Green Infrastructure Statement and Net Benefit for Biodiversity

Lower Wych One Planet Development

Land at Lower Wych, Lower Wych Road, Bronington, Wrexham, Wales, SY14 7JZ

This document should be read alongside the Lower Wych OPD Management Plan and the submitted ecological, landscape, water, waste and monitoring evidence.

1 Introduction

This Green Infrastructure Statement accompanies the planning application for a single-household One Planet Development at Lower Wych. It explains how green infrastructure, biodiversity, ecosystem resilience, landscape character and long-term land management have shaped the proposal from the outset.

The statement addresses the Welsh planning requirement for a proportionate Green Infrastructure Statement, the approach to biodiversity, net benefit for biodiversity and the ecosystem-resilience attributes of diversity, extent, condition, connectivity and adaptability. [1][2][3]

The proposal is not treated as a conventional rural house plot. It is a monitored, land-based One Planet Development in which built form, access, productive land use, water management, lighting, habitat enhancement and annual monitoring operate as one integrated green-infrastructure system.[4]

Table GIS-1: Relationship to the wider submission pack

Document / evidence source	Role in this Green Infrastructure Statement
Preliminary Ecological Appraisal v2	Provides the ecological baseline, habitat descriptions, COFNOD records, protected-species risk assessment and recommended safeguards.
GCN eDNA evidence and avoidance-led RAMS	Records confirmed GCN presence in on-site P1 and off-site P5, the assumed-presence approach for inaccessible P2 and the relevant wider pond context, and the construction safeguards for pond and terrestrial habitat.
Section 2: Baseline	Confirms the site location, area, on-site woodland, adjacent Doley Wood and Meadows Local Wildlife Site, hedgerows, mature trees, pond, landscape context and planning constraints.
Section 5: Land Management	Provides the controlled land-use schedule, habitat prescriptions, quantitative targets, ecological safeguards and annual management approach.
Sections 6 and 7: Energy, Water and Waste	Set out rainwater harvesting, clean-water irrigation, source-separated sanitation, greywater treatment, reedbed / polishing pond separation and nutrient controls.
Section 9: Landscape and Visual Impact	Assesses landscape character, visual containment, lighting, material choices and long-term landscape integration.
Section 13: Phasing, Monitoring and Exit Strategy	Secures annual monitoring, Year 3 and Year 5 review, corrective action and reversibility if OPD requirements are not met.
Plans and ecological figures	Include the Landscape Plan, Baseline Habitat and Ecological Features Plan, Low-Impact Lighting and Dark-Corridor Plan, and GCN Constraints and RAMS Plan.

2 Site and proposal summary

The registered holding comprises 20,710 m² / approximately 5.12 acres / 2.071 ha. The Management Plan uses a rounded 20,700 m² audit basis for land-use percentages. The proposal comprises a compact dwelling and enterprise cluster, access, rainwater harvesting, source-separated sanitation, greywater treatment, productive growing areas, orchard and soft fruit, polytunnels, ponds, coppice, rotational grazing / poultry pasture and habitat-enhancement areas.[4]

The site-wide strategy keeps built form deliberately compact. The controlled land-use audit records a combined built footprint of 313 m², approximately 1.51% of the holding, with access, parking, turning and paths limited to 256 m², approximately 1.24% of the audit area. The remainder remains in productive, ecological or low-input landscape management.[4]

The house and enterprise spaces support the land-based activity; they do not replace the ecological and productive function of the holding. Roof-mounted renewable energy, permeable access, separate clean-water and greywater systems and low-impact landscape management reduce the physical and operational footprint of the proposal.

