ALTEMAR

Marine & Environmental Consultancy

Biodiversity Enhancement Plan for a Proposed Residential Development at Gowan Motors Compound, Merrion Road, Dublin 4.

4TH SEPTEMBER 2024

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.

On behalf of: Merrion Compound Land Limited

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Document Control Sheet			
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Report	Biodiversity Enhancement Plan		
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Introduction

Biodiversity Enhancement Plan

This BEP is primarily the result of consultation between the ecologists (Altemar) and Landscape Architects (NMP Landscape Architects) of the proposed development project as well as the wider team. The BEP cross-references both landscape and biodiversity elements. It initially describes the proposed project. The landscape elements of the proposed project have involved extensive consultation and reiterations of the landscape masterplan, to enhance biodiversity across all landscape components on site. These biodiversity enhancement measures are outlined and will be implemented and would be seen to improve biodiversity significantly on site, particularly as currently on site there is a paucity of biodiversity features and important habitats.

Description of the Proposed Project

Planning permission is sought for a Large-Scale Residential Development delivering 200 no. student residential units within two blocks. The blocks range in height up to 6 storeys with a basement below. All associated internal and external amenity space, car and cycle parking, landscaping, bin stores, service provision and vehicular and pedestrian accesses are also proposed.

The proposed development will include hard and soft landscaping, pedestrian and cycle links, boundary treatments, tree planting, interim site hoarding, public lighting, green/blue roofs, residential waste & recycling facilities, piped site wide services and all ancillary works and services necessary to facilitate construction and operation.

The proposed site outline, location, and site plan are demonstrated in Figures 1-3.

Overall Landscape Masterplan

The Landscape Masterplan report for the proposed development has been prepared by NMP Landscape Architects. This was carried out in consultation with Altemar Limited. It is important to note that this is a brightly lit urban area and that the proposed use is for student accommodation. These elements have been taken into account during the meetings held between NMP and Altemar to enhance biodiversity within the scheme within the landscape plan and to develop this BEP. The landscape report details the following:

"Landscape Vision

The development offers an opportunity to curate community. The masterplan has been crafted in such a way so as to promote placemaking, creating opportunity for interactions on a social level and generating a sense of connection, thereby supporting the essence of community in providing verdant nature- & sensory positive space, set within an urban context.

Influenced by its formative years as motor dealership and an objective both at a project, national and a global level to meaningfully increase our biodiverse credentials, the landscape realm will be predominantly characterised by soft landscaping.

The use of native tree & shrub planting areas to respond to, support and promote the National Pollination Plan, will have a positive net gain for biodiversity. This will enhance the existing ecological system, creating more habitat and diversity. Tree planting will promote carbon sequestration as well as a varied habitat, roosting for bird life and the screening of the development.

The overall site serves the development in encouraging social interaction and a connection with community & nature, thereby creating a sense of well-being."

Figure 1- *Site outline*

0 0.2 0.4 0.6 0.8 km

Project: Merrion Compound
Location: Merrion Rd, Dublin 4
Date: 04th September 2024
Drawn By: Gayle O'Farrell (Altemar)

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***Figure 2**- Site location*

***Figure 3**- Site layout plan*

Landscape Masterplan

The landscape design has been planned in such a way so as to maximise the site's orientation and anticipated microclimate to create high quality spaces which respond to human comfort, encouraging residents into a calm environment with the communal open space is conceived as habitable verdant urban park space.

The vision underpinning the landscape expression is centred around the creation of welcoming nature-positive, legible, interactive and healthy landscape experiences that will encourage and promote the essence of community. The use of native tree & shrub planting and wildflower meadow areas to respond to, support and promote the National Pollination Plan, will have a positive net gain for biodiversity. This will enhance the existing ecological system, creating more habitat and diversity. Additional tree planting will promote carbon sequestration as well as a varied habitat, roosting for bird life and screening of the development.

Ultimately the provided programme will encourage greater use of the outdoor environment, greater opportunities for interactions and places health & wellbeing at the forefront of spatial planning.

