



# URBAN REGENERATION FOR BIODIVERSITY AND CLIMATE RESILIENCE

Dr. Rob Rowlands, Technical Director (Ecology)

15th September 2023

[www.linkedin.com/in/drrobrowlands/](https://www.linkedin.com/in/drrobrowlands/)

[rpsgroup.com](https://rpsgroup.com)

# Introduction

- Dr. Rob Rowlands – Technical Director (Ecology), RPS.  
[www.linkedin.com/in/drrobrowlands/](https://www.linkedin.com/in/drrobrowlands/)
- What is Biodiversity?
- What Biodiversity influencing Urban Regeneration?
- Key Legal and Policy Drivers relevant to Biodiversity and Urban Regeneration
- Biodiversity Net Gain
- Biodiversity and Urban Regeneration Options
- Potential for “Added Value”





# What is Biodiversity?

- All species – e.g. animal, plants, fungi, bacteria.
- All habitats – e.g. vegetation, soils, marine, freshwater.
- Their ecosystem and their interaction with the physical environment – e.g. rock, water, air.

<https://www.eea.europa.eu/themes/biodiversity/intro#:~:text=Biodiversity%20is%20the%20name%20given,or%20in%20a%20particular%20habitat>

- Biodiversity essential to human life and wellbeing e.g. climate regulation, flood management, food, fuels and materials.



# Why Biodiversity Influencing Urban Regeneration?

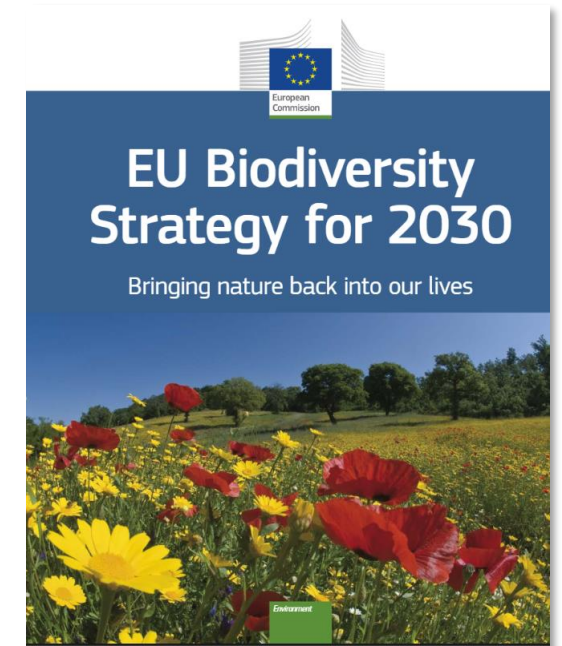
- Biodiversity Crisis – critical loss of biodiversity due to human activities. Urbanisation a key cause of loss.
- Climate Crisis – “two faces of the same coin”. Interlinked issues and solutions/responses.
- Both increasingly affecting human life. Requires significant change over short period. This leading to multiple drivers of change.





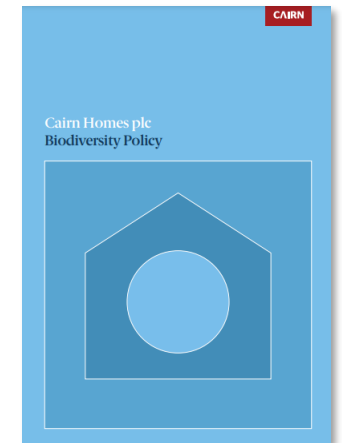
# Key Legal and Policy Drivers

- Corporate Sustainability Reporting Directive (CSRD) – ESRS E4: Biodiversity. Includes targets for transition from no net loss to net gain to net recovery in biodiversity (<https://businessforbiodiversity.ie/corporate-sustainability-reporting-directive-for-biodiversity-and-ecosystems-csrd/>)
- Sustainability Assessments e.g. BREEAM, LEED
- Urban Greening. EU Biodiversity Strategy – all towns and cities of at least 20,000 inhabitants required to develop “Urban Greening Plan” ([https://environment.ec.europa.eu/topics/urban-environment/urban-greening-platform\\_en](https://environment.ec.europa.eu/topics/urban-environment/urban-greening-platform_en))



