PROPOSED LARGE-SCALE RESIDENTIAL LED MIXED-USE DEVELOPMENT ON MILLTOWN PARK AT SANDFORD ROAD

# Habitat Management Plan

## Sandford Living Limited

**Report no.:** 003, Rev. 002
**Date:** 11/12/2025

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# 1 INTRODUCTION

## 1.1 Background

DNV was commissioned by Sandford Living Ltd., to prepare a Habitat Management Plan (HMP) for a Large-scale Residential led Mixed-use Development (LRD) (the 'Proposed Development') at a ca. 4.26 hectare site at Milltown Park, Sandford Road, Dublin 6, D06 V9K7 (the 'Site').

## 1.2 Aims & Objectives

This HMP provides a comprehensive framework of actions and guidelines designed to maintain the ecological integrity of existing habitats, to maintain biodiversity enhancements through targeted management practices, and to ensure the long-term sustainability of green infrastructure at the Proposed Development Site. Objectives set out to achieve this include:

- Maintain existing and proposed habitats.
- Implement pollinator-friendly and wildlife-supportive management regimes.
- Monitor and adapt management measures to ensure long-term biodiversity benefits.

## 1.3 Quality Assurance and Competence

All surveying and reporting have been carried out by qualified and experienced ecologists and environmental consultants.

This Report was authored by DNV Ecologist Ciara Barry Hannon (CBH). The ecological surveys (bats, terrestrial flora and fauna) at the Site were coordinated by DNV Senior Ecologist Liam Gaffney (LG).

CBH is a Senior Ecologist with DNV and has a BSc. (Hons) in Wildlife Biology from Munster Technological University (formerly ITT). CBH has a wealth of experience in desktop research, literature review and reporting, as well as practical field and laboratory experience including experience in surveying habitats, plants, bats, birds, mammals, and invasive species. CBH is experienced in the preparation of Preliminary Ecological Appraisals (PEA), Ecological Impact Assessments (EcIA), and Stage I/Stage II Appropriate Assessment Reports, as-well as ornithology reports for renewable energy projects (wind and solar technology). Additionally, CBH has completed, and supported the preparations of several Biodiversity Chapters for Environmental Impact Assessment Reports (EIAR). CBH is also a Qualifying member of CIEEM.

LG is a Senior Ecologist with 6 years of experience in ecological consultancy. With a B.Sc. in Zoology (Hons) and a M.Sc. (Hons) in Wildlife Conservation and Management from University College Dublin. LG is experienced in desktop research, literature scoping-review, and report writing, as well as practical field experience (e.g., Bat surveys, habitat surveys, invasive species surveys, wintering bird surveys, large mammals, fresh water macro-invertebrates etc.). LG's MSc thesis was a literature scoping review on the ecosystem services provided by Irish bats. He has also completed best practice guidance courses on bat survey and mitigation techniques such as: 'Bat Ecology & Survey' and 'Bat Impacts and Mitigation' both held by the Chartered Institute of Ecology and Environmental Management (CIEEM). LG is experienced in compiling Biodiversity Chapters of EIARs, EclAs, AA screening and Natura Impact Statements (NIS) reports, and in the overall assessment of potential impacts to ecological receptors from a range of developments. LG is also a Qualifying member of CIEEM with full membership application pending.

# 2 DESCRIPTION OF THE PROPOSED DEVELOPMENT

## 2.1 Site Location

The Proposed Development Site is located of Sandford Road and Milltown Road (R117), Milltown, Co Dublin (Figure 1). The Site is currently comprised of a mix of buildings and green space with an overall developable area of 4.26Ha. Works are also proposed on Milltown Road and Sandford Road to facilitate access to the Site including improvements to pedestrian facilities on an area of ca. 0.1Ha. Works associated with the Site's surface water drainage network will entail works through the junction of Milltown Road / Sandford Road and along a portion of Eglinton Road (R824) (approximately 200 metres from the Sandford Road / Eglinton Road junction), with these works incorporating an area of ca. 0.32 Ha.

The Proposed Development Site area, road works and drainage works areas will provide a total application site area of c. 4.74 hectares. The Site is accessed to the north via the R117 and is surrounded to the north, east and west by residential lands. The southern boundary of the Site backs on to lands owned by the Jesuit order and zoned as Z15.

## 2.2 Project Description

Sandford Living Limited intend to apply for permission for a Large-Scale Residential led Mixed-use Development at a c. 4.26 hectare site at Milltown Park, Sandford Road, Dublin 6, D06 V9K7. Works are also proposed on Milltown Road and Sandford Road to facilitate access to the development including improvements to pedestrian facilities on an area of c. 0.16 hectares. The development's surface water drainage network shall discharge from the site via a proposed 300mm diameter pipe along Milltown Road through the junction of Milltown Road / Sandford Road prior to outfalling to the existing drainage network on Eglinton Road (approximately 200 metres from the Sandford Road / Eglinton Road junction), with these works incorporating an area of c. 0.32 hectares. The development site area, road works and drainage works areas will provide a total application site area of c. 4.74 hectares.