3 Existing green infrastructure baseline

The Arbtech Preliminary Ecological Appraisal v2 records lowland mixed deciduous woodland, other neutral grassland, bramble scrub, pond P1, scattered trees and native hedgerows within the application site. The woodland, hedgerows, trees and ponds connect with a wider landscape of woodland blocks, hedged fields and ponds associated with the Wych Brook valley.[3]

The on-site lowland mixed deciduous woodland covers approximately 3,829 m² / 0.946 acres and is assessed as being in good condition. It lies outside, but adjacent to, Doley Wood and Meadows Local Wildlife Site. The Local Wildlife Site is therefore an off-site designated receptor; no part of the application site or its retained woodland is described in this statement as lying within the LWS. The on-site woodland is retained in full and managed as a sensitive ecological asset adjoining the LWS.[3][4]

The lowland mixed deciduous woodland and native hedgerows are habitats of principal importance. Scattered trees also provide ecological and landscape value. Other neutral grassland is assessed as poor condition and provides the principal opportunity for enhancement. Pond P1 is retained; follow-up eDNA evidence confirms GCN presence in on-site pond P1 and off-site pond P5. P5 lies on third-party land outside the application site and is not directly affected by the proposed works. P2 and other inaccessible ecologically connected ponds are treated on an assumed-presence basis, with no absence conclusion drawn.[3][5]

Table GIS-2: Existing green infrastructure assets and proposed response

Existing asset / receptor	Baseline value	Proposed response
On-site lowland mixed deciduous woodland	3,829 m² / 0.946 acres; habitat of principal importance; PEA condition good; outside and directly adjacent to the LWS.	Retain in full; protect from construction, drainage, lighting, compaction, storage and material-spill impacts; retain deadwood where safe and maintain a dark, structurally varied edge.
Doley Wood and Meadows Local Wildlife Site	Off-site non-statutory designated receptor directly adjacent to the holding and the on-site woodland.	No encroachment or direct loss. Prevent indirect effects from runoff, sediment, dust, lighting, storage, nutrient application or construction activity.
Native hedgerows	Habitat of principal importance; landscape feature and movement corridor; PEA condition good.	Retain, gap-plant with native species and manage on rotation outside the main nesting season.
Scattered trees T1-T16	Good / moderate condition; ecological, landscape, shading and potential bat / bird value.	Retain and protect through BS5837-style root-protection measures, construction exclusion zones and low-impact lighting.

Existing asset / receptor	Baseline value	Proposed response
Pond P1 and wider pond network	P1 is retained on site and has excellent GCN HSI. GCN is confirmed in on-site P1 and off-site P5; P5 is outside the application site and is not directly affected. P2 and other inaccessible ecologically connected ponds are treated on an assumed-presence basis.	Protect P1 from pollution and disturbance; implement the GCN RAMS / CEMP; recognise off-site P5 as confirmed local GCN habitat; protect connected terrestrial habitat; and create additional clean-water ponds, planted margins, hibernacula and rough-grass refugia.
Other neutral grassland	Poor-condition grassland with enhancement potential.	Convert and manage through H3 wildflower meadow, H4 pollinator strips, H6 managed meadow / scrub-grassland mosaic and G1 low-input rotational pasture.
Bramble scrub and rough margins	Shelter, nesting and refugia value.	Retain selectively within the managed H6 habitat mosaic and woodland-edge transition.
Woodland-edge and hedgerow corridors	Bat, bird, invertebrate and mammal movement routes linking the site to the surrounding landscape.	Maintain dark corridors and strengthen links with coppice, orchard, scrub, meadow, pond margins and pollinator planting.

4 Step-wise approach

The proposal applies the step-wise approach by avoiding the highest-value features first, minimising land take and disturbance, mitigating unavoidable construction and operational risks, restoring simplified grassland and enhancing the whole-site green-infrastructure network. No off-site compensation is proposed because priority habitats are retained and the scheme delivers extensive on-site enhancement around a compact built and access footprint.[1][4]

4.1 Avoid

The layout avoids direct loss of the on-site woodland, native hedgerows, mature trees and pond P1. The 3,829 m² woodland is excluded from the building cluster, access, productive infrastructure and water-management works. The proposal also avoids encroachment into the adjacent Doley Wood and Meadows Local Wildlife Site. Existing ecological features form the fixed framework around which the development has been designed.

No built form, productive infrastructure, material storage, runoff discharge or routine nutrient application is proposed within the retained on-site woodland.

