

Abergavenny Velo Park Masterplan

Green Infrastructure Strategy

November 2020

DRAFT

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Introduction

The following Green Infrastructure Strategy describes the various environmental measures that are integral to the proposed Llanfoist Velo Park, Abergavenny. The Velo Park will comprise a purpose built closed road cycle track (CRC) and associated off-road circuits, car parking and facilities.

Set within an open and attractive landscape on the eastern fringe of Llanfoist, the facility will provide a hub for cycling events and training, and form a new home for local cycling clubs supporting coaching and cyclist development within the area. It will also allow opportunities for wider informal community and visitor activities.

The strategy has been developed with consideration of Monmouthshire County Council's 2015 and 2019 GI guidance and considers key themes including health and well-being, biodiversity and ecosystems, landscape character and distinctiveness, climate change resilience and sustainable economic development. The strategy has been central to the delivery of a integrated masterplan for the site.

The document includes:

- A survey of existing Green Infrastructure assets in the vicinity of the site
- A summary of Green Infrastructure Needs and Opportunities
- A description of the proposed Green Infrastructure strategies
- A concept site plan

2.0 Existing GI Assets

The Site & its Surroundings

The land at Racecourse Farm (the site) is located within the low lying landscape which sits just above the floodplain of the River Usk, adjacent to the urban edges of Llanfoist and Abergavenny and the transport corridors of the A465 and A40. The wider setting includes the upland areas of the Brecon Beacons National Park and the Blaenavon Industrial Landscape World Heritage Site.

To the north of the site is the A465 corridor and associated infrastructure, including Llanfoist Recycling Centre and landfill site and a drive through restaurant. To the west is a newly built residential care home and an overgrown pond which sits between the site and the Llanfoist’s residential edge. Further to the southwest is Llanfoist Primary School and playing fields. The eastern boundary opens out to the low-lying areas of the River Usk floodplain (apart from the man-made topography of the landfill site) and although the A465 and the substation intersect the landscape, there is a visual connection beyond to open countryside. This open landscape wraps around the site to the south where the farmland and Monmouthshire Golf course extend to meet the lower slopes of the Bloreng.

The site itself covers an area of approximately 6.4ha and is currently managed as a mixture of scrub and grazing which is subdivided into small paddocks. The site’s topography is heavily undulated with a high point to its centre, falling both north and south and most steeply towards the River Usk floodplain.

The most notable existing vegetation comprises native boundary hedgerows interspersed with hedgerow trees, together with a small group of ‘Category C’ trees including an over-mature Ash in the centre of the site and a mature Oak adjacent to the care home. The majority of the site’s hedgerows have not been managed in recent times and have become over-mature and gappy. The remainder of the site consists of semi-improved grassland with areas of encroaching scrub, particularly in the north of the site.



Within the immediate vicinity of the site, there are a number of significant Green Infrastructure assets including the tree lined River Usk and its floodplain, the overgrown pond and associated marginal habitat to the west, two small ponds within the adjacent farms, and several mature tree groupings along the boundaries of the floodplain fields to the east.

Two public rights of way cross the site. A north/south footpath enters the site between the northern edge of the pond and the care home. From here, the path runs in a south easterly direction towards Racecourse Farm and beyond, to cross Monmouthshire Golf Course. A second footpath runs in a broadly east-west direction passing the southern boundary of the Llanfoist Fawr Primary School and continuing to cross the site and join with the north/south footpath at Racecourse Farm. Currently a dense bank of brambles blocks the linkage between the care home and the site at the boundary.

Arboricultural Survey

An arboricultural survey was carried out in the spring of 2020. The findings of the report have been incorporated into the GI Strategy and any recommended works should form part of an ongoing maintenance strategy. Any trees of particular merit have been noted and where necessary, additional protection measures would be set out.

Tree Tag No.	Species	Height (m)	Calculated Stem diameter (mm)	Height crown clearance (m)	Age Class	Branch spread (m)				Vitality	Structural condition notes	Recommended Works	Est. remain years	Category grading	RPA radius (m)
						N	S	E	W						
17	Oak	16	1250	2.0	V	8.0	10.0	8.0	10.0	FAIR	<ul style="list-style-type: none">Old pollard with re-growth from 3mHas been re-pollarded in past at 5mNo. of small cavities visible at old pollard points at 5m East – potential bat roost sitesEpicormic shoots on lower main branches and on trunkNo other visible external defects	No works required	40	A1	15.0
43	White Willow	20	1250	N-0	V	10.0	10.0	6.0	8.0	FAIR	<ul style="list-style-type: none">Very old Veteran pollardTrunk is hollow and split into 2 halves5 main stems coming off trunkOne stem snapped and fallen to South2 other stems split, twisted and fallen to NorthValuable standing and fallen dead wood habitat for site biodiversityNo other visible external defects	Retain Reduce height of remaining upright stems by half to prevent further stem failure	20 to 40	A3	15.0

