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CARDIFF HENDRE LAKES
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ARUP

CARDIFF HENDRE LAKES

Planning Statement

Outline Planning Application to Cardiff Council

July 2020

Cardiff Parkway Developments Limited

Cardiff Hendre Lakes

Planning Statement

4-50

Pre-application Consultation | 29 July 2020

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 252199-00

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1 Introduction

1.1 Background to the Proposed Development

This Planning Statement has been prepared by Ove Arup and Partners Ltd. (Arup) and accompanies an outline planning application for land to the south of St Mellons Business Park hereafter referred to as 'the site'. The application is submitted to Cardiff Council (CC) as Local Planning Authority on behalf of Cardiff Parkway Developments Limited as the Applicant.

The application seeks consent for a new business district of up to 90,000sqm of campus style employment floor space, together with the construction of a new transport interchange and ancillary development on land to the south of St Mellons Business Park. The full description of development reads as follows:

"Outline planning permission, with all matters reserved, is being sought for: the construction of a business park (up to 90,000m2 - Use Classes B1, B2 and B8), ancillary uses and infrastructure associated with; biodiversity; landscape; drainage; walking, cycling and other transport modes.

Together with the construction of a new transport hub facility, comprising railway station buildings (up to 2,500m2 – Use Class Sui Generis) including ancillary uses), 4 no. platforms, surface car park (up to 650 no. spaces), and associated infrastructure works at land to the south of St Mellons Business Park."

With reference to the ancillary uses, it is anticipated that they would be no more than 3,500sqm within the overall 90,000sqm and be in the A1 and A3 use classes (no more than 2,500sqm with no individual unit being more than 600sqm) to provide a food and beverage offer for employees and visitors to the development, together with no more than 1,000sqm of D1 and D2 uses to offer the principal potential for crèche/nursery, gym, dentist/doctor/pharmacy to support the business park.

The site is cross boundary with the majority of the proposed development located within Cardiff, however small parts of the site are located within Newport. Three separate detailed planning applications dealing with accesses from Heol Las are to be submitted to Newport City Council (NCC) for which a separate Planning Statement has been prepared. The principal technical assessments including the Environmental Statement (ES) and the Transport Assessment (TA) have been prepared to assess the proposed development in its totality and will support all applications. NCC has also been consulted during preparation of the proposals and the assessments.

1.2 Principle of Development

Policy KP2(H) of the Cardiff Local Development Plan (CLDP) allocates land to the south of St Mellons Business Park for a strategic employment site with essential, enabling and necessary supporting infrastructure. The allocation

includes a number of features, including but not limited to the provision of a transport hub and station park and ride including new rail station and 44hectares (ha) of employment land capable of accommodating up to 90,000sqm campus style high quality development similar to the existing business parks at St Mellons.

The outline planning application is compliant with the relevant allocation and therefore the principle of development is established. Subsequently, the material considerations informing the planning application's determination concern the potential impacts that may be generated by the scale, layout and character of the proposal within the context of prevailing site constraints, rather than the principle of development.

Impacts are identified, assessed and mitigated where necessary, or balanced against the opportunities presented by the development, such as providing accessible employment opportunities in an area experiencing socio-economic deprivation and fulfilling a long-standing investment commitment established by the Regional Transport Plan, leveraging the site's location next to the South Wales Main Line (SWML) and enhancing regional connectivity to generate significant socio-economic benefits.

The site comprises predominantly agricultural land located within the Gwent Levels, which is an area of low-lying estuarine alluvial wetland and intertidal mudflats adjoining the north bank of the Severn Estuary. The area is characterised by an extensive network of watercourses (reens and ditches) which drain the surrounding wetlands and were established by Roman settlers in the 3rd century BC.

It is considered a remarkable example of manmade landscape reflecting many centuries of drainage and reclamation from coastal mud flats during the Roman period and onwards. This historical context has led to the area's designation as a Registered Landscape of Outstanding Historic Interest.

In addition to their historical significance, the reens, ditches and wider wetlands are an identified feature within the Site of Special Scientific Interest (SSSI) because of their rich ecological value.[1]

The development seeks to integrate with this natural and historic environment to preserve and enhance important assets whilst creating a high quality employment development and transport interchange.

1.3 The Statement

This Statement sets out the context for the planning application and assesses the proposed development against relevant policies and material planning considerations in order to justify granting consent. The Statement is ordered as follows:

[1] https://naturalresources.wales/media/682619/nlca34-gwent-levels-description.pdf

- Chapter 1 provides the introduction and overview of the application;
- Chapter 2 describes the site location, relevant designations and site context;
- Chapter 3 outlines the detailed pre-application process that has been undertaken for the site;
- Chapter 4 provides a detailed description of the proposed development;
- Chapter 5 outlines the relevant planning policy context;
- Chapter 6 provides the planning assessment within the context of relevant policies and material planning considerations; and
- Chapter 7 summarises the findings of the Statement and justifies the grant of planning permission.

The following principle documents are also submitted in support of the planning application:

- Environmental Statement and its Non Technical Summary;
- Design and Access Statement (DAS);
- Pre-application Consultation Report;
- Flood Consequences Assessment and Drainage Strategy; and
- Transport Assessment.

2 The Site

2.1 Site Location

The site covers an area of approximately 80ha as shown in Figure 1 Site boundary and Location Plan. It lies approximately 8kilometres (km) east of Cardiff and 9km west of Newport with the South Wales Main Line (SWML) bisecting the site, defining two zones of land - north and south. It is located on the eastern edge of CC and therefore the western edge respectively of NCC's administrative boundaries.

The existing character of the site reflects the historic Gwent Levels landscape, consisting of undeveloped farmland reclaimed from the sea, incrementally over the past 2,000 years. The Levels forms a strip of flat land between the Bristol Channel and the hills to the north. A topographical survey shows a maximum range of between 4.7metres and 6.3metres Above Ordnance Datum (AOD), with no distinctive patterns of gradient across the site.

The process of land reclamation has created a distinctive patchwork of rectilinear fields subdivided by reed filled drainage channels, known locally as reens and smaller field ditches giving a strong wetland feel. Historic surface ridging is also present and well preserved.

Faendre Reen, lying adjacent to the western edge of the site, is distinctive locally for its width and more naturalised, meandering course. Interior field boundaries also include native hedgerows and areas of dense vegetation which visually break up the site and restrict wider views, especially to the south. The larger and more open fields in the north-western area of the site are an exception to this.

In addition to the distinctive field boundary, overhead pylons (275kV National Grid Transmission Lines) are a dominant feature of the site. Other utilities which cross the site include a high-pressure gas main, two intermediate pressure gas mains (roughly parallel with each other) and a foul rising main (Dŵr Cymru Welsh Water (DCWW)).

The site lies between St Mellons to the west and the village of Marshfield to the east. The SWML runs south west to north east across the lower section of the site. St Mellons Business Park lies immediately north of the site. The A48(M) lies to the north of the site which is connected via Cypress Drive which runs along the west of the site and leads to Hendre Lake. A corridor of dense wooded vegetation exists on the western side of Faendre Reen.

Figure 1 Site Location Plan

2.2 Site Context

2.2.1 Access

Vehicular access to the site is provided via Cyprus Drive, a dual carriageway providing direct access to the A48(M) and onward access to the M4.

The site is also currently served by the 45B bus route which has a limited timetable. Routes 44, 45, X45, 64 and 65 also serve St Mellons and are within walking distance of the site.

The site is walkable on foot from St Mellons and Hendre Lake Park. Movement between the site is currently restricted by Cypress Drive and Faendre Reen. A Public Right of Way (PRoW) St Mellons No.4A crosses the site from east to west but is currently unpassable.

The Cardiff Cycling Strategy (2016-2026) proposes a Primary Route to run north from the site along Cypress Drive, providing a link to Cardiff city centre. National Cycle Network (NCN) 88 runs along Fortran Road, close to the northern edges of the site, heading eastward to Newport along St Mellons Road, joining traffic-free routes further east.

The SWML runs through site. The site is located approximately 8km from Cardiff Central Station to the west and 9km from Newport Station to the east.

The proposed development of the 'South Wales Metro' includes possible provision of Light Rail Transit as part of local rail service. Cardiff Parkway is identified as *St Mellons Station* on the South Wales Metro plan. These proposals therefore assist in facilitating the wider Metro aspirations.

2.2.2 Designations

The site is wholly located within the Gwent Levels – Rumney and Peterstone SSSI and part of the site forms the Marshfield Site of Important Nature Conservation (SINC). The whole of the site is also located within The Gwent Levels Landscape of Outstanding Historic Interest and the site is partly within The Wentloog Levels Archaeologically Sensitive Area. The site is also crossed by St Mellons No.4A PRoW.

2.2.3 Surrounding Land Uses

The site is surrounded by land in agricultural use, transport infrastructure and urban settlements. The site marks the transition point between the urban extent of Cardiff and the more rural Gwent Levels.

The St Mellons suburb of Cardiff is located to the site's immediate west. St Mellons comprises a late twentieth century low density residential community served by several primary schools, a district centre with an established community hub and open spaces including Hendre Lake - a wetland habitat connected to the reen network.

To the immediate north of the site is the St Mellons Business Park which comprises an early 1980-1990s office based business park typified by low density two storey buildings and car dependency. With the exception of the Heron Marsh pub this is mono-use development.

To the east of the site is open agricultural land within the Gwent Levels and slightly further east the village of Marshfield both within NCC's administrative area. Marshfield is an established village community of approximately 2,500 residents. The village has a historic core, including St Mary's church, a post office and convenience store. The wider village includes areas of more modern suburban housing.

South of the site is further agricultural land within the Gwent Levels and intertidal mud flats adjoining the north bank of the Severn Estuary.

The SWML crosses the site in a south-west to north-east direction, providing a direct transport connection for mainline trains from London to Swansea via Cardiff Central. The site is also within close proximity to the A48(M) which provides a direct road link between Cardiff and Newport city centres.

2.2.4 Topography

The site sits on the edge of the Gwent Levels, marking the transition between the expansive flat, lowland areas to the south and east, the undulating topography of St Mellons to the east and north and hills rising to the north.

As previously stated, the site is largely flat with small localised level changes associated with reens, field ditches, and hedgerows. Typically, higher ground is located along the Faendre Reen edge with a lower section along the southern extent of the study area. The railway is on embankment and a result is typically higher than adjacent land.

2.2.5 Ecosystems

The site and surrounding habitats support populations of protected species including grass snake, barn owl, water vole, otter, bats and hazel dormice. The ecological interest is predominantly limited to the mature continuous hedgerows, primary reens and semi-improved neutral grassland particularly the area designated as a SINC north of the railway line.

2.2.6 Cultural Heritage and Landscape

Chapter 10 of the ES describes the site's archaeological context as being wholly within the Gwent Levels Registered Historic Landscape (Reference number HLW(Gt)2). The majority of the site lies within Character Area 019: Trowbridge Historic Landscape Characterisation, a component part of the Registered Landscape, which is described as a medieval landscape of long, narrow 'planned' fields situated on the lower-lying back fen with drainage provided by a network of major reens and grips (internal field channels), and a series of minor 'green lanes' which may be medieval drove roads, typically delimited by drainage ditches, such as Heol Las [Green Lane] to the east. Heol Las also marks the modern boundary between the Cardiff and Newport Unitary Authorities The remainder of the site falls within Character Area 018: Rumney, described as an irregular field pattern of small irregular shaped fields (preserving lines of former tidal creeks), although

much of the Character Area closest to the application site is encroached by modern development.

The Trowbridge Character area shares the eastern and southern boundary with Character Area 17: Peterstone, which is characterised by trapezoidal blocks of very long, narrow fields defined as Roman. The application site encompasses only a small portion of Rumney Character Area 18, to the west of Pil du Reen.

Glamorgan Gwent Archaeological Trust (GGAT) considers the site to be within a less significant area of the levels, where piecemeal development has caused some fragmentation and its integrity and coherence as a historic landscape has been damaged, but which nonetheless has an important character and forms a buffer to the more sensitive and better preserved Roman landscape to the south.

The landscape study area for the site is primarily made up of the Wentloog Levels, a composite part of the larger Gwent Levels. The Levels form a strip of flat land between the Bristol Channel and the hills to the north. To the south and south-west 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.

The Wentloog 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.

The Gwent Levels landscape includes a number of key features which are present on the site which are integral to both the historic landscape and SSSI designation:

Hedgerows

Hedgerows are the main form of mature vegetation at 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. The hedgerows also help to create a visual break, screening views of buildings and reducing views of the neighbouring urban area.

Trees

Most trees within the site are within hedgerows and on the banks to the reens, with a few located in the middle of open fields.

The trees can be grouped into ‘seasonal wet woodland’ with Goat Willow, Crack Willow and Alder, found mainly to the immediate south of the railway line, and close to reen edges. The second group is mostly of oak in isolated woodland and scrub.

Species-Rich Grassland

Areas of species rich grassland, consisting of native grasses and wild flowers, typically located in areas of the site which have not been intensively grazed or improved. The fields in the south-eastern corner of the site are particularly rich and identified as a SINC in the CLDP.

Reens

Reens are a network of historic, man-made water channels which drain the Gwent Levels. They play a role in transmitting flows around the wider network, whilst field ditches help to drain water from each field into the reens.

The network is central to the historic landscape character of the Gwent Levels and play an important role in the hydrological function of the area.

The site is also situated in close proximity to Hendre Lake Park and a corridor of dense wooded vegetation on the western side of the Feandre Reen which is distinctive locally for its width and more naturalised, meandering course.

2.2.7 Hydrology

The Welsh Government Technical Advice Note 15 (TAN15) and Natural Resources Wales (NRW) Flood Maps show that the site is located entirely within Zone C1 and within Flood Zone 3 respectively.

Baseline tidal flood modelling has been carried out to check the extent of flooding during 1 in 200 and 1 in 1,000 year tidal flood events, taking into account 75 years of climate change. The modelling demonstrates that for the 75 year climate change scenario, the 0.1% event flood level is approximately 5.25m AOD.

Consideration has also been given to the risk of flooding from pluvial sources. During high rainfall events, water held and transmitted in the reen system may overtop and spill onto the site. Baseline pluvial modelling has also been completed for the 1 in 1,000 year pluvial event. The modelling demonstrates some shallow flooding in places, particularly in the northeast.

The proposed development is located on a greenfield site with a proportion of the water falling on the site during rainfall events lost through natural processes such as infiltration, interception and evapotranspiration. The remainder ultimately discharges into the existing reen network which exists within and around the site.

Ground investigation results have shown that the ground conditions have insufficient infiltration capability to discharge through infiltration. It will therefore be necessary to discharge surface water run-off generated from the proposed development at an agreed runoff rate to the existing reen network.

2.2.8 Ground Conditions

The majority of the site has not been subject to any major previous development. The exceptions are the main railway line which was built in the mid 19th century

and the overhead electrical cables/pylons and gas governors which were formed between 1964 and 2002. The Green Lane overbridge which crosses the railway on the western boundary of the site has recently been reconstructed, with both bridge and approach embankments supported on piled foundations.

The preliminary ground investigation confirms that the site is underlain by very soft alluvium with peat bands, resting on glacial till, which in turn rests on either Mercia Mudstone or St Maughan's Group mudstone. The depth of soft alluvium and peat vary between 1m and 7m, potentially greater in areas of buried channels.

2.2.9 Services and Utilities

The site is crossed by a number of services and utilities (refer to Section 2.8 of the DAS for a visual representation). A high-pressure gas main crosses the site from the site's north-east to south-west corners. The gas main has a 30m wide Wales & West Utilities easement, 16m wide Health and Safety Executive statutory consultation area 'inner and middle zone' and an 82m wider HSE statutory consultation area 'outer zone'.

275kV National Grid transmission lines also cross the site south east-north west and south-east to south. National Grid discourages new buildings within the buffer zone, however suggest that uses such as green space, footpath and cycleways and attenuation ponds may be appropriate.

Furthermore, two intermediate pressure gas mains cross the site east-west with associated 6m wide easements, a foul rising main with an associated 6m wide easement crosses the site from north-east to north-west and a rising main adjacent to Cypress Drive with an associated 6m wide easement.

2.2.10 Site Ownership

The Hendre Lakes site is currently in a number of different ownerships:

- **Cardiff Parkway Development Limited** own or have options over the majority of the site, including the full extent of the areas where new buildings and associated development is proposed, and areas which are required for essential environmental mitigation measures.
- **Cardiff Council** owns land to the west of Faendre Reen, including areas which are proposed vehicle access routes and green spaces associated with the proposed development.
- **Newport City Council** owns land along Heol Las (adopted highway).
- **Wales & West Utilities** own land associated with a gas pressurising station.
- **Network Rail** owns the existing railway line, embankments and associated infrastructure within the rail corridor.
- **Other land owners**: there are a series of agricultural holdings on land to the south of the railway line which are not required for the development.

2.3 Planning History

The planning history for the site is limited to a small number of prior approvals for telecommunication and drainage infrastructure works. The site is allocated within the CLDP for the application scheme.

2.3.1 Planning Application History

Table 1: Planning Application History

Application Ref	Description	Decision
00/01916/R	15m extendable and shareable telecommunications tower	Prior approval granted 10 November 2000
01/01566/R	Telecommunications equipment on existing national grid pylon	Prior approval granted 21 August 2001
07/01813/E	Replace culvert	Prior approval granted 28 September 2007
20/00300/MNR	Prior approval determination for the installation of electronic communication apparatus at Rhubina Farm	Pending determination

2.3.2 Planning Policy History

The application site has been identified as a growth area in the CLDP 2006-2026. **Policy KP2(H)** allocates land to the south of St Mellons Business Park as a strategic employment site. As part of this allocation, essential/enabling infrastructure is identified, which includes for the provision of a transport hub including a new rail station served by relief line rail services connecting to the city centre and services to Cardiff Airport and London via Cardiff Central. Land to the south is reserved for mitigation associated with the development in the north.

This strategic allocation is also supported by **Policy T3** which outlines that new rail stations which can be easily accessed by walking, cycling and local bus services, facilitate rail park and ride, where appropriate, and meet the access needs of all users, will be supported. The proposed Cardiff Parkway station is also identified as strategic transportation infrastructure under **Policy T7**. It is within this context that the concept and rationale for the scheme has been developed.

3 Pre-application

3.1 The Pre-application Process

From the outset, a collaborative approach has been adopted for the pre-application process, engaging with both key stakeholders and the local community as set out below:

3.1.1 Cardiff Council and Technical Consultees

A Planning Performance Agreement is in place for this application and regular pre-application meetings with CC have been held to seek input on scope and direction from the LPA and their specialist officers on design, environmental and other technical studies. A series of briefing meetings have also taken place with officers to share progress as the proposals have developed.

An Environmental Impact Assessment (EIA) Scoping report was submitted to CC on the 5 July 2018. CC subsequently issued its Scoping Opinion on the 25 September 2018. CC consulted a list of consultees in the process of forming its Scoping Opinion. The ES has been prepared based on the responses received. Full details of the scoping responses along with how these have been responded to in the EIA are included in Appendix A-2 of the ES.

In addition to engagement with CC, various other technical consultees such as officers from NCC, NRW, Glamorgan Gwent Archaeological Trust Ltd. and utility providers have been consulted during the pre-application process. Their input and guidance has helped inform the planning application and ES. This has been particularly important given the site's sensitive location.

3.1.2 Public Consultation

In recognition of the development's significance in the local area, a four week long period of early engagement was undertaken in November and December 2019 in order to ensure that the local community and stakeholders had an opportunity to understand the potential benefits of the project and comment on the proposals at an early stage in the design process. That engagement activity included:

- A community newsletter issued to more than 10,000 residents in the St Mellons and Marshfield areas;
- Emails sent to stakeholder, community and business groups to promote the public engagement activity;
- Media activity to promote engagement activity, securing press coverage in South Wales Echo, Western Mail, Wales Online, BBC Wales breakfast, Cardiff Local TV and Wales Business Insider;
- Political briefings with key ward councillors, community councillors, MPs and AMs;
- Social media activity to promote the events and how people could get involved;

- Posters placed in key areas in St Mellons and Marshfield and shared with businesses to promote engagement activity;
- Launch of a dedicated bilingual project website with information on the proposals and a dedicated feedback questionnaire (www.cardiffhendrelakes.com);
- Launch of community contact centre with freephone, freepost and community email address for local people to ask questions directly to the CPDL project team;
- Two public engagement events, one in St Mellons and the other in Marshfield, attended by more than 250 people; and
- Bilingual materials to support public engagement activity, including a booklet detailing the proposals, an online and hard copy feedback form and event materials.

Around 150 people completed hard copy or online feedback forms.

The scale of the proposed development also means that it must comply with the Pre-Application Consultation requirements of the Town and Country Planning (Development Management Procedure) (Wales) Order 2012. Consequently, stakeholders and the public will be able to view and comment on the draft planning application documentation and plans (including for those parts of the application in Newport) in advance of formal submission.

Full details of the pre-application consultation activities undertaken will be presented in the Pre-application Consultation Report which will be submitted in support of the application.

4 Proposed Development

4.1 Outline Planning Application

This planning application is being made in outline with all matters reserved (layout, scale, landscaping, access and appearance).

Development specifications and parameters for the site are set out in the Parameter Plan which forms part of the outline planning application. The Parameter Plan provides information on the scale, layout, density and form of development and has provided the basis for the ES.

As this application is being made in outline, the submitted illustrative masterplan layout provides the overall design parameters for the development. Other plans establish guiding principles for the arrangement and provision of green infrastructure for example to guide further applications that will be submitted within this framework at the reserved matters stage.

In addition, the DAS sets out illustrative information as a framework for how the detailed design could be developed.

4.2 Proposed Development

A detailed description of the proposed development is outlined below, in summary the development comprises the following:

Table 2: Summary of Development Proposals

Development Proposals	
Employment	Employment floorspace would comprise a total of 90,000sqm GFA across the site.
Railway station	The railway station building would be up to 2,500sqm and would be situation along the existing mainline railway, adding four additional platforms.
Transport interchange	A 650 space station Park and Ride facility, bike storage facilities (cycle parking for up to 100 bikes), taxi rank and bus stops within 100m of the railway station and of each other, connected via a high-quality public realm.
Car parking	A Park and Ride car park at the station for up to 650 cars would be provided and there would be a limited number of on street parking provision (not yet defined). This is referred to as 'Station park and ride'. Parking would be provided for other land uses, but this will be on a plot basis and/or in shared parking areas. These parking allowances will be based on Cardiff parking standards.
Building heights	A range of building heights are proposed as shown on the Parameter Plan. Building heights would be greatest around the station potentially being up to 15 storeys (+ 1 for building plant).

Development Proposals	
	Heights would reduce with distance from the station; the central area buildings would be up to 12 storeys, with buildings up to six storeys in the north east corner of the site. It is important to note that these represent maximum heights within the defined areas and that they are not average heights. Some buildings within these areas are likely to be lower.
Building densities	There would be higher density development around the proposed station and public transport interchange. Details on density is not yet defined.
Landscaping	A landscape would be created which responds to the rich and sensitive heritage and ecology of the existing site. The landscape has been designed to have a number of functions including active travel, meeting space, play space, wildlife, waterways, recreation and trails.
Biodiversity	The ecological strategy for the development is to retain as much habitat as possible, creating more habitat than is removed and work towards net biodiversity gain.
Energy	A robust assumption is made that the energy from the site will be 'business as usual' being a mixture of electricity and gas. This would be reviewed at detailed design stage.
Foul drainage	Foul water generated by the development would be transmitted via a new foul sewer network to the existing DCWW sewers. Strategically located foul pumping stations would be required to pump foul water to the DCWW sewers.
Surface water drainage	Sustainable drainage is at the heart of the development character with drainage reens being part of a long history of land management over this coastal flood plain.
Site levels	The proposed development areas would include provision for a raised plateau to ensure that developed areas are flood free during a 1 in 200 year tidal flood event and a 1 in 100 year pluvial event. Depth of flooding would not exceed 0.6m during 1 in 1,000 year flood events. To ensure the site meets the requirements of TAN15, existing site levels of access, buildings and public realm need to be raised. Proposed development areas would include provision of raised plateaux. Existing topography shows a maximum range of between 4.7m and 6.3m AOD; levels would need to be raised to 6.0m AOD.
Access and movement	Walking and cycling would be prioritised throughout the site. Access routes for pedestrians and cyclists would be created at various points around the site perimeter as well as throughout, connecting areas of the site to each other and to the communities surrounding it. Vehicle access into the site would primarily be from a new junction on Cypress Drive in the north-eastern corner of the site. A secondary access point would be provided from the west with an enhanced junction of Cypress Drive/Sandbrook Road. Tertiary access to the two development parcels north of the power lines would be via two new priority junctions on

Development Proposals	
	Cobol Road. The internal highway network has been designed to limit the proportion of traffic routing through the site.
Lighting	An overarching lighting hierarchy would be applied to the site suited to the different areas and uses. A detailed lighting strategy would be prepared at reserved matters stage.
Main park	A new, accessible public park would be created to connect the existing Hendre Lake park into the site's wildlife corridor on the west of the site and to the wider St Mellons area.

