

**Democratic Services Section
Legal and Civic Services Department
Belfast City Council
City Hall
Belfast
BT1 5GS**



**Belfast
City Council**

MEETING OF THE CLIMATE AND CITY RESILIENCE COMMITTEE

Dear Alderman/Councillor,

The above-named Committee will meet in the Lavery Room and in Hybrid Format - City Hall on Thursday, 7th December, 2023 at 5.15 pm, for the transaction of the business noted below.

You are requested to attend.

Yours faithfully,

John Walsh

Chief Executive

AGENDA:

1. Routine Matters
 - (a) Apologies
 - (b) Minutes (Pages 1 - 8)
 - (c) Declarations of Interest
2. Embodied Carbon - Reimagining Construction [Presentation - Dr Siobhan Cox, Senior Lecturer School of Natural & Built Environment, Queens University] (Pages 9 - 34)
3. Passive House Standards at Erne Campus [Presentation - Barry McCarron, Head of Business Development, South West College] (Pages 35 - 58)
4. Retain: Sustain programme and short film on tackling eco anxiety in the wider Belfast Community [Presentation - Lise McGreevy, Photographic] (Pages 59 - 76)
5. Local Development Plan [Presentation - Kate Bentley] (Pages 77 - 102)

6. Update on the Belfast Carbon Disclosure Project Submission 2023, and UK Score Cards [Presentation Claire Shortt, Monitoring Learning & Reporting Officer, BCC] (Pages 103 - 112)
7. Tree Cutting at Orangefield Playing Fields - Stephen Leonard, Neighbourhood Services Manager (Pages 113 - 128)
8. Date of Next Meeting

Climate and City Resilience Committee

Thursday, 9th November, 2023

MEETING OF THE CLIMATE AND CITY RESILIENCE COMMITTEE

HELD IN THE LAVERY ROOM AND
REMOTELY VIA MICROSOFT TEAMS

Members present: Councillor R-M Donnelly (Chairperson);
Alderman Copeland; and
Councillors Anglin, Bell, Bower, R. Brooks, T. Brooks,
Collins, Doherty, M. Donnelly, D. Douglas, S. Douglas,
Kelly, Long, McAteer, McCabe, McKeown, Smyth
and Walsh.

In attendance: Mr. J. Tully, Director of City and Organisational Strategy;
Ms. D. Caldwell, Climate Commissioner;
Ms. C. Shortt, Monitoring, Learning and Reporting Officer;
Ms. B. Roddy, Project Support Officer – Climate;
Ms. M. Quigley, Adaptation and Resilience Advisor; and
Mr. G. Graham, Democratic Services Assistant.

Apologies

An apology for inability to attend was reported on behalf of Councillor McCabe.

Minutes

The minutes of the meeting of 12th October, 2023 were taken as read and signed as correct.

Declarations of Interest

No declarations of Interest were reported.

Schedule of Meetings 2024

The Committee agreed its schedule of meetings for the period commencing 1st January 2024 to 31st December 2024.

Kerbside EV proposal from BT (Presentation BT Openreach)

Mr. P. Fyfe, Mr. P. Wade, Mr. D. Lunney and Mr. A. Irwin, BT Openreach, attended in connection with this item and were welcomed by the Chairperson.

The Climate Commissioner provided an overview on the proposal to provide the Council with the opportunity for Belfast to take part in a U.K. trial, by BT Openreach, to make use of DSLAM cabinets, distributed throughout the city, in order to provide on street charging

**Climate and City Resilience Committee,
Thursday, 9th November, 2023**

for electric vehicles. She stated that given twenty percent of emissions in Belfast were attributed to transport, this would assist in helping the province meet its carbon reduction targets and make the city a much healthier place to live and work.

Mr. Wade reported that 90,000 DSLAM cabinets had been provided throughout the UK, of which 60,000 were suitable for EV charging. He stated that the provision of the charging ports would assist in meeting the government's target to provide 30,000 charging ports by 2030 and would assist those residents who had no access to off street parking. The Committee was informed that BT would be undertaking a trial, at its own cost, and would remove any associated hardware after the trial was completed, again at its own cost.

The Members were provided with a map showing the distribution of the various DSLAM cabinets distributed throughout the city, including the exchange locations. Mr. Fyfe confirmed that six initial EV charging sites had been identified as part of the technical trial, including details of the proposed DSLAM cabinets and charger ports which would be subject to planning permission.

