

# PROPOSED RESIDENTIAL DEVELOPMENT AT: INCLINE FIELDS, BANGOR, GWYNEDD. GREEN INFRASTRUCTURE STATEMENT



Report Ref: EE.4756.24.A.TY/V2

Date: 15/05/2025

## 1. INTRODUCTION

- 1.1 This Green Infrastructure Statement has been produced by Enfys Ecology for Williams Homes (Bala) Ltd and provides a Green Infrastructure statement associated with a proposed residential development on land off Llandegai Road (the A5), on the eastern side of Bangor, Gwynedd. The site is opposite Bangor Crematorium and Maesgirchen on the A5 approach into Bangor from the southeast.
- 1.2 Green infrastructure (GI) is defined in Planning Policy for Wales (PPW) Edition 12<sup>1</sup> as *“the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places”*. Development proposals should take GI into consideration in order to avoid negative impacts on habitats and species, and seek ways to maintain and enhance biodiversity. Impacts on habitats and species should be treated in a step-wise manner (PPW 12, paragraph 6.4.15), by seeking to:
- **Avoid** damage to biodiversity in its widest sense by maintaining the largest possible area of existing habitat supporting biodiversity and functioning ecosystems, particularly Section 7 habitats and species where present, through careful development design and consideration of long-term maintenance and management and ensuring that retained habitats continue to be well connected to adjacent habitats to provide connectivity for key species.
  - **Mitigate** or **restore** by identifying measures to address the specific negative effects by repairing damaged habitats and disturbed species. The measures should seek to restore in excess of like for like, accounting for disturbance and time lags for the recovery of habitat and species, and in every case, mitigation or restoration measures should seek to build ecosystem resilience within the site and where possible the wider area.
  - As a last resort off-site **compensation** for unavoidable damage must be provided. This must be of significant magnitude to fully compensate for any loss.
  - All development must **deliver a net benefit** for biodiversity and ecosystem resilience from the baseline state (proportionate to the scale and nature of the development proposed).
- 1.3 The Anglesey and Gwynedd Joint Local Development was formally adopted on 31 July 2017, dealing with Anglesey and Gwynedd, but parts of Gwynedd within the Snowdonia National Park are not included. Following a decision by Cyngor Gwynedd and the Isle of Anglesey County Council to cease the joint working agreement on Planning Policy matters on 31 March 2023, the Gwynedd Planning Policy Service was established, preparation of a Gwynedd Local Development Plan (LDP) for the Gwynedd Local Planning Authority is underway. The new LDP will cover a period between 2024 and

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<sup>1</sup> See: <https://www.gov.wales/planning-policy-wales>

2039. The Anglesey and Gwynedd Joint Local Development Plan continues to provide the local policy framework for decisions on planning applications, until the Gwynedd Local Development Plan is adopted.

- 1.4 The Gwynedd Council and Isle of Anglesey County Council Joint Local Development Plan (LDP) 2011 – 2026 and Supplementary Planning Guidance provide relevant information associated with biodiversity and green infrastructure as follows:
- GC & IACC JLPD 2011-2026 PS19: Conserving and Where Appropriate Enhancing the Natural Environment
  - GC & IACC JLPD 2011-2026 Strategic Policy PCYFF 4: Design and Landscaping
  - GC & IACC JLPD 2011-2026 Policy AMG 5: Local Biodiversity Conservation Policy
  - GC & IACC JLPD 2011-2026 Policy AMG 6: Protecting Sites of Regional or Local Importance
  - GC & IACC SPG: Landscape Character
  - GC & IACC SPG: Wildlife Sites
  - GC & IACC SPG: Open Spaces in New Residential Developments

