

Cardiff Airport and Gateway Development Zone



Supplementary Planning Guidance

December 2019



Vale of Glamorgan Local Development Plan 2011-2026

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1. EXECUTIVE SUMMARY

- 1.1. This new Supplementary Planning Guidance (SPG) relates to Cardiff Airport and the adjoining Gateway Development Zone which is a strategic employment site forming part of the wider Cardiff Airport - St. Athan Enterprise Zone. It also refers to the proposed Porthkerry Country Park extension which is located adjacent to the land to the south of Port Road.
- 1.2. The SPG provides clarity to applicants on how future development proposals will be assessed against the Local Development Plan framework in order to ensure the delivery of a comprehensive, high quality sustainable development.
- 1.3. The SPG sets out the legislative and planning policy context, the development framework (visions, objectives and development areas) and relevant planning considerations including design and visual impact, phasing, noise, drainage / flooding and renewable energy.
- 1.4. In addition, it identifies the likely Section 106 planning obligations in relation to sustainable transport, travel plans, public open space (including the Porthkerry Country Park extension), training and development and public art. The appendices contain a number of relevant plans such as a contour map, sustainable transport map and an illustrative masterplan.
- 1.5. The SPG was subject to a 6-week public consultation between 19th August 2019 and 1st October 2019 (Cabinet Minute no. C67). Cabinet subsequently approved the SPG on 16th December 2019 (Cabinet Minute no. C179) as a material consideration in the determination of relevant planning applications and appeals.

2. INTRODUCTION

- 2.1. Cardiff Airport and the adjoining Gateway Development Zone are located approximately 5km west of Barry and 5km east of RAF St. Athan (see [Appendix 1](#)). The site is bounded by the A4226 / B4265 to the north and the primary settlement of Rhoose to the south. The site benefits from being situated within the Welsh Government's Cardiff Airport and St. Athan Enterprise Zone¹ which focuses primarily on the growth of the aerospace and defence related sectors and supports regional development.
- 2.2. Since 2013, Cardiff Airport has been owned by the Welsh Government and it aspires to be "*a sustainable airport business generating significant economic benefit for Wales*" (Cardiff Airport 2040 Masterplan). In terms of passenger numbers, the airport has substantial core and outer catchment areas and the aim is to achieve 2 million passengers by 2021 and 3 million passengers by 2036. Eighteen airlines regularly use the airport and are continually seeking to increase capacity on existing routes and introduce new destinations. [Appendix 2](#) shows the percentage of passengers travelling to the airport from the different regions in the UK.
- 2.3. The airport and adjoining business park currently accommodates several aviation and aerospace companies and related services including British Airways Maintenance Cardiff (BAMC), the Cardiff Aviation Training Centre as well as the International Centre for Aerospace Training (ICAT) at Cardiff and Vale College. The remaining part of the development zone lies to the south of Port Road and is currently undeveloped. The Cardiff Airport and Gateway Development Zone therefore has the potential to generate significant economic benefits for not just the Vale of Glamorgan but also the Capital Region and Wales as a whole in terms of direct and indirect employment opportunities. Nevertheless, it is important that the economic growth of the area is properly managed to avoid any potential negative impacts on the local natural and built environment.
- 2.4. The adopted Vale of Glamorgan Local Development Plan (LDP) acknowledges the strategic importance of the zone and seeks to encourage new inward investment to this location by favouring appropriate new development which helps to support the growth of the airport and the adjoining strategic employment site.

¹ <https://businesswales.gov.wales/enterprisezones/zones/cardiff-airport-and-st-athan>

3. PURPOSE OF THE SUPPLEMENTARY PLANNING GUIDANCE

- 3.1. This Supplementary Planning Guidance (SPG) has been prepared to provide support and additional detail to the relevant policies in the adopted LDP. Cardiff Airport is one of the key elements in the LDP Strategy and a number of LDP policies refer specifically to the airport and the adjoining strategic employment site e.g. Strategic Policy SP 2 (Strategic Sites) and Managing Growth Policy MG 10 (St. Athan – Cardiff Airport Enterprise Zone). In addition, numerous other LDP policies refer to related matters such as new and improved transport schemes (Policy MG16 Transport Proposals) and the extension of Porthkerry Country Park (Policy MG28 Public Open Space).
- 3.2. This SPG seeks to provide clarity on how such development proposals will be assessed against the LDP policy framework to ensure the delivery of a comprehensive, high quality sustainable development. Specifically, it sets out the principal planning considerations for the future development of the land and includes information on relevant planning obligation requirements.

4. STATUS OF THE GUIDANCE

- 4.1. This guidance was subject to a 6-week public consultation between 19th August 2019 and 1st October 2019 (Cabinet Minute no. C67). Cabinet subsequently approved the SPG on 16th December 2019 (Cabinet Minute no. C179) as a material consideration in the determination of relevant planning applications and appeals in accordance with Planning Policy Wales (Edition 10, 2018).

5. LEGISLATIVE AND PLANNING POLICY CONTEXT

5.1. NATIONAL LEGISLATION

- 5.1.1. **The Planning (Wales) Act 2015** - seeks to deliver a planning system which is fair, resilient, enables development and helps create sustainable places. The Act supports the principle of sustainable development and provides opportunities to protect and enhance our most important built and natural environments.
- 5.1.2. **Well-Being of Future Generations (Wales) Act 2015** - seeks to improve the social, economic, environmental and cultural well-being of Wales. It contains seven well-being goals which local authorities as well as other public bodies must seek to achieve in order to improve well-being both now and in the future.
- 5.1.3. **Environment (Wales) Act 2016** – puts in place a modern statutory process to plan and manage our natural resources in an integrated and sustainable way.
- 5.1.4. **Aviation Policy Framework 2013**– sets out the UK Government’s policy to allow the aviation sector to continue to make a significant contribution to the UK economy.

5.2. NATIONAL POLICY CONTEXT

- 5.2.1. **People, Places, Futures – The Wales Spatial Plan Update 2008** - provides a framework for the future spatial development of Wales. Paragraph 19.20 notes that the future role and function of the airport will be a key consideration for both the Capital Region and the rest of Wales’ economy.
- 5.2.2. It should be noted that the Welsh Government is currently preparing a new **National Development Framework (NDF)** in accordance with the Planning (Wales) Act 2015. The NDF will cover a 20-year period and replace the current Wales Spatial Plan in due course.
- 5.2.3. **Water Framework Directive (WFD)** - The WFD is implemented across Wales through the Water Environment (Water Framework Directive) (England and Wales) Regulation 2017. The WFD is based upon three key principles which are to protect (prevent deterioration), restore (aim to achieve good or better status) and to promote the value of the water environment. In line with the regulations the WFD requires River Basin Management Plans to be published which set out the environmental objectives for all water bodies within the River Basin District and how they will be achieved.
- 5.2.4. **Planning Policy Wales, Edition 10 (December 2018) (PPW)** - sets out the land-use planning policies of the Welsh Government and is supplemented by a series of Technical Advice Notes (TANs). Paragraph 5.3.17 recognises that airports are important hubs, which play a significant role in providing national and international connectivity for tourism and business.

5.2.5. The following TANs are considered to be of relevance to this SPG:

- TAN 5 – Nature Conservation and Planning (2009)
- TAN 11 – Noise (1997)
- TAN 12 – Design (2017)
- TAN 13 – Tourism (1997)
- TAN 15 – Development and Flood Risk (2004)
- TAN 18 – Transport (1998)
- TAN 23 – Economic Development (2014)
- TAN 24 – The Historic Environment (2017)

5.2.6. **One Wales: Connecting the Nation - The Wales Transport Strategy (2008)** –sets out the Welsh Government’s strategy for transport and makes several references to Cardiff Airport.

5.2.7. **The National Transport Plan (2010)** - sets out in detail how the Welsh Government proposes to deliver the Wales Transport Strategy ‘One Wales: Connecting the Nation.’ It sits alongside Local Transport Plans in delivering the Wales Transport Strategy to ensure consistency of service provision across the transport network.

5.2.8. **Economic Renewal: A New Direction (2010)** – contains the Welsh Government’s strategic framework for economic development.

5.3. LOCAL POLICY CONTEXT

The Vale of Glamorgan Adopted Local Development Plan (LDP) (2011-2026):

5.3.1. The LDP was formally adopted by the Council on 28th June 2017 and constitutes the development plan for the area. The LDP provides the local planning policy framework for assessing planning applications for new development and uses. The relevant extract from the adopted LDP proposals map is contained in Appendix 3: LDP Proposals Map. The LDP vision for the Vale of Glamorgan is a place:

“that is safe, clean and attractive, where individuals and communities have sustainable opportunities to improve their health, learning and skills, prosperity and wellbeing; and

where there is a strong sense of community in which local groups and individuals have the capacity and incentive to make an effective contribution to the future sustainability of the area.”

5.3.2. The LDP contains a number of relevant objectives associated with Cardiff Airport and the Gateway Development Zone. These are listed below:

- **Objective 1:** “To sustain and further the development of sustainable communities within the Vale of Glamorgan, providing opportunities for living, learning, working and socialising for all.”

- **Objective 2:** “To ensure that development within the Vale of Glamorgan makes a positive contribution towards reducing the impact of and mitigating the adverse effects of climate change.”
- **Objective 3:** “To reduce the need for Vale of Glamorgan residents to travel to meet their daily needs and enabling them greater access to sustainable forms of transport.”
- **Objective 4:** “To protect and enhance the Vale of Glamorgan’s historic, built and natural environment.”
- **Objective 8:** “To foster the development of a diverse and sustainable local economy that meets the needs of the Vale of Glamorgan and that of the South East Wales region.”
- **Objective 9:** “To create an attractive tourism destination with a positive image for the Vale of Glamorgan, encouraging sustainable development and quality facilities to enrich the experience for visitors and residents”.

5.3.3. The LDP Strategy identifies four broad areas where new development will take place in order to achieve the vision and objectives set out in the Plan. One of these areas is Cardiff Airport which is identified as a focus for transport and employment investment. The strategy therefore recognises the importance of Cardiff Airport to the future prosperity of the Vale of Glamorgan as does its designation (along with St. Athan) as part of the Cardiff Airport and St. Athan Enterprise Zone.

5.3.4. In order to support the LDP vision, objectives and strategy, there are a number of strategic policies, managing growth policies and managing development policies which are relevant to new development at Cardiff Airport and the Gateway Development Zone. However, it should be noted that other LDP policies may apply depending on the nature of the proposal and that each application will be dealt with on its own merits. The most relevant LDP policies are listed below:

- Policy SP 1 – Delivering the Strategy
- Policy SP 2 – Strategic Sites
- Policy SP 5 – Employment Requirements
- Policy SP 7 – Transportation
- Policy SP 8 – Sustainable Waste Management
- Policy SP 11 – Tourism and Leisure
- Policy MG 9 – Employment Allocations
- Policy MG 10 – St. Athan –Cardiff Airport Enterprise Zone
- Policy MG 16 – Transport Proposals
- Policy MG 17 – Special Landscape Areas
- Policy MG 18 – Green Wedges
- Policy MG 22 – Development in Mineral Safeguarding Areas
- Policy MG 28 – Public Open Space Allocations
- Policy MD 2 – Design of New Development
- Policy MD 4 – Community Infrastructure and Planning Obligations
- Policy MD 7 – Environmental Protection
- Policy MD 8 – Historic Environment
- Policy MD 9 – Promoting Biodiversity
- Policy MD14 – New Employment Proposals
- Policy MD 15 – Protection of Allocated Employment Sites
- Policy MD 16 – Protection of Existing Employment Sites and Premises

- Policy MD 19 – Low Carbon and Renewable Energy Generation

5.3.5. **The Vale of Glamorgan Local Transport Plan 2015- 2030** identifies the local sustainable transport measures required to ensure that the authority adheres to the requirements set by Welsh Government and current good practice guidance. It has been informed by proposals in the LDP and aims to secure necessary improvements to strategic highway corridors, public transport as well as better provision for pedestrians and cyclists.

5.4. SUPPLEMENTARY PLANNING GUIDANCE

5.4.1. The Council has produced a number of Supplementary Planning Guidance (SPG) documents in support of the adopted LDP. These are available to view on the Council's web site via the following link:
https://www.valeofglamorgan.gov.uk/en/living/planning_and_building_control/Planning/planning_policy/Supplementary-Planning-Guidance.aspx

5.4.2. The following SPGs are of relevance to new development proposals on the site:

- Design in Landscape
- Trees, Woodlands, Hedgerows and Development
- Biodiversity and Development
- Parking Standards
- Planning Obligations
- Travel Plan
- Public Art in New Development
- Renewable Energy
- Sustainable Development
- Tourism and Leisure Development

5.5. OTHER RELEVANT DOCUMENTS AND POLICY GUIDANCE:

5.5.1. The following background evidence to the LDP is considered relevant to the consideration of new development proposals on the airport and adjoining employment site in so far as it provides a factual analysis and information that is material to the issues addressed in this SPG:

- [Employment Land and Premises Study \(2013\)](#)
- [Further advice on Employment Land and Premises Study \(2015\)](#)
- [Cardiff Airport and St. Athan Enterprise Zone – Strategic Plan \(2015\)](#)
- [St. Athan and Cardiff Airport Enterprise Zone – Draft Strategic Development Framework 2015](#)
- [Cardiff Airport 2040 Masterplan](#)
- [Identification of SINC's \(2013\)](#)
- [Local Development Plan Highway Impact Assessment \(2013\)](#)
- [Open Space Background Paper \(2013\)](#)

5.5.2. In addition, the following guidance / Circulars are of relevance:

- [Manual for Streets \(Welsh Assembly Government, DCLG and DfT - March 2007\)](#)
- [Welsh Office Circular 11/99 – Environmental Impact Assessment](#)
- [Welsh Office Circular 13/97 - Planning Obligations](#)

6. DEVELOPMENT FRAMEWORK

6.1. THE VISIONS

6.1.1. Cardiff Airport and the adjoining Gateway Development Zone form a key part of the wider Cardiff Airport and St. Athan Enterprise Zone. Enterprise Zones are Welsh Government designated geographical areas that support new and expanding businesses by providing first class business infrastructure and support. The Cardiff Airport and St. Athan Enterprise Zone focuses on the advanced materials and manufacturing sector and in particular its aerospace sub sector. The overall vision for the Cardiff Airport and St. Athan Enterprise Zone is:

“to strengthen the foundations already in place, to maximise the opportunities for Cardiff Airport and for St. Athan to become an internationally recognised centre of excellence for the aerospace industry and Maintenance, Repair and Operations activities.” (Cardiff Airport and St. Athan Enterprise Zone Strategic Plan 2015 – Updated July 2017).

6.1.2. The Welsh Government Enterprise Zone designation therefore provides an unprecedented opportunity for Wales to both contribute to and take advantage of the competitiveness of the UK in a growing aerospace sector. The designation will assist in the delivery of significant aviation related economic growth in the Vale of Glamorgan and the Cardiff Capital Region. In order to realise this development opportunity, the vision for Cardiff Airport is:

“to be an outstanding capital city airport connecting Wales to the world and the world to Wales, whilst delivering an exceptional customer experience” (Cardiff Airport 2040 Master Plan).

