Negligible
Overall effect year 1	Large	Moderate	**Slight**	Negligible / Neutral
Overall effect year 15	Large	Moderate	**Slight**	Negligible / Neutral

Note: Blue highlighted boxes indicate judgements for each criteria.

Hendre Lake Park

13.15.12 The baseline description of the aspect area would remain the same as that for construction.

13.15.13 Judgements on the sensitivity of the Hendre Lake Park aspect area would remain the same as reported at construction. Hendre Lake Park would have a medium sensitivity to the type of change proposed.

Nature of effects

Size/ Scale of change

13.15.14 At year 1, the scale of change to this landscape will remain medium, as reported for the construction phase. Although not directly affected by operational changes, the presence of tall buildings up to 15 storeys and a four-storey railway station will form a significant part of the backdrop to the setting of the park reducing the relative levels of tranquillity due to the disturbance of increased traffic movements at the transport interchange and trains stopping and departing in close proximity to the park, increasing the presence of train activity which would normally be an occasional passing feature in the landscape. The removal of vegetation to the east will alter the composition of the landscape, changing the landscape pattern of open parkland that existed before the development.

13.15.15 At year 15, the proposed landscape mitigation would have matured to help screen and integrate the tall buildings into the wider landscape although the tall buildings would remain a feature to the setting of the park. Overall, the scale of change would reduce to small at year 15.

Geographical extent

13.15.16 The redline boundary crosses the eastern edge of the aspect area, however, no development is proposed within the aspect area. There will be effects perceived indirectly from the neighbouring Wentlooge Levels North West aspect area, to the east. The presence of 15 storey buildings will alter the skyline and the increased presence of traffic and railway activity will decrease the tranquillity of the landscape, increasing the urbanising influence on the aspect area already experienced due to the presence of St Mellon’s. The geographical extent is medium in comparison to this aspect area, affecting part of this aspect area and its neighbouring aspect area to the east.

Direct or indirect

13.15.17 Indirect effect to the character of this aspect area.

Duration

13.15.18 Operational effects will last for a duration of over 15 years (long term).

Reversibility

13.15.19 The effects of operation would be not reversible, in that the proposed development will form a permanent feature in the landscape.

Magnitude of change

13.15.20 At year 1, large scale of change and indirect effect of long duration which is not reversible, over a medium geographical extent will result in a major adverse magnitude of change to Hendre Lake Park aspect area. At year 15, a medium scale of change and indirect effect of long duration which is not reversible, over a medium geographical extent will result in a moderate magnitude of change.

Significance

13.15.21 At year 1, overall, and combining the level of effect on the aspect area is considered to be large adverse and indirect effect.

13.15.22 For the receptor at this location the presence of the development is predicted to result in a large adverse effect at this location, due to a major magnitude of change to a landscape affecting medium sensitivity receptors. This is a significant effect.

13.15.23 At year 15, the level of effect would reduce to moderate adverse. This is a significant effect.

Table 13.27: Operation effects for Hendre Lake Park Aspect Area.

Susceptibility	High	**Medium**	Low	
Value	Outstanding	**High**	Moderate	Low
Sensitivity	High	**Medium**	Low	
Size/ scale of change year 1	**Large**	Medium	Small	Imperceptible
Size/ scale of change year 15	Large	**Medium**	Small	Imperceptible
Geographical extent	**Large**	Medium	Small	
Duration	**Long**	Medium	Short	
Reversibility	**Not reversible**	Partially reversible	Reversible	
Magnitude of change year 1	**Major**	Moderate	Minor	Negligible
Magnitude of change year 15	Major	**Moderate**	Minor	Negligible
Overall effect year 1	**Large**	Moderate	Slight	Negligible / Neutral
Overall effect year 15	Large	**Moderate**	Slight	Negligible / Neutral

Note: Blue highlighted boxes indicate judgements for each criteria.

Wentlooge Level

13.15.24 The baseline description of the aspect area would remain the same as that for the construction phase.

13.15.25 Judgements on the sensitivity of the Wentlooge Level aspect area would remain the same as reported at construction. Wentlooge Level would have a high sensitivity to the type of change proposed.

Nature of effects

Size/ Scale of change

13.15.26 At year 1, the scale of change to this landscape will be medium. The flat open landscape lends high levels of intervisibility between the proposed development and the Wentlooge Level aspect area. The development will extend the urban footprint of St Mellons settlement and St Mellons business park as experienced from this landscape. Landscape mitigation will not have matured, although advanced environmental works will be complete by year 1, reducing the scale of change from medium. At year 15, the scale of change to this aspect area will

reduce to small, as landscape mitigation will help embed the tall buildings into the wider landscape despite the increase in urban footprint forming a permanent feature in the neighbouring aspect area. The scale of change will remain small for the majority of this aspect area at and beyond year 15 of operation.

Geographical extent

13.15.27 The redline boundary aligns along the western boundary of the aspect area, with no development present within this aspect area. There will be effects perceived indirectly from the neighbouring Wentlooge Levels North West aspect area, to the west. This results from the presence of 15 storey buildings and a four-storey railway station, which will intensify the urbanising effect of neighbouring St Mellons and St Mellons business park on the flat aspect area, decreasing the tranquillity of the landscape. The geographical extent is medium in comparison to this aspect area.

Direct or indirect

13.15.28 Indirect effect to the character of this aspect area.

Duration

13.15.29 Operational effects will last for a duration of over 15 years (long term).

Reversibility

13.15.30 The effects of operation would be not reversible, in that the proposed development will form a permanent feature in the landscape.

Magnitude of change

13.15.31 At year 1, medium scale of change and indirect effect which is not reversible, over a long duration and medium geographical extent will result in a moderate adverse magnitude of change to Wentlooge Level aspect area, reducing to minor at year 15.

Significance

13.15.32 At year 1, this aspect area is predicted to experience a large and indirect adverse effect due to a medium adverse magnitude of change to a landscape affecting a highly sensitivity receptor. This is a significant effect.

13.15.33 At year 15, for this highly sensitive aspect area, the level of effect would reduce to moderate adverse as the proposed mitigation planting takes effect. This is a significant effect.

Table 13.28: Operation effects for Wentlooge Level Aspect Area.

Susceptibility	**High**	Medium	Low	
Value	**Outstanding**	High	Moderate	Low
Sensitivity	**High**	Medium	Low	
Size/ scale of change year 1	Large	**Medium**	Small	Imperceptible
Size/ scale of change year 15	Large	Medium	**Small**	Imperceptible
Geographical extent	Large	**Medium**	Small	

Duration	**Long**	Medium	Short	
Reversibility	**Not reversible**	Partially reversible	Reversible	
Magnitude of change year 1	Major	**Moderate**	Minor	Negligible
Magnitude of change year 15	Major	Moderate	**Minor**	Negligible
Overall effect year 1	**Large**	Moderate	Slight	Negligible / Neutral
Overall effect year 15	Large	**Moderate**	Slight	Negligible / Neutral

Note: Blue highlighted boxes indicate judgements for each criteria.