## 2. SCHEME DETAILS

- 2.1 The proposed Development comprises a residential development of 14 Apartments, 6 bungalows and 28 houses (totalling 48 Dwellings), immediately east of the A5 Llandegai Road on the eastern edge of Bangor. The site currently comprises a roughly triangular pasture field of generally short improved grassland, on a slight slope rising to the east away from the A5. The site has a managed hedgerow along the road side, but the other two sides to the north and east are lined with mature broadleaved woodland to the north, and a stone wall with mature trees as the eastern boundary, forming a continuous line of trees along two sides of the site
- 2.2 The proposed development comprises a single new no-through-road with a new access created off the A5 in the north of the site, with the buildings grouped along the road leaving open areas in the north, east and south of the field which incorporate ecological mitigation and the attenuation basin.
- 2.3 Enfys Ecology were involved in the design of the scheme from the design stage, in order to assist with including consideration of biodiversity into the scheme, based on the step wise approach to the mitigation hierarchy (see Section 1.2). The scheme includes numerous considerations of biodiversity from the siting of the buildings to avoid the most significant habitats, careful design of lighting to minimise impacts, through to the creation of new and more diverse grassland habitats. (See Table 4.1, Section 4).
- 2.4 The reports, drawings and statements produced as part of the design were reviewed for the production of this Green Infrastructure Statement. Rather than list all the various elevation drawings (for example), those considered relevant to the Green Infrastructure status of the site and providing evidence for this submission are detailed in Table 2.1, below.

**TABLE 2.1: PROJECT INFORMATION SOURCES**

Information	Organisation	Reference and Date
Proposed Site Layout	Ainsley Gommon Architects	C1124 004 P Proposed Masterplan, 15/05/2025
Design and Access Statement	Ainsley Gommon Architects	Design and Access Statement: Housing development, Incline fields, Bangor 13/12/2024
Preliminary Ecological Appraisal	Enfys Ecology Ltd	EE.4756.2024.AB Incline Fields, Bangor PEA 09/12/2024
Bat Surveys	Enfys Ecology Ltd	EE.456.24.DA Incline Fields – Bat Activity Surveys 13/11/2024
Arboricultural Assessment	West Coast Arboriculture and Land Planning Ltd	Incline Fields, Bangor- Proposed Residential Development: Arboricultural Planning Assessment (BS5837:2012) WAL_24_065_P01 12/08/2024
Tree Protection Plan	West Coast Arboriculture and Land Planning Ltd	Incline Fields Tree Protection Plan WAL_24_065_1P_003 13/12/2024
Landscape and Biodiversity Enhancements	Land Studio	423-LST-XX-XX-DR-L-0101-Landscape General Arrangement 10/12/2024
Landscape Planting Plan	Land Studio	423-LST-XX-XX-DR-L-0301-Planting Plan 10/12/2024
Lighting Plan – Street Lighting Layout	Carpenter Davies Partnership	P1980-CDP-XX-EX-DR-E-2101 P1 18/12/2024
Spillage Calculations, Lighting Calculations	Carpenter Davies Partnership	P1980 Lighting Calculations and P1980 Lighting Calculations 18/12/2024
Proposed Drainage Scheme	Datrys	24139-DAT-XX-XX-DR-C-501P01 Proposed Drainage Scheme 17/12/2024
Transport Statement	SCP	Incline Fields, Bangor, Transport Statement - SCP_240564 – AR. 16/12/2024
Agricultural land Quality Considerations	Kernon Countryside Consultants Ltd.	KCC3857 ALQC Dec 24 Draft December 2024

### 3. SITE BASELINE AND CONNECTIVITY

3.1 The site comprises agricultural improved grassland, mostly grazed very short and of limited diversity, save for a small patch of slightly more diverse neutral grassland on steeper ground close to the A5 hedgerow. The northern boundary comprises the southern edge of a part of a large area of woodland in the valley of the Afon Cegin, with large mature trees. The eastern boundary follows a stone wall and is lined with tall mature trees, in places considered small woodland patches. This boundary follows the site of the old Penrhyn Quarry Railway and the estate boundary wall, including the grade II listed Incline Cottage (outside the proposed scheme to the east). The field is undivided save for a narrow road which crosses the site in the north. The tall trees and woodland lining two sides of the site are well connected to a much larger area of woodland in the Cegin Valley, as can be seen in Figure 3.1, right.