In response to a question from a Member regarding any potential cost for users should the technical trial be successful, Mr. Wade confirmed that BT had not worked up a costing profile as yet which would be subject to market conditions and a commercial decision and stated that he would endeavour to come back with a response on the differential pricing mechanism between on street and off street EV charging.

A Member raised concerns in regard to BT by virtue of owning the EV infrastructure and the risk associated with monopoly supply. Mr. Wade stated that there were other potential suppliers within the marketplace, including Virgin, and that there were no commercial barriers restricting other potential suppliers from entering the marketplace and competition would be a factor in comparative pricing.

The Committee raised further issues in regard to restricted access for disabled pedestrians and cyclists given the infrastructure requirements and was assured that BT was required to comply with Public Realm and relevant planning legislation and that it was anticipated that a significant layout of cabling would be delivered underground.

The Climate Commissioner reported that many of the Committee's concerns would be addressed in the EV Strategy which would be used to coordinate the Council's interventions in terms of equitable access to charging ports, including disabled groups and dedicated EV parking bays. She stated that it would be her intention to report back to a future meeting of the Committee on the EV Strategy.

The Committee noted the information provided and thanked the representatives from BT Openreach for their detailed and informative presentation.

**Update - Belfast Sustainable Food Partnership
(Presentation - Beth Bell, Co- Chair of the
Belfast Sustainable Food Partnership/ Mura Quigley-
Adaptation and Resilience Advisor)**

**Climate and City Resilience Committee,
Thursday, 9th November, 2023**

Ms. Quigley informed the Committee that food production had a significant impact on greenhouse gas emissions and equated to 35% from the food and drink industry. She stated that the demand for food was increasing, including the global impact of food scarcity. The Members were informed that the issue of food nutrition and obesity had been identified as a major problem for many European nations and that access to good quality food was not distributed equally in the UK. Ms. Quigley reported that access to cheap fast food was more readily available in socially deprived areas.

The Committee was informed the work surrounding sustainability and food was one of the actions contained within the Resilience Strategy and that, in 2021, the Council had signed up to the Glasgow Food and Climate Declaration. The Declaration provided a commitment by local authorities and regional governments to tackle the climate emergency, through integrated food policies, with a call on national governments to take affirmative action.

The Members were informed of the work undertaken by the Belfast Food Network with support from Belfast City Council and with the remit to improve access to healthy, local fresh food in the city and to build community wealth in a way that addressed the climate emergency. To that end, she reported that the Council had been asked to establish a new community food partnership.

Ms. Quigley explained that the Sustainable Food Partnership was people focussed with an ethos based on the notion that people had the right to gain access to good nutritional food. She highlighted the need to empower people to access food systems, including a vision to transform food systems that protect national resources for future generations, and which was both economically and environmentally sustainable. To that end, she referred also to the importance attached to the provision of good food options.

She highlighted the work undertaken, as part of the sustainable food economy, manifesting itself with such initiatives as food cooperatives, enabling lower income households to access climate and nature friendly food. In terms of catering and procurement food policy, she highlighted the important work undertaken by the Council in that regard and the need to offer plant-based food alternatives, including sourcing food with a short supply chain. The Committee was informed that food insecurity was an increasing challenge and provided the Members with an overview of the governance structure associated with the food partnership.

Ms. Quigley referred to several successes associated with the food partnership, including, amongst other things, the establishment of an open food network for sharing ideas, learning and creating opportunities, including a public event which had been held in June 2023.

The Committee was requested to allocate £30,000, from within existing budgets, to develop a food strategy and vision, including a city-wide and communication plan.

After discussion it was

Proposed by Councillor Smyth,
Seconded by Councillor Carson and

Resolved – that the Committee agrees to the allocation of £30,000, from within the City and Neighbourhood Services budget, to develop a food strategy,

**Climate and City Resilience Committee,
Thursday, 9th November, 2023**

including a comprehensive city-wide and communication plan as part of the Council's food strategy and vision.

The Committee recognised also the need to support local communities in the creation of social supermarkets and to engage with both schools and young people as part of a food strategy for the city and to address those areas which lead to the elimination of food poverty.

Noted.