Ecological Survey

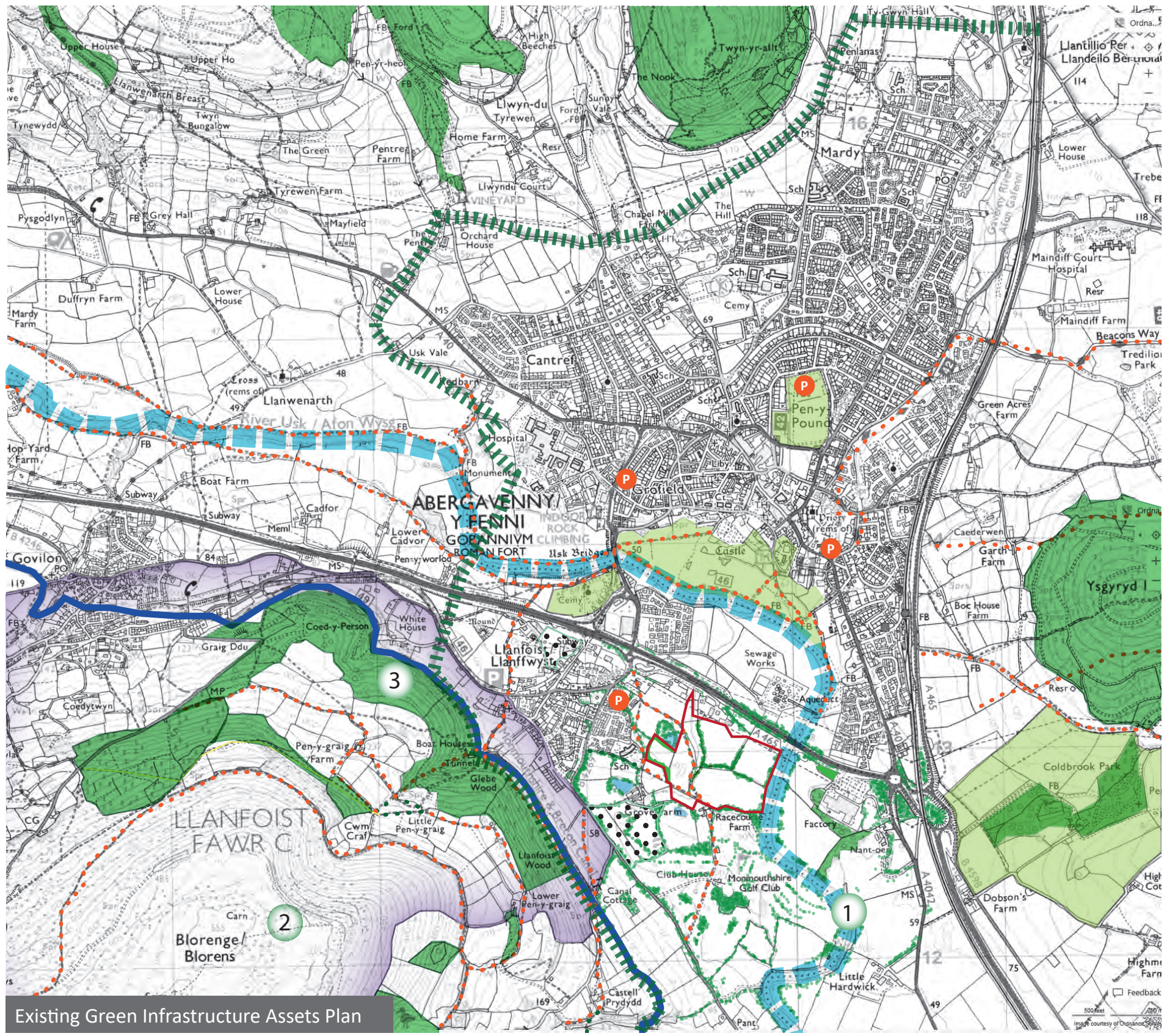
A series of ecological surveys have been undertaken since June 2019. The Phase 1 habitat survey identified that the site predominantly comprised semi-improved grassland with an area of marsh grassland divided by narrow corridors of broadleaved woodland and dense scrub and ditches containing running water.

Great Crested Newts and bats have been recorded on site and the green infrastructure concept plan has been developed in consultation with the project ecologist to ensure maximum protection and habitat connectivity/creation is afforded to this species.

Recommendations also included that the following considerations be undertaken:

- Sensitive lighting design in the vicinity of potential nocturnal species
- Retention of all trees if possible and further survey works for hazel dormice within any areas of potential felling
- Retention of as much dense scrub-land as possible
- Treatment of all invasive weed species as part of ongoing management
- Use of predominantly native species within planting proposals
- Management of areas of grassland swards as wildflower meadow
- Incorporation of additional wildlife features within the design including insect hotels, hibernacula.
- Creation of an ongoing biodiversity management plan

It was also noted that the presence of otters along the River Usk corridor was highly likely and the GI strategy includes proposals for potential ongoing work which could provide enhanced habitat for this species.



- Application Boundary
- Large woodland areas
- Areas of Amenity Importance (Monmouthshire)
- Historic Parks and Gardens
- Site of Special Scientific Importance
1 The River Usk; 2 Coed-y-Person; 3 The Blorenges
- The River Usk
Special Area of Conservation
- Blaenavon World Heritage Centre
- Public Right of Way
- Site of Importance for Nature Conservation
- Brecon Beacons National Park Boundary
- Play Areas
- Monmouthshire & Brecon Canal
- Earth Centre
- Potential groups of tree planting
topsoil placement to soften landfill
- Grove Farm SINC
- Notable trees with Veteran status
or bat roosting potential
- Key Opportunities

Existing Green Infrastructure Assets Plan

3.0 GI Opportunities

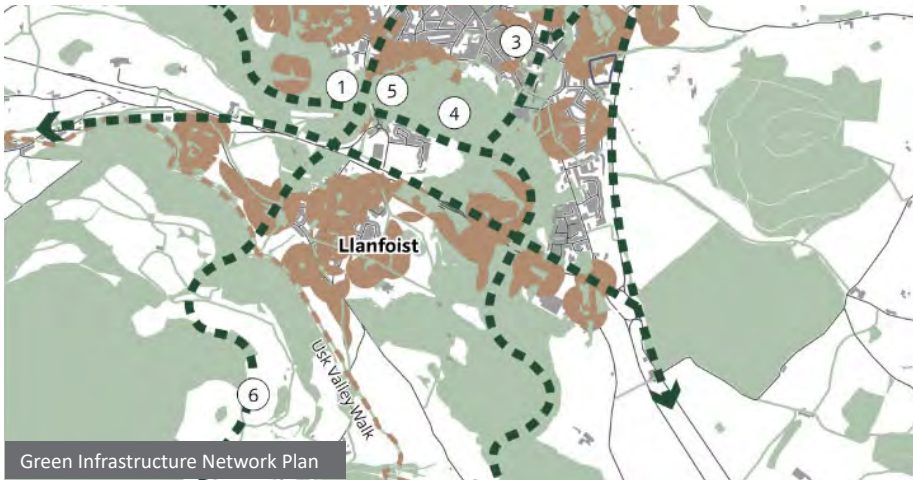
Monmouthshire GI Strategy: Assets & Opportunities

The Monmouthshire Green Infrastructure Strategy (2019) is informed by a series of linked strategy documents including SPGs, assessments and Local Development Plan policies. The proposals for the Velo Park incorporate the GI guidance within the masterplanning process however, this strategy also identifies works beyond the red line boundary and therefore, the immediate scope of the Velo Park project, where there are associated opportunities to meet the objectives set out in the 2019 GI Strategy.

Detailed GI assets and opportunities for the Abergavenny and Llanfoist area are set out within the GI Strategy document, details of which are shown below for reference. Also included for reference, is the overarching Green Infrastructure network plan which is notable in that it highlights the site and its immediate surroundings as having Habitat Connectivity Opportunities which support the additional works which are proposed.

