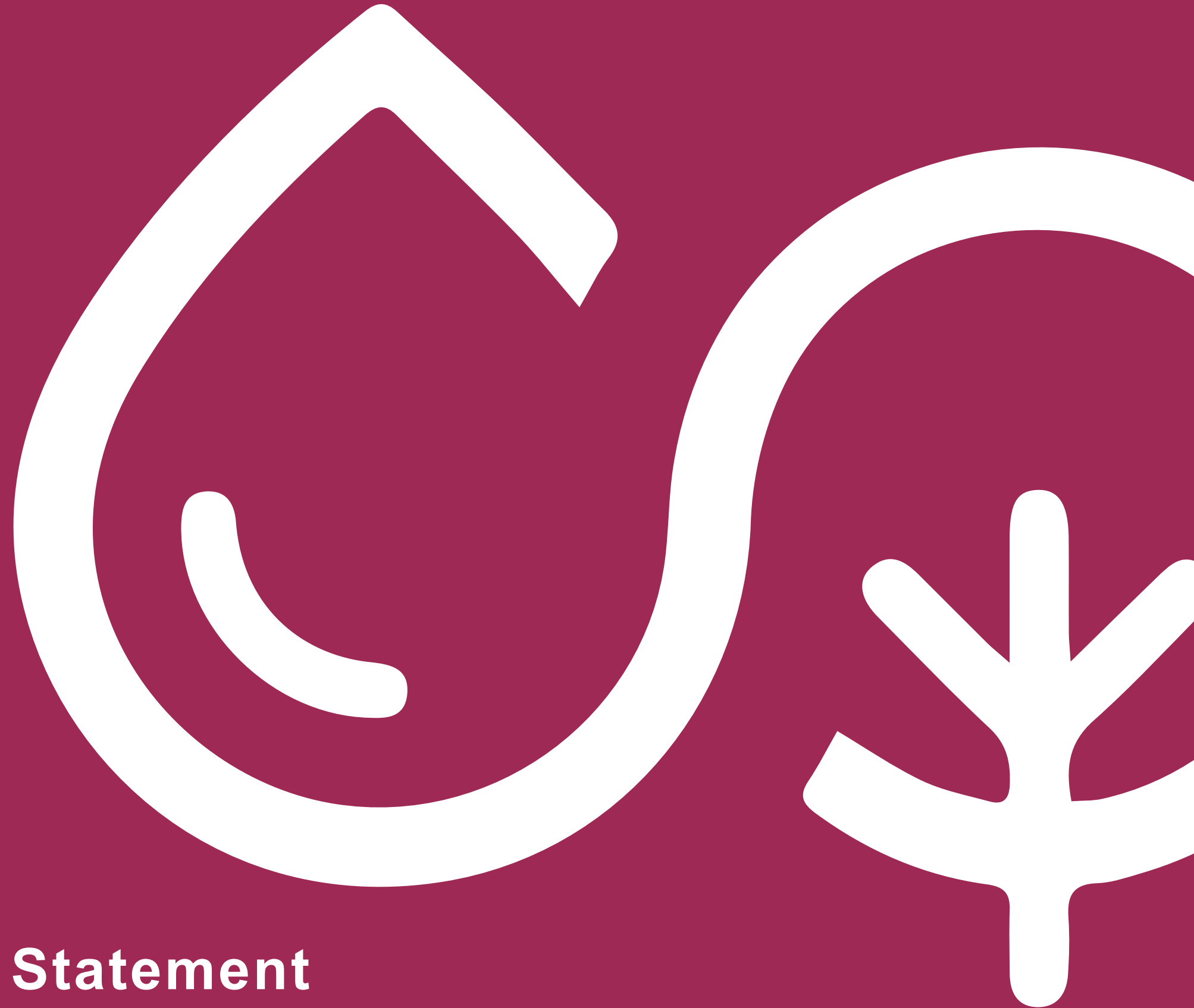




July 2024

Trevor Basin Area
Site Arrival & Car Park

Green Infrastructure Statement



Reviewer: Ed Caldwell

Date: 22.07.2024

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Pontcysyllte Aqueduct





01

INTRODUCTION

1.0 INTRODUCTION

1.1 INTRODUCTION

- 1.1.1 This Green Infrastructure Statement has been prepared by Arcadis Consulting (UK) Ltd under the direction of Wrexham Borough Council. It supports a planning consent application under the Town and Country Planning Act 1990, as amended (the 1990 Act) for the creation of a primary arrival area and car and coach park at Trevor Basin, Wrexham, referred to as the 'Trevor Basin Area Site Arrival and Car Park' in this document.
- 1.1.2 The application concerns access improvements, a new visitor car park, and associated vehicular access on the brownfield site known locally as the "Flexsys Site" (hereafter referred to as the 'Proposed Development'), located in the Trevor Basin area of North Wales, part of the Pontcysyllte Aqueduct & Canal World Heritage Site (WHS).
- 1.1.3 The planning application seeks permission for the following:
- 'Construction of a new arrival point to Pontcysyllte Aqueduct World Heritage Site including car, coach and cycle parking; hard and soft landscaping; pathways for vehicles and active travel; a recreational walking and cycle route to the Aqueduct; woodland enhancement with additional planting and amenity green space; signage and wayfinding; drainage ponds; and additional fencing'*
- 1.1.4 The Proposed Development site located approximately 10km south-west of Wrexham town centre, Wales, near the villages of Trevor and Cefn-mawr centred at approximate National Grid Reference (NGR) SJ 27578 42545. The application site boundary is shown in the accompanying Site Location Plan (10054502-ARC-XX-XXX-DR-LA-00001) and covers an approximate area of 4.54 hectares (ha) of brownfield land being the site of former industrialisation, most recently the former Flexys site, and includes the current visitor coach park.

1.2 THE TREVOR BASIN & SURROUNDING AREA MASTERPLAN

- 1.2.1 In 2017, Arcadis (UK) Ltd were commissioned by the Canal & River Trust, Solutia UK Ltd, and Wrexham County Borough Council. The objective was to formulate a viable and achievable masterplan for an expansive site covering approximately 74 hectares, incorporating the land surrounding Trevor Basin and the locally recognized 'Flexsys site' at Cefn-mawr. The primary focus of this masterplanning initiative centered on evaluating land use, fostering place-making enhancements, refining World Heritage Site (WHS) facilities, and establishing improved linkages within the masterplan area and with adjacent settlements, including Cefn-mawr, Trevor, and Froncysyllte.
- 1.2.2 The masterplan took on board the findings and put forward the following eight elements:
- Primary arrival area, car park and new Multi-Use Welcome Hub/ Event Space.
 - Rewilding' the former manufacturing site.
 - Creation of a Treetop Walk.
 - Public realm improvements to the Basin Area.
 - Woodland activity area and education centre.
 - Developing a glamping/camping site.
 - Creation of a Dee River walk.
 - Creation of Development Plot.
- 1.2.3 As an integral component of the initial sub-projects, this project focuses on establishing a primary arrival area, car and coach park addressing item 1 of the masterplan. The overarching goal is to enhance the visitor experience at the World Heritage Site (WHS) by addressing current challenges related to inadequate parking, limited visitor stay duration, and suboptimal visitor management.

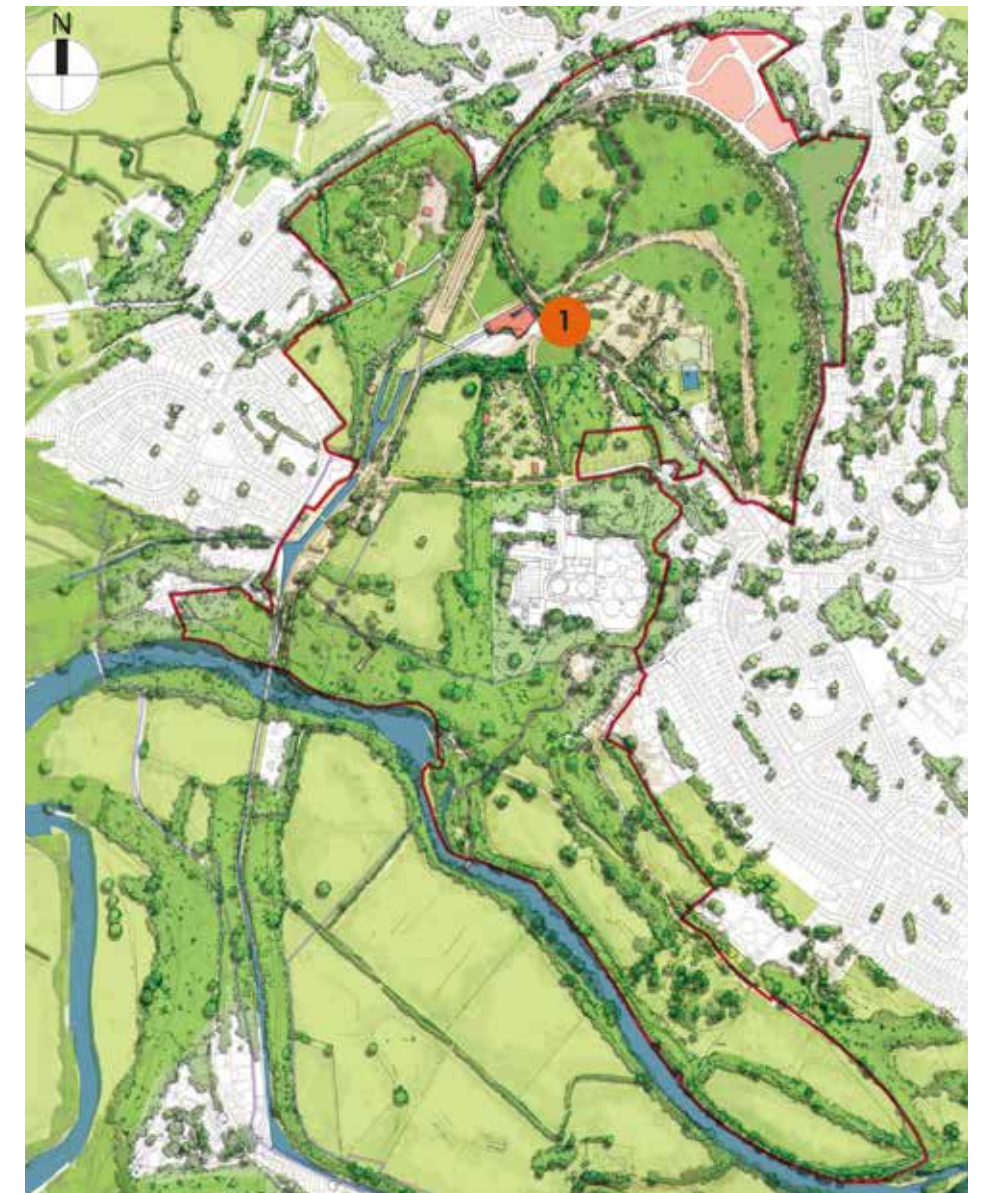


Figure 1. Extract from the Trevor Basin and Surrounding Area Masterplan. Number 1 is the Primary Arrival Area



1.3 SUMMARY OF PROPOSED DEVELOPMENT

1.3.1 The Proposed Development comprises a number of new structures and associated works to accommodate the delivery of the new arrival point and car park. Further details can be found in the accompanying Design and Access Statement (Doc Ref 10054502-ARC-XX-XXX-RP-LA-01002 P02).

1.3.2 The Proposed Development has been designed for space efficiency utilising the general site levels, retaining a core structure of established vegetation and providing new planting to create a suitable landscape character within the wider WHS setting. The design provides distinct parking zones including:

- Accessible Bays – 25 bays proposed
- Standard Parking Bays – 170 bays proposed
- Overflow Parking Bays – 56 bays proposed
- Coach Car Parking – 9 bays proposed

1.3.3 This project is for a new arrival point and car park primarily for the Pontcysyllte Aqueduct & Canal World Heritage Site (WHS), and includes:

- car, coach and cycle parking.
- hard and soft landscape works.
- pathways for vehicles and active travel.
- a recreational walking and cycle route to the Aqueduct.
- woodland enhancement with additional planting and amenity green space.
- biodiversity enhancements.
- centralised arrival zone.
- signage and wayfinding.
- drainage ponds.
- fencing.