Local Development Plan - Presentation - Kate Bentley

Owing to the inability of Ms. K. Bentley to attend, the Committee agreed to defer this item to a future meeting of the Committee.

**Update - Belfast Retrofit Delivery Hub –
Brenda Roddy, Project Support Officer (Climate)**

The Committee considered the undernoted report outlining the progress made in regard to delivery of the Belfast Retro-fit Delivery Hub.

1.0 Purpose of Report/Summary of Main Issues

1.1 The purpose of this report is to update Members on the Belfast Retrofit Delivery Hub.

2.0 Recommendation

2.1 The Committee is asked to:

i) note the contents of the report.

3.0 Main Report

3.1 Background

Belfast Retrofit Delivery Hub was established in November 2022 following publication of the Belfast Net Zero Carbon Roadmap which identified that emissions from domestic, public and commercial buildings account for 63% of the city's greenhouse gas emissions. The Hub recognises that the majority of buildings in Belfast in 2035 already exist, and as a result, there is a need to focus resources on improving energy efficiency and decarbonising the heat supply to these buildings in order to achieve emission reduction targets and reduce energy costs.

The Hub takes a consortium approach to catalyse retrofit activity across the public, commercial and private building sectors in Belfast, engaging stakeholders from across the construction supply chain, funders, academics, public bodies, housing

providers and consumer bodies. Belfast City Council's Climate Team convenes and supports the Hub's activities as part of the wider support the team provides for the Belfast Community Planning Partnership. The Hub's work is informed by the National Retrofit Strategy produced by the Construction Leadership Council and is Chaired by Peter Roberts (previously chair of NIHE) with technical advisory support provided by Professor Alice Owen from Leeds University.

3.2 The Hub's principal duties are:

- To identify opportunities for retrofit across the city and bring together the partners who can realise those opportunities.
- To identify and endorse the required standards of building performance that retrofit in Belfast needs to achieve.
- To identify ways of supporting the economic activity, skills and jobs that achieving those standards requires
- To draw together partners to source and release funding, using a funding-ready rather than a funding-led approach.
- To promote a collaborative, solutions approach sharing knowledge across ownership and tenure.
- To ensure engagement with stakeholders across the city, and to support and promote complementary initiatives.
- To ensure that retrofit work considers climate resilience.
- To report on progress, initially to the Community Planning Partnership's Resilience and Sustainability Board

3.3 Achievements and process to date

Participants in the Belfast Retrofit Delivery Hub meetings over the past 12 months have confirmed the city's aspiration to transform the city's buildings in line with its carbon reduction commitments and discussions have generated a rich range of insights and potential interventions.

Belfast's approach so far has had some distinctive features compared to how other cities are tackling the retrofit challenge:

- Stakeholders from all aspects of retrofit delivery have been involved – including installers, customers, housing providers, property owners, policymakers, researchers. The benefits of getting the 'whole system in a room' have been evident in the information that has been shared and the depth and breadth of ideas produced.
- Using the UK National Retrofit Strategy as a reference point has enabled discussions to reflect on how delivering retrofit, at scale, is a complex problem where many different elements

all need to move at once. Skills, technical standards, funding, policy/regulation, market demand, supply chain capacity have to be progressed in parallel.

- Political constraints – whilst there is frustration at the constraints imposed whilst the NI Assembly is not functioning, there is also the recognition that the city stakeholders need to do what they can rather than waiting for restoration of the Assembly's functioning.
- Aiming to be funding ready rather than funding led i.e. developing the projects that the city needs and then finding ways to fund those projects.
- Thinking through how to work across tenures – most retrofit programmes focus on one tenure only.

Discussions have focussed mainly on the residential sector to date, in part because improving homes is an important social priority as well as being essential for carbon emissions reduction. This discussion has gone further than many other cities by including consideration of the private rented sector alongside social housing and owner-occupied homes. Hub participants have also identified a need to retrofit commercial and public buildings in parallel with upgrading the housing stock.