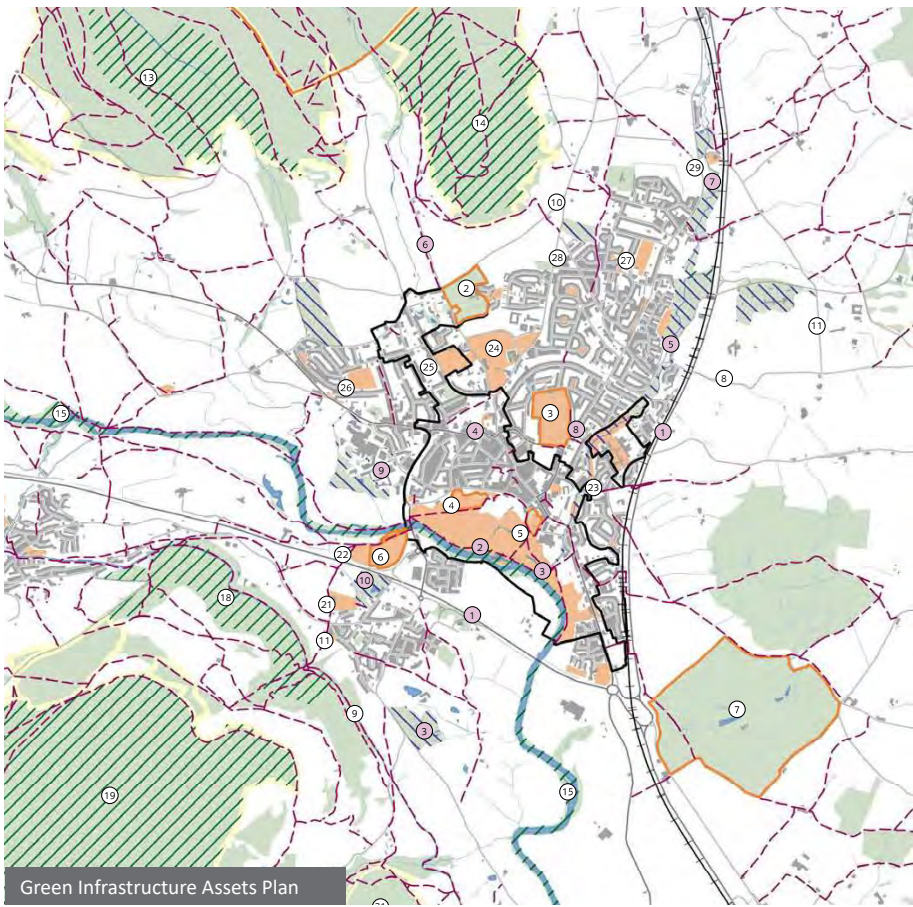
The key GI opportunities identified in the Monmouthshire GI Strategy that would deliver the most significant benefits for people and wildlife are considered to be as follows:

1. Strengthen the A465 and railway corridor, ensuring tree line and hedgerows are well connected and sensitively managed.
2. Improve the ecological quality and value of the green corridor adjacent to the River Usk.
3. Create and enhance links between the River Usk, River Gavenny, A465, A4143 and railway corridors with the semi-natural habitats around Llanfoist, including connections between development at Grove Farm and the nearby SINC, the Monmouthshire and Brecon Canal and the ancient woodlands.
4. Integrate trees in open green (grassed) space where appropriate2 within the Abergavenny Conservation Area.
5. Understand the significance of the culverts on the River Gavenny and the smaller watercourses e.g. the Afon Cibi, as barriers to wildlife dispersal and explore potential options for reducing their fragmentary effects.
6. Form or strengthen ecological links between The Hill site and the Sugar Loaf ancient woodlands
7. Form or strengthen ecological links between the River Gavenny railway corridor and the woodland and watercourse near St Teilo's vicarage.
8. Enhance ecological connectivity between sections of the Afon Cibi in central Abergavenny with the trees and watercourse of Bailey Park, which itself could be better connected to the River Gavenny to its east.
9. Form or strengthen ecological links between patches of trees in and around The Knoll and Nevill Hall Hospital and also to the Nant Iago to the west, the A4143 corridor to the east and a block of woodland, semi- improved grassland and a small tributary of the River Usk to the south.
10. Increase access to rights of way and green spaces between Abergavenny and Llanfoist that are currently not accessible.



Green Infrastructure Network Plan

Combined green infrastructure assets
Main Promoted Routes
Green infrastructure corridors
Habitat connectivity opportunities



Green Infrastructure Assets Plan

Natural or Semi-natural Greenspace
Statutory Biodiversity Designations
Sites of Interest for Nature Conservation
Watercourses/Waterbodies
Historic Parks & Gardens
Conservation Area
Public Open Space
Country Park
Open Access Land (CRoW Act)
Public Right of Way

Llanfoist Velo Park: Needs & Opportunities

The Needs and Opportunities Strategy for the Velo Park site is illustrated on the following page and has been developed in consideration of local planning policy aspirations, recent site surveys and technical information guiding the delivery of the closed loop circuit.

The key opportunities, including those within the development's red line boundary and those suggested as future GI improvements to create further connectivity opportunities beyond the boundary, are detailed below:

- 1 Strengthened GI corridor along the A465 with a native woodland planting buffer to the south of the recycling centre
- 2 Strengthened and in-filled GI corridors linking across the site with native tree and hedgerow planting, including the potential for occasional fruit trees
- 3 Increased wetland/buffer areas adjacent to the pond and ditches, providing additional amphibian habitat/connectivity and the potential for integrated sustainable drainage features
- 4 Increased ecological diversity within grassland swards across the site including field margin wildflower mixes and sloping banks managed as wildflower meadows
- 5 Filtering of views between the main body of the site and the northern, more urbanised zone, and to soften views between the care home and recycling centre
- 6 Improved pedestrian access into the site, creating linkages to existing footpaths where possible and the introduction of clear signage. Scrub clearance at entrance points and replacement of styles with gates to improve accessibility
- 7 Improved accessibility to the existing pond, including selective thinning of encroaching scrub to increase visibility of water and provision of a boardwalk to direct visitors away from, and over, sensitive habitats and the SuDS basins
- 8 Potential future opportunity to create additional footpaths and board-walks to provide access to the River Usk floodplain meadows, habitat interpretation boards, informal seating, natural play features and possible additional links to PROWs
- 9 Recognition of the need to retain key views to the wider setting whilst factoring in the likely need for the filtering of views of the proposals from outside the site
- 10 Recognition of visually enclosed area with limited inward views from surrounding area