4.2 Minimise

The dwelling, enterprise building, open barn, access and parking are clustered to reduce land take, service runs, visual spread and ecological disturbance. Access, parking and paths use permeable or grass-reinforced surfaces wherever practical. Renewable generation is roof-mounted, avoiding a separate ground-mounted solar field.

External lighting is avoided wherever practical. Any necessary fitting is warm-colour, low-level, shielded, downward-directed, close to the point of use and controlled by timer or motion sensor. No floodlighting or continuously lit external working area is proposed.[4][6]

4.3 Mitigate

Construction-phase mitigation will be secured through the CEMP / Ecological Construction Method Statement and the GCN avoidance-led RAMS.[4][5] The controls include tree and root protection, pollution prevention, sensitive vegetation-clearance timing, excavation safeguards, contractor induction and protection of pond, woodland, hedgerow and dark-corridor habitat.

Table GIS-3: Main construction and operational risks and mitigation

Risk	Mitigation
Pollution to P1, on-site woodland, the adjacent LWS, drainage routes or watercourses	Use pollution-prevention controls, designated storage areas, spill kits, silt management, no concrete washout and no dirty-water discharge to ponds, woodland or off-site designated habitat.
Damage to trees, RPAs or woodland edge	Install protective fencing, prevent compaction and storage, avoid trenching in protected areas and use the submitted ecological / tree constraints information during setting-out.
Great crested newt and amphibian risk	Apply the confirmed / assumed-presence approach, GCN RAMS, ecological toolbox talk, trench checks, escape ramps, stop-work procedure and protection of P1 and suitable terrestrial habitat.
Harm to reptiles, hedgehogs or other small mammals	Use staged vegetation clearance, precautionary working methods, covered excavations or escape ramps, and ECoW input where the RAMS / CEMP requires it.
Nesting bird disturbance	Avoid routine hedge, tree and scrub clearance from March to August unless a suitably qualified ecologist confirms that no active nest will be affected.
Bat disturbance and light spill	Maintain dark corridors; avoid temporary and permanent floodlighting; use warm, shielded and downward-directed fittings and a design target of no material spill, with no more than 0.5 lux at sensitive habitat edges.
Indirect effects on the adjacent LWS	No encroachment, storage, runoff, nutrient application, temporary lighting or uncontrolled construction activity affecting the off-site LWS or the intervening woodland edge.

4.4 Restore

The proposal restores simplified, poor-condition neutral grassland into a more diverse and structurally varied habitat mosaic. Restoration is delivered through the 6,683.2 m² H6 managed meadow / scrub-grassland mosaic, 1,125 m² H3 wildflower meadow, 963 m² H4 pollinator strips / beetle banks and 2,810 m² G1 low-input rotational grazing / poultry pasture.[4]

Measures include late cutting and arisings removal in selected meadow components, low-intensity rotational grazing with rest periods, native wildflower establishment, hedgerow gap planting, pond-edge planting, deadwood retention, hibernacula, log and brash refugia, reduced nutrient inputs to habitat areas and soil-building within productive areas.

4.5 Compensate

No off-site compensation is proposed because no loss of the on-site woodland, hedgerows, retained mature trees, pond P1 or the adjacent LWS is proposed. Should detailed implementation identify an effect that cannot remain within the approved avoidance and mitigation envelope, the relevant works will pause and the project ecologist and Local Planning Authority will be consulted before proceeding.

4.6 Enhance

Enhancement is delivered through a connected whole-site system rather than isolated features. Table GIS-4 uses the controlled land-use figures carried through Section 5 and the final Management Plan.[4]

Table GIS-4: Principal retained and proposed green infrastructure components

Green infrastructure component	Area / scale	Biodiversity and ecosystem function
Existing on-site broadleaved woodland retained	3,829 m²	Priority woodland habitat, landscape enclosure, dark corridor and source habitat; outside but directly adjacent to Doley Wood and Meadows LWS.
New mixed native coppice blocks C1-C4	2,250 m²	Shelter, structural diversity, habitat extension, carbon storage, small-scale biomass and woodland-edge connectivity.