Wentlooge Levels North West

13.15.34 The baseline description of the aspect area would remain the same as that for the construction phase.

13.15.35 Judgements on the sensitivity of the Wentlooge Levels North West aspect area would remain the same as reported at construction. Wentlooge Levels North West would have a high sensitivity to the type of change proposed, due to high levels of tranquillity, historic field pattern and presence of reens and hedgerows.

Nature of effects

Size/ Scale of change

13.15.36 At year 1, the scale of change to this landscape will remain large as the landform is altered to 1.6m development platforms above existing ground level. The flat, small scale arable fields bounded by historical primary and secondary reens and hedgerow would be replaced tall buildings up to 15 storeys, a four-storey railway station with up to four platforms, a large carpark and supporting road infrastructure and designed green space. Primary reens are retained although planting is reconfigured to endure a more urban situation. The moderately high levels of tranquillity will be lost to proposed high levels of traffic at the transport interchange and carpark, and the presence of trains stopping and starting at the rail station, which were once a passing feature in the landscape. The existing green infrastructure of overgrown hedgerow would include new immature urban planting with the presence of more trees and designed green space. Access would improve to a more permeable landscape where opportunities to cross reens are available.

13.15.37 At year 15, the proposed planting would have matured to an extent that it would begin to provide the level of landscape mitigation it was designed for. As part of the green infrastructure strategy, it would reinstate green corridors along the primary reens and some secondary reens, reducing the scale of change to medium at and beyond year 15 of operation.

Geographical extent

13.15.38 The redline boundary follows the aspect area boundary for all but a small portion of the aspect area to the south, resulting in changes to a medium geographical extent. The majority of the development is located within this aspect area and parts of the wider landscape.

Direct or indirect

13.15.39 Direct effect to the character of this aspect area.

Duration

13.15.40 Operational effects will last for a duration of over 15 years (long term).

Reversibility

13.15.41 The effects of operation would be not reversible, in that the proposed development will form a permanent feature in the landscape.

Magnitude of change

13.15.42 A large scale of change and direct effect of long duration which is not reversible, over a medium geographical extent will result in a major adverse magnitude of change to Wentlooge Levels North West aspect area, at year 1. This will reduce to a moderate adverse magnitude of change at year 15, as the landscape mitigation begins to mature integrating the development into the surrounding landscape.

Significance

13.15.43 overall, and combining the level of effect on the aspect area is considered to be large adverse and direct effect.

13.15.44 At year 1, for this aspect area the presence of the development is predicted to result in a large adverse effect, due to a high magnitude of change to a landscape affecting high sensitivity receptors, resulting in a significant effect.

13.15.45 At year 15, the level of effect would reduce to moderate adverse significance effect, as the proposed mitigation will take effect.

Table 13.29: Operation effects for Wentlooge Level North West Aspect Area.

Susceptibility	**High**	Medium	Low	
Value	Outstanding	**High**	Moderate	Low
Sensitivity	High	**Medium**	Low	
Size/ scale of change year 1	**Large**	Medium	Small	Imperceptible
Size/ scale of change year 15	Large	**Medium**	Small	Imperceptible
Geographical extent	Large	**Medium**	Small	
Duration	**Long**	Medium	Short	
Reversibility	**Not reversible**	Partially reversible	Reversible	
Magnitude of change year 1	**Major**	Moderate	Minor	Negligible
Magnitude of change year 15	Major	**Moderate**	Minor	Negligible
Overall effect year 1	**Large**	Moderate	Slight	Negligible / Neutral

Overall effect year 15	Large	**Moderate**	Slight	Negligible / Neutral

Note: Blue highlighted boxes indicate judgements for each criteria.

Wentlooge Levels South West

13.15.46 As there are no significant construction effects recorded for the Wentlooge Levels South West aspect area and it is predicted that there will not be any significant landscape effects to this aspect area during both operational phases, due to the area's existing urban and industrial character, with a medium sensitivity to the type of change being proposed. Existing vegetation between the site and this aspect area would further limit and indirect operational effects which would likely be experienced as a minor magnitude of change and not significant. Therefore, the aspect area has been scoped out of the operational assessment.

13.16 Assessment of visual effects from operation

Table 13.30: Assessment of visual effects from operation

Viewpoint (Refer to Figures 1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Operational Impact at winter year 1	Operational effect year 1	Mitigation and level of change at summer year 15	Residual effect
Viewpoint 1 Grid Ref.: ST 25039 81288	View from junction of primary reens looking northest towards St Mellons	Flat small pasture field bounded with mature unmanaged hedgerow vegetation. A pylon line crosses the field directly overhead. Small field terminates in the midground bounded by a mature deciduous tree belt that forms the skyline and foreshortens further views. A further pylon line is seen above the tree line.	Users of the St Mellons footpath 4a	Judgements on the sensitivity of the users of the St Mellons footpath 4a would remain the same as reported at construction. Users of the St Mellons footpath 4a would have a **medium sensitivity** to the type of change proposed.	The view is from within the site boundary and so the visual resource along the footpath will change in its entirety from a rural view at baseline to an urban view once the proposed development is operational. The built form will dominate the midground shortening views to the deciduous tree belt that forms the skyline in the baseline. There will be green infrastructure incorporated into the development, which will help to integrate the buildings into the rural environment. The proposed development will also draw larger numbers of people to the site, reducing tranquility. Overall the scale of change will be large. The footpath will be realigned through the proposed development and similar views from within the site will be experienced along the realigned footpath. The size of the site will affect a large proportion of view, however this is a view from a small area of the site. Therefore the geographical extent is small. At year 1 the mitigation planting is likely to be whips and transplants, providing little to no screening of the proposed development until it has reached maturity which will then help to integrate the built form into its landscape setting. This will result in a duration of effects which are a combination of medium and partially reversible, and long term and irreversible. The proposed development is therefore predicted to result in a **major** magnitude of change.	**Moderate adverse significant**	By year 15 mitigation planting will be nearing maturity and will help to integrate the proposed development into the wider landscape setting. This will mitigate the medium-term and partially reversible effects. The remaining long-term and irreversible effects are still predicted to result in a **moderate** magnitude of change.	**Moderate adverse significant**
Viewpoint 2 Grid Ref.: ST 25558 80931	View from railway overbridge looking north towards St Mellons	Overbridge falls away to grade to the north, bounded by post and pale fencing. Unmanaged field boundary vegetation obscures small pasture fields. A substation bounded by palisade fencing is prominent in the foreground. The topography levels out in the midground. Unmanaged field boundary vegetation continues into the midground and background forming the perception of a woodland. A pylon line crosses the view from north east to south west in the midground. Views of the wooded background continue to an elevated skyline to the north-west revealing the settlement of St Mellons. Long distance views of a high ridge to the north reveals Craig Llysfaen.	Recreational and road users of Heol Las	Judgements on the sensitivity of the recreational and road users of Heol Las would remain the same as reported at construction. Users of Heol Las would have a **medium sensitivity** to the type of change proposed.	The proposed development is located approximately 180m to the north east. The immediate foreground will remain unchanged with the substation, palisade fencing prominent in the foreground. Existing overgrown scrubby vegetation will be retained around the substation to the east, filtering some views of the proposed car park. However, views will be afforded from the elevated road over the railway line. The proposed development will dominate the midground, obscuring views over the north west edge of the Levels and interrupting the view to the elevated skyline to the north including views to St Mellons and Craig Llysfaen. There will be green infrastructure incorporated into the development, which will help to integrate the buildings into the rural environment and the hills in the background. Overall this will result in a medium scale of change. The proposed development runs adjacent to Heol Las with similar views afford along this road. However, the road is a minor road with relatively few users, resulting in a geographical extent which is small. At year 1 the mitigation planting is likely to be whips and transplants, providing little to no screening of the proposed development until it has reached maturity which will then help to integrate the built form into its landscape setting. This will result in a duration of effects which are medium and partially reversible, and long term and irreversible The proposed development is therefore predicted to result in a **moderate** magnitude of change.	**Moderate adverse significant**	By year 15 the mitigation planting will be nearing maturity and will help to integrate the building into the wider landscape setting more fully Mitigation planting to the south is likely to further obscure views to the parking facilities. However due to the proximity and size of the proposed development, the scale of change is likely to remain medium. There will be no direct access into the proposed development from Heol Las which will remain a minor road with relatively few recreation and transport users and so the geographical extent will remain small. Due to the size and scale of the proposed development it is likely to take until planting has reached maturity to integrate the built form into its landscape setting. Therefore, the duration of effects will be long term and not reversible. The mitigation will have an incremental effect on the impact of the proposed development and the residual effects are therefore predicted to continue to result in a **moderate** magnitude of change.	**Moderate adverse significant**
Viewpoint 3	View from Ton-yr-heol-las looking	Open view of flat large pasture fields bounded by gappy hedgerow and	Residential properties and	Judgements on the sensitivity of the recreational users and road	The proposed development will be sited approximately 850m to the north west.	**Moderate adverse significant**	Existing vegetation in leaf along the roadside and hedgerow and trees in the	**Moderate adverse significant**