The Development will principally consist of: the demolition of c. 4,847.5 sq m of existing structures on site including Milltown Park House (880 sq m), Milltown Park House Rear Extension (2,031 sq m), the Finlay Wing (622 sq m), the Archive (1,240 sq m) and the Link Building between Tabor House and Milltown Park House Rear Extension to the front of the Chapel (74.5 sq m); the refurbishment and reuse of Tabor House (1,575 sq m) and the Chapel (768 sq m) and the provision of a single storey glass entrance lobby to the front and side of the Chapel (52 sq m); and the provision of 562 No. residential units comprising 6 No. three-bed courtyard houses and 556 No. apartment units (70 No. studios, 176 No. one-bed units, 267 No. two-bed units and 43 No. three-bed units).

Block A1 will range in height from 5 No. storeys to 8 No. storeys and will comprise 81 No. apartment units; Block A2 will range in height from 6 No. storeys to 8 No. storeys and will comprise 139 No. apartment units; Block B will range in height from 3 No. to 7 No. storeys and will comprise 74 No. apartment units; Block C will range in height from 4 No. storeys to 7 No. storeys and will comprise 151 No. apartment units; Block D will range in height from 3 No. storeys to 5 No. storeys and will comprise 30 No. apartment units; Block E will be 2 No. storeys in height and will comprise 6 No. courtyard type houses; and Block F will range in height from 5 No. storeys to 7 No. storeys and will comprise 81 No. apartment units.

The Development also includes the provision of: cultural/community space within Tabor House (4 No. storeys including lower ground floor level) and the Chapel (2 No. storeys including lower ground floor level and mezzanine level) (1,698 sq m) with associated outdoor space (248 sq m); a café/restaurant (179 sq m) and a creche (375 sq m) within Block F with associated outdoor creche play area; ancillary residents' amenities and facilities (324 sq m) within Blocks B & C; and a single storey bin store and substation adjacent to Block F (101 sq m).

The Development also provides a new access from Milltown Road (which will be the principal vehicular entrance to the site) in addition to utilising and upgrading the existing access from Sandford Road as a secondary access principally for deliveries, emergencies and taxis; new pedestrian access points; pedestrian/bicycle connections through the site; 319 No. car parking spaces (288 No. at basement level and 31 No. at surface level); set down area for deliveries; bicycle parking; 22 No. motorcycle spaces; bin storage; boundary treatments; private balconies and terraces facing all directions; hard and soft landscaping including public open space and communal open space; green/blue roofs; PV panels; substations; lighting; plant; lift cores and overruns; and all other associated site works above and below ground.

The proposed development has a gross floor space of c.50,196 sq m above ground level over a partial basement (under part of Blocks A1 and A2 and under Blocks B and C) measuring c. 10,550 sq m, which includes parking spaces, bin storage, bike storage and plant.

See **FIGURE 2** for proposed site layout.