Green infrastructure component	Area / scale	Biodiversity and ecosystem function
Dedicated wildflower meadow H3	1,125 m²	Floristic enhancement, long-season pollinator forage and low-input grassland management.
Pollinator strips / beetle banks H4	963 m²	Beneficial-insect habitat, flowering resource, pest-predator support and connectivity around productive land.
Managed meadow / scrub-grassland mosaic / wildlife refugia H6	6,683.2 m²	Rough meadow, flowering grassland, tussock structure, scrub pockets, hibernacula, log piles and low-intervention refugia.
Low-input rotational grazing / poultry pasture G1	2,810 m²	Varied sward structure, low-density rotational management, fertility cycling and productive grassland.
Orchard and soft fruit P4	1,550 m²	Blossom, fruit, perennial structure, pollinator forage, bird habitat and seasonal food resilience.
Annual vegetables and protected cropping	470.4 m²	Productive green infrastructure using no-dig management, clean-water irrigation, soil cover, compost and flowering crop edges.
Low-technology wasabi beds and outdoor mushroom area	250 m²	Speciality production in shaded microclimates, clean-water use and woodland-edge / organic-matter functions outside sensitive habitat.
Proposed ponds and reedbed	200.4 m²	Two clean-water ponds, one greywater polishing pond and a 15 m² reedbed. Existing pond P1 is retained separately within the baseline and is not double-counted as an additional audit category.

5 Proposed green infrastructure network

The green infrastructure network is organised as four connected layers: the retained ecological framework, the productive ecological landscape, habitat creation and enhancement areas, and blue-green infrastructure.

5.1 Retained ecological framework

The on-site woodland, native hedgerows, mature trees and pond P1 form the retained ecological framework. The woodland is outside but directly adjacent to Doley Wood and Meadows LWS, so the off-site designation and the on-site woodland edge are both treated as sensitive receptors. These features define the layout and are protected as constraints rather than treated as residual land.

5.2 Productive ecological landscape

The productive landscape includes 470.4 m² of annual vegetables and protected cropping, 1,550 m² of orchard and soft fruit, 100 m² of low-tech wasabi beds, 150 m² of outdoor mushroom logs / woodchip beds, 2,810 m² of low-input rotational grazing / poultry pasture and 2,250 m² of new coppice. These systems also provide soil cover, blossom, pollinator forage, habitat edges, organic-matter cycling, seasonal structure and reduced reliance on off-site food and materials.[4]

5.3 Habitat creation and enhancement areas

The principal habitat-creation areas are the 6,683.2 m² managed meadow / scrub-grassland mosaic, 1,125 m² dedicated wildflower meadow, 963 m² pollinator strips / beetle banks, new coppice blocks, planted pond margins and orchard understorey. These measures improve the condition and structural diversity of the former poor-condition grassland and strengthen links between woodland, hedgerows, ponds and the wider Wych Brook landscape.

5.4 Blue-green infrastructure and water management

The site uses separate potable, clean irrigation and greywater systems. Domestic rainwater is harvested to 40,000 L of potable storage. Two 10 m clean-water irrigation / attenuation ponds, polytunnel roof catchment and header storage support edible-crop irrigation. Domestic greywater is treated through a 15 m² horizontal subsurface-flow reedbed and a separate 6 m polishing pond / infiltration / non-edible planting route.[4]

Edible crops are irrigated only with harvested rainwater and clean runoff. Treated greywater is not connected to the clean-water ponds or edible-crop irrigation. This separation protects crop hygiene, pond ecology, adjacent habitats and the wider Wych Brook / River Dee catchment.