6.1.3. The vision for the Cardiff Airport and Gateway Development Zone is therefore based upon a long-term plan for investment and is **to create a major business destination at Cardiff Airport that will complement the existing and proposed offers of Barry and rest of the Vale of Glamorgan as well as the wider Capital region by becoming a:**

- *recognised base for a range of aerospace companies;*
- *business destination for related local and international business;*
- *specialist location for education, training, research and development and*
- *a major transport interchange.*

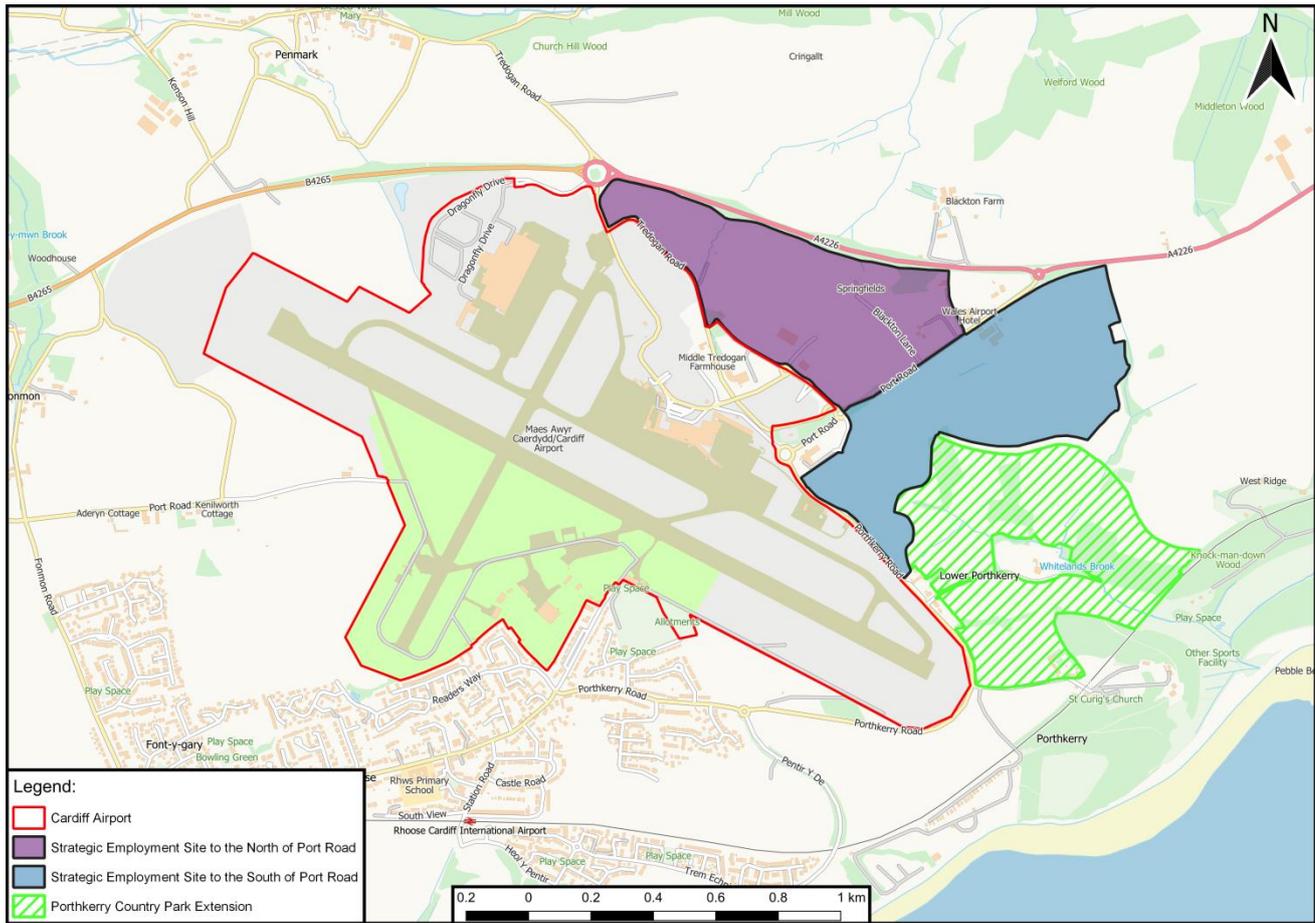
6.2. DEVELOPMENT OBJECTIVES

- 6.2.1. As stated in the LDP, it is envisaged that the Cardiff Airport and Gateway Development Zone will provide a sustainable mixed use “airport city” development. Accordingly, proposals will need to facilitate the continued growth and expansion of Cardiff Airport whilst promoting the establishment of an international hub for aerospace-related business activity, education, training and research and development.
- 6.2.2. In order to achieve this, it is essential that the new development addresses the following key objectives:
- Integrates and complements the existing facilities and businesses at Cardiff Airport;
 - Makes provision for related development such as improved public transport facilities, environmental enhancements (including the transfer of land and delivery of an extension of Porthkerry Country Park) and renewable energy technologies;
 - Encompasses exemplar design that respects the high-quality landscape setting; and
 - Provides physical connectivity between existing and proposed complementary and linked uses in order to make the most of the synergies between them.
- 6.2.3. These objectives are covered in more detail under section 6 below – Planning Considerations. An indicative site layout plan for the Development Zone is contained in [Appendix 10: Illustrative Masterplan](#). Given the strategic importance of this site and the fact that it is in multiple ownership, it is imperative that a collaborative approach is taken to avoid a piecemeal development of the site and to ensure an appropriate mix of uses is achieved.

6.3. DEVELOPMENT AREAS

- 6.3.1. The Cardiff Airport and Gateway Development Zone comprises two distinct areas in the north: Cardiff Airport and the adjoining strategic employment site (currently referred to as the Airport Business Park) and two in the south: the undeveloped part of the strategic employment site and the proposed extension to Porthkerry Country Park. These are shown in figure 1 below:

Figure 1: Cardiff Airport Development Areas



Cardiff Airport

- 6.3.2. Cardiff Airport serves as an international gateway to Wales and the UK creating travel opportunities for leisure and business travel alongside freight operations. It is also a major driver within the Welsh economy providing in the region of 2700 jobs both directly and indirectly.
- 6.3.3. Cardiff Airport currently comprises one central runway with passenger, cargo and Maintenance, Repair and Overhaul (MRO) facilities. In addition, there are ancillary airside facilities such as a fire station, training centre, fuel farm and waste recycling centre to the south of the runway. The airport has one passenger terminal with connecting operating facilities. On site transport infrastructure includes drop off / pick up areas, taxi facilities, hire car facilities, visitor and staff car parking, dedicated bus stops and limited cycling and walking access.

Strategic Employment Site to the north of Port Road (Airport Business Park)

- 6.3.4. The existing Airport Business Park lies to the east of the Airport and is adjoined by the A4226 to the north and Port Road to the south. The majority of the land is owned by the Welsh Government and the Vale of Glamorgan Council. The remainder on the eastern side is in private ownership. Despite the land being allocated for employment use in the former adopted Unitary Development Plan (1996-2011) and the current adopted LDP, it remains a largely undeveloped green field site. Parts of the site are currently used for

car parking, aerospace training (Cardiff and Vale College) and some airport related businesses. Nevertheless, the Cardiff Airport 2040 Masterplan shows a new vehicular access point off the A4226 into the site and identifies it for new and improved airport related uses and an airport campus (see Appendix 10: Illustrative Masterplan).

Strategic Employment Site to the south of Port Road

- 6.3.5. This site forms the remaining part of the strategic employment site and is in private ownership. A strong rural landscape surrounds the site to the east and south. An existing three / four storey hotel adjoins the western corner of the site and beyond that lies Cardiff Airport. However, the existing terminal building is not visible from the majority of the site and views are unobstructed across the runway land towards the south west. The site adjoins the Barry and Rhoose Green Wedge (LDP policy MG18 refers) which also provides a significant undeveloped physical gap between Barry and Cardiff Airport.
- 6.3.6. Arable fields dominate the higher lying, more exposed and predominantly flat areas, while grazing and strips of woodland dominate the sheltered slopes and valleys. The field system consists of moderately sized fields enclosed by hedgerows of varying height and density. The hedgerows on higher ground are relatively low providing some screening particularly towards Port Road but allow long distance views of the surrounding area and views across the Bristol Channel.

Porthkerry Country Park Extension

- 6.3.7. The proposed country park extension is considered to be an essential part of the development and is required to be delivered at an early stage of the development of the land for employment purposes south of Port Road, to be determined via an appropriate phasing plan. Policy MG10 refers to the Enterprise Zone and the transfer of land to the Council to provide an extended area to Porthkerry Country Park as part of this development. It is envisaged that the transfer would form part of a Section 106 planning obligation, terms of which would need to be agreed prior to the determination of a planning application in respect of the employment allocation south of Port Road. The supporting text of Policy MG10 states:

“Given the fine landscape qualities of the Vale of Glamorgan, and the need to promote sustainability, development to the south of Port Road is only considered acceptable as part of a comprehensive development including the transfer to the ownership of the Vale of Glamorgan Council (together with appropriate negotiated financial contributions) of land for a 42ha extension to Porthkerry Country Park (Policy MG28 refers).”

- 6.3.8. The hedgerows in this area are unmanaged and contain more mature trees adding to the distinct character and ‘sense of place’ of the valleys. Two streams exist on the site: Whitelands Brook, which traverses the site from north to south and Bullhouse Brook which runs to the west and adjoins Whitelands Brook at a private residence (formerly known as the Egerton Grey Hotel). It should be noted that this dwelling and its associated curtilage does not form part of the proposed country park extension.

7. PLANNING CONSIDERATIONS

7.1. DESIGN AND VISUAL IMPACT

- 7.1.1. The context of the Cardiff Airport and Gateway Development Zone is an important consideration in understanding how future development of the site should be designed. Proposals will therefore need to take account of the function and relationship between the development site and its surroundings. Consequently, future applications should be supported by an appropriate Landscape and Visual Impact Assessment (LVIA).
- 7.1.2. To ensure future development of the site is appropriate, 'placemaking' should be considered at the earliest possible stage as advocated in PPW 10. Good design is one aspect of the placemaking approach and it plays a fundamental role in creating sustainable places. The strategic nature of the Cardiff Airport and Gateway Development Zone and its regional importance to South East Wales further emphasises the need for good design. Moreover, the developable area of the site is of a considerable scale which has the potential to cause significant visual impact if the design of proposals is not appropriately considered.
- 7.1.3. Design does not solely relate to architecture but should also consider the relationship between the natural and built environment as well as between people and places. In order for design to aid in the creation of sustainable places, it should not only be concerned with aesthetics but include social, economic, environmental and cultural aspects including assessing and understanding how space is used, how buildings and public realm support the use and its relationship with the surrounding area. To achieve good design, Welsh Government have set out 5 objectives (see figure 2 below) which should be considered to appropriately appraise the context of an area to which the development relates.

Figure 2: Objectives of Good Design (Source: PPW)



7.1.4. Due to the strategic nature of the Cardiff Airport and Gateway Development Zone, the Council has identified a number of important site-specific design principles² which should inform future development proposals. The principles relate to each objective and should influence the design of proposals coming forward on the site. Although future developments should take account of these principles, detailed design and access statements would still be required to be submitted to support any future application which would require a further in-depth appraisal of the context relating to that specific proposal identifying design principles specific to that development.

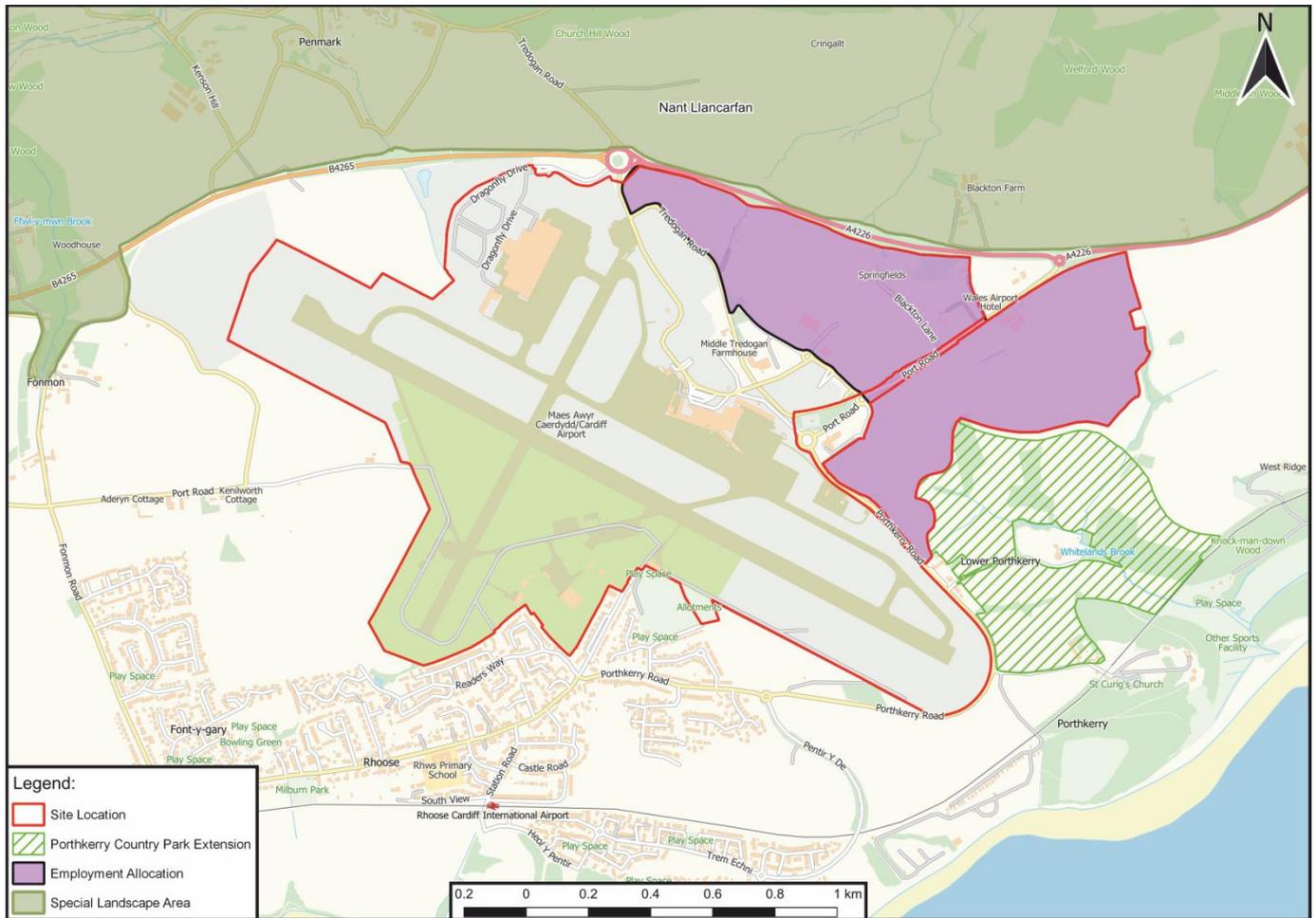
i. **Site Location (Access; Character; Movement)**

7.1.5. Figure 3 below shows the geographical location of Cardiff Airport, the adjoining Gateway Development Zone and the proposed extension to Porthkerry Country Park. The site adjoins the village of Rhoose to the south west yet retains a character of openness due to the nature of the airport. The proposed extension to Porthkerry Country Park lies to the south east of the allocation. The country park extension will provide enhanced recreational facilities for local residents, visitors and employees on the adjacent employment site. The Nant Llancarfan Special Landscape Area (SLA) lies to the north of the site and was originally designated for its visual importance to the area. Although the site lies outside of the designated SLA it is recommended that consideration is given to

² Welsh Government. March 2016. Site & Context Analysis Guide: Capturing the Value of a Site. Available at: <https://gov.wales/sites/default/files/publications/2018-09/site-context-analysis-guide.pdf>

the character of the SLA and how this could influence the design of future proposals on the site.