In addition, it is anticipated that the development will offer a net gain to biodiversity through the development of additional habitat connecting existing surrounding ecological stands with continuous tree canopies for bat and bird roosting and provision of specific plants for wildlife to forage through."

Biodiversity Enhancements

As outlined previously Altemar held several meetings with NMP to discuss biodiversity enhancement measures on the site. In relation to biodiversity enhancements the landscape report outlines the following:

'An awareness and the enhancement of the site's existing natural features will inform the character of vegetation and the sense of place it derives from this character. In turn, there will be a net gain in biodiversity by planting native tree species, coupled with plants selected from a list of pollinator friendly species and maintained to increase the availability of flowering plants in the shoulder months. The loss of habitat will be negated by the inclusion of native tree- & plant species within the vegetation palette and complemented with habitat boxes, etc.'

As seen in Figure 4 biodiversity enhancement features have been included in the proposed landscape plan. Despite the site in general being brightly lit, two of the darkest areas have been selected as the most optimal areas for bat boxes on site. Within the scheme due to the potential for damage bird boxes for song birds were not included. Instead it was deemed more optimal to plant ivy over the gabion wall to provide more subtle nesting opportunities. In addition, 8 areas of the site were deemed optimal for the inclusion of swift boxes. These would be in the format of swift bricks. Each area would have four swift bricks.

Blue/Green Roofs

'*Green roofs have been incorporated into the SuDS drainage strategy. There are many opportunities for green roofs which can improve local biodiversity and excellent way to encourage new wildlife into the development*.'

As outlined in the engineering services report prepared by TENT Engineers:

'Green Blue roofs have been incorporated following the 'Green & Blue Roof Guide 2021'. A lightweight green roof cover, as partof a blue roof is proposed for flat roof areas.>70% of the flat roof area between the parapets (intensive). This contributes to the interceptionstorage during storm events and reduces the flow and discharge rates from the impermeable roof surface and blue roof storage requirements.'

The locations of these green roofs are demonstrated in figure 5.

Figure 4. Location of Biodiversity Enhancement Measures – Bat Boxes, Swift Boxes, and Habitat Creation- Gabion Wall

''Indicative Soft Landscape Materials Approach

Planting styles and types will vary depending on use. Planting within the streetscapes will have an element of formality. Within the public realm, planting will be more organic in look and feel, robust, mostly evergreen and require less maintenance. Tree species are selected for longevity, suitability to local soil conditions and micro-climate, biodiversity (native species) and where required, suitability for proximity to residential buildings. The scale of planting and transition in shrub planting from low, medium and high to create defensible space has been planned according to programme, thresholds and spatial hierarchy.

Streetscape

The structured expression of the streetscape planting will create interest along the public edge of the development and act as a green buffer. The intention with the planting is to, along with the structured tree planting, create a memorable streetscape experience.

Communal Open Space Planting

Informed by the existing and formative tree planting & a native palette, the tree planting will bleed into the site to create a memorable landscape expression. The planting palette is earmarked for the public open space and surrounds to complement the parkland / meadow landscape typology.

Periphery Planting

The shrub & groundcover planting palette will assist in expanding the net gain in biodiversity with larger shrub planting assisting with enveloping. Sun & shade loving species make up the palette.

Figure 5. Location of Proposed Green Roofs

Reference images of proposed planting species

Trees
- *Amelanchier lamarckii*
- *Betula pubescens**
- *Betula pendula**
- *Betula utilis subsp. jacquemontii*
- *Carpinus betulus 'Frans Fontaine'**
- *Cornus kousa*
- *Crataegus monogyna**
- *Liquidambar styraciflua 'Worplesdon'*
- *Magnolia grandiflora*
- *Malus sylvestris**
- *Sorbus aria*

*(food and shelter for birds)

Climbers
Hedera helix (shelter & berries for birds)

Bulbs
- *Allium 'Purple Sensation'*
- *Camassia leichtlinii 'White'*
- *Galanthus plicatus*
- *Narcissus 'Petrel*

