IGBC
IRISH GREEN BUILDING COUNCIL

BIO-NEIGHBOUR

Towards greener, more biodiverse neighbourhoods

D2.2: Actions to be tested for incorporating and maintaining new nature-led residential developments at scale

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IGBC
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Disclaimer

The Housing Agency's purpose is to provide expertise and solutions to help deliver sustainable communities throughout Ireland. A strategic objective is to support stakeholders and policy makers by providing innovative thinking through evidence-based housing insights and data. In this vein, the Research Support Programme funds research projects which respond to key topical issues in housing and have the potential to impact on housing policy and practice. The views expressed in this report are those of the author and do not necessarily represent those of The Housing Agency.

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Introduction

This report presents a set of practical, testable actions derived from the findings of WP2 of the BIO-NEIGHBOUR project. The aim is to move from identifying barriers to implementation by proposing measures that can be trialled and refined with stakeholders. These actions are not fixed prescriptions but testable options to be interrogated in Work Package 3 workshops, where their feasibility, governance, and resourcing will be explored alongside alignment with existing legislation and policy. The actions, informed by interviews with stakeholders, are grouped under the same themes as the D2.1 report: Policy – planning and zoning; Policy – design and delivery; Long-term management; Knowledge; Finance; and Perceptions and people.

1 Methodology

The actions were derived from analysis of interview findings and framed as steps necessary to improve biodiversity outcomes. Their practical application, including ownership, responsibility, legal, and financial considerations, will be developed through stakeholder workshops in Work Package 3. Each theme is introduced with an overarching research question or objective. To guide this process, participants should evaluate each proposed action against a common set of feasibility questions:

Feasibility Questions for Suggested Actions

- Who is responsible? (Which actor owns and delivers the action?)
- Who pays? (What funding mechanism or budget line applies?)
- Can this be done within the current system, or is new legislation/policy required?
- How does this action interact with existing legislation and policy (e.g., Planning and Development Acts, Nature Restoration Law, EU Directives)?
- How is it enforced or monitored, and by whom?
- What timeframe applies (immediate, medium, or long term)?
- What are the risks of unintended consequences (e.g., greenwashing, displacement of impacts)?
- What is the smart way of doing this? (Scalable, replicable, efficient, cost-effective)

This shared framework will ensure that the actions are evaluated not only for their ecological ambition but also for their **real-world feasibility**.

2 Actions to be Tested

2.1 Policy – Planning and Zoning

How can we plan more strategically for biodiversity at National, Regional, and Local Level?

Identifying the correct sites for housing developments

Proposed Actions

1. Strengthen ecological baselines before zoning and planning permission

- Map and protect high-quality habitats, degraded habitats suitable for restoration, and locally important biodiversity sites (LIBS).
- Develop a national ecological corridor network (hedgerows, riparian corridors) protected with buffer zones.

2. Integrate biodiversity into zoning decisions

- Introduce a national "traffic-light" or amber list tool to classify ecological value early in the zoning process.
- Mandate the use of a Green Space Factor (GSF) or similar metric to ensure layouts deliver measurable biodiversity and ecosystem services.
- Distinguish between open space and biodiversity space so that one is not traded off against the other.

3. Build Consistency and Resourcing within local authorities

- Standardise biodiversity policies and design guidance nationally, with scope for local champions to trial and share best practice.
- Embed ecologists and strategic specialists in every local authority to support evidence-based zoning and plan-making.
- Provide training and shared services across counties to address gaps in expertise and ensure consistency.

4. Align with wider obligations and frameworks

- Link development plan and zoning approaches with established frameworks such as the Nature Restoration Law, SDGs, planetary boundaries, and donut economics.
- Apply these frameworks to prioritise avoidance of sensitive areas and strategic land-use balance between housing and nature.

Implementation Considerations

- *Which measures can be delivered under the current Planning and Development Acts, and which require new statutory powers?*
- *How can national standards (e.g. GSF, amber list) be embedded in Development Plan guidelines and Local Area Plans?*
- *How will cross-boundary ecological corridors be coordinated between local authorities?*
- *What resources are required to ensure every LA has ecological and drainage expertise, and how could this be supported regionally?*

2.2 Policy – Design and Delivery

How can we design better for nature at site level?