**FIGURE 1. SITE LOCATION (QGIS, 2025)**

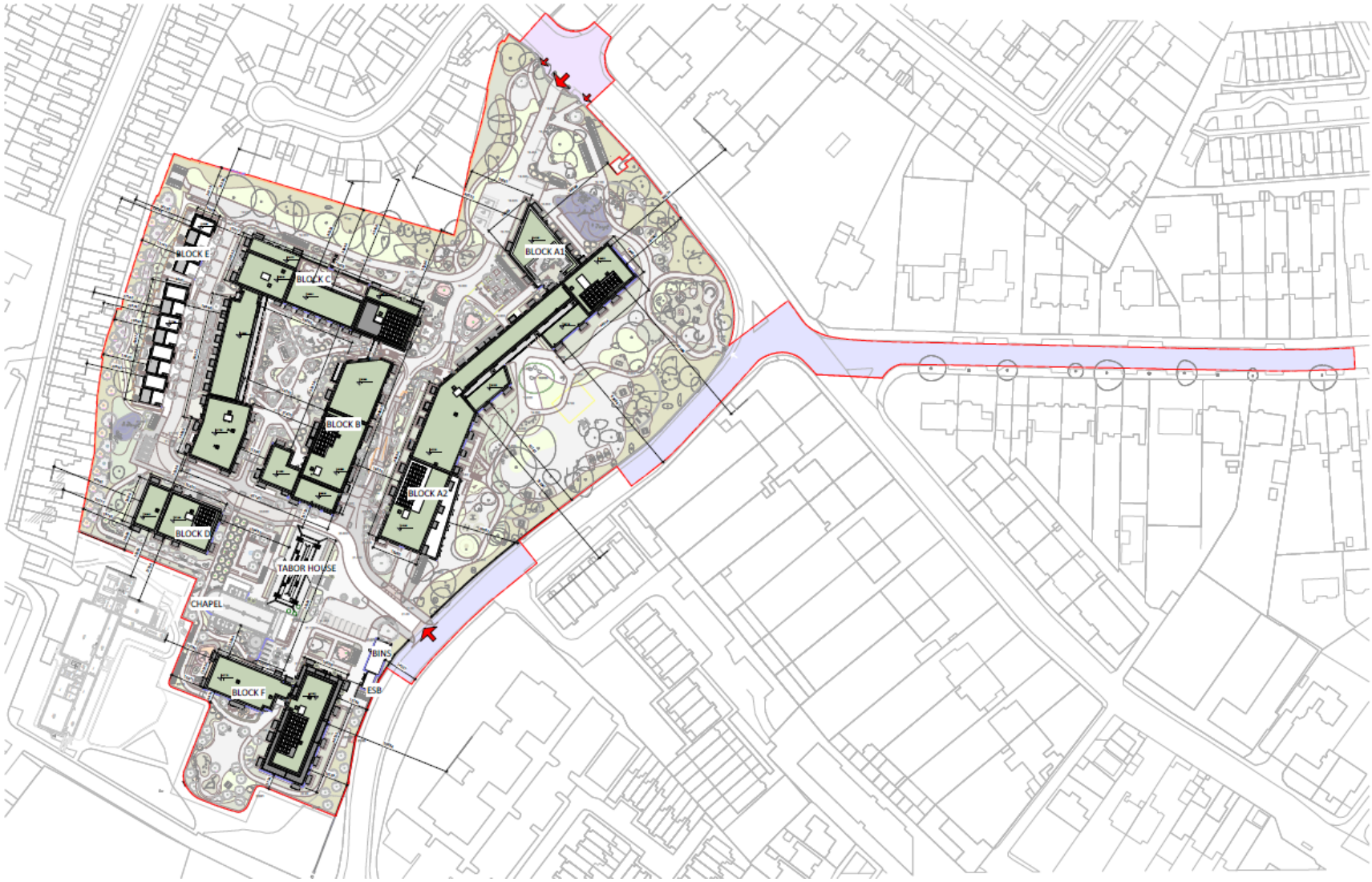


**FIGURE 2. PROPOSED SITE LAYOUT (EXTRACTED FROM 19037C-OMP-OO-O8-DR-A-1109 - PROPOSED SITE PLAN – ROOF LEVEL, 2025).**

# 3 Baseline Ecological Conditions

Multiple surveys have been conducted over several years (2022-2025) to determine the baseline ecological conditions at the Site. Table 1 shows the types of surveys carried out, the dates they were completed and who completed them. These results are referenced where relevant in this HMP. A summary of results are included in 3.1 below. Please refer to the Biodiversity Chapter of the EIAR submitted with this application, for the full suite of survey results including fauna, which is provided under separate cover.

**TABLE 1: SCHEDULE OF ALL ECOLOGICAL SURVEYS CARRIED OUT AT THE PROPOSED DEVELOPMENT TO DETERMINE BASELINE CONDITIONS AT THE SITE.**

| Survey Type | Date |
|---|---|
| Multidisciplinary Ecological Walkover | 25/04/2023<br>29/08/2024<br>24/09/2025 |
| Habitat and Flora Surveys | 03/03/2023<br>29/08/2024 |
| Non-Volant Mammal Surveys | 03/03/2023<br>29/08/2024<br>24/09/2025 |
| Invasive Alien Plant Species (IAS) Surveys<br>(Specialist IAS surveys completed by Invasive Plant Solutions in 2025) | 03/03/2023<br>09/10/2025 |
| Winter Bird Surveys | 23/11/2022<br>23/01/2023<br>31/01/2023<br>28/02/2023<br>29/03/2023 |
| Early/seasonal Bird Survey | 03/03/2023 |
| Breeding Bird Survey including building inspections for Swallow, Swift and House Martins.<br>The survey on the 25th of June also included a dusk component specifically focused on detecting potential Swift nesting activity. | 25/06/2024<br>25/07/2024<br>24/08/2024<br>----------<br>18/06/2025<br>22/07/2025<br>12/08/2025 |
| Bat Building Emergence Surveys | 17/07/2024<br>30/07/2024<br>29/08/2024<br>----------<br>30/06/2025 |

| Survey Type | Date |
|---|---|
| | 31/07/2025<br>27/08/2025 |
| Bat potential tree (PRF-M) (Tree no. 267) Emergence Surveys | 26/06/2025<br>29/07/2025<br>04/09/2025 |
| Bat potential tree (PRF-M) (Tree no. 290) Emergence Surveys | 26/06/2025<br>29/07/2025<br>04/09/2025 |
| Daytime Bat Habitat Assessment Survey & Potential Bat Roost Assessment (PBRA) of trees to be felled | 09/03/2023<br>10/03/2023<br>24/04/2024<br>29/08/2024<br>24/09/2025 |
| Internal Bat Roost Assessment of Buildings | 25/04/2023<br>08/05/2024<br>05/09/2024<br>19/06/2025 |
| Dusk Bat Transect Surveys | 24/06/2024<br>25/07/2024<br>30/08/2024<br>----------<br>11/06/2025<br>15/07/2025<br>21/08/2025 |
| Bat Static detector deployment within attic of Tabor House | 08/05/2024 – 20/05/2024<br>25/06/2024 – 02/07/2024<br>25/07/2024 – 30/07/2024<br>29/08/2024 – 08/09/2024<br>27/09/2024 – 04/10/2024<br>----------<br>19/06/2025 – 24/06/2025<br>11/07/2025 – 15/07/2025<br>27/08/2025 – 01/09/2025 |

| Survey Type | Date |
|---|---|
| | 24/09/2025 – 29/09/2025<br>15/10/2025 – 20/10/2025 |