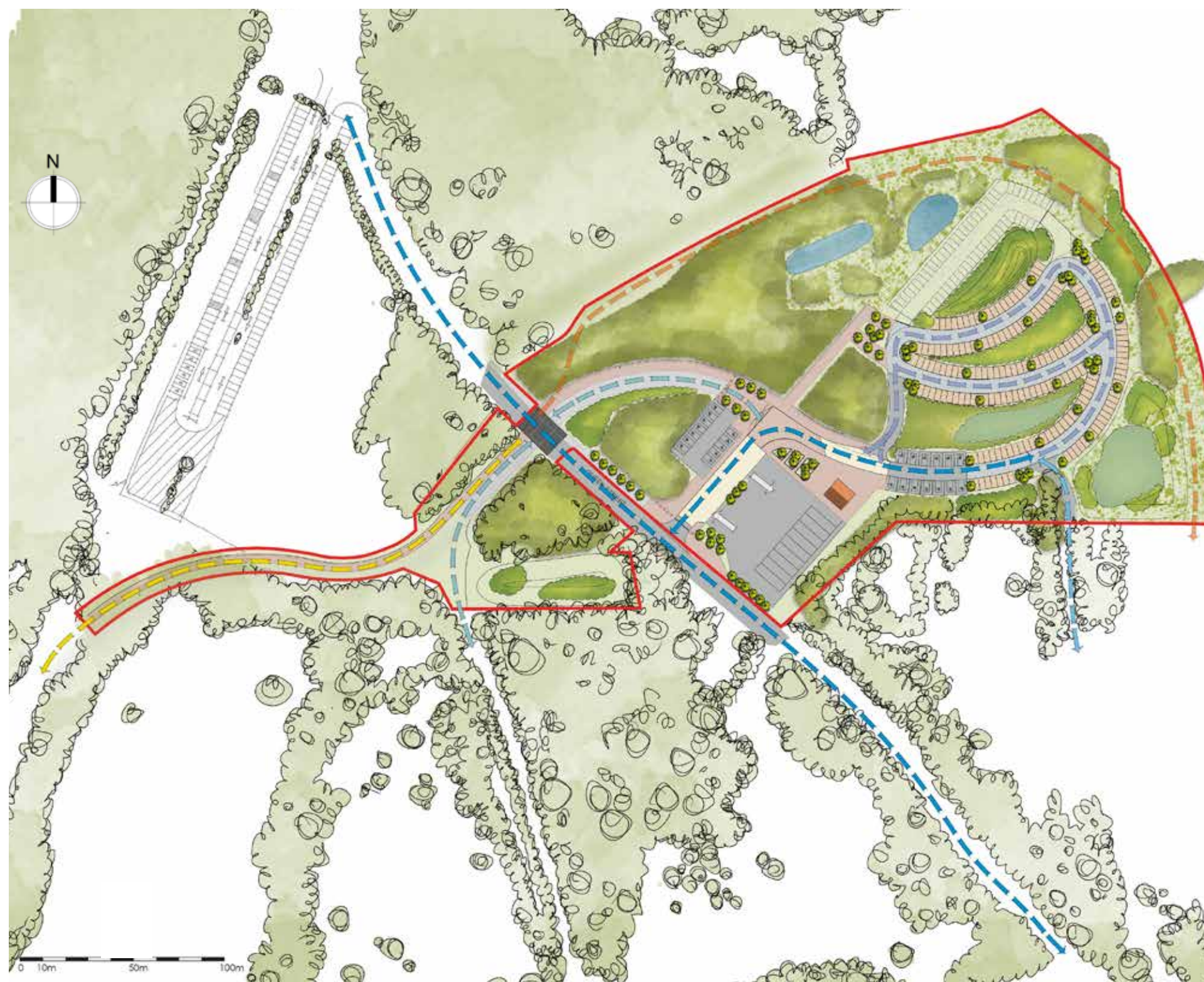


Figure 2. Trevor Basin and Surrounding Area Car Park and Access - Illustrative General Arrangement

1.4 PLANNING POLICY CONTEXT

1.4.1 At a national level, Planning Policy Wales (PPW) 11 Edition (Welsh Government, February 2021) provides relevant planning guidance informed by the Well Being Future Generations Act, together with the National Development Framework: Future Wales – The National Plan 2040 (February 2021), as well as supporting Technical Advice Notes (TANs). The content of national guidance must be taken into account by local planning authorities when deciding planning applications. Detail of all applicable policy detail is set out in the Planning Statement (Document reference B10181-0AG964-ZZ-ZZ-RP-TA-PN0319).

Green Infrastructure

1.4.2 The Environment (Wales) Act 2016, provides a context for the delivery of multi-functional green infrastructure. Its protection and provision can make a significant contribution to the sustainable management of natural resources, and in particular to protecting, maintaining and enhancing biodiversity and the resilience of ecosystems in terms of the diversity within and connections between ecosystems and the extent and condition of these ecosystems, so that they are better able to resist, recover from and adapt to pressures. This means that the development of green infrastructure is an important way for local authorities to deliver their Section 6 duty.

1.4.3 Planning Policy Wales (PPW) 12 (February 2024) Paragraph 6.2.12 requires development proposals to submit a Green Infrastructure Statement with all applications. This should demonstrate positive multi-functional outcomes for green infrastructure that are appropriate to the development site and use a step-wise approach.

- **Green Infrastructure:** stronger emphasis on taking a proactive approach to green infrastructure covering cross boundary considerations, identifying key outputs of green infrastructure assessments, the submission of proportionate green infrastructure statements with planning applications and signposting Building with Nature standards.
- **Net Benefit for Biodiversity and the Step-wise Approach:** further clarity is provided on securing net benefit for biodiversity through the application of the step-wise approach, including the acknowledgement of off-site compensation measures as a last resort, and, the need to consider enhancement and long-term management at each step. The use of the green infrastructure statement as a means of demonstrating the stepwise approach is made explicit. A simplified diagram of the policy approach has been developed (which will be further refined in the consolidated version of PPW12). The importance of strategic collaboration to identify and capture larger scale opportunities for securing a net benefit for biodiversity is recognised.

- **Trees and Woodlands:** closer alignment with the stepwise approach, along with promoting new planting as part of development based on securing the right tree in the right place.



Figure 3. View east from within the site along the existing road linking to the underpass of the Queen Street bridge.

1.4.4 Paragraph 6.2.5 of the annex sets out that the quality of the built environment should be enhanced by integrating green infrastructure into development through appropriate site selection and use of creative design. With careful planning and design, informed by an appropriate level of assessment, green infrastructure can embed the benefits of biodiversity and ecosystem services into new development and places, help to overcome the potential for conflicting objectives, and contribute to health and well-being outcomes. Furthermore a green infrastructure statement should be submitted with all planning applications. This will be proportionate to the scale and nature of the development proposed and will describe how green infrastructure has been incorporated into the proposal. In the case of minor development this will be a short description and should not be an onerous requirement for applicants. The green infrastructure statement will be an effective way of demonstrating positive multi-functional outcomes which are appropriate to the site in question and must be used for demonstrating how the step-wise approach has been applied.

1.4.5 Improving ecosystem resilience, particularly improving connectivity to the immediate surroundings, would be a key contribution to on-site avoidance, minimisation, and mitigation strategies and enhancement. How a development would improve the attributes of resilience should be demonstrated as far as this is reasonably practical.

Step-Wise Approach Summary

1.4.6 The first priority for planning authorities is to avoid damage to biodiversity in its widest sense (i.e. the variety of species and habitats and their abundance) and ecosystem functioning. Proposals in statutory designated sites are, as a matter of principle unacceptable, and therefore must be excluded from site searches undertaken by developers. This principle also extends to those sites containing protected species and habitats which are irreplaceable and must be safeguarded. When all locational, sitting and design

options for avoiding damage to biodiversity have been exhausted, applicants, in discussion with planning authorities must seek to minimise the initial impact on biodiversity and ecosystems by:

- maintaining the largest possible area of existing habitat supporting biodiversity and functioning ecosystems, by minimising development size and appropriate orientation on site, paying due regard to the potential for continued long term maintenance and management of retained areas to benefit biodiversity;
- ensuring that retained habitats continue to be well connected to adjacent habitats to provide connectivity for key species and ensuring that the favourable conservation status of local species populations is maintained;

- retaining existing features, develop a management plan for their future care (e.g., trees, hedgerows, species rich grasslands, heath, wetlands, ponds and freshwater habitats) and use appropriate buffers to protect these from construction and operational impacts, and
- using proven innovative/creative solutions (where required) to minimise damage and maintain existing biodiversity features and ecosystems in tandem with robust monitoring and rectification strategies.

1.4.7 Where, after measures to minimise impact, biodiversity and ecosystems could still be damaged, or lost through residual impacts, the proposed development should mitigate that damage. Mitigation measures must be put in place to limit the negative effects of a development. Effective mitigation or restoration measures should be incorporated into the design proposal following the consideration of

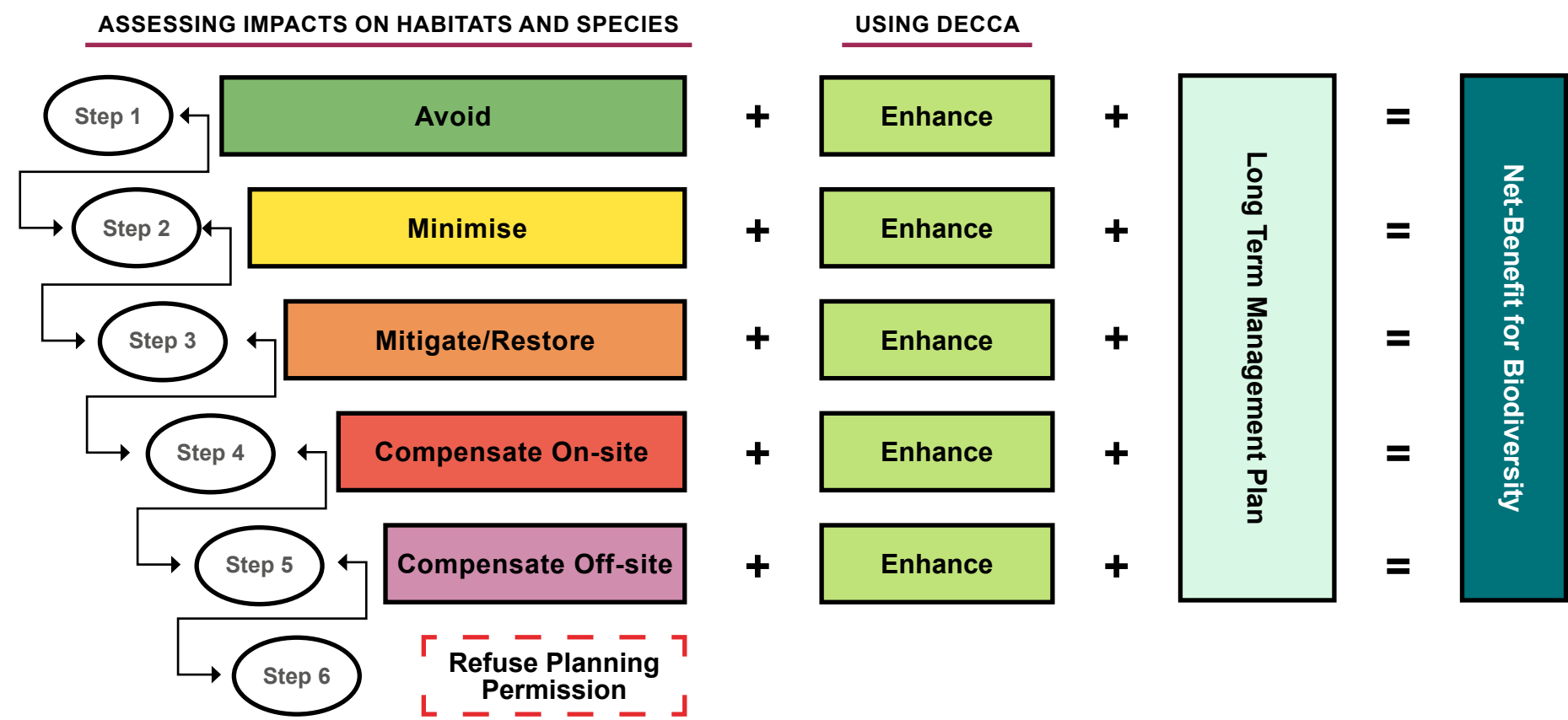


Figure 4. Step-Wise Approach

steps one and two above. Mitigation or restoration measures must be designed to address the specific negative effects by repairing damaged habitats and disturbed species. When all the steps above have been exhausted, and where modifications, alternative sites, conditions or obligations are not sufficient to secure biodiversity outcomes further on site/immediately proximate, and as a last resort off-site compensation for unavoidable damage must be provided. This must be of significant magnitude to fully compensate for any loss.

1.5 GREEN INFRASTRUCTURE OVERVIEW

- 1.5.1 Green infrastructure is the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places. Component elements of green infrastructure can function at different scales and some components, such as trees and woodland, are often universally present and function at all levels. At the landscape scale green infrastructure can comprise entire ecosystems such as wetlands, waterways, peatlands and mountain ranges or be connected networks of mosaic habitats, including grasslands. At a local scale, it might comprise parks, fields, ponds, natural green spaces, public rights of way, allotments, cemeteries and gardens or may be designed or managed features such as sustainable drainage systems. At smaller scales, individual urban interventions such as street trees, hedgerows, roadside verges, and green roofs/walls can all contribute to green infrastructure networks.
- 1.5.2 Green infrastructure plays a fundamental role in shaping places and our sense of well-being, and is intrinsic to the quality of the spaces we live, work and play in. The planning system must maximise its contribution to the protection and provision of green infrastructure assets and networks as part of meeting society's wider social and economic objectives and the needs of local communities. Taking a proactive and spatial approach, which links to wider activity being taken by local authorities to protect and provide green infrastructure,

will help provide clarity around the contribution which the planning system can make. This means considering how it complements existing and future maintenance and management regimes within urban areas and contribute towards wider land management activities in rural areas to aid nature recovery, and its underpinning natural resources. This will require effective joint working and collaboration across various sectors and activities, including administrative boundaries. Establishing arrangements to promote collaboration across local authority borders will be necessary, especially where the provision of off-site compensatory land to address biodiversity loss and provide enhancement will have the greatest benefit for biodiversity and resilient ecological networks.