Viewpoint (Refer to Figures 1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Operational Impact at winter year 1	Operational effect year 1	Mitigation and level of change at summer year 15	Residual effect
Grid Ref.: ST 26059 80430	northwest towards St Mellons	intermittent post and pale fence. Occassional hedgerow trees obscure further views. Large pasture fields continue, a pylon line crosses the view. Overhead line equipment associated with the railway is intermittently visible through mature railside vegetation. Pasture fields continue into the background where they are obscured by boundary vegetation. A pylon line crosses the background, the white render of St Mellons Business Park is clearly visible in the distance, to the north. Where the land rises to the north-west, the settlement of St Mellons is visible. Longer distance views are afforted to the north where a wooded high ridge forms the skyline.	recreational users along Ton yr Heol	users along Ton yr Heol Las would remain the same as reported at construction. Recreational users and road users along Ton yr Heol Las would have a **medium sensitivity** to the type of change proposed.	The northern parcel of the proposed development will sit beneath the skyline, obscured by the electricity pylon and small brick building in the midground. Roadside vegetation, hedgerow and tree cover in the midground will filter views to the northern parcel. There will be filtered views to the station zone of the proposed development obscured by hedgerow and trees in the midground. The proposed development will break the skyline to the north east and interrupt longer distance views. This will result in a small scale of change. Similar views of the proposed development will be experienced along Ton-yr-heol-las which is a rural minor lane with a few residential properties. Therefore, the geographical extent is small. Due to the size and scale of the proposed development the effects are likely to be a combination of medium and partially reversible, and long term and irreversible The proposed development is therefore predicted to result in a **moderate** magnitude of change.		midground are likely to screen out views of the northern parcel of the development. The proposed development will be intermittently visible with tree coverage and hedgerow in the midground obscuring the view. However, the proposed development will still break the skyline and interrupt long distance views and so overall will result in a medium scale of change. Similar views of the proposed development will continue to be experienced along Ton-yr-heol-las which is a rural minor lane with few residential properties. Therefore, the geographical extent remains small. The mitigation will slightly decrease the adverse impacts, removing medium term and partially reversible effects. After mitigation, the size and scale of the proposed development to result in long term and irreversible effects are predicted to remain. The proposed development is therefore predicted to result in a **moderate** magnitude of change.	
Viewpoint 4 Grid Ref.: ST 26670 80741	View from Rosog Fawr Reen looking northwest towards St Mellons	Open view of flat large pasture fields bounded by gappy hedgerow and intermittent post and pale fence. Occassional hedgerow trees obscure further views. Large pasture fields continue, a pylon line crosses the view. Overhead line equipment associated with the railway is intermittently visible through mature railside vegetation. Pasture fields continue into the background where they are obscured by boundary vegetation. A pylon line crosses the background, the white render of St Mellons Business Park is clearly visible in the distance, to the north. Where the land rises to the north-west, the settlement of St Mellons is visible.	Residential properties along the B4239. Recreational users of the Wentlooge footpath 412/3/1. Road users of the B4239.	Judgements on the sensitivity of the residents and users of the PRoW and road users of the B4239 would remain the same as reported at construction. The residents and users of the PRoW would have a **medium sensitivity** to the type of change proposed. Road users of the B4239 would have a **low sensitivity** to the type of change proposed.	The proposed development is approximately 1km to the north west and will be sited south of St Mellons business park which is visible in the distance. The development will be partly visible in the midground and distance, with intervening vegetation providing some screening. The proximity of the business park and clustered electricity pylons accommodates the proposed development within the view. The view will remain open although the proposed development will be discernible in the mid ground and distance. Overall this results in a small scale of change to the view. Similar views of the proposed development will be experienced along the B4239 for recreational and road users between Broadway and Green Lane Therefore the geographical extent is medium. Due to the size and scale of the proposed development the effects are likely to be long term and irreversible The proposed development is therefore predicted to result in a **minor** magnitude of change.	**For residential and recreational receptors: slight adverse insignificant** **For transport receptors: negligible adverse insignificant**	Due to the distance of the proposed development in the view, vegetation in leaf is unlikely to provide additional screening. Views of St Mellons business park are visible during both summer and winter. Therefore, the view will remain similar to that at year one, resulting in a small scale of change and medium geographical extent. Due to the size and scale of the proposed development the effects are likely to be long term and irreversible. The proposed development is therefore predicted to result in a **minor** magnitude of change.	**Residential and recreational receptors: slight adverse insignificant** **Transport receptors: negligible adverse insignificant**