All surveys have been undertaken having regard to best practice guidelines and guidance documentation published by relevant bodies including Transport Infrastructure Ireland (TII). A complete list of all surveys conducted, including their respective methodologies and results is detailed in Chapter 8, Biodiversity, of the EIAR Report which supports this planning application.

## 3.1 Habitats and Flora

The Site comprises a variety of habitats reflecting its historic parkland character within a predominantly urban setting. Key habitats include stone walls (BL1), which provide limited shelter and minor connectivity; buildings and artificial surfaces (BL3), where the Chapel and Tabor House offer potential bat roosting opportunities; and dry meadows and grassy verges (GS2), formerly improved amenity grassland, now supporting a tall, rank sward of grasses and forbs with succession to scrub (WS1) habitat occurring around the margins and in areas of previously disturbed ground in the centre of the Site. Two areas of mixed broadleaf/conifer woodland (WD2) in the northwest and northeast support mature trees and understorey vegetation, contributing to ecological connectivity and assigned Regional/County Importance given their urban context.

Additional habitats include scattered trees and parkland (WD5) in the northern section; hedgerows (WL1), which are few, species-poor, and in poor condition; and several treelines (WL2), including mature Beech and Yew, which function as wildlife corridors. Scrub (WS1) occurs along the western and north-western boundaries, dominated by Bramble and providing food and cover for birds and insects. Ornamental and non-native shrub habitats (WS3) and WS3/GS2 mosaics occur around buildings and are considered of Less than Local Importance.

The wider area surrounding the site is predominantly urban, comprising BL3 Built Land interspersed with amenity green spaces, treelines, and hedgerows. Adjacent lands include residential gardens, sports pitches, and landscaped areas typical of suburban Dublin. Connectivity to semi-natural habitats is limited, although the River Dodder lies approximately 500 m to the southeast, providing a riparian corridor of ecological value. Overall, the surrounding landscape is dominated by managed amenity grassland and ornamental planting, with occasional semi-natural features contributing modestly to local biodiversity within an otherwise heavily urbanised setting.

The value of each habitat identified within the Site is based on a combination of both field and desktop studies unless stated otherwise. Habitats within and around the Site boundary were recorded and are shown in Figure 3. The following sections provide a more detailed description of each habitat type present on Site, while Table 2 below shows a summary of the habitat types recorded at the Site.

Several invasive alien plant species (IAPSs) were recorded on Site, these include:

- Butterfly Bush
- Cherry Laurel (*Prunus laurocerasus*)
- Himalayan Honeysuckle (*Leycesteria formosa*)
- Snowberry (*Symphoricarpos albus*)
- Spanish Bluebell (*Hyacinthoides hispanica*)*
- Three-cornered Leek (*Allium triquetrum*)*
- Traveller's Joy (*Clematis vitalba*)
- Winter Heliotrope (*Petasites pyrenaicus*)

Of this list, only two species (those with an *) are high-impact species listed on the Third Schedule of European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011). The Medium impact invasive species recorded on Site include Butterfly Bush, Traveller's Joy, and Himalayan Honeysuckle.

In addition, Ragwort (*Jacobaea vulgaris*) which is not an invasive plant species but is considered a noxious weed under the Noxious Weeds Act, 1936 (and amended), was also recorded along the grassy verges contiguous to the carpark. The habitat map (Figure 3) shows the precise location of the invasive species where they occur across the Site. For the most part, invasive species were restricted to the perimeter of the Site and no invasive plant species were found to occur in the centre of the Site which is comprised of GS2 grassland habitat.

Invasive species were recorded on-site during ecological surveys conducted previously by JBA in 2019/20, and Invasive Plant Solutions. On foot of these observations, the client approved the immediate deployment of bio-security measures and the commencement of an active herbicide treatment regime, spanning April, May and June 2021. The purpose of these initial measures was to protect the plant stands from disturbance, through the erection of fencing and signage, and to mitigate the risk of seed dispersal and plant reproduction by the spot application of approved herbicide. Subsequent IAPS surveys have been conducted at the Site in December 2020, April and September 2021, April 2022, and March, April 2023, and finally October 2025 (with a 2026 survey pending) to determine the extent of IAPS on Site. The results of which have informed an update to the management plan, as necessary, by Invasive Plant Solutions (2025).