Steps to implement good planning and design for nature in housing developments

Proposed Actions

1. Integrate ecology at the earliest design stages

- Require ecologists to be part of project teams from feasibility and masterplanning, not post-design.
- Apply the mitigation hierarchy (avoid, minimise, restore, offset) from concept stage onwards.
- Embed biodiversity objectives in pre-planning processes so they shape layouts, not just compliance documents.

2. Prioritise retention and multifunctionality

- Retain existing habitats (hedgerows, treelines, mature trees, wetlands) as "anchors" for site design.
- Protect features with adequate buffers, ensuring they function as ecological corridors.
- Use multifunctional or "stacked" land-use approaches: integrate biodiversity with SuDS, amenity, climate adaptation, and active travel.
- Review historic satellite imagery as part of planning decisions to prevent the clearance of ecological features prior to planning application.

3. Mainstream nature-based SuDS

- Adopt a "water-first" approach: integrate SuDS into layouts from the outset, layered with ecological corridors and public spaces.
- Exclude underground tanks from open space calculations to encourage natural SuDS.
- Develop and/ collate national design standards for SuDS features, boundary treatments, and buffers.

4. Design for species and long-term function

- Incorporate features for target species (sandbanks, wildflower meadows, wetland planting) alongside the built environment (swift bricks, bat roosts).
- Prioritise natural habitats over artificial features where possible; use artificial features (e.g. nest boxes) as complements.

- Ensure measures are maintained and monitored post-occupancy to prevent greenwashing.

5. Lead by example and normalise best practice

- Use state-funded housing and regeneration projects as demonstrators of integrated biodiversity design.
- Showcase exemplar projects nationally, measuring outcomes for people and nature.
- Encourage private developers to adopt internal biodiversity standards (e.g. swift bricks in all homes) to normalise measures across the sector.

6. Enable multidisciplinary working and guidance

- Resource local authorities to convene ecologists, planners, landscape architects, engineers, and project managers in joint design reviews.
- Produce practical, costed guidance for developers with clear expectations (e.g. buffers, drainage hierarchy, acceptable SuDS features).
- Develop Irish case studies with lifecycle costings of grey vs green infrastructure to give certainty on costs and benefits.

Implementation Considerations

- *How can early ecological input be mandated in the planning system (e.g. validation requirements at pre-application stage)?*
- *What enforcement mechanisms are needed for pre-clearance prevention?*
- *Which standards (buffers, SuDS design, swift bricks) should be made national, and which should allow for local adaptation?*
- *How can multidisciplinary working be supported within local authority resourcing constraints?*
- *What monitoring/enforcement structures are needed to ensure measures persist beyond handover (e.g. through an Ecological Clerk of Works)?*
- *How can demonstrator projects be selected, funded, and communicated to maximise peer learning?*

2.3 Long-Term Management

How can we manage for nature benefit in the long term?

Steps to implement good management for nature in housing developments

Proposed Actions

1. Define ownership and responsibility from the outset

- Require biodiversity management plans as part of planning applications, clearly assigning responsibility for habitats, SuDS, and ecological features.
- Formalise transfer of responsibility when developers hand over to local authorities, management companies, or residents' associations.
- Clarify who funds ongoing maintenance, and ensure cost implications are transparent to future owners or residents.

2. Strengthen enforcement and accountability

- Include long-term management requirements as binding planning conditions.
- Establish independent inspection mechanisms (e.g. local authority enforcement teams or regional shared services).
- Appoint an Ecological Clerk of Works (ECoW) on major projects to oversee ecological commitments through construction and early handover.

3. Resource local authorities for long-term stewardship

- Provide adequate staffing, training, and equipment to parks, roads, and operations teams tasked with managing NbS.
- Ensure biodiversity features are mainstreamed into existing estate management structures, rather than treated as add-ons.
- Support staff with specialist training (e.g. managing wetlands, tree pits, swales) and resource them in line with new workloads.