3.4 Next steps

Based on discussions to date, ten 'work packages' – clusters of actions – are proposed, to run in parallel:

Foundation Work Packages – cross-cutting activities that underpin all the actions:	1. Data and information 2. Co-ordination, learning and knowledge exchange. 3. Ensuring the just transition – checking for equality of opportunity
Themed Work Packages – clusters of actions identified:	4. Pipeline development & funding options 5. Creating customer demand – Improving understanding, creating the market 6. Building energy performance assessment and monitoring 7. Supply chain development
New work packages – filling important gaps:	8. Commercial sector 9. Local Area Energy Plan integration 10. Resilience assessment

A series of 43 actions was identified by Hub members, clustered into three work packages and ranked by a combination of potential

level of impact, ease/difficulty of implementation, timescale to deliver and dependency on factors outwith the Hub. A full list of actions is included in Appendix A.

Task and finish groups are being set up for each work package with Hub members invited to lead and participate in those relating to their experience and expertise. The groups will examine the actions in detail, exploring if/how they can be taken forward and commencing work as appropriate. Workshops are scheduled to take place in late November 2023 with progress reported to the Hub consortium at its next quarterly meeting in January 2024.

Outputs of the task and finish groups will be integrated into and will serve as a delivery plan for the Draft Retrofit Strategy which will be a Hub consortium document. Plans are under development for a launch event of the strategy in February 2024.

4.0 Financial and Resource Implications

4.1 None.

**5.0 Equality or Good Relations Implications/
Rural Needs Assessment**

Corporate policies will be followed, and appropriate screening and mitigating actions for individual work packages delivered where necessary.

The Committee was informed that, in response to a question from a Member, due to the lack of governance in Northern Ireland by way of the Northern Ireland Executive, it was not in a position to legislate and provide grant funding for retro-fit schemes, which created an impediment to progress in that particular area.

Noted.

Date of Next Meeting

The Committee agreed that its next meeting be held on Thursday, 7th December at 5.15 p.m.

Chairperson

This page is intentionally left blank



Embodied carbon in construction

Dr Siobhan Cox (s.cox@qub.ac.uk)

Senior Lecturer in Environmental and Civil Engineering, Queen's University Belfast

What is embodied carbon?