**TABLE 2: HABITATS RECORDED DURING THE SITE VISIT**

| Survey Type | Date |
|---|---|
| Stone walls & other stonework | BL1 |
| Buildings and artificial surfaces | BL3 |
| Dry Meadows and Grassy Verges | GS2 |
| Mixed broadleaved/conifer woodland | WD2 |
| Scattered trees and parkland | WD5 |
| Hedgerows | WL1 |
| Treelines | WL2 |
| Scrub | WS1 |
| Ornamental/non-native shrub | WS3 |
| Non-native shrub and Dry meadows mosaic | WS3/GS2 |


**FIGURE 3. HABITAT AT THE PROPOSED SITE INCLUDING KEY FEATURES AND INVASIVE SPECIES FOUND ON SITE (SOURCE: QGIS/DNV)**

# 4 PROPOSED LANDSCAPE PLAN

The landscape plan for the Proposed Development integrates a strong ecological and biodiversity enhancement strategy.

Key features include:

- Extensive native and wildlife-friendly planting, such as;
  - wildflower meadows,
  - SuDS features such as raingardens / biodiverse roofs, and;
  - layered woodland understory vegetation
- Existing high-value trees, including elm specimens, are retained where feasible
  - This is complemented by new native tree and;
  - New shrub planting to strengthen ecological networks.

All of which serve to maintain/ create green corridors and habitat connectivity.

The design incorporates biodiverse and blue roofs planted with Irish-origin wildflower mixes, providing foraging habitats for birds and bats while contributing to the SuDS strategy. Additional ecological enhancement design includes:

- 10 no. bird boxes,
- 10 no. bat boxes,
- 70 no. swift bricks,
- 2 no. insect hotels, and;
- 10 no. log piles

All of which will be strategically located to support nesting, roosting, and invertebrate diversity throughout the Site.

In addition, dark zones and buffer zones are maintained to protect bat movement, while pesticide-free management (detailed further below) ensures pollinator health. Communal spaces such as amenity terraces and edible gardens further enhance ecological value and resident engagement, setting a benchmark for sustainable urban design.

An extract of the proposed landscape plan (soft planting) is shown in Figure 4, below. For further information on the landscape plan / design and the ecological function of the proposed landscape plan, please refer to the Biodiversity Enhancement Plan (DNV, 2025), provided under separate cover.


**FIGURE 4. PROPOSED LANDSCAPE PLAN (EXTRACTED FROM LANDSCAPE DESIGN STATEMENT, CAMEO AND PARTNERS, 2025).**

## 4.1 Key Ecological Features of Landscape Plan

The key features of the proposed landscape plan are listed above and included below to provide further context on the ecological importance of their contribution to Site ecology / biodiversity. It is this understanding that underpins the necessity to ensure a correct management plan and that procedures are in place, to ensure longevity, continuity, and true enhancement of ecology at the area, as enhancement features are design features integrated into the design of a project at conception but require long-term investment and commitment. The key features and associated ecological functions, are shown below:

**Wildflower Meadows**

Function: Provide nectar and pollen for pollinators (bees, butterflies), seeds for birds, and habitat for invertebrates. They also improve soil health and contribute to carbon storage, and can offer cover for small mammals from predation, as well as foraging opportunities.

**Raingardens**

Function: Manage stormwater by filtering and slowing runoff, reducing flood risk and improving water quality. They create micro wetland-like habitats for amphibians and insects.

**Layered Woodland Understory Vegetation**

Function: Adds structural diversity, offering shelter and foraging for birds, small mammals, and insects. Enhances connectivity between canopy and ground layers.

**Green Corridors and Habitat Connectivity**

Function: Enable wildlife movement across the site, reducing fragmentation and supporting genetic diversity.

**Retention of Existing High-Value Trees (including Elm specimens)**

Function: Mature trees provide nesting, roosting, and microhabitats for birds, bats, and invertebrates. They also act as carbon sinks and regulate microclimate.

**New Native Tree Planting**

Function: Supports local fauna with food and shelter, strengthens ecological resilience, and contributes to long-term habitat provision.

**New Shrub Planting**

Function: Offers dense cover for nesting birds and small mammals, nectar for pollinators, and transitional habitats between grassland and woodland.

**Biodiverse (Green and Blue) Roofs**

Function: Create additional habitat for pollinators and invertebrates, provide foraging for birds and bats, and contribute to stormwater management (SuDS). They also help mitigate urban heat island effects and improve building energy efficiency.

# 5 HABITAT MANAGEMENT PLAN MEASURES

### 5.1.1 Habitat Management and Maintenance

A Landscape Management and Maintenance Plan (LMMP) has been prepared for the Site of the Proposed Development (Cameo + Partners Ltd., 2025). The above document should be consulted along with this HMP when managing the vegetation and habitats within the Site to ensure a co-ordinated approach is taken to habitat management. A coordinated approach will provide the most positive results in terms of biodiversity enhancement and support within the Site of the Proposed Development for its operational lifetime.