4.2.1 Design Principles

The key elements of the concept masterplan have been developed following the identification of constraints at the site and feedback from early engagement sessions with key stakeholders. The key elements of the concept masterplan include:

- Retaining the primary reen network within and surrounding the site;
- The retention of the utility corridor, creation of an inverted 'v' landscape area, and co-location of the habitat mitigation;
- The creation of 3 'areas' of development set around the primary reens and wildlife corridor;
- Development blocks orientated to maximise solar gain and views to the Faendre Reen corridor;
- A focal public space around the transport interchange; and
- Primary access from the north via Cypress Drive to allow for a largely car-free core with the main station parking and vehicle access located to the east of station.

The masterplan proposes four distinct character areas that reflect and respond to the context of the site, proximity to the new transport interchange and its relationship with surrounding areas.

1. **Business District -** The heart of the development, focussed around a high quality, vibrant public realm spine which helps pedestrians and cyclists move through the site and integrates the development with surrounding areas. The business district would be a key address for new businesses, framed by new buildings. Its character is framed around a central linear water feature that creates a distinctive and attractive environment for people to spend time.
2. **Station Square -** The main point of arrival and departure for people coming to the site by rail and bus, focussed around the new interchange. Surrounding development would be concentrated here with taller buildings and a more urban character reflecting the importance of this area. The heart of this would be a bustling square framed with active ground floors and amenities to support life beyond the workplace and to animate this key space.

3. **Main Park -** A significant new open space for the local residents, visitors and business community, connecting people with the natural environment of the Gwent Levels. The park contrasts the Station Square area by creating an open, green landscape. It would provide a vital recreational resource for people to meet, walk over lunch, for children to play and for events, as well as contributing to habitat creation and sustainable water management.
4. **Wildlife Corridors -** Green corridors following the Faendre Reen and the existing utilities corridor. These areas would create a series of connected habitat rich spaces. New paths to create recreational routes for walking and cycling would allow people to experience nature as they move through the site. Lower scale buildings would be set within this landscape, sensitively integrated with the green character of the surroundings.

4.2.2 Employment

The employment floorspace at the site would be located within the business district and would comprise a total of 90,000sqm in Use Classes B1, B2 and B8 providing employment opportunities for approximately 6,000 people.

Employment areas would be across all the developable areas of the site alongside ancillary uses. However, the higher density development and taller buildings would be concentrated around the station square to create a focus for workplaces in the most connected part of the proposed development.

Mixed employment types and floorspace would help start-up and small and medium sized enterprises to thrive, as well as supporting established larger companies. Targeted employment sectors would include those identified in the Cardiff Capital Region Industrial and Economic Plan which includes technology, financial and engineering sectors.

4.2.3 Transport Interchange

The interchange would be the main point of arrival. It would be a space that provides opportunities to change between different modes of public transport, designed around a central plaza which would have ancillary uses such as food and beverage outlets. The interchange will also provide links to the wider cycle and pedestrian network.

Railway Station

The new railway station to be known as ‘Cardiff Parkway’ would be located along the existing rail mainline which consists of two lines (four tracks); the main line and the relief line. The relief line would be slued to the south of the existing alignment to allow for the provision of four platforms which would have a footbridge between the platforms. A service yard would be provided to the west of the main station building.

The station building would be up to 18m AOD (approximately 12m high) and consists of a main concourse and a mezzanine level. Around the building a public

square is proposed to create an immediate first and last impression. Water features and planting would be carefully incorporated into the public square to manage surface water using the same techniques that have sustained the Gwent Levels.

Park and Ride

A Park and Ride facility of up to 650 spaces would be provided to the east of the railway station (north of the rail line), which would include wheelchair accessible car parking. Bike storage facilities (cycle parking for up to 100 bikes), taxi rank and bus stops would be within 100m of the railway station and of each other, connected via a high-quality public realm. There is potential for cycle hire providers such as Next Bike to install docking stations in the area (and throughout the development) subject to commercial agreement.

4.2.4 Car Parking

In addition to the station Park and Ride that would be integral to the transport interchange, car parking for other land-uses would be provided on individual plots and/or in shared car parking areas, subject to the requirements of each development parcel and CC guidance. It is anticipated that these parking areas across the site could accommodate up to 1,800 cars. Electric Vehicle (EV) charging points would be provided in line with guidance (10%) across all car parking areas, with passive provision provided for future upgrade.

4.2.5 Public Open Space

The public open space strategy for the site would be broadly categorised into three types: green open spaces, civic open spaces and permeable plots for drainage/attenuation.

Green Open Spaces

As part of the green open spaces the Main Park would form a cherished park framing the gateway to the Gwent Levels. The park would be a dynamic landscape that promotes niche ecological areas, water sensitive design solutions and an active community programme.

The Faendre Reen edge would form a natural buffer to the west side of the site. A new footpath would be created along the edge, allowing people to walk the full perimeter, close to nature, and creating an extended walk to Hendre Lake. Three new crossing points would be created over the reen, connecting St Mellons through the wooded land to the west. Pedestrian and cycle routes from Cypress Drive to the station would be greatly enhanced by creation of these access points.

The Wildlife Corridor would run along the east side of the site, providing an ecologically rich buffer to the development zone. This area would be abundant with new habitats created for dormice: a continuous canopy of trees and shrubs of specific species including the staple Hazel. Part of this area would also hold ground level water attenuation and trees would be planted such as willow and

alder that are suitable for wet woodland. A public footpath would run across the corridor allowing a scenic route to and from site.

Civic Open Spaces

The Station Square would be a significant civic plaza and public realm forming the gateway to the Gwent Levels, with integrated environmental design solutions to reinforce the sustainability and ecological profile of the new district. The Station Square would be alive with verdant planting and the sounds of water to welcome people and encourage them to explore the area or simply sit back and relax in the peaceful setting.

Further public squares and pocket parks would be distributed throughout the site and would vary in character, each offering a distinct sense of place. These plazas and parks offer opportunities for gathering, play and connection with nature.

The public realm spine would be at the core of the development. Running north to south, it is a continuous multi-modal route, accessible to vehicles, pedestrians and cycles. The route would have blue and green infrastructure at its heart. A water feature would run along the length of the route, providing opportunities to dwell, rest and meet. Densely planted with trees and other vegetation it would exemplify the integration of nature, well-being and urban use that characterises this development.

A network of green streets would also extend from the civic heart out towards surrounding natural areas. The streets would act as a living infrastructure featuring rain gardens, swales, tree planting and green frontages, making the streets a pleasant place to walk, encouraging active travel for those on site and the adjoining community of St Mellons, whilst contributing to green connectivity and the microclimate.

Permeable Plots

Car parking plots would feature vegetated swales and a high proportion of planting amongst the bays. There is potential for parking plots to have a transitional nature. Plots reserved for parking in the near future could be designed to have a meanwhile use: serving as tree nurseries for the site for example. Parking spaces can be freed up over time and trees can be relocated on site.

The smallest and least accessible of plots and spaces on site could contain valuable micro habitats. These spaces could include bat and bird nesting boxes, insect hotels, and extensive (brown) roofs which could provide for invertebrates. Log piles, bird perches and areas allowing for natural plant colonisation and succession would be encouraged.

4.2.6 Building Heights

Taller buildings would be located around the station with areas of reduced height towards the north of the site. The exact location of buildings has not developed at the outline planning stage, so these locations have not yet been fixed. The location of tall structures on site will need to be tested as part of the detailed design stage

to make sure that shading of reens is minimised to protect reen habitats and wildlife.

The heights of the buildings would be zoned with the tallest buildings located along sight lines and public spaces to assist with wayfinding and within the following ranges:

- Station Zone: up to 15 storeys;
- Main area: up to 12 storeys;
- Northern parcels: up to 6 storeys.

It is important to note that these heights represent the maximum heights and not average heights. The net total size of buildings would be limited by the total amount of proposed floor area within the proposed development. Not all buildings within each of these zones would be at these shown heights.

4.2.7 Building Densities

Section 3.3 of the DAS presents the 'anatomy' of the masterplan and (as elsewhere in that document), illustrates that within the overall 90,000sqm floorspace limit, density will vary across the site, there will be a cluster of higher density development around the proposed station and public transport interchange. This business district would be the main concentration of activity within the proposed development which would reduce in density moving north across the site. Details of building densities would be determined at the reserved matters stage.

4.2.8 Landscaping

Across the site, the landscape strategy is focused on ensuring that surface water run-off is managed through Sustainable Drainage Systems (SuDS) as part of an integrated public realm.

A landscape strategy and parameter plan have been developed based on eight principles that have been established for the development (as described in Section 5.1.2 of the DAS) and reproduced over:

CONNECTED HABITAT

The development will provide a continuous and connected series of natural green areas. This large wildlife corridor preserves the existing rich habitats and enhances the quality and quantity of planting, providing opportunities for habitat mitigation as well.

CO-EXISTENCE

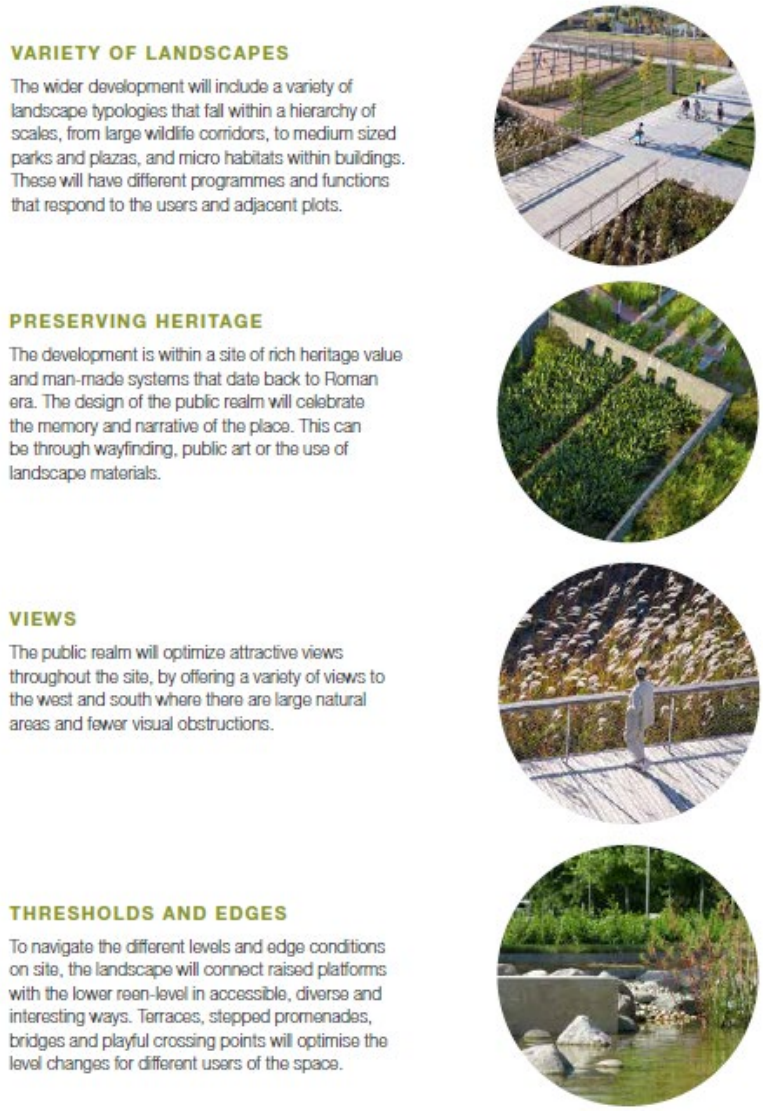
People and wildlife will share the site in mutually beneficial ways. By expanding development beyond a built environment exclusively for human consumption and comfort. The reen network of the area is home to unique native flora and fauna including some UK priority species. From the smallest vascular plant in the world to predators including otters and the little egret.

SUSTAINABILITY

The site aims to re-use materials as much as possible, for example re-using soil, water, energy, and ensuring a local supply chain.

HEALTH AND WELL-BEING

The proposed development aims to improve public health and community well-being by increasing opportunities for recreation, play, active travel, improving air quality and minimising noise pollution among other things.



The landscape strategy would be advanced at the detailed design stage but would maintain these principles to develop an approach that would be implemented across the whole site in a consistent way. In general, the site can be divided into three planting character areas which align with the levels of management and maintenance that each area will require:

- **Natural areas to include trees, hedgerows and grassland:** the aim of these areas would be to achieve biodiversity net gains. Each area would have the characteristics of the habitat they are seeking to enhance and whilst not accessible, would have routes passing through them.

- **Civic areas including parks, squares and the community 'spine' of the development:** landscaping of the civic areas would include planting to promote well-being for employees and public using the space. Standard and semi-mature trees would be used to frame these spaces to provide a sense of place and continuity which would add to amenity whilst also providing additional biodiversity.
- **Plots (permeable and connective):** across the whole site there would be opportunities for landscaping/planting to enhance the public realm and biodiversity. This includes roadside wildflower planting, rain gardens and swales, permeable paving, multi-purpose parking areas, roofs, living walls, micro-habitats and biodiverse native tree planting.

Integration with the existing landscape has been key in the design development process and would continue to be central as the scheme evolves.

Landscape character areas have been defined for the proposed development, based on the existing site's environmental characteristics aligned with the stated development vision. Figure 2 identifies these landscape character areas.

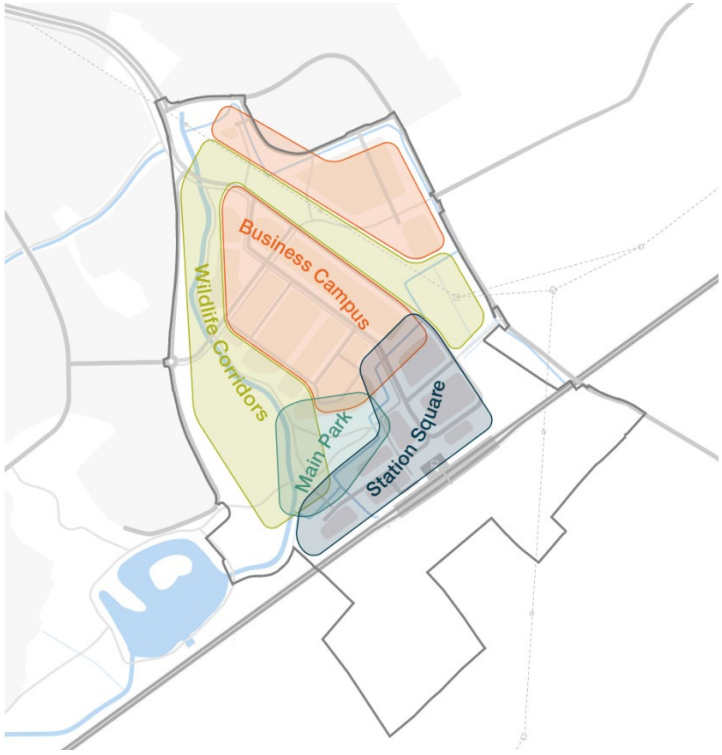


Figure 2: Landscape Character Areas

4.2.9 Biodiversity

The masterplan for the site has been developed around a strategy of integrated green and blue infrastructure which mitigates ecological loss and enhances overall biodiversity across the site.

The ecological strategy for the development is to retain as much habitat as possible, create more habitat than is removed and work towards net biodiversity gain. This is based on a full understanding of the habitats and species within the site boundary (and beyond) which has been obtained through extensive survey work undertaken over the last 2 years.

Notable ecological strategy components include:

- The 'Wildlife Corridor', running north west to south east, comprising a line of double hedgerows, enclosed by a swathe of wet woodland along one edge, and hazel-dominated woodland and a scrub/species-rich grassland mosaic along the other edge;
- A 12.5m wildlife buffer around the Ty Ffynnon Reen, running north east to south west, comprising 1-2m verges of vegetation suitable for water vole foraging on the reen banks, alongside a hedgerow set back from the reen (to avoid shading), providing further connectivity across the site for dormice;
- A network of 4.2km of new species-rich intact hedgerows, planted strategically throughout the proposed development to maintain connectivity for dormice and foraging/commuting bats;
- Maintenance and enhancement of all primary reens, and the introduction of 3.72km of new secondary reens and ditches to replace those secondary reens and ditches that will be lost;
- New woodland strip planting in the south, which when combined with the new woodland planting within the Wildlife Corridor, totals approximately 2.6ha (of 1.8ha dry woodland and 0.8ha wet woodland); and
- 3.2ha of new species-rich wet grassland planting and 8.9ha of new species-rich dry grassland planting.

4.2.10 Energy

It is assumed that energy usage on the site would be electricity sourced from the main electricity network along with gas boilers for heating. Consultation with energy companies has confirmed that there is sufficient capacity within the network to provide the additional load.

In addition, it is envisaged that building developers/occupiers would seek to integrate renewable energy generation where possible, on a building by building basis. They would also be constructed to be energy efficient across their lifetime to minimise energy demand.

4.2.11 Foul Drainage

Onsite buildings would generate foul flows and as such dedicated new foul drainage networks would be needed to serve the proposed development to transmit the waste to the nearest DCWW sewer. As no heavy industrial premises

are proposed it is considered unlikely that non-domestic foul flows would be generated.

The new foul sewer networks proposed to transmit foul flows generated from the new development would follow the proposed road network with spurs located at each development plot to receive foul flows. Due to the topography of the site and existing location of DCWW sewers, foul pumping stations would be required.

4.2.12 Storm Water Drainage

The proposed development is located on a greenfield site with a proportion of the water falling on the site during rainfall events lost through natural processes such as infiltration, interception and evapotranspiration. The remainder ultimately discharges into the existing reen network. Developing the site will create impermeable areas, preventing these natural processes and therefore increasing the run-off rate and volume from the site.

SuDS would be implemented across the site which aim to manage rainfall on site using methods that mimic natural processes, by making use of the landscape and vegetation to control the flow, volume and quality of the surface water runoff. In addition to this, SuDS also provide amenity benefits by providing aesthetically pleasing and natural landscapes, and biodiversity benefits by creating habitats for wildlife and vegetated areas.

The proposed development is not foreseen to have sufficient demand for non-potable water to make rainwater harvesting a viable option. Ground investigation results have shown that the ground conditions have insufficient infiltration capability to discharge through infiltration. It is therefore proposed to discharge at an agreed run-off rate to the existing reen network which are located around the development. It should be noted that the detailed design of the drainage will be approved under a separate consenting process by the SuDS Approving Body (SAB), in this case Cardiff Council.

4.2.13 Flood Management

As a result of the proposed development introducing hard surfaces to an area of existing green field, there is a need to provide an area of land that would be able to accommodate the water displaced from these previously permeable areas. A flood compensation area to the south of the existing railway, would be created to act as the primary storage area for excess surface water, with smaller secondary areas integrated into the north of the site. The primary area has been designed to fit within the existing field patterns, so as to avoid removal of hedgerow. As part of the flood mitigation works it is necessary to widen Green Lane Reen by 3m to the west, for a distance of 500m north of the Gas Pressure Reduction site. The works would also include two new sluice gates south of the railway line controlling flow along Railway Reen and Green Lane Reen.

4.2.14 Site Levels

The site sits on the edge of the Gwent Levels, marking the transition between the expansive flat, lowland areas to the south and east, the undulating topography of St Mellons to the east and north, and hills rising to the north. The site is largely flat with small localised level changes associated with reens, field ditches, and hedgerows. A topographical survey shows a maximum range of between 4.7m and 6.3m AOD, with no clear patterns of gradient across the site.

Access, buildings and public realm areas would be placed on a raised plateaux which would raise site levels to 6m AOD and above. This would ensure that developed areas are flood free during a 1 in 200-year tidal flood event and a 1 in 100-year pluvial event. Depth of flooding would not exceed 0.6m during 1 in 1,000-year flood events.

4.2.15 Access and Movement

Section 2.9 of the DAS describes and identifies the location of the vehicle and pedestrian access points on Cypress Drive, Cobol Road and Heol Las. Primary vehicle access would be from a new junction on Cypress Drive in the north eastern corner of the site. Cypress Drive would be reconfigured to provide priority to vehicles entering the site.

A secondary vehicle access point would be provided from the west, from an enhanced junction with Cypress Drive/Sandbrook Road. This would be reserved for emergency access and public transport.

The two development parcels in the north east of the site would be accessed separately via a new priority junction on Cobol Road.

Access routes for pedestrians and cyclists would be provided to create connections to:

- Cypress Drive in the north-east corner of the site, and onward connections via the proposed Primary Cycle Route ‘C2’, linking paths into St Mellons;
- Sandbrook Road, and onward footpath routes linking to St Mellons;
- Hendre Lake Park in the south western corner of the site;
- St Mellons and business parks to the north of the site, via the street network;
- St Mellons Road to the east of the site, and onward connections via National Cycle Network route NCN88; and
- Heol Las, above the pressure reduction station in the eastern part of the site, and onward access to the rural lane network.

The delivery of the improvements to the crossings of Green Lane Reen at St Mellons Road and the pressure reduction station are dependent on the acquisition of interests in land which are not currently within the applicant's control.

The ES has therefore been prepared to describe and assess two forms of development proposal; one which includes the core elements of the development described in Chapter 3 of the ES but does not include the improvements (to the crossings of Green Lane Reen and the pressure reduction station), and a second "optimal" form which does include those elements.

The improvements are proposed to enhance active travel connections between the proposed development and the Newport Council administrative area. Where there are impacts of the development proposal which only occur (or are only mitigated by) through those active travel connections, the term "optimal proposed development" is used to indicate that the development including those active travel connections is being referred to.

The ES reports the environmental effects of the proposed development, as described above (and referred to as the proposed development throughout the ES), which includes two distinct areas; the business district and the railway station.

The latter two of the above bullet pointed list are potential connection opportunities that form 2 of the 3 full applications to NCC. The development is not reliant upon them, but they open up the potential for improved active travel linkages for residents to the east of the site to the station environs.

Within the site, the street hierarchy would include the primary vehicle access road running from Cypress Drive to the station park and ride which would avoid the main central areas of development. Secondary streets would provide additional vehicle routes into the main body of the site and the north eastern parcels of the site providing resilience for gaining access into the site in the event the primary route was impeded. Tertiary streets would provide an interconnected network of smaller streets providing permeability to all plots and supporting pedestrian movement away from vehicles.

A main spine route would be provided passing through the key public realm of the site and providing vehicle access for these areas. This would be lightly trafficked and of non-standard carriageway design to encourage low traffic speeds and cycling and walking priority.

The existing PRoW would be realigned within the development but would maintain the existing access points at similar locations. The layout of the site aims to prioritise walking and cycling with traffic speeds of 20mph or lower throughout the site. Wayfinding would be provided across the site to facilitate active travel by promoting the key active travel routes as the primary means of moving about the site.

4.2.16 Access works on land in Newport

Access into the development from the east involves works on land in NCC's administrative area. This outline application establishes the principles of the locations of the three access points (as illustrated on the Master Site Plan), with the detail being the subject of full planning applications to NCC accordingly to consent the works.

It is to be noted that the development is not reliant on the two north eastern accesses for construction or operation of the development, but that they are an enhancement from an active travel perspective. The south eastern access is required for construction and maintenance as well as access to private land.

The below is a summary of the 3 full applications to NCC:

Full Application 1: Public Right of Way (PRoW)

This outline application establishes the principle of the PRoW (which is currently unpassable into the site due to a missing reen crossing) being useable once more as part of localised widening works to Green Lane Reen.

It is proposed to provide a new bridge wide enough to facilitate a 3m wide combined footway/cycleway so that it could facilitate an shared use active travel access point for Newport 'users' into/out of the 'completed' scheme.

The construction and use of the structure is entirely dependent upon NCC granting planning permission for the works and the use of it as an active travel access point. Implementation by the applicant will depend upon securing rights to undertake these works both within Newport and Cardiff.

Full Application 2: Pressure Reduction Station

The full application is to provide a 4m wide shared use active travel route for Newport 'users' into/out of the 'completed' scheme, through the upgrading of the existing access with a re-surfacing of the slab, fencing, bollards and signage.

The implementation of any full planning permission will rely upon this outline providing planning permission for the upgrade works within Cardiff. Implementation by the applicant will also depend upon securing rights to undertake these works both within Newport and Cardiff.

Full Application 3: South of Railway Line

The full application is to provide a permanent access for railway infrastructure related maintenance as well as access to private land south of the railway line. The land includes an existing bridge over the reen and this will provide CPDL with vehicular access into the southern lands. This bridge has the capacity to continue to be used for agricultural access to the southern lands in advance of the approval of the Reserved Matters Application (for the design of the southern access junction). The bridge is not being considered an option for construction purposes.