4. Match design with maintenance capacity

- Select biodiversity measures based not only on ecological value but also on long-term viability.
- Encourage early planting and phased establishment to reduce long-term costs and build local support.
- Develop national guidance on matching habitat types and SuDS features to realistic maintenance capacity of local authorities or private managers.

5. Build evidence on costs and performance

- Develop a national portfolio of monitored Irish NbS projects to provide real data on lifecycle costs and ecological outcomes.
- Compare long-term maintenance costs of NbS with conventional grey infrastructure (e.g. cost to empty attenuation tanks).
- Use this evidence to inform funding models and make the economic case for NbS as standard practice.

Implementation Considerations

- *How should responsibilities for post-construction management be legally assigned and enforced?*
- *Should inspection and enforcement sit within local authorities or a new independent entity?*
- *What new resourcing and training do LA operations teams require to manage NbS effectively?*
- *How can developers and residents' associations be incentivised or required to maintain biodiversity features?*
- *What monitoring and reporting structures are needed to track ecological outcomes over 10, 20, and 30 years?*
- *How can cost–benefit analysis of NbS vs grey infrastructure be embedded into decision-making at funding and design stages?*

2.4 Knowledge

How can we maximise knowledge for nature-led development?

Steps to implement knowledge dissemination for nature in housing developments

Proposed Actions

1. Embed ecological expertise across all levels

- Resource every local authority with at least one in-house ecologist (additional to biodiversity officer) and a drainage specialist.
- Establish regional shared-services teams to support smaller authorities with specialist input.
- Mandate early engagement between ecologists and design teams, embedding ecology at concept and pre-application stages.

2. Upskill the wider development sector

- Introduce cross-disciplinary training modules on biodiversity for planners, architects, engineers, and project managers (CPD and third-level curricula).
- Run short, informal workshops led by ecologists to build shared understanding within project teams.
- Use public sector capital projects as training grounds and exemplars for multidisciplinary learning.

3. Promote shared language and tools

- Develop clear communication frameworks to translate ecological objectives into design language that resonates with non-specialists.
- Create practical guidance for common features (e.g. SuDS, buffers, boundary treatments), reducing ambiguity and conflicting interpretations.
- Develop accessible GIS-based tools and biodiversity metrics (e.g. Green Space Factor) to make ecological data visible and actionable.

4. Build political and public literacy

- Improve communication with elected members and the public by linking biodiversity to everyday benefits: wellbeing, climate resilience, and attractive home environments.

- Use exemplar projects and demonstration visits to normalise biodiversity as a mainstream component of housing.
- Challenge misconceptions that compact housing and biodiversity are incompatible by showcasing successful medium-density, nature-led models.

5. Centralise knowledge and evidence

- Create a national hub for best practice, guidance, and case studies, accessible to all sectors.
- Commission and share independent research on costs, benefits, and performance of NbS in the Irish housing context.
- Promote peer-to-peer knowledge exchange between local authorities, developers, and communities.

Implementation Considerations

- *How can local authority ecological expertise be resourced sustainably (e.g. shared services, state funding)?*
- *Which professional bodies (e.g. RIAI, Engineers Ireland, CIEEM) should take responsibility for cross-disciplinary training?*
- *How should guidance and tools (GSF, GIS mapping) be standardised and maintained nationally?*
- *What mechanisms can embed biodiversity literacy in public sector projects, so they act as exemplars?*
- *How can political and public literacy be strengthened without oversimplifying ecological complexity?*

2.5 Finance

How can financial mechanisms support the integration of biodiversity into residential developments?

Ensuring costs and benefits are *shared fairly* across sectors.

Proposed Actions

1. Develop standardised economic metrics

- Quantify the value of biodiversity and NbS in terms of ecosystem services, property value, climate resilience, and health benefits.
- Embed these metrics in project appraisal and land valuation processes.
- Commission Irish case studies comparing conventional vs nature-inclusive developments.