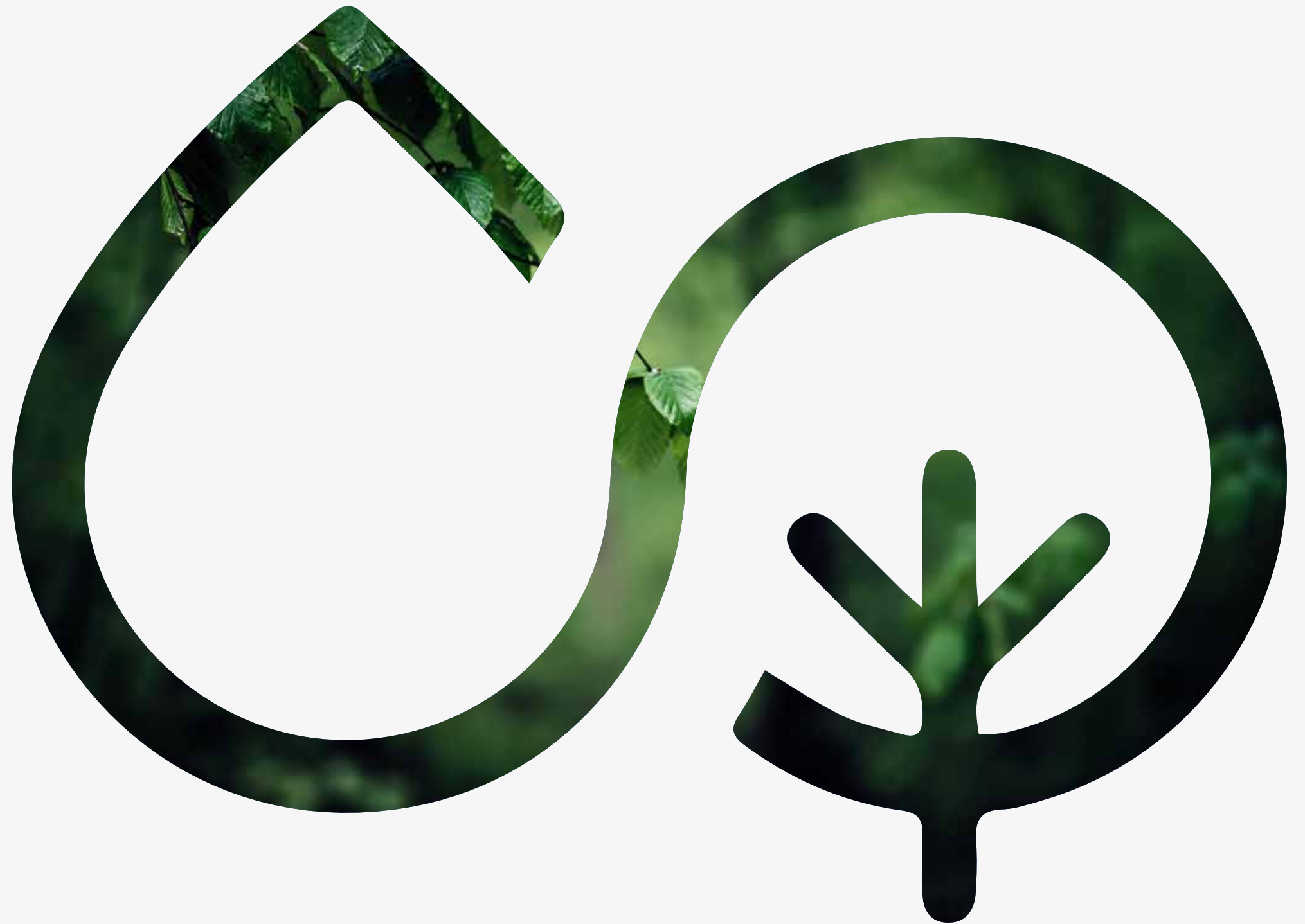
- 1.5.3 Green infrastructure is capable of providing several functions at the same time and as a result offers multiple benefits, for social, economic and cultural as well as environmental resilience. The components of green infrastructure, by improving the resilience of ecosystems, can result in positive benefits to well-being including flood management, water purification, improved air quality, reduced noise pollution and local climate moderation, climate change mitigation and food production. These benefits are important in urban environments where they can facilitate health and well-being related benefits of open space, clean air and improved tranquillity, for example, as well as creating a sense of place and improved social cohesion. In addition, green infrastructure has a role in protecting local distinctiveness, providing economic benefits and social and community opportunities.

1.6 PURPOSE AND STRUCTURE OF THE STATEMENT

- 1.6.1 The purpose of this Green Infrastructure Statement is to demonstrate how green infrastructure has been incorporated into the proposals and outline how the proposals add value to the existing green infrastructure networks. This statement is an effective way of demonstrating positive multi-functional outcomes as a result of the Proposed Development and how the Step-wise approach has been applied.
- 1.6.2 This Statement includes an assessment which is structured around the Building with Nature standards^[1]. These standards represent good practice and are an effective prompt for developers to improve the quality of their schemes and demonstrate the sustainable management of natural resources. Using these standards in a way which is proportionate to the nature and scale of the development proposed is a useful way of ensuring appropriate consideration in circumstances where there is an absence of a green infrastructure assessment and planned approach or relevant local or Supplementary Planning Guidance. The standards are underpinned by an accreditation system and whenever possible, accreditation under these standards should be pursued.
- 1.6.3 The structure of the Green Infrastructure Statement is as follows:
- **Chapter 1** provides a brief description of the Proposed Development, an overview of Planning policy context and purpose and structure to the Statement.
 - **Chapter 2** sets out the Site Context in consideration of the immediate locality of the Proposed Development and the wider Green Infrastructure context in which it is located.
 - **Chapter 3** provides an analysis of the Green Infrastructure in consideration of the Building with Nature Standards.
 - **Chapter 4** reaches conclusions on the overall provision and design of Green Infrastructure.

¹ Building with Nature (buildingwithnature.org.uk/)





02

SITE CONTEXT

2.0 SITE CONTEXT

2.1 INTRODUCTION

2.1.1 This Chapter provides a description of the application site and its surroundings, the planning history, as well as the description of the development and proposed works taking place at the arrival point and car park at Trevor Basin.

2.2 DEVELOPMENT SITE & SURROUNDINGS

2.2.1 A desk study has been undertaken to understand the development site and its surrounding context. The desk study involved consulting the following sources:

- Multi Agency Geographical Information for the Countryside (MAGIC) website for statutory designated Sites ^[1]
- LANDMAP Wales ^[2]
- Natural Resources Wales (NRW) for criteria of designated sites ^[3]
- National Forest Inventory Area 2011 ^[4]
- The relevant 1:25,000 scale Ordnance Survey (OS) sheet and aerial photography

2.2.2 The existing local car park is accessible off Queen Street. This currently carries a provision of 100 parking spaces including 6 mobility spaces.

2.2.3 About 65% of the site is comprised of hard standing and bare ground, featuring terraces, brick walls, asphalt roads, and concrete pads from it's former industrial land use on a mostly west facing slope. The remainder of the site was occupied by broadleaved semi-natural woodland, mixed species scrub, ruderal and ephemeral land, poor semi-improved grassland, and several scattered trees.

1 MAGIC (defra.gov.uk)
2 Natural Resources Wales / LANDMAP - the Welsh landscape baseline
3 Natural Resources Wales (naturalresources.wales)
4 National Forest Inventory (forestresearch.gov.uk/tools-and-resources/national-forest-inventory)

KEY

Site Boundary

Broadleaved Parkland/Scattered Trees

Coniferous Parkland/Scattered Trees

Scrub-Scattered

Running water

Hedge with trees - Species(Poor)

Fence

Wall

Broadleaved Woodland-Semi Natural

Scrub-Dense/Continuous

SI

Poor semi-improved Grassland

Standing water

A

Amenity Grassland

Bare Ground

Other Habitat

Target notes

Existing Car Park

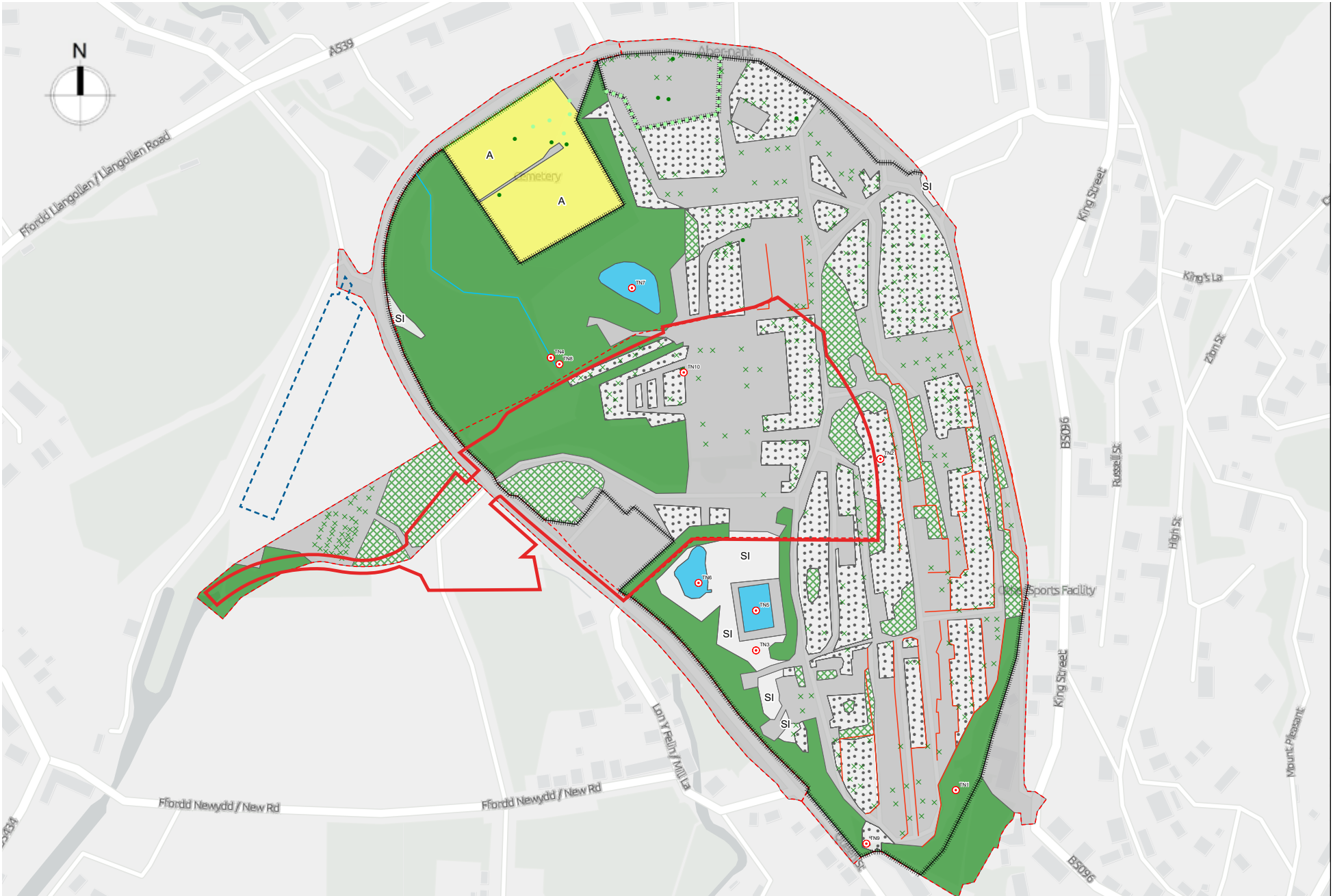
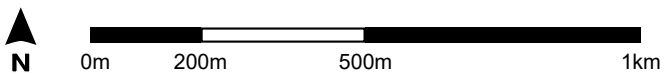


Figure 5. Ecology plan



- 2.2.4 Topographic surveys of the site show ground levels across the main site generally range from 85m Above Ordnance Datum (AOD) to 98m AOD. The highest ground levels are in the north- eastern corner of the site with ground levels generally sloping in a south-western direction from the western portion of the site and in a south-eastern direction from the eastern part of the site meeting at the southern part of the site. The lowest ground levels are in the southern part of the site on Queen Street.
- 2.2.5 The historical industrial use is evident in the site topography, with the building bases remaining insitu creating a series of terraces across the site. A former access road runs under Queen Street.
- 2.2.6 There is a network of Public Rights of Way within proximity of the site but none that directly run through or connect to the site.
- 2.2.7 The closest railway station is just over 2 miles away at Ruabon, a combined rail and bus interchange. It is on the Shrewsbury to Chester Line. To reach the site by Public Transport involves an approximate 20minute journey to the nearest bus stop on the A539 and a short walk to the site.