6 Net benefit for biodiversity statement

The proposal delivers a clear net benefit for biodiversity when assessed against the existing baseline. This conclusion is based on retention of the most valuable features, improvement of poor-condition grassland, creation of a connected habitat mosaic and long-term management through the binding OPD monitoring framework.[1][2][4]

The net-benefit case is summarised as follows:

- The 3,829 m² on-site woodland, native hedgerows, mature trees and pond P1 are retained and protected.
- The on-site woodland lies outside but directly adjacent to Doley Wood and Meadows LWS; the off-site designation is protected from indirect construction, drainage, lighting and nutrient effects.
- The principal habitat subject to layout change is poor-condition other neutral grassland, which is common, widespread and capable of substantial ecological enhancement.
- The scale of habitat creation and improved management is substantially greater than the compact built and access footprint.
- The scheme creates a linked mosaic of woodland edge, hedgerows, meadow, pasture, orchard, coppice, ponds, wetland, pollinator strips and scrub-grassland refugia.
- Confirmed local GCN presence (P1 on site and P5 off site), together with assumed presence in the relevant inaccessible pond context, is addressed through an avoidance-led RAMS, retained ponds and terrestrial habitat, hibernacula, trench checks and stop-work procedures.
- Annual monitoring, a Year 3 review and the Year 5 Management Plan review make ecological delivery measurable and correctable.

This statement demonstrates net benefit through the Welsh planning approach of retention, enhancement, connectivity, ecosystem resilience and secured long-term management.

7 Ecosystem resilience

The proposal supports ecosystem resilience through the recognised attributes of diversity, extent, condition, connectivity and adaptability.[1][2]

Table GIS-5: Ecosystem resilience response

Ecosystem resilience attribute	Lower Wych response
Diversity	Existing woodland, hedgerows, trees and P1 are retained and supplemented by managed meadow, wildflower meadow, pasture, orchard, coppice, ponds, reedbed, scrub pockets, productive beds and pollinator strips.
Extent	The majority of the 20,700 m² audit area remains in green infrastructure, productive landscape or habitat management. Built form and access together occupy approximately 2.75% of the site.
Condition	Poor-condition neutral grassland is targeted for measurable improvement. On-site woodland, hedgerows, mature trees and P1 are protected; new habitat is managed through defined prescriptions and triggers.
Connectivity	On-site woodland, hedgerows, pond margins, coppice, orchard, H6 habitat mosaic and H4 pollinator strips strengthen links through the holding toward the adjacent LWS, surrounding ponds and Wych Brook valley.
Adaptability	Annual monitoring, Year 3 review and Year 5 review allow management to respond to establishment failure, drought, grazing pressure, invasive species, lighting, poor meadow response or new ecological evidence.

8 Habitat and species enhancements

The measures below are already carried into Section 5, the submitted ecological figures and the GCN avoidance-led evidence. Detailed location and installation will follow the submitted plans and any implementation advice required under the CEMP / RAMS; the measures are not dependent on a future undefined Green Infrastructure Plan.[4][5]

Table GIS-6: Species and habitat enhancements

Species / habitat group	Committed enhancement
Bats	Provide two integrated bat boxes in suitable building locations; retain commuting and foraging corridors; keep fittings away from woodland, hedgerows, trees and ponds; apply the habitat-edge lighting limit.
Birds	Provide 12 mixed bird boxes, retain nesting habitat, manage hedgerows and scrub outside the main nesting season and avoid routine March-August vegetation clearance unless checked.
Great crested newts and other amphibians	Retain and protect on-site P1; recognise off-site P5 as confirmed local GCN habitat and protect connected terrestrial habitat; apply the confirmed / assumed-presence RAMS; create clean-water ponds, planted margins and hibernacula; and use trench checks and stop-work procedures.
Reptiles	Provide rough grass margins, native scrub, hibernacula and log / brash refugia, with precautionary construction methods.
Pollinators	Provide the 1,125 m² H3 meadow, 963 m² H4 strips / beetle banks, orchard blossom, flowering hedgerows and pesticide-free productive areas with April-October forage.
Invertebrates	Retain standing and fallen deadwood where safe; maintain compost systems, pond margins and scrub-grassland transitions; provide at least five log / brash refugia across the H6 / coppice / meadow interface.
Mammals	Maintain hedgerow connectivity, rough margins and mammal-hole buffers; provide excavation escape routes and avoid unnecessary night-time disturbance.
Woodland and adjacent LWS	Retain the on-site woodland in full, outside the LWS designation; maintain dark and pollution-free edge conditions and prevent indirect effects on the adjacent designated woodland.