As per the LMMP, maintenance of the landscape areas shall be undertaken by a competent Landscape Contractor, registered with the British Association of Landscape Industries (BALI). Maintenance visits shall be undertaken at minimum

monthly intervals (i.e., 12 visits per year). Visits may need to be increased at certain times of the year to enable the operations set-out within the report to be properly executed. The plan covers the first 5 years of maintenance. After which, the plan should be reviewed, with fresh objectives and prescriptions for long-term maintenance, in consultation with any relevant stakeholders, including any emerging resident groups.

The following sections detail the management approach for the various areas of planting on Site that will be undertaken during the Operational Phase of the Proposed Development.

#### 5.1.1.1 Grassland & Wildflower Meadow Management

A pollinator-friendly mowing regime will be implemented as per the All-Ireland Pollinator Plan (AIPP) 2021-2025, and the AIPP 2015-2020 guidance leaflet '*Gardens: actions to help pollinators*'[1]:

- Where possible, areas of amenity grass shall be mown on a reduced mowing regime, and shall not be mown until the 15th of April. This will allow important pollinator plants such as Dandelion to flower. Thereafter grass can be cut on a six-weekly rotation (**5 cut and lifts per year**). Second cut at the end of May, third cut in mid-late July to maximise growth of Clovers and other wildflowers, fourth cut at the end of August and the fifth cut after mid-October.
- Cutting arisings will be removed to an off-site compost facility. Mowing to be carried out when ground conditions are appropriate i.e., when soil is moist but not waterlogged. It is noted that, as these areas of amenity grassland are for use by future residents, there may be limited potential for areas of reduced mowing of amenity grassland, and that this will be adopted where possible (along margins forming a less managed verge may be appropriate).
- Areas of wildflower meadow will be cut **1-2 times annually**; once in early spring and once in September as per the All-Ireland Pollinator Plan 2015-2020 guidance leaflet '*Pollinator-friendly grass cutting'*[2].
- Cuttings will ideally be left lie for a few days to allow any seed to drop and then removed. Meadows managed in this way will allow wildflowers to bloom throughout the pollinator season and also provide undisturbed areas for nesting.
- Mowing will be undertaken during dry conditions to avoid compacting and potentially damaging the soil structure.
- The use of herbicides will be avoided.
- Natural revegetation shall be allowed to occur.
- Occasional overseeding with native species may be needed.

#### 5.1.1.2 Low Intervention Woodland Understorey Management

The existing woodland understorey areas proposed to be retained within the Site within the woodland along its outer margins, will be managed in a way that maximizes the ecological value they provide, with habitat connectivity maintained along the margins of the Site.

This connectivity is vital for wildlife such as birds, bats, mammals, and insect pollinators in a human landscape such as that which will be provided by the Proposed Development.

Additionally, by managing scrub/understorey areas more naturally, they will provide more in terms of biodiversity; through increased plant diversity, increase provision of food resources and higher quality shelter to wildlife inhabiting and commuting through the area.

It is acknowledged that there will be significant landscaping undertaken at the Site, resulting in changes to the nature of some of the woodland understorey habitats found on Site. For the woodland understorey areas running along the outer

[1] https://pollinators.ie/wp-content/uploads/2022/12/Garden-Pollinator-Guidelines-2022-WEB.pdf

[2] https://pollinators.ie/wp-content/uploads/2022/05/Pollinator-friendly-grass-cutting-A5-Flyer-2022-PRINT.pdf

margins of the Site, the following management approach is proposed to maximise their biodiversity value and offset the loss of any sections of existing understorey/scrub habitat at the Site.

- The woodland understorey located along the outer boundaries of the Site will, as much as is practicable, link up with each other. The provision of an almost continuous vegetative margin around the Site; through planted scrub and trees, will maintain habitat connectivity with the surrounding environment.
- The understorey areas along the outermost sections of the Site will be maintained in a wild state as dense, scrub habitat with minimal intervention. This will recreate the natural scrub habitat conditions present within the existing woodland.
- Where trimming of dense scrub understorey needs to occur, delay trimming as late as possible – until January and February as the surviving berry crop will provide valuable food for wildlife. The earlier this is cut; the less food will be available to help birds and other wildlife survive through the winter. Any scrub/understorey cutting will be done **outside of the nesting season (March 1st-August 31st)** and due consideration of the Wildlife Act 1976 (as amended) needs to be taken.
- Where possible, minimise the frequency woodland understorey areas are cut, if at all, (as cutting annually stops the scrub species flowering and fruiting) and cut in a three year rotation rather than all at once - this will ensure some areas of dense vegetation will always flower (Blackthorn in March, Hawthorn in May etc.).
- The woodland understory requires selective pruning to maintain structure and prevent dominance by aggressive species. Remove invasive plants and allow leaf litter to accumulate for soil health.
- Where they occur naturally, Bramble and Ivy *Hedra helix* should be allowed to grow, as they provide key nectar and pollen sources in summer and autumn. Minimal intervention supports natural processes.

**Methods to Avoid:**

Woodland understorey will not be over-managed. Tightly cut vegetation means there are fewer flowers and berries, thus reducing available habitats, feeding sources and suitable nesting Sites.