Figure 3: Site Location



7.1.6. The Cardiff Airport and Gateway Development Zone is intended for a variety of uses which include transport, education and employment. Due to the strategic nature of the site and presence of Cardiff Airport, the anticipated catchment area would be significant. In terms of employment opportunities, it is considered that the site would attract people from not only the Vale of Glamorgan area but also from the wider South East Wales region and further afield.

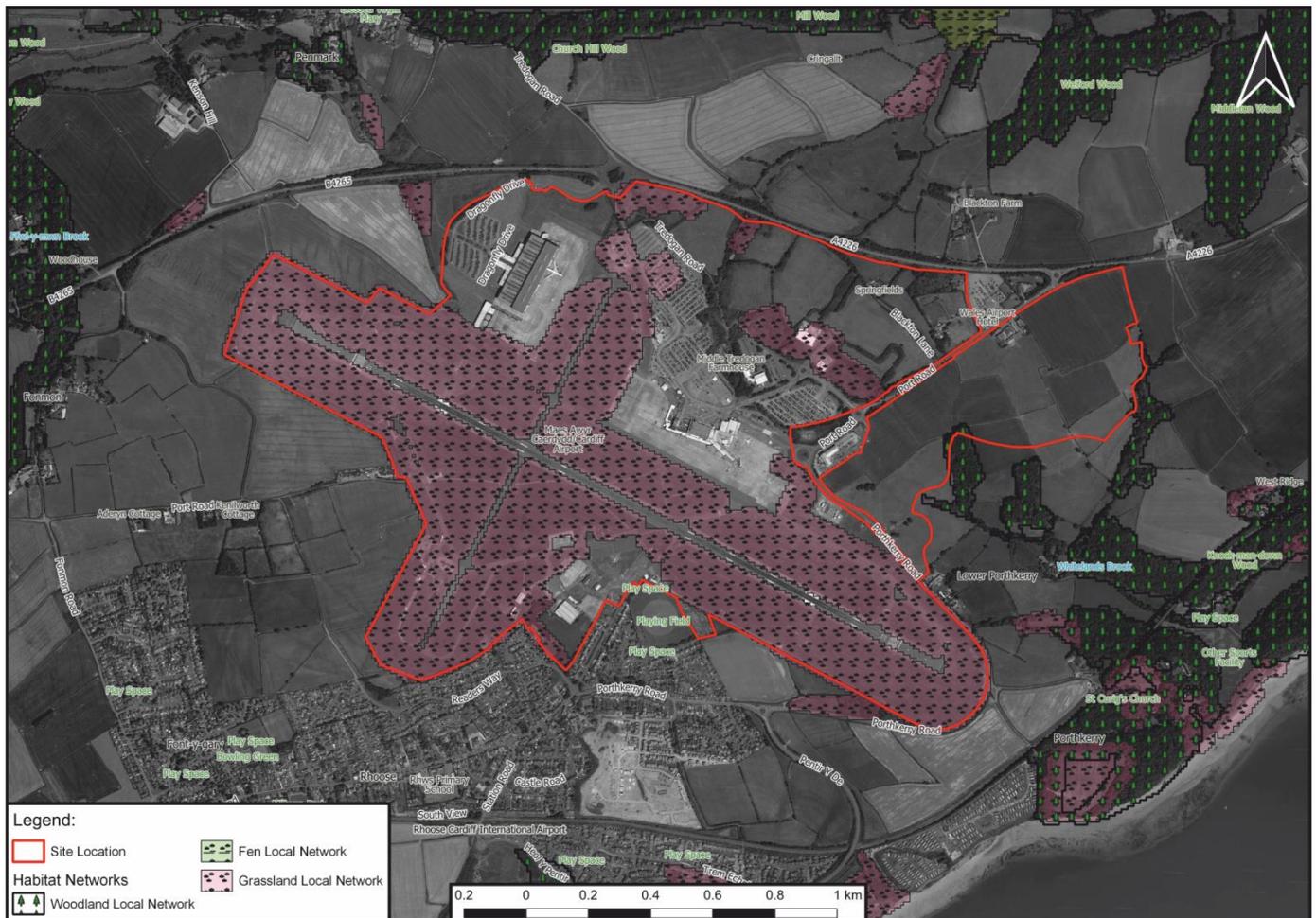
ii. Surrounding Land & Building Use (Character)

- 7.1.7. The existing land uses within the surrounding area play an important role in informing the character of the development. Policy MG10 in the LDP states that development proposals should seek to accommodate business and employment uses catering specifically for the needs of the aerospace industry and high-tech manufacturing. It also refers to the potential “to create an ‘airport city’, taking the form of a business destination for local and international businesses including quality office accommodation, specialist education, training facilities and leisure developments.”
- 7.1.8. Notwithstanding the above, other existing surrounding land uses such as agricultural land, the Country Park and sensitive receptors (e.g. residential) would need to be considered when designing future development proposals. Future planning proposals must therefore identify how the development would address these issues by creating a mitigation plan which should be submitted in support of a future planning application.

iii. Green Infrastructure (Character; Environmental Sustainability)

- 7.1.9. Green infrastructure is defined in PPW as “the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places” (PPW, para.6.2.1, 2018). It plays an integral role in the sustainable management of natural resources and helps towards maintaining and enhancing biodiversity and creating resilient ecosystems. Figure 4 below shows the existing green infrastructure within the site using data from Natural Resources Wales (NRW) which identifies potential habitat networks at a local level based upon an analysis of aerial imagery to identify woodland, fen and grassland habitats. It also outlines the areas which have potential to be habitat networks and should be used to identify areas for further study when progressing development proposals to the planning application stage. Future planning applications must be supported by a Phase 1 Habitat Survey which identifies the presence of habitats of value to protected species on the site to which the proposal relates and how these habitats link with other across the development zone and the wider context. Due to the importance of preserving and enhancing biodiversity developers should seek to retain and enhance green infrastructure features within the Zone to improve habitat networks (wherever possible). Where these features are to be lost, the impact upon the net biodiversity of the site must be considered as proposals need to demonstrate how the development represents a net benefit to biodiversity to ensure it complies with national policy (PPW 10, para.6.4.5 refers).
- 7.1.10. Green infrastructure does not solely relate to areas within a development site but must consider how habitats link with each other across an area. Therefore, new and retained green infrastructure across the development zone must provide good connectivity to other habitats in the wider landscape, beyond the development zone. Where green infrastructure is present and functions as wildlife corridors, planning proposals should be designed to ensure these areas remain unlit to protect the quality of the natural environment as a habitat for protected species. These measures are necessary to ensure continued use of the zone by protected species, preventing them from becoming isolated within the zone or on land around the development zone (e.g. at Porthkerry), and to continue to allow them to move in response to environmental changes or local pressures.

Figure 4: Potential Local Habitat Networks (Source: NRW)



iv. Ecology (Environmental Sustainability)

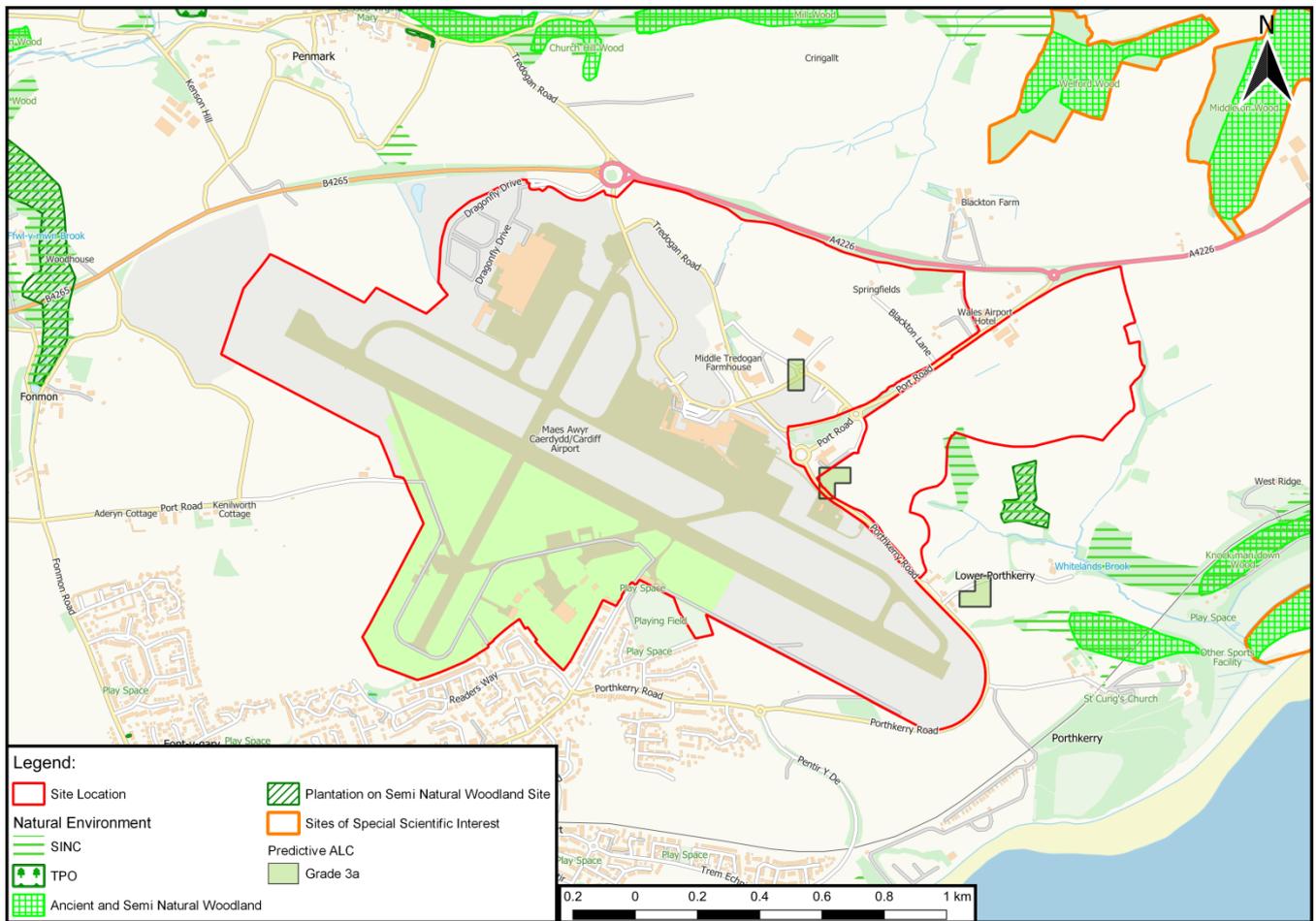
7.1.11. Section 6 of the Environment (Wales) Act 2016 places a duty on public bodies in the exercise of their functions to seek to maintain **AND** enhance biodiversity. Developers need to be aware of this duty in relation to future proposals as developments which do not maintain and enhance biodiversity will be considered unfavourably in line with legislation and national planning policy contained within PPW.

7.1.12. Any planning application should be supported by a Preliminary Ecological Appraisal of the site to establish what further surveys and assessments will be required to inform the development. Additional surveys and assessments should be undertaken as part of the initial appraisal. This should include comprehensive protected species survey information and a detailed assessment of likely impacts of the proposals on protected species and, if protected species are likely to be affected, details of all the mitigation that will be put in place to offset the anticipated impacts, including long-term monitoring proposals. It is recommended that the ecological appraisal for the land to the south of Port Road includes the country park extension land as practical and cost implications may arise in the event that protected species are identified on this part of the land. The appraisal should assess the suitability of the habitat for all protected species. The application would also be subject to consultation with NRW and it is therefore

recommended that the appraisal and survey results are made available to them as part of the Pre-Application Consultation process. The ecological appraisal and report should be carried out by a competent Ecologist and to national accepted standards. Figure 5 below identifies a number of national and local biodiversity designations within and surrounding the site.

- 7.1.13. The undeveloped parts of the development zone include pasture and arable fields, numerous hedgerows, pockets of woodland, scattered trees and dense scrub. These features can provide suitable foraging and nesting habitat for a variety of wildlife including protected species such as bats and dormice. Areas of semi-natural broadleaved woodland within the lower part of the development zone have been identified as Sites of Interest for Nature Conservation (SINCs) which are locally identified sites of wildlife / biodiversity interest. These are largely located within the land proposed to form the Porthkerry Country Park extension and the landscape buffer identified within the illustrative masterplan. A landscape buffer is also necessary in this location to ease the visual transition between the developed and undeveloped areas.
- 7.1.14. Existing woodland and hedgerows should be retained wherever possible to maintain and enhance existing habitats and to increase the amenity value of the new development. The Council's Trees, Woodlands, Hedgerows and Development SPG provides advice and guidance on how this can be achieved. Furthermore, there are several small watercourses and ponds within the site which have the potential to be used by species such as otter, water voles and newts. The Council's Biodiversity and Development SPG includes guidance on assessing and minimising the impact of new development on biodiversity. Figure 4 shows the designated national and local features and constraints on and within close proximity of the site.
- 7.1.15. In addition to the above and in accordance with the provisions of Policy MD9 and TAN5, any forthcoming planning application should be accompanied by a biodiversity conservation and enhancement strategy that sets out broad principles to inform the subsequent detailed design and layout of the development.

Figure 5: National and Local Biodiversity Designations



v. Ground Conditions (Environmental Sustainability)

7.1.16. A historic landfill and former quarry site (Model Farm Landfill and Model Farm Quarry) lie in close proximity to the southern part of the development zone. The nature and extent of infilling of these sites is unknown. Such sites are associated with the generation of landfill gases, within subsurface materials, which have the potential to migrate to other sites. In addition, activities associated with the operation of the farm may have caused the land to become contaminated and therefore may give rise to potential risks to human health and the environment for the proposed end use.

7.1.17. In view of this, a robust contamination and ground gas assessment of the land to the south of Port Road must be undertaken in line with current guidance in order to identify any associated risks and to determine whether further assessment or remediation works are required. The assessment must be carried out prior to the commencement of the development to the south of Port Road by or under the direction of a suitably qualified competent person in accordance with BS10175 (2011) Code of Practice for the Investigation of Potentially Contaminated Sites and shall assess any contamination on the site, whether or not it originates on the site. [Appendix 8 Ground Conditions Map](#) identifies the locations of the historic landfill sites referred to above.

vi. **Road Hierarchy & Access (Access; Movement)**

7.1.18. The road hierarchy of the surrounding area as well as within the site needs to be considered to better understand how accessibility and legibility can be improved through the design of the development. The site benefits from an established road network with reasonably good access to strategic links along the M4 corridor (see figure 6 below). This allows for wider access to settlements within the South East Wales region as well as further afield such as Swansea (Appendix 6: Driving Isochrone Map refers).