At least three hibernacula per hectare of habitat-creation land, with later additions where monitoring identifies gaps. Box and refugia installation, condition and replacement will be recorded through the annual land-management file.[4]

9 Water, lighting and pollution controls

The biodiversity strategy is supported by the wider OPD water, waste and lighting systems. These controls are essential because the site contains sensitive woodland, pond and hedgerow receptors, lies beside an LWS and drains within the wider Wych Brook / River Dee catchment.

9.1 Water and nutrient separation

Clean water, greywater, source-separated urine, sanitation compost and edible-crop irrigation are kept physically and operationally separate. Edible crops are irrigated only with harvested rainwater and clean runoff. Treated greywater is routed to the reedbed, polishing pond, infiltration and / or non-edible planting only. Source-separated urine and sanitation compost are not discharged to ponds, reedbeds, drainage routes, watercourses, the on-site woodland or the adjacent LWS.[4]

9.2 Lighting

Lighting will be avoided unless required for safe access, servicing or animal welfare. Any necessary fitting will be warm spectrum, downward-directed, fully shielded, low-level, located close to the point of use and controlled by motion sensor or timer. No floodlighting, uplighting, decorative garden lighting, pole-mounted yard lighting or continuously lit external working area is proposed.[4][6]

The lighting design objective is no material light spill into woodland, hedgerows, mature-tree canopies, ponds or identified dark ecological routes. The quantitative design target used by Section 5 and the lighting plan is no more than 0.5 lux at sensitive habitat edges. Any monitored exceedance or visible spill will trigger shielding, relocation, control changes or removal of the fitting.

9.3 Pollution prevention

During construction and operation there will be no uncontrolled discharge of dirty water, fuel, chemicals, concrete washout, nutrient-rich runoff or sediment-laden water to the on-site woodland, adjacent LWS, ponds, hedgerow bases, drainage routes or watercourses.

10 Construction safeguards

Table GIS-7: Construction safeguards

Safeguard	Purpose
Baseline Habitat / ecological constraints information	Mark the on-site woodland, adjacent LWS edge, P1, hedgerows, RPAs, mammal holes, dark corridors and sensitive working exclusions.
GCN Constraints and RAMS Plan	Apply the confirmed / assumed-presence approach, P1 protection zone, terrestrial-habitat precautions, trench checks, stop-work procedure and ecological responsibilities.
CEMP / Ecological Construction Method Statement	Control dust, pollution, runoff, deliveries, storage, access, vegetation clearance, temporary lighting and emergency response.
Tree and root protection	Protect retained trees and woodland edge from trafficking, trenching, storage and compaction.
Vegetation-clearance controls	Avoid routine hedge, tree and scrub clearance from March to August unless a suitably qualified ecologist confirms that active nests will not be affected.
Ecological toolbox talk	Ensure contractors understand the adjacent LWS, on-site sensitive features, GCN position and working restrictions before work begins.
Excavation controls	Cover excavations or provide escape ramps overnight; inspect trenches and stored materials in accordance with the RAMS.
Pollution and construction-lighting controls	Prevent fuel, chemicals, silt, concrete washout, dirty water and temporary lighting from affecting ponds, woodland, hedgerows, the adjacent LWS or watercourses.

11 Long-term management and monitoring

The green infrastructure commitments are secured through the binding OPD Management Plan. Year 1 baseline records will be established before or at first habitation. Annual Monitoring Reports will be submitted within one month of each anniversary of first habitation, with a mid-term review at Year 3 and a full Management Plan review at Year 5.[4]

Records will include fixed-point photographs, habitat-establishment notes, planting survival, woodland and hedgerow checks, meadow / pasture quadrats and cutting / grazing records, pond and reedbed inspections, invasive-species checks, lighting audits, clean-water / greywater separation, species observations, box / refugia checks and corrective actions.