**FIG. 3.1: SITE CONTEXT**

*BACKGROUND IMAGE © GOOGLE 2024*

- 3.2 The boundary features connect to other areas of woodland at both ends of the site. Bats were recorded using these flight lines during the ecological surveys for the scheme (see ecological reports). The northern site boundary forms a south facing woodland edge habitat with at present an abrupt transition from mature trees to open grassland.
- 3.3 The wider area is rural, with the exception of urban areas of Bangor to the north and west. Despite the location on the edge of the city of Bangor the woodland at the site boundary is contiguous with a broad band of mature woodland stretching along the Cegin Valley, around the Penrhyn estate to the east and much of the way along Bangor mountain to the west, providing a very large (for North Wales) area of connected woodland with excellent connectivity to the site. To the east are large open fields on the Penrhyn estate. Beyond the woods to the west is Maesgirchen and Bangor. The coast at Bangor harbour is approximately 600m to the north.
- 3.4 There is at present no public access to the site, which is private property. The North Wales Coastal Path follows the A5 adjacent to the west, and the Llon Las Ogwen (National Cycle Route 82) runs along the Cegin Valley to the west, within 25m of the site entrance. There will be no direct link to this route due to the significant difference in elevation in a short distance (via an important woodland habitat), but it is accessible within a short walk or cycle.
- 3.5 There are no waterbodies on the site. The closest water is the Afon Cegin which runs past the site to the west and north, at its closest 30m from the north of the site.
- 3.6 The site, being currently undeveloped, has no current connections to local foul and surface water systems. An existing septic tank (for Incline cottage) in the east will be removed as part of the scheme. (from Datrys drainage plan).

3.7 The ecological surveys found most of the site to be relatively species poor semi-improved grassland, however the woodland to the north and trees along the eastern boundary (largely outside the actual site) are important habitat for bats with at least six species using the boundaries as flight lines. There is some potential for reptiles in the boundaries, particularly the wall to the east, but they are unlikely to be on the shorter grassland in the site itself. All of the trees have the potential to support nesting birds. Badgers, hedgehog and other animals may use the site but are not likely to be resident.

#### 4. SUMMARY OF GREEN INFRASTRUCTURE PROPOSALS

4.1 As set out in PPW 11, paragraph 6.4.21, the impacts on habitats and species from a proposed development should be treated in a step-wise manner. Table 4.1 summarises how the proposed works at Incline Fields has adopted these step-wise principles and details the Green Infrastructure contribution of the proposed scheme. The Green Infrastructure contribution proposed is considered to be proportionate to the proposed development.