Figure 6: Strategic Road Network



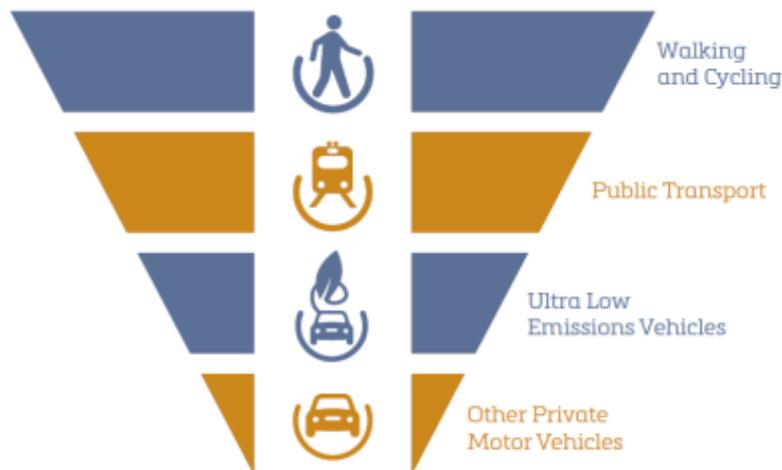
7.1.19. It should be noted that the Welsh Government is funding improvement works to the A4226 Five Mile Lane between Bonvilston and Barry which will improve highway safety, reduce congestion and enhance surface access to the St. Athan – Cardiff Airport and Gateway Zone. In addition, the Council in conjunction with Welsh Government are considering options to improve transport links from Junction 34 of the M4 south towards the airport, to improve access and relieve congestion elsewhere.

7.1.20. Vehicular access to the Cardiff Airport and Gateway Development Zone will predominantly be via Port Road and Five Mile Lane. Given the scale of the proposed development it is considered inevitable that it will have an impact on the existing local highway network, particularly the associated road junction at Weycock Cross leading to and within the vicinity of the site. The Council’s Highways Authority have advised that any forthcoming planning application for development on the site must be accompanied

by a robust and comprehensive scoping study to be agreed with the Local Planning Authority and Highway Authority. A comprehensive Transport Assessment must also be undertaken to evaluate the effects of the development on the surrounding transport network and how they can be addressed by carrying out improvements for sustainable modes of transport like cycling and walking as well as off-site highway and public transport improvements. Further guidance on Transport Assessments can be found within TAN 18 – Transport. The development of the site is also likely to require a Travel Plan. Further information regarding Travel Plans and what they should include can be found in the Council’s Travel Plan SPG (2018).

- 7.1.21. Cardiff Airport currently has a number of on-site surface car parks that collectively cover a large part of the site. The Cardiff Airport Masterplan 2040 revised site layout shows a new multi storey car park which is a more efficient use of land and one surface car park both of which are located roughly within the middle of the northern part of the development zone. Whilst the new transport hub and enhanced public transport facilities to and from the site will reduce demand for on-site car parking it is acknowledged that on site car parking provision is an operational requirement on the airport site. The exact level of car parking for the airport use will therefore need to be agreed with the Local Highway Authority in due course. There is also scope for a section of the proposed car park to be used for park and ride facilities, particularly during off peak times when the airport car parking facilities are less busy.
- 7.1.22. In terms of the other proposed uses on the remainder of the site, car parking should be provided in accordance with the relevant standards set out in the Council’s approved Parking Standards SPG. Disabled parking, motor cycle parking and bicycle parking will also be required to be provided on site in appropriate locations in accordance with the adopted standards. It should be noted that the Parking Standards SPG also identifies specific thresholds for the provision of electric vehicle charging points (EVCPs) in relation to different uses. These should therefore be included as part of new development proposals where applicable.
- 7.1.23. The current layout of the site is predominantly focussed towards car travel. Legibility within the site is poor with large open spaces, a variety of minor roads, dead ends and poor visual landmarks which do little to aid people moving through the site. However, the development of the Cardiff Airport and Gateway Development Zone represents an opportunity to improve accessibility to the site by creating an effective spatial strategy for the area including the provision of a new major transport interchange. Consequently, development proposals must seek to maximise opportunities for walking, cycling and public transport in line with the sustainable transport hierarchy (Figure 7 refers) by prioritising their provision on site and where necessary mitigate transport impacts through the provision of off-site measures, such as the development of active travel routes, bus priority infrastructure and financial support for public transport services. This approach is in line with the LDP strategy which identifies Cardiff Airport as both an employment and transport opportunity and supports the provision of sustainable transport infrastructure under Policy MG10.

Figure 7: Sustainable Transport Hierarchy (Source: PPW)



vii. **Active Travel & Public Transport (Access; Movement)**

Walking and Cycling

- 7.1.24. Given that the site will be an important centre for employment and training as well as an operational airport, it is essential that careful thought is given to incorporating a network of new and enhanced active travel routes that are safe and attractive to users within and adjoining the site. New pedestrian and cycle infrastructure will be required to connect the northern and southern parts of the development zone. Consideration will also need to be given to appropriate walking and cycling links between the development zone and the country park extension to ensure permeability. In addition, it will be essential that development proposals also consider the provision of a network of high-quality dedicated routes that link the site to the nearby train station at Rhoose
- 7.1.25. To better understand movement to and from the site, isochrone maps have been created for walking and cycling over a 60 minute range ([Appendices 4](#) and [5](#) refer respectively) to show the relationship to surrounding settlements. It should be noted that an attractive and safe environment plays an important role in whether people would be willing to travel to destinations by these modes. Although this issue has not been factored in to the isochrone modelling it would need to be carefully considered as part of future development proposals.
- 7.1.26. Pedestrian and cycle access between the airport terminal and neighbouring settlements is currently limited. Whilst there is a shared footway / cycle way along Porthkerry Road towards Rhoose, it is under used, and there are gaps in the network on the approach to the airport. Pedestrian and cycling infrastructure to settlements to the east and west is currently lacking e.g. there is no pavement or dedicated cycle path between the Airport and Barry (Port Road and A4226 towards Weycock Cross). LDP Policy MG16 (2) recognises this void and proposes improvements to walking and cycling infrastructure along the A4050 Port Road to Cardiff Airport as this is a strategically important transport corridor. Similarly, there is no pedestrian and cycle infrastructure to the north (Tredogan Road) and to the west along the B4265.

- 7.1.27. The cycling potential to and from the site needs to be considered in light of existing cycling infrastructure in the local area. The majority of the cycle routes rely upon existing road infrastructure which in most cases does not cater for cyclists' needs and requires cyclists to share roads with vehicular traffic where there are high speed limits and high levels of congestion thus creating a poor cycling environment. Future development proposals should therefore consider improvements to cycling infrastructure, particularly along the A4226 to improve access to the site from Barry. Consideration should also be given as to how cycle paths on the site can be integrated into the National Cycle Network (NCN) Route 88 which runs throughout the Vale of Glamorgan and passes through the site. This would allow for better cycling connectivity within the site and the surrounding area. Therefore, it is recommended that Sustrans are consulted at an early stage in relation to how future proposals could improve the NCN Route 88.
- 7.1.28. All main spine roads on the development should accommodate cycle lanes and footpaths to facilitate active travel. There is also an opportunity for the new development to link into an existing Public Right of Way to the east of the site. As mentioned previously, there will be a need for sufficient cycle parking to be provided in appropriate locations on the site and consideration should also be given to the possibility of providing cycle hire facilities such as 'Next Bike'.

Public Transport

- 7.1.29. In order to understand what improvements are needed to ensure the development is adequately served by public transport, the developer should assess the current provision available at the site (including frequency and destination of services). To aid in this process, [Appendix 9 - Sustainable Transport Map](#) identifies the existing public transport services within and in close proximity to the site as well as the existing active travel routes in the area.
- 7.1.30. In terms of rail, Cardiff Airport and the northern part of the development zone are currently served by Rhoose Cardiff International Airport railway station which is located approximately 3km from the terminal building on the Vale of Glamorgan line. The station currently offers basic facilities and has very little 'sense of place'. It is considered that it would benefit from enhanced passenger waiting facilities, better signage and environmental enhancements such as public art to make the station more inviting and help to improve the travelling experience for passengers, employees and visitors.
- 7.1.31. A shuttle bus currently meets each train and links the station with Cardiff Airport and MOD St. Athan. There is currently 1 train per hour east to Cardiff and 1 train per hour west to Bridgend. It should be noted that it is the intention to increase the frequency of trains to 2 per hour by 2023 as part of the Cardiff Capital Region Metro proposals. The Cardiff Airport Masterplan 2040 seeks to improve the transfer experience between the station and the airport with an improved, dedicated connection. In terms of the LDP, the provision of new sustainable transport infrastructure is required in this location and it states that consideration should also be given to a route for a potential direct rail (including light rail or tram / road tram alternatives) link to Cardiff Airport across the site to ensure that new development does not compromise future proposals to enhance sustainable access to the airport and Enterprise Zone. No dedicated route has been identified or safeguarded in the LDP or the Masterplan for the provision of such a link because there is no certainty of delivery at this time, and it would be unreasonable to

fetter the delivery of development within the Enterprise Zone on this basis, however it remains a key aim to deliver sustainable public transport links to the airport and Enterprise Zone.

- 7.1.32. Cardiff Airport and the adjoining business park are currently served by regular bus services which provide links to both the east and west. There are proposals for new bus priority measures to be introduced along the A4050 Culverhouse Cross to airport transport corridor (LDP policy MG16 [7] refers) which currently experiences congestion problems, particularly during peak times. The Cardiff Airport Masterplan 2040 includes a new transport hub which will provide improved bus facilities at the site and provide greater travel choices for staff and visitors alike. The use of electric buses within the site and appropriate electric vehicle charging facilities would be welcomed as part of future development proposals.

viii. History & Archaeology (Character; Movement)

- 7.1.33. There have been a number of archaeological finds and evidence of sites of archaeological interest within the Cardiff Airport and Gateway Development Zone which demonstrates that the land could have archaeological value according to the Gwent and Glamorgan Archaeology Trust (GGAT) records. In the first instance, GGAT have advised that a desk-based assessment is carried out for the area concerned that examines appropriate sources and assesses the impact of the development on these. Geophysical survey should also be undertaken and may prove useful in targeting areas for further field examination. Early consultation with GGAT is advised so that they can make appropriate recommendations for mitigation and agree a methodology. This will ensure that the results meet the standards to allow understanding in order to recommend any further mitigation work, and for deposition of reports into the Historic Environment Record. Further information is available from http://www.ggat.org.uk/archplan/arch_planning.html.
- 7.1.34. Where archaeological mitigation work is required, GGAT have advised that all historic environment and archaeological work undertaken in relation to planning and development issues should be undertaken to the Standards and Guidance of the Chartered Institute for Archaeologists. In addition, GGAT recommend that either a Registered Organisation with the CIfA or a member with MCIfA accredited membership should undertake the work (www.archaeologists.net/codes/cifa and www.archaeologists.net/ro).
- 7.1.35. There are two Grade II listed buildings (Lower Porthkerry Farmhouse and Upper Porthkerry Farmhouse) located to the south of the development zone, at Upper and Lower Porthkerry Farm (see Figure 8). There is a statutory duty to pay special regard to preserving the setting of listed buildings in the determination of planning applications. Accordingly, it is recommended that an assessment of the impact of the proposed development is undertaken, with particular reference to the historic built environment.
- 7.1.36. For the purpose of planning applications, especially complex cases, the definition, analysis and assessment of the setting of a historic asset should be carried out by a qualified and competent expert. It is therefore recommended that Cadw's guidance 'Setting of Historic Assets in Wales' is used in the preparation of this assessment. The

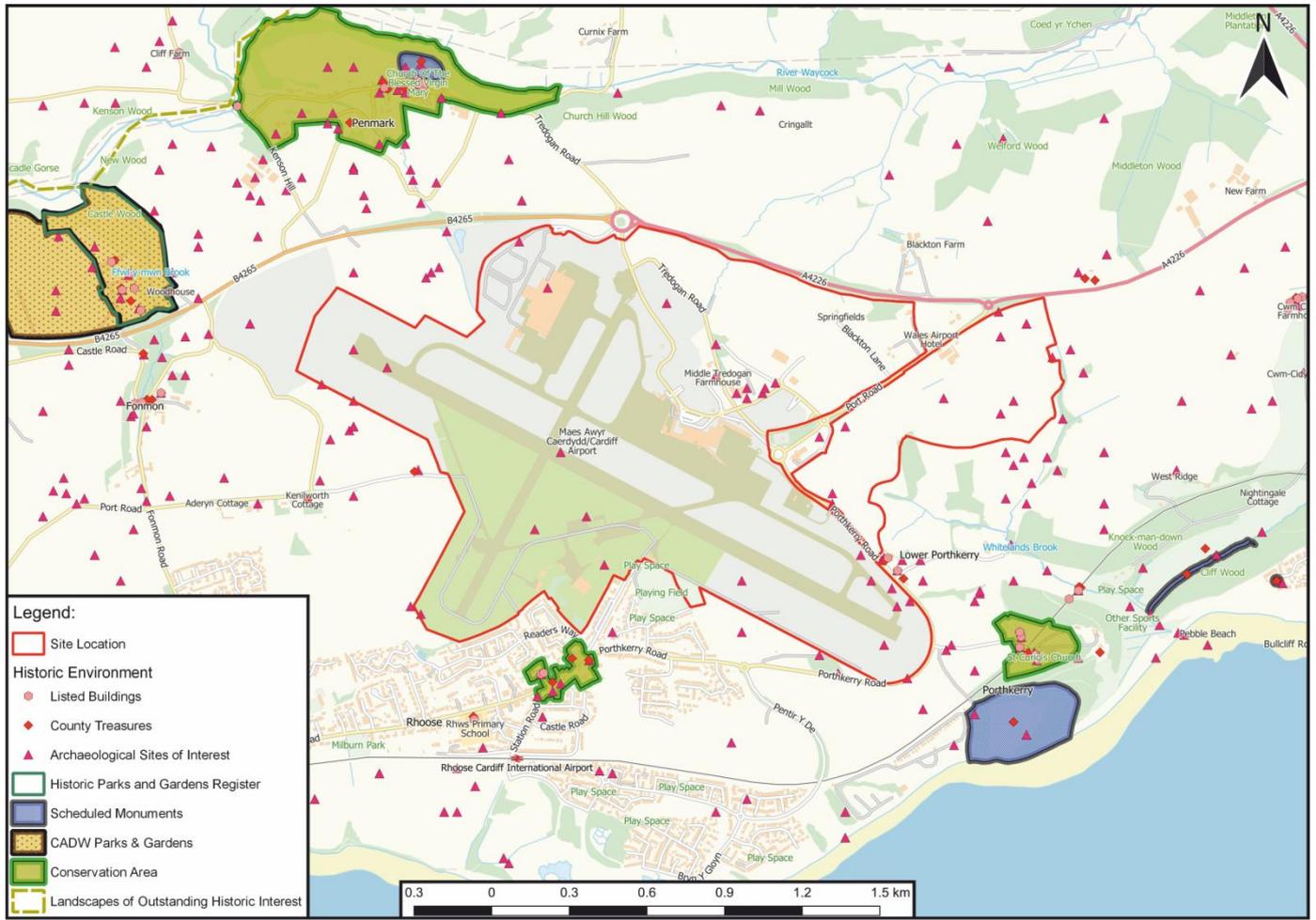
guidance is available online at:

<https://cadw.gov.wales/docs/cadw/publications/historicenvironment/20170531Setting%20of%20Historic%20Assets%20in%20Wales%2026918%20EN.pdf>

- 7.1.37. The potential impact of the development will need to be considered at the earliest possible stage. The illustrative master plan in [Appendix 10: Illustrative Masterplan](#) indicates that there should be a substantial landscape buffer between the development parcels and the listed buildings. This should be retained in any subsequent detailed proposals and the adjacent development parcels should also have buildings of suitable height and mass, with consideration to the listed buildings and their settings, as outlined above.
- 7.1.38. The Porthkerry Conservation Area is approximately 650 metres to the south of the development zone. It is unlikely that there will be a direct impact on the conservation area; however, the impact of the proposed development on the setting of the conservation area will also need to be considered.
- 7.1.39. The site is also located in relatively close proximity to the scheduled monuments of Bulwarks Camp and Medieval Mill and Mill Leat Cliffwood, some 900 metres south of the development zone. In accordance with guidance from Cadw, development proposals need to consider the impact of the development on the monuments and their setting. Cadw have produced detailed guidance regarding the setting of historic assets in Wales and the impact new development can have on these assets³. Given that the development zone has an area of more than 1 hectare, other scheduled monuments within 5km of the development site will also need to be considered. Figure 8 identifies the sites of archaeological interest recorded on the site and the location of the scheduled monuments in relation to the Cardiff Airport and Gateway Development Zone.