# Key Legal and Policy Drivers (cont.)

- EU Nature Restoration Law and EU Biodiversity Action Plan
- Domestic Planning Policy
  - National Planning Framework. First revision of NPF underway.
  - Local Development Plans e.g. Fingal County Development Plan 2023-2029 e.g.
    - Policy GINHP3 – Greening of Developments
    - Policy GINHP14 – Biodiversity Net Gain Guidance
- Biodiversity Action Plan – National, Local and Corporate Plans



---

# Biodiversity Net Gain (BNG)

- Post-development Biodiversity minus Pre-development Biodiversity equals Biodiversity Gain or Loss
- No single, adopted accounting tool for measuring BNG in Ireland; either qualitatively or quantitatively.
- Various accounting tools in circulation e.g. DEFRA metrics, Uisce Éireann (UE) metric, Urban Greening Factor (e.g. Policy G5 of London Plan), Fingal County Council (Policy GINHP14).
- Mainly habitat based metrics.
- Currently significant risk of “Green Washing” and failure to deliver – needs to be science based, transparent, measurable, accountable and proof of delivery (personal view).



# Integrating Biodiversity – Some Examples

- Biodiversity can be incorporated at any scale e.g.
  - Brownfield regeneration
  - Greenfield development
  - Retrofitting/Refurbishment of existing built development
  - Upgrading of public realm.
  - Sustainable urban drainage
- Multi-disciplinary work needed to deliver:  
Chartered Surveyors, Engineers, Architects,  
Landscape Architects, Ecologists etc. etc.





# Integrating Biodiversity – Some Examples (cont.)

- Greenfield Development
  - Greater scope to retain existing biodiversity resources e.g. identified through survey, inputting into masterplanning, early assessment of net loss/gain, management of consenting risks.
  - Greater scope for considering integration of biodiversity into built structures and public realm.
    - Sustainable Urban Drainage Systems (SUDS)
    - Nature Based Solutions
    - Design solutions e.g. green roofs, green walls.



# Integrating Biodiversity – Some Examples (cont.)

- Brownfield Re-development
  - Although developed, potential to support biodiversity prior to redevelopment
  - Opportunities to rectify historic issues e.g. re-opening culverted watercourses
  - Reuse of demolition materials – extensive brown roofs
  - Creation of new multi-functional greenspace within urban areas – multiple benefits, including for biodiversity





# Integrating Biodiversity – Some Examples (cont.)

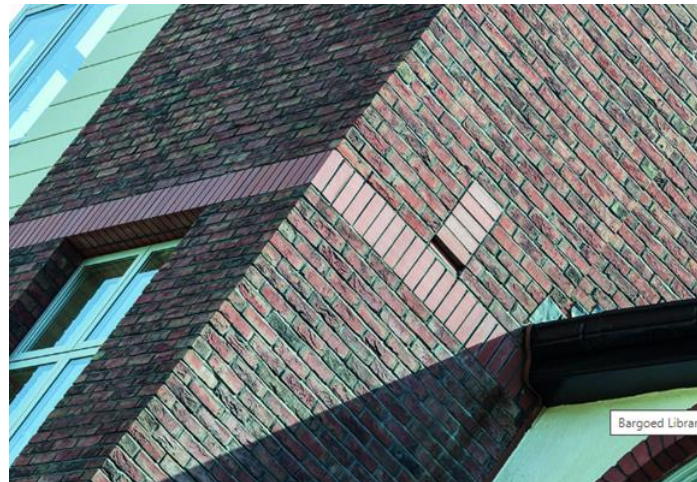
- Retrofitting existing buildings & upgrading public realm
  - Tree planting
  - Living roofs and walls
  - Pollinator-friendly planting
  - Sustainable urban drainage





# Integrating Biodiversity – Some Examples (cont.)

- “Built-in” features for Biodiversity
  - Bird nesting
  - Bat roosting
  - Connectivity for Mammals



---

# Added Value from Biodiversity

- Creating attractive places where companies/occupiers want to be based.
- Creating attractive places where people want to live and work – well being.
- Adding financial value – more sustainable buildings and built environment
- Assists in responding to climate change – more sustainable/resilient urban environments e.g. water management, heat.





---

THANK YOU



Dr. Rob Rowlands, Technical Director (Ecology)

15th September 2023

[www.linkedin.com/in/drrobrowlands/](https://www.linkedin.com/in/drrobrowlands/)

[rpsgroup.com](https://rpsgroup.com)