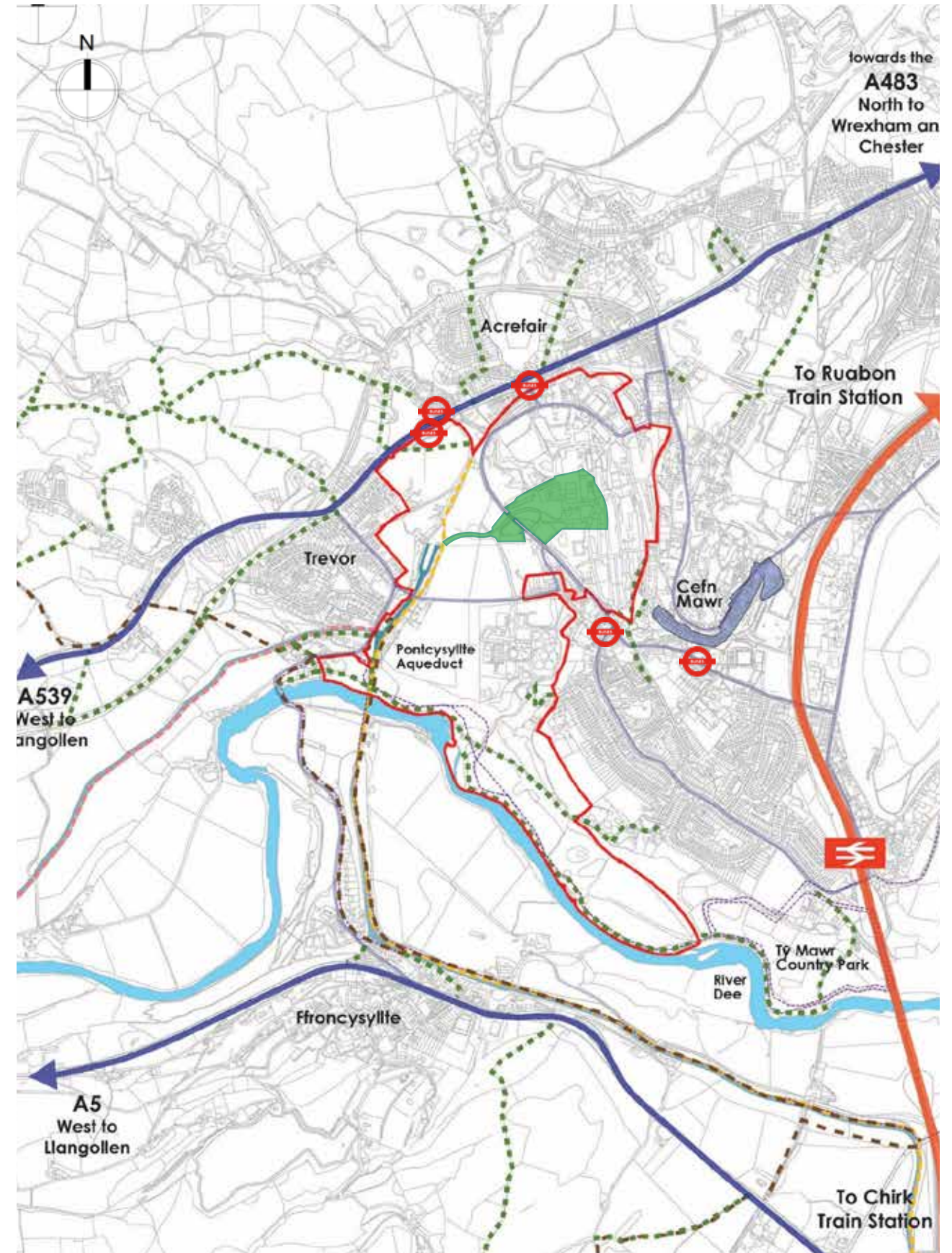
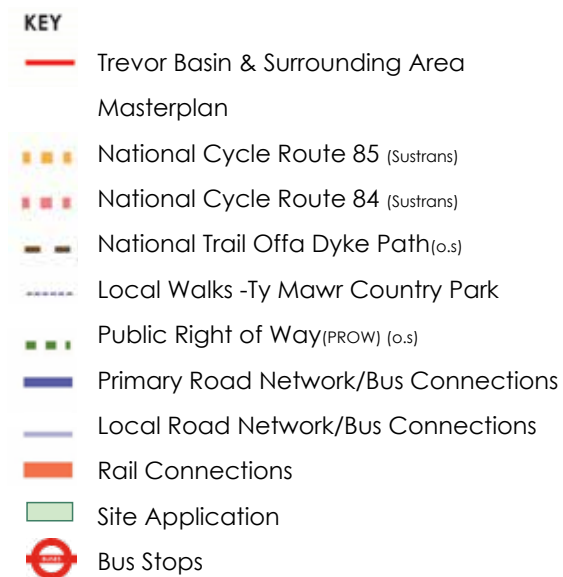


Figure 6. **Access & Connectivity Local Context**
(Extracted from the Trevor Basin and Surrounding Area Masterplan)

2.3 LANDSCAPE CHARACTER AREA NATIONAL LANDSCAPE CHARACTER

2.3.1 The site is situated in NLCA 13, Glannau Dyfrdwy a Wrecsam / Deeside and Wrexham and within close proximity to NLCA 15, Bro Llangollen a Dyffryn Dyfrdwy / Vale of Llangollen and Dee Valley. The NLCA provides a comprehensive profile for each area, outlining the key characteristics that contribute to the understanding of the Study Area's baseline. These characteristics are detailed below:

- 2.3.2 NLCA 13 Glannau Dyfrdwy a Wrecsam / Deeside and Wrexham:
- Lowland, foothills, and levels sloping down to the lower Dee and Dee estuary.
 - Dominated by the single large river, the Dee, traversing the area.
 - Broad flat floodplain adjacent to the Dee estuary.
 - Narrow, incised, wooded tributary valleys, many originating from the west.
 - Mixed pasture and some arable land, alongside farm woodland cover.
 - Presence of urban settlements.
 - Industrial character evident in the landscape.
 - Small settlements associated with landed estates and isolated farmsteads.

LOCAL LANDSCAPE CHARACTER

2.3.3 At the local landscape character level, the site falls within two character areas LCA 9d Dee Valley, Froncysyllte to Newbridge and LCA 7b Cefn-mawr. (Wrexham LANDMAP SPG).

2.3.4 The LCA 9d Dee Valley, Froncysyllte to Newbridge designation encompasses a small wooded valley extending from Wrexham to Minera. Key characteristics pertinent to the landscape and visual context of the Site, as outlined in the SPG, include:

- An enclosed lowland valley featuring a level floodplain.
- A distinctive blend of farmed and wooded elements, bordered by closely built 'urban villages' such as Cefn-mawr, Trevor, and Froncysyllte.

- Exceptional views extending to and from landmarks like the Pontcysyllte Aqueduct, Cefn railway viaduct, and nearby hills.
- A notable man-made embankment that carries the canal to the aqueduct, contributing to the formation of a 'gateway' within the valley.
- The SPG emphasizes the sensitivity of LCA 9a to any development that may impact the setting of the Pontcysyllte Aqueduct and the scenic Vale of Llangollen.
- Management guidelines specific to LCA 9d and the Site are summarised as follows:
- Preserve and enhance the scenic and historic landscape character, identifying, maintaining, and enhancing significant views.
- Strengthen tree planting on valley edges while preserving selected views for a visually exciting rural-urban contrast.
- Improve recreational routes linking historic landscape features.
- Manage woodlands to enhance biodiversity, including diversifying woodland structure, restricting grazing, and retaining old/dead trees.
- Expand native woodland types, such as upland mixed ash woodland, and replace conifers with broadleaves.
- Safeguard industrial archaeology and earlier prehistoric and medieval heritage, particularly preserving the canal and associated structures.
- Promote understanding and enjoyment of the outstanding historic industrial landscape and setting through existing management strategies for Pontcysyllte, Trevor, and Ty Mawr Country Park.

2.3.5 The character area LCA 7b Cefn-mawr, is situated on a ridge overlooking the scenic Dee Valley at the entrance to the Vale of Llangollen. Key characteristics contributing to the landscape and visual baseline of the Study Area in this locale include:

- Diverse communities, including the tightly built Cefn-mawr on a ridge, the 1960s housing estate of Plas Madoc, and Acrefair visible from the Llangollen Rd tourist route.
- Scenic views to the south over the Dee Valley towards the Berwyn foothills.
- The presence of unsightly industrial development, particularly noticeable in views from the southwest.

KEY

 Application Boundary

 Landscape Character Boundary

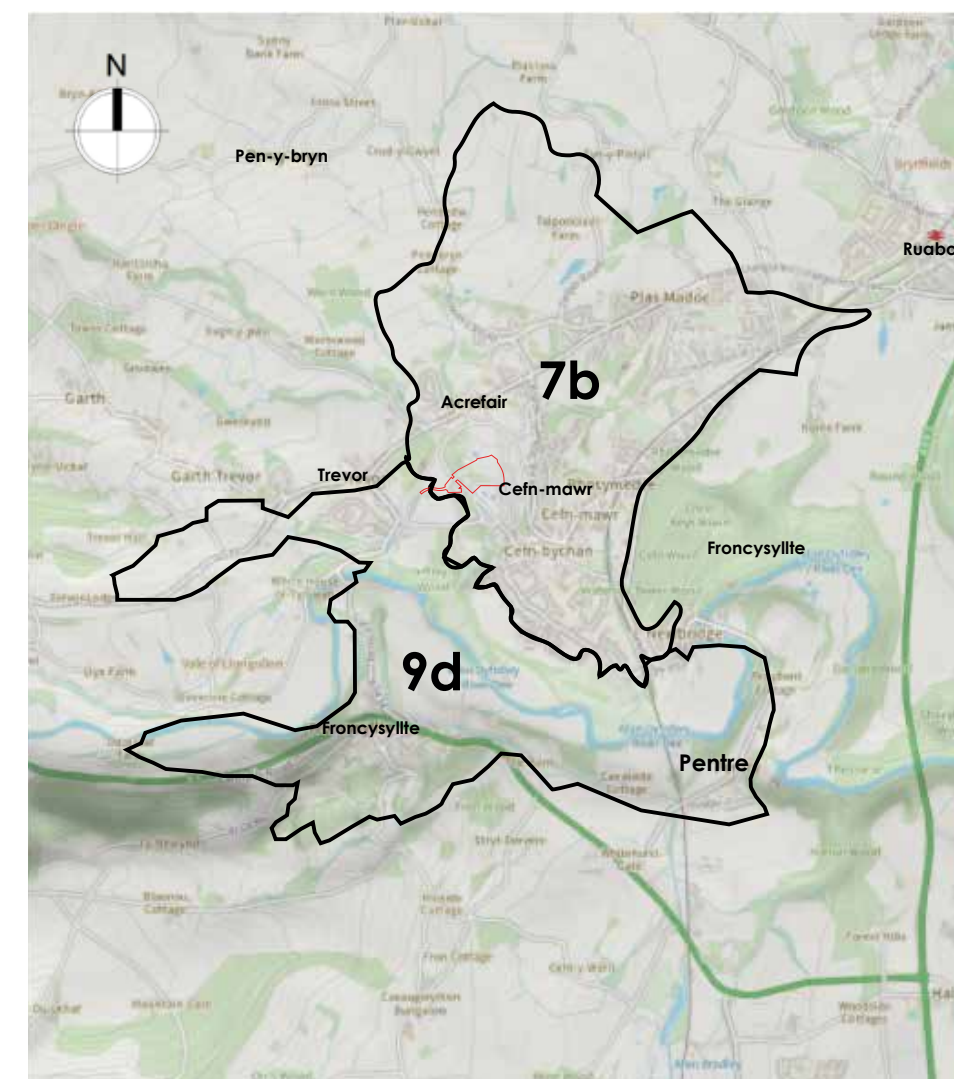


Figure 7. Landscape Character Map

2.4 SITE PHOTOGRAPHS

- 2.4.1 The following photographs provide a visual narrative of the site, capturing the dynamic interplay between existing former industrial infrastructure and the self colonised landscape of the development area.
- 2.4.2 These images offer a perspective on the intricate relationships between human activity and nature. The industrial elements stand as a testament to the site's history and existing land use, showcasing the tangible imprint of prior endeavours.



Figure 9. **View A** from the Queen Street looking south west along the current underpass road. To the left and right of the road is self seeded and emergent trees and woodland



Figure 10. **View B** west from within the centre of the site. Concrete foundations at base level, with Buddleja growing within gaps.



Figure 8. **Photograph Reference Plan**



Figure 11. **View C** Remnant of the former industrial use. Existing reinforced concrete slabs and retaining walls



Figure 12. **View D** looking north showing existing brick retaining wall and concrete building foundations

2.5 GREEN INFRASTRUCTURE

- 2.5.1 A desk study and field survey, undertaken in October and November 2022, indicated that there are six statutory protected sites (of ecological relevance) within 10km of the site and eight non-statutory) within 2km of the site. There were no areas of Ancient Woodland within 200m of the survey area. River Dee SAC/SSSI is located approximately 500m to the southwest and is hydrologically connected to the site via Tref-y-nant brook.
- 2.5.2 The project site lies within a number of landscape designations of international and national importance, including the Pontcysyllte Aqueduct World Heritage Site, Bryniau Clwyd a Dyffryn Dyfrdwy Area of Outstanding Natural Beauty (AONB) and Pontcysyllte Aqueduct Conservation Area. The Pontcysyllte Aqueduct and Canal is designated a Scheduled Ancient Monument of National Importance. Ty Mawr Country Park lies a short distant east of the Site.
- 2.5.3 There are no National Parks, Registered Historic Landscapes or Historic Parks and Gardens within the local area.
- 2.5.4 An Arboricultural Survey and Impact Assessment Report in line with British Standard BS 5837: 2012 Trees in relation to design has been undertaken. A total of 50 arboricultural features were recorded within the study area, these were recorded as 15 individual trees, 34 groups of trees and one hedgerow. A total of 20 different individual tree species were recorded.
- 2.5.5 One veteran tree has been identified in the baseline arboricultural survey, an Ash tree, entitling it to protection under the National Planning Policy Framework (NPPF) (2023), and it is retained in the current designs.
- 2.5.6 The northern part of the site has become overgrown with vegetation, predominantly Silver Birch.
- 2.5.7 Wrexham Borough Council has confirmed that none of the surveyed trees are subject to Tree Preservation Orders or Conservation Area restrictions. Additionally, there are no designated ancient woodlands in the study area.

