



BIODIVERSITY PLAN

Saint Pauls to Ballykeeffe Roundabout
Active Travel Scheme Limerick

Prepared for Limerick City and County Council

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1 Biodiversity Plan St Nessian's Road

1.1 Introduction

MEC Ltd was commissioned by Limerick City and County Council (LCCC) to prepare a Biodiversity plan for the proposed Part 8 application for the Saint Pauls to Ballykeeffe Roundabout Active Travel Scheme in Limerick City.

1.1.1 Summary of proposed development

The proposed scheme will provide high-quality cycling facilities on a section of the R526 St Nessian's Road in the south Limerick environs. This area is c.600m in length, beginning at the southern end of Nessian Road - Father Russell Road (Saint Pauls Roundabout) and commencing at the northern end next to Crescent Shopping Centre, north of Ballykeeffe Roundabout.

The provision of the cycling facilities will involve an upgrade of the current road corridor to better accommodate pedestrian, cycling and vehicular provisions. This will be achieved by re-construction of the existing footpaths, construction of cycle tracks and narrowing of the existing road carriageway between the Saint Pauls and Ballykeeffe Roundabouts. The segregated cycle facilities on both sides of the road will be separated from the road carriageway by a c.250mm wide upstand kerb.

1.1.2 Supporting documentation

A screening statement for Appropriate Assessment and an Environmental Impact Assessment Screening report were prepared. In addition, an Arboricultural survey was undertaken and a bat roost potential survey was undertaken in relation to the existing trees on site. These all accompany this application.

1.1.3 Objective of the Biodiversity Plan

The overriding design intention is to improve the sense of space, create a variety of quality public spaces along existing residential developments to increase potential uses / improve the sense of ownership and to enhance the biodiversity in the area.

Additional specimen trees will be planted at selected locations to improve the character of the site, provide additional screening and compensate for loss of existing trees, whilst bands of native hedgerows and swaths of wildflowers along existing tree lines will create a linear green buffer strip.

Site biodiversity will be improved through the use of native and non-invasive adaptive planting, including landscape planting measures to protect and enhance pollinators as set out in the All Ireland National Pollinator Plan 2021-2025, through the provision of pollinator friendly planting, wildflower meadow and shade tolerant planting under trees and native hedges.

Bird and bat boxes will be installed on existing trees as part of this development to encourage nesting in the area and attract wildlife.

1.2 Existing ecological resources

The proposed development is located within an established urban area and the dominant habitat is reflective of the urban landuse, and is classified as Built Land and Artificial Surface (BL3), with a narrow strip of amenity grassland and occasional semi-mature tree planting primarily within the small pocket park adjacent to Ballinacurra Estate. The approach to the design has been to focus on retention of trees within this pocket park and minimal tree removal overall. See Plate 1 below:



1.2.1 Summary of bat roost evaluation

A bat roost potential evaluation survey was completed in May 2023 by Minogue Environmental Consultants. The survey was completed to identify the potential for trees and vegetation to be removed to allow construction of the Scheme to function as tree roost habitats for bats. The bat roost potential was assessed in accordance with the guidelines in Chapter 6 of the Bat Conservation Trust's Bat Surveys for Professional Ecologists (2016).