Building Life Cycle

Page 11

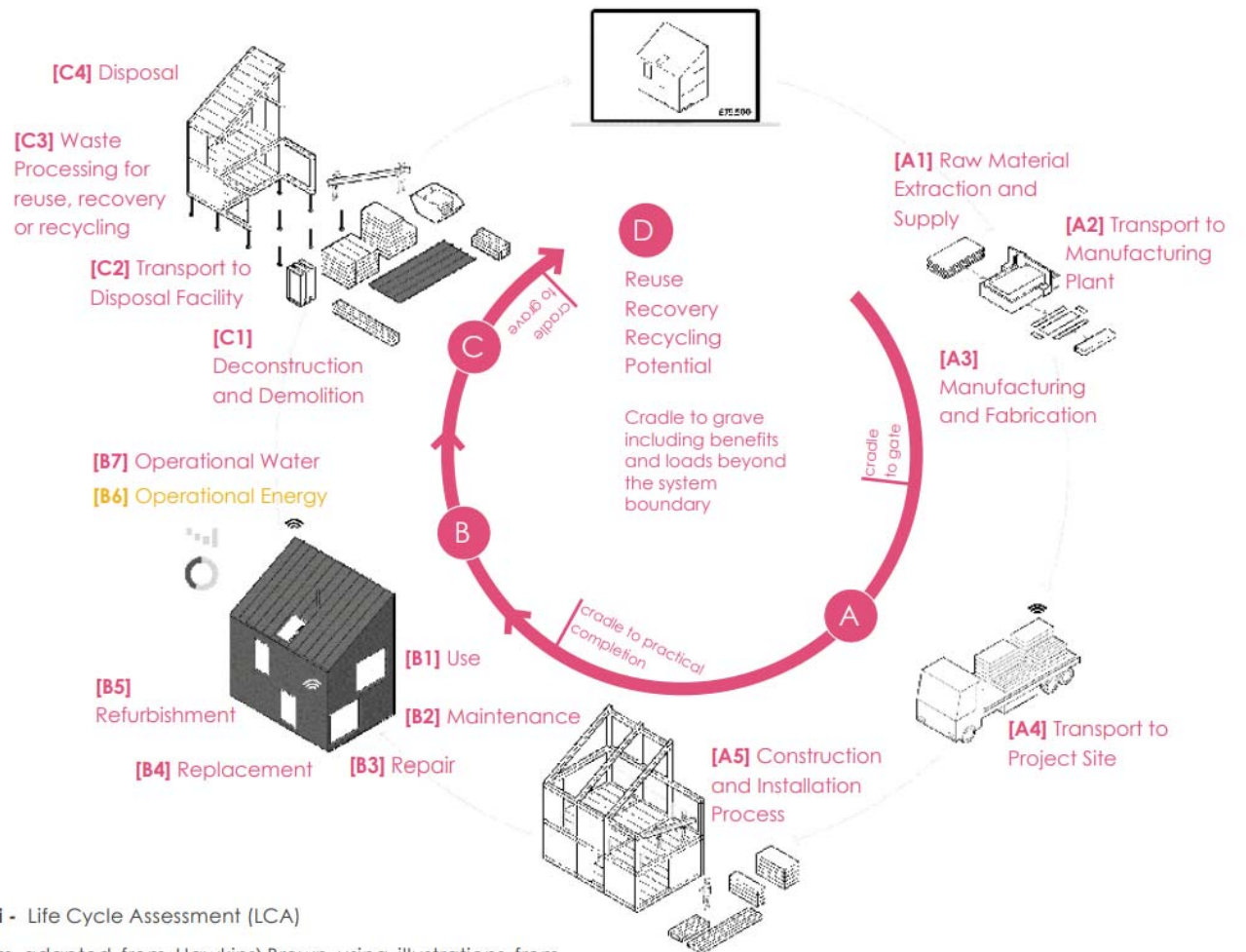
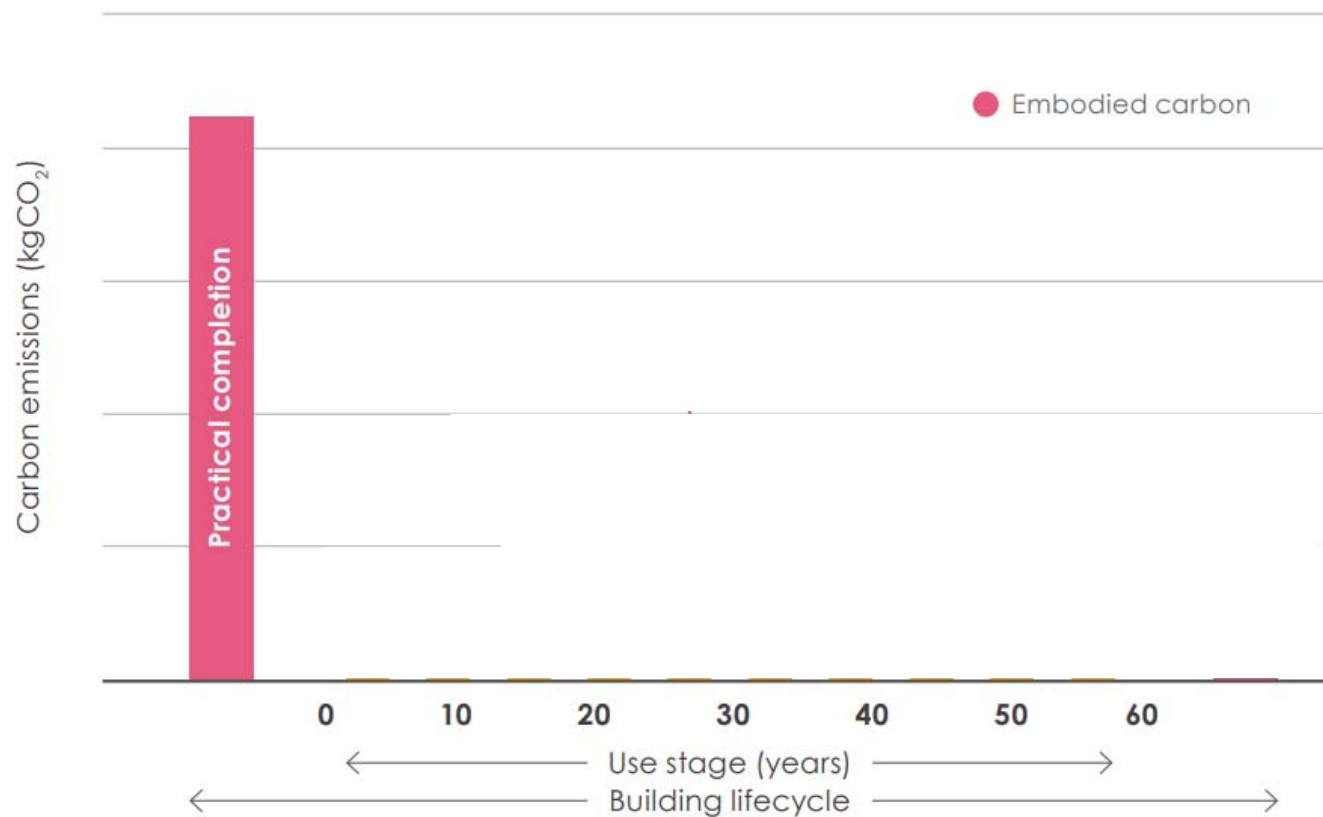