The new junction is sized to accommodate potential construction access. Works within Newport are minimal and are related to the mouth of junction i.e. kerbing, fencing and white lining. An earthworks structure will also be needed which ties into the existing rail overbridge related to one of two new penstock/tilting weirs.

This outline application includes the construction of the new access point the two new penstock tilting weirs – one of which is partially within Newport.

This outline application seeks approval for the principle of the works within Cardiff. Implementation will also depend upon securing rights to undertake these works both within Newport and Cardiff.

In relation to the consenting of full application 3, it is intended that associated access and penstock works within Cardiff (south of the railway line) will be consented through the discharge of condition(s) attached to this outline which will be submitted concurrently with the submission of the applications to discharge related conditions within Newport.

4.2.17 Lighting

Lighting would need to balance the requirements of night-time activity, access and safety requirements as well as ecological sensitivities and the need to minimise light pollution. Lighting would be tailored to the needs of the different areas of the site which would have distinctive characters and lighting requirements:

- **Transport interchange and station square:** this would be an urban environment requiring higher lighting levels to promote safety and to create a vibrant evening economy;
- **Public realm spine and access routes:** the aim of lighting here is to aid site legibility, particularly around key public spaces, and to provide safe environments for access (both footpaths/cycleways and trafficked routes); and
- **Waterways and habitats:** lighting would drop in areas of waterways and ecological habitats, only being included for public wayfinding and safety.

In order to control levels of lighting across the site, measures may include curfew periods (to reduce light levels during periods when less light is needed – typically between 11pm and 6am), control systems which may use dimming or timing and careful selection of the design and positioning of lighting.

4.2.18 Construction Access

There are a number of existing and proposed accesses onto the development site north of the railway line which could be utilised for site construction activities including surveys, clearance, import of materials, workforce travel and export of materials. A combination of locations is likely to be used during the construction programme, with these reflecting different access requirements, constraints, and phasing of activities.

North of the railway line access into and out of the site for construction will vary over time reflecting the different phases, safety considerations and ecological constraints. The assessment has considered the effects of two options for access into and out of the site for construction:

1. All construction traffic movements north of the railway line, gains access into and out of the site from the proposed secondary access at the Cypress Drive/Sandbrook Road roundabout on the western boundary of the site. This is the preferred option.

2. All construction traffic north of the railway line, gains access into and out of the site from an access route north of the gas reduction station access on Heol Las on the eastern boundary of the site. This access is subject to a separate planning application to Newport City Council. While the assessment allows for HGV access it is proposed that this route is only used for initial activities and will not be used by HGVs.

By assessing these two scenarios a robust assessment of all receptors along the eastern, northern and western boundaries of the site has been undertaken, allowing flexibility in the final selection of construction accesses during delivery of the project.

For both options there continues to be construction traffic movements associated with railway and station building works south of the railway line, with this access taken from Heol Las.

A Construction Traffic Management Plan (CTMP) will be prepared to describe the ways in which vehicles will enter and leave the site during construction. The CTMP will ensure the impacts of construction traffic are effectively controlled.

4.2.19 Construction Phasing

Construction of the proposed development includes a number of phases to include some areas wholly associated with mitigation works. Considerations which fed into the development of the phasing includes the requirements and constraints resulting from:

- Planning, permit and licenses requirements;
- Ecology and landscaping which needs to take account of different protected species across the site and habitat capacity where this is important in terms of relocation of species and habitat creation. The need to clear habitat also results in phasing implications in terms of seasonal constraints;
- Flood mitigation works which require the flood compensation works to the south of the site to be completed prior to land raising,

A period of five years is anticipated for completion of earthworks, utilities, buried services, main highways, flood compensation and ecological works. Within the five years, the site would be brought forward in a number of phases in response to market conditions.

Ecological and flood mitigation would be undertaken, as required, in the initial phase, with it anticipated that these works will be undertaken during 2021 and 2022. Within the redline, new tree and hedgerow planting will be undertaken in 2021 within the Wildlife Corridor and areas to the south of the railway. This will

allow new habitat as much time as possible to mature prior to removal of any hedgerow in later phases of the earthworks programme. In areas north of Ty Ffynnon Reen, flood compensation areas and new reens will be created south of the railway with it anticipated that these works will be undertaken in 2021/2022.

The first phase of infrastructure works would be associated with development in and around the proposed station – in particular the creation of a new railway embankment and a development platform enabling construction of the station building, station car park, transport interchange, station square and initial commercial buildings.

These works are, by necessity, adjacent to the SWML and will result in construction in the area north of the railway line and south of Ty Ffynnon Reen. This area contains a significant proportion of dormice habitat in the form of mature hedgerows. The construction programme and ecological mitigation strategy proposes translocation of dormice over the 2021 season and the subsequent removal of hedgerow in April 2022. The station is included within the initial construction phase as a core component of the allocation, securing sustainable travel to and from the site and facilitating development. The station construction programme will be subject to agreements with a number of parties including Network Rail, Transport for Wales and Train Operating Companies as well as commercial agreements. Construction on the SWML will be subject to "possessions" which will need to be scheduled to minimise disruption to passenger and freight services, with long possessions generally confined to the Easter and Christmas periods.

Dormice translocation proposals have been informed by site-specific surveys, the extent and timing of construction activities and the capacity of adjacent habitat. This strategy has been developed with reference to the Dormouse Conservation Handbook (2nd Ed) English Nature, Bright et al (2014), Peterborough. The translocation of dormice would be undertaken under NRW licence issued under Regulation 55 of the Habitats Regulations.

The primary access road including the junction with Cypress Drive will be constructed so as to facilitate public access to the station and transport interchange on first opening. Preparatory work on this route is expected to begin in 2021, with habitat clearance for the new junction with Cypress Drive scheduled to begin in April 2022 allowing for dormice seasonal clearance.

Building phasing would be in response to market conditions and for the purposes of assessment, an eight-year development programme is assumed for construction. This is based on anticipated take-up of employment at the site informed by local and regional market conditions. It is anticipated that the first buildings constructed would be in and around the station.

5 Planning Policy

5.1 The Development Plan

This Chapter sets out the national and local planning policy to be considered in the determination of the application.

Section 70(2) of the Town and Country Planning Act 1990 and requires that *"in dealing with an application for planning permission" a local planning authority "shall have regard to the provisions of the development plan, so far as material to the application".* Section 38(6) of the Planning and Compulsory Purchase Act 2004 adds "i*f regard is to be had to the development plan for the purpose of any determination to be made under the planning Acts the determination must be made in accordance with the plan unless material considerations indicate otherwise.*"

The Development Plan is defined by Section 38(3) of the Planning and Compulsory Purchase Act 2004 (in Wales) as *"the regional strategy for the region in which the area is situated (if there is a regional strategy for that region) and the development plan documents (taken as a whole) which have been adopted or approved in relation to that area".*

The Development Plan for the planning application comprises the following:

- Cardiff Local Development Plan 2006-2026 (2016);
- Cardiff Local Development Plan Proposals Map 2006-2026 (2016); and
- Cardiff Local Development Plan Constraints Map 2006-2026 (2016).

5.1.1 Cardiff Local Development Plan 2006-2026 (2016)

The CLDP was adopted in 2016 and has an end date of 2026. It comprises a Written Statement, Proposals Map and Constraints Map.

The Written Statement sets out the vision for development in Cardiff over the plan period and sets out a number of Key Policies and Detailed Policies which determine and guide how development should be approached within Cardiff.

The CLDP is supplemented by more detailed guidance in Supplementary Planning Guidance documents.

Policies of the Newport Local Development Plan 2011-2026 (2015) are appraised in the Planning Statement that accompanies the 3 full planning applications to NCC. Notwithstanding that, Newport specific development plan policy features in over-arching assessments and other application documents that accompany this outline application such as the Environmental Statement, Transport Assessment and DAS as relevant.

Proposals Map

The Proposals Map from the adopted CLDP indicates that the site is allocated under Key **Policy KP2(H)** for the following:

Policy KP2(H): South of St Mellons Business Park

"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:*
    - *Provision of transport hub including new rail station served by relief line rail services connecting to the city centre and services to Cardiff Airport and London via Cardiff Central;*
    - *Provision of park and ride facility;*
    - *Off-site infrastructure including bus priority measures to develop bus-based Rapid Transit Corridors integrating with the site, the Eastern Bus Corridors and other routes within the North Eastern/Eastern Rapid Transit Corridor including services linked to the City Centre and Strategic Sites G and F;*
- *Walking and Cycling:*
    - *Provide high quality on-site and off-site walking and cycling links and facilities to maximise walking and cycling access to the site from neighbouring communities including Trowbridge and St Mellons.*
- *Flood mitigation/ defences:*
    - *Flood mitigation works including raising the development plateaus and providing compensatory flood storage areas south of the rail line.*

Necessary Infrastructure

- *Retain the area of land to the east of Cypress Drive and Faendre Reen as green space linked with Hendre Lake Park;*
- *If the infilling of any reen or field ditch proves to be unavoidable at the application stage it should be realigned (with at least an equal capacity) around the perimeter of the development or a compensatory length of ditch should be provided elsewhere within the site.*

Development shall be undertaken in a comprehensive manner and accord with the following key masterplanning requirements (as depicted, where appropriate, on the Schematic Framework):

- *Provide 44 ha of business land capable of accommodating up to 90,000 square metres campus style high quality development similar to existing business park at St Mellons in a location which benefits from Assisted Area Status;*
- *Integrate the site with local facilities in the surrounding area;*
- *Effectively respond to landscape and biodiversity assets by:*
    - *Protecting the value of the Gwent Levels SSSI with development being a minimum of 12.5 metres from main reens and 7 metres from field ditches;*
    - *Ensuring that all development accords with the Natural Resources Wales (formerly Countryside Council for Wales) Wentloog Levels guidelines "Nature Conservation and Physical Developments on the Gwent Levels – the current and future implications";*
    - *Integrating any landscape natural features, such as existing reens and hedgerows into the design including provision of suitable buffers;*
    - *Protecting the Marshfield SINC;*
    - *Respecting the intricate reen network and exiting hedgerows;*
    - *Linking retained habitats through the provision of a series of open space corridors providing ecological connectivity, sustainable access routes and opportunities for sustainable drainage including:*
        - *Links between retained reens and hedgerows;*
        - *Green links to Hendre Lake Park which respond to the natural landscape value of the area;*
        - *Ensuring that there is no detriment to the maintenance of the favourable conservation status of the Shrill Carder Bee by carrying out a survey, and if found, provide appropriate compensatory measures;*
        - *Ensuring that there is no detriment to the maintenance of the favourable conservation status of European Protected Species including bats, otters and reptiles including provision of suitable compensatory planting to supplement existing retained habitats.*
- *Effectively respond to heritage assets by:*
    - *Assessing and effectively addressing potential impacts on known assets including the Wentloog Levels Archaeologically Sensitive Area and registered Landscape of Outstanding Historic Interest."*

Land to the north of the site is allocated as an existing employment site under **Policy EC1.5** St Mellons Business Park, land to the south east a Special Landscape Area and the site is located in the settlement boundary of Cardiff.

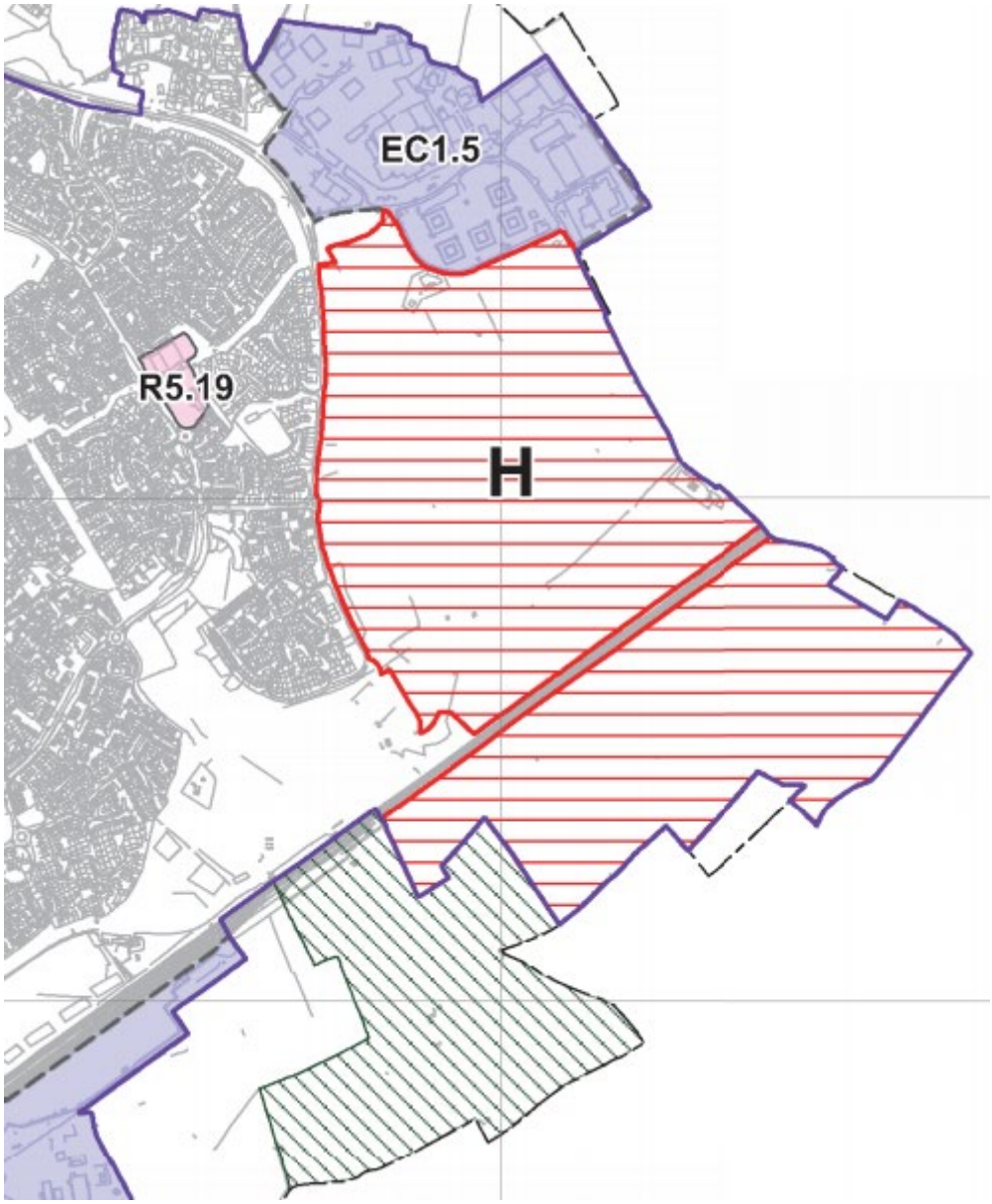


Figure 3: CLDP Proposals Map extract

Constraints Map

The Constraints Map for the CLDP indicates the following for the site:

- The site is wholly located within the Gwent Levels – Rumney and Peterstone SSSI (9);
- The site is wholly located within the Gwent Levels Historic Landscape (1);
- The site is partly located within The Wentloog Levels Archaeologically Sensitive Area (4); and
- Part of the site forms the Marshfield SINC. (106).

The Constraints Map also indicates that there is a Rapid Transit Corridor crossing the site and running along its western boundary, with a Proposed Rail Station and Park and Ride at its centre.

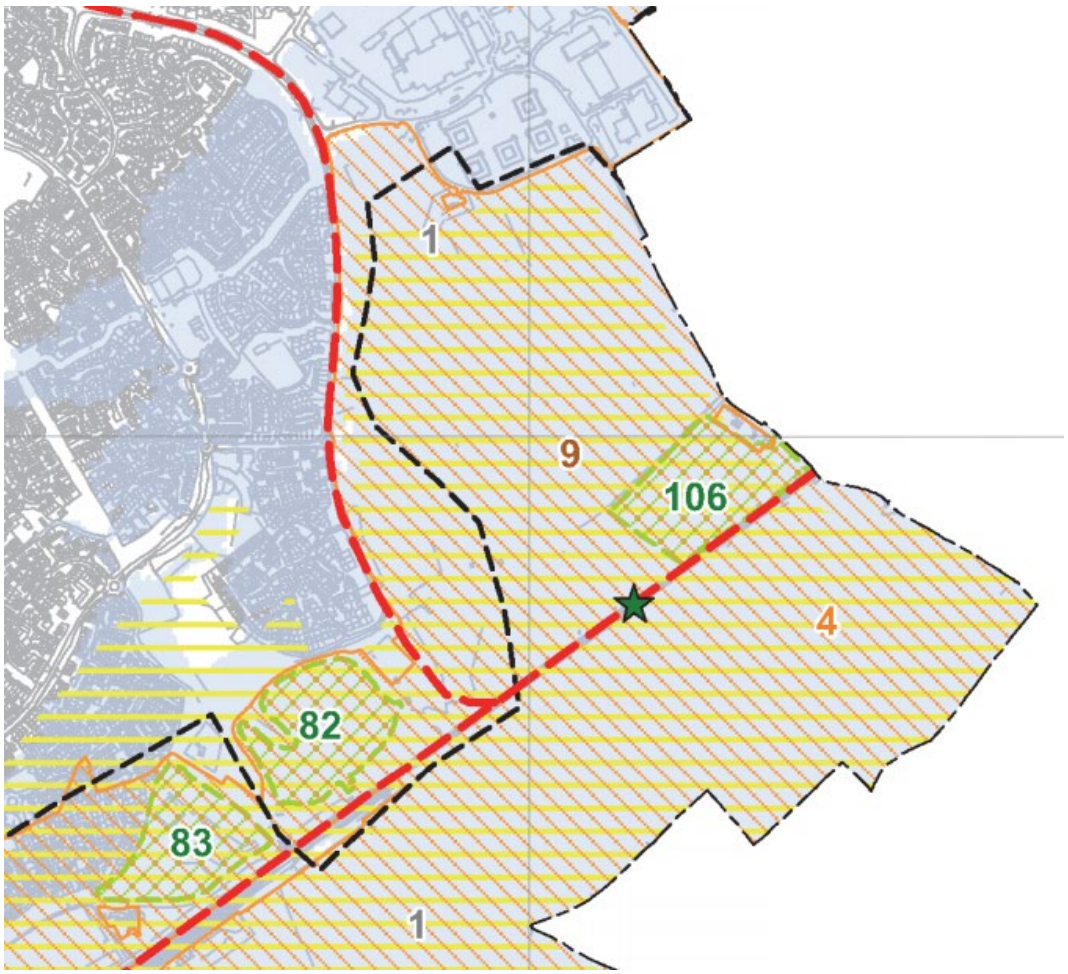


Figure 4: CLDP Constraints Map extract

5.2 Material Planning Considerations

As required by Section 70(2) of the Town and Country Planning Act 1990 and Section 38(6) of the Planning and Compulsory Purchase Act 2004 applications are to be determined in accordance with the Development Plan unless material considerations indicate otherwise.

The other policy and guidance documents that form material considerations in the determination of this planning application are:

- Planning Policy Wales (Edition 10);
- National Development Framework (2020-2040): Consultation Draft (2019)
- The Wales Spatial Plan (2008);
- Technical Advice Notes (TAN):

- TAN 4 – Retail and Commercial Development
- TAN 5 – Nature Conservation and Planning;
- TAN 11 – Noise;
- TAN 12 – Design;
- TAN 14 – Coastal Planning;
- TAN 15 – Development and Flood Risk;
- TAN 18 – Transport; and
- TAN 24 – The Historic Environment.

- Cardiff's adopted Supplementary Practice Guidance:
  - Archaeology and Archaeologically Sensitive Areas;
  - Green Infrastructure;
  - Managing Transportation Impacts;
  - Planning for Health and Wellbeing;
  - Planning Obligations; and
  - Public Art.
- Cardiff Local Development Plan Masterplanning Framework (2013)

5.2.1 Planning Policy Wales Edition 10 (2018)

Published in December 2018, the tenth edition of Planning Policy Wales (PPW10) sets out the land use planning policies of the Welsh Government. The key element of PPW10 that sets it apart from the previous version is the fact that it has been prepared in the light of the Well-being of Future Generations (Wales) Act 2015 (WFGA), the objectives of which represent the central thread running through the document. The Ministerial Foreword expresses how PPW10 will *"deliver the vision of the Wales we want set out in the Well-being of Future Generations Act"* and the extent to which *"PPW plays a significant contribution to the improvement of well-being in all its aspects."* The central thread of the WFGA remains within the PPW10, which also focuses on the new, multi-faceted concept of Placemaking. This relates to the delivery of Sustainable Places to support the well-being of people and communities across Wales. The interlinkages between key planning principles (such as growing the economy in a sustainable manner, making the best use of resources, facilitating healthy and accessible environments, creating and sustaining environments, and maximising environmental protection) and the "five ways of working" (prevention, long term, collaboration, integration and involvement) are identified to be integrated within the plan-making and development management processes. It is stated that this approach will contribute both to Placemaking and well-being.

PPW10 reaffirms the presumption in favour of sustainable development and defines sustainable development as *"the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the Well-being Goals"*.

PPW10 highlights the importance of proposals taking a placemaking approach, specifically, guiding proposals to take a holistic approach when planning and

designing development and spaces, focusing on positive outcomes. The concept of placemaking should be considered at all levels including at a global scale through paying key consideration to climate change; and also, at a more local scale, considering the amenity impact on neighbouring properties and people.

In line with the principles of the Well-being Act, PPW10 is organised around four key themes; *'Strategic and Spatial Choices', 'Active and Social Places', 'Productive and Enterprising Places' and 'Distinctive and Natural Places'*. The elements of most relevance to the proposed development in this case are outlined further below.

Chapter 3 'Strategic and Spatial Choices' focuses on placemaking and strategic development. Paragraphs 3.3 - 3.313 of the PPW10 set out five key objectives to achieving good design: access and inclusivity; environmental sustainability; character; community safety; movement. Figure 5 illustrates these objectives.

Figure 5: PPW10 – Objectives of Good Design

Paragraph 3.7 sets out that *"developments should seek to maximise energy efficiency and the efficient use of other resources (including land), maximise sustainable movement, minimise the use of non-renewable resources, encourage decarbonisation and prevent the generation of waste and pollution."*

Paragraph 3.9 sets out that *"the special characteristics of an area should be central to the design of a development. The layout, form, scale and visual appearance of a proposed development and its relationship to its surroundings are important planning considerations."*

Paragraph 3.30 sets out the Sustainable Management of Natural Resources (SMNR) framework as outlined within The Environment (Wales) Act 2016. PPW10 states that, *"amongst other considerations, the planning system can contribute to the SMNR approach through ensuring resilient locational choice for infrastructure and built development, taking actions to move towards a circular economy and facilitate the transition towards economic decarbonisation".*

Paragraph 3.54 sets out that the best and most versatile agricultural land (grades 1, 2 and 3a) should be conserved as a finite resource for the future. It further states that *"Land in grades 1, 2 and 3a should only be developed if there is an overriding need for the development and either previously developed land or land in lower agricultural grades is unavailable, or available lower grade land has an environmental value recognised by a landscape, wildlife, historic or archaeological designation which outweighs the agricultural considerations."*

In terms of the provision of new infrastructure, Paragraph 3.58 states that, "*planning authorities should, in conjunction with key providers, take a strategic and long-term approach towards the provision of infrastructure as part of plan making. This may involve collaboration between planning authorities and key infrastructure providers to ensure infrastructure provision is sustainable".*

Chapter 4 'Active and Social Places' outlines components of placemaking required to create well connected and cohesive communities covering the following:

- Transport;
- Housing;
- Retail & commercial development;
- Community facilities; and
- Recreational spaces.

With regards to transport, it states that people should have access to jobs and services through more efficient and sustainable journeys, by walking, cycling and public transport. It further states that *"new development should prevent problems from occurring or getting worse such as…the reliance on the private car and the generation of carbon emissions."*

It is also noted that land use and transport planning should be integrated to *"minimise the need to travel, reduce dependency on the private car and enable sustainable access to employment, local services and community facilities".*

It is a priority of Welsh Government to reduce reliance on the private car and support a modal shift to walking, cycling and public transport. PPW10 states that *"Delivering this objective will make an important contribution to*

decarbonisation, improving air quality, increasing physical activity, improving the health of the nation and realising the goals of the Well-being of Future Generations Act." The Sustainable Transport Hierarchy for Planning illustrates how development proposals must seek to prioritise walking, cycling and public transport ahead of the private motor vehicles. The Sustainable Transport Hierarchy for Planning, as presented within PPW10, is illustrated within Figure 6.