Scrub/understorey vegetation will not be cut between March 1st and August 31st inclusive. It is both prohibited (except under certain exemptions) and very damaging for birds as this is the period, they will have vulnerable nests containing eggs and young birds. Red-listed bird species such as Yellowhammer in particular nest up until the end of August.

#### 5.1.1.1 Tree / Shrub Retention and Planting

All retained trees should be inspected annually for health and safety, and to ensure trees remain healthy, free of disease, structural damage that poses a risk to health and safety, etc. In terms of proposed trees and shrubs for planting; these should be watered during establishment (first 2–3 years), with mulch used to suppress weeds. Minimal pruning should be applied so as to maintain natural form, and trees and shrubs should be monitored for pests and diseases.

In addition, unnecessary pruning is to be avoided. While root zones will be protected from compaction and construction impacts during the construction phase.

Overall, the highest level of management activity will take place at the start, gradually reducing as time passes, until management requirement is minimal. As such, over-management should be avoided to preserve dense cover for wildlife, and deadwood should be retained where safe to provide microhabitats.

#### 5.1.1.2 General Vegetation Removal

To ensure compliance with the Wildlife Act 2000 as amended, any removal of areas of vegetation (e.g., hedge cutting) will not take place within the nesting bird season (March 1st to August 31st inclusive) to ensure that no significant impacts (i.e., nest/egg destruction, harm to juvenile birds) occur at the Site.

Where any removal of vegetation within the nesting season is deemed unavoidable, a qualified Ecologist will be instructed to survey the vegetation prior to any removal taking place. Should nesting birds be found, then the area of habitat in question will be noted and suitably protected until the Ecologist confirms the young have fledged.

To avoid any issues, the preferred period for vegetation clearance is within the months of **September and October.** Any large areas of vegetation will be removed in sections working in a consistent direction to prevent entrapment of protected fauna potentially present (e.g., Hedgehog).

#### 5.1.1.3 Herbicides & Pesticides

No herbicides[3] or pesticides will be used within or within close proximity to areas of biodiversity enhancement e.g., wildflower meadows, woodland understorey shrub layer, insect hotels, biodiverse roof planting and log piles. This will protect local pollinators and wildlife and maximise the biodiversity value of these enhancement features.

#### 5.1.1.4 SuDS Features

Certain SuDS features will require some maintenance to ensure they continue to function correctly and as intended.

Rain gardens are to be maintained, specifically in terms of infiltration by removing sediment and debris from inlets and outlets as blockages occur. Mulch is to be replaced annually, with plants pruned as needed, and the area should be monitored for invasive species. Avoid chemical treatments to protect water quality and aquatic invertebrates.

In terms of the biodiverse green and blue roofs; An annual inspection to check drainage and plant health is recommended. As with the rain gardens the removal of invasive species and litter, should they occur, are to be carried out, with bare patches reseeded with native wildflower mixes. The use of fertilisers and pesticides is to be avoided in order to maintain biodiversity.

[3] Ideally, herbicide use within the Site should be avoided entirely, and alternative weed control options (e.g. thermal control with hot water or foam) should be explored as per Pesticide Action Network UK: https://pollinators.ie/wp-content/uploads/2021/05/Alternatives-to-herbicides-a-guide-for-the-amenity-sector.pdf

### 5.1.2 Additional Habitats

Additional habitats included for consideration include man-made habitats for the purpose of ecological enhancement, that require some level of management, once the Proposed Development is Operational. Detailed descriptions of these habitats, including their specifications, placement, and monitoring is covered in the accompanying Biodiversity Enhancement Plan (BEP) under separate cover.

### 5.1.3 Management of Invasive Alien Species

Invasive alien species which are currently present on Site are to be removed and managed according to the IAS report produced by Invasive Plant Solutions, under separate cover.

### 5.1.4 General Management

The following best practice maintenance measures will be followed as part of the regular management of the habitats on Site:

- A contractor will be appointed to oversee all habitat maintenance and management on Site, including engaging with third parties for completion of the procedures contained herein, such as a suitably qualified ecologist, or invasive species specialist (where required).
- Ongoing management is to include the:
    - periodic inspection for and if necessary, clean-up of litter.
    - Physical removal of undesirable non-native or invasive shrub or herb species should these be recorded within the Site during the Operational Phase. Chemical control will be used only **as a last resort**.
- In addition, signage will be erected to help management follow the pollinator and wildlife friendly management regime, while also informing residents and visitors of these biodiversity enhancement measures (See Figure 5).
- Signage and waste bins will be provided at the Site to minimise dog fouling, which can have a negative effect on biodiversity planting by adding excessive amounts of nutrients and "over-fertilising" areas thus reducing the number and types of wildflowers that will grow.