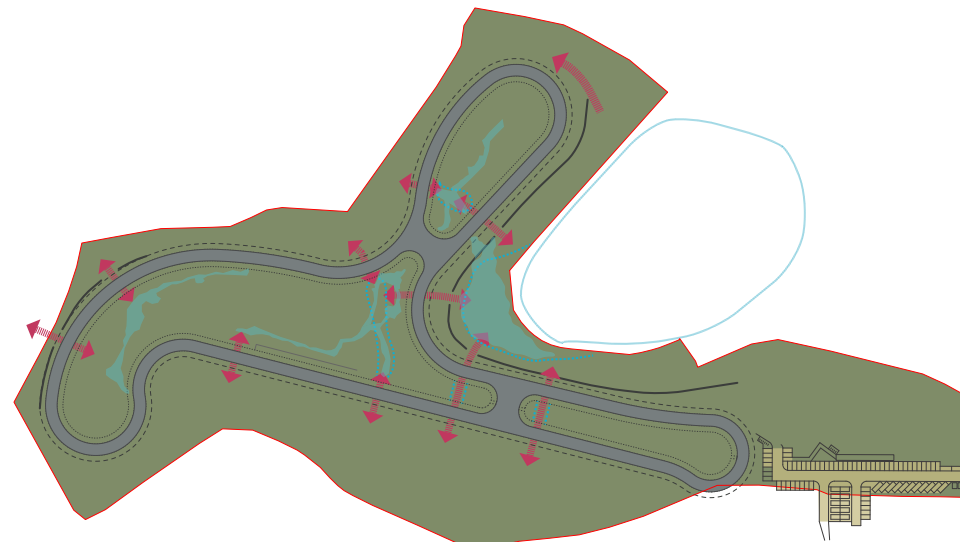
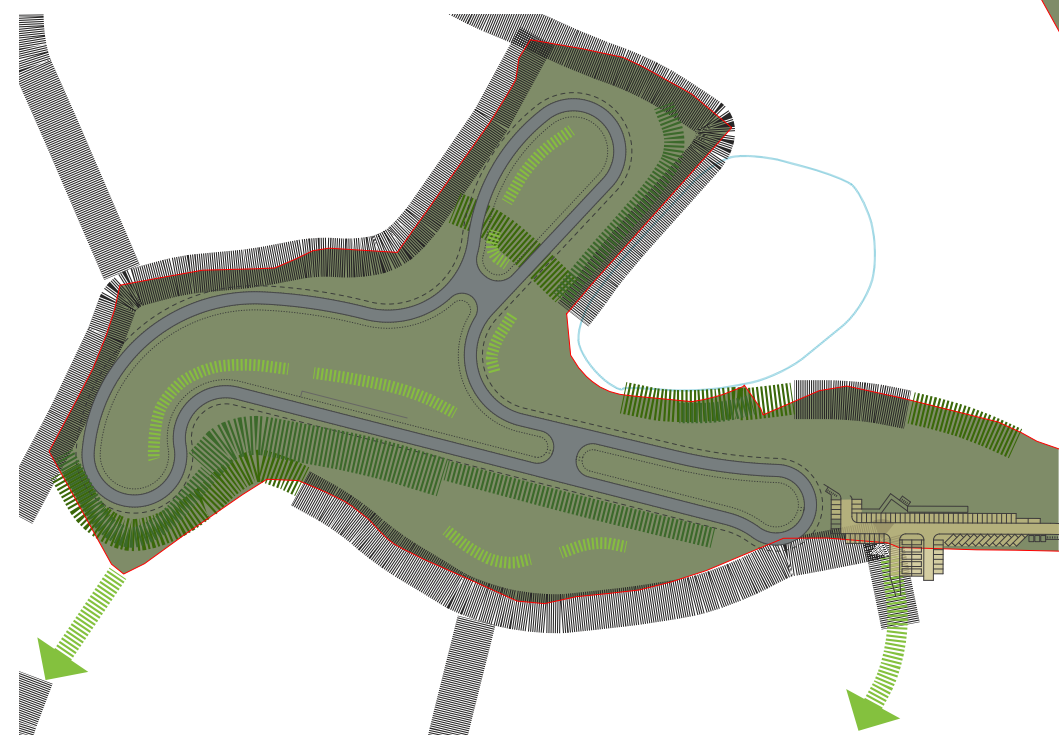
4.0 GI Strategy

The following pages describe the Green Infrastructure proposals for Llanfoist Velo Park and opportunities beyond the project site boundary.

The proposals are firstly identified on a site masterplan and then in more detailed under the five strategic GI objectives set out within the 2019 Monmouthshire Green Infrastructure Strategy document.

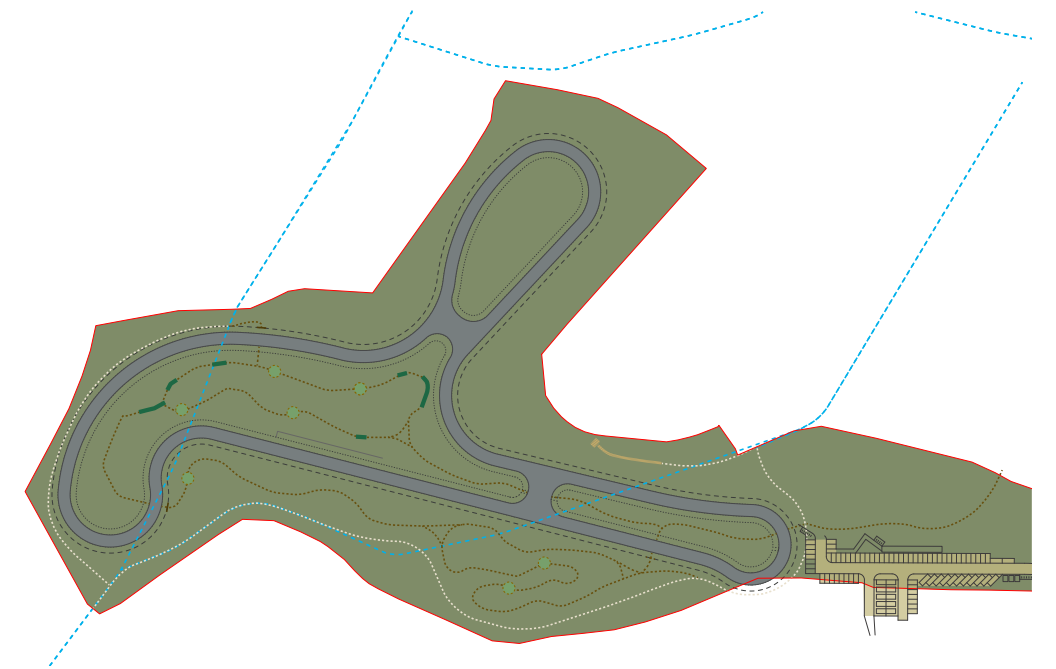
Landscape / ecological structure and connection

The existing boundaries and edges are a key asset in terms of ecological and landscape value. The proposals reinforce these elements to create substantial continuous hedge-lines and woodland belts that will expand and connect habitats, and provide landscape enhancement and visual screening. Their arrangement will also help to repair the local landscape character.