³<https://cadw.gov.wales/docs/cadw/publications/historicenvironment/20170531Setting%20of%20Historic%20Assets%20in%20Wales%2026918%20EN.pdf>

Figure 8: Historic Environment Map



ix. Building Scale; Heights & Density (Character)

7.1.40. Due to the limited urban form within the site, the existing airport terminal building and the BAMC hangar have a strong visual presence on the site. Both of these buildings have a large foot print and are approximately 4-6 storeys in height which reflects their functions. Although new buildings will need to be functional, developers should seek to use appropriate building heights to limit the visual impact of the proposal. A mix of building heights and landmark buildings positioned at nodes will help to improve legibility throughout the site. In terms of density, while the current urban form is sparse, proposals should look to achieve a higher density on the site to ensure the efficient use of the land and reflect its status as a strategic site within the Enterprise Zone. Appendix 10: Illustrative Masterplan identifies potential building envelopes which would be considered appropriate within the area based upon Cardiff Airport 2040 Masterplan.

x. Building Character & Building Traditions (Character)

7.1.41. The existing building character and building traditions of the area appear dated particularly in relation to the existing terminal building and industrial units located on the site. Due to the regional importance of Cardiff Airport and the strategic nature of the site, the development offers an opportunity to introduce bold new designs and / or revert to a more traditional architectural style utilising local materials where appropriate. The following photographs show the existing building character within and adjoining the site.



Photograph 1: View across Long Stay Car Park towards Terminal



Photograph 2: View across Long Stay Car Park towards BAMC



Photograph 3: View of Front of Cardiff & Vale College



Photograph 6: View of Approach to Holiday Inn



Photograph 4: View of Industrial Unit at Airport (Type 1)



Photograph 7: View of Residential Property from Valley Floor



Photograph 5: View of Industrial Unit at Airport (Type 2)



Photograph 8: View of Porthkerry Viaduct from Valley Floor

7.1.42. The majority of the built environment at Cardiff Airport and surrounding development is typical of industrial style uses i.e. large units with metal cladding and a limited amount of glass. Although most of these buildings are low lying and surrounded by embankments and existing hedgerows / tree lines which limits their impact upon the wider area, the internal character and layout of the site is poor with many of the buildings looking dated. Large areas within the site are tarmacked particularly in relation to the airport car parks which have little in the way of green infrastructure to break up the parking areas.

7.1.43. However, further from the airport towards Porthkerry Country Park the character of the buildings changes drastically. These include residential properties with prominent architectural features and large Victorian style infrastructure (e.g. Porthkerry viaduct) with a number of buildings being nationally and locally listed. There is a strong contrast between the two architectural styles within the area and the current industrial style approach taken within Cardiff Airport does not relate to the surrounding historic architectural style. Although, the function of buildings will dictate their form within the Cardiff Airport and Gateway Development Zone, it is considered that the attractiveness of the area could be enhanced by creating an improved sense of place through the use of sensitive materials and striking designs that respect their sensitive setting.

7.1.44. Notwithstanding the above, consideration should also be given to the surrounding natural environment, particularly the specific landscape characteristics within the adjoining area which can be used to influence the design of new buildings on the site. The following images identify the key landscape features within the Cardiff Airport and Gateway Development Zone which should be considered when designing development proposals. They show a predominately rural landscape to the north shaped by rolling agricultural fields broken by mature hedgerows and woodland areas. In contrast, the south of the site slopes downwards towards the sea creating a valley which allows views of Severn Estuary.



Photograph 9: View to the North from Site Boundary



Photograph 11: View South East from Holiday Inn Car Park



Photograph 10: View North West from Valley Basin to the East of Runway

- 7.1.45. Future proposals should seek to incorporate active frontages which face public highways and help to create attractive 'street scenes'. Rather than replicating the design of existing development on the site, light weight building forms should be considered which incorporate materials such as glass into the design. Given the limited buildings within the site; it is considered that future development could seek to pursue an unconstrained design palette of materials. However, the material finishes of the proposed buildings must reflect the strategic importance of the site and the Council will aim to ensure a high-quality palette of materials is maintained on the site. [Appendix 11 – Case Studies](#) shows examples of new airport terminal buildings and business parks that have used design which is functional, in keeping with their surroundings together with high quality material finishes.
- 7.1.46. The case studies demonstrate the importance of the built and natural environment when understanding the potential building characteristics and building traditions to be used in future proposals. They also illustrate how good design can be used to solve the different issues faced on sites. Each site is subject to its own specific considerations which are highlighted through extensive site analysis which in turn informs the design of the development. Therefore, it is important that future development proposals include detailed analysis of the Cardiff Airport and Gateway Development Zone and the case studies cited in this SPG should be used as inspiration to inform potential design solutions following the site analysis stage to ensure the development is designed to respond to the social, built and natural environment appropriately in line with the 5 objectives of Good Design promoted by PPW 10.

7.2. PHASING

- 7.2.1. The developable area of the site is approximately 288.6ha (77.4ha excluding Cardiff Airport). Due to the scale of the site, the phasing of the development is important to ensure that there is adequate infrastructure to support the proposal. The Council will require an appropriate phasing strategy to be submitted to support future applications on the site which demonstrates that the proposal would not compromise the future development of the entire site and that each phase of the proposal would be supported by adequate infrastructure. The phasing strategy will therefore need to consider all landowners and those with an interest in the site. A collaborative approach should be pursued to ensure the phasing strategy does not undermine the council's aspirations for the site. The phasing strategy should identify green infrastructure and demonstrate how it relates to other parts of the site and the wider area. The focus should be on ensuring green infrastructure is in place and established ahead of any potential impacts on protected species or their habitat.

7.3. NOISE ISSUES

- 7.3.1. Cardiff Airport undertook a Noise and Environmental Monitoring Report in 2010 which identified the number of complaints received concerning noise and environmental issues in relation to aircraft movements and route deviations over each quarterly period between January and December 2010. The Monitoring Report offers an insight to where

the potential noise issues are located within the Vale of Glamorgan. However, due to the age of the report and the limited data recorded any future noise assessment would be required to undertake a more detailed and up to date study of the impacts any future expansion of the airport would have on the amenity of the surrounding area.

- 7.3.2. Future noise assessments should be carried out in accordance with Welsh Government Guidance contained within TAN 11: Noise (1997)⁴. An update to TAN11 was released in the form of a Ministerial Letter which updates references throughout TAN11⁵. Due to the existing uses on the site, future developers must take account of the agent of change principle set out in PPW which states “that a business or person responsible for introducing a change is responsible for managing that change. In practice, for example, this means a developer would have to ensure that solutions to address air quality or noise from nearby pre-existing infrastructure, businesses or venues can be found and implemented as part of ensuring development is acceptable.” (PPW 10, para.6.7.5 refers).
- 7.3.3. To ensure future occupiers are not adversely impacted by the noise created by aircraft, design features should be included within the proposed development to mitigate against noise. These could include:
- Sound insulation
 - Screening development from noise sources using both artificial and natural barriers
 - Positioning noise sensitive buildings an adequate distance away from noise sources.
- 7.3.4. In addition, new development on the site must have regard to existing residential properties in the area and the likely impact proposals would have on residential amenity. Noise creating development should be positioned away from other sensitive uses to ensure residential and public amenity is protected.

7.4. DRAINAGE / FLOODING

- 7.4.1. The site does not have any Zone C1 or C2 flooding according to the latest Development Advice Maps produced by NRW (April 2019). However, there is an element of Zone B flooding within the northern area of the site. Zone B is an area known to have flooded in the past, evidenced by sedimentary deposits. However, the site is allocated within the adopted LDP and no issues relating to flooding were raised by NRW during the Examination process. However, NRW did indicate that due to the size of the development, a surface water assessment would be required prior to the commencement of development. This is further evidenced by the presence of surface water flooding throughout the site as shown by Ground Conditions Map in [Appendix 8 - Ground Conditions Map](#).
- 7.4.2. The Cardiff Airport and Gateway Development Zone lies within the Western Wales River Basin Management Plan area. Developers should have regard to the Management Plan to ensure proposed developments do not detract from the objectives of the Plan. The LPA in their role as decision maker, must have regard to River Basin Management Plans

⁴ <https://gov.wales/sites/default/files/publications/2018-09/tan11-noise.pdf>

⁵ <https://gov.wales/sites/default/files/publications/2018-11/cl0115-tan-11-noise.pdf>

when determining planning applications. Consequently, an applicant may be required to undertake a WFD assessment and confirm whether the objectives of WFD are likely to be compromised.

- 7.4.3. In terms of the land to the south of Port Road, Dwr Cymru Welsh Water (DCWW) have advised that it will be necessary for developers to undertake hydraulic modelling assessments of the public sewerage and potable water supply networks which will examine the existing networks and consider the impact of the introduction of flows from the development and then identify solutions and points of communication to ensure that the sites can be accommodated within these systems. From a wastewater treatment perspective, DCWW have confirmed that the foul flows from the whole of the Development Zone area would be conveyed to Cog Moors Wastewater Treatment Works and there would be no issue in accommodating the foul flows.
- 7.4.4. With regard to the use of Sustainable Urban Drainage Systems (SUDS), with the exception of developments with a “construction area” of less than 100 square metres, all construction work requiring planning permission which has drainage implications will need Sustainable Drainage Approving Body (SAB) approval. Developers must therefore consider how surface water drainage and flooding mitigation measures can be incorporated into the design of the new development from the earliest stage. Further advice can be found at:

<http://www.valeofglamorgan.gov.uk/en/living/Flooding/Flood-and-Coastal-Erosion/Sustainable-Drainage-Systems.aspx>

- 7.4.5. The use of SUDS represents an opportunity to introduce new green infrastructure which also combats surface water flooding. Amphibian friendly designs should be employed, particularly in areas where Great Crested Newts may be implicated. However, the inclusion of new green infrastructure will need to be sensitively considered due to the relationship future development will have with the operation of Cardiff Airport. The Civil Aviation Authority (CAA) has identified a number of SUDS components which could threaten aircraft safety. In particular, ponds, wetlands and green roofs all have the potential to create a hazard to aircraft as they can attract wildfowl which can result in bird strikes. The risk to aircraft safety can be mitigated through the implementation of good ecological design which includes the use of long grass planting rather than short grass which is preferred by geese, the use of small ponds to limit the amount of bird life they can support as well as designing water features with accessible edges for predators such as foxes to deter birds from nesting, and forming a planting strategy which reduces the risk of roosting by birds in large numbers. However, bird strikes are a complex issue and it is recommended that specialists in bird strike prevention are consulted and included within the design phase of future proposals to ensure both SUDS and ecological considerations are effectively integrated into the development without detracting from the safety of the airport.

7.5. RENEWABLE ENERGY

- 7.5.1. The scale of the proposed development at the Cardiff Airport and Gateway Development Zone presents an opportunity to incorporate renewable energy proposals into the layout and design. This could include small scale solar and wind energy although the siting of

these would need to be carefully considered in relation to the impact upon aviation safety due to the glare from solar panels and the radar interference wind turbines can cause. However, the Council's Renewable Energy SPG (2019)⁶ highlights potential mitigation methods for these issues and outlines possible ways in which renewable energy can be integrated into proposals.

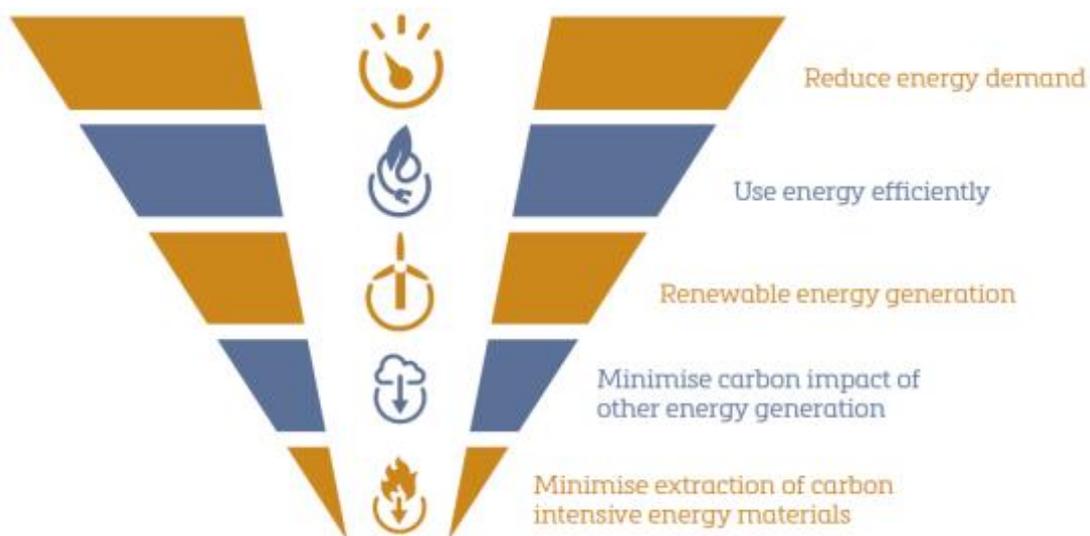
- 7.5.2. The site lies within the Aviation Safeguarding Zone which requires consultation with the Civil Aviation Authority (CAA) if any new buildings, structures or works exceed 45 metres in height. Additionally, the site falls within the Ministry of Defence (MoD) statutory 45.7 metres technical safeguarding zone surrounding St. Athan. The MoD must also therefore be consulted if new development exceeds 45.7 metres in height so that a technical assessment can be undertaken and to ensure no degradation to the technical output of their assets.
- 7.5.3. Wind energy development must be sensitively managed where it lies within close proximity to aviation activities and MoD assets. The physical dimensions of wind turbines can cause obstructions to the protected critical airspace encompassing military aerodromes and impede the operation of safeguarded defence technical installations. In addition, where turbines are erected in line of sight to defence radars and other types of technical installations the rotating motion of their blades can degrade and cause interference to the effective operation of these types of installations with associated impacts upon aviation safety and defence interests. Consequently, the MOD needs to review applications for all types of wind turbines 11 metres or greater in height or for turbines with rotor blades 2 metres or greater in length. The MOD will assess the effects of wind turbine development proposals upon defence radars based upon radar line of sight and on prescribed distances from particular radar installations.
- 7.5.4. The scale of the development site and potential commercial uses would also lend itself to the creation of a district heating system. District heating systems generate heat in a central location and distribute the heat energy amongst multiple different buildings, providing low carbon energy which also helps to save on energy costs. It is a particularly efficient when used alongside renewable technology as the main heat generator combined with other waste heat incorporated to make up any shortfalls. Developers should consider how this technology could be integrated into the development in the early stages to help future proof proposals, improve the sustainability of the development and reduce energy costs for future occupiers. Modern district heating reduces waste by distributing residual heat that is generated during the day, rather than just during peak morning and evening times, when demand is at its highest. For instance, in the daytime, heat can be recovered from air-conditioned offices and used to heat other uses in the area.
- 7.5.5. LDP Policy MG10 - St. Athan - Cardiff Airport Enterprise Zone refers to the inclusion of a sustainable energy centre at the Cardiff Airport and Gateway Development Zone. This could be a new stand-alone facility or incorporated into building designs. Furthermore, to ensure the proposed development creates a sustainable community it is recommended that future proposals are designed in relation to the BREEAM Communities Technical

⁶ <https://www.valeofglamorgan.gov.uk/Documents/Living/Planning/Policy/SPG/Renewable-Energy-SPG-March-2019.pdf>

Manual (2012)⁷. This is a technical guide that describes an environmental, social and economic performance standard against which large scale developments in the UK and internationally through the BREEAM Communities bespoke international process can be assessed, rated and certified.