Shrubs & Groundcover
- *Agapanthus africanus 'Blue'& 'White'*
- *Asplenium scolopendrium*
- *Bergenia cordifolia*
- *Dipsacus fullonum*
- *Echinops 'Ritro Blue'*
- *Hedera helix**
- *Ilex crenata*
- *Libertia grandiflora*
- *Pennisetum alopecuroides 'Hameln'*
- *Persicaria affinis 'Superba'*
- *Perovskia atriplicifolia 'Blue Spire'*
- *Rosmarinus officinalis 'Prostratus'*
- *Sedum spectabile 'Autumn Joy'*
- *Stipa tenuissima 'Pony Tails'*
- *Sambucus nigra**

Pollinator Plan

All-Ireland Pollinator Plan 2021-2025 has richly informed the planting palette and soft landscape approach. This in conjunction with a selection of native plant species will characterise the landscape design. Planting will inform and define public routes to differentiate from communal or private space.

Wildflower Meadow

Meadows managed in the following way will allow wildflowers to bloom throughout the pollinator season. A further benefit is that bumblebees are provided with an undisturbed area for nesting. Over a number of years, the area will become more and more flower-rich with local species that are adapted to the site.

Short Flowering '6-Week Meadow'

Identify areas of grass that could be cut on a 6-weekly rotation to allow Clovers and Bird's-foot-trefoil to flower. This will provide food for pollinators where shortly mown grass does not. Such areas could be beside areas of shortly mown grass, a path or a meadow.

Flowering Trees + Shrubs

Incorporate a mix of pollinator friendly trees and shrubs into the local community that will flower throughout the season. An orchard can be a wonderful addition for pollinators and the community. It is important to prioritize increasing native plants (trees, shrubs, wildflowers) across the landscape to provide food for pollinators.

Perennial Flowers For Pollinators

Incorporate pollinator friendly perennial plants into the local community to provide food for pollinators from spring through to autumn. Pollinator friendly perennial plants are excellent sources of pollen and nectar. They are much more attractive to bees when planted in blocks rather than as single plants.

Annual Flowers For Pollinators

Work with local authorities to ensure a component of annual planting in parks is with pollinator friendly annual plants - single rather than double flowered varieties. You should always try to select scented, single-flowered varieties. The block planting of these can be an excellent source of food for pollinators.

Pollinator Friendly Urban Planters

Identify some urban planters or hanging baskets where the standard annual bedding mix could be replaced by perennial pollinator friendly plants.

Native Wildflower Meadows

Identify areas where it may be possible to create a native wildflower meadow using commercially purchased seed. This would be more flower-rich than the meadow but it is also more costly and requires careful planning and management. It is very important to buy a pollinator friendly seed mix that has been grown in Ireland from native wildflowers and is suitable for your soil type.

Hedgerows For Pollinators

Flowering hedgerows that contain Hazel, Willow, Blackthorn and Hawthorn provide food in spring when wild bees come out of hibernation. Bramble is a good source of food in summer, and Ivy in the autumn. Bumblebees often nest in long grass at the base of hedgerows.

Clover Lawns

Identify small areas where grass could be entirely replaced with a permanent clover mix. Red and white clovers will provide colour, and are a very important food source for bees.

Eliminate The Use Of Pesticides

Identify some areas where the use of pesticides could be eliminated. This could be streets/areas where your group is willing to take responsibility for manual weed control. Most herbicide use is along edging or tree bases that mowers can't access. Identify areas of south facing edging that could not be sprayed to provide solitary bee nesting habitat.

Awareness

Promote the All-Ireland Pollinator Plan to local businesses and encourage them to make their outdoor spaces pollinator friendly or to sponsor local pollinator friendly actions

Pesticide Avoided

Identify areas of grass that could be cut on a 6-weekly rotation to allow Clovers and Bird's-foot-trefoil to flower. This will provide food for pollinators where shortly mown grass does not. Such areas could be beside areas of shortly mown grass, a path or a meadow.

Signage

Put up signage explaining the importance of pollinators and what is being done locally to support the All-Ireland Pollinator Plan. Templates that can be used to create signage can be downloaded from the website.