KEY

- Study site boundary
- Large area of existing hardstand
- Established/maturing vegetation
- Vegetation associated with water body
- Mix of hardstanding and self seeded scrubland
- Water body
- Cemetery
- Existing Private road
- Existing watercourse
- Existing watercourse (culverted)
- ➔ Existing Entrance
- Bridge

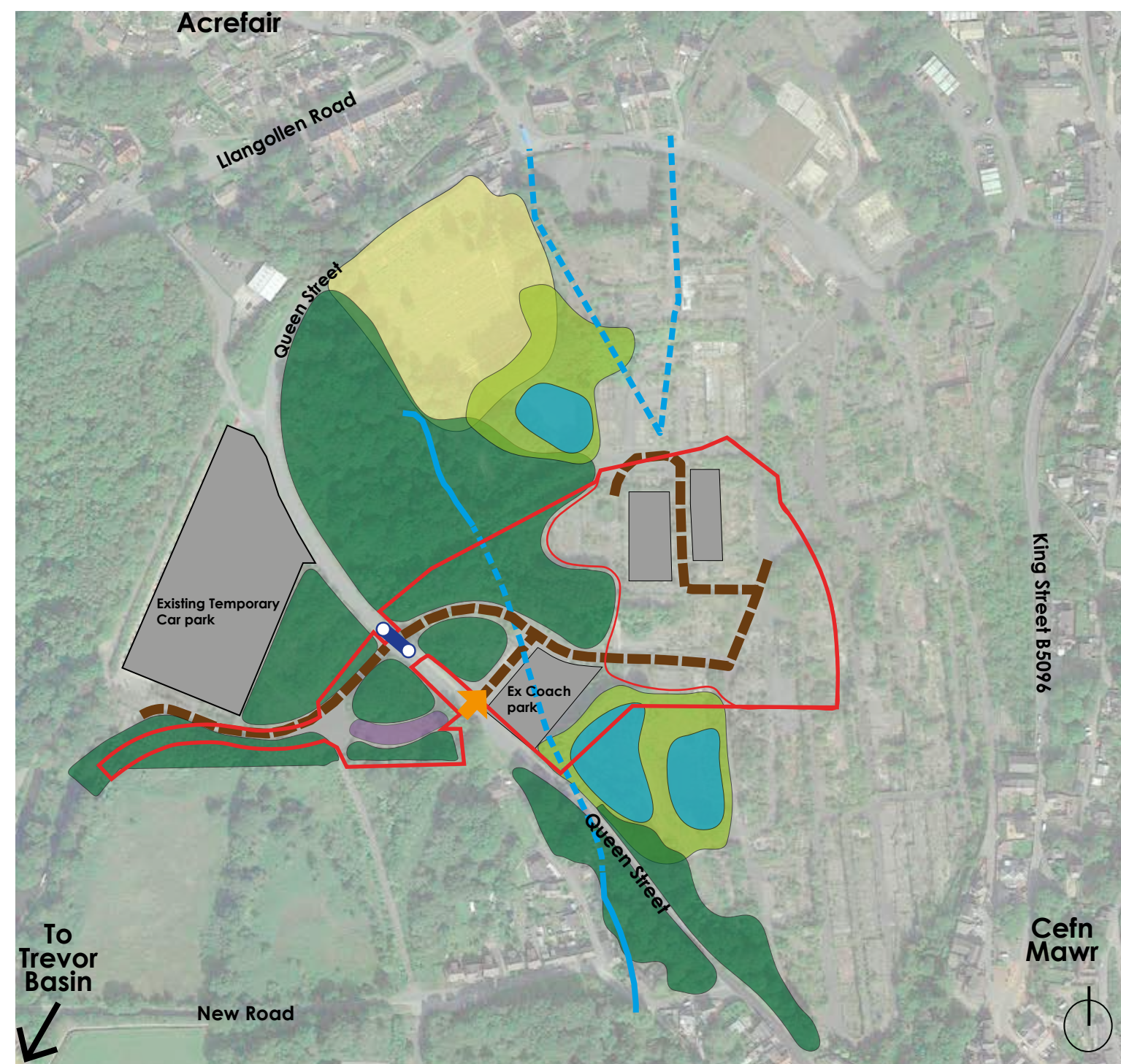


Figure 13. Existing Land Use Plan

2.6 HERITAGE

- 2.6.1 In 1879 there is a mixture of uses including Plas Kynaston Chemical Works, Foundry and Pottery within the site vicinity with the canal network extending into the site. By the 1950's the site has a clear arrangement of industrial units, with the canal partially backfilled.
- 2.6.2 To the east of the site lies the conservation area of Cefn Mawr. Cefn Mawr has a historic core which has been formed on several tiers within the hillside, wrapped around a central quarry creating a unique and distinctive townscape. Its elevated position affords Cefn Mawr with magnificent views along the Vale of Llangollen towards the Pontcysyllte Aqueduct.
- 2.6.3 There is also the Pontcysyllte Aqueduct Conservation Area to the south west of the site which covers the Pontcysyllte Aqueduct and Canal World Heritage Site extending from the Llangollen canal Trevor Basin terminus in the settlement of Pontcysyllte, southwards as far as the settlement of Froncysyllte. The boundary of the site in proximity to the Pontcysyllte Aqueduct & Canal World Heritage Site.

2.7 FLOOD RISK

- 2.7.1 The site is shown by the Natural Recourse Wales online Flood Risk Map to be located within Flood Zone 2 and 3 from surface water and small watercourses. The is considered to be at High risk of flooding from surface water and small watercourses with a risk greater than 3.3% chance each year.
- 2.7.2 Flood Zone from rivers exists north and south of the site boundary, however it does not appear to intersect with the redline boundary.

KEY

Flood Risk from Surface water & Small Watercourses

High

Low

Medium

Risk Level under review

Flood Risk from Rivers

High

Low

Medium

Study Site Boundary

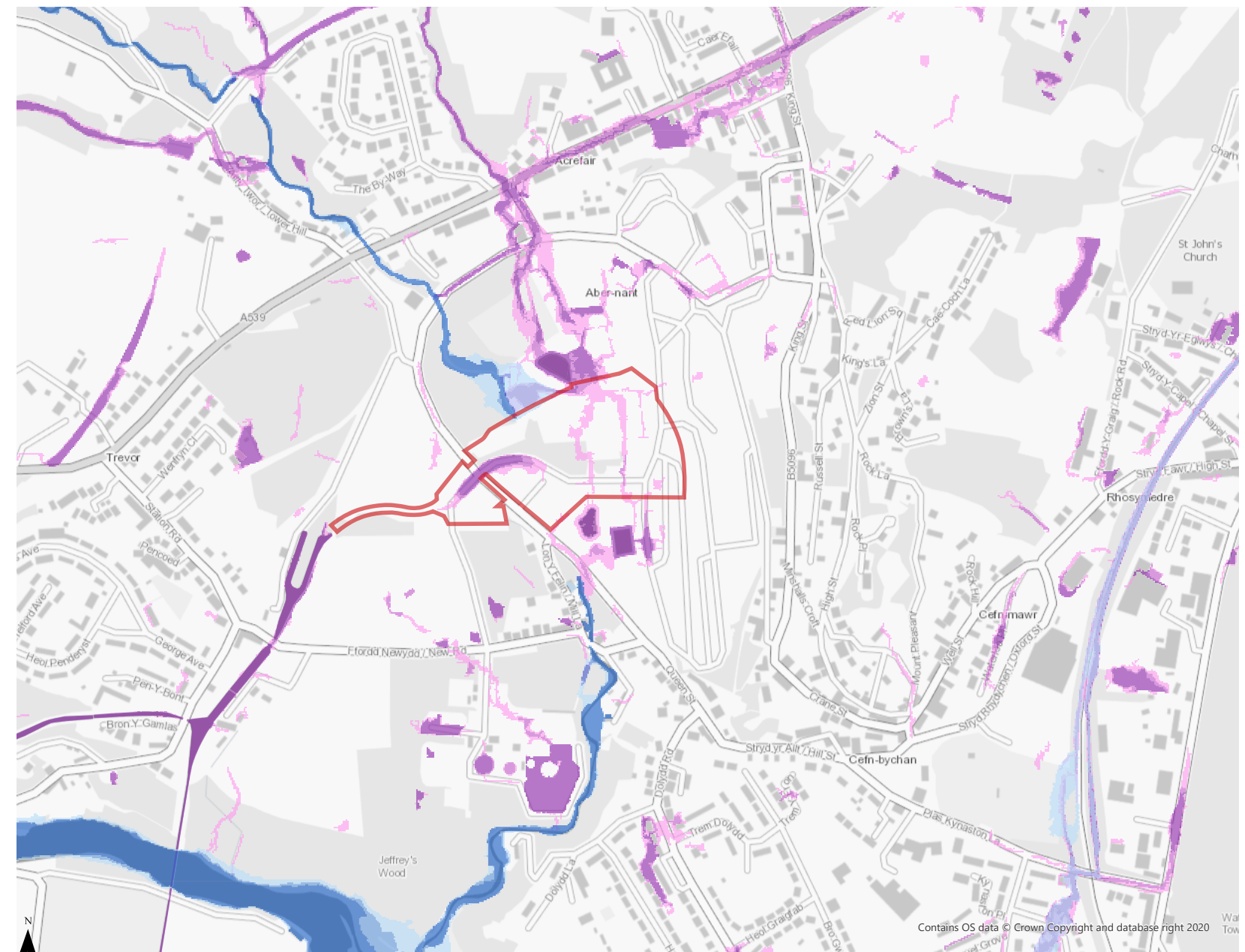


Figure 14. Flood Risk Map



03

GREEN INFRASTRUCTURE ANALYSIS

3.0 GREEN INFRASTRUCTURE ANALYSIS

3.1 APPLICATION OF THE BUILDING WITH NATURE STANDARDS

- 3.1.1 This Chapter provides an analysis of Green Infrastructure in consideration of the planning application material prepared for the Proposed Development. The analysis is structured using the Building with Nature (BwN) Standards. Taken together, the 12 BwN Standards define “what good looks like” by offering a set of quality standards for placemaking and place-keeping, covering the themes of Wellbeing, Water and Wildlife. The BwN Standards support cross-disciplinary decision making about green infrastructure design and delivery, implementation, construction, management and maintenance of green infrastructure in development.
- 3.1.2 The analysis considers each of the 12 BwN Standards against the key criteria in consideration of the design, mitigation and management arrangements for the Proposed Development bringing together the contextual analysis as a baseline starting point and analysis of the proposed Green Infrastructure enhancement and gains. The table set out below provides evidence referencing the key planning application documents where each of the standards can be supported with explanatory text to set out the key proposals and benefits they will bring.
- 3.1.3 The Arboricultural Survey and Landscape General Arrangement are provided in Appendices for reference however all Planning documents have been reviewed as part of the desk top review and this analysis.

BwN Standards	Evidence	Analysis
Standard 1 Optimises Multifunctionality and Connectivity		
Optimises multifunctionality and connectivity within the boundary of the project and links with existing and planned for green infrastructure in the surrounding area.	Planning Statement 10054502-ARC-XX-XXX-RP-PL-01003 Design and Access Statement 10054502-ARC-XX-XXX-RP-LA-01002 Arboricultural Impact Assessment 10054502-AUK-XX-XX-RP-ZZ-0004-01 Preliminary Ecology Appraisal 10054502-AUK-XX-XX-RP-GE-3-1 Outline Construction Environmental Management Plan 10054502-ARC-XX-XXX-RP-GE-01001 General Arrangement 10054502-ARC-XX-300-DR-LA-00002 Softworks General Arrangement 10054502-ARC-XX-300-DR-LA-00003	— The planting strategy aims to enhance the current ongoing rewilding process of the development area by supporting natural processes. The objective is to create a balanced environment that fosters ecological diversification and supports both human and natural elements. The planting will include wildlife and pollinator-friendly species that are robust, low maintenance, and well-suited to the setting, aiding in the transformation of the brownfield site, linking into retained woodland areas which extend beyond the site boundary. — The proposal includes planting 92 individual trees and approximately 2,900m² of native woodland planting mix. The planting adopts the Stepwise approach ensuring the right trees are planted in the right places, optimising connectivity with the surrounding site. — The site’s existing topography and vegetation provide natural screening from most surrounding roads and properties. — The development will be visible from wider viewpoints, it is expected to have a positive local impact on the area’s character. The existing vegetation, along with the proposed planting, will reinforce the landscape’s characteristics, limit visibility of the development, and integrate it with the surrounding landscape and views. The proposals are fundamentally landscape-led. — The Outline Construction Environmental Management Plan (OCEMP) and the Arboricultural Impact Assessment outline measures to protect existing young tree plantings, woodland areas, and a veteran oak tree outside the site boundary from construction impacts. This includes pollution prevention controls, root protection zones, and sensitive site clearance practices. — Clear signage and pathways will be implemented to guide users through the car park and connect them to surrounding amenities, the Trevor Basin and the Pontcysyllte Aqueduct & Canal World Heritage Site. These routes will be safe and accessible. — The infrastructure is designed to be accessible to people of all abilities, promoting inclusivity and ease of movement. As part of the wider Trevor Basin Masterplan, a proposed pedestrian route and heritage trail along the former Kynaston Arm Canal will provide an additional connection to the settlement of Cefn Mawr.