**TABLE 4.1: SUMMARY OF GREEN INFRASTRUCTURE PROPOSALS FOR INCLINE FIELDS, BANGOR.**

Step-Wise Stages	Summary of Project Proposals
Avoidance	<ul style="list-style-type: none"> <li>The development will avoid impacts to more valuable habitats by being constructed almost entirely on improved grassland of limited ecological value (one small area near the road is of slightly more diversity, but still of relatively low ecological value).</li> <li>The hedgerows and wall will also be unaffected (except two gaps and minor realignment of the road side hedge only), and large vegetated areas will remain between the site and the northern and eastern boundaries.</li> <li>A key aspect of the mitigation is strict lighting design which preserves the entire northern and eastern site boundaries as dark zones, which will be kept dark (below 1 lux) at all times both during the works phase and during the lifetime of the development. This avoids negative impact from lighting on the recorded bat activities along these flight lines, preserving their availability as habitat.</li> <li>This is demonstrated by the lighting plan, which shows that the great majority of the site outside the development footprint including the habitat areas will be kept well below 1 lux, with the boundaries below 0.2 lux. (however please see section 4.2)</li> <li>All new foul water and sewerage will connect to existing systems in the road to the west, and an existing septic tank removed.</li> </ul>
Minimisation	<ul style="list-style-type: none"> <li>As much space as possible is retained between the development and the important habitats on the northern and eastern boundaries, the most valuable areas of the site, to minimise as much as possible disturbance from the works, and the housing once occupied.</li> <li>The lighting scheme is designed to minimise where possible any spillage outside the developed area.</li> <li>The only loss of hedgerow to the road side will be the unavoidable removal of two sections of the western hedgerow along the road, to allow for the access road and enlargement of and access to the bus stop in the south. This work is confined to the least valuable of the site boundaries and the southern section of hedgerow will be re-laid, slightly to the east to preserve the hedgerow corridor. Any losses have been kept to the minimum allowed by sight lines and highways regulations.</li> <li>As much of the area as possible, including significant areas of the north, east and south of the field will be left undeveloped.</li> <li>Drainage has been designed to minimise the creation of additional runoff, using rain gardens and significant areas of porous paving to absorb runoff from the hardstanding areas and drain into an attenuation basin and ultimately an existing ditch to the north. Attenuation tanks and the basin will minimise any silt loading carried off site.</li> </ul>



Step-Wise Stages	Summary of Project Proposals
Mitigation or Restoration	<ul style="list-style-type: none"> <li>• Protective fencing will be used to secure the root zones of all retained trees. This will be periodically inspected for the duration of the works.</li> <li>• The Preliminary Ecological Appraisal (PEA) contains Reasonable Avoidance Measures will be followed to minimise the risk of harm to any animals using the site, should any be present during the works.</li> <li>• The PEA also includes recommended precautionary surveys which will all be implemented to identify and minimise any potential risk to other species that might be present, including supervision of any works to the wall (though none are confirmed), nesting bird checks, and tree maintenance.</li> </ul>
Compensation	<ul style="list-style-type: none"> <li>• A new hedgerow will be created along the eastern boundary to compensate for the unavoidable loss of trees, scrub and other vegetation on the monument area which follows this boundary. These losses are <i>not</i> a result of the development, but of enforcement of heritage site regulations, but compensation has been specifically designed to preserve the ecological value present in the area. The new hedgerow will preserve the existence of a largely unbroken flight lines for bats and provide good habitat for birds and invertebrates. The new hedgerow will comprise a native species hedgerow dominated by hawthorn and connect to the existing hedgerow at the southern end.</li> <li>• This hedgerow will incorporate native trees, aligned with trees in the preexisting boundary to the east, it is intended that these trees will grow up as the existing boundary dies back, maintaining continuity of the feature.</li> <li>• There will be an unavoidable gap in the hedgerow in the southern part of the site where there is insufficient space to allow a hedgerow along with the area where clearance has been imposed, In this area the flight lines will be maintained by installing a wire fence of similar height, which will be planted with native climbing honeysuckle in order to maintain a vegetated feature in a tight space. While not comparable to a hedgerow this will still support foraging by birds and insects and a much more naturalistic appearance.</li> <li>• It may be necessary to realign the hedgerow along the western boundary (by the A5) in order to enlarge the bus stop here. This will be avoided if possible, but if necessary the new hedgerow the eastern edge of the site will compensate for the loss of hedgerow along the road.</li> <li>• The loss of the improved grassland (which covers the entire development footprint) including a small more diverse area will be compensated for by the creation of several areas of much more diverse grassland using wildflower meadow mix. These will occupy almost all of the available areas to the east, north and south of the site, making up a much larger area than the small existing area of more diverse grassland near the road (see PEA). These will be much more diverse and provide a much greater density of flowers for pollinating insects than the sparse improved grassland.</li> </ul>
Enhancement	<ul style="list-style-type: none"> <li>• The creation of large areas of wildflower meadow on three sides of the site go beyond compensation for the existing grassland and enhance the site, providing much greater diversity of grassland plants, and habitat opportunities for invertebrates and other animals.</li> <li>• The wildflower grassland areas will be managed as such, and not intensively mown.</li> <li>• In addition, the scheme includes areas of native scrub and wildflower planting along the northern boundary and parts of the eastern boundary. This is designed to take advantage of the opportunity presented by the south facing woodland edge north of the site. This is at present an abrupt transition from tall woodland to grassland, and will be enhanced through planting to create a diverse woodland edge habitat with a transition through trees to scrub and woodland ground flora. Woodland edges are good habitat for many birds and invertebrates but tend, as</li> </ul>