**FIGURE 5. EXAMPLE POLLINATOR AND WILDLIFE FRIENDLY MANAGEMENT SIGNAGE AVAILABLE FROM POLLINATORS.IE**

# 6 SCHEDULE OF MANAGEMENT MEASURES

**TABLE 3. SCHEDULE OF OPERATIONAL MANAGEMENT MEASURES TO BE IMPLEMENTED AT THE SITE**

| Habitat/Species | Operational Phase Management/Enhancement | | |
|---|---|---|---|
| | **Task** | **Frequency** | **Responsibility** |
| **Proposed SuDS Features** | To check for litter / debris, and invasive species, which will affect filtration, drainage, and establishment. | Annually or as required | Management Company |
| **Proposed wildflower meadow, amenity grassland, Woodland habitat, and woodland understorey planting.** | Where possible and deemed appropriate, five cuts and lifts per year of amenity grass areas, under dry conditions to avoid soil compaction. Collect cuttings and compost off Site.<br>Where possible, grass will not be mown until the 15th of April to allow dandelions to flower.<br>Areas along margins forming a less managed verge may be appropriate. | Where possible, cut on a six-weekly rotation. Second cut at the end of May, third cut in mid-late July to maximise growth of Clovers and other wildflowers, fourth cut at the end of August and the fifth cut after mid-October. | Management Company |
| | Areas of wildflower meadow will be cut 1-2 times annually.<br>Collect cuttings and compost off Site. | Cut once in early spring and once in September. | Management Company |
| | Periodic inspection for and if necessary, clean-up of litter. | To be undertaken as part of routine litter management. | Management Company |
| | Removal of undesirable non-native or invasive shrub or herb species should these be recorded. | Annually or as required | Management Company |
| | Signage to be erected to help management follow the pollinator and wildlife-friendly management regime. | Once | Developer |
| | Herbicides will not be used within these habitats, except in exceptional circumstances where spot control of invasive flora is required. | n/a | Management Company |
| | | | |

| Habitat/Species | Operational Phase Management/Enhancement | | |
|---|---|---|---|
| | **Task** | **Frequency** | **Responsibility** |
| **Bats** | Erection of a bat box scheme in the form of 10 2F Schwegler bat boxes which will be erected at appropriate locations under instruction from a qualified ecologist.<br><br>Inspection of bat boxes. | Once, once development complete.<br><br>Within one year of erection of bat box scheme | Developer & Bat Specialist |
| **Birds** | A minimum of 10 bird boxes will be installed within the dense shrub planting and on trees on the Site, under advice from a qualified Ecologist. The boxes will be durable. The bird box will be firm and secure to its support and only placed on trees that are robust and large enough to support bird boxes.<br><br>Inspection of bird boxes for damage. | Once, once development complete.<br><br>Annually between September-February (outside breeding bird season) | Developer & Ecologist<br><br>Management Company |
| | Removal of old nests from bird boxes. | Annually between September-February (outside breeding bird season) | Management Company |
| | Incorporation of 70 Swift Bricks along proposed buildings.<br><br>Installation of Swift calling system with guidance from an Ecologist.<br><br>The ecologist will also check that the Swift calling system is operational each year and advise if repairs are needed. | Once, once development complete. | Developer & Ecologist |
| **Invertebrates** | The provision of 2x insect hotels in areas of dense planting. Installation of insect hotels with guidance from an Ecologist. | Once, once development complete. | Developer and Ecologist |

| Habitat/Species | Operational Phase Management/Enhancement | | |
|---|---|---|---|
| | **Task** | **Frequency** | **Responsibility** |
| | Small discrete log piles will be created using the wood from the felled trees on Site.<br>A suitable location is within the woodland understorey along the north and eastern site boundaries.<br>New logs will be added as the older logs decay. | Once during landscaping phase and then as required.<br>Several years or as required | Management Company |
| **Invasive Species** | To monitor for invasive species and remove per the Invasive species management plan | As required | Checks are required to be carried out by management company, removal and management of IAS to be carried out by IAS expert, as required. |

# 7 Conclusion

This HMP describes the various ways in which biodiversity, and long-term ecological enhancement has been considered in the design of the Proposed Development. The management approach detailed within this Report and the accompanying Biodiversity Enhancement Plan will contribute to the support of biodiversity at the Site during its operational lifetime. The report adopts a habitat approach to managing biodiversity on Site and provides detailed management procedures to be carried out in relation to the habitats proposed per the landscape plan, including man-made habitats such as the proposed enhancement measures outlined in the BEP and the Biodiversity chapter of the EIAR.

All management measures outlined in this Report will be adhered to as will the various recommendations and commitments relating to post-construction vegetation management regime, bats, birds and pollinator habitat. Should any of the proposed management measures recommended in this report fail to be adhered to, the Local Authority shall be informed, and appropriate remedial actions will be agreed.

Furthermore, it is recommended that the appointed management company keep a log of all actions undertaken in the event of an audit being undertaken to ensure works are undertaken as described within the report.

It is also important to note that the management procedures set out in this HMP are not exhaustive but aim to act as a guide for the application of prescriptive management techniques on Site, which can be built upon over time as habitats / conditions establish and change.

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