Within paragraph 4.1.35, the role of public transport in the sustainability of places is underlined, stating that *"it enables people to undertake medium and long journeys without being dependent on having access to a car."* In addition to this, paragraph 4.1.37 states that *"Planning authorities must ensure the layout, density and mix of uses of new development support the use of public transport and maximises accessibility potential."*

PPW10 also encourages the use of Ultra Low Emission Vehicles (ULEVs) and the provision of ULEV charging points as part of new development. Paragraph 4.1.39 states that *"Where car parking is provided for new non-residential development, planning authorities should seek a minimum of 10% of car parking spaces to have ULEV charging points".*

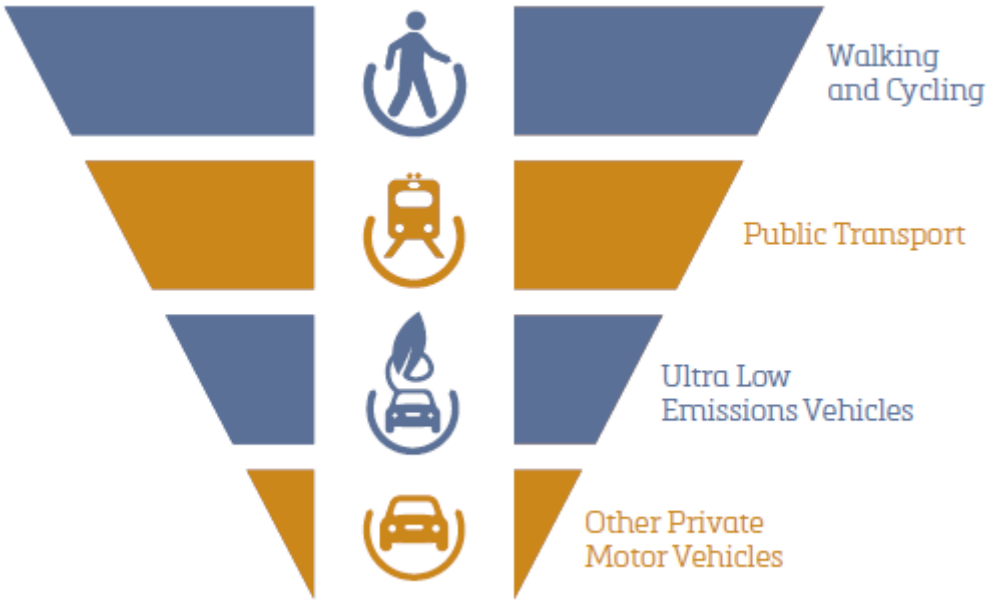


Figure 6: PPW10 – The Sustainable Transport Hierarchy for Planning

Chapter 5 Productive and Enterprising Places covers the economic components of placemaking and states that "*a more Equal Wales can be achieved through promoting sufficient employment and enterprise opportunities for people to realise their potential and by recognising and building on the existing economic strengths of places to assist in delivering prosperity for all.*"

PPW10 states that "*the potential of new/improved transportation infrastructure to create new or renew hubs of economic activity should be realised with careful master-planning around sustainable transport nodes and interchanges to create*

places which can be easily accessed by sustainable transport and which capitalise on their location and the opportunities which this presents."

Paragraph 5.3.1 states that *"the provision of sustainable transport infrastructure is essential in order to build prosperity, tackle climate change, reduce airborne pollution and to improve the social, economic, environmental and cultural well-being of Wales"* and that "*the planning system should facilitate the delivery, decarbonisation and improvement of transport infrastructure in a way which reduces the need to travel, particularly by private vehicles, and facilitates and increases the use of active and sustainable transport*".

PPW10 sets out that "*Planning authorities should support necessary transport infrastructure improvements, where it can be demonstrated that such measures are consistent with Welsh Government policy to encourage and increase use of sustainable transport and reduce reliance on the private car for daily journeys.*"

In relation to transport and employment, paragraph 5.4.13 states that planning authorities should "*align jobs and services with housing and sustainable transport infrastructure, to reduce the need for travel, and dependency on travel by car*".

Chapter 6 Distinctive and Natural Places covers environmental and cultural components of placemaking. PPW10 sets out how development should protect the special characteristics of the natural built environment including the historic environment, green infrastructure, landscape biodiversity and ecological networks.

Green infrastructure is considered core to the creation and management of distinctive and natural places. PPW10 states that green infrastructure assets and networks should be protected owing to their multi-functional roles such as providing benefits for the health and well-being of communities as well as the environment.

Paragraph 6.4.3 gives focus to biodiversity and ecological networks and sets out a number of considerations for development proposals to consider. This includes that development proposals must consider the need to "*support the conservation of biodiversity, in particular the conservation of wildlife and habitats".*

5.2.2 Building Better Places (2020)

In July 2020 Welsh Government published its policy position on how the planning system can assist in the COVID-19 recovery period. 'Building Better Places' is intended to sit alongside PPW and is a key consideration in both plan preparation and development management. 'Building Better Places' expands on the recent letter issued to Chief Planning Officers from Julie James (Minister for Housing and Local Government) in July 2020 which acknowledges that the economic consequences of the COVID-19 pandemic are predicted to be severe and felt across all sectors, including those in construction and the built environment. 'Building Better Places' emphasises both the primacy of the plan led system in Wales but also the need to have places and place-making at the heart of the recovery process. The policy agenda seeking to deliver better places and

placemaking develops the principles already enshrined in PPW. The pandemic has highlighted the importance of the need for good quality places for people to live, work and relax. 'Building Better Places' seeks to ensure that the economic hardship owing to the pandemic does not outweigh the above principles and policies.

It is clear that an immediate supply of development land is essential if we are to build the better places envisaged by Welsh Government and lead the recovery that is desperately required. New development delivering positive social and economic outcomes as well as addressing climate change concerns needs to be happening on the ground in the short term and can't simply await the completion of the LDP review process in five years time.

Welsh Government has recognised this issue and in respect of development management, 'Building Better Places' states "PPW and the NDF can be used directly in the decision making process. The WG will support decisions taken in this context, particularly in the short-term until an LDP is adopted". This is a very important concession and allows for new development in the short term that truly embrace the principles and policies of delivering better places and placemaking. The guidance includes a Welsh Government commitment to follow through on infrastructure obligations which will go a long way in ensuring that the developments envisioned are delivered and the wider public benefits are maximised.

It also emphasises that development management decisions should focus on creating healthy, thriving active places with a focus on a positive, sustainable future for our communities. The planning system has an important role in supporting healthier lifestyles and reducing inequalities. This includes both direct and indirect opportunities such as the allocation of land for health facilities, ensuring good design and barrier free development, jobs and skills among other considerations.

5.2.3 The Wales Spatial Plan (2008)

This sets out the planning agenda for Wales at the spatial level. Its main principle is that development should be sustainable, by improving the well-being and quality of life for Wales.

The plan recognises that in the context of responding to and mitigating the effects of climate change, the WSP encourages measures to reduce the need to travel by co-locating jobs, housing and services and changing behaviour in favour of 'greener' modes of travel, such as car sharing, public transport, walking and cycling. The site is located within the South-East Wales Capital Region. The objectives for this area include making better use of the existing transport infrastructure and delivering more sustainable access to jobs and services. The proposed development assists in achieving these objectives.

5.2.4 The National Development Framework – Consultation Draft (2019)

The new National Development Framework (NDF) is set to replace the Wales Spatial Plan, providing a framework for development between 2020 and 2040. The NDF's aim is to address key national priorities through providing the direction for where we should invest in infrastructure and development for the greater good of Wales and its people.

Chapter 3 NDF Outcomes The draft NDF is outcome-led and aims to develop a Wales where people live …

> *"1. and work in connected, inclusive and healthy places*
>
> *2. in vibrant rural places with access to homes, jobs and services*
>
> *3. in distinctive regions that tackle health and socio-economic inequality through sustainable growth*
>
> *4. in places with a thriving Welsh Language*
>
> *5. and work in towns and cities which are a focus and springboard for sustainable growth*
>
> *6. in places where prosperity, innovation and culture are promoted*
>
> *7. in places where travel is sustainable*
>
> *8. in places with world-class digital infrastructure*
>
> *9. in places that sustainably manage their natural resources and reduce pollution*
>
> *10. in places with biodiverse, resilient and connected ecosystems."*

The following Strategic and Spatial Choices policies are considered to be of relevance to the proposed development:

Policy 1 – Sustainable Urban Growth: *"Urban growth should support towns and cities that are compact and orientated around urban centres and integrated public transport and active travel networks. Higher density and mixed use development on sites with good access to urban centres and public transport hubs, including new and improved Metro stations, will be promoted and supported."*

Policy 7 – Ultra Low Emission Vehicles: *"The Welsh Government supports the increasing use of ultra low emission vehicles. We will work with the UK Government, local authorities, the energy sector and businesses to plan for and implement the roll out of electric vehicle charging infrastructure, including the creation of a network of rapid charging points to enable longer distance travel by electric vehicles throughout Wales."*

Policy 8 – Strategic framework for biodiversity enhancement and ecosystem resilience: "*To ensure the enhancement of biodiversity and the resilience of ecosystems, the Welsh Government and its key partners will identify:*

- *areas which could be safeguarded as ecological networks for their potential importance for adaptation to climate change or other pressures, for habitat restoration or creation, or which provide key ecosystems services, to ensure they are not unduly compromised by future development; and*
- *opportunities where strategic green infrastructure could be maximised as part of development proposals, requiring the use of nature based solutions as a key mechanism for securing sustainable growth, ecological connectivity, social equality and public well-being.*

Planning authorities should include these sites in their development plan strategies and policies in order to promote and safeguard the functions and opportunities they provide. In all cases, cumulative action towards securing the enhancement of biodiversity and the resilience of ecosystems should be demonstrated as part of development proposals through innovative, nature-based approaches to site planning and the design of the built environment."

Policy 27 – Cardiff: *"Cardiff will retain and extend its role as the primary national centre for culture, sport, leisure, media, the night time economy and finance. The Welsh Government supports regional development which addresses the opportunities and challenges arising from Cardiff's geographic location and its functions as a Capital City. The Welsh Government supports Cardiff's status as an internationally competitive city and a core city on the UK stage."*

Policy 28 – Newport: *"The Welsh Government supports Newport as the focus for regional growth and investment and wants to see the City play an increased strategic role in the region. The strategic emphasis should be focussed on achieving growth in the city. Strategic and Local Development Plans across the region should recognise Newport as a focus for strategic housing and economic growth; essential services and facilities; transport and digital infrastructure; and consider how they can support and benefit from Newport's increased strategic regional role. Development in the wider region should be carefully managed to support Newport's growth and to provide a focus for regional planning. The Welsh Government will work with authorities within the region and in England to promote Newport's strategic role and ensure key investment decisions in Wales and England support Newport and the wider region."*

Policy 32 – Growth in sustainable transit orientated settlements:
"Development and growth in the region should be focussed in places with good active travel and public transport connectivity. Land in close proximity to existing and committed new mainline railway and Metro stations should be the focus for development. Strategic and Local Development Plans should plan growth to maximise the potential opportunities arising from better regional connectivity. The Welsh Government supports the development of the South Wales Metro and will work with agencies to enable its delivery."

5.2.5 Technical Advice Notes

PPW10 is supported by a suite of Technical Advice Notes (TANs) which provide further guidance in relation to specific aspects of development. The TANs considered to be of most relevance to the proposed development are set out as follows.

TAN 4 - Retail and Commercial Development (2016) provides guidance on the role of land use planning in retail and commercial development. **TAN 4** identifies three objectives for retail and commercial centres:

- *"To promote viable urban and rural retail and commercial centres, as the most sustainable locations to live, work, shop, socialise and conduct business.*
- *To sustain and enhance retail and commercial centres vibrancy, viability and attractiveness.*
- *To improve access to, and within, retail and commercial centres by all modes of transport, especially walking, cycling and public transport."*

TAN 4 states that *"good access to, and within, commercial centres is key, both to the vibrancy of those places and to ensure that everyone in society has access to the wide variety of goods and services."* The guidance highlights the importance of consultation with relevant stakeholders in the design of new public areas to ensure that development is accessible to all.

TAN 5 – Nature Conservation and Planning (2009) provides advice on how planning proposals should contribute to protecting and enhancing biodiversity and geological conservation. In cases of EIA development, TAN 5 sets out that it is essential to carry out the following:

a) *"Screening of all Schedule 2 developments;*
b) *Ensure all potentially significant nature conservation interests and effects on them are considered at the outset and particularly at the scoping stage;*
c) *Encourage applicants to apply for a scoping opinion and engage as early as possible with relevant stakeholders;*
d) *Agree on the effects to be assessed and information required including proposed assessment, methodology and timescales;*
e) *Agree the scope for avoiding, mitigating or compensating for any adverse effects on nature conservation and ensure that these are included within the ES;*
f) *Ensure that opportunities for enhancements are explored through the EIA process."*

TAN 11: Noise (1997) contains guidance related to assessing the noise impacts of proposed development and outlines mitigation measures which can be introduced to control noise.

TAN 12: Design (2016) contains the design principles that should be considered for any new development. It sets five considerations which must be included within the design of new buildings listed below:

a) *"Accessibility: Including ease of access for all into the development and to all elements within the site;*

b) *Character: Including sustaining or enhancing local character.*

c) *Community Safety: Including securing through natural surveillance.*

d) *Environmental Sustainability: Including achieving efficient use and protection of natural resources; and*

e) *Movement: Promoting sustainable means of travel."*

TAN 14 – Coastal Planning (1998) contains guidance relating to development proposals within coastal areas and includes advice on recreation development, heritage coats and non-statutory groupings, and shoreline management plans.

TAN 15 – Development and Flood Risk (2004) provides technical guidance in relation to development and flooding and sets out a precautionary framework to guide planning decisions in respect of development in areas at high risk of flooding. It provides guidance on how to fully assess flood consequences and how to design and implement SuDS.

An update to **TAN 15** has recently been consulted on. The updated **TAN 15** aims to:

- *"replace the development advice map with a new Wales flood map*
- *place a greater emphasis on the development plan and the value of strategic flood consequences assessments*
- *integrate guidance on coastal erosion with flood risk issues in TAN 15*
- *provide guidance for regeneration initiatives affecting communities in flood risk areas"*

However, given the draft stage of preparation, the draft TAN is not a consideration in the determination of planning applications.

TAN 18: Transport (2007) offers guidance on the integration between the planning system and transport. It contains detailed guidance on parking, active travel, public transport and major transport infrastructure as well as information on how transport impacts should be assessed within Environmental Statements, Transport Assessments/Statement and Travel Plans. The TAN also sets out that planning authorities should allocate land for rail infrastructure. The guidance states that where major development has been permitted in phases, reasonable public transport provision should be in place before occupation of each phase to ensure travel by car is not necessary at the outset.

TAN 23: Economic Development (2014) provides guidance on the role of land use planning in generating wealth, jobs and income. **TAN23** states that *"the economic benefits associated with development may be geographically spread out far beyond the area where the development is located and as such it is essential that the planning system recognises, and gives due weight to, the economic benefits associated with new development."*

TAN 24: The Historic Environment (2017) aims to provide guidance as to how the planning system should consider the historic environment during plan-making and decision-making. It provides guidance on all aspects of the historic environment including World Heritage Sites, Archaeological Remains, Listed Buildings, Conservation Areas, Historic Parks and Garden and Historic Landscapes and Historic Assets of Local Interest.

5.2.6 Cardiff Supplementary Planning Guidance

In support of the CLDP, CC has published a series of Supplementary Planning Guidance (SPG) documents to guide development in Cardiff. A number of these are relevant to the proposed development and have been taken into consideration in the development of the application.

Archaeology and Archaeologically Sensitive Areas (2018) provides guidance on the city's archaeological heritage within the planning process.

Green Infrastructure SPG (2017) provides planning advice on a number of areas relating to development and the environment, including protection and provision of open space, ecology and biodiversity, trees, soils, public rights of way and river corridors.

Managing Transportation Impacts (Incorporating Parking Standards) SPG (2018) sets out CC's approach to assessing and managing the transport impacts of developments. This includes guidance relating to CC's approach to quantifying and assessing the transport impacts of development proposals as well as how the impacts of developments upon Public Rights of Way (PRoW) will be considered. The guidance states that in some cases, the route proposed for the diversion of PRoW may offer demonstrable advantages over the existing PRoW for users.

Planning for Health and Wellbeing SPG (2017) provides additional guidance in relation to the impact of development and the environment on the health and wellbeing of the population. The SPG details the range of potential health and well-being related factors that developers should consider when drawing up development proposals.

Planning Obligations SPG (2017) sets out CC's approach to planning obligations when considering applications for development in Cardiff. It provides further guidance on how the policies set out in the CLDP are to be implemented and will assist in securing the provision of sustainable development across the city.

Public Art SPG (2006) encourages the provision of public art in association with development proposals and provides guidance in relation to how public art can be incorporated into the design of proposals.

5.2.7 Cardiff Local Development Plan Masterplanning Framework (2013)

The Cardiff Local Development Plan Masterplanning Framework provides principles for development in order to ensure new communities are sustainable, well designed and integrated into the existing neighbourhoods. Amongst providing general masterplanning principles, a number of site-specific frameworks are provided including one for the Strategic Site H: South of St Mellons Business Park CLDP allocation. The Framework firstly considers the site in terms of the site constraints and opportunities before identifying a number of site-specific principles for the development allocation. Table 3 below sets out these principles.

Table 3: Cardiff Local Development Plan Masterplanning Framework – Site Specific Principles for Strategic Site H: South of St Mellons Business Park

Site Specific Principle	Description
Master Planning Approach	- Develop a vision for the area which reinforces Wentloog as a principal destination for business / transport hub for the city region and beyond. - Ensure frequent public transport provision in place prior to residential occupation of the site. - Potential phasing from the north of the site southwards. Development around the station (if and when funding is secured) is a priority.
Development Density	- Campus style low density development similar to existing Business Park, to provide hybrid business space for high value knowledge sectors, research and development.
Sustainable Transport Corridor	- Provide a transport interchange with a station for bus and rail users. - Provide rapid transit rail links on the relief lines between Central Cardiff, Newport and east of Newport connecting to the city centre and Cardiff Airport, as well as links to London. - Provide rapid link bus service along the A48 to the city centre. - Provide bus priority improvements to routes serving the site. - Provision of a park and ride.

Site Specific Principle	Description
Sustainable Travel Choices	- Provide additional rapid transit and bus services to provide public transport access to the site from other parts of the city. - Provide high quality walking and cycling facilities to maximise local access to the site from neighbouring communities including Trowbridge and St Mellons.
Neighbourhood Centres	- Develop a mixed-use hub comprising of appropriate uses, such as shops, a hotel, cafes and other facilities around a central piazza which are accessible by walking, cycling and public transport. - Create good links to the hub from within site and the wider St Mellons area.
High quality, sustainable design and distinctive character	- High quality, sustainable design and distinctive character - Integrate any landscape natural features, such as reens to the design. - Utilise existing roads and pedestrian routes to minimise impact of development. - Orientate commercial buildings to face neighbourhood centres to improve integration both day and night.
Integration with neighbouring areas	- Improve cycling and pedestrian linkages between the site and surrounding areas, such as Trowbridge and St Mellons.
Connected strategic green open spaces	- Provide green links to Hendre Lake Park which respond to the natural landscape value in the area. - Retain the area of land to the east of Cypress Drive and Faendre Reen as and green space (potential extension to the adjacent park).
Landscape, biodiversity and heritage	- Protect the value of the Gwent Levels SSSI with development being a minimum of 12.5m from main reens and 7m from field ditches. - If the infilling of any main reen or field ditch is unavoidable, the realign it around the perimeter of the development or a compensatory length of ditch should be case elsewhere within the site. - Respect the intricate reen network and hedgerow structure resulting in smaller discreet plots. - Accord with CCW Wentloog Levels guidelines (reference Nature Conservation and Physical Developments on the Gwent Levels – the current and future implications). - Survey for the Shrill Carder Bee, and if found provide appropriate compensation.

Site Specific Principle	Description
	- Protect European Protected Species (bats, otters and reptiles). - Protect Marshfield SINC. - Protect the Wentloog Levels Archaeologically Sensitive Area and registered Landscape of Outstanding Historic Interest.
Resource efficiency	- Address the flood risk which poses a significant challenge due to its location within Zone C1 and containing a large number of drainage reens. - All surface run-off from roads, car parks and roofing should not be routed directly to the reen system. - Provide a range of flood protection measures to bring the site into use by: • Raising the existing coastal defences at Sluice Farm. • Raising site levels. • Constructing flood compensatory flood storage facilities to mitigate any off-site increase in fluvial flood risk. • Providing details of flood storage arrangement and the use of a multi cell system.

6 Planning Assessment

6.1 The Planning Assessment

This assessment takes into consideration the allocation for the site, alongside the relevant topic specific policies from the CLDP as a whole. It also includes relevant policy considerations in the context of PPW10 which forms a material planning consideration in the determination of the application.

Important policy considerations are summarised below into key themes and presented with an explanation as to how the proposed development aligns with local and national adopted planning policy.

The proposed development is considered to accord with the site allocation and the relevant policies from the adopted CLDP and the Development Plan as a whole. It is further considered to accord with the relevant policies of PPW10 which form material planning considerations. Given that PPW10 has been prepared in light of the WFGA and embodies its central themes, it is considered that conformity with PPW10 demonstrates alignment with the WFGA.

6.2 Policy Considerations

6.2.1 Principle of Development

Policy KP1 of the CLDP outlines that "*the Plan make provision for 40,000 new jobs in Cardiff between 2006-2026.*"

Policy KP2(H) allocates the site "*Land to the South of St Mellons Business Park*" The full policy is included in Section 5.1 but in summary the policy allocates the site as a strategic employment site together with essential, enabling and necessary supporting infrastructure. The allocation includes a number of features, including but not limited to the provision of a transport hub including new rail station and park and ride and 44ha of business land capable of accommodating up to 90,000sqm campus style high quality development similar to existing business park at St Mellons.

Throughout **PPW10**, there is a clear emphasis towards the delivery of sustainable transport infrastructure and economic development, with reference given to the integration of land use and transport planning to "*minimise the need to travel, reduce dependency on the private car and enable sustainable access to employment, local services and community facilities*". Furthermore, **PPW10** states that planning authorities should "*align jobs and services with housing and sustainable transport infrastructure*".

PPW10 further states that "*the potential of new/improved transportation infrastructure to create new or renew hubs of economic activity should be realised with careful master-planning around sustainable transport nodes and interchanges to create places which can be easily accessed by sustainable*

transport and which capitalise on their location and the opportunities which this presents

PPW10 also states that "*the provision of sustainable transport infrastructure is essential in order to build prosperity, tackle climate change, reduce airborne pollution and to improve the social, economic, environmental and cultural well-being of Wales*" and that "*the planning system should facilitate the delivery, decarbonisation and improvement of transport infrastructure in a way which reduces the need to travel, particularly by private vehicles, and facilitates and increases the use of active and sustainable transport*".

Policy 32 of the **draft NDF** sets out that development and growth in the region should be focussed in places with good active travel and public transport connectivity and that land in close proximity to existing mainline railway should be the focus for development.

As outlined in Section 1.2, the outline planning application is compliant with **Policy KP2(H)** and therefore the principle of development is established. The proposed development will deliver a strategic employment site comprising a total of 90,000sqm of high quality employment floorspace (Use Classes B1, B2 and B8). The employment floorspace along with ancillary uses would be located across the site in all developable areas and would allow for a range of appropriate building types to support businesses of varying sizes. The development would also positively contribute to the requirements of **Policy KP1** by creating approximately 6,000 jobs.

In addition to the employment provision, the proposed development includes a new transport interchange which would include a new railway station with connections to the local city centres and beyond to London. Alongside the railway station a new 650 space Park and Ride facility is proposed. The Park and Ride facility and railway station will be supported by an extensive bus, cycle and pedestrian network.

The interchange will be the main point for people arriving to the site by bus and rail. It would be a space that provides opportunities to change between different modes of public transport, designed around a central plaza which would have ancillary uses such as food and beverage outlets. The interchange would also provide links to the wider cycle and pedestrian network.

The site is walkable on foot from St Mellons and Hendre Lake Park and will be permeated by an integrated network of traffic-free paths for walking and cycling, providing access to all parts of the site and onward connections to surrounding streets, footpaths and cycle routes.

The proposed transport hub would be located along an existing mainline railway and would provide and be accessible via a number of sustainable transport connections including rail, bus, on foot or by bicycle. The provision of sustainable transport infrastructure at the site would align with the policy aims of **PPW10** and the **draft NDF.**

The proposed development also positively responds to the hydrological, social and ecological historic features at the site. The landscape concept is defined by large-scale connected green, wildlife corridors that from the west, north and east of the site join to form an 'inverted V' shape. The landscape parameters for the site are set by four key landscape framework plans focusing on water, habitat, accessibility and public realm.