BwN Standards	Evidence	Analysis
Standard 2 Optimises Multifunctionality and Connectivity		
Is designed to be climate resilient by incorporating mitigation and adaptations that respond to the impacts of climate change. The green infrastructure is designed to promote low carbon behaviours and contributes to achieving zero carbon development by optimising carbon sequestration and demonstrating low carbon approaches to design, construction, and long-term maintenance.	Design and Access Statement 10054502-ARC-XX-XXX-RP-LA-01002 Preliminary Ecology Appraisal 10054502-AUK-XX-XX-RP-GE-3-1 General Arrangement 10054502-ARC-XX-300-DR-LA-00002 Softworks General Arrangement 10054502-ARC-XX-300-DR-LA-00003 Drainage Strategy 10054502-ARC-SW-XX-DR-CE-00 Pre-Application Consultation Report 10054502-ARC-XX-XXX-RP-PL-01005	— The planting strategy focuses on maximising carbon sequestration through extensive planting of trees, shrubs, and other vegetation by enhancing soil health and its carbon storage capacity with organic structure and avoiding compaction. — The planting strategy aims to enhance the current ongoing rewilding process of the development area by supporting natural processes. The objective is to create a balanced environment that fosters ecological diversification and supports both human and natural elements. The planting will include wildlife and pollinator-friendly species that are robust, low maintenance, and well-suited to the setting, aiding in the transformation of the brownfield site. — As well as providing shelter and access to the site for wildlife, the planting scheme will be rich with native plants and shrubs for that will attract butterflies, moths, bees, and birds and will be focused on maximising species richness and thus resilience to climate change. — The new tree and native woodland plantings will provide shade, reduce the urban heat island effect, and help cool the environment. The use of native and drought-resistant plants in the planting palette ensures the vegetation requires less water and is better adapted to local climatic conditions. — The proposal includes planting 92 individual trees such as <i>Alnus glutinosa</i> (Alder), <i>Carpinus betulus</i> (Hornbeam), <i>Liriodendron tulipifera</i> (Tulip Tree), <i>Pinus sylvestris</i> (Scots Pine), <i>Prunus avium</i> (Wild Cherry), <i>Quercus robur</i> (English Oak), and <i>Ulmus minor</i> (Small-leaved Elm), along with approximately 2900m² of native woodland planting mix. The planting approach ensures the right trees are planted in the right places, optimising connectivity with the surrounding site. — The site benefits from natural screening provided by its existing topography and vegetation, shielding it from most surrounding roads and properties. The Softworks General Arrangement Plan highlights the removal of specific trees, primarily young self-seeded Silver Birch species, to facilitate the proposals. — Bird and bat boxes will also be provided along with onsite hibernaculum/habitat piles to provide essential shelter and overwintering sites for reptiles and amphibians — The proposed hard landscape includes permeable surfaces for the main car parking area to facilitate water infiltration, reducing surface runoff as part of the site-wide flood mitigation strategy. Detention basins will store stormwater during heavy rain events, preventing flooding and erosion. — Construction materials with low embodied carbon, such as recycled aggregates and sustainably sourced timber, will be used. Locally sourced materials will reduce transportation emissions and support the local economy. — The lighting strategy will incorporate energy-efficient LED lighting throughout the car park and access areas, reducing energy consumption. — The development promotes active transportation by including facilities for bicycles, with 20 bicycle parking spots, safe and attractive pedestrian pathways, electric vehicle (EV) charging stations, and option for use of public transport via the existing bus stop at the Duke of Wellington Hotel on the A539 Llangollen Road, to encourage the use of sustainable travel modes. In addition there is provision for 9 Coach Parking Spaces. — It will be recommended that long-term maintenance practices will include the use of electric maintenance vehicles and organic landscaping methods to reduce environmental impact. — The supporting Pre-Application Consultation Report details the engagement with the local community and stakeholders to raise awareness of the project and its sustainability initiatives.



BwN Standards	Evidence	Analysis
Standard 3 Maximises Environmental Net Gains		
Is designed to actively mitigate any unavoidable harmful environmental impacts of development on soil and air quality and to minimise light and noise pollution. In addition, it delivers environmental net gains, including improving air and water quality and wherever possible includes quiet spaces for people and wildlife.	Planning Statement 10054502-ARC-XX-XXX-RP-PL-01003 Design and Access Statement 10054502-ARC-XX-XXX-RP-LA-01002 Arboricultural Impact Assessment 10054502-AUK-XX-XX-RP-ZZ-0004-01 Preliminary Ecology Appraisal 10054502-AUK-XX-XX-RP-GE-3-1 Phase 1 Geo-Environmental Desk Study 10054502-ARC-XX-XXX-RP-GE-01001 Transport Assessment Report 10054502-AUK-XX-XX-RP-HE-0006 Noise Assesment Report 10054502-AUK-XX-XX-RP-AC-0007 General Arrangement 10054502-ARC-XX-300-DR-LA-00002 Softworks General Arrangement 10054502-ARC-XX-300-DR-LA-00003	– The site presents several arboricultural opportunities considered during the development design phase. Some small, low-quality trees (C Category) will be removed to facilitate construction, ensuring no significant long-term adverse impact on the health of retained trees or the area’s amenity. The planting strategy includes green spaces with diverse trees and plants that can absorb pollutants, improve air quality, and provide native woodland planting to act as a natural sound buffer between the car park and surrounding areas. – The habitats created within the development area would feature natural screening, such as scrub and trees, placed between the spaces used by people and the newly created wetlands. The proposals include creating natural habitats that provide quiet spaces for wildlife, promoting biodiversity and ecological health. Native planting will support local ecosystems and provide habitats, incorporating features such as bird boxes, bat houses, and insect hotels. – The proposed scheme does not involve the use of hazardous substances in notifiable quantities. A secure drainage system will channel potential contaminants into a controlled system, preventing off site migration of spillages. – Temporary impacts and mitigation measures are outlined in the accompanying Outline Construction and Environmental Management Plan (OCEMP). These measures include dust suppression techniques, such as water spraying, to reduce particulate matter. – External lighting will be designed and positioned sensitively to avoid visual intrusion and light spillage and will be developed in consultation with the project ecology team. – The Noise Assessment report concludes that the ambient noise levels in the area will not experience significant changes due to the new car park. The maximum increase in noise is expected to be classified as “Minor,” while most of the changes will be deemed “Negligible.” According to the DMRB LA111 guidelines, these classifications do not constitute an adverse impact. – The drainage strategy focuses on water quality improvement through attenuation ponds and permeable surfaces that filter and clean stormwater before it recharges groundwater. It is proposed to combine surface water falling on the external impermeable areas into one system before discharging to an existing culvert. The eastern side of the site will incorporate permeable paving to convey surface water run-off to two different detention basins. This eastern network will have a separate inlet to the attenuation crates. – Designated quiet zones adjacent to the main the car park will feature seating and planting, offering relaxation areas away from vehicular movement. Enhanced wildlife corridors will allow safe movement for wildlife, connecting existing natural habitats. – Further site investigation will be undertaken before construction to inform soil remediation efforts addressing any pre-existing contamination issues. – Informational and educational signage will inform visitors about the environmental features and their benefits, engaging them and raising awareness about environmental issues and sustainability practices. – The project will promote sustainable maintenance practices, such as using electric or manual tools and organic landscaping techniques.

BwN Standards	Evidence	Analysis
Standard 4 Champions a Context Driven Approach		
Positively responds to the local context, including the physical environment, such as landscape and urban character and social, economic, and environmental priorities, including the evidenced needs and strengths of existing and future local communities.	Planning Statement 10054502-ARC-XX-XXX-RP-PL-01003 Design and Access Statement 10054502-ARC-XX-XXX-RP-LA-01002 Heritage Statement 10054502-ARC-XX-XXX-RP-HE-01007 General Arrangement 10054502-ARC-XX-300-DR-LA-00002 Softworks General Arrangement 10054502-ARC-XX-300-DR-LA-00003 Site Location Plan 10054502-ARC-XX-XXX-DR-LA-00001	– The Proposed Development identifies and incorporates important local character features into the Green Infrastructure proposals. This approach references, reflects, and enhances the local environment, recognising the site's location within several significant landscape designations, including the Pontcysyllte Aqueduct World Heritage Site, Bryniau Clwyd a Dyffryn Dyfrdwy Area of Outstanding Natural Beauty (AONB), and the Pontcysyllte Aqueduct Conservation Area. – The visitor car park has been designed for space efficiency, utilising the site levels, retaining a core structure of established vegetation, and providing new planting to create a suitable landscape character within the wider World Heritage Site setting. The design aims to integrate the site into the surrounding landscape, preserving and managing existing woodland belts and complementing them with new tree plantings to enhance aesthetics. – The car park's design follows a parkland style with a landscape-led form and layout, with tree planting at its core. The proposals make efficient use of the existing land, considering the need for internal access roads and the preservation of existing trees and woodland. The sloping landform and operational requirements influence the internal layout, addressing visual impacts and other environmental considerations. – The proposed habitats will lead to an overall increase in both area and quality, enhancing the environment for the diverse wildlife on site. For instance, current low-value hardstanding areas will be transformed into open mosaic habitat and wetland habitats. These new, species-rich, and freshwater environments will support a wide range of species, including insects, amphibians, and plants, while also offering a crucial water resource for birds and mammals – The design evolution process has consistently considered the importance of site context, surrounding character, and operational requirements. The design seeks a natural 'fit' within its rural setting in terms of scale and appearance, recognising the functional nature of the facility while integrating it into the landscape. – The layout and appearance of the Proposed Development have been strongly influenced by the site context, taking advantage of scenic views to the south over the Dee Valley towards the Berwyn foothills. The topography, rising across the site from the low point of 87m Above Ordnance Datum (AOD) under the Queens Street Bridge to 98m AOD in the northeast corner of the site supports natural screening by existing vegetation from most surrounding roads and properties. The historical industrial use is evident in the site topography, with the building bases remaining insitu creating a series of terraces across the site. A former access road runs under Queen Street. – The accompanying Heritage Report provides a comprehensive overview of both established and potential archaeological features and historical built heritage elements. There would be no direct impacts on the World Heritage Site status of the Pontcysyllte Aqueduct and Canal due to the site's distance. – The Proposed Development is aligned with Wrexham Councils desire to improve the visitor experience to the local historic assets, and it does so by enhancing an existing brownfield site. – The proposed development does not cause harm to any of the attributes of the WHS that make up its Outstanding Universal Value. The use of industrial cues in the design and proposed materials will retain the character of the site, referencing its industrial heritage. – The proposals preserve and incorporate existing natural features such as trees and topography into the project design, ensuring the car park blends with the surrounding landscape and urban character. The design and arrangement are in scale with surrounding land use, buildings, and spaces, avoiding an overpowering presence. – The car park is designed to be accessible to all community members, including those with disabilities, and includes clear signage and natural surveillance to enhance safety and security. Provisions for social interaction, such as seating areas and green spaces, are included.



BwN Standards	Evidence	Analysis
Standard 4 Champions a Context Driven Approach (Cont'd)		
		— The site is approximately 400m equidistant from the Queens Street entrance to the settlements of Cefn Mawr and Trevor with good existing footpath links. — The material palette includes cost-effective, sustainable building practices and materials that offer long-term economic benefits through reduced maintenance and operational costs. The proposals will include electric vehicle charging stations, generating additional revenue and attracting environmentally conscious users. — The project includes green infrastructure elements to enhance biodiversity, manage stormwater, and reduce the carbon footprint. Energy-efficient lighting and infrastructure will be incorporated to minimise energy consumption. Measures are implemented to ensure the car park is resilient to climate impacts, such as heatwaves and heavy rainfall, ensuring long-term functionality.
Standard 5 Creates Distinctive Places		
Is integral to the project and is designed to reinforce local distinctiveness and/or create a distinctive sense of place	Planning Statement 10054502-ARC-XX-XXX-RP-PL-01003 Design and Access Statement 10054502-ARC-XX-XXX-RP-LA-01002 Heritage Statement 10054502-ARC-XX-XXX-RP-HE-01007 General Arrangement 10054502-ARC-XX-300-DR-LA-00002 Softworks General Arrangement 10054502-ARC-XX-300-DR-LA-00003 Site Location Plan 10054502-ARC-XX-XXX-DR-LA-00001	— The scale of the Proposed Development is within the site constraints identified in the Design and Access Statement to allow for a functional and operational use. Elements within the operational area of the site will be viewed against the backdrop of existing facilities, reducing impact on the surrounding landscape character. Development is designed to blend with existing structures and the wider landscape, effectively mitigated by landscape planting. — The proposed materials for surfacing and street furniture have been carefully chosen to reference the site's heritage and former uses. This selection creates a visual and historical continuity that reinforces the local identity. — External lighting will be sited sensitively to avoid visual intrusion and light spillage, maintaining the area's character and reducing light pollution. — The project adopts a holistic design approach, integrating the car park and access arrangements into the overall landscape character and setting. This approach ensures functional connectivity as part of the wider Trevor Basin Masterplan. — The purposeful placement of car parking within the site's topography makes efficient use of land, balancing parking needs with green space, and maintaining the area's natural landscape. — Where permissible, materials characteristic of the local area, such as stone, brick, or timber, will be used. This creates a sense of continuity with the surrounding built environment and reinforces the area's identity. — The Heritage Assessment report identifies opportunities for integrating cultural and historical elements into the site layout. This includes interpretive educational items that tell the story of the site, its local area, and its people. Themed signage reflecting local design motifs and colour schemes will enhance navigation and reinforce the sense of place. The proposed development does not cause harm to any of the attributes of the WHS that make up its Outstanding Universal Value. The use of industrial cues in the design and proposed materials will retain the character of the site, referencing its industrial heritage. — The proposal includes gathering spaces with seating, shade, and amenities where people can meet, relax, and engage before embarking on their adventure. These spaces promote social interaction and community engagement.