2. Integrate biodiversity into mainstream funding streams

- Make biodiversity criteria mandatory in existing public programmes (e.g. URDF, capital housing, NTA active travel).
- Ensure projects must meet nature-based standards to qualify for funding, normalising best practice rather than treating it as optional.
- Align biodiversity with obligations under the Public Spending Code and new Infrastructure Guidelines.

3. Pilot targeted incentives

- Offer fiscal incentives for developers (e.g. reduced levies, tax credits) or homebuyers (e.g. green mortgages) when biodiversity thresholds are met.
- Streamline approvals processes for developments that achieve defined biodiversity performance standards.

4. Compare lifecycle costs of grey vs green infrastructure

- Collect data on long-term maintenance costs of NbS compared with conventional systems (e.g. cost to empty underground attenuation tanks vs lower-cost distributed SuDS).
- Use this evidence to build the business case for NbS as the cost-effective default.
- Develop maintenance cost models to guide developers, management companies, and local authorities.

5. Share costs and benefits across sectors

- Explore cross-departmental funding models to reflect the wider benefits of NbS (health, flood management, transport, biodiversity).
- Pilot mechanisms where costs are not borne solely by housing budgets but shared with sectors that benefit from ecological outcomes.

Implementation Considerations

- *Which bodies (e.g. Department of Housing, DHLGH, Department of Finance) should lead on embedding biodiversity into funding streams?*
- *How can fiscal incentives be tested without distorting housing affordability or delivery targets?*
- *What datasets are needed to standardise lifecycle cost comparisons?*
- *How can cross-sectoral co-benefits (health, flood management, climate adaptation) be reflected in budget allocation?*
- *What role can the private finance sector play (e.g. green loans, ESG-linked investment)?*

2.6 Perceptions and People

How can perceptions of biodiversity be shifted?

Seeing biodiversity as an asset rather than a constraint

Proposed Actions

1. Reframe biodiversity as aspirational

- Use marketing, communications, and housing promotion to position biodiversity as part of an attractive, high-quality living environment.
- Showcase medium-density, nature-led developments as aspirational models of urban living.
- Highlight everyday benefits for residents (e.g. birdsong, passive recreation, shade in heatwaves).

2. Promote exemplar projects and peer learning

- Develop and publicise case studies of successful nature-inclusive housing (including social housing and regeneration projects).
- Organise demonstration visits for local authorities, developers, elected members, and residents.
- Support peer-to-peer platforms where residents and local authorities can share lived experiences of biodiversity in housing.

3. Strengthen communication with stakeholders

- Tailor messages to the concerns of different groups:
  - Residents (quality of life, property value, safety).
  - Developers (clarity, viability, reduced risk).
  - Politicians (public support, climate obligations).
- Use accessible tools (visualisations, GIS, metrics like Green Space Factor) to make biodiversity outcomes visible and tangible.

4. Address myths and misconceptions

- Challenge the belief that compact housing and biodiversity are incompatible by showcasing evidence and exemplars.
- Position NbS as complementary to engineering solutions, not in opposition.

- Use “insurance” framing — NbS as resilience-building alongside traditional defences (e.g. flood walls plus upstream tree planting).

5. Build political and community will

- Engage councillors, TDs, and community leaders through positive narratives and site-based learning.
- Make biodiversity part of mainstream conversations on housing, not a niche or oppositional concern.
- Recognise and reward developers, local authorities, and community groups that deliver strong biodiversity outcomes.

Implementation Considerations

- *Which agencies (local authorities, the Housing Agency, IGBC, LAWPRO) are best placed to lead communications and peer-learning initiatives?*
- *How can exemplar projects be selected and funded for maximum visibility and impact?*
- *What formats of communication (visualisation tools, marketing campaigns, public signage) resonate best with residents and politicians?*
- *How can misconceptions be addressed early in projects to prevent biodiversity from being seen as a constraint?*
- *What incentives could encourage developers to champion biodiversity as part of their brand identity?*