The site's sensitive location has also been a key influencer in the development of the masterplan. New buildings would be integrated within the landscape and not imposed upon it. Buildings would be set back to create a sense of openness and the natural character of the Faendre Reen would be preserved for future generations with a 12.5m offset. Significant areas within the masterplan have also be set aside to provide a strong landscape setting for the proposed development and ecological mitigation including the following:

- A 'Wildlife Corridor' – an ecologically rich corridor abundant with native habitats for dormice, woodlands, wet woodlands, following the alignment of the overhead powerlines and high-pressure gas mains;
- The 'Main Park' – an open space in the heart of the development, providing amenity to users, flood alleviation, sustainable drainage and habitat mitigation;
- A 'Southern Mitigation Area' – an area to be 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; and
- 'Reen Offset Areas' – strips of land on both banks of retained reens in the northern area of the site, which are safeguarded from built development, protecting reens and associated habitats as key elements of the SSSI, and providing access for management. (12.5m wide).

It is therefore considered that the proposed development closely conforms to the site allocation and the relevant policies of the CLDP and the principle of development is established.

Subsequently, the remainder of this planning assessment considers the topic specific policies from the adopted CLDP and demonstrates how the proposed development accords with the Development Plan as a whole.

6.2.2 Existing Land Uses and Designations

Policy KP3(B) of the CLDP states that *"In order to strategically manage the spatial growth of Cardiff, settlement boundaries are proposed as shown on the Proposals Map."*

Policy KP18 deals with natural resources and states that *"In the interests of the long-term sustainable development of Cardiff, development proposals must take full account of the need to minimise impacts on the city's natural resources and minimise pollution, in particular the following elements:*

i. Protecting best and most versatile agricultural land."

The site comprises predominantly agricultural land - cereal stubbles pastures which are grazed. The site also includes an area of scrub and brambles on the western and northern extents which are non-agricultural/woodland and some built form.

Chapter 11 (Socio-Economics) of the ES confirms that that agricultural land at the site which equates to circa 80ha is Grade 4. Grade 4 agricultural land is not considered to be Best and Most Versatile Agricultural Land and the proposed development would therefore not result in the loss of higher graded agricultural land.

Furthermore, the proposed development is located within the settlement boundary of Cardiff and forms a strategic employment allocation in the CLDP. The site location therefore fully aligns with the strategic management of growth in Cardiff and the loss of the site for agricultural purposes has already been established through its allocation within the CLDP.

It is therefore considered that the proposed development aligns with the existing land use allocation for the site and the loss of land for agricultural purposes is justified.

6.2.3 Proposed Uses

The proposed development comprises a mixed-use employment and transport led development. The proposals for the site not only align with the requirements of the site's allocation under **Policy KP2(H)** but also a number of wider key land use policies within the adopted CLDP.

Policy KP6 deals with the delivery of new infrastructure and states that *"New development will make appropriate provision for, or contribute towards, all essential, enabling and necessary infrastructure required as a consequence of the development in accordance with Planning Policy Guidance."*

Policy KP9 deals with responding to evidenced economic needs and outlines that *"provision will be made for a range and choice of new employment sites including those identified in KP2 for different types of employment and in different geographical locations to effectively deliver the level of growth set out in the plan."*

Policy KP13 deals with responding to evidenced social needs and further states that *"a key part of the successful progression of the city will be to develop sustainable neighbourhoods, tackle deprivation, and improve the quality of life for all."* This will be achieved through a number of criteria including *"Encouraging the enhancement of communities through better equality of access to services for all, promoting cultural and wider diversity for all groups in society, and creating places that encourage social interaction and cohesion;"*

The principal uses for the proposed development are employment and a transport hub. The proposed development site is located within the Trowbridge 6 Lower Super Output Area (LSOA) which is amongst the 50% least deprived LSOA in

Wales. However, the LSOA of Trowbridge 4 is to the west of the site and is among the 10% most deprived LSOA in Wales for housing, education, health, employment and income. The proposed development would therefore directly respond to **Policy KP9** by providing local employment opportunities including reducing deprivation for Trowbridge 4 in terms of access to employment.

The proposed development would also bring wider community benefits beyond the jobs created in line with **Policy KP13**. These relate to enhanced transport links to Bristol and London, improved regional accessibility and helping to facilitate Cardiff's role as a cultural centre. The development would provide access to local residents into the business district and its landscaped and ecological setting including the Main Park which would be a dynamic landscape that promotes ecology, water sensitive design solutions and an active community programme available to both local residents and employees from the business district.

Policy T3 outlines that *"in order to facilitate the transfer between transport modes and help to minimise travel demand and reduce car dependency, the following developments will be supported:*

- *New rail stations which can be easily accessed by walking, cycling and local bus services, facilitate rail park and ride, where appropriate, and meet the access needs of all users;*
- *Strategically located park and ride facilities, supported by attractive, frequent and reliable bus or rapid transit services;*
- *High quality passenger facilities including but not limited to seating, information, toilet facilities and cycle parking;"*

The proposed development would also provide a high-quality transport interchange including a new railway station on the SWML relief line, bus facilities and a station park and ride. The interchange would be the main point of arrival for people arriving to the site by bus and rail and it would comprise a space that provides opportunities to change between different modes of public transport, designed around a central plaza.

The transport interchange would also include cycle parking for up to 100 bikes, a Next Bike docking station with capacity for 30 bikes, taxi rank and bus stops all within 100m of the railway station and each other, connected via a high-quality public realm.

Policy EC2 deals with the provision of complementary facilities for employees in employment developments, it states that the *"Provision for open space, public realm, leisure, food and drink, and child-care facilities will be appropriate in office, industrial and warehousing developments, provided, the facility is of an appropriate scale and nature intended primarily to meet the needs of workers in the vicinity, therefore not attracting significant levels of visitor traffic into the area, or exacerbating existing traffic conditions."*

Policy R1 deals with retail and states *"Retail proposals outside centres identified on the Proposals Map will be assessed against Policy R6: Retail Development*

(Out of Centre). or Policy R7: Retail Provision within Strategic Sites where they form part of an allocated housing led strategic site."

Policy R6 deals with out of centre retail development and states *"Retail development will only be permitted outside the Central Shopping Area, District and Local Centres identified on the Proposals Map if:*

i. There is a need for the proposed floorspace (with precedence accorded to establishing quantitative need);

ii. That need cannot satisfactorily be accommodated within or adjacent to the Central Shopping Area, within a District or Local Centre;

iii. The proposal would not cause unacceptable harm to the vitality, attractiveness or viability of the Central Shopping Area, a District or Local centre or a proposal or strategy including the Community Strategy, for the protection or enhancement of these centres;

iv. The site is accessible by a choice of means of transport; and

v. The proposal is not on land allocated for other uses. This especially applies to land designated for employment and housing, where retail development can be shown to limit the range and quality of sites for such use."

Policy R8 covers food and drink establishments and states *"Food and Drink Uses are most appropriately located in:*

i. The City Centre (Central Business Area)

ii. The inner harbour/waterfront area of Cardiff Bay (Bay Business Area)

iii. District and Local Centres

Subject to amenity considerations, highway matters, crime and fear of crime considerations, and where they do not cause unacceptable harm to the shopping role and character of designated centres. Food and drink uses are unlikely to be acceptable within or adjacent to residential areas, where they would cause nuisance and loss of amenity, or result in the loss of a residential property."

In addition to the principal uses at the site namely employment floorspace and a transport interchange other ancillary uses including retail and food and drink uses (Use Classes A1 and A3) would be provided in appropriate locations across the site, with an obvious focus in the station and around its plaza.

The proposed development would create a network of new landscaped open spaces that are accessible to the public and within easy access of places of work, transport and existing residential communities. The Main Park would be a significant new open space for local residents, visitors and the business community, connecting people with the natural environment of the Gwent Levels. The park would provide a vital recreational resource for people to meet, walk over lunch, for children to play and for events, as well as contributing to habitat creation and sustainable water management.

In terms of the retail and food and drink uses, whilst these would be outside established Central Shopping Areas and District and Local Centres it is considered that the scale of the proposed development justifies these ancillary and functionally linked uses in accordance with **Policy EC2**. The proposed development would also be highly sustainable with access to a choice of transport options. The ancillary uses would also be predominantly clustered in the heart of the development and actively serve the employees within the proposed business district and those already working on the existing St Mellons Business Park. It is therefore considered that these ancillary uses are acceptable and would not harm the function or viability of existing districts or centres.

6.2.4 Design

Policy KP4 outlines Cardiff's masterplanning approach and it states *"major development should accord with:*

(i) The following Masterplanning General Principles:

1. Development schemes that are planned in a comprehensive and integrated manner reflecting partnership working and setting out the phasing of development along with a timely provision of supporting infrastructure. Masterplans will need to encompass the whole of a development area regardless of land ownership patterns, and this will require partnership working, involving all relevant parties;

2. High density residential and mixed-use development is focused along public transport corridors and in neighbourhood centres with lower densities provided elsewhere to deliver an overall range and choice to meet different needs;

3. Dedicated sustainable transport corridors including provision for public transport, cycling and walking which will form key elements of the overall master plan and effectively link into the wider network;

4. Walking, cycling and public transport will be attractive, practical and convenient travel choices for all;

5. Provision of a full range of social and community facilities will be concentrated within mixed use neighbourhood centres located along public transport corridors and easily accessed by walking and cycling;

6. The masterplanning process effectively responds to the local context and the context of climate change, to create new well designed neighbourhoods with a distinctive character which residents will be proud of;

7. New development responds to local deficiencies and provides good connectivity to adjoining areas and is informed by feedback from existing communities;

8. Multi-functional and connected green open spaces form strategically important links to the surrounding area to provide routes for people and wildlife and open spaces for sports, recreation and play;

9. Sympathetically integrate existing landscape, biodiversity and historic features of the site into the development taking opportunities to protect, enhance and manage important features along with mitigation and enhancement measures to provide satisfactory compensatory measures;

10. Innovative and creative energy, management of surface water and waste management solutions are adopted to make new developments more environmentally sustainable; and

(ii) Guidance set out in Site-Specific Masterplanning Frameworks, where prepared."

Policy C3 deals with community safety/creating safe environments and states that *"All new development and redevelopment shall be designed to promote a safe and secure environment and minimise the opportunity for crime."*

PPW10 sets out five key objectives to achieving good design. These include:

- *"Ensuring ease of access for all (Access);*
- *Sustaining or enhancing local character. Promoting legible development / a successful relationship between public and private space / quality, choice and variety / innovative design (Character);*
- *Ensuring attractive, safe public spaces / security through natural surveillance (Community Safety);*
- *Achieving efficient use and protection of natural resources / enhancing biodiversity / designing for change (Environmental Sustainability);*
- *Promoting sustainable means of travel (Movement)."*

The proposed development has been designed in accordance with **PPW10** design objectives and the masterplanning principles of **Policy KP4** and the **Strategic Site H: South of St Mellons Business Park Site Specific Framework**.

The vision for the proposed development is for a new major employment hub for the capital formed around the new Cardiff Parkway railway station.

6.2.5 Masterplan Key Features

The key features of the masterplan are summarised below and these build on the requirements of **Policy KP4** and the principles from the **Site-Specific Framework:**

- The proposed development would create a catalyst for growth, contributing to the regeneration of East Cardiff and the wider Cardiff Capital Region by attracting high quality business and investment;
- Provide a development formed around sustainable travel with seamless access to rail, bus, walking and cycling routes. Placing new and existing businesses and the existing community within walking distance of a mainline railway

station with access to major cities including Cardiff, Newport, Bristol, London and Manchester;

- Retain the primary reen network across the site including the Faendre Reen, the Ty Ffynnon Reen and the Green Lane Reen;
- Create a new accessible public space known as the Main Park connecting with both St Mellons and Hendre Lakes;
- Provide a new north-south public realm spine to provide pedestrian focussed places to meet, dwell and gather, integrating high quality hard and soft landscape and sustainable urban drainage;
- Retain east-west green fingers across the site to create a green grid integrated with the new development plots and linking key habitat areas, managing water and defining new streets;
- Provide a wildlife corridor with protected habitats following the alignment of retained utilities;
- Create three distinct areas of development with a higher density cluster around the transport interchange;
- Orientate buildings to maximise solar gain and improve their energy efficiency and provide views to the Faendre Reen Corridor;
- Provide a primary point of vehicle access from Cypress Drive, with a primary vehicle route to the interchange to keep vehicular traffic away from the heart of the development; and
- Provide multiple points of access for walking and cycling to create a locally connected and permeable development.

The masterplan proposes four distinct character areas that reflect and respond to the context of the site, provision of the transport interchange and relationship with surrounding areas.

Further information is provided on the character areas in Section 4.2.1 and the DAS.

The extent of the proposed development would be limited to the development areas identified on the parameter plan, totalling some 30ha.

Proposed ground levels would ensure that developed areas are flood free during a 1 in 200 year tidal flood event and 1 in 100 year pluvial flood event. Depth of flooding would also not exceed 0.6m during 1 in 1,000 year flood events. This would ensure that requirements for surface and foul water drainage are met.

The design approach to the distribution of height, concentrates taller buildings (up to 15 storeys) around the station to optimise the benefits of proximity to station and interchange facilities and contribute to the vibrancy of the Station Square.

Moving north from the Station Square building heights would reduce within the main area to up to 12 storeys and into the north parcels at up to 6 storeys, with the

intention that taller elements would align to key sight lines and public spaces to assist with wayfinding.

Building heights are indicative at this stage and would be defined at the Reserved Matters stage.

The layout of the site and the design of the streets and active travel network have been designed to create an inclusive walkable place which prioritise walking and cycling. The network of streets are intended to be direct and legible, providing easy navigation within the site and connections to the surrounding area.

In terms of community safety the design of the proposed development ensures that public spaces (streets, parks etc.) are directly overlooked by occupied buildings with clear lines of sight which are critical factors in deterring anti-social behaviour and creating a sense of safety and comfort. Appropriately illuminated public routes and spaces would also be essential in providing a safe environment after dark. An outline lighting strategy has been included within the DAS and illustrates how this could be achieved. The pedestrian priority approach to the streets and public realm would also encourage lower vehicle speeds and help to reduce the prospect of conflict. Ancillary uses at the site such as food and beverage outlets would also help to ensure life and activity at the site after dark.

The proposed development has been designed to directly respond to its sensitive ecological, landscape and archaeological setting. The proposed development would retain the primary reen network which crosses the site and provide a diversity of open spaces including unbroken wildlife corridors of rich and diverse habitats, civic open spaces to promote social interaction and encourage outdoor activity and well-being and permeable plots providing buildings and land uses that maximise drainage in-situ and protect on-plot biodiversity features.

The DAS sets out in full detail, the design process and principles for the proposed development and it is considered that the application positively responds to **Policy KP4** in terms of masterplanning principles and the **Strategic Site H: South of St Mellons Business Park Site Specific Framework** and the community safety requirements of **Policy C3**. The proposed illustrative masterplan and the design parameters for the site have been produced in line with the criteria provided in the CLDP and relevant guidance documents.

6.2.6 Sustainable Development

Policy KP5 states that to *"help support the development of Cardiff as a world-class European Capital City, all new development will be required to be of a high quality, sustainable design and make a positive contribution to the creation of distinctive communities, places and spaces."*

PPW10 reaffirms the presumption in favour of sustainable development and defines sustainable development as "*the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the Well-being Goals*". **PPW10** focuses upon the concept of placemaking and a

positive outcome approach being taken within the planning and design of development. *"The concept of placemaking should be considered at all levels including at a global scale through paying key consideration to climate change; and also, at a more local scale, considering the amenity impact on neighbouring properties and people."*

Sustainability is inextricably woven into the proposed development as explained in the DAS. Whilst the Well-being of Future Generations (Wales) Act 2015 (WFGA) is not specifically a material planning consideration, it has clear relevance in the planning arena, containing a blueprint that requires the delivery of sustainable development through the well-being goals and ways of working as illustrated in Figure 7. The proposal delivers strongly against the seven well-being goals, seeking to bring about positive change in local and wider economic prosperity, community cohesion through employment opportunities, sustainable travel, public space and other amenities and creating a strong, diverse and characterful sense of place; resilience through enhancing and creating a biodiverse and healthy eco-system; contributing to people's physical and mental well-being on a number of levels through provision of services/amenities, spaces to dwell and for recreation; delivering on equality by bringing investment, jobs and travel choice to a socio-economically disadvantaged part of the city.

The proposal also delivers strongly against the five ways of working, having been prepared in an integrated and collaborative way, working with a diverse and broad range of local and statutory interest groups to understand the issues and the place and what the scheme can do in response to deliver a long term benefit to the locality and wider region.

It is therefore considered that the proposal represents sustainable development in accordance with the definition of the Act.

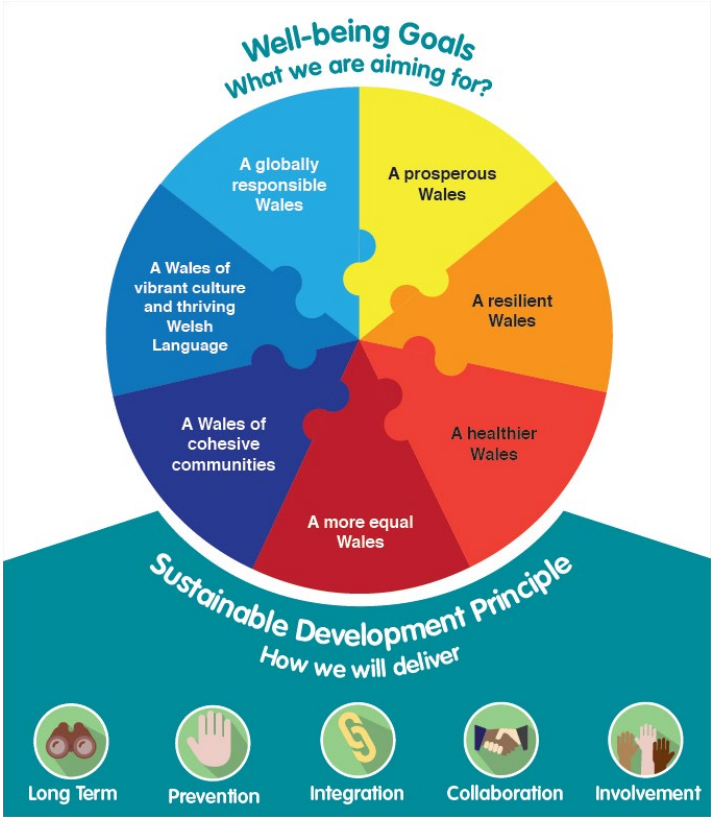


Figure 7: WFGA – The Well-being Goals and Ways of Working

The objective of environmental sustainability as prescribed in TAN 12 – Design has been incorporated throughout the proposed development and is reflected throughout this application. The proposed development represents a Transit Oriented Development model of growth, where development and infrastructure are shaped around public transport. This approach aims to provide people with attractive and viable alternatives to car based travel and capture value from public transport investment. The proposed development has also been designed to encourage accessibility and connectivity to the wider city region, facilitating access to new jobs and skill opportunities. The proposals would provide employment and training opportunities for the local population both during the construction phases and over the lifetime of the development across a range of sectors and skill-levels.

Within the site, the illustrative masterplan proposes a network of streets and spaces that have been designed to support a modal hierarchy that prioritises pedestrians, cyclists and public transport through detailed design, following the principles set out in Manual for Streets and Manual for Streets 2.

The proposed development also considers both the current risks presented by climate change and the longer term changes. In preparing the masterplan, the proposed development has responded to TAN 15 – Development and Flood Risk and Schedule 3 of the Flood and Water Management Act 2010, both which set clear direction for the approach to resilient development. Throughout the site floor

levels would be raised and the landscape would be used to ensure surface water run-off is managed through SuDS.

Chapter 14 of the ES assesses the proposals in terms of Green House Gas (GHG) emissions and Climate Change Resilience (CCR) and then assesses the In-combination Climate Change Impact (ICCI) to provide a holistic assessment across the construction and operational phases of the scheme.

During the construction phase, construction activities and use of materials would lead to a release of GHG emissions for which mitigation measures have been recommended to reduce such emissions. However, even with these recommendations construction emissions from the project are estimated to represent 1% of the total GHG from the Cardiff region. The construction effects on GHG emissions are therefore considered significant. The effects of proposals on CCR and ICCI during construction is negligible.

On completion, the proposed development would emit GHG as a result of energy consumption from buildings and transport, loss of habitat carbon sequestration and embodied emissions within maintenance and refurbishment activities.

Mitigation measures have been recommended to reduce GHG emissions, but the effect is still considered significant.

The proposed development has been designed to take account of future climate change and therefore the development is considered resilient to climate change, including in-combination impacts.

At the current time the final type, size and range of employers and buildings attracted to the site is unknown. The assessment has therefore assumed a business as usual approach with buildings meeting current standards and National Grid connections as the primary power supply. There will be significant opportunities to reduce building emissions below the levels assumed in the assessment, through energy efficiency measures at a local or site-wide level, including those mandated by future, more stringent, standards.

In summary, the various elements of the proposed development would ensure a high quality, sustainable design that would make a clear positive contribution to the creation of a distinctive community, place and space demonstrating accordance with **Policy KP5** and the sustainable development principle of the WFGA**.**

6.2.7 Healthy Environments

Policy KP14 deals with healthy living and states *"Cardiff will be made a healthier place to live by seeking to reduce health inequalities through encouraging healthy lifestyles, addressing the social determinants of health and providing accessible health care facilities. This will be achieved by supporting developments which provide for active travel, accessible and useable green spaces, including allotments."*

Policy C5 further states that *"Priority in new developments will be given to reducing health inequalities and encouraging healthy lifestyles through:*

ii. Ensuring that they provide a physical and built environment that supports interconnectivity, active travel choices, promotes healthy lifestyles and enhances road safety."

PPW10 considers the priority of Welsh Government to reduce reliance on the private car and support a modal shift towards walking, cycling and public transport. It states that "*planning authorities should develop and maintain places that support healthy, active lifestyles across all age and socio-economic groups*." PPW10 also sets out how in delivering a modal shift, important contributions will be made to "*improving air quality, increasing physical activity and improving the health of the nation and realising the goals of the Well-being of Future Generations Act*".

PPW10 also considers how green infrastructure should be protected owing to the multi-functional role it plays in providing benefits for the health and well-being of communities as well as the environment.

The proposed development would create new landscaped open spaces that are accessible to the public and within easy access of places of work, transport and existing residential communities. These would allow for work and play, encouraging people to engage with their surrounding environment whilst improving their health and well-being through activity and increased social interactions.

Wales has increasing health challenges relating to obesity and an ageing population. Lowering rates of inactivity in deprived communities will help to reduce the burden that such issues place on our health care systems. For the proposed development, this means prioritising active travel and encouraging physical activity through accessible walking and cycling networks for recreation, commuting and other travel.

Chapter 12 of the ES considers how the proposed development may impact a number of health determinants, which are aspects of the environment which influence a person's health. Health determinants considered include access to healthcare services, social infrastructure, open spaces and work and training; air quality, noise and neighbourhood quality; accessibility and active travel; climate change; and crime reduction and community safety.

No significant health effects were identified for the construction phase, although there would be some minor beneficial effects through increased employment opportunities. Once completed, improvements in local transport networks allowing the local population to access a wider range of services, infrastructure and opportunities would have a significant health benefit. Upgrades to, and the provision of, walking and cycling routes would promote activity and active travel in the local community, providing further beneficial effects. Finally, the high number of jobs directly generated through the operation of the proposed

development, and provision of transport links to increase access to other employment opportunities, would provide significant beneficial effects.

The development would also be fully inclusive, ensuring that older people, people with disabilities and people from across the community are able to access and utilise new facilities in order to fully benefit the wider community, reduce existing health inequalities and encourage healthy and active lifestyles in accordance with **Policy KP14** and **Policy C5** as well as having a clear alignment beyond LDP policy to the PPW objective of facilitating accessible and healthy environments and the WFGA objective of 'a healthier Wales'.

6.2.8 Biodiversity and Nature Conservation

The application site is located within a number of sensitive environmental sites including the Gwent Levels – Rumney and Peterstone SSSI and the Marshfield SINC. It is also home to a number of protected species and habitats and therefore its existing biodiversity and nature conservation features have been key drivers in the design of the proposed development.