Viewpoint (Refer to Figures 1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Operational Impact at winter year 1	Operational effect year 1	Mitigation and level of change at summer year 15	Residual effect
		Longer distance views are afforded to the north where a wooded high ridge forms the skyline.						
Viewpoint 5 Grid Ref.: ST 26973 79907	View north west from Wales Coastal Path	Elevated view from flood defences of Wales Coastal path over small scale pastures heavily obscured by tall vegetation boundaries. Wooded midground and background. The flat topography and wooded setting of the foreground and midground screens the majority of the background although higher ground is visible such as St Mellons and the high ridge skyline in the far distance.	Users of the Wales Coastal Path south of Peterstone Wentlooge.	Judgements on the sensitivity of users of the Wales Coastal Path would remain the same as reported at construction. Users of the Wales Coastal Path would have a **high sensitivity** to the type of change proposed.	The proposed development will be sited approximately 1.8km to the north west. Due to the distance the of siting of the proposed development is likely to be obscured by the well wooded foreground and mid ground with only filtered views of the development. Therefore, the scale of change will be small. There may be a few isolated locations along the Wales Coastal path from which the proposed development could be glimpsed and so the experience of users will remain similar to those at baseline. Therefore, the geographical extent is small. Due to the size and scale of the proposed development the effects are likely to be long term and not reversible. The proposed development is therefore predicted to result in a **minor** magnitude of change.	**Moderate adverse significant**	Intervening vegetation in leaf is likely to screen all but the very top of the proposed development. There may be a very narrow and glimpsed view between the tree coverage in the mid ground towards St Mellons. Therefore, the scale of change will be reduced to imperceptible. There may be a few isolated locations along the Wales Coastal path from which the proposed development could be glimpsed and so the experience of users will remain similar to those at baseline. Therefore, the geographical extent is small. Due to the size and scale of the proposed development the effects are likely to be long term and not reversible. The proposed development is therefore predicted to result in a **negligible** magnitude of change.	**Negligible insignificant**
Viewpoint 6 Grid Ref.: ST 25721 79549	View north from Broadstreet Common	Open views of small fields of permanent pasture grazed by sheep, bounded by post and wire fences and reens, across a flat landscape. Sluice House Farm is seen to the east of the view. Open views of pastures continue, vegetation cover increases. Wood poles and pylon infrastructure cross the view parallel to the road. Long distance views to Craig Llysfaen and a high wooded ridge are afforded by the lack of tall vegetation and very flat landscape.	Residential properties along Broadstreet Common, recreational users of Wentloog footpath 7, transport users along Broadstreet Common	Judgements on the sensitivity of residents and users of the PRoW and transport users along Broadstreet Common would remain the same as reported at construction. Users of the PRoW would have a **medium sensitivity** to the type of change proposed. Transport users of Broadstreet Common would have a **low sensitivity** to the type of change proposed.	The proposed development is approximate 1.2km to the north. The flat open landscape in the foreground remains unchanged from baseline. The proposed development will be visible in the distance beyond the field boundary. Intervening hedgerows and vegetation will help to screen the lower parts of the proposed development. However, the development will break the skyline obscuring views to St Mellons and the wooded ridge. Long distance views to Craig Llysfaen will be still be afforded. Although predominantly a rural landscape, the mid-ground is cluttered by electricity pylons and rail infrastructure and the proposed development will be sited within this envelope of the view. The proposed development will increase the number of vertical and built elements within the view and the midground. Therefore, the overall scale of change is medium. Similar views of the proposed development will be experienced from along the B4239 and from within the Wentloog levels south of the proposed development. Therefore, the geographical extent is medium. Due to the size and scale of the proposed development the effects are likely to be long term and not reversible. The proposed development is therefore predicted to result in a **moderate** magnitude of change.	**Residential and recreational receptors: moderate adverse significant** **Transport receptors: slight adverse insignificant**	Due to the distance of the proposed development in the view and the intervening vegetation cover, it is unlikely that matured mitigation planting will provide additional screening to the proposed development. However, existing intervening vegetation in leaf will help to soften the built form and integrate it into the wider landscape setting. Therefore, the view will remain similar to that at year one, resulting in a medium scale of change and medium geographical extent. Due to the size and scale of the proposed development the effects are likely to be long term and not reversible. The proposed development is therefore predicted to result in a **moderate** magnitude of change.	**Residential and recreational receptors: visual effects would continue to be moderate adverse significant** **Transport receptors: visual effects would continue to be slight adverse insignificant**
Viewpoint 7 Grid Ref.: ST 25099 79170	View north-east from Broadstreet Common	Open views of small fields of permanent pasture grazed by sheep, bounded by post and wire fences and reens, across a flat landscape. Sluice House Farm is seen to the east of the view. Open views of pastures continue, vegetation cover increases. Wood poles and pylon	Residential properties along Broadstreet Common, recreational users of Wentloog footpath 7, transport users along Broadstreet Common	Judgements on the sensitivity of residents and users of the PRoW and transport users along Broadstreet Common would remain the same as reported at construction. Users of the PRoW would have a **medium sensitivity** to the type of change proposed.	The proposed development is approximate 1.5km to the north east. The view is a similar view as viewpoint 6 with open views of pastural fields and vegetation cover increasing in the distance. The foreground remains unchanged from the baseline. The proposed development will be visible in the distance beyond the field boundary. Intervening hedgerows and vegetation will help to screen the lower parts of the proposed development. However, the development will break the skyline. Long distance views to Craig Llysfaen will remain visible.	**Residential and recreational receptors: moderate adverse significant** **Transport receptors: slight adverse insignificant**	Due to the distance of the proposed development in the view and the intervening vegetation cover, it is unlikely that matured mitigation planting will provide additional screening to the proposed development. However, existing intervening vegetation in leaf will help to soften the built form and integrate it into the wider landscape setting. Therefore, the view will remain similar to that at year one, resulting in a small scale of change and medium geographical extent.	**Residential and recreational receptors: visual effects would continue to be moderate adverse significant** **Transport receptors: visual effects would continue to be**