Step-Wise Stages	Summary of Project Proposals
Enhancement (continued).	<p>here at present, to be abrupt, without the important glades, sheltered sunspots etc.</p> <ul style="list-style-type: none"> <li>• The drainage scheme includes an attenuation basin in the north. This will be enhanced with wetland wildflowers for additional diversity (due to its attenuation requirements this will periodically drain and not persist as a permanent pond).</li> <li>• The entire area will be further enhanced by planting native trees, in lines and individually through the developed area and parts of the meadows. These will also provide shelter and additional habitats for birds and other animals, which are not currently present on site.</li> <li>• All of the above will be appropriately managed under a management plan designed around the habitats present and under agreements to ensure the persistence of the habitats created.</li> <li>• Hedgehog access points will be located in fencing or walls wherever feasible and to access individual private gardens in addition to boundaries, this will create a 'Hedgehog Highway' comprising a 130 x 130 mm square hole at bottom of every fence or gravel board, (and include signage explaining not to block opening).</li> <li>• The scheme includes the addition of new bat and bird boxes, appropriately sited on the buildings to provide additional habitat enhancement. Bat boxes are sited away from lighting and facing on to habitat features wherever possible.</li> <li>• These will be inbuilt boxes where possible as less maintenance is required. This may not be possible on all buildings as they cannot be built into prefabricated sections, in which case appropriate boxes will be used under the direction of an ecologist. The ecologist will have final say on the placement of boxes if any changes are needed due to the positioning of lighting or other factors.</li> </ul>

4.2 The dark corridors for bats will be maintained through control of lighting including the use of baffles on the rear of the street lights, particularly where these are close to the boundaries in the southeast of the site. Refer to the lighting plan for further details (however it should be noted that the software used to plot isolines cannot model these baffles at present, so some lighting spillage shown on the boundary here will not in fact be present on site (area circled in blue on Figure 4.2 below). A corridor including the trees on the northern boundary and the new hedgerow on the eastern boundary, plus as much as possible of the grassland in front of them has been kept dark in order to avoid disturbing the established bat flight lines. In the north of the site this dark area comprises the entire area north of the buildings, 20-40m in depth, while it will be a minimum of 2-3 metres in the east, and generally much wider. Modelling was available to 1 lux, but areas beyond this point are entirely unlit and are anticipated to drop to natural night-time light levels of 0.2 lux or less (see Figure 4.2).



**FIGURE 4.2: PROPOSED DARK ZONES (BELOW 1 LUX AT GROUND LEVEL) IN PURPLE. (NORTH IS TO THE LEFT)**  
TAKEN FROM SITE PLAN © AINSLEY GOMMON ARCHITECTS.

- 4.3 The proposed scheme will provide much needed affordable housing totalling 48 units supporting the maintenance of the local community in Bangor.
- 4.4 The development includes pedestrian and cycling access to the A5, with a short walk to Bangor to the north. There will also be easy public transport access via busses on the A5 immediately adjacent to the site, which is already a major bus route. The scheme provides residents with access to nature and natural spaces within a very short distance of their homes, due not only to the creation of wildflower meadows and tree planting immediately around the site, but also with quick access via paths in the northeast and via the A5 pavements to the woodlands along the Cegin Valley, including the National cycle route up to the Ogwen Valley, and to the sea at Bangor, from which the North Wales Coastal Path can be accessed.
- 4.5 To achieve a reduction in carbon emissions, the design looks to implement the energy hierarchy by reducing energy demands and then increasing energy efficiency in the dwellings. Orientation, micro-climate and built form have all been considered to promote passive solar gain, natural light and wind protection, which will all contribute towards reducing the energy demand. Materials will be selected from local sources wherever possible to minimise transport energy use and help sustain the local economy. The materials have been chosen for their sustainability in reference to the 'BRE' Green Guide to Specification.