The site allocation **Policy KP2(H)** states that the proposed development must *"Effectively respond to landscape and biodiversity assets by:*

- *Protecting the value of the Gwent Levels SSSI with development being a minimum of 12.5 metres from main reens and 7 metres from field ditches;*
- *Ensuring that all development accords with the Natural Resources Wales (formerly Countryside Council for Wales) Wentloog Levels guidelines "Nature Conservation and Physical Developments on the Gwent Levels – the current and future implications";*
- *Integrating any landscape natural features, such as existing reens and hedgerows into the design including provision of suitable buffers;*
- *Protecting the Marshfield SINC;*
- *Respecting the intricate reen network and exiting hedgerows;*
- *Linking retained habitats through the provision of a series of open space corridors providing ecological connectivity, sustainable access routes and opportunities for sustainable drainage including:*
  - *Links between retained reens and hedgerows;*
  - *Green links to Hendre Lake Park which respond to the natural landscape value of the area;*
  - *Ensuring that there is no detriment to the maintenance of the favourable conservation status of the Shrill Carder Bee by carrying out a survey, and if found, provide appropriate compensatory measures;*

- *Ensuring that there is no detriment to the maintenance of the favourable conservation status of European Protected Species including bats, otters and reptiles including provision of suitable compensatory planting to supplement existing retained habitats;*

Policy KP16 states that *"Cardiff's distinctive natural heritage provides a network of green infrastructure which will be protected, enhanced and managed to ensure the integrity and connectivity of this multi-functional green resource is maintained."* The policy further outlines that *"Natural heritage assets are key to Cardiff's character, value, distinctiveness and sense of place. They include the City's:*

- *Biodiversity interests including designated sites and the connectivity of priority habitats and species (EN5, EN6 and EN7);*
- *Trees (including street trees), woodlands and hedgerows (EN8);"*

Policies EN5, EN6, EN7 and **EN8** individually outline the requirements and protection for designated sites, ecological networks and features of importance for biodiversity, priority habitats and species and trees, woods and hedgerows.

PPW10 states that development proposals must consider the need to "*support the conservation of biodiversity, in particular the conservation of wildlife and habitats*".

A full programme of ecological surveys and monitoring has been undertaken at and surrounding the site to inform the proposed development. Ecological surveys between 2017 and 2019 confirmed the presence/potential of a number of protected and/or notable species. This included foraging and commuting bats, dormice, otter, water vole, European eel, foraging and commuting badgers, breeding and wintering birds, barn own, grass snake, common lizard and common amphibians.

These surveys have been used to identify important ecological features and species and habitats requiring protection at the site. The ecological impacts of the proposed development and any required mitigation measures have been fully assessed in Chapter 10 (Biodiversity) of the ES.

Designated Sites

A Habitats Regulations Assessment (HRA) has been undertaken for the site due to the presence of internationally designated sites located within 10km of the site, bat Special Areas of Conservation (SAC) located within 30km of the proposed development and three nationally designated sites within 2km of the site.

Seven International Sites were identified within the search area (10km and all SACs designated for the presence of Annex II bat and/or fish species within 10-30km of the project): Severn Estuary SAC, Special Protection Area (SPA) and Ramsar site, River Usk SAC, Mendip Limestone Grasslands SAC, North Somerset and Mendip Bats SAC, and the Wye Valley and Forest of Dean Bat Sites SAC.

The HRA Screening Assessment identified the potential pathways for effect for the Severn Estuary SAC, SPA and Ramsar site, and the River Usk SAC, via: habitat degradation, in the form of dust deposition, pollution events, sediment runoff, changes in air quality, and the spread of INNS; habitat loss/severance; physical disturbance/damage of habitats for which qualifying features rely on; disturbance/displacement to qualifying fauna and mortality/injury of individuals. The information to inform the Appropriate Assessment considered these effects in relation to the conservation objectives for the qualifying features of the International Sites and identified suitable mitigation measures.

Potential effects from construction activities, such as from dust deposition, pollution events or sediment run-off, to designated sites which are within relatively close proximity and/or are hydrologically connected to the construction footprint would be mitigated through standard best-practice techniques and methods as described within Section 1.9 of Chapter 10 (Biodiversity) of the ES and within the Outline Construction Environmental Management Plan (CEMP).

During operation, SuDS would be implemented across the site to manage rainfall using methods that mimic natural process, by using landscape and vegetation to control the flow, volume and quality of the surface water runoff. The storm water drainage strategy and flood mitigation proposals have been designed to ensure no de-watering of existing reens and the interconnectivity between the reen network is maintained.

The HRA concluded that these measures along with the proposed monitoring are considered sufficient to ensure that the construction and operation of the proposed development do not, either alone or in-combination with other plans or projects, give rise to any adverse effects on the integrity of the International Sites. No permanent barriers to SPA or Ramsar site fish species are proposed and the habitat loss to SPA and Ramsar site bird species is considered to not be significant.

As a result of the proposed development 4.43km of reens, ditches and field grips would be lost from the Gwent Levels – Rumney and Peterstone SSSI. However, this loss would be mitigated by reen re-provision of 3.72km of wet reens with a 3m wide base and 1 in 1 slopes on the banks. This is considered to be a net gain of wet reens, at a ratio of 1:1.38 (or 37% increase). These wet reens would be created to meet the conditions required to support the aquatic invertebrate and macrophyte species that are features of the SSSI. Where reens are retained, strips of land on both banks of the reens would be retained in the northern area of the site which would be safeguarded from built development. 12.5m wide off sets would also be provided for the main reens including the Faendre Reen.

The Marshfield SINC which is a non-statutory locally designated site would be permanently lost and directly impacted by the proposed development. However, the 2018 National Vegetation Classification survey assessed the majority of grassland within the SINC as having only a moderate botanical value in a local context. To mitigate its loss, 10.2ha of species-rich grassland would be provided within the south of the proposed development (south of the railway line) and a

further 1.92ha of species-rich tussocky grassland would be created within the Wildlife Corridor. Due to the phased construction approach, this new grassland would also be created prior to the removal of the existing semi-improved grassland, with both turfs and soils from the SINC being translocated into the created grasslands south of the railway line.

It is therefore considered that whilst the loss of the SINC itself cannot be mitigated through the proposed development, the created grassland, which would include translocated turfs and soils from the SINC, have the potential to provide a biodiversity net gain of higher valued habitats at the site which would be subject to monitoring and management to secure their long term benefit.

As such the proposed development during operation is considered to have negligible impact on designated sites and would not cause permanent unacceptable harm to sites of international, national or local nature conservation importance in accordance with **Policy EN5.**

Biodiversity Features and Protected Species

In terms of biodiversity features at the site and protected species, Chapter 10 (Biodiversity) of the ES concludes that through the provision of wildlife crossings and enhancement of key foraging habitats (including a 62% increase of wet woodland, a 95% increase of broadleaved woodland (hazel dominate), a 1,905% increase of species-rich hedgerows (1:18 ratio of total length of hedgerow lost vs. gain), a 37% increase of wet reens, 62% increase of scrub and an increase in species diversity of species-rich grasslands), the operational effects on foraging and commuting protected species at the site is considered to be positive, being a net gain.

Wildlife bridges and safe crossing locations would be provided across the site to enable protected species connections into existing and planted habitats without being restricted by built development.

0.8ha of wet woodland and 1.8ha of broadleaved woodland would also be created within the Wildlife Corridor and woodland corridors within the north and the south of the proposed development. Species-rich hedgerow would be translocated within the site and where species-poor hedgerows would be lost, replacement hedgerows would be planted as species-rich and double planted through the Wildlife Corridor, alongside the Ty Ffynnon Reen and throughout the southern mitigation area (south of the railway line) to provide a connected network through and around the proposed development and ensuring the proposed development remains connected to the surrounding network of hedgerows and woodlands.

Where it has not been possible to design the proposed development to avoid, eliminate, or reduce the magnitude of some of the potential impacts and risks associated with the proposed development, mitigation measures have been identified to achieve this. Mitigation measures seek to employ best-practice methods for dealing in particular with habitat loss, habitat severance, habitat damage, disturbance and species mortality. Enhancement measures have also been

included, going above and beyond what is required to mitigate the adverse effects of the proposed development, resulting in some overall net biodiversity gains.

Overall the ES Biodiversity chapter concludes that with the relevant mitigation measures in place, the proposed development would have no significant effects on biodiversity features or protected species. In fact, it would have a number of residual minor beneficial effects during operation and would provide biodiversity net gains.

A high standard of environmental management during construction would also be adopted through the CEMP, an Outline of which is included in the ES and this would be developed and detailed by the appointed contractors and submitted to CC should planning permission be granted.

It is therefore considered that the proposed development accords with **Policies KP2(H), KP16, EN6, EN7** and **EN8** of the CLDP.

6.2.9 Landscape and Visual Impact

Policy KP16 states that *"Cardiff's distinctive natural heritage provides a network of green infrastructure which will be protected, enhanced and managed to ensure the integrity and connectivity of this multi-functional green resource is maintained."* The Policy further outlines that *"Natural heritage assets are key to Cardiff's character, value, distinctiveness and sense of place. They include the City's:*

- *Landscape, geological and heritage features which contribute to the City's setting (EN3);*
- *Trees (including street trees), woodlands and hedgerows (EN8);"*

Policy EN3 further states that *"Development will not be permitted that would cause unacceptable harm to the character and quality of the landscape and setting of the city. Particular priority will be given to protecting, managing and enhancing the character and quality of the following Special Landscape Areas:*

- *Wentloog Levels."*

PPW10 sets out that *"the special characteristics of an area should be central to the design of a development. The layout, form, scale and visual appearance of a proposed development and its relationship to its surroundings are important planning considerations".*

Landscape

The proposed development includes aspects which are located within or in close proximity to the National Landscape Character Area NLCA) 34: Gwent Levels and NLCA 35: Cardiff, Barry and Newport. The site is also included within the Gwent Levels Landscape of Outstanding Historic Interest in Wales HLW(GT) 2 and within close proximity to the Wales Coast Path.

The landscape strategy for the proposed development is defined by large scale connected green wildlife corridors that flow from west, north and east to form an 'inverted v' shape at the site. The history and ecological features of the site together with the surrounding reens and farmland have driven the strategy to ensure that it responds to its sensitive context.

The Landscape Parameter Plan submitted in support of the application outlines four key parameters for the site: water, habitats, access and public realm.

The water strategy for the site aims to retain the primary reens at the site whilst removing and replacing some of the secondary reens. The development would also include a wider network of hydrological features aimed at mitigating flood risk and managing surface water.

The ecological strategy for the proposed development is to retain as much habitat as possible, create more habitat than is proposed and work to a biodiversity net gain. Every attempt to create habitat would be focussed on principal aspects of the habitat network (inverted V) and the land to the south of the railway which is also reserved for ecological habitat.

The proposed transport interchange and areas of public realm would be fully accessible to vehicles, pedestrians and cycles with a hierarchical network of paths allowing safe movement. A series of trails through the natural areas and generous widths in the urban realm would support active travel and the raised development plots would allow for creative edge treatments.

The public realm strategy can be broadly categorised into three types – natural open space, civic open space and permeable plots, a Main Park, Wildlife Corridor and squares and plazas would be provided across the site to enable the landscape to function for a variety of users, ages and abilities who are at the site for recreation, work or leisure. Green roofs and living façades would also be encouraged to enable the built environment to connect with its setting. Further information on the landscape strategy can be found within the DAS.

In line with **Policies KP16** and **EN3** the proposed development also incorporates the embedded mitigation set out below to ensure the site respects the existing landscape character and landscape designations:

- 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. Buildings could be clad/finished with green wall façades and green roofs;
- PRoW and Access Strategy, including management of people and vehicles across the site;

- Site wide green infrastructure strategy including 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 soften the visual impact of the car park and vehicles within it;
- Proposed wildlife habitat that forms part of the wider green infrastructure across the site:
    - 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 would be lost, these would be replaced at a ratio of 1:1.95 for dry woodland, and 1:1.62 for wet woodland;
- Reen offset areas including the retention of existing main reens and enhancement of character and condition, including a 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, providing visual screening to views into the site from the east and the south, particularly from the Wales Coast Path; and
- An overall Biodiversity Net Gain for the site.

Visual

Chapter 13 of the ES deals with Landscape and Visual Impact, At construction stage and when operational. 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, including plant, which would be approximately 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, including plant, which would be approximately 52m. The Northern Parcels would have buildings up to 6 storeys in height, including plant, approximately 28m.

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 transport interchange at the proposed railway station.

Visual effects of the proposed development are likely with the introduction of tall built form on the eastern edge of Cardiff, into an otherwise rural setting, resulting in visual change.

The assessment includes 18 viewpoints agreed with the Landscape Officer with two viewpoints from the Wales Coastal Path. The Chapter concludes that the built elements of the proposed development are clustered and phased sympathetically across the development. Impacts on visual receptors are mitigated by perimeter planting around the edges of the site, and in particular around the edges of car parks.

During construction, the assessment concludes (in Section 13.14, summarised in Table 13.25 thereof) that whilst there are negative effects, for the large part they are *slight adverse* or *negligible adverse* and insignificant. There are a small number of *moderate adverse significant* effects but that they would be caused largely by vegetation clearance creating more open views onto the site, but that they would be both temporary and reversible.

Turning to the effects from operation, mitigation for impacts arising during this 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 development areas are set within a structure of green and blue infrastructure across the site and the following mitigation has been embedded in the design of the development:

- 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.

The assessment concludes (in Section 13.16, summarised in Table 13.30 thereof) that the embedded mitigation as set out above will reduce the overall impact of some of the *moderate adverse significant* effects on the receiving landscape and visual receptors with planting over time integrating the development into the landscape and obscuring views into and within. However, there will remain some *slight* and *moderate adverse* residual effects for residential and transport receptors simply due to proximity, but that planting will soften those views over time. 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.

6.2.10 Cultural Heritage and Archaeology

Policy KP17 deals with built heritage and outlines that *"Cardiff's distinctive heritage assets will be protected, managed and enhanced, in particular the character and setting of its Scheduled Ancient Monuments; Listed Buildings; Registered Historic Landscapes, Parks and Gardens; Conservation Areas; Locally Listed Buildings and other features of local interest that positively contribute to the distinctiveness of the city."*

Policy EN9 supports this policy outlining that development relating to the heritage assets listed above *"will only be permitted where it can be demonstrated that it preserves or enhances that asset's architectural quality, historic and cultural significance, character, integrity and/or setting."*

The site-specific allocation **Policy KP2(H)** further states that the proposed development should *"Effectively respond to heritage assets by:*

- *Assessing and effectively addressing potential impacts on known assets including the Wentloog Levels Archaeologically Sensitive Area and registered Landscape of Outstanding Historic Interest;"*

PPW10 highlights the Welsh Government's objectives to protect, conserve and enhance the significance of historic assets, including paying consideration for the setting of an historic asset, and states that the planning system must take into account these objectives.

The proposed development is located entirely within the Gwent Levels Landscape of Outstanding Historic Interest in Wales HLW(GT) 2. Chapter 10 (Archaeology and Cultural Heritage) of the ES concludes that the proposed development is likely to have a direct effect on the Historic Landscape and the Wentloog Levels field system. The registered Historic Landscape covers most of the site from the land mostly located to the west of the Faendre Reen and the modern pond. The Gwent Levels have been entered on the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales and identified as being of 'exceptional historic importance'. The area has considerable potential for discovery of previously unrecorded archaeological interests.

However, despite the proposed development's location within the Historic Landscape the proposed development would only directly impact on a very small proportion of the landscape overall and would therefore result in a 'Minor' effect on the overall landscape.

The proposed development would also include the relocation of 4.3km of secondary reen from the area north of the rail line to an area south of the rail line. As such, it is considered that the development would have a 'Major' effect on the Wentloog Levels field system 86852 including reens, sluices, and footbridges. The effects of alteration to the pattern of reens and ditches may produce local changes in moisture content within the geology which may have an indirect and unintended effects upon previously unknown archaeological assets. However, the

extent of any change is difficult to assess in areas for which there is no currently known archaeological information.

In order to mitigate these effects, assessment of potential unknown buried archaeological remains is recommended through a programme of geophysical survey followed by targeted trial trenching in areas appropriate for the perceived archaeological potential. The scope of the trial trenching would be set out in a Written Scheme of Investigation prepared following consultation with the necessary statutory authorities and following assessment of the results of the geophysical survey. It is envisaged that an archaeological watching brief would be required during the construction phase on intrusive groundworks. The need for and scale of watching brief would be agreed through consultation with the statutory authorities.

A programme of historic hedgerow recording would also be carried out for all those identified as being removed as result of the proposed development. This is to identify the nature of these hedgerows and to record their form and extent i.e. whether furnished with banks, rubble cores, ditches etc.

Mitigation would consider the predicted impacts of the proposed development and aim to avoid adverse effects on archaeology and heritage assets within the study area. In the case of any archaeological remains, the mitigation would aim to avoid undisturbed archaeological remains and preserve them in situ. Where this is not possible, preservation by record would be proposed as mitigation.

The overall effect of the proposed development would be the permanent removal of areas within the Gwent Levels Historic Landscape Area. However, as outlined above only a very small proportion of the overall Historic Landscape Area would be lost as a result of the proposed development and mitigation measures would be adopted during construction to ensure that the impact on currently undisturbed archaeological remains is reduced. Furthermore, the site is allocated within the CLDP for built development and it is therefore considered that the principle of the loss of this small part of the wider Gwent Levels Historic Landscape Area is acceptable. Where possible, historic and archaeological features would be protected and managed and the heritage significance of the wider area would not be harmed. It is therefore considered that the proposed development accords with **Policies KP17** and **EN9**.

6.2.11 Transport and Access

Policy KP8 deals with sustainable transport and outlines that "*Development in Cardiff will be integrated with transport infrastructure and services in order to:*

i. Achieve the target of a 50:50 modal split between journeys by car and journeys by walking, cycling and public transport;

ii. Reduce travel demand and dependence on the car;

iii. Enable and maximise use of sustainable and active modes of transport; iv. Integrate travel modes;

iv. Provide for people with particular access and mobility requirements;

v. Improve safety for all travellers;

vi. Maintain and improve the efficiency and reliability of the transport network;

vii. Support the movement of freight by rail or water; and

viii. Manage freight movements by road and minimise their impacts."

Policy KP8 is supported by a number of transport specific policies which all encourage sustainable transport including **Policies T1, T3, T5, T6** and **T7.**

Of particular relevance to the proposed development, **Policy T3** supports transport interchanges including new rail stations and park and ride facilities and **Policy T7** confirms that support will be given to the development of strategic transport infrastructure including a *"St Mellons rail interchange including Park and Ride."*

The site allocation **Policy KP2(H)** also allocates the site for a *"Transport hub including new rail station served by relief line rail services connecting to the city centre and services to Cardiff Airport and London via Cardiff Central…park and ride facility…of site infrastructure including bus priority measures…and high quality on-site and off-site walking and cycling links."*

The proposed development fully aligns with the transport allocations and policy for the site and would provide a new transport hub and interchange which would include a new railway station, new 650 space Park and Ride facility and an integrated network of traffic free paths for walking and cycling, providing access to all parts of the site and onward connections to surrounding streets, footpaths and cycle routes. The Park and Ride facility and railway station would also be connected to numerous bus stops providing bus priority measures.

A TA and two Framework Travel Plans have been submitted in support of the application. The TA confirms that the proposed access strategy for the development has been developed with reference to the sustainable transport hierarchy set out in TAN 18 – Transport and prioritises pedestrians and cyclists over other transport modes.

Policy KP8 targets an overall 50:50 modal split for journeys in Cardiff between trips by car and trips by walking, cycling and public transport. Fostering a step change away from journeys made by car can be achieved through the integration of sustainable travel modes and providing the opportunity for journeys to be made by alternative modes of travel to the car.

The establishment of pedestrian and cycle links to the neighbouring communities and employment area of St Mellons and the provision of a sustainable transport interchange including a railway station, Park and Ride and bus facilities forms a critical component of the vision for the proposed development. These infrastructure proposals, alongside a masterplan that adheres to a sustainable transport hierarchy, will deliver a sustainable development for which walking,

cycling and public transport are often the most convenient and quickest forms of transport.

As stated within **PPW10**, it is a priority of Welsh Government to reduce reliance on the private car and support a modal shift to walking, cycling and public transport. **PPW10** states that "*planning authorities should support necessary transport infrastructure improvements, where it can be demonstrated that such measures are consistent with Welsh Government policy to encourage and increase use of sustainable transport and reduce reliance on the private car for daily journeys."* **PPW10** also states that planning authorities should also "*align jobs and services with housing and sustainable transport infrastructure, to reduce the need for travel, and dependency on travel by car*". The proposed railway station is anticipated to result in a positive change in the travel behaviour of existing residents and employees, with some existing journeys made by car being transferred to rail.

To mitigate the traffic impacts associated with the proposed development and change the character of Cypress Drive to reflect a more urban environment, traffic signals are proposed as part of development at its junctions with Fortran Road, Pascal Close and Willowdene Way. The introduction of signals should reduce traffic speeds and result in the route becoming more permeable with the introduction of controlled crossings for pedestrians.

A junction improvement scheme is also required at the A48/Cypress Drive roundabout and this is proposed to be secured via a planning condition. A staggered signalised junction has been identified as a potential improvement scheme which is forecast to mitigate the traffic impacts associated with the proposed development.

Framework Travel Plans have been prepared for the business district and the railway station. These seek to maximise the proportion of journeys made to the site by sustainable modes of transport through a range of measures including Personalised Travel Planning for all employees of the existing business park and the proposed business district.

Furthermore, a Construction Traffic Management Plan will be prepared as part of the Reserved Matters stage and this document would outline measures that would seek to minimise the impacts arising from construction traffic associated with the site.

In summary, the TA concludes that the proposed development would contribute positively towards the overarching policy objections for the CLPD and is compliant with relevant local and national policy regarding sustainable travel and transport. The development would positively contribute to the sustainable travel and modal shift requirements for Cardiff and would provide transport improvements at the site and to the local area in line with the site allocation. It is therefore considered that there are no traffic or transportation reasons why the proposed development should not be granted planning permission.

6.2.12 Noise and Vibration

Policy EN13 states *"Development will not be permitted where it would cause or result in unacceptable harm to health, local amenity, the character and quality of the countryside, or interests of nature conservation, landscape or built heritage importance because of air, noise, light pollution or the presence of unacceptable levels of land contamination."*

Chapter 9 (Noise and Vibration) of the ES considers the effects of noise associated with the proposed development on the surrounding environment. The existing noise climate at the site is predominantly rural in nature, with occasional passing road traffic, as well as sounds from natural sources such as trees and animals. Occasional train noise is audible at locations closer to the existing railway line and some aircraft noise is also experienced.

The area to the north west of the site is primarily residential, with two schools. To the south of the railway and east of the site, are sparsely located individual residential dwellings, farms and light industrial areas. To the north lies the St Mellons Business Park and the site generally has a number of less sensitive non-residential receptors surrounding the site.

The proposed development would generate noise from activities on site, including additional traffic movements from people accessing it and building services plant.

In terms of plant noise it is recommended that the hours of operation of individual plant items be reviewed and that where the existing background noise level is less than 40dBLA90, the noise from all items of plant be restricted to a rating level of 5dB below background noise level or 30dBLAeq, whichever is the higher. It is anticipated that by restricting the noise levels in this manner that the noise levels from building services would not be significant.

The proposed development would also result in increased road traffic volumes, however only one section of road along Cypress Drive would be subject to an increase in noise level of between 1-3dB based on the partial angle of view to the road that the existing dwellings have. This section of road is relatively small and the worst affected properties do not have habitable rooms which face the road and as such the increase in noise level is likely to be less than 3dB. At all remaining roads, the increase in noise levels due to changes in road traffic from the scheme is less than 1dB, which is categorised as negligible. The effect of noise from increased road traffic as a result of the scheme is therefore not significant.

The nearest residential properties to the proposed Cardiff Parkway station are over 400m away on Water Avens Close. Although outside the scoping distance, there is currently no screening to noise from rail operations. The future scheme does not introduce additional rail services, however some of the services would now stop to service the station. According to Calculation of Rail Noise, the noise level for a decrease in speed will be lower than for the same train travelling at a higher speed, and so the periods where the train is moving but travelling at lower speeds to enter and exit the station would have lower noise levels.

The noise assessment also considers the noise from the train departing the station and on all occasions, concludes that given the noise climate has existing occasional higher noise levels from existing road and rail sources, noise events from the proposed train station would not be prominent above ambient noise levels and therefore it is considered not significant.