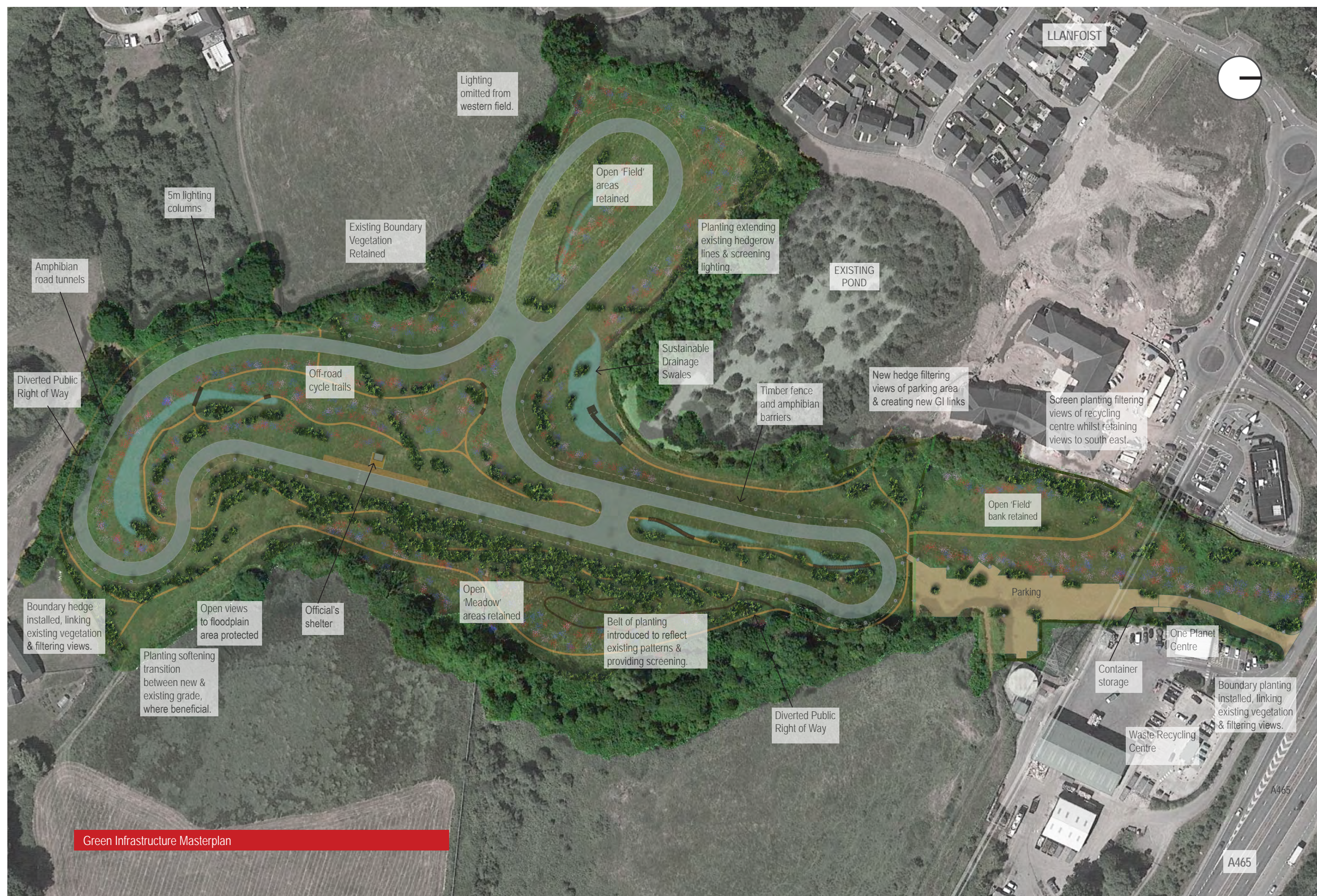
Integrated drainage, habitat creation and connectivity

The interior elements of the site also provide extensive opportunities for habitat creation, and the proposals include areas of wildflower meadow, low scrub, and small groupings of trees. The landform will include slopes and undulations, together with areas of stone, boulders and log piles. The SuDS drainage will provide a network of routes to help direct amphibians towards tunnels which pass under the cycle track, to aid their safe migration.



Integrated recreation routes and facilities

The proposals include the diversion of two public rights of way and additional new connecting routes. Increased accessibility is also supported through the installation of pedestrian gates, well constructed paths and gentle gradients. The experience of the visiting the area is enhanced through substantial improvements to the integrity of the landscape and provision for informal recreation including seating, play, boardwalks, nature observation and interpretation.



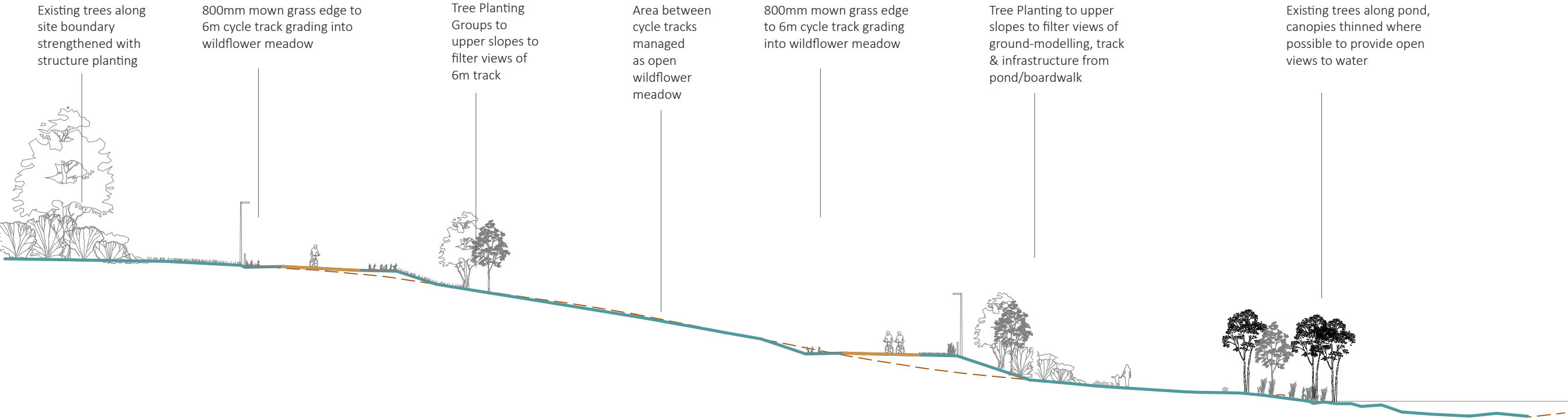
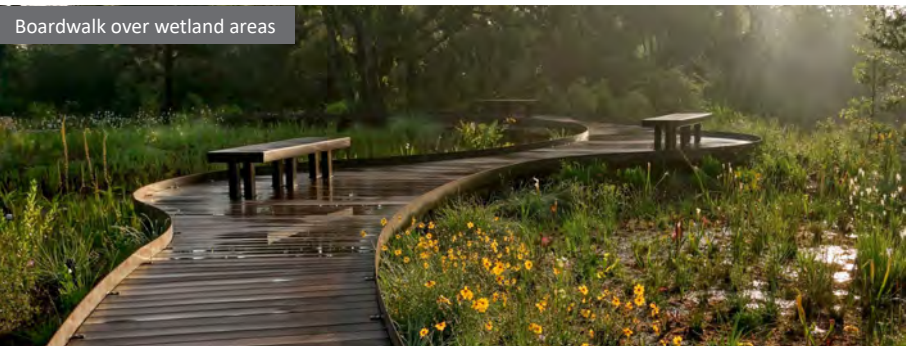
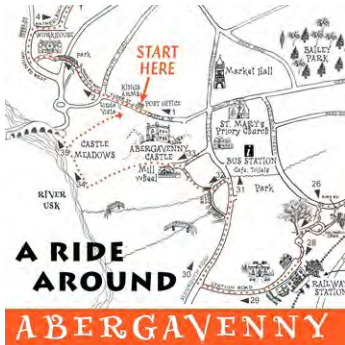
1. Improve Health & Well-being