Figure ii - Life Cycle Assessment (LCA)

Diagram adapted from Hawkins\Brown using illustrations from Open Systems Lab 2018 licensed under Creative Commons CC-BY-ND

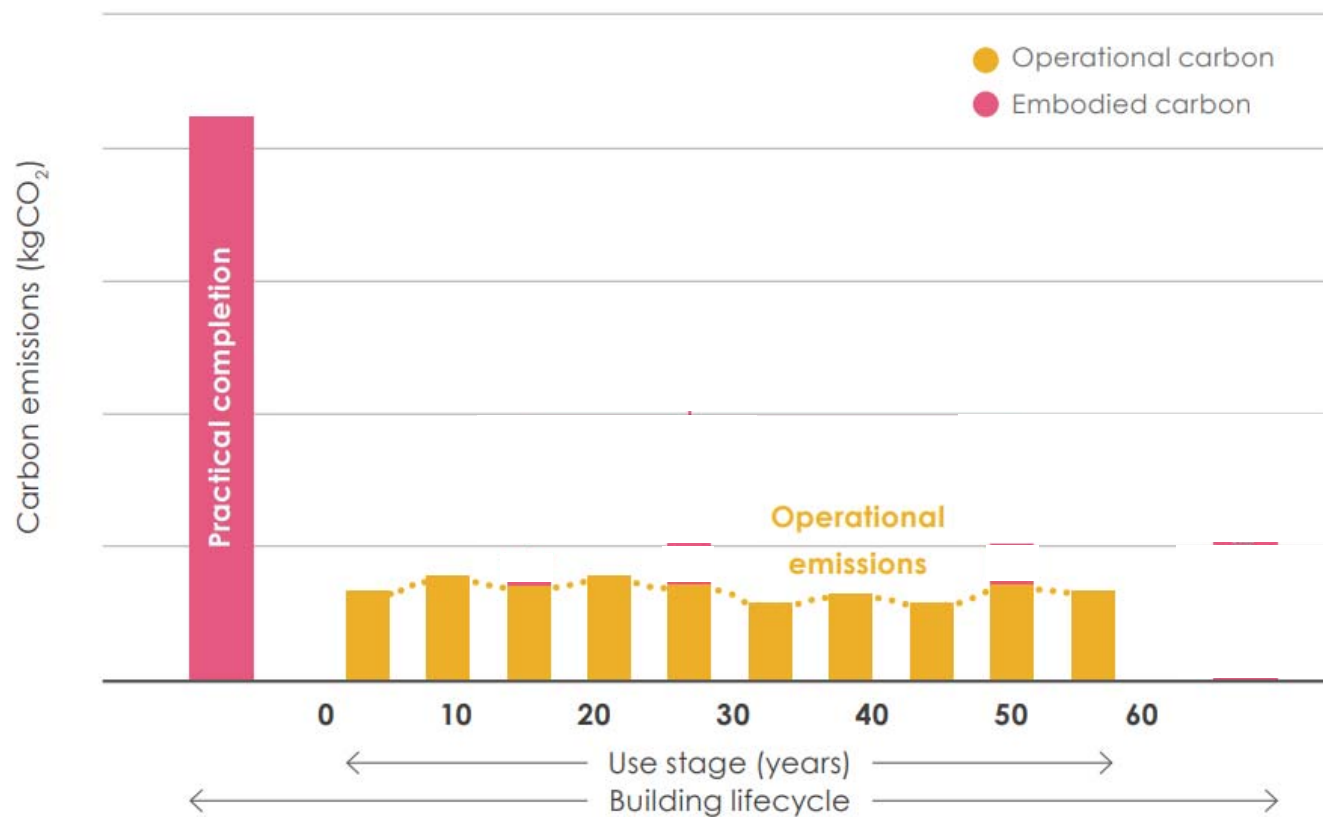
LETI Embodied Carbon Primer, 2020 www.leti.london/ecp