Given that the proposed development would result in no significant effects to the existing noise climate, no noise mitigation is proposed through the ES. In considering residual effects from construction and operation, the ES concludes that given no significant effects are identified, there will be no residual effects for these sources and it is therefore possible to conclude that the proposed development would not result in any unacceptable harm to the area from a noise or vibration perspective and accords with **Policy EN13.**

6.2.13 Air Quality

Policy KP18 outlines that *"In the interests of the long-term sustainable development of Cardiff, development proposals must take full account of the need to minimise impacts on the city's natural resources and minimise pollution, in particular the following elements:*

- *Minimising air pollution from industrial, domestic and road transportation sources and managing air quality."*

Policy EN13 states *"Development will not be permitted where it would cause or result in unacceptable harm to health, local amenity, the character and quality of the countryside, or interests of nature conservation, landscape or built heritage importance because of air."*

PPW10 states that *"it is a priority of Welsh Government to reduce reliance on the private car and support a modal shift to walking, cycling and public transport and that by delivering this objective, an important contribution will be made to improving air quality."*

Chapter 8 (Air Quality) of the ES considers the air quality effects of the proposed development from a number of perspectives including the impact of construction dust and construction traffic on human and ecological receptors as well as the operational stage of development.

Cumulative effects have been considered throughout the air quality assessment and CC has requested sensitivity tests to be carried out by using the baseline year (2019) emission factors and background concentrations for the future predictions. This is a very conservative approach as there are expected to be improvements in both vehicle emissions and background pollutant concentrations as a result of local and national initiatives.

CC and NCC have declared multiple areas as Air Quality Management Areas (AQMAs) and whilst the proposed development is not in any of them, the road network affected by the traffic generated during the construction and operation of the proposed development extends into these designated AQMAs. Therefore,

more stringent screening for road traffic within AQMAs has been taken into account in this assessment.

The air quality assessment concludes that both during construction and operation there would be no significant effects as a result of the proposed development. During construction, appropriate control and mitigation measures would be adopted to control dust. The mitigation measures which feature in the outline CEMP include those for minimising the emissions of dust and particulate matter through the prevention or reduction at source. The conclusions and recommendations of the assessment will feed into the CEMP to ensure that the CEMP includes all the necessary mitigation measures based on the risk of dust soiling, human health and ecological impact from the construction of the proposed development.

During operation, embedded mitigation in the form of sustainable transport infrastructure provision such as EV charging facilities, highway and pedestrian/cycle network improvements and Travel Plans lead to no significant adverse impact predicted based on the operational traffic assessment carried out and hence no further mitigation measures are proposed. With regards to proposed boilers for the buildings, at the Reserved Matters stage these should meet a NOx emission rate of a maximum of 40mg/kWh. The design for the future buildings at the Reserved Matters stage should also ensure that the flue stacks for the boilers are located on the roof of the buildings away from ventilation inlets.

The Air Quality chapter concludes that with the assumption that these measures are committed to and applied appropriately, no significant effect is predicted and the proposed air quality impacts of the development are considered to be acceptable in accordance with **Policies KP18** and **EN13**.

6.2.14 Ground Conditions

Policy EN13 states *"Development will not be permitted where it would cause or result in unacceptable harm to health, local amenity, the character and quality of the countryside, or interests of nature conservation, landscape or built heritage importance because of … the presence of unacceptable levels of land contamination."*

A number of ground condition investigations have been undertaken at the site and its vicinity as detailed in Chapter 6 (Ground Conditions) of the ES. The investigations completed to date encountered limited and isolated areas of made ground and no evidence of significant contamination within the proposed development area.

The known areas of made ground are associated with the Green Lane Overbridge, the railway line and access track to the gas governor. A review of the site history showed that the site has predominantly been agricultural fields since 1898. As a result, there could be contaminants associated with the use of fertiliser and pesticides, particularly in areas of storage or loading. However, the levels within the fields are unlikely to be significant and no storage areas have been identified

on historical mapping or during site walkovers, therefore no significant levels of contaminants associated with agricultural uses are anticipated.

The Ground Conditions chapter concludes that the assessment of effects resulting from the construction activities are generally identified as neutral or slight adverse effects on either geology, hydrogeology or land contamination.

This is with the exception of a potential risk to construction workers encountering isolated pockets of methane during deep intrusive works like piling or band drain installation. This health and safety risk would be managed during construction with an appropriate method statement, which would set out procedures allowing for control and monitoring of exposure to ground-gas during any intrusive construction activities.

During operation, the proposed development has been identified to pose a potential risk with respect to land contamination with end users and controlled waters potentially being exposed to dust generated in areas of made ground exposed in areas of soft landscaping. In order to mitigate this effect any made ground exposed within soft landscaped areas would require validation through sampling and laboratory testing and assessment of results against criteria for an appropriate end use scenario or controlled water receptor. Should this indicate a potential risk, remediation measures would be required e.g. placement of clean materials at surface or removal of made ground.

The risk to maintenance workers with a slight to moderate significance of effect due to potential ground gas/VOC vapours accumulation in confined spaces would also require appropriate health and safety measures during maintenance works.

With the appropriate mitigation measures put in place, much of which translates across from the assessment into the outline CEMP in terms of health and safety and pollution control measures for protection of the water environment and human receptors in terms of unexpected contamination, during operation it is considered that the proposed development would be acceptable in terms of land contamination and accord with **Policy EN13.**

6.2.15 Water Quality, Flood Risk and Drainage

Policy EN10 deals with water sensitive development and states that *"Development should apply water sensitive urban design solutions (the process of integrating water cycle management with the built environment through planning and urban design)."*

Policy EN14 deals with development and the different types of flood risk it states that *"Where appropriate the developer should demonstrate that they have considered the need to incorporate environmentally sympathetic flood risk mitigation measures such as Sustainable Urban Drainage Systems (SuDS)."*

The site-specific allocation **Policy KP2(H)** further states that the proposed development should provide *"Flood mitigation works including raising the*

development plateaus and providing compensatory flood storage areas south of the rail line."

PPW10 states that "*development should reduce, and must not increase, flood risk arising from river and/or coastal flooding on and off the development itself.*"

Water Quality

As mentioned throughout this Statement, the site is characterised by an extensive network of watercourses (reens and ditches) which drain the surrounding wetlands. The protection and consideration of these reens is therefore a key feature of the design for the proposed development. Chapter 5 (Hydrology and Flooding) of the ES outlines that the development would require the removal of existing unnamed secondary reens to provide the area needed for the different scheme elements. For drainage purposes, a portion of Green Lane Reen would be widened to provide storage that has been lost through removal of the reens and improve conveyance of flows through the reen system. The main named reens would be retained as part of the proposed development and culverts or bridges would be introduced to provide access routes over several of the main reens. The quantity of unnamed reens that would be removed for the development areas would be provided at a greater than 1:1 ratio in the area to the south of the proposed development site, south of the railway line.

During operation, the impacts on surface water quality would be managed through SuDS which would include features such as dry ponds, wet ponds, swales and bioretention systems and potentially such features as rain gardens and green roofs among others. The proposed SuDS features would provide a level of buffering and an opportunity for containment between impermeable areas (where a spillage is most likely to occur) and the wider water environment.

Flood Risk

In terms of flood risk the site is located within Flood Zone C1 which is defined as areas within the NRW flood outline, equal to or greater than 0.1% risk of flooding, which are developed and served by significant infrastructure, including flood defences.

The Rivers and Sea Flood mapping produced by NRW indicates that the whole proposed development site is within Flood Zone 3. Areas that are either within the extent of flooding from rivers with a 1% (1 in 100) chance or greater of happening in any given year or the extent of flood from sea with a 0.5% (1 in 200) benefiting from flood defences.

The Surface Water Flood Mapping produced by NRW indicates there are areas of Low Surface Water Flood Risk associated with the Gwent Levels reen system. Low surface water flood risk is defined as an area which has between 1 in 1,000-year and 1 in 100-year flood risk.

A Flood Consequences Assessment (FCA) has been undertaken for the proposed development and submitted in support of the application the methodology of which accords with TAN15 – Development and Flood Risk. A Drainage Strategy

has also been provided in support of the application and this confirmed that SuDS would be installed across the site which would ensure that the surface water runoff would be discharged at greenfield runoff rate (GRR). Given the SuDS would be designed to ensure a GRR, it is concluded that the magnitude of impacts of flooding on all surface water features would be negligible as they are designed to replicate the existing site conditions.

Baseline tidal flood modelling has been carried out for the site to check the extent of flooding during 1 in 200 and 1 in 1,000 year tidal flood events, taking into account 75 years of climate change. The modelling demonstrates that for the 75 year climate change scenario, the 0.1% event flood level is approximately 5.25m AOD.

Consideration has also been given to the risk of flooding from pluvial sources. During high rainfall events, water held and transmitted in the reen system may overtop and spill onto the site. As such, baseline pluvial modelling has also been completed for the 1 in 1,000 year pluvial event. The modelling demonstrates some shallow flooding in places, particularly in the north-east.

To enable the development to proceed in accordance with the requirements of TAN15 and as described in the FCA, the site and access roads would need to be raised to ensure the site is flood free during a 0.5% tidal event and 1.0% pluvial event, whilst the depth of flooding cannot be more than 0.6m during 0.1% flood events. This has resulted in the need for a number of mitigation measures to ensure that the site can be developed in accordance with the requirements of TAN15. These include:

- Raising of existing ground levels to ensure that the site is flood free during a 0.5% tidal event and 1.0% pluvial event, whilst the depth of flooding cannot be more than 0.6m during 0.1% flood events;
- Introduction of two sluice gates, unidirectional culverts or non-return valves located along the existing primary reens, namely the Railway and Green Lane Reens. This would prevent tidal inundation from entering the site from the south during an extreme tidal event;
- Widening of the Green Lane Reen between Cobol Road / Heol Las junction down to the field access from Heol Las located north of the gas pressure reduction station, located near the south eastern corner of the site. This forms part of the pluvial flood mitigation measures;
- Lowering of the land south of the railway to form flood compensation storage in an extreme pluvial event. An interconnecting reen would be required to convey flows from the Green Lane Reen to the flood compensation storage area in such an event;
- Lowering of the land on either side of the Ty Ffynnon Reen where it forms a confluence with the Faendre Reen to a maximum of 4.93m AOD between the development plateaus. A 4m wide channel, formed with its base set at 4.6m AOD would also need to be created between the Ty Ffynnon Reen and the Faendre Reen. The above measures are to ensure that flows are conveyed in an

extreme pluvial event. A sluice gate may also be needed within the formed channel to prevent water held by existing sluices to maintain penning levels along the Faendre Reen.

The method of control and responsibility of management of any control devices such as sluice gates are subject to discussions primarily with NRW and its internal drainage board.

With these features present, the FCA concludes that the tidal and pluvial flood modelling shows that the proposed built development will be flood free in all events, up to and including the 0.1% pluvial event and the 0.1% plus climate change tidal event. It further concludes that in the very unlikely scenario of multiple breaches in the significant NRW coastal defences between Newport and Cardiff, the residual flood risk to the site remains well below the acceptability criteria (ie. flood depths <600mm) set out in TAN15.

The site provides safe access and egress through the northern and western routes in all scenarios. Site occupants and business owners will be advised to sign up to NRW flood warnings.

Comprehensive flood modelling supports the conclusion that on the grounds of flood risk, the proposed development site shall be safe over its lifetime, meeting all of the requirements set out in TAN15 and the aims of Planning Policy Wales.

It is therefore considered that with the installation of the proposed SuDS features at the site and mitigation measures identified through the FCA, the proposed development would achieve a water sensitive urban drainage solution and appropriate flood risk mitigation in line with **Policies EN10** and **EN14**.

6.2.16 Climate Change

Policy KP15 deals with climate change and states that *"To mitigate against the effects of climate change and adapt to its impacts, development proposals should take into account the following factors:*

i. Reducing carbon emissions;

ii. Protecting and increasing carbon sinks;

iii. Adapting to the implications of climate change at both a strategic and detailed design level;

iv. Promoting energy efficiency and increasing the supply renewable energy; and

v. Avoiding areas susceptible to flood risk in the first instance in accordance with the sequential approach set out in national guidance; and

vi. Preventing development that increases flood risk."

Policy EN12 further states that "*Development proposals are required to maximise the potential for renewable energy. The Council will encourage developers of major and strategic sites to incorporate schemes which generate energy from renewable and low carbon technologies."*

Climate change is a key consideration throughout **PPW10**. The critical components of sustainable transport infrastructure and integrated land use and transport planning are highlighted amongst the key ways to mitigate and respond to climate change issues. **PPW10** specifically states that "*the provision of sustainable transport infrastructure is essential in order to build prosperity, tackle climate change, reduce airborne pollution and to improve the social, economic, environmental and cultural well-being of Wales*". The placemaking approach set out within **PPW10** ensures that consideration for the impact of proposals is taken in consideration of all levels, including climate change on a global scale.

Global temperatures are continuing to rise, creating changing patterns of weather and sea level rises which will lead to a number of risks surrounding climate change that have been taken into consideration in the planning stage of the proposed development.

The illustrative masterplan seeks to create an adaptable layout which facilitates potential for on-site renewable energy production and buildings which could integrate renewable energy generation where appropriate. Throughout the site the landscape would be designed and used to ensure that surface water runoff is managed through SuDS which would not only manage the effects of climate change and flooding but also create an integrated landscape and public realm.

Chapter 14 (Climate Change) of the ES sets out a number of measures to mitigate the impact of greenhouse gas emissions from the operation of the proposed development. This includes measures such as:

- Setting targets and developing a clear carbon reduction plan. This should include a clear plan of how targets would be passed to developers of individual plots over time (this could be a plot guide for example);
- Taking a 'fabric first' approach to building design in order to improve the thermal efficiency of buildings and reduce heating and cooling energy requirements during operation, including consideration of orientation and design;
- Selecting energy efficient infrastructure, equipment and fittings in order to reduce energy demand during operation;
- Assessing energy supply options and developing an energy strategy for the proposed development, which focuses on the installation of renewable energy generators and connections to low carbon energy sources where possible, in order to reduce the emissions intensity of the energy consumed;
- Developing strategies to encourage the use of low carbon transport modes, including active and public transport, in order to reduce emissions from

transport. This should include an EV charging strategy for cars parking at the station;

- Provide segregated infrastructure for walking and cycling, and sufficient bicycle parking at the station, as well as in the wider development, aligned to the building uses;
- Developing a strategy to support building occupiers to develop a circular economy, reducing consumption and waste; and

It is considered that with these measures in place and the adoption and development of these at the Reserved Matters stage, the development would actively mitigate the impacts of climate change in accordance with **Policies KP15** and **EN12**.

6.3 The Planning Balance

With reference to the above planning assessment, it is considered that the proposed development accords with the relevant policies of the CLDP as summarised in Table 3 over and the Development Plan as a whole.

The approval of the planning application and its successful delivery would facilitate important social and sustainable infrastructure, not least a new business district with the potential for 6,000 new jobs in an area of socio-economic deprivation but also a new transport interchange which would fulfil a long-standing investment commitment established by the Regional Transport Plan. Around the built development a new, high quality landscape would be provided with a variety of areas of public open space including the Main Park, Station Square and the Faendre Reen Edge and Wildlife Corridors. The proposed development would provide significant improvements to the local community and create a new employment and transport hub which would contribute to the vibrancy and accessibility of Cardiff, Newport and the City Region.

In addition to the proposed development's accordance with the adopted policies of the Development Plan it is further considered that the development accords with the relevant policies of **PPW10** which is a material planning consideration.

For these reasons it is considered that the many positive benefits of the proposed development outweigh any harm and the application accords with the Development Plan, as summarised in Table 4.

Table 4: CLDP Policy Compliance

CLDP Policy	Proposed development response
Principle of Development **Policy KP1** **Policy KP2(H)**	The proposed development and masterplan have been prepared in conformity with the allocation in terms of the mix and quantum of development. The proposal has been developed in a truly integrated manner, with the spatial arrangement of buildings aligning to a strategic green and blue infrastructure strategy for the entire site which mitigates against flood risk and loss of overall quality of biodiversity and habitat. The strategic highway and other movement networks to and within

CLDP Policy	Proposed development response
	the site have been planned to optimise usability, safety, legibility, place-making, efficiency and air quality among others.
Existing Land Uses and Designations **Policy KP3(B)** **Policy KP18**	The site is located within the settlement boundary of Cardiff. The site is Grade 4 agricultural land which is not considered to be Best and Most Versatile Agricultural Land. The loss of the site for agricultural purposes has already been anticipated through its allocation in the CLDP.
Proposed Uses **Policy KP2(H)** **Policy KP6** **Policy KP9** **Policy KP13** **Policy T3** **Policy EC2** **Policy R1** **Policy R6** **Policy R8**	The proposed uses at the site align with the site allocation. The proposed development will deliver a strategic employment site comprising a total of 90,000sqm of high-quality employment floorspace. In addition to a new transport interchange which would include a new railway station, Park and Ride facility and high-quality bus, cycle and pedestrian facilities. Alongside a landscape, biodiversity and hydrology led masterplan within easy access of places of work, transport and existing residents. The proposed development would also be supported by a number of ancillary facilities which would be accessible to employment users of the site and the wider community.
Design **Policy KP4**	The vision for the proposed development is a new major employment hub for the capital formed around the new Cardiff Parkway railway station and set within a high-quality landscape. The key features of the masterplan intend to create a catalyst for growth, provide a sustainable transport interchange, retain the primary reen network across the site, create new accessible public open spaces, provide green fingers across the site to create a connected green grid that integrates buildings into the surrounding environment, provide a biodiversity net gain and provide a pedestrian focused environment creating a locally connected and permeable development.
Sustainable Development **Policy KP5**	The proposals have been guided by the Well-being of Future Generations (Wales) Act 2015 to ensure current and future generations benefit from lasting, positive change for the environment, economy and community. The proposed development represents a Transit Orientated Development model of growth, where development and infrastructure are shaped around public transport. The effects of climate change and the Welsh Government's net-zero ambition have also been taken into consideration in the design of the proposed development.
Healthy Environments **Policy KP14** **Policy C5**	The proposed development would create new landscaped open spaces that are accessible to the public and within easy access of places of work, transport and existing residential communities. The development would also be fully inclusive, ensuring that older people, people with disabilities and people from across the community are able to access and utilise new facilities in order to fully benefit the wider community, reduce existing health inequalities and encourage healthy and active lifestyles.

CLDP Policy	Proposed development response
Biodiversity and Nature Conservation **Policy KP2(H)** **Policy KP16** **Policy EN5** **Policy EN6** **Policy EN7** **Policy EN8**	The proposed development incorporates a series of mitigation measures to offset its impacts. 12.5m reen offsets are provided for the primary reens and where secondary reens would be lost, re-provision of wet reens would be provided at a 1:1.38 ration (or a 37% increase). Significant increases in biodiversity habitats would also be provided across the site in wildlife zones and in the mitigation area to the south of the railway. With the relevant mitigation measures in place, the proposed development would have no significant effects on biodiversity features or protected species during operation and would provide net biodiversity gains.
Landscape and Visual Impact **Policy KP16** **Policy EN3**	The landscape strategy for the proposed development is defined by large scale connected green wildlife corridors that flow from west, north and east to form an 'inverted v' shape at the site. The history and ecological features of the site together with the surrounding reens and farmland have driven the strategy to ensure that it responds to its sensitive context. The proposed development incorporates embedded mitigation to ensure the site respects the existing landscape character and landscape designations. Chapter 13 (Landscape and Visual Impact) of the ES concludes that due to the extent of embedded mitigation, there is no additional mitigation proposed to address the residential effects that would arise for the operation phase and it is therefore considered that the proposed development's landscape and visual impacts are acceptable.
Cultural Heritage and Archaeology **Policy KP2(H)** **Policy KP17** **Policy EN9**	The proposed development is located entirely within the Gwent Levels Historic Landscape of Outstanding Historic Interest and would have a 'Major' effect on the Wentloog Levels field system 86852 including reens, sluices, and footbridges. Despite this the site only forms a small part of the much wider Gwent Levels Historic Landscape Area and the loss of this section has been established through the CLDP. In order to mitigate the effects of the proposed development a series of mitigation measures are proposed through the ES including geophysical surveys and archaeological watching briefs. Following the implementation of these measures the significance of direct effects of the development upon the unknown archaeological resource within the development area would be reduced.
Transport and Access **Policy KP2(H)** **Policy KP8** **Policy T1** **Policy T3** **Policy T5** **Policy T6** **Policy T7**	The proposed development fully aligns with the transport allocation and policies for the site and would provide a new transport interchange which would include a new railway station, new 650 space Park and Ride facility and an integrated network of traffic free paths for walking and cycling, providing access to all parts of the site and onward connections to surrounding streets, PRoWs, footpaths and cycle routes. The TA concludes that the proposed development would align with the overarching policy objections for the CLPD and the proposed development would positively contribute to the sustainable travel and modal shift requirements for Cardiff and would provide transport improvements at the site and to the

CLDP Policy	Proposed development response
	local area where necessary, in line with the site allocation. The proposal provides for the opportunity to create active travel routes from the Newport side of the site as part of the sustainable travel portfolio of interventions. The development is policy compliant with or without the creation of such routes.
Noise **Policy EN13**	The proposed development would generate noise from activities on site, including additional traffic movements from people accessing the site and building services plant. However, given the location of the proposed development and the existing background noise environment there would be no significant effects as a result of the proposals and no mitigation measures are proposed through the ES.
Air Quality **Policy KP18** **Policy EN13**	The Air Quality chapter of the ES concludes that during operation there would be no significant effects as a result of the proposed development. The chapter proposes some mitigation measures for the proposed buildings to be considered at the reserved matters stage.
Ground Conditions **Policy EN13**	A number of ground condition investigations have been undertaken at the site and in its vicinity. Investigations completed to date encountered limited and isolated areas of made ground and no evidence of significant contamination within the proposed development area. During operation the proposed development has been identified to pose a potential risk with respect to land contamination with end users and controlled waters potentially being exposed to dust generated in areas of made ground exposed in areas of soft landscaping. Risk mitigation measures are proposed within the ES and with these in place there would be no significant effects in terms of contamination.
Water Quality, Flood Risk and Drainage **Policy KP2(H)** **Policy EN10** **Policy EN14**	The site is characterised by an extensive network of watercourses (reens and ditches) which drain the surrounding wetlands. The protection and consideration of these reens is therefore a key feature of the design for the proposed development. The main named reens would be retained as part of the proposed development and culverts or bridges would be introduced to provide access routes over several of them. The quantity of unnamed reens that would be removed for the development areas would be provided at a greater than 1:1 ratio in the area to the south of the proposed development site, south of the railway line. In terms of flood risk and drainage, SuDS would be installed across the site to ensure that surface water runoff would be discharged at a GRR. To enable the development to proceed in accordance with the requirements of TAN15, the site and access roads would also be raised to ensure the site is flood free during a 0.5% tidal event and 1.0% pluvial event. With the mitigation measures in place the FCA states that comprehensive flood modelling supports the conclusion that on the grounds of flood risk, the proposed development site shall be safe over its lifetime, meeting all of the requirements set out in TAN-15 and the aims of Planning Policy Wales.

CLDP Policy	Proposed development response
Climate Change **Policy KP15** **Policy EN12**	The illustrative masterplan seeks to create an adaptable layout which facilitates potential for on-site renewable energy production and buildings which could integrate renewable energy generation where appropriate. Throughout the site, the landscape would be used to ensure that surface water runoff is managed through SUDS which would not only manage the effects of climate change and flooding but also create an integrated landscape and public realm. The Climate Change chapter of the ES also sets out a number of measures to mitigate the impacts of greenhouse gas emissions for the proposed development and with the development of these at the Reserved Matters stage it is considered that the development would actively mitigate the impacts of climate change at the site.
Planning Obligations **Policy KP7**	The applicant is in discussions with CC on the nature and relevant of obligations, which will gain more definition and certainty through the determination of the planning application.

6.4 Mitigation and the role of Conditions and Obligations

The ES submitted in support of the planning application identifies various environmental effects associated with the proposed development. Some of the effects are permanent and irreversible by the very nature of introducing development on previously undeveloped land. However, the ES shows that with the adoption of appropriate mitigation measures during both construction and operation the severity and/or significance of those adverse effects as a result of the proposed development can be reduced. One example where this is demonstrated is in the Landscape and Visual Assessment chapter where a significant effect results from a high magnitude of change affecting high sensitivity receptors, resulting in a significant effect. That level of effect would at year 15, reduce to moderately adverse as the proposed mitigation takes effect.

Mitigation is both embedded (integrated into the proposal) in the scheme or is proposed in addition to either completely address or reduce an adverse effect. The full schedule of mitigation contains both embedded and additional and is presented in the following tables 5 (embedded) and 6 (additional) which demonstrate the breadth of mitigation envisaged.

It is envisaged, that mitigation that is not already embedded in the scheme, will be secured by a range of suitably worded planning conditions, sometimes in tandem with appropriate planning obligations/financial contributions. Both mechanisms have yet to be explored in detail with the Local Planning Authority, but there is a general understanding of the likely scope and nature of both at this pre-application stage.