## 5. STATEMENT

- 5.1 The proposed development at Incline Fields will provide a large number of additional affordable social dwellings to support the community. The housing mix reflects the results of dialogue and housing need in consultation with the Local Authority. The scheme has been designed taking a step-wise approach to impacts on habitats and species, and ecological enhancement will be provided through the creation of new habitat, particularly meadows and woodland edge enhancement, and minimising the losses to the existing value of the site. The development requires the removal of some mature trees on the eastern site boundary, but apart from this development will be restricted to areas of relatively low ecological value i.e. improved grassland, which is a common habitat in the wider landscape.
- 5.2 The main ecological value of the site as constituted prior to development is in the site boundaries, which are tall broadleaved woodland or lines of trees (except along the A5 to the west), and have very good connectivity to other similar habitat in the wider area. These are also used by at least six bat species for foraging and commuting. On the eastern boundary vegetation removal is required by the heritage regulator; this is not driven by this scheme which seeks to preserve the boundary features wherever possible, and to that end significant compensation will be implemented with a native species rich hedgerow will be planted, offset slightly to the west, to preserve bat flight line. This includes numerous trees which will be allowed to grow to full size, equivalent to the preexisting boundary.
- 5.3 The choice of a hedgerow with trees along the boundary over discrete scrub and woodland patches is partly for speed of establishment, but in great part in order to ensure long term continuity of the linear feature which is so important, it is much easier to ensure the correct long term management of a hedgerow as a linear feature. The heritage features will not be isolated from the development, paths will run both sides of the hedge and through gaps in it to encourage access to the feature.
- 5.4 The proposed scheme also achieves preservation of the ecologically valuable boundary features through positioning of the buildings to create a buffer away these features and maintaining as much of these features intact as possible, keeping them dark, to minimise any impact on wildlife using these features. The biodiversity enhancement plans for the site is designed around avoiding impacting the valuable habitat corridors as its first principle, with other habitat creation designed to fit into this.



- 5.5 Additional enhancements will be provided through multiple areas of species rich grassland, created to increase diversity, scattered native trees and native hedgerow planting. There will also be features for animals including bat and bird boxes, hedgehog highways and habitat piles. As much of the area as possible has been designated for planting with additional trees and diverse grassland. This is the main ecological and green infrastructure gain resulting from the scheme, and represents a significant increase in good quality grassland habitat over the site as it is currently.
- 5.6 Planning Policy Wales identifies the importance of “*paying due regard to the potential for continued long term maintenance and management of retained areas to benefit biodiversity*” (PPW12, paragraph 6.4.15). It is recommended that a plan identifying the proposed maintenance and management of habitats and species features (in addition to other Green Infrastructure components as required) be produced at an appropriate stage. Once implemented this will secure the preservation of the boundary features against further development, and the connectivity of habitats.
- 5.7 The creation of the meadow belt around the site, and the trees and woodland also provide good quality and accessible natural spaces for the occupants of the estate.

## REFERENCES

Gwynedd Council and Isle of Anglesey County Council. (2017). ‘Anglesey and Gwynedd Joint Local Development Plan 2011 – 2026’. Available: <https://www.gwynedd.llyw.cymru/en/Council/Strategies-and-policies/Environment-and-planning/Planning-policy/Joint-Local-Development-Plan/Joint-Local-Development-Plan-Current/Joint-Local-Development-Plan.aspx>

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