The detailed quantitative targets remain those in Section 5. They include at least 25 native forb species and at least 40% native flowering-forb cover in H3 by Year 5, a 30% increase in representative H6 meadow-component species count against the Year 1 baseline, coppice survival above 80%, improving hedgerow condition, retained dark-corridor function and soil / habitat targets reviewed at Year 3 and Year 5.[4]

Table GIS-8: Monitoring summary

Monitoring item	Record / evidence	Corrective-action trigger
On-site woodland and adjacent LWS edge	Annual photographs, no-storage / runoff checks, deadwood and invasive-species notes, woodland-edge condition and lighting audit.	Compaction, storage, damage, invasive spread, runoff, nutrient input or light spill affecting the woodland edge or adjacent LWS.
Hedgerows and trees	Hedge condition, gap-planting survival, cutting dates, tree / RPA checks and box records.	Planting failure, excessive cutting, nesting-season disturbance, root damage or loss of dark-corridor function.
H3, H6 and G1 grassland habitats	Quadrats, fixed photographs, forb cover, cutting / grazing diary, sward structure and scrub extent.	Poor establishment, nutrient enrichment, overgrazing, poaching, blanket scrub closure or failure to meet the Section 5 trajectory.
P1, off-site P5 / wider GCN context and proposed water features	P1 and refugia checks, proposed-water-feature levels, reedbed inspection, pollution observations, and review of works against the confirmed P1 / off-site P5 and assumed wider-pond context before relevant works.	Pollution, pond degradation, greywater cross-connection, damaged refugia or works falling outside the avoidance-led RAMS envelope.
H4 pollinator strips / beetle banks	Flowering-season checks, fixed transect observations, establishment notes and photographs.	Seasonal forage gaps, failed establishment, weed dominance or accidental cultivation / cutting.
Orchard, soft fruit and coppice	Survival counts, replacement planting, guards, pruning, coupe map and woodfuel records.	Mortality or coppice survival below target, browsing damage, drought stress or inappropriate harvest pressure.
Boxes, hibernacula and log / brash refugia	Annual late-winter condition and replacement log.	Damage, loss, unsuitable location or newly identified protected-species constraint.
Lighting	Night-time audit of fittings, direction, colour, controls and sensitive-edge lux condition.	Any visible material spill or measurement above the 0.5 lux sensitive-edge target.

12 Conclusion

Green infrastructure is the organising framework of the Lower Wych One Planet Development. The proposal avoids the most valuable on-site ecological assets, keeps built form compact and clustered, retains the 3,829 m² on-site woodland, hedgerows, mature trees and pond P1, protects the adjacent Doley Wood and Meadows Local Wildlife Site from indirect effects, and converts poor-condition grassland into a more diverse and connected habitat mosaic.

The proposal delivers a clear net benefit for biodiversity through retained priority habitats, improved grassland condition, 2,250 m² of new coppice, 1,550 m² of orchard and soft fruit, 1,125 m² of wildflower meadow, 963 m² of pollinator strips / beetle banks, 6,683.2 m² of managed meadow / scrub-grassland refugia, ponds, wetland treatment, dark corridors, species enhancements and long-term OPD monitoring.

The scheme therefore provides a proportionate and auditable response to Welsh green-infrastructure, net-benefit-for-biodiversity and ecosystem-resilience requirements for a small, land-based One Planet Development.[1][2]

References

[1] Welsh Government. 2024. Planning Policy Wales, Edition 12.

[2] Environment (Wales) Act 2016, sections 6 and 7.

[3] Arbtech Consulting Ltd. 2025. Preliminary Ecological Appraisal: Land at Lower Wych, v2, 28 August 2025, including COFNOD records.

[4] Lower Wych OPD. 2026. Final Management Plan, Sections 2, 5, 6, 7, 9 and 13, with submitted landscape / ecological figures.

[5] Lower Wych OPD. 2026. GCN eDNA evidence and avoidance-led GCN Constraints and RAMS Plan.

[6] Institution of Lighting Professionals / Bat Conservation Trust. 2023. GN08/23: Bats and Artificial Lighting at Night.