BwN Standards	Evidence	Analysis
Standard 5 Creates Distinctive Places (Cont'd)		
		- Planting will promote local fauna and flora through the use of native plants, reflecting the local ecosystem and promoting biodiversity. This approach creates habitats for local wildlife and reinforces the area's natural identity and ecological significance. - The project will seek to implement sustainable construction and maintenance practices, ensuring the car park contributes positively to the environment. Resilient design features reduce climate impacts, ensuring the car park remains a valuable community asset in the long term. - The design includes an overflow car park, providing flexibility to accommodate visitor numbers. This space can be modified to a permanent solution if visitor numbers exceed expectations.
Standard 6 Secures Effective Place-keeping		
Is subject to management arrangements that demonstrate a commitment to effectively implement, establish and maintain features at all stages of the development process. This should include details of funding, governance, maintenance, monitoring, remediation and, where appropriate, community involvement and stewardship.	Planning Statement 10054502-ARC-XX-XXX-RP-PL-01003 Design and Access Statement 10054502-ARC-XX-XXX-RP-LA-01002 Preliminary Ecology Appraisal 10054502-AUK-XX-XX-RP-GE-3-1 Outline Construction Environmental Management Plan 10054502-ARC-XX-XXX-RP-PL-01006 General Arrangement 10054502-ARC-XX-300-DR-LA-00002 Softworks General Arrangement 10054502-ARC-XX-300-DR-LA-00003	- The proposed development protects the qualities of the built and historic environment of the Trevor Basin surrounding area. The total site area measures approximately 4.5 hectares, with large areas of young trees and woodland retained to maintain the site's natural character. - The proposed development is designed to reduce detrimental impacts on the immediate locality and surrounding landscape. The Outline Construction and Environmental Management Plan (OCEMP) details potential temporary impacts and mitigation measures. - This project forms part of a for a programme of work to improve movement infrastructure at key destination sites in Wrexham County Borough and Denbighshire, following a successful joint County Borough application to the UK Government Levelling Up Fund. - It is anticipated that the Council will either undertake maintenance tasks directly or procure external contractors to undertake these tasks. As the project progresses further engagement with the Council teams who would take on these assets will be undertaken to develop the aftercare strategy and secure adequate resources in the long-term. This will be captured within a 25 year Landscape and Ecology Management Plan, which is anticipated as a planning condition if permission is granted. This would primarily be required in relation to great crested newts but would support all ecological features on site. It is anticipated that the car parking will implement a parking fee structure which will be utilised for maintenance costs. - The Design and Access Statement has assumed routine maintenance activities, such as cleaning, landscape upkeep, and minor repairs, to include preventative measures to extend the lifespan of infrastructure and reduce long-term costs.

BwN Standards	Evidence	Analysis
Standard 7 Brings Nature Closer to People		
Is close to where people live, work, learn, play and/or visit, and is designed to optimise use and enjoyment for everyone across the year, to maximise health and wellbeing outcomes and to promote active living for existing and future communities.	Planning Statement 10054502-ARC-XX-XXX-RP-PL-01003 Design and Access Statement 10054502-ARC-XX-XXX-RP-LA-01002 Transport Assessment Report 10054502-AUK-XX-XX-RP-HE-0006 General Arrangement 10054502-ARC-XX-300-DR-LA-00002 Softworks General Arrangement 10054502-ARC-XX-300-DR-LA-00003 Site Location Plan 10054502-ARC-XX-XXX-DR-LA-00001	— The proposed development at the Trevor Basin Area, part of the Pontcysyllte Aqueduct & Canal World Heritage Site (WHS), aims to provide improved access, promote active living, and optimise use and enjoyment for everyone throughout the year. — The site is located just off the A539 between Llangollen and Wrexham in North Wales, approximately 10km south-west of Wrexham city centre, and approximately 400m equidistant from the Queens Street entrance to the settlements of Cefn Mawr and Trevor with good existing footpath links. — The site is within walking distance to the Pontcysyllte Aqueduct WHS, facilitating easy access for visitors. There are existing safe and well-lit pedestrian routes from residential areas to the car park. — For those with low mobility, dedicated car parking spaces within the development will complement the existing designated bays within the village of Trevor. — The development connects with National Cycle Route 85, which runs south from Chester to Wrexham and then heads west towards Llangollen, Corwen, and Bala. This route provides an enjoyable path, allowing users to appreciate the natural beauty and cultural richness of the North Wales landscape. — The closest railway station is just over 2 miles away at Ruabon, on the Shrewsbury to Chester Line, with a combined rail and bus interchange. — The nearest bus stop is the Duke of Wellington Hotel on the A539 Llangollen Road, approximately 300m walking distance from the site, with services running every 30 minutes from Llangollen. — The project will give priority to pedestrians and cyclists. Direct pathways will connect the car park to the Trevor Basin and Pontcysyllte Aqueduct & Canal WHS. Safe and accessible walking and cycling paths promote active transportation and physical activities. The car park and associated pathways will be accessible to people of all abilities, including those with mobility impairments. — Cycle parking is provided to facilitate the meeting of people and friends arriving by different modes of transport. — Provision has been made for a future information kiosk to enhance the visitor experience when funding permits. — The planting palette proposes plants and trees that provide year-round interest, creating an attractive environment in all seasons. — Incidental spaces with seating provide restorative environments that support mental health and wellbeing. — The design incorporates sustainable features such as Water Attenuation SUDS and energy-efficient lighting to minimise environmental impact. Adequate lighting and surveillance are implemented to enhance safety and security for all users, especially during evening and night hours.

BwN Standards	Evidence	Analysis
Standard 8 Supports Equitable and Inclusive Places		
Is designed to encourage and enable everyone, including those from vulnerable or excluded groups, to use and enjoy it, to help reduce health inequalities and to build a shared sense of community and belonging.	Planning Statement 10054502-ARC-XX-XXX-RP-PL-01003 Design and Access Statement 10054502-ARC-XX-XXX-RP-LA-01002 General Arrangement 10054502-ARC-XX-300-DR-LA-00002	— The design of the proposed car park and surrounding areas at the Trevor Basin Area, part of the Pontcysyllte Aqueduct & Canal World Heritage Site (WHS), is intended to encourage and enable everyone, including those from vulnerable or excluded groups, to use and enjoy it. — All areas of the car park and access points are designed to be fully accessible to people with disabilities, including those using wheelchairs, walkers, or other mobility aids. Tactile paving and clear signage will aid those with visual impairments in navigating the space safely. — The car park is well-connected to public transportation routes, with clear and accessible paths to the nearest bus stop at the Duke of Wellington Hotel on A539 Llangollen Road, approximately 300m walking distance. Regular bus services every 30 minutes from Llangollen ensure reliable access. — Secure bicycle parking facilities are provided to encourage cycling as a sustainable mode of transport. — The car park will implement pricing structures that ensure cost is not a barrier to access, promoting affordability for all users. — Safe, well-lit walking and cycling paths will promote physical activity among users of all ages and abilities. Enhanced lighting throughout the car park and surrounding areas enhances safety, particularly during evening and night-time use. — Inclusion of multilingual signage accommodates non-English speakers, promoting inclusivity and ensuring all visitors can easily navigate and understand the facilities and services offered by the car park. — Clear, easy-to-understand information about the car park's facilities and services, including maps and guides, will be provided as part of the wayfinding to enhance user experience and ensure everyone feels welcome and informed.



BwN Standards	Evidence	Analysis
Standard 9 Delivers Climate Resilient Water Management		
Is integral to sustainable drainage using above ground features to manage flood risk, maintain the natural water cycle and improve water quality within the boundary of the project and at a catchment scale. The green infrastructure is designed to be drought resistant and wherever possible, includes measures for the retention and reuse of rainwater.	Planning Statement 10054502-ARC-XX-XXX-RP-PL-01003 Design and Access Statement 10054502-ARC-XX-XXX-RP-LA-01002 Drainage Strategy 10054502-ARC-SW-XX-DR-CE-00 General Arrangement 10054502-ARC-XX-300-DR-LA-00002 Softworks General Arrangement 10054502-ARC-XX-300-DR-LA-00003	– The proposed development at Trevor Basin Area integrates sustainable drainage systems (SuDS) within its design to effectively manage flood risk, maintain the natural water cycle, and enhance water quality. – The drainage strategy focuses on water quality improvement through attenuation ponds and permeable surfaces that filter and clean stormwater before it recharges groundwater. It is proposed to combine surface water falling on the external impermeable areas into one system before discharging to an existing culvert. The eastern side of the site will incorporate permeable paving to convey surface water run-off to two different detention basins. This eastern network will have a separate inlet to the attenuation crates. – Creation of attenuation ponds within the site will temporarily hold stormwater, allowing sediments to settle and reducing peak runoff rates. These designated flood storage areas within the car park will accommodate excess water during heavy rainfall events, preventing flooding in surrounding areas. – Use of permeable materials for parking areas and pathways will enable water infiltration, thereby reducing surface runoff and promoting groundwater recharge. – Incorporation of green spaces and vegetated areas to increase permeability and provide additional stormwater management benefits. – Integration of appropriate planting within the attenuation basins to treat stormwater, provide habitat for wildlife, and support the natural water cycle. – Use of vegetative filters to remove pollutants from stormwater through filtration and uptake by plants, serving as sediment traps to improve water quality before entering water bodies. – Use of native and drought-tolerant plant species to reduce water demand and increase resilience to drought conditions. – Collaboration with local authorities and stakeholders to align the project's drainage strategy with broader catchment management plans and objectives. – Commitment to regular inspections and maintenance of drainage features to ensure they function effectively and address any issues promptly. – Education of the community about the importance of sustainable drainage through interpretation signage, promoting water conservation and quality improvement efforts.

BwN Standards	Evidence	Analysis
Standard 10 Brings Water Closer to People		
Is designed to integrate water, including areas of standing water, flowing water, seasonal and ephemeral features, to bring additional amenity and wildlife benefits.	Planning Statement 10054502-ARC-XX-XXX-RP-PL-01003 Design and Access Statement 10054502-ARC-XX-XXX-RP-LA-01002 Drainage Strategy 10054502-ARC-SW-XX-DR-CE-00 General Arrangement 10054502-ARC-XX-300-DR-LA-00002 Softworks General Arrangement 10054502-ARC-XX-300-DR-LA-00003	— The drainage strategy incorporates ponds within the landscape design, using naturalistic shapes and materials to blend with the surroundings. Design features such as filtration systems and aquatic plants will improve water quality and support wildlife habitat. Establishment of marginal native vegetation within the pond will assist in stabilising banks, filter pollutants, and provide habitat. — The ponds are located between car parking bays allowing visitors to observe wildlife and enjoy scenic views. The project is committed to install interpretive signage near water features to educate visitors about local wildlife, hydrology, and the importance of water conservation. — The ponds will create diverse aquatic habitats, including shallow areas, deeper pools, and submerged vegetation, to support a variety of aquatic species. It will include edge habitats where water meets land, providing nesting sites, food sources, and shelter for amphibians, birds, and mammals. — The ponds will attenuate stormwater, reducing peak flows and mitigating flood risks in the surrounding area. — The creation of wetland habitats will complement those that exist in the wider area, expanding and strengthening the range of the species present. These wetland features will be designed to maximise their benefit for species identified locally.
Standard 11 Delivers Wildlife Enhancement		
Optimises long term and climate resilient net benefits for nature, by retaining and enhancing existing ecological assets and creating locally relevant new habitats within the boundary of the project. Wildlife measures are secured at all stages of implementation and where applicable, across multiple phases of development.	Planning Statement 10054502-ARC-XX-XXX-RP-PL-01003 Design and Access Statement 10054502-ARC-XX-XXX-RP-LA-01002 Arboricultural Impact Assessment 10054502-AUK-XX-XX-RP-ZZ-0004-01 Preliminary Ecology Appraisal 10054502-AUK-XX-XX-RP-GE-3-1 Drainage Strategy 10054502-ARC-SW-XX-DR-CE-00 General Arrangement 10054502-ARC-XX-300-DR-LA-00002 Softworks General Arrangement 10054502-ARC-XX-300-DR-LA-00003	— The proposed development at Trevor Basin Area is committed to optimising long-term and climate-resilient net benefits for nature by retaining and enhancing existing ecological assets and creating locally relevant new habitats within the project boundary. — A Preliminary Ecological Appraisal has been prepared to accompany the application. The findings of the desk and field surveys identified habitats within the survey boundary that have the potential to support nesting birds, roosting, foraging, and commuting bats, reptiles, and amphibians. — The existing young woodland and trees, which are likely to support nesting birds and may support reptiles and amphibians, will be largely retained. Tree removal will be minimised to reduce negative effects on flora and fauna and will only occur where necessary to achieve the proposed arrangement. — The project prioritises the retention of valuable ecological assets such as native vegetation, wetlands, and wildlife corridors and will enhance existing habitats through restoration activities such as native plantings, invasive species removal, and habitat diversification. — The proposals will create new habitats that are locally relevant and support native wildlife species, such as new ponds, open mosaic habitat, native woodland planting, inclusion of pollinating herbaceous and shrub planting, bird nesting sites, and amphibian habitats. — The green infrastructure elements such as attenuation basins and permeable surfaces that contribute to habitat creation while providing other benefits such as stormwater management and urban cooling. — The project will deliver biodiversity net gain by ensuring that the ecological value of the site is enhanced. This will be achieved through careful planning, habitat creation, and management practices that aim to improve biodiversity over the long term.