Viewpoint (Refer to Figures 1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Operational Impact at winter year 1	Operational effect year 1	Mitigation and level of change at summer year 15	Residual effect
		infrastructure cross the view parallel to the road. Long distance views to Craig Llysfaen and a high wooded ridge are afforded by the lack of tall vegetation and very flat landscape.		Transport users of Broadstreet Common would have a **low sensitivity** to the type of change proposed.	Sluice House Farm is a prominent feature in the foreground with a number of electricity pylons across the view in the midground. The proposed development will be sited in the midground, adjacent agricultural buildings visible in the foreground. This extends the envelope of existing built development within the view, resulting in an overall scale of change which is low. Similar views of the proposed development will be experienced from along the B4239 and from within the Wentloog levels south of the proposed development. Therefore, the geographical extent is medium. Due to the size and scale of the proposed development the effects are likely to be long term and not reversible. The proposed development is therefore predicted to result in a **moderate** magnitude of change.		Due to the size and scale of the proposed development the effects are likely to be long term and not reversible. The proposed development is therefore predicted to result in a **moderate** magnitude of change.	**slight adverse insignificant**
Viewpoint 8 Grid Ref.: ST 24074 80127	View east from Matthysens Way	The foreground consists of a recreational space with walking routes through overgrown scrubby vegetation and mature trees. There are glimpsed views of railway overhead line equipment beyond vegetation. Flood lighting infrastructure is visible beyond the railway in the industrial park. In winter distant filtered views of the proposed development may be possible.	Residential properties on the southern edge of St Mellon's, recreational users of St Mellons footpath 6A, road users along Matthysens Way	Judgements on the sensitivity of residents, recreational users and road users would remain the same as reported at construction. Residents and recreational users and residents would have a **medium sensitivity** to the type of change proposed. Road users would have a **low sensitivity** to the type of change proposed.	The proposed development will be sited approximately 800m to the east. Due to the siting the proposed development is likely to be below the existing skyline and largely obscured by residential buildings and intervening vegetation along the Pil-du Reen. This results in a small scale of change. Distant and filtered views of the proposed development will be afforded along the road network in the residential setting and along the public right of way adjacent to Pil-du Reen. Similar views of the proposed development will be experienced in a number of locations along the PRoW and by residents on the periphery of St Mellons. This results in a medium geographical extent. Overgrown scrubby vegetation and mature trees along the Pil-du Reen largely obscures views of the proposed development with only filtered views of the proposed development towards the railway. Mitigation planting at this stage will be whips and transplants, smaller than the existing vegetation and will not be visible in the view. Therefore, the duration of the effects is likely to be long term and not reversible Due to the small scale of change in the view which will not overtly contrast with the existing urban characteristics of the view, the proposed development is therefore predicted to result in a **minor** magnitude of change.	**Residential and recreational receptors: slight adverse insignificant** **Transport receptors: negligible adverse insignificant**	Existing vegetation in leaf within the residential will provide additional screening by further filtering views of the proposed development. Screening from vegetation will help soften the built form integrating it into the wider landscape resulting in an imperceptible scale of change to the view. Due to the siting of the proposed development, existing vegetation at Hendre Lake Park and woodland along the Faendre Reen are not visible in the view and so mitigation planting as part of the proposed development is unlikely to provide additional screening. Therefore, the change in view remains across a medium geographical extent. As mitigation planting associated with the proposed development would not be visible in the view, the duration of the effects is likely to be similar to that at year 1 and remain long term and not reversible. Overall due to the existing intervening vegetation cover, the proposed development is therefore predicted to result in a **negligible** magnitude of change.	**Residential, recreational, and transport receptors: negligible adverse insignificant**
Viewpoint 9 Grid Ref.: ST 24431 80604	View south east from Hendre Lake memorial	Open views of scrubland across a flat landscape around the memorial. Housing is seen to the east of the view. The lake is framed with large hedges and scrubby trees that afford framed further views to the background Glimpsed views to pylons and rail infrastructure.	Recreational users of the Hendre Lakes Memorial site, recreational users of the Hendre Lakes public open space.	Judgements on the sensitivity of recreational users would remain the same as reported at construction. Recreational users would have a **medium sensitivity** to the type of change proposed.	The proposed development is sited approximately 500m to the southeast with partial views above the existing residential buildings and trees east of the view. The proposed development will break the skyline. The scale and the siting are likely to result in a medium scale of change which is likely to be experienced in similar views and by a large number of people visiting the park. This results in a medium geographical extent. There will be a direct view of the proposed development which will be partially obscured by the existing residential buildings and intervening vegetation within the park. The proposed development will break the skyline and will be a noticeable feature in the view. Due to the size and scale of the proposed development the effects are likely to be a combination of medium and partially reversible, and long term and irreversible The proposed development is therefore predicted to result in a **moderate** magnitude of change.	**Moderate adverse significant**	Existing vegetation in leaf within Hendre Lake Park will obscure views of the residential properties but the proposed development will remain a noticeable feature to the east of the view. Existing woodland and trees along Faendre Reen will be retained but these are not visible in the view due to the intervening vegetation and tree coverage in the immediate vicinity of the park and residential setting. Therefore, mitigation planting at matured height is unlikely to provide additional screening to the proposed development. The scale of change to the view and the geographical extent is likely to be largely similar to that at year 1	**Moderate adverse significant**

Viewpoint (Refer to Figures 1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Operational Impact at winter year 1	Operational effect year 1	Mitigation and level of change at summer year 15	Residual effect
							of the operational stage and remain a large scale of change experienced over a large geographical extent. The existing vegetation and tree cover within Hendre Lake Park obscures views of residential buildings providing a well vegetated and rural view which will be broken by the proposed development which will form a prominent feature in the view. The duration is therefore long term and irreversible. The proposed development is therefore predicted to remain a **moderate** magnitude of change at year 15.	
Viewpoint 10 Grid Ref.: ST 24663 80825	View east from Cypress Drive	The foreground consists of road verge and post and pale fencing. Street lights are present. Scrubby vegetation and tall trees filter the majority of further views. Filtered views to scrubby vegetation.	Transport users of Cypress Drive along the south east edge of St Mellon's, residential properties along the south east edge of Cypress	Judgements on the sensitivity of residents and road users would remain the same as reported at construction. Residents would have a **medium sensitivity** to the type of change proposed. Transport users would have a **low sensitivity** to the type of change proposed.	The proposed development is approximately 100m to the east and occupies a direct line of vision across the entire view. Existing scrubby vegetation and trees along the Faendre Reen corridor adjacent to the road provide some screening to the proposed development, helping to soften the built form and integrate the proposed development into the wider landscape setting. There will be green infrastructure incorporated into the development, which will help to integrate the buildings into the rural environment. Due to proximity and scale, the proposed development breaks the skyline and shortens the view, resulting in a medium scale of change. Similar views would be experienced along Cypress Drive and residential properties on the eastern edge of St Mellon's resulting in a medium geographical extent. Mitigation planting at this stage will be a mixture of whips, transplants and semi-mature trees which at this stage would be smaller than the existing vegetation and not provide additional cover to the existing vegetation. This will result in a duration of effects which are a combination of medium and partially reversible, and long term and irreversible. The proposed development will contrast with the existing rural feel of the view with the built form a prominent feature across the entire view. It is therefore predicted to result in a **modertae** magnitude of change.	**Residential receptors: moderate adverse significant** **Transport receptors: slight adverse insignificant**	During the summer months existing vegetation along the Faendre Reen corridor will further filter views of the proposed development. However, the proposed development will remain a prominent feature in the landscape, breaking the skyline and occupying the entire view. The scale of change and geographical extent is therefore likely to be similar to that at year 1. Remaining a large scale of change over a large geographical extent. Mitigation planting in the main park as part of the proposed development will have reached or will be nearing maturity. This will increase the density of existing planting along the Faendre Reen corridor and help to filter views south east towards the development. Views of the proposed development will remain visible across the entire view even once mitigation planting has reached maturity. Therefore, the duration of effects will be long term and not reversible The overall effects of the proposed development are therefore predicted to remain similar to that at year 1, resulting in a **moderate** magnitude of change.	**Residential receptors: moderate adverse significant** **Transport receptors: slight adverse insignificant**
Viewpoint 11 Grid Ref.: ST 24634 81475	View south east from Cypress Drive	The foreground consists of road infrastructure and overgrown roadside vegetation that filters further views into the midground and beyond. Sign posts, street lighting and safety bollards are present. Overhead lines are visible indicating a pylon line are out of view. A large scale arable field is visible above the roadside vegetation bounded by tall scrubby	Transport users of Cypress Drive driving south	Judgements on the sensitivity of road users would remain the same as reported at construction. Transport users would have a **low sensitivity** to the type of change proposed.	The viewpoint is taken along the western site boundary with the proposed development to the east. The proposed development will be visible in the foreground where the road will be realigned to accommodate the new access road. The new access road will open up a channelled view through the proposed development and wildlife corridor which will be visible in the midground. Existing mature vegetation on this section of Cypress Drive will be removed to make way for the access road and replanted with whips and transplants. At year 1 these will provide little to no screening, opening up views to the midground. This will result in the proposed development occupying a large proportion of the view and a large scale of change. Vegetation removed along Cypress Drive will be isolated to the location of the new access road and so similar views will be limited. Therefore, the geographical extent over which the changes would be visible are small.	**Slight adverse insignificant**	Once mitigation planting along Cypress Drive has established and reached maturity at year 15 the planting will filter views to the mid ground of the development similar to that of the baseline. However, views opened up along the new access road will be permanent and the built form will shorten the view. Overall the scale of change will remain large and the geographical extent will remain small. Once mitigation planting along the wildlife corridor has reach maturity this will help soften the built form and integrate it into the wider landscape setting. The permanent presence of the built structures in the midground will be long term and not reversible.	**Slight adverse insignificant**