GHG Emissions during a building's life cycle



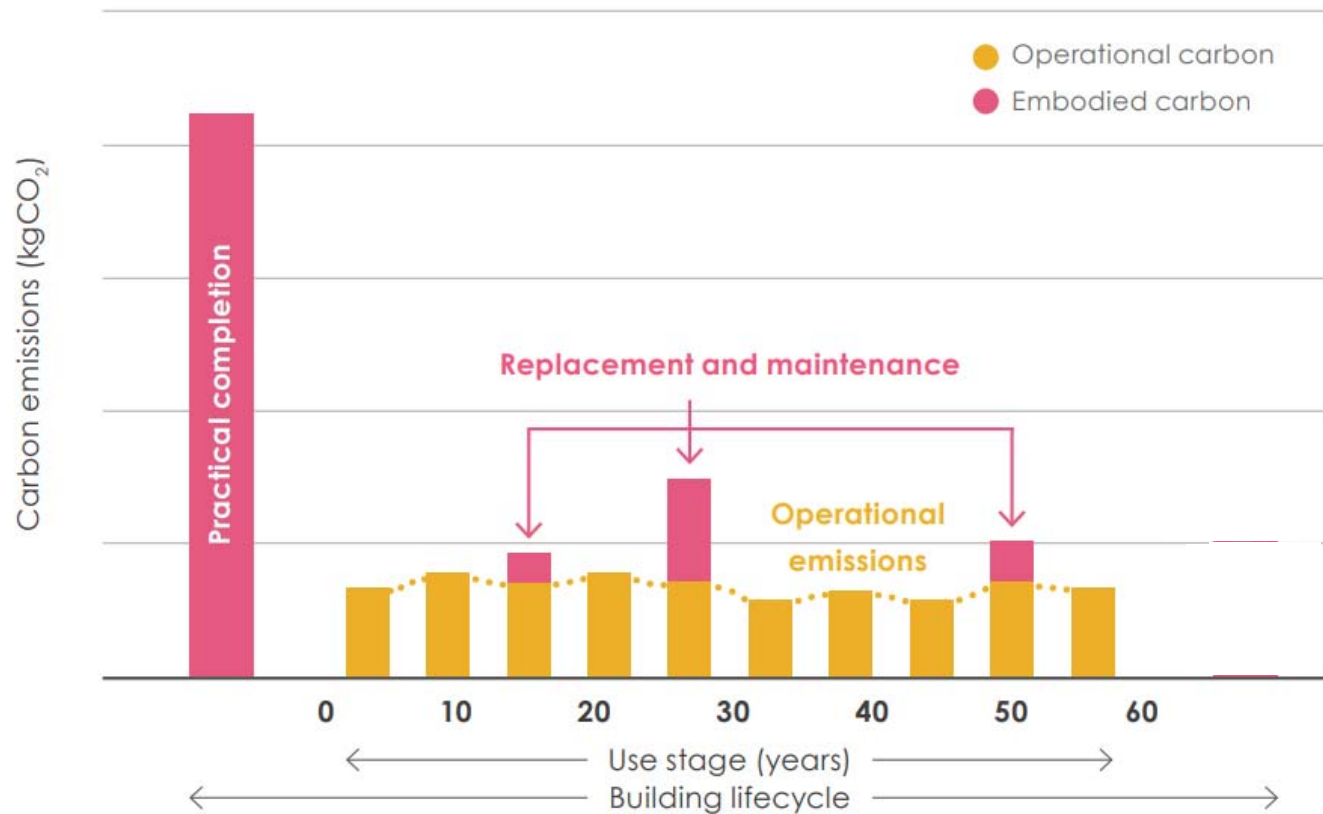
LETI Embodied Carbon Primer, 2020
www.leti.london/ecp