Policy KP7 deals with planning obligations and states that *"Planning obligations will be sought to mitigate any impacts directly related to the development and will be assessed on a case by case basis in line with Planning Policy Guidance."*

Discussions with CC on the Heads of Terms of any planning obligations will be ongoing from the time of submission of the planning application. At the time of writing, it is envisaged that these will be negotiated on in the areas of transport; management of mitigation for biodiversity; landscaping and SuDS; public realm and public art; community safety and waste management.

Table 5: Mitigation Measures - **Embedded**

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
4	Traffic and Transport	4.8.2	Minimise vehicle trips through promotion of active travel	Provision of walking and cycling links throughout the site
		4.8.3		Provision of pedestrian and cycle crossings throughout the site
		4.8.4		Extend Cycleway 2 from the red line boundary of the site to the station
		4.8.5		Link site to NCN Route 88
		4.8.6		Provision of footways and cycleways through the site between the station
		4.8.7		Provision of Next Bike stations within the site
5	Hydrology and Flooding	5.10.29	Mitigate impacts of operational surface water drainage on surface water quality	Provision of SuDS within the development
		5.10.30	Mitigate impacts of operational surface water drainage	Road corridors, bioretention systems / swales would be located

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
				between the proposed carriageway and footway
		5.10.31	Mitigate impacts of accidental spills from vehicles on surface water quality	Provision of SuDS within the development
		5.10.32	Mitigate impacts of accidental spills from trains on surface water quality	Track drainage to Network Rail standards and the Statutory National Standards for Sustainable Urban Drainage Systems
		5.10.38	Mitigate impacts of accidental spills from vehicles on groundwater water quality	Provision of SuDS within the development
		5.10.39	Mitigate impacts of accidental spills from trains on ground water quality	Track drainage to Network Rail standards and the Statutory National Standards for Sustainable Urban Drainage Systems
		5.10.47	Mitigate impacts of surface water flood risk	Provision of SuDS within the development and drainage system
6	Ground Conditions	6.9.1	Ensure appropriate concrete class selection for proposed structures and infrastructure	Incorporate assessments in accordance with BRE Special Digest 1 onto the design
		6.9.2	Ensure that any risks posed by	Incorporate appropriate ground gas protection measures into the design, in accordance with

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
			ground gas are addressed	BS8485:2015 or equivalent
8	Air Quality	8.9.1	Mitigate emissions from private vehicles through encouraging modal shift to public transport	Provision of a new railway station and bus stops within the site
		8.9.2	Mitigate emissions from private vehicles through encouraging modal shift to active travel	Provision of new pedestrian and cycle crossings within the site
		8.9.4	Mitigate emissions from private vehicles by encouraging a shift towards electric vehicles	Provision of electric charging points at 10% of all parking spaces within the site, with passive provision for the remaining 90% to be converted
7	Biodiversity	7.9.5	Mitigate impacts of construction on retained trees and hedges	Provision and implementation of Arboricultural Method Statement and Tree Protection Plan
		7.9.9	Mitigate impacts of construction on Protected Sites	Provision and implementation of Construction Environmental Management Plan. Provision and implementation of fish capture and release during in-stream works

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
		7.9.14	Mitigate impacts of construction on dormice	Provision and implementation of a dormouse mitigation strategy through an EPS development licence, potentially to include translocation of dormice
		7.9.15	Mitigate impacts of development on dormice	Creation of new dormouse habitats within the redevelopment
		7.9.23	Minimise impacts of development on bat commuting and foraging	Retention of identified bat routes for as long as possible during construction and use of 'dead' hedges
		7.9.25	Mitigate impacts of construction on otters	Preconstruction surveys to confirm presence / absence and any changes to baseline and requirements for licence. Provision and implementation of an otter mitigation strategy through an EPS development licence.
		7.9.29	Mitigate impacts of construction on water vole	Preconstruction surveys to confirm presence / absence and any changes to baseline and requirements for licence.
		7.9.30	Mitigate impacts of construction on water vole	Provision and implementation of a water vole manipulation strategy through an NRW water vole development licence.
		7.9.32	Mitigate impacts of construction on water vole	All Primary Reens will have a protected buffer zone established and

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
				fenced during construction of at least 2m where possible.
		7.9.33	Mitigate impacts of construction on amphibians	Provision and implementation of Construction Environmental Management Plan. Provision and implementation of amphibian capture and release strategy during in-stream works.
		7.9.36	Mitigate impacts of construction on badger	Preconstruction surveys to confirm presence / absence and any changes to baseline and requirements for licence.
		7.9.39	Mitigate impacts of construction on breeding birds	Provision and implementation of Construction Environmental Management Plan and Breeding Bird Protection Plan.
		7.9.41	Mitigate impacts of construction and operation of barn owl	Preconstruction surveys to confirm presence / absence and any changes to baseline. Provision and implementation of barn owl mitigation strategy via the CEMP and provision of barn owl boxes.
		7.9.45	Mitigate impacts of construction on reptiles	Provision and implementation of Construction Environmental Management Plan. Habitat manipulation strategy to displace reptiles.

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
		7.9.47	Mitigate impacts of construction on European Eel and Fish Species	Potential translocation of fish from impacted reens to suitable habitat outside of the construction footprint
		7.9.49	Mitigate impacts of construction on European Eel and Fish Species	Provision and implementation of Construction Environmental Management Plan.
		7.9.50	Mitigate impacts of construction on invertebrates	Aquatic vegetation from drained waterbodies will be places on the banks of retained and/or created reens for a minimum of 24 hours to allow invertebrates to move out of the vegetation.
		7.10.7	Mitigate impact of development on tree and hedgerow habitats	Provide compensatory planning to provide a 1:1.95 ratio of dry woodland, a 1:1.62 ratio of wet woodland, and a 1:1.18 ratio of hedgerow planting of woodland, trees and hedgerow planting.
		7.10.9		A single hedgerow 225m in length that has been identified as species-rich and dormouse present; 15m will be retained and 210m will be translocated to reduce impacts associated with the loss of the species diversity within the hedgerow. A Hedgerow Translocation Method Statement will be provided in the CEMP

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
		7.10.10		Ecological design planting will be undertaken within 'Phase 0' to allow habitats to better establish prior to vegetation clearance; reducing the impact of habitat loss during construction. There will be opportunities to translocate mature hedgerow, as part of habitat creation.
		7.10.11		To include the 'wildlife corridor' connecting to existing woodland habitats
		7.10.12		Hedgerow and tree planting is proposed within the Main Park east of Faendre Reen.
		7.10.13		A hedgerow is proposed within the 12.5m vegetated buffer
		7.10.14		Woodland and hedgerow planting and / or translocation will occur south of the railway line. Woodland strips will be located to enhance the habitat
		7.10.17	Mitigate loss of Marshfield SINC and other semi-improved grassland within the site	Translocation of turf and soils from the SINC within the sire and creation of 12.12ha of species rich grassland., 1.92ha within the wildlife corridor and 10.2ha to the south of the railway.

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
		7.10.20		The FCA will be lowered and soils from the SINC spread over the site. A wet meadow species-rich grassland seed mix will be sown over the FCA.
		7.10.21		The drier' species-rich grassland area and the FCA will be profiled
		7.10.22		A Turfs and Soils Method Statement will be provided with a final CEMP to avoid damage to the surfs and seed bank within the soils during the works
		7.10.23		The grasslands proposed within the Wildlife Corridor will have a mosaic of tall or tussocky grasslands and species-rich grasslands
		7.10.25		The Biodiversity Strategy will deliver through translocations, seed mixes and management
		7.10.26	Mitigate loss of SSSI reens and associated habitat as a result of development	Primary reens have been retained and will be enhanced where possible. Greenlane Reed will be widened by 3m for drainage and flood compensation.
		7.10.28		Formation of 7.72km of new reens to replace the existing 2.72 wet reens lost as a result of the proposed development on

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
				a 'like for like' or improved basis
		7.10.29		Reen banks will be undisturbed for water voles. They will not be shaded by hedgerows or woodland planting.
		7.10.30		Where practicable and subject to NRW approval, vegetative and dredged material from Secondary reens to be lost will be used to encourage colonisation of new reens and ditched by aquatic macrophytes.
		7.10.31		Newly created reens will be planted within key foraging species
		7.10.33		An FCA of 3.2ha will be created. The FCA will be lowered and soils from SINC spread over the site. A wet meadow species-rich grassland seed mix will be sown over the FCA.
		7.10.34		SuDS will be implemented across the site
		7.10.35		The storm water drainage strategy and flood mitigation proposals have been designed to ensure no dewatering of existing reens and underconnectivity between reen network is maintained during operation of the proposed

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
				development. No interconnectivity has been proposed between two Primary reens.
		7.10.36	Mitigate impact of bridges and culverts on fish migration	Ensure that all structures that impact on watercourses are designed in accordance with CIRIA C786: culvert, screen and outfall manual
		7.10.37	Mitigate impacts of proposed penstocks or tilting weir penstocks on eel migration	Ensure that all structures are designed in accordance with the Eels (England and Wales) Regulations 2009, with eel passes installed as required
		7.10.39	Mitigate impact of culverts and roads on otters	Otter fencing will be installed around the culverts designed for otter to encourage use of culverts and discourage crossing the road
		7.10.40	Mitigate impact of culverts and roads on dormouse populations	Instillation of dormouse bridges at the two culverts over Faendre Reen
		7.10.41	Mitigate impact of culverts and roads on dormouse and bat populations	A dormouse bridge is proposed over the minor access road into the site through Hendre Park woodland off the roundabout of Cypress Drive and Sandbrook Road. This will also function as a bat bridge to encourage bats over the road.

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
		7.10.42	Ensure that any impacts arising on biodiversity from lighting are mitigated	Provision and implementation of an ecologically sensitive lighting strategy
		7.10.43		Illumination in public areas that intersect the Primary reens and other ecologically sensitive habitats should be minimised
		7.10.44		Lighting into the proposed development off Cypress Drive will use directional lighting and be designed to ensure no light spill over 0.5 Lux at 1m from the road verge
		7.10.45		Light spill will be avoided into the Ty Ffynon Reen and it's 12.5m buffer (where possible) running through the proposed development.
		7.10.46		Low-level lighting will be used to keep the illumination isolated and focused and limit light spill onto surrounding habitats. A control spill may control the lighting.
10	Cultural Heritage	10.8.3	Minimise disturbance of archaeological deposits within the site	Retention of a green corridor in the western part of the side
		10.8.7	Minimise disturbance of existing historical	Retention of the primary reen network within and around the site

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
			features within the site	
11	Socioeconomic	11.9.2	Promote active travel and mitigate impacts on access to local facilities and employment	Reprovision of existing PRoW across the site and introduction of new walking and cycling routes through the area
		11.9.3	Mitigate impacts on access to open space	Introduction of areas of blue and green infrastructure that are accessible to those within the development and the wider local area
12	Health and Wellbeing	12.8.1	Mitigate impacts on health through encouragement of active travel and mitigate impacts on access to open space	The design for the proposed development includes provision for active transport and open space (including wildlife areas, play space and open access park areas).
13	Landscape and Visual	13.11.1	Mitigate impacts on landscape and visual receptors	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
				Provision of large areas of open green space to reduce the visual prominence to the built form and provision of a site-wide green infrastructure strategy

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
				Provision of planted car parks with trees and SuDS to reduce the visibility of car parks and vehicles within them
				Provision of an increase in tree cover combined with additional hedgerows to provide visual screening to views into the site from the east and the south, particularly from the Wales Coastal Path
15	Materials	15.9.2	Mitigate impacts arising from sourcing of materials for site levelling	Source 70% of all materials for site levelling from secondary and recycled aggregate sources

Table 6: Mitigation Measures - **Additional**

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
4	Traffic and Transport	4.8.3	Mitigate the potential effects caused by the forecast increase in traffic	Provision of new signal-controlled crossings on Cypress Drive
		4.8.8	Mitigate the potential effects caused by the forecast increase in traffic	Provision of traffic signals with pedestrian and toucan crossings at the Fortran Road / Cypress Drive junction
			Mitigate the potential effects caused by the forecast increase in traffic	Provision of traffic signals with pedestrian and toucan crossings at the Pascal Close / Cypress Drive junction
			Mitigate the potential effects caused by the forecast increase in traffic	Provision of traffic signals with pedestrian and toucan crossings at the Willowdene Way / Cypress Drive junction
		4.8.9	Mitigate traffic impacts at the A48/Cypress Drive roundabout	New junction arrangement TBC, potentially through provision of a signal-controlled staggered crossroads
			Mitigate pedestrian and cycle delay at the A48/Cypress Drive Roundabout	Provision of footbridge over Cypress Drive
		4.8.10	Maximise benefits associated with the proposed rail station	Introduction of active travel routes into the site from Hendre Lake and Cypress Drive
				Improvement of pedestrian infrastructure within the existing business park to provide a coherent route

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
				between the proposed station and Pascal Close
				Introduction of an existing link through Hendre Lake Park, including the provision of lighting subject to ecological constraints
				Provision and implementation of a Travel Plan
				Provision and implementation of Construction Environmental Management Plan
		4.8.11	Minimise vehicle trips through promotion of sustainable travel	Provision and implementation of Construction Traffic Management Plan
		4.10.2	Mitigate impacts of construction on pedestrian and cycle amenity	Provision and implementation of Construction Environmental Management Plan
				Provision and implementation of Construction Environmental Management Plan
5	Hydrology and Flooding	5.10.8	Mitigate impacts of construction on water quality	Provision and implementation of Construction Environmental Management Plan
		5.10.13	Mitigate impacts of in channel workings during construction on hydromorphology	Phasing of development and implementation of the CEMP
		5.10.18	Mitigate impacts of potential pollutants on groundwater	Provision and implementation of Construction Environmental Management Plan

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
			quality during construction	
		5.10.24	Mitigate impacts of flood risk during construction	Undertake further gas monitoring and communicate ground gas data through Health and Safety file
6	Ground Conditions	6.8.1	Mitigate impacts of construction on water environment and human health	Undertake a foundation works risk assessment to ensure the correct piling technique is applied
		6.11.6	Manage any risks posed by ground vapours during operation to maintenance staff	Provision and implementation of Construction Environmental Management Plan
		6.11.7	Control impacts of piling on controlled water	Provision of no less than 20 bat boxes and/or bat bricks in buildings and bridges or on mature trees
7	Biodiversity	7.9.1	Mitigate impacts of construction on habitat damage, disturbance and species mortality	Provision of an otter holt on Feandre Reen
		7.12.4	Enhancement of bat habitats throughout the site	Provision and implementation of a mink control programme within the site
		7.12.6	Enhancement of otter habitats within the site	Provision of no less than 20 bird boxes in buildings and bridges or on mature trees
		7.12.8	Enhancement of water vole habitats within the site	Implementation of a junction improvements scheme at the A48 / Cypress Drive junction

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
		7.12.10	Enhancement of bird habitats throughout the site	Provision and implementation of Framework Travel Plans
8	Air Quality	8.9.3	Mitigate emissions caused by queuing traffic	Provision and implementation of Construction Environmental Management Plan
		8.9.5	Mitigate emissions from private vehicles through encouraging modal shift to active travel	Provision and implementation of Construction Environmental Management Plan
		8.11.1	Mitigate impacts of construction dust on air quality	Consideration for the use of earth bunding or a noise barrier adjacent to the section of Cypress Drive between Fortran Road and the new development entrance
9	Noise and Vibration	9.9.1	Mitigate impacts of construction dust on noise and vibration	Implementation of a noise monitoring plan with implementation of the following if considered necessary: Install speed limit signs to reduce speed; Install traffic lights at the Fortran Road and proposed development junction with Cypress Drive; Proposed development access junction to have priority over Cypress Drive (south), reducing road speeds for through-movements on Cypress Drive; and Changes to the radius/alignment of Cypress

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
				Drive and the proposed development access
		9.11.3	Mitigate impacts of operation on noise and vibration	Use of Planning Condition requiring intrusive works to be kept above the level that layers are encountered
		9.11.4	Mitigate impacts of noise caused by the forecast increase in traffic	Implementation of an augur survey or similar
10	Cultural Heritage	10.8.4	Minimise disturbance to peat deposits to preserve organic material at design stage	Implementation of methodologies outlined in *Piling and Archaeology Guidance and Good Practice*, English Heritage 2019
		10.8.5	Minimise disturbance to peat deposits to preserve organic material at design stage	Implementation of a geophysical survey followed by targeted trial trenching to inform design and excavation
		10.8.6	Mitigation for loss of assets through piling activities	Implementation of a survey to determine nature of the boundaries and to record the extend and characteristics of the hedgerows
		10.8.7	Minimise disturbance to heritage receptors during construction	An archaeological watching brief will be conditioned during the construction phase on intrusive groundworks
		10.8.8	Mitigation for loss of historic hedgerow during construction	Provision and implementation of Construction Traffic Management Plan
		10.8.9	Minimise disturbance of existing historical	Provision and implementation of Construction Environment Management Plan

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
			features within the site	
		11.10.18	Mitigate impacts of construction on access to local businesses	Provision and implementation of Construction Environment Management Plan
		11.10.22	Mitigate impacts of construction on business amenity	Provision and implementation of Construction Environment Management Plan
11	Socio-Economic	11.10.26	Mitigate impacts of construction on Local Residents	Provision and implementation of Construction Environment Management Plan
		12.9.13	Mitigate impacts of construction on active travel use	Provision and implementation of Construction Environment Management Plan
		12.9.16	Mitigate impacts of construction on crime reduction and community safety	Recommended that targets are set for carbon reduction and passed through the supply chain. This should include a clear plan as to how targets will be passed to developers of individual plots over time
12	Health and Wellbeing	13.17.1	Mitigate impacts on construction on views from surrounding areas	Provision of various mitigation measures during operation, the following are recommended: Consider opportunities for meanwhile uses on the site in terms of the site the programme for development Take a 'fabric first' approach to building design in order to improve the thermal efficiency of buildings and reduce heating and

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
				cooling energy requirements during operation. Including consideration of orientation and design; Select energy efficient infrastructure, equipment and fittings in order to reduce energy demand during operation; Assess energy supply options, and develop an energy strategy for the proposed development, which focuses on the installation of renewable energy generators and connections to low carbon energy sources where possible, in order to reduce the emissions intensity of the energy consumed; Develop strategies to encourage the use of low carbon transport modes, including active and public transport, in order to reduce emissions from transport. This should include an EV charging strategy for cars parking at the station. Provide segregated infrastructure for walking and cycling, and sufficient bicycle parking at the station, as well as in the wider development, aligned to the building uses;

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
				Develop a strategy to support building occupiers to develop a circular economy, reducing consumption and waste; Design for operation, consider service-based material and selection of durable materials with low requirements for maintenance and replacement over the operational life of the development, with consideration of appropriate selection of materials.
		14.10.4	Mitigate impacts of construction on greenhouse gas emissions	Implementation of an adaptive pathway and introduction of green infrastructure during detailed design
13	Landscape and Visual	14.10.5	Mitigate impacts of operation on greenhouse gas emissions	Provision and implementation of Construction Environment Management Plan
14	Climate Change	14.10.7	Mitigate impacts of operation on climate change resilience	Source all material fill for the site from areas as close as possible to the development site, minimising the amount of transportation required
		15.8.1	Mitigate impacts arising from movement, import, reuse and disposal of materials during construction	
		15.9.1	Mitigate impacts arising from movement, import, reuse and disposal of	

ES Chapter	Topic	Para Reference	Effect	Mitigation Measure
			materials during construction	
15	Materials		Mitigate impacts arising from movement, import, reuse and disposal of materials during construction	

To deliver the additional mitigation captured in Table 6, conditions are envisaged covering the scope of activity/requirement. Please note that Table 7 is not intended to be an exhaustive list, but an indication of the type of conditionality that can be brought to bear to secure the above type of mitigation and to also note that the detail of the content and the wording of any conditions would be subject to discussion/negotiation during the determination of the planning application – see Table 7.

Table 7: Possible Scope of Conditions

ConditionTopic/Scope
• Comprehensive phasing plan for the development, to include the public realm works, to be submitted and agreed with the LPA. • Phasing of the development (including the associated delivery of the spine road, associated spurs and drainage infrastructure) shall be implemented in accordance with the Phasing.
• Detailed Masterplans for the phase within which that reserved matters application is located. The Detailed Masterplans shall be in broad accordance with the design principles set within the Design and Access Statement and could include the following matters: finish floor levels, floorspace, street structure/hierarchies, focal spaces, buildings and frontages, development blocks, building density/heights, roads, footpaths and utilities strategy, parking strategy, architectural principles and detailing, design principles for green infrastructure and SuDS, principles for hard and soft landscaping/tree planting, principles on lighting, external plant and refuse storage.
• A Green Infrastructure Management Plan including a phasing plan and implementation program, and management and maintenance schedules for the ecological, arboricultural, landscape, soil, open space and SUDS resource (including 50+ year management plans for substantial arboricultural features such as woodlands, hedgerows, ecotones, trees in hard landscape and all other significant soft landscape features).
• Implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the local planning authority.
• An Ecological Management Strategy (EMS) in relation to that phase (or part thereof). The EMS shall be based upon the mitigation measures set out in the Environmental Statement and would include avoidance, mitigation and

ConditionTopic/Scope
enhancement measures to be delivered for the benefit of statutory and non-statutory designated sites and retained habitats and include measures to be delivered for the benefit of protected species, as appropriate to the phase or part thereof, including dormice, bats, badgers, reptiles and birds.
• Prior to the commencement of any site clearance, construction works or development preparation of a Construction Environmental and Management Plan (CEMP) for that phase (or part thereof) covering matters such as an implementation programme for the construction of the roads, footpaths and other publicly accessible areas, details of Construction Traffic Management, details of site waste management for the recycling and/or disposal of all waste resulting from demolition and construction works and a Construction Drainage Scheme indicating how surface water and land drainage flows will be controlled.
• Preparation of a public art strategy to include details of procurement, a timetable for implementation and a maintenance schedule.
• The proposed car parking and manoeuvring areas shall be laid out in accordance with the approved details before the development is brought into beneficial use and be thereafter maintained and retained at all times for those purposes in association with the development.
• Details for the storage and the treatment of refuse/waste on site to the approved.
• Control on the noise emitted from fixed plant and equipment on the site.

The following list in table 8 is not is not intended to be an exhaustive list, but an indication of the type of obligation that may be used to secure the above type of mitigation. The detail of the content and the wording of any obligations would be subject to discussion/negotiation during the determination of the planning application – see Table 8.

Table 8: Possible Scope of Obligations

Obligation Type	Topic/Scope
Transport	Travel Plan Co-ordinator
Transport	Travel Plan Management
Transport	Active Travel Routes
Transport	Park and Ride Bus Service
Transport	Bus Priority Infrastructure
Transport	Off-site highway improvements
Hard and soft landscape/Open Space/SuDS	Management Scheme, Management Mechanism
Biodiversity	Where measures of avoidance, mitigation or compensation are implemented, the Council will require that the effectiveness of these measures is monitored and that there is provision for remediation in the event that these measures are identified as not being effective.
Public Realm, Community Safety and Public Art	Public realm improvements, community safety measures and public art provision/installations
Waste Management	Management Scheme, Management Mechanism

7 Conclusion

It is considered that the proposed development at land to the south of St Mellons Business Park ought to be granted planning permission in accordance with Section 70(2) of the Town and Country Planning Act 1990 and Section 38(6) of the Planning and Compulsory Purchase Act 2004. The proposed development accords with the policies within the Development Plan for Cardiff.

The proposed development gives effect to the site's allocation under **Policy KP2(H)** and would provide a strategic employment site that will be a catalyst for growth, providing 90,000sqm of high-quality employment floorspace and approximately 6,000 jobs. The proposals are also formed around the principles of sustainable travel providing a transport interchange that would allow seamless access for businesses and the local community to rail, bus, walking and cycling routes.

Furthermore, the proposed development has been designed to integrate into its surroundings. The proposed development would retain the primary reen network which crosses the site. It will also provide a range of open spaces including unbroken wildlife corridors of rich and diverse habitats, a large park for recreational purposes and encourage outdoor activity and well-being, and civic open spaces to promote social interaction. Permeable plots provide buildings and land uses that maximise SuDS in-situ and protect on-plot biodiversity features.

The proposed development also accords with national planning policy that provides a presumption in favour of sustainable development and which forms a material planning consideration in the determination of applications.

The benefits of the proposed development are clear, the proposals align with its site allocation and would provide a high-quality sustainable development that would benefit the local area and the Cardiff Capital Region.

A positive planning balance has been evidenced throughout this Statement. The proposed development is a sustainable form of development that accords with the relevant policies of the adopted CLDP and the Development Plan as a whole. Where significant effects are identified, appropriate mitigation measures are proposed to address those and it has been identified that these can be (subject to negotiation on the detail) be secured through a combination of planning conditions and obligations.

The development plan compliance and overall positive planning balance warrant the grant of planning permission for the proposed development.