Viewpoint (Refer to Figures 1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Operational Impact at winter year 1	Operational effect year 1	Mitigation and level of change at summer year 15	Residual effect
		vegetation. Palisade fencing around a substation is visible. A pylon line crosses the view in the background visible above a wooded skyline.			The mitigation planting along Cypress Drive and within the wildlife corridor at year 1 will provide little screening at this section of which will result in a combination of medium and partially reversible, and long term and irreversible. The permanent realignment of Cypress Drive and the channelled view through the development along the proposed access road will result in a change to view that is not reversible. It is therefore predicted to result in a **moderate** magnitude of change.		The proposed development will therefore be predicted to result in a **moderate** magnitude of change.	
Viewpoint 12 Grid Ref.: ST 24774 81582	View south from Fortran Road	The foreground consists of road infrastructure and overgrown roadside vegetation that filters further views into the midground and beyond. Sign posts, street lighting and wooden post bollards are present. Overhead lines are visible indicating a pylon line in close proximity although pylons are out of view. A large scale arable field extends from the midground into the background bounded by reens and overgrown scrubby vegetation and mature trees that screen further views. Veteran field trees and mature trees in the background are scenic rural features of the view. Pylons are visible on the skyline.	Transport users of Fortran Road, the workers within St Mellon's Business Park with views south.	Judgements on the sensitivity of road users and employment users would remain the same as reported at construction. Transport and employment users would have a **low sensitivity** to the type of change proposed.	The proposed development is approximately 200m to the south. The foreground will remain unchanged from the baseline with overgrown roadside vegetation that will filter views of the proposed development in the mid ground. The scale of the development will break the skyline and occupy the majority of the view in the midground. Mature trees along the roadside will obscure further views to the west. There will be green infrastructure incorporated into the development, which will help to integrate the buildings into the rural environment. These measures will result in a large scale of change to the view. There will only be isolated locations from along Fortran Road of similar views due to the tree lined roadside vegetation and existing built form which is predominantly commercial. Therefore, the geographical extent over which the changes would be visible are small. At year 1 the mitigation planting is likely to be whips and transplants, providing little to no screening of the proposed development until it has reached maturity which will then help to integrate the built form into the wider landscape, although glimpsed views will likely remain visible. This will result in a duration of effects which are a combination of medium and partially reversible, and long term and irreversible. It is therefore predicted to result in a **major** magnitude of change.	**Moderate adverse significant effect**	By year 15 mitigation planting will be nearing maturity and will help to integrate the proposed development into the wider landscape setting which is predominantly commercial. This will help to reduce the scale of change from large to medium and the geographical extent to which the similar changes could be experienced along Fortran Road would remain small. Due to the size and scale of the proposed development it is likely to take until planting has reached maturity to integrate the built form into the landscape setting and glimpsed views of the proposed development are likely to remain. Therefore, the duration of effects will be long term and not reversible. Due to the mitigation planting reaching maturity the proposed development will therefore predicted to result in a **moderate** magnitude of change.	**Slight adverse insignificant**
Viewpoint 13 Grid Ref.: ST 26262 81472	View north west from Wentlooge Footpath 412/3/1 over railway	Elevated view from footpath with the railway corridor extending from the foreground to the background westwards. Railside vegetation filters some views. A distinct network of small scale pastures bounded by dense hedgerows and occassional field trees. A pylon line crosses the view from the midground into the distance. Further views to a more wooded network of fields are afforded that screens most views into the distance. The land rises in the distance where St	Recreational users of the Wentlooge Footpath 412/3/1	Judgements on users of the PRoW would remain the same as reported at construction. Recreational users would have a **medium sensitivity** to the type of change proposed.	The proposed development is approximately 900m to the west. The immediate foreground will remain unchanged with views over a network of pastural fields bounded by hedgerow. The proposed development will be sited within the wooded midground. There are a number of large electricity pylons in the foreground and into the midground which are prominent features within the view, breaking the skyline. The proposed development will appear grouped within this industrial clutter and the adjacent the railway line which is visible to the left of the view. Although the proposed development will be in the midground, due to the elevated viewpoint, the size of the proposed development will occupy a large amount of the open view and will form a noticeable feature within what is a predominantly rural landscape. Therefore, the scale of change is small. Due to the elevated nature of the viewing point there are unlikely to be similar views along Wentlooge footpath with hedgerow and vegetation along the footpath and across the levels providing some screening of the proposed development resulting in a small geographical extent. This will result in a duration of effects which are a combination of medium and partially reversible, and long term and irreversible.	**Slight adverse insignificant**	By year 15 mitigation planting will have established and reaching maturity. This planting will integrate with the existing wooded vegetation in the middle distance. Mitigation planting and existing vegetation in leaf will help to soften the built form and integrate the proposed development into its landscape setting, offering partial views of the development where it breaks the skyline. This will mitigate the medium-term and partially reversible effects. The remaining long-term and irreversible effects are predicted to result in a **minor** magnitude of change.	**Slight adverse insignificant**