Health and well-being is intrinsically linked with quality of environment and opportunities for people to interact with it. The primary purpose of the Velo Park is to provide opportunities for people to partake in track based and off-road cycling events and training. However, beyond this, a key objective of the wider masterplan has been to ensure that both the quality of the site and its setting are not negatively impacted by the introduction of the proposals and that existing users remain able to access the site and new users are encouraged to visit the site through enhanced facilities.

The GI Strategy proposes the following:

- i. The retention, realignment and enhancement of two public rights of way that cross the site linking the edge of Llanfoist with Racecourse Farm, Monmouthshire Golf Course and beyond, towards the wider countryside.
- ii. Provision of more accessible footpaths across site and connecting to the wider countryside through improved wayfaring, scrub clearance at access points, off site linkages to residential paths and replacement of poor quality styles with field gates.
- iii. Provision of a variety of routes across site catering for differing ages and abilities.
- iv. Provision of routes which are accessible when cycling events are taking place.
- v. Provision of a variety of cycling opportunities catering for a range of ages and abilities to encourage families to use the site.

- vi. Provision of potential future routes to encourage connection with a variety of natural habitat types including the River Usk corridor.
- vii. Provision of seating, natural play opportunities and interpretation boards to improve the quality and variety of experience.
- viii. Provision of access linkages to The One Planet Centre





Re-routed public rights of way crossing open meadows, encouraging active exercise and exploration of the local area

2. Enhance Biodiversity & Increase Ecosystem Resilience

The site mainly comprises semi-improved pasture bordered by unmanaged hedges, interspersed with trees. The site also includes encroaching scrub, particularly in the north of the site, young regenerating woodland, ditches, pond edges and marshy grassland however, the northern parts of the site have limited structural vegetation.

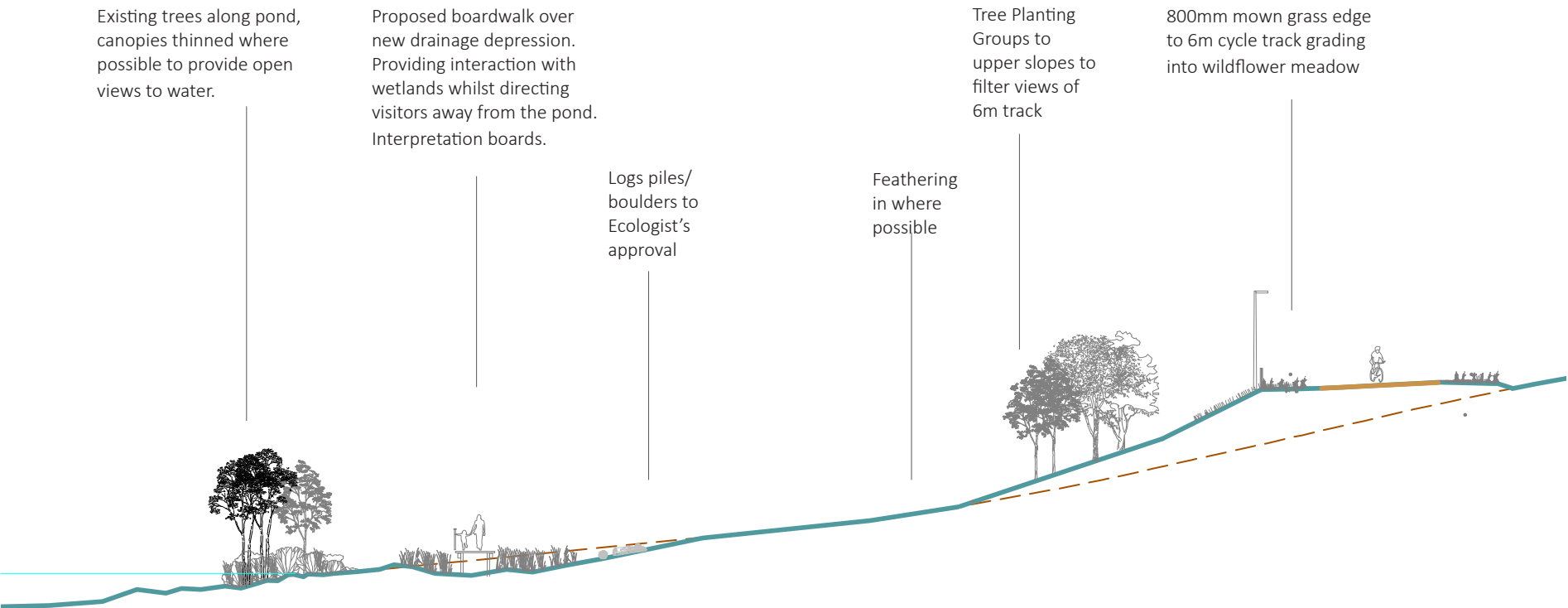
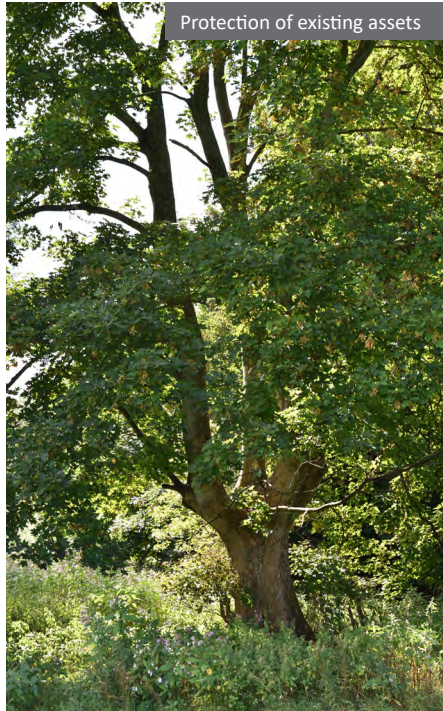
A number of significant GI Assets surround the site including ponds, mature tree groups, hedgerows, extensive areas of floodplain, and the River Usk. In addition, the ecological surveys have confirmed the presence of Great Crested Newts and bat species and generally, the findings and recommendations of the ecology and arboricultural reports have been incorporated into the GI strategy from the outset.