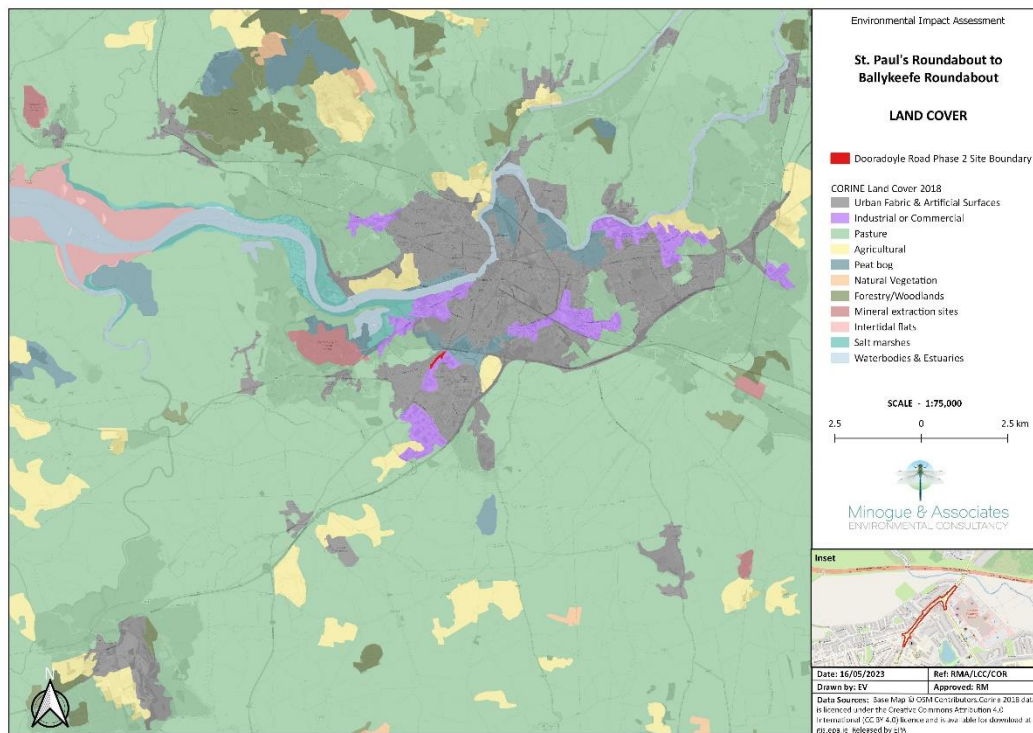
The survey noted that the trees to be removed have smooth bark, absence of cankers or knotholes and ivy growth and provide negligible potential to function as a hibernating roost for bats.

Figure 1-1 presents the site location, Figure 1-2 the landuse mapping (Corine) for the project area. Figures 3-1 and 3-2 the landscape proposals.

Figure 1-1 Site location



Figure 1-2 Existing landcover and use



2 Mitigation Measures

2.1.1 Protection of breeding birds

Where feasible, vegetation (e.g. hedgerows, trees, scrub and grassland) will not be removed, between the 1st March and the 31st August, to avoid direct impacts on nesting birds. Where the construction programme does not allow this seasonal restriction to be observed, then these areas will be inspected by a suitably qualified ecologist for the presence of breeding birds prior to clearance. Areas found not to contain nests will be cleared within three days of the nest survey, otherwise repeat surveys will be required. Should nesting birds be encountered during surveys, the removal of vegetation will be required to be delayed until after the nesting season (1st March to 31st August inclusive).

2.2 Construction Environmental Management Measures

The contract documents include for the following:

- The Contractor shall establish and implement, during the execution and completion of the Works, an Environmental Operating Plan consistent with and analogous to the NRA "Guidelines for the Creation, Implementation and Maintenance of an Environmental Operating Plan".
- All construction and operations shall be carried out in accordance with the Control of Water Pollution from Linear Construction Projects, Technical Guidance (C648) (CIRIA 2006), Control of Water Pollution from Linear Construction Projects, Site Guide (C649) (CIRIA 2006), and in accordance with the Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes (NRA, 2006).