Viewpoint (Refer to Figures 1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Operational Impact at winter year 1	Operational effect year 1	Mitigation and level of change at summer year 15	Residual effect
		Mellon's settlement is visible to the north west.			The proposed development is therefore predicted to result in a **minor** magnitude of change.			
Viewpoint 14 Grid Ref.: ST 26120 81678	View west from southern edge of Marshfield	The view is enclosed by garden vegetation and tall mature trees that filter further views to the midground and background. The landform is flat.	Recreational users of the Wentlooge Footpath 412/3/1	Judgements on users of the PRoW would remain the same as reported at construction. Recreational users would have a **medium sensitivity** to the type of change proposed.	The view is further north along the same footpath as viewpoint 13 and so the proposed development is approximately 900m to the west. At year one there will be glimpsed views of the proposed development in the middle distance, obscured by field boundary hedgerow and trees. Tree coverage on the edge of the urban setting further screens the northern parcels of the proposed development form view. Therefore, the scale of change is small. There will be similar views from along the footpath that users will experience but will be limited to the vicinity of Marshfield. This results in a small geographical extent. Due to the size of the proposed development the duration of effect will be long term and not reversible. The proposed development is therefore predicted to result in a **minor** magnitude of change due to the view largely remaining unchanged despite the proposed development being discernible in the middle distance.	**Slight adverse insignificant**	Field boundary hedgerow and trees in leaf shorten the view, obscuring views to the middle distance and beyond. There will be no views of the proposed development at year one or 15 during the summer months when vegetation is in leaf. Therefore, the scale of change is reduced to imperceptible with an overall **negligible** magnitude of change.	**Negligible adverse insignificant**
Viewpoint 15 Grid Ref.: ST 25840 81813	View west from Blacktown sports fields.	The land form is very flat and slopes to the south providing screening for longer distance elements. Foreground consists of sports ground and playing fields bounded by robust continuous hedgerows. Housing and everygreen vegetation to the road on the west of the sports ground obscure further views. Limited views to the background, a pylon line is visible on the skyline that crosses the south west of the view.	Peripheral residential properties in Blacktown. Recreational users of the Marshfield footpath 399/46/1, and recreational sports ground.	Judgements on residents, recreational users of the PRoW and sports ground, and transport receptors along Mathysens Way would remain the same as reported at construction. Residents and recreational users would have a **medium sensitivity** to the type of change proposed. Road users along Matthysens Way would have a **low sensitivity** to the type of change proposed.	The proposed development is approximately 750m to the west and will be partially visible in the centre of the view behind the existing multi-use games area (MUGA). Views of the development will be partial and filtered by the large oak tree in the centre of the view and partially obscured by the MUGA in the foreground and residential buildings beyond. The proposed development will occupy a large and central portion of the view, however, views of the proposed development in the background will be framed within the view with existing built development and therefore the scale of change is small. Similar changes to the view will be experienced around Blacktown and will be experienced by a number of recreational users to the sports ground and residents around in the vicinity of the sportsground. This results in a medium geographic extent. Due to the size of the proposed development the duration of effect will be long term and not reversible. Although the proposed development will be visually prominent in the view and will have long term effects which are not reversible. The nature of changes will not overtly contrast with existing elements and the scale of changes within the view will be small. Therefore, the proposed development will result in a **minor** magnitude of change.	**Residential and recreational receptors: slight adverse insignificant** **Recreational receptors: negligible adverse insignificant**	Due to the distance of the proposed development, mitigation planting will not be discernible in the view, even once established and reaching maturity Boundary trees around the sports field and intervening vegetation in the midground will help to filter views of the proposed development and so the envelope in which views are gained will be smaller than at year 1. However, there will still be distant views of the proposed development which results in a small scale of change. Where trees and vegetation are in leaf filtering views of the proposed development this will limit similar views experienced by users of the sports ground and residents on the periphery of the sports ground. This results in a small geographical scale. Due to the size of the proposed development the duration of effect will remain long term and not reversible. Although boundary trees and intervening vegetation will limit the geographical extent to which similar views will be experienced, there will still be a **minor** magnitude of change as there will still be glimpsed views of the proposed development and although not overtly contrasting with the existing built features within the view, these changes will be noticeable.	**Residential and recreational receptors: slight adverse insignificant** **Recreational receptors: negligible adverse insignificant**
Viewpoint 16 Grid Ref.: ST 25453 82605	View south west from Marshfield Footpath 399/16/1 / Sandy Lane Farm	The foreground consists of flat permanent pastures around the settlement edge of Castleton and Blacktown, bounded by mature gappy hedgerow and post and pale fencing.	Residential properties on the edge of Castleton, users of the Marshfield Footpath 399/16/1, Marshfield	Judgements on the sensitivity of residents and recreational users would remain the same as reported at construction. Residential and recreational receptors would have a **medium sensitivity** to the type of change proposed.	The proposed development is located approximately 1.1km south west and will be largely visible in midground, central in the view. Lower parts of the development will be obscured by the field boundary vegetation which will help to filter views, however a large section of the development will remain visible above the tree line. The siting of the proposed development will extend the envelope of existing development of Blacktown towards the rural character within the view. However, the scale of the proposed development within the view will contrast with the existing built elements.	**Residential and recreation receptors: slight adverse insignificant** **Transport receptors: negligible**	Due to the distance of the proposed development and the siting in the midground, mitigation planting which is reaching maturity at year 15 will not be discernible in the view. Boundary trees and interviewing vegetation in leave will help to filter views of the proposed development, however, partial views will remain above the line of trees	**Residential and recreation receptors: slight adverse insignificant** **Transport receptors: negligible adverse insignificant**

Viewpoint (Refer to Figures 1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Operational Impact at winter year 1	Operational effect year 1	Mitigation and level of change at summer year 15	Residual effect
		Mature trees in the small scale field boundaries obscure the majority of further views when in full leaf. Housing in Blacktown visible in the view to the south. Further views of mature field boundary vegetation are afforded above the rooftops and midground field vegetation. A pylon line crosses the view to the south and extends east.	Footpath 399/12/1, transport users of Marshfield Road.	Road users would have a **low sensitivity** to the type of change proposed	Due to the direct line of vision and contrast in scale with the existing built development at Castleton and Blacktown there will be a medium scale of change overall. Similar changes to the view will be experienced along a small section of road where the view becomes semi-open but will also be experienced by a moderate number of residents on the periphery of Castleton and Blacktown and users of the public rights of way. This results in a medium geographic extent. This results in a medium geographic extent. Due to the size of the proposed development the duration of effect will be long term and not reversible. The proposed development will be dominant in the view and will alter the key features and balance between built elements and rural characteristics within the view. Therefore, the proposed development will result in a **minor** magnitude of change.	**adverse insignificant**	and residential buildings. This results in little change to year one with the scale of changes in the view remaining medium. The geographical extent which similar views will be afforded by users of Marshfield Road, users of the public rights of way and residents along the periphery of Castleton and Blacktown will remain similar to that at year 1, resulting in a medium geographic extent. Overall at year 15, views of the proposed development will be little changed from year 1 albeit with vegetation in leaf filtering views to the lower parts of the proposed development. There will still remain a large section of the proposed development visible and dominant in the view, extending the envelope of built development and altering the balance between the built elements and rural characteristics of the view. This results in a **minor** magnitude of change.	
Viewpoint 17 Grid Ref.: ST 21848 76327	View north east from Wales Coastal Path by Pengam Moors	The foreground consists of steeply sloping scrubby grassland and dunes with low growing scrubby hedgerow along the coastline. The coastline extends to the north, where land falls out of view as the land recedes to the west. A pylon line extends into the far distance along the coastline where grassland is the predominant visible landcover. In the far distance, the white render of the Imperial Park is a dominant feature on the skyline in addition to a single wind turbine. Along the coast, the old steelworks chimneys are visible where the Newport Wetlands Centre is situated.	Users of the Wales Coastal Path	Judgements on recreational users would remain the same as reported at construction. Recreational users on the Wales Coast Path would have a **high sensitivity** to the type of change proposed, as their attention is likely to be focused on the landscape and environment around them.	The proposed development is approximately 5.1km to the north east. The proposed development will be visible along the horizon in the distance. The proposed development will obscure the white render of Imperial industrial park and grouped within the view of the wind turbine and electricity pylons which puncture the view along the horizon. Therefore, there would be a small scale of change overall. The viewpoint is from a localised highpoint along the Wales Coastal Path which provides an elevated vantage point in which the proposed development is more visible. There would be a few isolated locations from which there would be similar views which results in a small geographic extent. Due to the size of the proposed development the duration of effect will be long term and not reversible. However, the scale of change and the siting of the proposed development amongst existing industrial clutter results in an overall **negligible** magnitude of change.	**Slight adverse insignificant**	Due to the distance of the proposed development and the open views over the coastline and mudflats there is little in the way of intervening vegetation and mitigation planting would not be **discernible** at this distance. Therefore, there will be little to **no change** from year one.	**Slight adverse insignificant**
Viewpoint 18 Grid Ref.: ST 32758 82911	View south west from Newport Wetlands Centre	The foreground consists of the waterfront of the river Usk. Vegetation cover consists of scrubby hedgerow and saltmarsh with post and wire fencing marking the boundary of the edge of the Newport Wetlands Centre.	Users of the Wales Coastal Path, visitors to the Newport Wetland Centre	Judgements on the sensitivity of visitors to the Newport Wetland centre and users of the Wales Coastal Path would remain the same as reported at construction. Visitors to the Newport Wetland centre and users of the Wales Coastal Path	The proposed development is approximately 7.1km to the southwest. Long distant views will be afforded of the proposed development across the mudflats. Vegetation in the distance gives the impression of a well wooded flat landscape which rises to the hills in the far distance. The siting of the proposed development within the wooded distance will partially screen views of the proposed development, along with the hills in the far distance which will still be visible, will to help integrate the proposed development into the wider landscape setting. There are several existing industrial buildings across the mudflat which the proposed development will be sited alongside within the view. Therefore, the proposed	**Slight adverse insignificant**	Due to the distance of the proposed development and the open views over the estuary and mudflats, seasonal changes in vegetation offer little difference in screening. Mitigation planting once established and reaching maturity will be **indiscernible** at this distance. Therefore, there will be little to **no change** from year one.	**Slight adverse insignificant**