The GI Strategy proposes the following:

- i. Retention of the majority of the site's boundary vegetation.
- ii. Retention of areas of dense scrub identified as having high value for wildlife.
- iii. Increasing the longevity of agreed sections of existing hedges through management practices such as hedge laying.
- iv. Strengthening of existing GI corridors with additional structure planting and infill planting to identified gaps within hedgerows.
- v. Creation of additional GI connectivity across site with new structure planting belts including along the northern A465 boundary and the floodplain boundary.
- vi. Management of newly created grassed slopes as wildflower meadow. Proprietary seed mixes selected in response to local conditions and enhanced with local provenance seed through liaison with local groups such as the wildlife trust and Monmouthshire Meadows Group.
- vii. Provision of a series of additional wetlands, ditches and tunnels to facilitate the movement of amphibians across the site, beneath the cycle tracks and linking to wetland habitats in the surrounding area.
- viii. Habitat creation through rock and log piles, etc.
- ix. Usage of predominantly native species including those with local distribution and value for pollinators with a small number of non-native species selected for pollinator value and seasonal interest closer to parking and circulation areas.
- x. Introduction of locally important tree species where appropriate to access known provenance saplings.
- xi. Provision of a multi-level lighting strategy for the cycle track with associated screen planting to ensure reduced lighting and unlit areas are provided in accordance with the ecologist's recommendations.
- xii. Production of an management and ecological monitoring plan.

Opportunities beyond the site boundary:

- xiii. Creation of additional GI connectivity beyond the site with new structure planting belts including along the northern A465 boundary and connecting the site with the River Usk corridor.
- xiv. Provision of an increased area of marshy wetland linking into the River Usk
- xv. Potential future access and interpretation on Veteran Trees identified within the River Usk corridor area.
- xvi. Eradication of invasive weed species through an ongoing management regime.





3. Strengthen Landscape Character & Distinctiveness

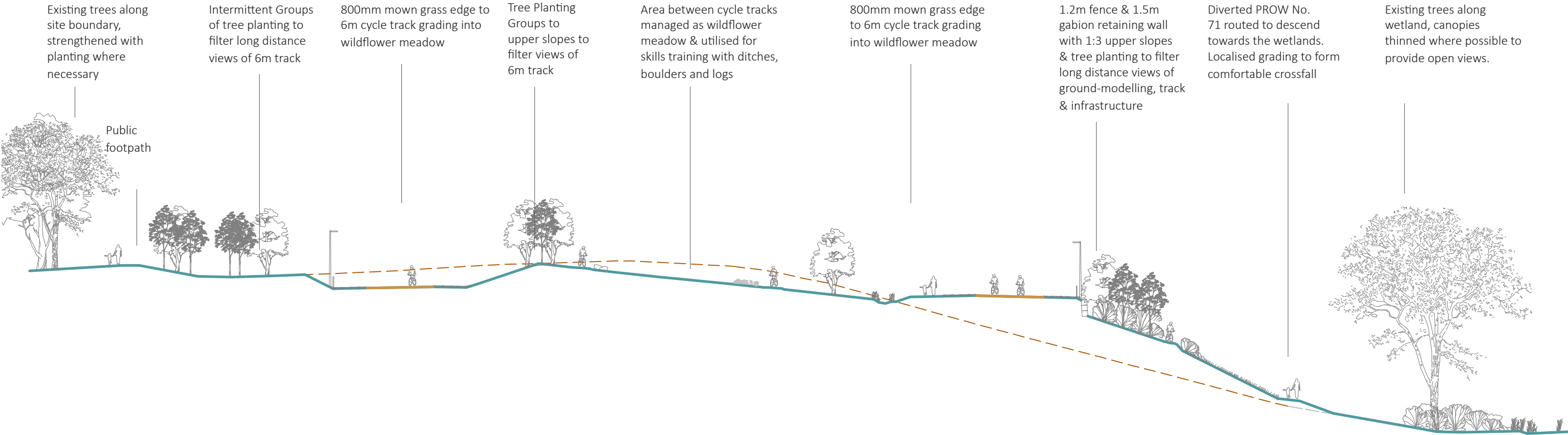
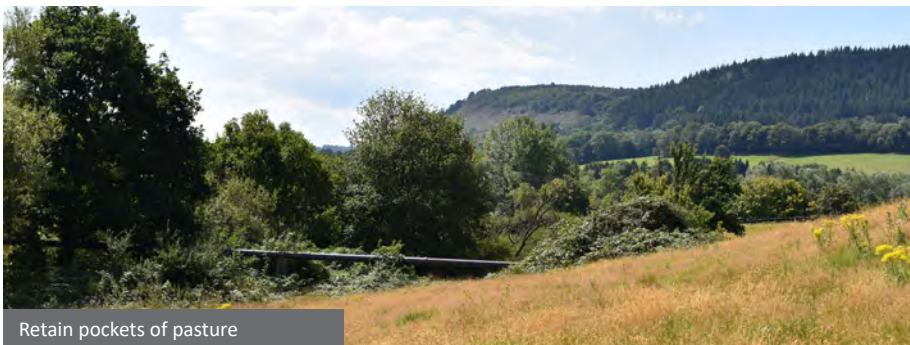
The Monmouthshire Sensitivity and Capacity Study (2009) describes the site and its surroundings as being a “mosaic of woodlands and small pastures” with “positive intrinsic qualities providing a transition from valley floor to the upland of the Blorengé”. In order to incorporate the cycle track into the landscape whilst supporting this mosaic structure, the GI Strategy proposes the following:

