

GREEN INFRASTRUCTURE

The zoned lands above Broomfield are characterised as being primarily *Improved Agricultural Land* GA-1, along with a cluster of non-native trees around the Water Treatment facility and scrub hedgerows bounding the site (Refer *Ecological Impact Assessment* Chapter 3). The degree of biodiversity is limited and no flora or fauna sensitivities have been identified.

Chapter 14 (Green Infrastructure and Recreation) and Chapter 15 (Biodiversity and Environment) of the Cork County Development Plan 2022-28 contain objectives for incorporating green and blue infrastructure into new residential development. These have been cross-referenced with the Cork Co Co guidance document *Biodiversity and the Planning Process*. The most pertinent of these objectives are outlined below.

Objective GI 14-1: Green and Blue Infrastructure

f) Achieve a net gain in green infrastructure through the protection and enhancement of existing assets and through the provision of new green infrastructure, as an integral part of the planning process.

With significant dieback of Ash and Elm on site, vegetation diversity is limited. Existing assets include moderate quality tree rows, low quality thorn hedgerows and low quality scrub hedgerows. The numbers protected and retained, as well as removed are outlined below:

Retention of moderate quality Tree Rows = 325 lin.m. (100%)

Removal of moderate quality Tree Rows = 0 lin.m. (0%)

Retention of low quality Thorn Hedgerows = 95 lin.m. (53%)

Removal of low quality Thorn Hedgerows = 85 lin.m. (47%)

Retention of low value Scrub Hedgerows = 360 lin.m. (38%)

Removal of low value Scrub Hedgerows = 575 lin.m. (62%)

Proposed planting includes 742 no. new semi-mature and advanced trees. Some of these are being coupled with supplemental transplants with the specific intent of re-creating biodiverse hedgerows to compensate for the lost vegetation. 660 lin.m. of 100% native hedgerows provide this compensation, with a far greater diversity than the existing species. Combined with several thousand pollinator shrubs, the green infrastructure gain is a net positive.

In terms of blue infrastructure, there are no existing field drains or areas of collected water. When the ground is saturated, stormwater sheets off the site. Blue improvements include 600 sq.m. of biodiversity swales plus hundreds of metres of filter drains. These will minimise the need for engineered structures and slow the flow of water from the site to the public storm system for a new positive gain.

Objective BE 14-6: Public / Private Open Space Provision

b) Promote the provision of high quality, accessible and suitably proportioned areas of public open space and promote linking of new open spaces with existing spaces to form a green infrastructure network.

The scheme provides a mix of passive and active public amenity totaling 18% of the site area (Part 14.5.11). The higher end of the range (12-18%) is provided to ensure sufficient open space on a sloping site. It is our opinion that the open space solutions are also provided to a high qualitative standard.

There a 9 no. designated open space zones, ranging in size from 450 to 2400 sq.m. and catering from young kids to teenagers to single adults and the elderly. With 6 of the 9 designed along a central amenity and biodiversity spine, the open spaces are interconnected and incorporate accessible paths, forming a strong green infrastructure network. This green network extends to the larger public realm by enhancing the biodiversity and landscape finish along the R7630 to the benefit of all Broomfield users.

Objective GI 14-9: Landscape

e) Discourage proposals necessitating the removal of extensive amounts of trees, hedgerows and historic walls or other distinctive boundary treatments.

Objective BE 15-8: Trees and Woodlands

d) Ensure that development proposals do not compromise important trees and include an appropriate level of new tree planting.
e) To protect mature trees/groups of mature trees and mature hedgerows that are not formally protected under Tree Preservation Orders.

An arborist was commissioned to carry out a *Hedgerow Appraisal and Arboricultural Report* (Tree Survey Report) to inform the design team. This guided the classification of trees and hedgerows and made parties aware of the extent of Dutch Elm and Ash dieback diseases.

There are no Tree Preservation Orders and no distinctive boundary treatments (the most notable features are sod and stone ditches with modern steel farmgates). The scheme protects the large sycamore trees bounding the water treatment facility. They are non-native but they serve a robust screening purpose. Where it is unnecessary to remove hedgerows, these have been retained (east boundary and southwest corner). Removals include low quality hedgerows that can easily be replaced with a more robust, biodiverse solution. New hedgerows and new native woodland corridors exceed the volume of vegetation removed and actually improve biodiversity links across the site.



Existing east hedgerow retained as an asset to adj. agricultural lands.

Objective GI 14-2: Green Infrastructure Objectives for Towns

c) Seek to create new and improved connections (physical/ecological corridors) between open spaces/green infrastructure and other important destinations as part of the enhancement of the overall network.

Objective GI 14-3: Green Infrastructure and Development

b) ...prepare a Landscape/Green (and Blue) Infrastructure Plan including a Landscape Design Rationale. This Plan should identify environmental assets and include proposals which protect, manage and develop green infrastructure resources in a sustainable manner.

A Landscape Strategy / Design Rationale (L200-L201) provides the ecological and open space framework from which the scheme is developed, with assets documented in dwgs. L203-L205. Biodiversity connections are prioritised with 5 full-site links, while a physical north to south link allows someone with a buggy to safely traverse the site and reach all open spaces.

Objective BE 15-6: Biodiversity and New Development

c) Requiring the incorporation of primarily native tree and other plant species, particularly pollinator friendly species in the landscaping of new developments.
f) Ensuring that the implementation of appropriate mitigation (including habitat enhancement, new planting or other habitat creation initiatives) is incorporated into new development, where the implementation of such development would result in unavoidable impacts on biodiversity-supporting the principle of biodiversity net gain.

The proposals include 2 no. new hedgerows / woodland corridors that link the site east to west as well as a number of urban woodland pockets. 100% of these plants will be installed as native species. A small percentage of on-native acclimatised species are used in difficult urban situations where our native trees would not perform well. These include some large canopy trees that will outgrow our natives. This diversity also serves as future-proofing against disease and climate change.

By expanding the native tree species on site and combining them with wildflower meadows, SuDS swales and damp meadows, plus shrubs derived from *All-Ireland Pollinator Plan* recommendations, a responsible approach to the landscape is illustrated. The result is a measurable biodiversity gain.