Viewpoint (Refer to Figures 1-4)	Location	Description of Existing View	Receptors represented	Receptor Sensitivity	Operational Impact at winter year 1	Operational effect year 1	Mitigation and level of change at summer year 15	Residual effect
		The saltmarsh and tidal flats continue into the background. A pylon line defines the skyline to the south.		would have a **high sensitivity** to the type of change proposed.	development will appear in scale with the existing built features in the view such that the changes in the view will be barely perceptible, resulting in an imperceptible scale of change. The viewpoint is located along the Wales Coastal Path within Newport Wetland Centre, there are likely to be a few isolated locations where similar views can be experienced by users of the Coastal Footpath and are limited to within the Wetlands where the focus of the view is west across the mouth of the River Usk. This results in a small geographical extent. Due to the size of the proposed development the duration of effect will be long term and not reversible. However, the distance of the proposed development and imperceptible changes of the view, this results in an overall **negligible** magnitude of change.			

13.17 Mitigation and enhancement

Mitigation of effects from construction

13.17.1 The development includes mitigation for the construction effects. These mitigation measures are embedded or 'primary' measures designed to avoid or reduce effects at source. These are described in the CEMP (Appendix A1) and CTMP (Appendix B2), and include a phased construction timeline, hoardings to reduce visual intrusion, and tree protection measures. It is not considered effective to provide additional 'secondary' landscape mitigation measures to further reduce short-term landscape and visual effects from construction.

13.17.2 The principal effects arising from construction identified above (under the landscape and visual assessments) are temporary, short term and reversible. They are already mitigated by measures embedded into the construction phase and are not addressed by landscape mitigation. Therefore, all residual effects remain as assessed for the construction phase, as outlined above.

Mitigation of effects from operation

13.17.3 As with the construction effects, mitigation for impacts arising during the operational phase of the development have been designed into the proposals, covered by a green infrastructure strategy while retaining many of the existing important landscape features. The built elements of the proposed development are clustered and phased sympathetically across the development. The development areas are set within a structure of green and blue infrastructure across the site. Impacts on visual receptors are mitigated by perimeter planting around the edges of the site, and in particular around the edges of car parks.

13.17.4 Due to the extent of the embedded mitigation, there is no additional mitigation proposed to address the residual effects which would arise for the operational phase. Therefore, all residual effects remain as assessed for the construction phase, as outlined above.

13.18 Residual effects

Residual effects from construction and operation

13.18.1 Due to the outline nature of the planning application, the exact details of the proposed development have not yet been finalised. Therefore, the judgements set out under the landscape and visual assessments reflect the maximum parameters of the proposed development. The assessment therefore judges the 'worst-case scenario' and the judgements on significant effects will remain the same at this stage. As this assessment describes the maximum parameters, the as-built effects are likely to be lower than those reported.

13.19 Significance: assessment summary matrices

13.19.1 The table below summarises all of the **significant** assessment judgements for each of the landscape receptors.

Table 13.31: Assessment summary matrices – significant landscape effects only

Receptor (s)	Sensitivity of Receptor	Magnitude (construction)	Significance (construction)	Magnitude (operation year 1)	Significance (operation year 1)	Magnitude (operation year 15)	Significance (operation year 15)
LANDMAP Hendre Lake Park	Medium	Moderate adverse	Moderate adverse significant	Major adverse	Large adverse significant	Moderate adverse	Moderate adverse significant
LANDMAP Wentlooge Level	High	Moderate adverse	Large adverse significant	Moderate adverse	Large adverse significant	Minor adverse	Moderate adverse significant
LANDMAP Wentlooge Levels North West	High	Major adverse	Large adverse significant	Major adverse	Large adverse significant	Moderate adverse	Moderate adverse significant

13.19.2 The table below summaries all of the **significant** assessment judgements for each of the visual receptors.

Table 13.32: Assessment summary matrices – significant visual effects only

Receptor (s)	Sensitivity of Receptor	Magnitude (construction)	Significance (construction)	Magnitude (operation year 1)	Significance (operation year 1)	Magnitude (operation year 15)	Significance (operation year 15)
VP 1 Users of the St Mellons footpath 4a	Medium	Moderate adverse	Moderate adverse significant	Major adverse	Moderate adverse significant	Moderate adverse	Moderate adverse significant
VP 2 Recreational and transport users of Heol Las	Medium	Moderate adverse	Moderate adverse significant	Moderate adverse	Moderate adverse significant	Moderate adverse	Moderate adverse significant
VP 3 Residential properties and recreational users along Ton yr Heol	Medium	Minor adverse	Slight adverse insignificant	Moderate adverse	Moderate adverse significant	Moderate adverse	Moderate adverse significant
VP 6 & 7 Residential properties along Broadstreet Common, recreational users of Wentloog footpath 7	Medium	Minor adverse	Slight adverse insignificant	Moderate adverse	Moderate adverse significant	Moderate adverse	Moderate adverse significant
VP 9 Recreational users of the Hendre Lakes Memorial site, recreational users of the Hendre Lakes public open space.	Medium	Negligible	Negligible insignificant	Moderate adverse	Moderate adverse significant	Moderate adverse	Moderate adverse significant
VP 10 Residential properties along the south east edge of Cypress	Medium	Minor adverse	Slight adverse insignificant	Moderate adverse	Moderate adverse significant	Moderate adverse	Moderate adverse significant
VP 12 Transport users of Fortran Road, the workers within St Mellon's Business Park with views south.	Low	Moderate adverse	Slight adverse insignificant	Major adverse	Moderate adverse significant	Moderate adverse	Slight adverse insignificant