3 Enhancement Measures

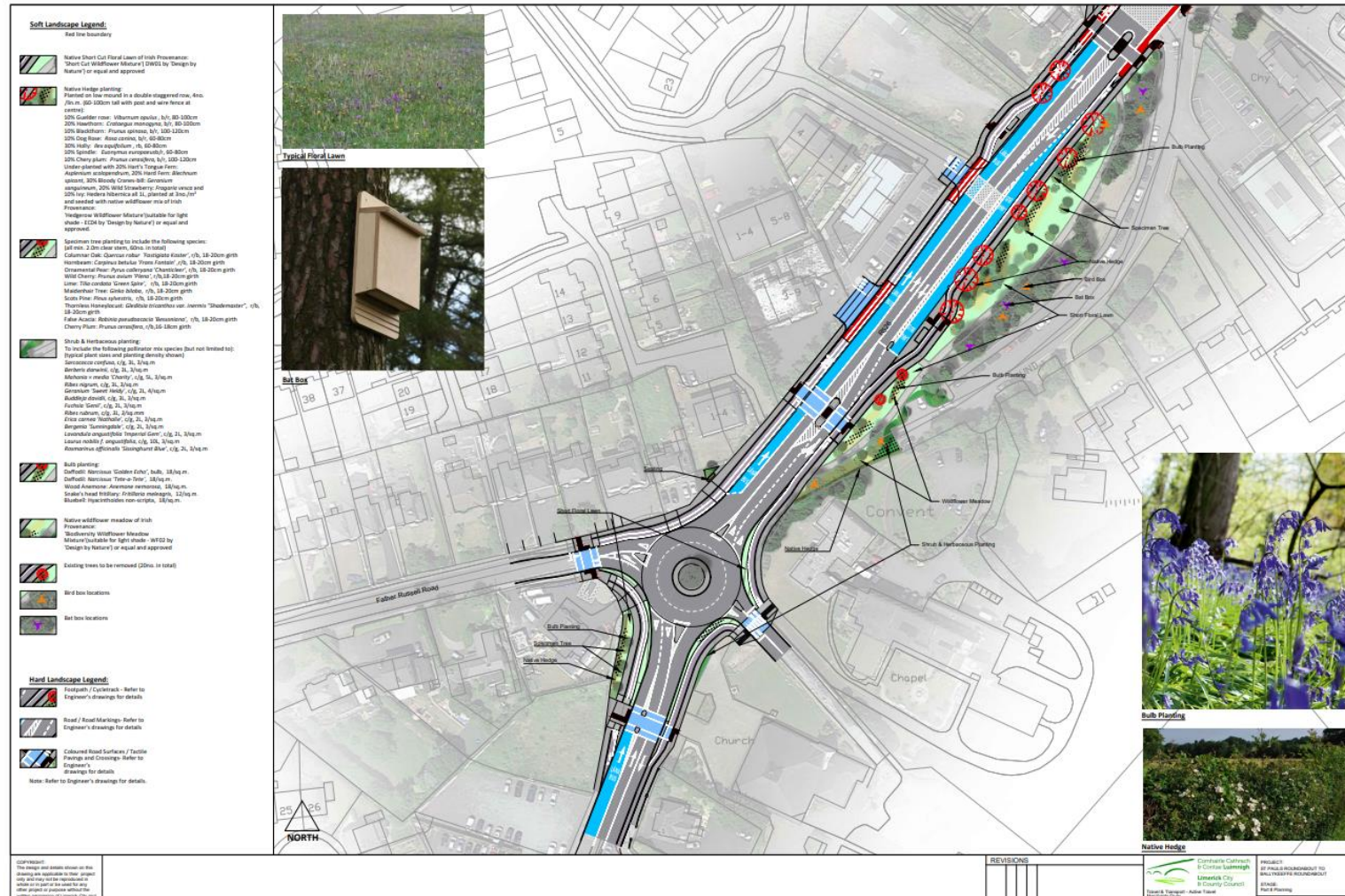
3.1 Landscape

Given the urban habitats present on the site the scheme offers the potential to integrate biodiversity and wildlife friendly planting measures. The landscape plans prepared for the scheme are provided under separate cover. Key to these planting species mix is the provision of native and pollinator friendly species including:

- Native hedgerow planting species including the following species and percentage mixes: 10% Guelder rose: *Viburnum opulus*, b/r, 80-100cm 20% Hawthorn: *Crataegus monogyna*, b/r, 80-100cm 10% Blackthorn: *Prunus spinosa*, b/r, 100-120cm 10% Dog Rose: *Rosa canina*, b/r, 60-80cm 30% Holly: *Ilex aquifolium*, rb, 60-80cm 10% Spindle: *Euonymus europaeus* b/r, 60-80cm 10% Chery plum: *Prunus cerasifera*, b/r, 100-120cm
- Under-planted with 20% Hart's Tongue Fern: *Asplenium scolopendrum*, 20% Hard Fern: *Blechnum spicant*, 30% Bloody Cranes-bill: *Geranium sanguineum*, 20% Wild Strawberry: *Fragaria vesca* and 10% Ivy: *Hedera hibernica* all 1L, planted at 3no./m² and seeded with native wildflower mix of Irish Provenance: 'Hedgerow Wildflower Mixture'(suitable for light shade - EC04 by 'Design by Nature') or equal and approved.
- Specimen tree planting including oak (*Quercus robur*), and wildflower meadow planting from native Irish provenance. Hornbeam: *Carpinus betulus* 'Frans Fontain', r/b, 18-20cm girth Ornamental Pear: *Pyrus calleryana* 'Chanticleer', r/b, 18-20cm girth Wild Cherry: *Prunus avium* 'Plena', r/b, 18-20cm girth Lime: *Tilia cordata* 'Green Spire', r/b, 18-20cm girth Maidenhair Tree: *Ginkgo biloba*, r/b, 18-20cm girth Scots Pine: *Pinus sylvestris*, r/b, 18-20cm girth Thornless Honeylocust: *Gleditsia tricanthos* var. *inermis* "Shademaster", r/b, 18-20cm girth False Acacia: *Robinia pseudoacacia* 'Bessoniana', r/b, 18-20cm girth Cherry Plum: *Prunus cerasifera*, r/b, 16-18cm girth.