- 7.5.6. The inclusion of an energy centre on the site which uses renewable or low carbon energy is also promoted in PPW which states, “The planning system plays a key role in delivering clean growth and the decarbonisation of energy, as well as being crucial in building resilience to the impacts of climate change.” (PPW 10, para.5.7.1 refers). The need to reduce greenhouse gases is also enshrined within legislation under the Environment (Wales) Act 2016 which sets the legal target of reducing greenhouse emissions by at least 80% by 2050. The Cardiff Airport and Gateway Development Zone presents an opportunity to help meet this target through including measures to reduce energy demand and increase energy efficiency in line with the Energy Hierarchy for Planning (Figure 13 refers). Therefore, developers should consider the inclusion of a renewable energy / low carbon energy plant, integrated renewables (solar and wind) and district heating systems to ensure proposals comply with national and local planning policy and help to meet the energy targets contained within legislation.

Figure 9: Energy Hierarchy for Planning (Source: PPW)



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https://www.breeam.com/communitiesmanual/content/resources/otherformats/output/bre_printoutput/breeam_communities.pdf

8. SECTION 106 PLANNING OBLIGATIONS

- 8.1.1. The Council's Planning Obligations SPG⁸ provides the local policy basis for seeking planning obligations through Section 106 Agreements in the Vale of Glamorgan. It sets thresholds for when obligations will be sought and indicates how they may be calculated.
- 8.1.2. The Council is likely to seek planning obligations for development proposals within the Cardiff Airport and Gateway Development Zone covering the following:
- Sustainable Transport
 - Travel Plan
 - Public Open Space including Porthkerry Park Allocation
 - Training and Development
 - Public Art
- 8.1.3. These planning obligations are likely to be necessary to ensure that the Cardiff Airport and Gateway Development Zone is well-connected to existing settlements; provides access to green spaces and recreational facilities to support healthy lifestyles; is bold in terms of its identity and strategic significance and provides training and development opportunities.

8.2. SUSTAINABLE TRANSPORT

- 8.2.1. New development within the Cardiff Airport and Gateway Development Zone will be required to make provision for sustainable transport on site, as well as providing off-site financial contributions, which will be calculated in accordance with the Planning Obligations SPG. New development will be required to reduce the reliance on the private car by supporting walking, cycling and public transport infrastructure and provision.
- 8.2.2. Development proposals must contribute to maximising accessibility by sustainable modes of travel, by mitigating transport impacts through the provision of off-site connections, such as the development of active travel routes, bus priority infrastructure and financial support for public transport services. As a minimum, the Cardiff Airport and Gateway Zone must be fully accessible by walking and cycling via surrounding communities and networks. In particular, links between Barry and the Cardiff Airport and Gateway Zone via Port Road, and links to the north and west of Rhoose, should be strengthened, particularly for walking, cycling and public transport. Links between the Zone and the Rhoose Cardiff International railway Station will also need to be strengthened.
- 8.2.3. It will be necessary for an overarching strategic sustainable transport strategy to be undertaken for the whole of the Cardiff Airport and Gateway Development Zone, to understand and evaluate the full extent of off-site sustainable transport measures required to mitigate the impacts of the development. This will be essential to ensure that

⁸ <https://www.valeofglamorgan.gov.uk/Documents/Living/Planning/Policy/SPG/Planning-Obligations-SPG-2018.pdf>

there is a holistic approach to sustainable travel within and to/from the site, and to avoid the sustainable transport measures being piece-meal and incremental.

- 8.2.4. It will be essential for development proposals to encourage sustainable travel choices for employees and visitors. This can be achieved by providing targeted new infrastructure; improving choice in transport and securing accessibility in a way which supports sustainable development, increased physical activity, improves health and helps to tackle the causes of climate change and airborne pollution.
- 8.2.5. In addition to off-site financial contributions for sustainable transport, development proposals will be required to provide necessary EVCP infrastructure as previously mentioned. The standards are set out in the Council's Parking Standards SPG.

8.3. TRAVEL PLAN

- 8.3.1. The primary objective of a travel plan is to provide incentives and/or disincentives to the end users of a development to reduce their reliance on private vehicles as their primary mode of travel. A successful travel plan should encourage the take up of more sustainable modes of transport such as walking, cycling, public transport or car sharing or indeed remove the need to travel all together.
- 8.3.2. Due to the scale and multiple land owners within the Cardiff Airport and Gateway Development Zone, an overarching Framework Travel Plan will be required. The overarching Framework Travel Plan should set out parameters and overall outcomes, targets and indicators for the entire site, and then subsidiary travel plans will thereafter be required for each end occupant (or user/element). The subsidiary travel plans should comply with and be consistent with the wider targets and requirements of the framework travel plan. Each travel plan will be required to create policies to reduce travel demand, especially that of single-occupancy private vehicles. Further guidance is available within the Travel Plan SPG.

8.4. PUBLIC OPEN SPACE INCLUDING THE PORTHKERRY COUNTRY PARK EXTENSION ALLOCATION

- 8.4.1. New development within the Cardiff Airport and Gateway Development Zone will be required to make provision for formal and informal public open space and/or recreational facilities on site to meet the needs of employees and visitors.
- 8.4.2. Public open space and recreational areas will be vital for health and well-being and will contribute to the area's visual amenity. There should be provision for healthy physical activity and places to relax. Networks of high quality, accessible green spaces and recreation spaces will be required to promote nature conservation, biodiversity and provide enjoyable opportunities for nearby residents, employees and visitors to participate in a wide range of physical activities.
- 8.4.3. The amount of open space and recreational areas to be provided on site will be calculated in accordance with the Planning Obligations SPG. A Green Infrastructure /

Open Space and Recreational Strategy should be considered for the Cardiff Airport and Gateway Development Zone, to ensure that the open space is not delivered piece-meal.

- 8.4.4. In addition, the land for the extension to Porthkerry Country Park will need to be transferred to the ownership of the Council (together with appropriate negotiated financial contributions) as part of the first phase of the development of the Land to the South of Port Road.
- 8.4.5. In view of the costs associated with the delivery and upkeep of the extension of Porthkerry Country Park, the Council are likely to seek financial planning obligations, in addition to the transfer of the land. The initial costs relating to implementation works are likely to be significant and require implementation of new footpaths, trails, footbridges and a play area, together with associated signage and furniture. In addition, substantial woodland and hedgerow planting and management would be required. There would also be design, staffing and equipment costs for these works. It is anticipated that the extension will also result in increased visitor numbers to Porthkerry Country Park and therefore the financial obligations should also provide for upgrades and extension to the car park and toilet facilities. In addition to the cost of these works, the Council are likely to request payment of an annual commuted sum toward cost of on-going hedgerow and woodland management, land maintenance and repairs over a period of 20 years.

8.5. TRAINING AND DEVELOPMENT

- 8.5.1. The Cardiff Airport and Gateway Development Zone is anticipated to attract inward investment and provide a range of employment opportunities that will benefit the area. The site is expected to accommodate business and employment uses catering for the needs of unique businesses such as the aerospace industry and high-tech manufacturing, research and development.
- 8.5.2. The development of skills and education in an economy are essential to maximise employment opportunities for local residents, in order to achieve 'A Prosperous Wales', and to ensure that people secure decent work and enjoy a better quality of life. Developments delivered within the Cardiff Airport and Gateway Development Zone will be required to support and enable opportunities for training and development. Training and development may be provided by the developer on site or provided in the form of a financial contribution payable to the Council which would then be used to facilitate skills training and promote access to employment.

8.6. PUBLIC ART

- 8.6.1. Public art is an important aspect for proposals on the site and art in the public realm can help to create a distinct identity, enhance the environment and create a sense of place. New development within the Cardiff Airport and Gateway Development Zone will be required to provide public art, in accordance with the Planning Obligations SPG and the Public Art in New Development SPG. On major developments, developers should set aside a minimum of 1% of their project budget specifically for the commissioning of art

and, as a rule, public art should be provided on site integral to the development proposal.

- 8.6.2. Given the size of the Cardiff Airport and Gateway Development Zone, a site responsive public art strategy should be developed to provide a strategic overview for potential opportunities for public art based upon the master plan. This will ensure that opportunities for public art are considered at an early stage in the design process and are not delivered piece-meal as each parcel is delivered. This approach will ensure that the final pieces of public art will be integral to the overall design of the Zone.
- 8.6.3. The public art strategy for the Zone should consider in detail the approach and exterior environment of the Cardiff Airport and Gateway Development Zone, as this is vitally important to the positive perception (i.e. the first impression) of the area by visitors and international investors. Public art will need to reinforce the strategic importance and identity of the Cardiff Airport and Gateway Development Zone, ensuring that there is a strong sense of arrival to the Zone. By focusing public art at key locations, such as the approach from Port Road; the approach from the B4265; the approach and journey from Rhoose Cardiff International Railway Station; and at key nodal points within the Zone, it will improve visitors' perception of the Zone and reinforce the profile and reputation of it.
- 8.6.4. There is considerable scope for integrating public art into the Cardiff Airport and Gateway Development Zone, ranging from the dramatic to the subtle, from traditional landmark sculptures to innovative design of street furniture or other functional objects such as the imaginative design of floorscape, railings, lighting and signage. It is acknowledged that the approach to the Cardiff Airport and Gateway Development Zone already benefits from some minor insertions of public art along the main highway network; however, this is relatively dated and will need to be significantly expanded as the Zone develops.
- 8.6.5. The choice of artists and the nature of subsequent work should be the subject of full collaboration from the outset between the artist, public art consultant, businesses, the local community and professionals involved in the design process. The Council's Arts Development Officer should be contacted for advice on public art development processes and opportunities. Artists should be engaged at the earliest opportunity to enable any public art installations and development to be integrated into the overall development site in accordance with guidance contained within the Public Art SPG. The existing public art has to be considered alongside any new developments so that each Public Art opportunity stands alone and compliments its surroundings and other art works rather than compromising. Engaging with the community to create a sense of local ownership and public responsibility for artwork is critical to the long-term success of public art projects. Public art professionals should be consulted at the earliest possible stage to identify opportunities and provide professional advice to local planning authorities and developers.

9. FURTHER INFORMATION AND ADVICE

9.1.1. Depending on the scale and nature of proposals, planning applications for development within the Zone are likely to require some or all of the following technical documents to support them:

- Pre-application Consultation (PAC) Report
- Design and Access Statement
- Preliminary Ecological Appraisal
- A biodiversity conservation and enhancement strategy
- Landscape and Visual Impact Assessment (LVIA)
- Tree / Hedgerow Survey
- Environmental Statement (see paragraph 8.2 below)
- A land contamination and ground gas assessment
- Transport Assessment – to be informed by Scoping Study in partnership with Highways Authority
- Travel Plan
- An Archaeological Assessment
- Heritage Impact Assessment
- Phasing Strategy
- Noise Impact Assessment
- Surface Water Assessment and Drainage Strategy
- Public Art Strategy

9.1.2. Regulation 3 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 prohibits the granting of planning permission within Schedule 2 of the regulations unless EIA procedures have been followed. It is therefore recommended that a request for a screening opinion is submitted to the Local Planning Authority in advance of any planning application to establish if an EIA is required. Welsh Office Circular 02/99 provides further guidance in regard to this process, in particular paragraphs 55 to 58. If the proposal is considered as EIA development an environmental statement would need to be submitted as part of a future planning application.