BwN Standards	Evidence	Analysis
Standard 11 Delivers Wildlife Enhancement (Cont'd)		
		- Wildlife measure include the provision of bird and bat boxes and the installation of hibernacules to support amphibians, reptiles and other small animals. - The project will implement management plans that encompass regular habitat maintenance, invasive species control, and habitat restoration. The creation of open mosaic habitat, featuring species that complement the existing grasslands, will expand the foraging habitat for invertebrates, thereby enhancing foraging resources for bats. Additionally, the project includes a 25-year management plan for the wetland and terrestrial habitats created for great crested newts, which will also benefit a wide variety of other species.
Standard 12 Underpins Nature's Recovery		
Creates effective links with existing and planned for ecological features and networks beyond the boundary of the project to support the creation and restoration of resilient ecological networks in the wider landscape.	Planning Statement 10054502-ARC-XX-XXX-RP-PL-01003 Design and Access Statement 10054502-ARC-XX-XXX-RP-LA-01002 Arboricultural Impact Assessment 10054502-AUK-XX-XX-RP-ZZ-0004-01 Preliminary Ecology Appraisal 10054502-AUK-XX-XX-RP-GE-3-1 General Arrangement 10054502-ARC-XX-300-DR-LA-00002 Softworks General Arrangement 10054502-ARC-XX-300-DR-LA-00003	- The proposed development at Trevor Basin Area aims to create effective links with existing and planned ecological features and networks, supporting the creation and restoration of resilient ecological networks in the wider landscape - The proposed biodiversity enhancement includes the provision of bird and bat boxes, along with onsite hibernaculum/habitat piles, as well as the preparation of a Outline Construction Management Plan to ensure that the existing young woodland and trees are not impacted by the works including practical pollution prevention control measures, root protection zones and sensitive site clearance. - The proposal includes planting 92 individual trees along with approximately 2,900m² of native woodland planting. The planting approach ensures the right trees are planted in the right places, optimising connectivity with the surrounding site. - The proposed landscape and ecological mitigation play a key role in achieving environmental sustainability. These practices not only enhance the aesthetic and functional aspects of the surrounding landscape but also contribute significantly to the preservation and restoration of natural ecosystems. Incorporating these key design principles promotes a balanced coexistence between the proposed development and the environment aspects of the site. - The layout is based around existing ecological features such as wildlife corridors, and natural habitats, key ecological networks and connectivity routes that could benefit from enhancement including pathways and green spaces that align with existing ecological features, creating transitions between natural areas. - The new grassland habitats on site will enhance the landscape-scale mosaic of habitats in the surrounding area, increasing the total grassland area locally. These habitats will be situated approximately 175 meters to the northeast of existing local grasslands. Additionally, the new ponds on site will support more resilient metapopulations of amphibians, including great crested newts - The proposals have been coordinated with landowners and local authorities to implement habitat restoration and enhancement that complement the project's goals. - The project will raise awareness among local communities and stakeholders about the importance of ecological connectivity and landscape-scale conservation.



04

CONCLUSION

4.0 CONCLUSION

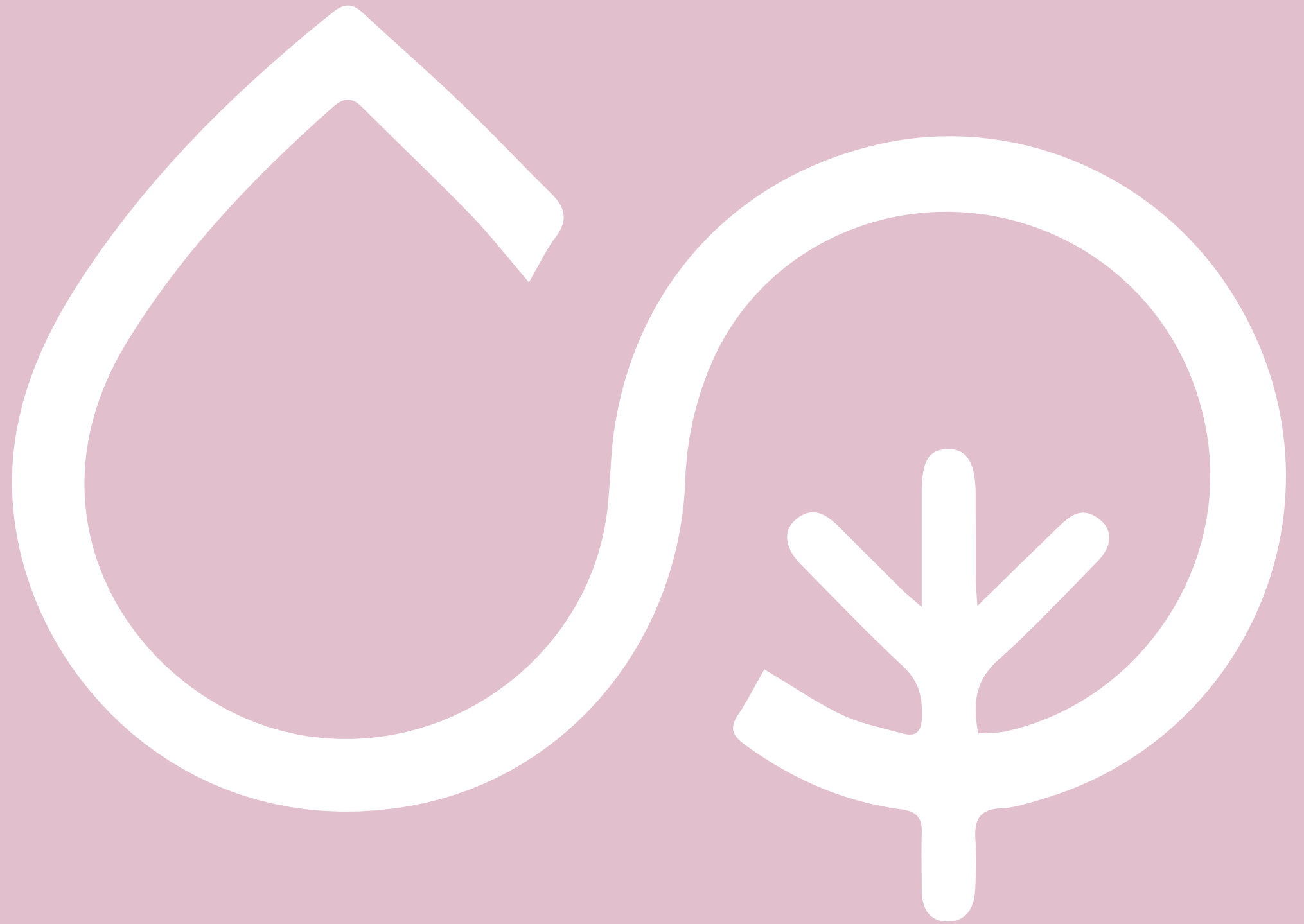
4.1 GREEN INFRASTRUCTURE SUMMARY

- 4.1.1 The Proposed Development demonstrates that the design and mitigation proposals have been designed to protect and reinforce local distinctiveness, notably the DAS sets out a clear contextual analysis and approach and creating sense of place, notably in consideration of landscape character and local habitat typologies. The Proposed Development identifies important local character features as a starting point for the Green Infrastructure proposals and incorporates them into the Proposed Development to reference, reflect and enhance the local environment.
- 4.1.2 In consideration of the Step-wise approach the design has considered maintaining the largest possible area of existing habitat paying due regard to the potential for continued long term maintenance and management of retained areas to benefit biodiversity. The proposals ensure that retained habitats continue to be well connected to adjacent habitats to provide connectivity for key species and ensuring that the favourable conservation status of local species populations is maintained.
- 4.1.3 Given the importance and influence of local landscape character and existing Green Infrastructure assets, careful planning and design has informed an appropriate level of Green Infrastructure which embeds the benefits of biodiversity. The landscape and ecological design and mitigation assists both the aesthetic and functional aspects of the surrounding landscape but also contribute significantly to the preservation and restoration of the natural ecosystems. By incorporating these key design principles they promote a balanced coexistence between the Proposed Development and the environment aspects of the site.



Figure 15. Existing Green Infrastructure Assets

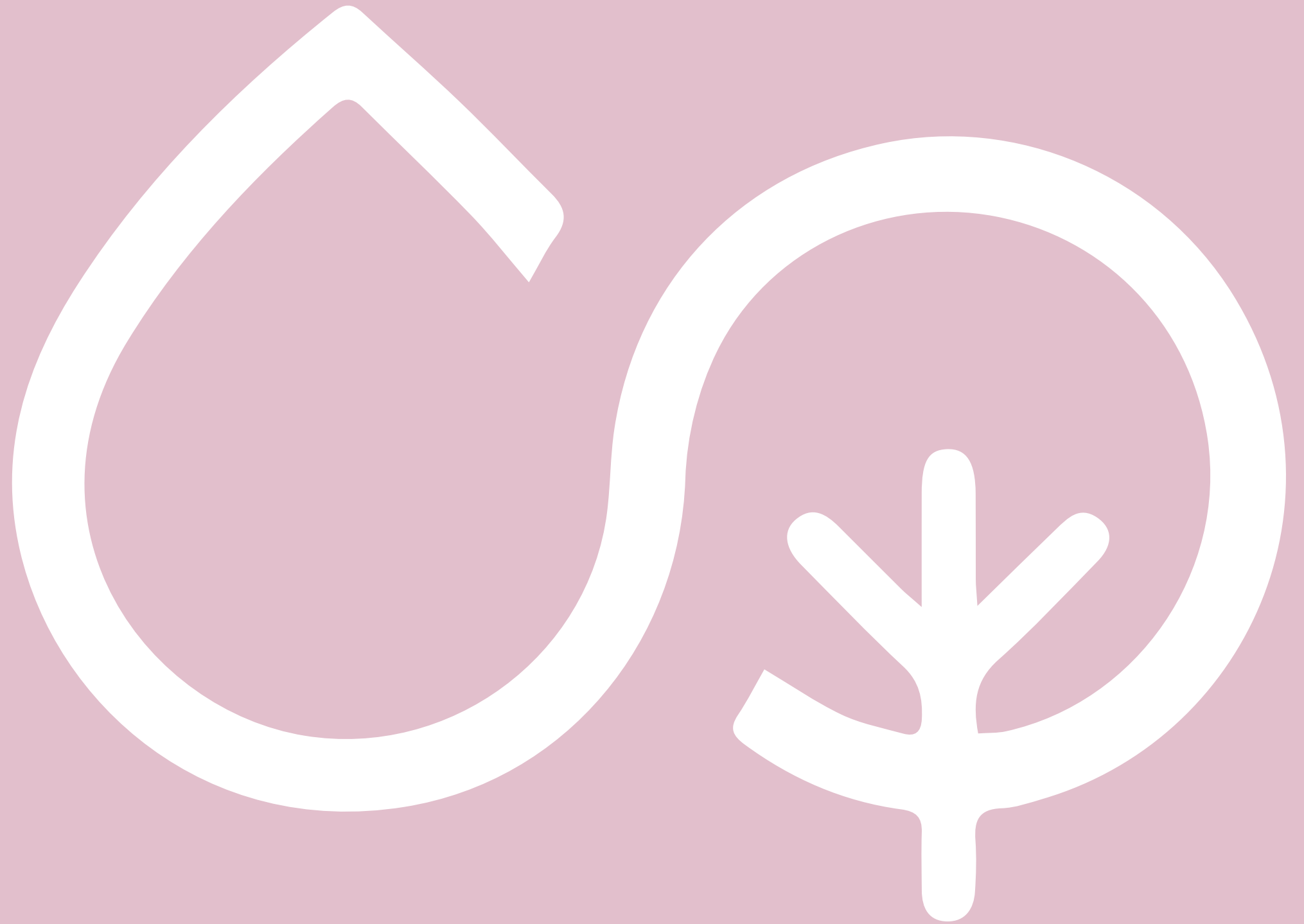




APPENDIX A

GENERAL ARRANGEMENT PLAN





APPENDIX B

SOFT LANDSCAPE GENERAL ARRANGEMENT