Bee Hotels For Pollinators

Incorporate a mix of pollinator friendly trees and shrubs into the local community that will flower throughout the season. An orchard can be a wonderful addition for pollinators and the community. It is important to prioritize increasing native plants (trees, shrubs, wildflowers) across the landscape to provide food for pollinators.

Training

Deliver training programmes locally on pollinators and how to take action to protect them. Resources will be available to allow interested parties to deliver training on: creating nest sites for wild pollinators: how to participate in the All Ireland Bumblebee Monitoring Scheme; collection, storage and use of local wildflower seed to improve areas that are being managed as small meadows in parks, greenways.

'***Soft Landscape Outline Specifications***

2.0 Tree Specifications:

2.1 Trees shall have a sturdy, reasonably straight stem, and a well-defined straight and upright central leader, with branches growing out of the stem with reasonable symmetry. The crown and root systems shall be well formed. Roots shall be in reasonable balance with the crown and shall be conductive to successful transplantation.

2.2 Standard trees shall have a clear stem 1.70m in height from ground level to the lowest branch, a minimum girth of 8cm measured at 1.00m above ground level and a total height of 2.75-3.00 m.

2.3 Light Standard trees have a clear stem 1.30m in height from ground level to the lowest branch, a minimum girth of 6cm measured at 1.00m above ground level and a total height of 1.80-2.40m

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2.4 Select standard trees shall have a clear stem 1.70 m in height from ground level to the lowest branch, a minimum girth of 10 cm. measured at 1.00.m. above ground level and a total height of 3.0 to 3.5 metres.

2.5 Heavy standard trees shall have a clear stem 1.80-1.90m in height from ground level to the lowest branch, a minimum girth of 14 cm. measured at 1.00.m. above ground level and a total height of 4.0 to 4.5 metres. All trees shall have been undercut a minimum of three times.

2.6 Extra Heavy standard trees shall have a clear stem 2.0m in height from ground level to the lowest branch, a minimum girth of 16 cm. measured at 1.00.m. above ground level and a total height of 4.5 to 5 metres. All trees shall have been undercut a minimum of three times.

2.7 Semi-mature trees shall have a clear stem 2.0m in height from ground level to the lowest branch, a minimum girth, as specified in the Bill of Quantities, measured at 1.00.m. above ground level and a total height of min. 5 metres. All trees shall have been undercut a minimum of three times. All standards shall be clearly labelled.

2.8 Feathered Trees 180-240cm Feathered trees shall be not less than four years old, and shall have been transplanted at least three times. Trees of species not listed in BS 3936: Part 4: shall be sturdy, with a balanced root and shoot development. Size shall conform to the schedules. Trees shall be well furnished with lateral fibrous roots, and shall be lifted without severance of major roots. Roots shall be of the habit normal for the species, without deformation. Transplants shall be wrapped in polythene in bundles of 50 no. and clearly labeled from the time of lifting until planting to conserve moisture.

2.9 Feathered Transplants 120-150cm Transplants shall be not less than two years old, and shall have been transplanted at least once. Trees of species not listed in B.S. 3936: Part 4: shall be sturdy, with a balanced root and shoot development. Size shall conform to the schedules.Trees shall be well furnished with lateral fibrous roots, and shall be lifted without severance of major roots. Roots shall be of the habit normal for the species, without deformation. Transplants shall be wrapped in polythene in bundles of 50 no. and clearly labeled from the time of lifting until planting to conserve moisture.

2.10 Feathered Transplants 90-120 cms, 60-90 cm, 40-60 cm, 30-40 cm
Transplants shall be not less than one year old. Trees of species not listed in B.S. 3936: Part 4: shall be sturdy, with a balanced root and shoot development. Size shall conform to the schedules. Trees shall be well furnished with lateral fibrous roots and shall be lifted without severance of major roots. Roots shall be of the habit normal for the species, without deformation. Transplants shall be wrapped in polythene in bundles of 50 no. and clearly labelled from the time of lifting until planting to conserve moisture.