9.1.3. Further advice on all aspects of this guidance can be sought from the Planning Department. Prior to the formal submission of a planning application, the Council encourages applicants to utilise the Council's pre-application services which can save unnecessary work, costs and delay through negotiation. Further information on the Council's pre-application advice services can be found on the Council's website https://www.valeofglamorgan.gov.uk/en/living/planning_and_building_control/Planning/Planning-Applications/Advice-and-Guidance.aspx

Development Management

Dock Office

Barry Docks

Barry

CF63 4RT

Tel: 01446 704681

Email: planning@valeofglamorgan.gov.uk

The following organisations may also be able to provide advice and guidance as appropriate:

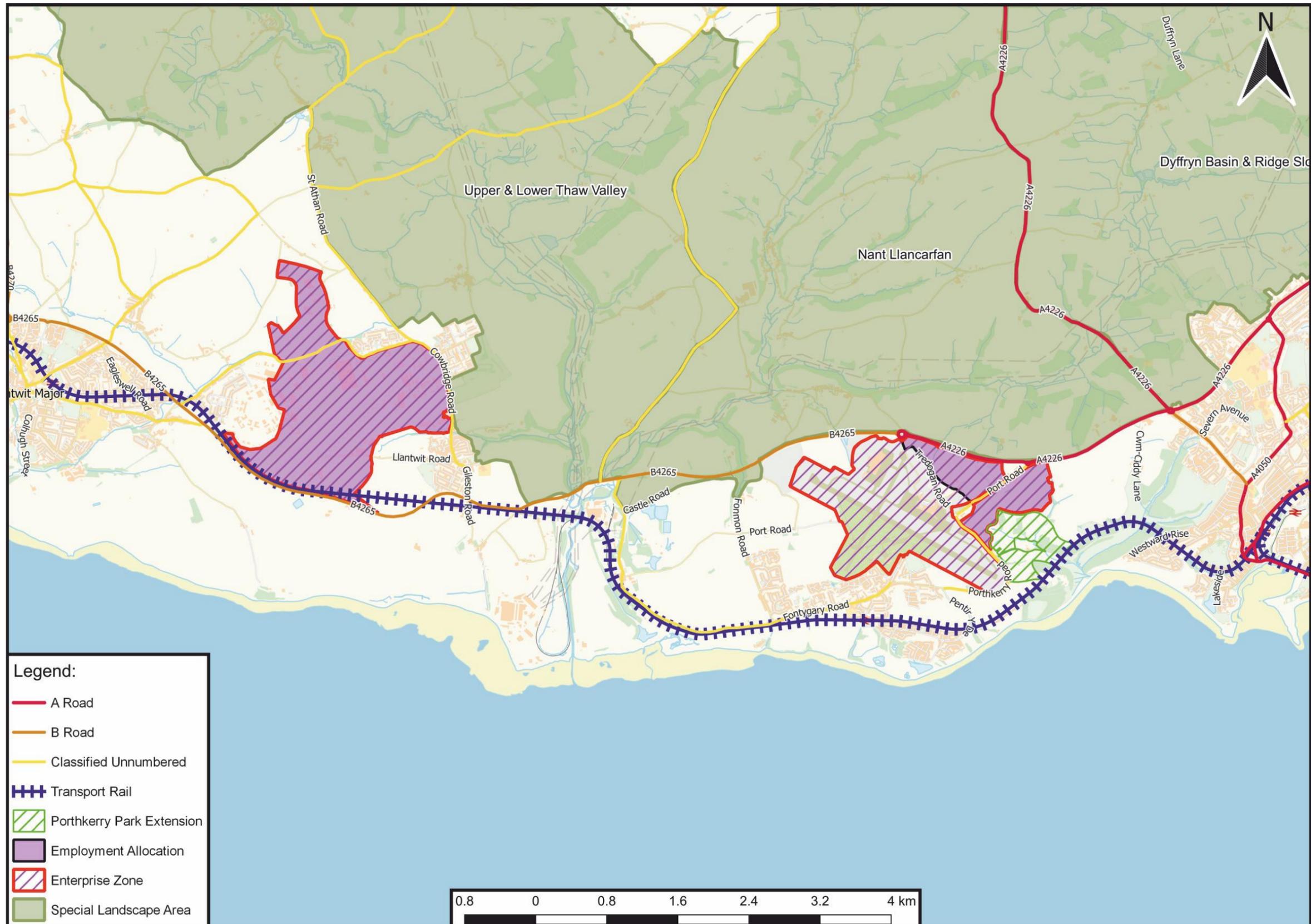
- [Cadw](#)
- [Glamorgan Gwent Archaeological Trust](#)
- [Design Commission for Wales](#)
- [Civil Aviation Authority](#)
- [Cardiff Airport](#)
- [Sustrans](#)
- [Natural Resources Wales](#)
- [Secured by Design](#)
- Utility Companies
- Public Transport Providers

9.2. COMMUNITY SAFETY

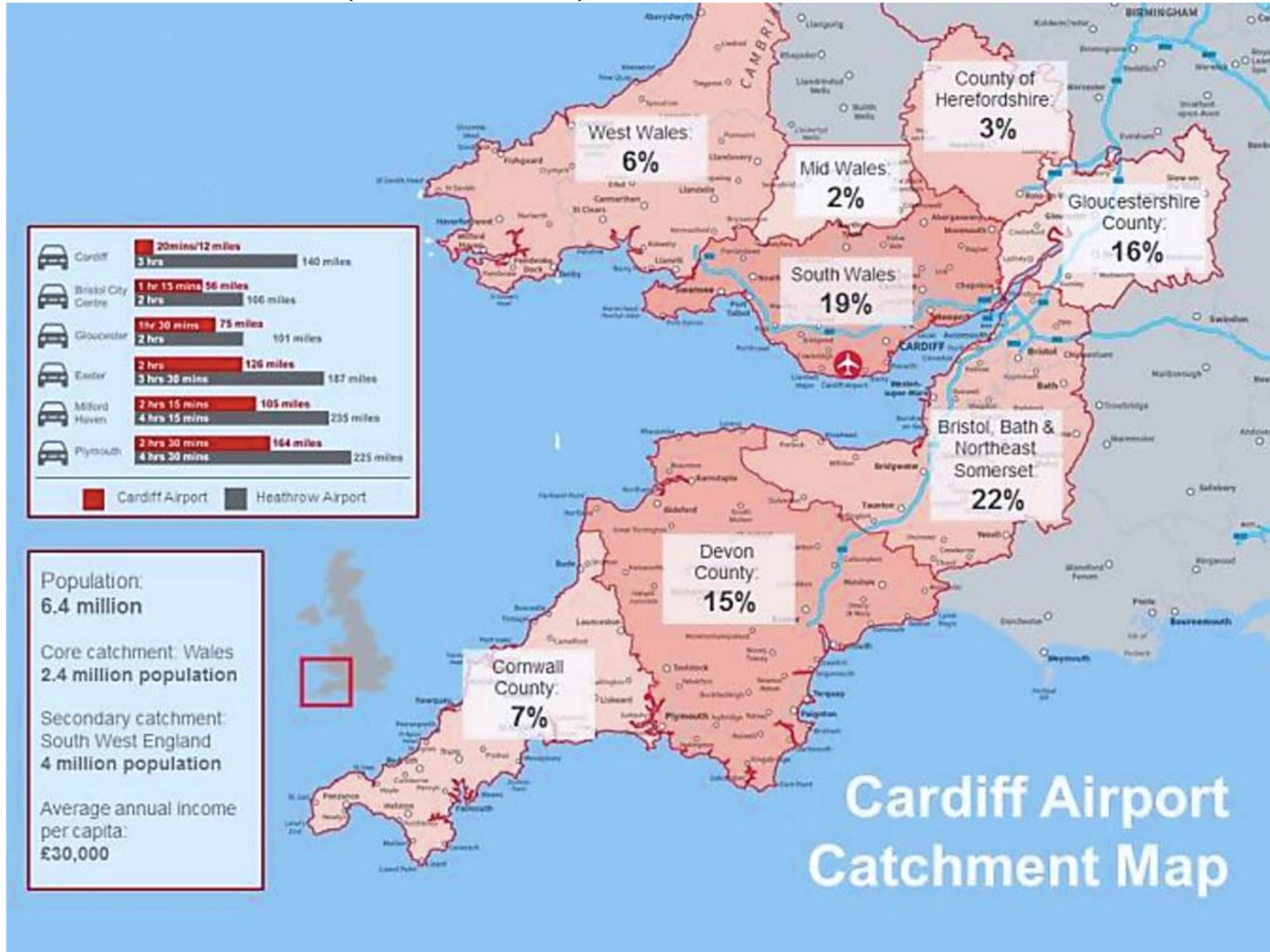
- 9.2.1. Safety and security are vital components of any airport or associated aerospace Industries. When considering the design and layout of new facilities or alterations to existing facilities it is vital that South Wales Police are consulted in the early stages of any project. Contact should be made with the Design Out Crime Officer (DOCO) AND Counter Terrorist Security Advisor (CTSA) who can advise on such issues.

10. APPENDICES

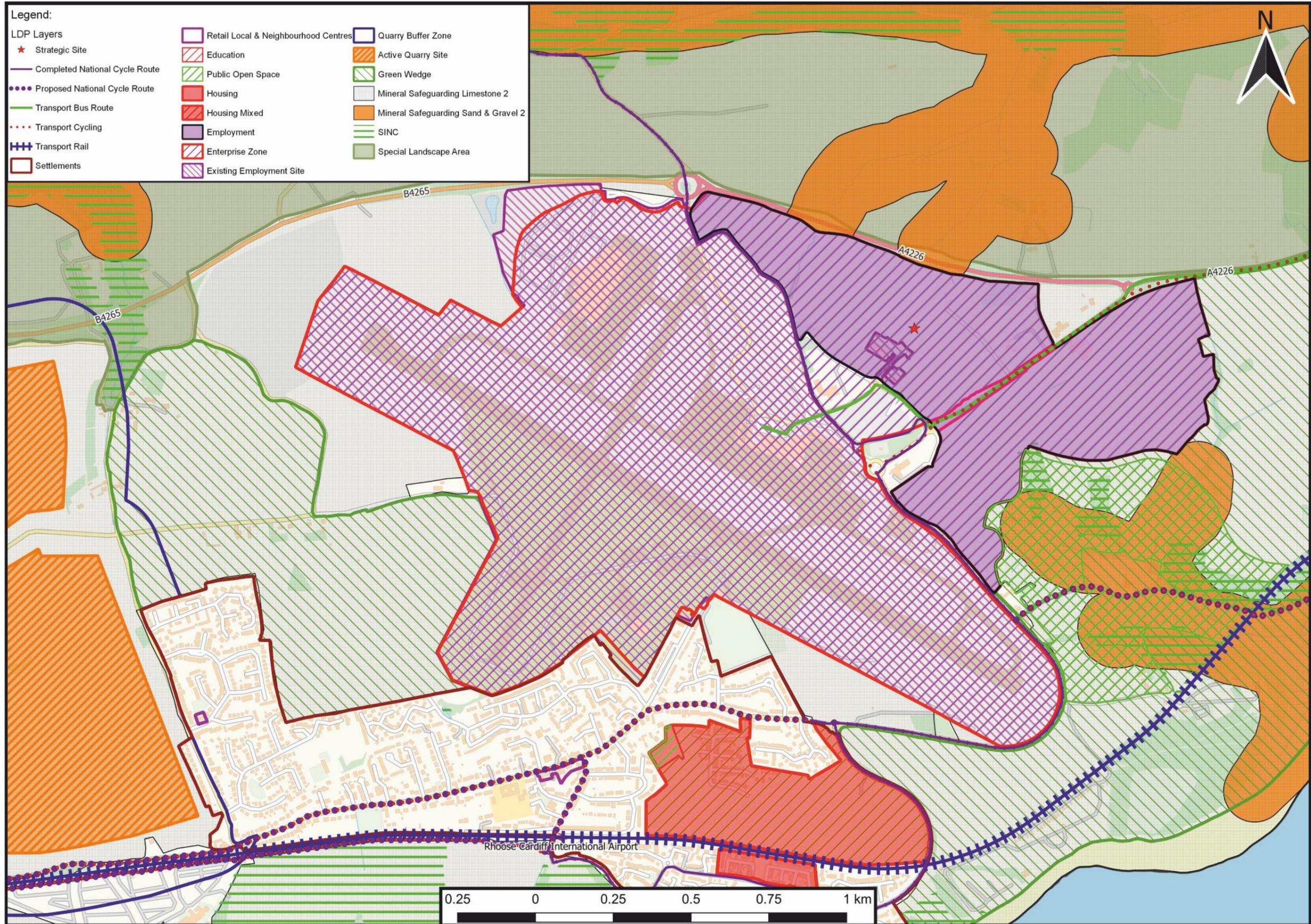
10.1. APPENDIX 1: SITE CONTEXT



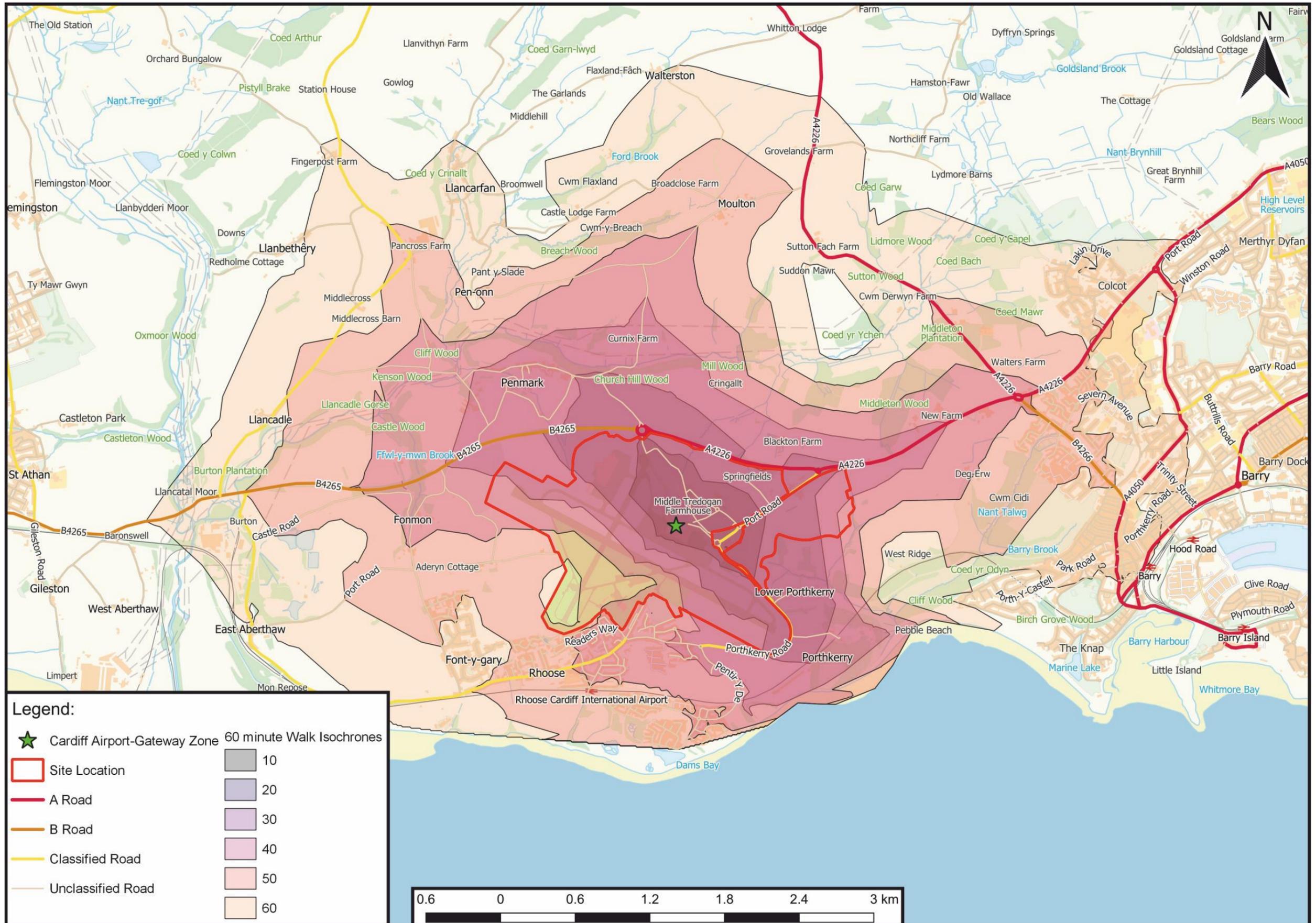
10.2. APPENDIX 2: CARDIFF AIRPORT CATCHMENT MAP (SOURCE: CARDIFF AIRPORT)