- i. Strengthening of existing field boundary vegetation with native structure planting to reinforce the field pattern.
- ii. Where planting is required in support of the lighting strategy, a broadly linear planting structure is adopted to reflect the field patten character.
- iii. Additional native boundary hedges and structure planting belts where they contribute to the field pattern and provide a screening function.
- iv. Where planting is required to soften/filter views of the proposed track, planting is positioned for maximum screening benefit and set out as linear strips, thereby creating open ‘field’ areas.
- v. Newly graded embankments would be feathered into existing contours with maximum 1:3 gradients across the majority of the slopes, reflecting the gentle topography of the wider rolling lowlands. In steeper areas, low stone filled retaining walls and screen planting would be introduced to reduce bank gradient.
- vi. New embankments will be managed as wildflower meadows to blend the made ground with existing contours.
- vii. Wildflower meadows will incorporate a proportion of locally sourced seed to further reflect surrounding landscape character

- viii. Management regimes/selective thinning will be proposed in locations to create visual linkages with GI assets including the pond, the River Usk and the floodplain area, reinforcing the character of the setting.
- ix. An integrated landscape and drainage scheme is proposed with attenuation basins located close to existing wetland areas and designed to achieve a natural and varied form with undulating bases and non-uniform sides creating diverse micro-climates and the basins sown with wildflower and grass species tolerant of fluctuating water levels.
- x. Views of detractors and elements that weaken the visual unity of the landscape will be softened with native structure planting

Opportunities beyond the site boundary:

- xi. The River Usk floodplain could be managed as a wetland meadow habitat through the removal of topsoil for use elsewhere, and the subsequent creation of ‘scrapes’. This could include the use of locally sourced seed and tree planting (including Black Poplar) to strengthen boundaries and corridors.
- xii. Where possible, views of detractors and elements that weaken the visual unity of the landscape could be softened with native structure planting. This could include the A465 boundary, and the landfill site which is incongruous within the wider setting.
- xiii. Identification of visually contained area alongside the landfill which provides opportunity to site cyclo-cross features without the requirement for screening.





The retention and improvement of existing walking and cycling routes and the creation of new routes, to connect with local existing places of interest

4. Increase Climate Change Resilience

The Green Infrastructure strategy includes various measures for increasing resilience to climate change with a particular focus on the management of water, species selection and the considered use resources. The strategy proposes the following:

- i. An integrated landscape and drainage scheme incorporating sustainable drainage solutions across the site, reducing site run-off and providing attenuation volumes for storm events.
- ii. Track alignment and landscape/earthworks designed to minimise the need for excessive export or import of materials.
- iii. Re-use of site won materials including topsoil, mulched organic matter and inert fill.
- iv. Provision of access and facilities to encourage journeys to the site by foot and cycling.
- v. Possible use of photovoltaics for site energy demands.
- vi. Lighting design that minimises energy demand through optimal lux levels and timing/switching.
- vii. Specification of feathered and light-standard stock across structure planting areas which will help to reduce losses from water stress and create a more natural appearance.
- viii. Water conservation through the use of tree watering bags for standard trees planted in car parking areas.
- ix. Tree planting in the parking areas to provide solar shading.
- x. Amenity and meadow grass mixes which contain a high proportion of drought tolerant species.
- xi. Specification of drought tolerant shrub species especially within car parking areas.

- xii. Potential for future incorporation of sections of boardwalk across low lying areas of the site, allowing access to the site over a greater proportion of the year and following increased periods of heavy rain.

Opportunities beyond the site boundary

- xiii. Implementation of structure planting which would strengthen and increase green infrastructure connectivity across the site and outwards to the wider area, supporting ongoing biodiversity.

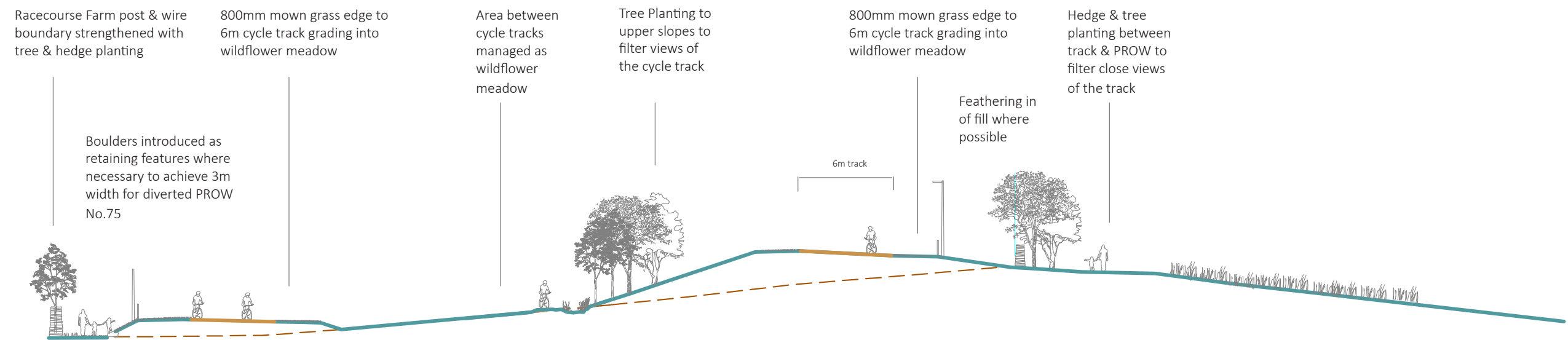


5. Support Sustainable Economic Development

The Velo Park will provide notable benefits to the local economy, and the wider issues of sustainability have been a central consideration in developing the proposals.

The GI Strategy includes the following proposals and associated benefits:

- i. The Velo Park will regularly draw significant numbers of users and spectators, who will use local shops, facilities and services, and generally contribute to the local economy.
- ii. The Velo Park will help strengthen the identity and reputation of the town, and reinforce Abergavenny as a desirable place to visit.
- iii. The facility could help to develop specialist cycling related skills and services and will promote competitive cycling in Wales.
- iv. The scheme provides opportunities to enhance the public footpath network and will help to enhance the area as a destination for visitors.
- v. The site is easily accessible by bicycle and on foot for the local community. For the wider community the site has good access to the existing transport network.
- vi. Re-use and extension of existing on-site facilities at the One Planet Centre including improved connection with the wider public rights of way network, encouraging further engagement with the surrounding natural environment.
- vii. Where possible and appropriate, the specification of materials from local sources.
- viii. The scheme provides opportunity to invest in the enhancement of existing GI assets and to introduce new features such as wildflower meadows and wetland areas.
- ix. The scheme incorporates an integrated sustainable drainage solution which will manage flood risk whilst contributing to landscape and ecological value.





The management of open areas to reduce maintenance requirements, introduce greater resilience to drought and improve biodiversity