3.0 Shrub Specifications:
3.1 Containerised Shrubs shall be of the size specified in the schedules, with several stems originating from or near ground level and of reasonable bushiness, healthy, vigorous and with a sound root system. Pots or containers shall be appropriate to the size of shrub supplied and clearly labeled. Shrubs shall not be pot bound or with girdled or restricted roots.

3.2 Bare Root Shrubs shall be of size specified in the schedules, with several stems originating from or near ground level, with reasonable bushiness, healthy, and vigorous. They shall be well furnished with fibrous roots and shall be lifted without severence of major roots. All bare root shrubs shall be wrapped in polythene in bundles of 50 no. and clearly labeled from the time of lifting until planting to conserve moisture.

3.3 Container Grown Conifers:
Conifers shall be of the size specified in the schedules, with one main stem originating from or near ground level and of reasonable bushiness and health, with a well-grown, root system. Pots or containers, where required, shall be appropriate to the size of plant supplied and clearly labeled. Plants shall not be pot bound, or with deformed or restricted roots.''

NOTE
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CLIENT: 1 MERRION COMPOUND LAND LIMITED

ARCHITECT: MDO ARCHITECTS

MDO ARCHITECTS

LEGEND:

- SITE BOUNDARY
- EXISTING TREES
- EXISTING TREE ROOT PROTECTION AREA
- PROPOSED NEW TREES
- SHRUB & GROUNDCOVER PLANTING
- LAWN
- HEDGING
- HIGH QUALITY PAVING
- HARD SURFACE TO BASKETBALL AREA
- SELF BINDING GRAVEL
- REINFORCED LAWN
- GRAVEL STRIP TO BUILDING EDGE
- RAINWATER GARDEN OUTLINE (1000MM HIGH)
- SEATING WALL
- PROPOSED RETAINING WALL (GABION)
- LOW WALL WITH RAILING (1200MM HIGH)
- GATED ACCESS
- SEATING OPPORTUNITY
- COVERED BICYCLE PARKING
- BICYCLE PARKING - 20 NO. SHORT TERM / VISITOR
- COVERED CARGO BICYCLE PARKING - 6 NO.
- OUTDOOR GYM ELEMENTS

REFERENCE: THIS DRAWING IS NOT FOR CONSTRUCTION

05	STAGE 3 REVISION TWO	02-09-2024
04	STAGE 3 REVISION ONE	28-08-2024
03	REVISION THREE FOR INFORMATION	23-08-2024
02	REVISION TWO FOR INFORMATION	16-08-2024
01	REVISION ONE FOR INFORMATION	29-05-2024

REVISIONS:

Job No.	6668	Drawn By	AG
Dwg No.	L_100	Checked By	HiL
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JOB DESCRIPTION

Site	MERRION ROAD, DUBLIN 4
Project	BOWN MOTORS OWNHOME - LARGE SCALE RESIDENTIAL DEVELOPMENT
Title	GENERAL ARRANGEMENT PLAN

NMP
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Architects 33 Rock Road, Williamstown, Blackrock, Co. Dublin.
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Figure 3: Landscape Masterplan

Figure 6. Landscape plan section drawing

Conclusion

The Biodiversity Enhancement Plan has been prepared by Altemar with the support of Landscape Architects (NMP Landscape Architects). It involves the implementation of biodiversity enhancement measures across the development. The proposed planting schedule outlines the heavy reliance on native and pollinator friendly species and the incorporation of bird boxes (swift), habitat complexity and bat boxes.

The landscape elements of the proposed project have involved consultation and reiterations of the landscape masterplan, to enhance biodiversity across all landscape components on site. These biodiversity enhancement measures are outlined and will be implemented. The works in relation to the Biodiversity Enhancement Plan will be overseen by a project ecologist to ensure that the specifications outlined will be carried out. Currently the site consists primarily of a brownfield site and is of low biodiversity value. The proposed biodiversity enhancement measures are sufficient to maintain and will enhance the current biodiversity value of the site.