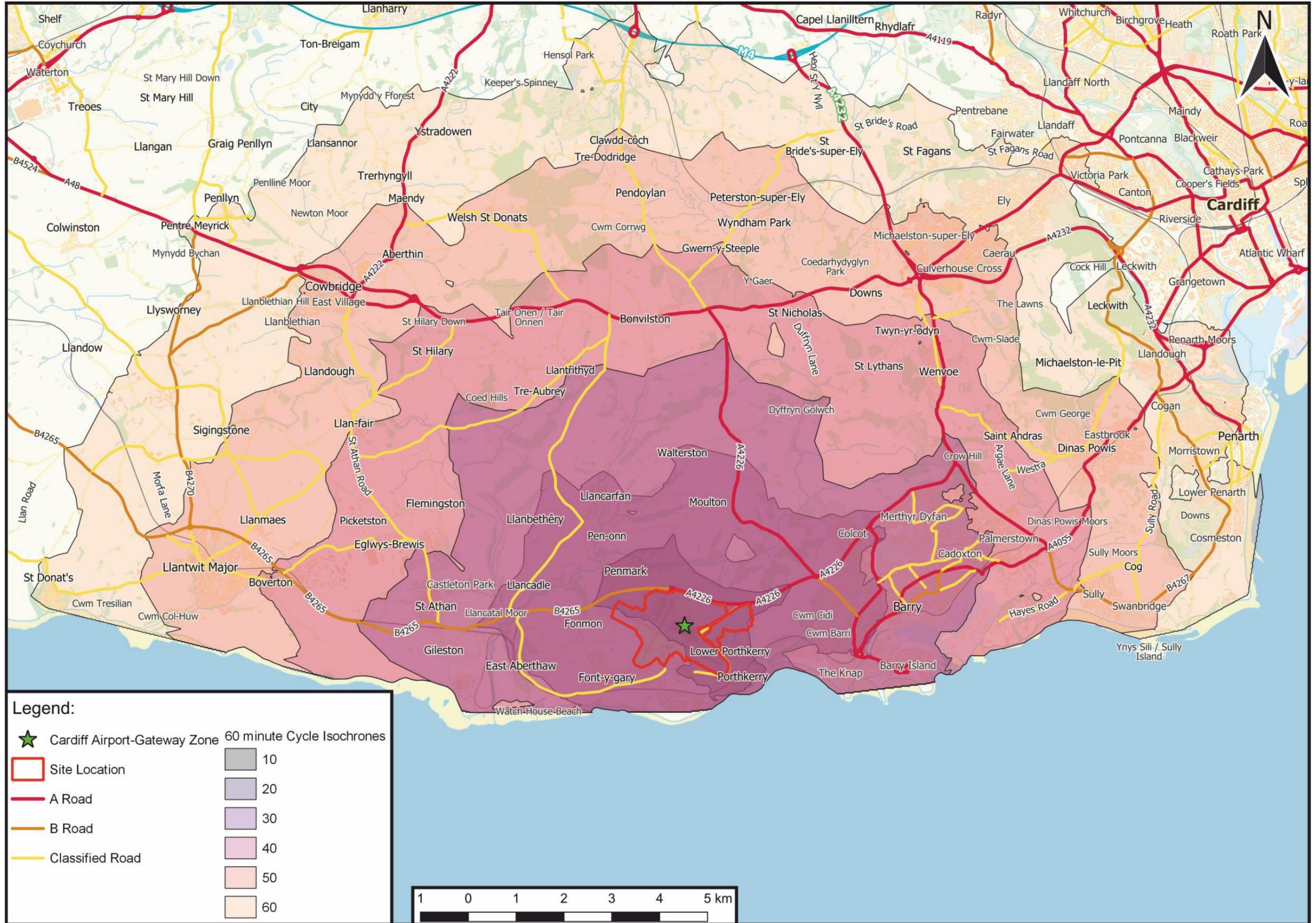
10.3. APPENDIX 3: LDP PROPOSALS MAP



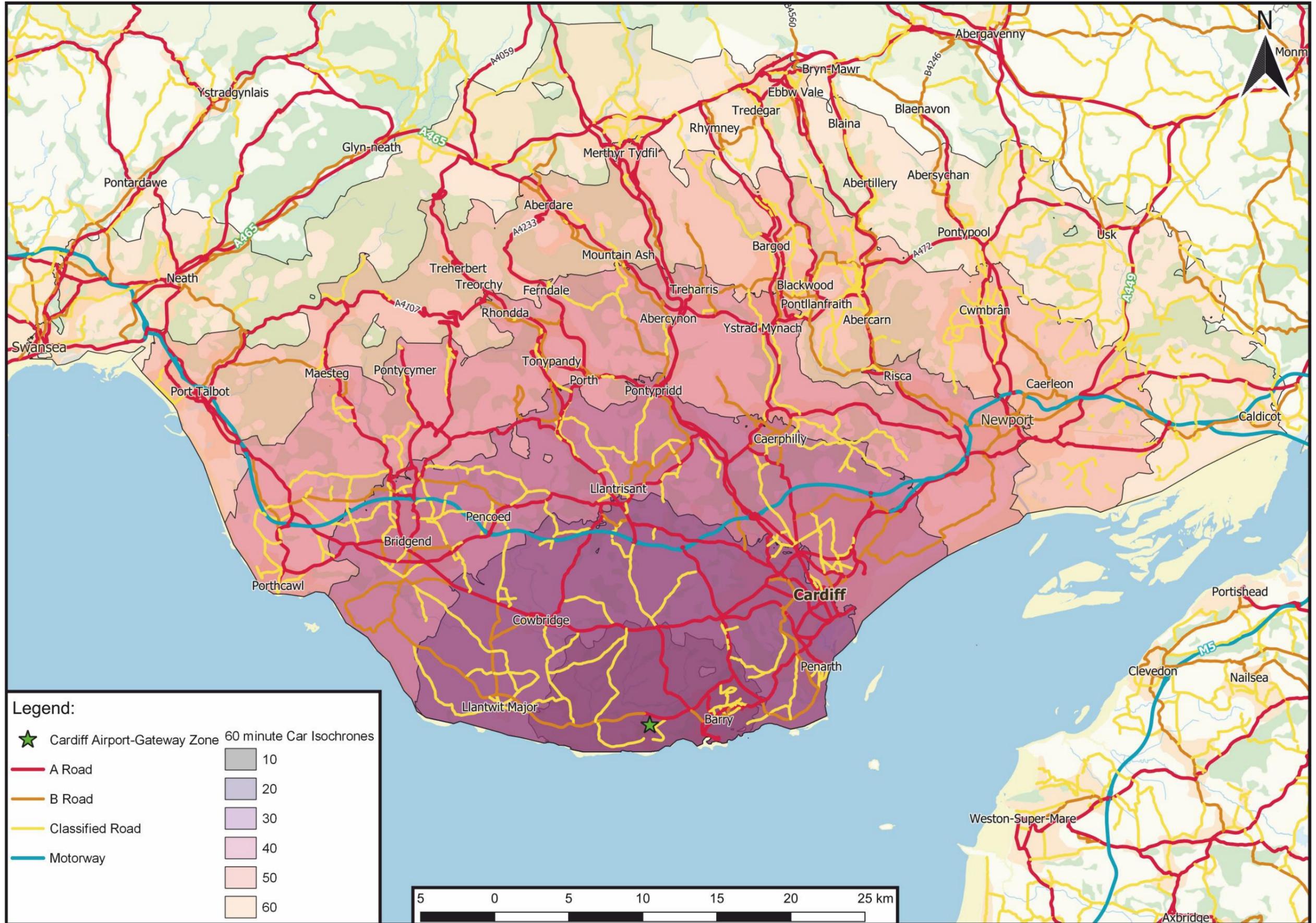
10.4. APPENDIX 4: WALKING ISOCHRONE MAP



10.5. APPENDIX 5: CYCLING ISOCHRONE MAP



10.6. APPENDIX 6: DRIVING ISOCHRONE MAP



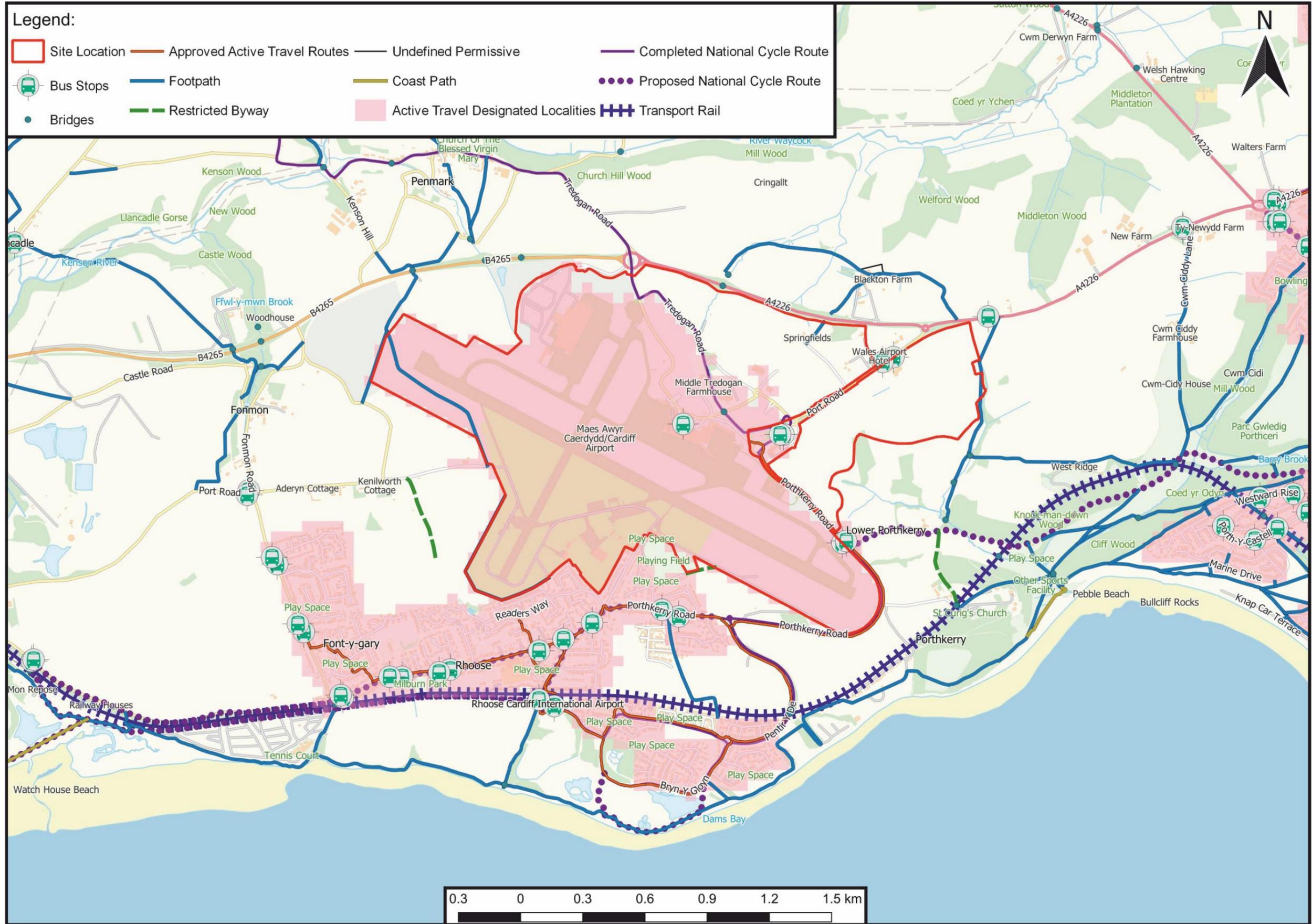
10.7. APPENDIX 7: CONTOUR MAP



10.8. APPENDIX 8: GROUND CONDITIONS MAP



10.9. APPENDIX 9: SUSTAINABLE TRANSPORT MAP



10.10. APPENDIX 10: ILLUSTRATIVE MASTERPLAN



Legend:

- | | | |
|-------------------------|---|-----------------------------------|
| Education Centre | Improved Operational Facilities | Possible Future Runway Extension |
| New Terminal | Cargo | Business & Commercial Development |
| Passenger Arrival Zone | BAMC | Landscape Buffer |
| Terminal Servicing Area | Fuel Farm | Existing Hedgerows |
| Hotel | Airport Business / Commercial Park | Existing Tree Belts |
| Public Transport Hub | Airport Expansion Area | Porthkerry Park Extension |
| Multi Storey Car Park | Transport Link | Roundabout |
| Surface Car Park | Primary Connection | Secondary Connection |
| Rhoose Station Upgrade | Potential Rail Link to Airport (LDP MG10) | |

10.11. APPENDIX 11: CASE STUDIES



Dublin Airport

The Terminal 2 building at Dublin Airport was constructed in 2010. In relation to the site, its main constraint was the size of the land parcel which was considered small for this type of development. However, the compact plan of the site allowed the design of the development to minimise travel distances for passengers and helped to reduce the overall volume of the development. Externally, the form and structure were considered holistically, the curved roof structures create a less imposing structure and was considered to reflect the function of the building appropriately. The roof sits upon slender columns with pencil head designs, whilst the diagonal bracing rods to the side elevations create a sense of tension which appears to pull and shape the steel hub plates. The design of the proposal also sought to reduce energy requirement and consumption and incorporated BRE Green Guide A listed materials in its construction ensuring the structure had 17% less CO₂ levels than other compliant building designs. The successful design was achieved by ensuring the principles established for the design were carried through with a consistent approach, resulting in a high-quality building. The needs of passengers were given special attention as well as how the design could use the size of the site to its advantage.



Farnborough Airport

Farnborough Airport was a £10.2 million project and formed part of a comprehensive masterplan for the airport. One of the main influences for the design was the use of Farnborough airfield as a historic site for air shows. To reflect this use and better promote the airport, the design aimed to create a 'theatre of aviation' which offered grandstand views of the activities of the airport while maintaining the functionality and intimacy of scale required for the use of the building. It also sought to ensure that the structure fitted within the surrounding landscape.



Chiswick Park, London

The key feature of the Chiswick Park development is the open space which forms the heart of the site. The landscaping is divided into two areas; an 'inner garden' and outer landscape areas. The inner garden forms the focal point of the development and is accessed from a canopied timber boardwalk from which the entrance to each building is arranged. The outer landscape areas attempt to soften the large building structures and create an informal area providing a more natural setting. Green corridors are used which extend between buildings, through to the perimeter car parks helping to create a more diverse environment. Chiswick Park was developed as a place favouring people rather than vehicles with pedestrians given priority (75 percent of those working at Chiswick Park arrive on foot, by bicycle, bus or train). All vehicular activity is routed around the edge of the site, to screened carparks or undercroft parking beneath the buildings. The facades of the buildings are fully glazed to maximise views and daylight, and enclose large, unobstructed office spaces to improve the quality of the internal space by maximising the importance of the external environment. The Park used a comprehensive energy strategy within its design which included fixed external sunshades at roof level as well as retractable fabric blinds on the east and west facades that are operated automatically via roof-mounted light sensors. This results in shade to 90 percent of the building's surfaces, and together with a displacement heating and cooling system and the extensive use of natural ventilation, the need for air-conditioning was significantly reduced improved the energy efficiency and consumption of the buildings.



Stockley Park, London

Stockley Business Park is located on the outskirts of west London in the London Borough of Hillingdon. Phases 1 and 2 of the development have been completed and it currently employs approximately 7,000 people. Phase 3 of the scheme includes offices, hotel use and a data centre. The design of the scheme seeks to integrate extensive areas of landscaping throughout the proposal and proposes innovative measures to promote biodiversity including public art contributions in the form of a gateway sculpture that also functions as a bat roost



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