Please see the accompanying landscape plans below and provided under separate cover and detailed provision and maintenance will be provided at contract stage. Remedial actions will be undertaken in the event of failure of planting to establish.

Figure 3-2 Landscape Proposals



3.2 Provision of bird boxes and bat boxes

Proposed locations of bird and bat boxes are shown on the accompanying landscape plans.

Nest boxes should be placed securely on a tall tree, as high as possible (2-5m from the ground) away from easy access to predators (e.g. cats), facing north-east, and in a sheltered spot. Different nest boxes have different sized holes to suit particular species. Nest boxes made from woodcrete rather than timber have greater durability and lifespan and are therefore recommended for use.

Bat habitat will also be enhanced through the provision of bat boxes within the proposed development footprint. Bat boxes will be similar to the general purpose Schwegler 2F type and placed at a minimum height of 3m on mature trees with a variety of different aspects. This will increase the likelihood of bat boxes being used at different times of the year. the year.

An appropriately qualified ecologist should supervise the installation of the bird boxes and bat boxes.

3.3 Monitoring

To ensure that the biodiversity actions are achieving the required objectives for each habitat and species, supervision and monitoring is required.

Table 3.1 below lists the schedule of monitoring required for each habitat/species, the personnel responsible, the methodologies employed, and the reporting outputs produced.

Actions will be undertaken by the appointed Project Ecologist (PE) and actions will be scheduled and agreed with LCCC in advance. If vegetation restoration/planting fails to meet targets, then management action should be undertaken. Further ecological advice and consultation will be required to determine the correct course of management action. Meetings will be scheduled between the LCCC, the Project Co-ordinator, and the Project Ecologist as required.

Table 3-1 Biodiversity Actions and Monitoring

Ref	Monitoring Item	Personnel	Schedule	Methods	Outputs	Target
M1	Use of Pollinator Features	PE	Post-Construction -1, 3 and 5 years after completion	Surveys of pollinator species recorded over standard time period in May-July at meadow planting and new woodland habitat	Report on use of features and recommendations for enhancement or remedial actions	Positive use by pollinator species with a 20% increase in diversity and abundance over the 5 year period.
M2	Bats	PE	Post Construction 1,3 and 5 years after completion.	Roost emergence and return surveys at the box locations during the months of June to July	No of bats confirmed using the bat boxes.	
M3	Birds	PE	Post Construction 1,3 and 5 years after completion.	Breeding Bird Survey in line with BTO guidelines.	No of possible, probably, confirmed nesting birds.	Target of supporting breeding birds within the first five years of the operation phase of the proposed development. Target for an increase in the diversity of breeding birds present over the lifetime of monitoring.
M4	Pollinator Species	PE	Post Construction 1,3 and 5 years after completion	Invertebrate Survey during summer months Of wildflower, meadow planting and ecological buffer	Number of species recorded.	20% increase in diversity and abundance over the 5 year monitoring period.

3.4 Conclusion

This Biodiversity Enhancement Plan outlines how the development contributes to the protection and enhancement of existing green infrastructure within the proposed development through maintenance of existing important features such as hedgerow and treeline and through the provision of measures to further enhance biodiversity and green infrastructure throughout the site. These measures include native tree, hedgerow and woodland planting and the provision of areas of wildflower meadow containing pollinator friendly species. The provision of nesting bird boxes and bat boxes, along with monitoring of same will also provide additional nesting and roosting features for wildlife within the area.