GHG Emissions during a building's life cycle



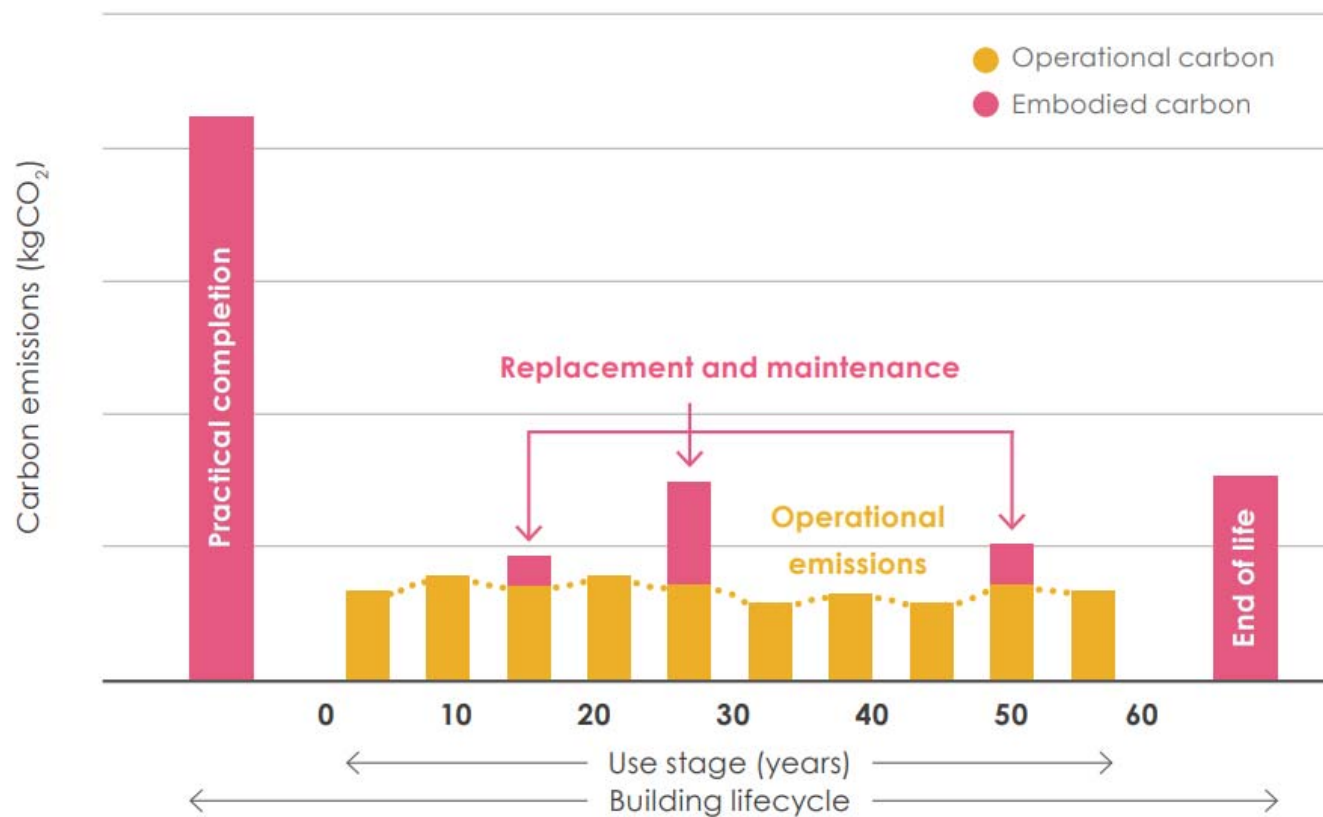
LETI Embodied Carbon Primer, 2020
www.leti.london/ecp

GHG Emissions during a building's life cycle



LETI Embodied Carbon Primer, 2020
www.leti.london/ecp

GHG Emissions during a building's life cycle



LETI Embodied Carbon Primer, 2020
www.leti.london/ecp

Whole life carbon (WLC)

Whole life carbon = Operational carbon + Embodied carbon

(LETI Embodied Carbon Primer, 2020)

Embodied carbon: the greenhouse gases associated with the following stages:

- **Product:** extraction and processing of materials, energy and water consumption used by the factory or in constructing the product or building, and transport of materials and products
- **Construction:** building the development
- **Use:** maintenance and replacement
- **End of life:** demolition, disassembly waste processing and disposal of any parts of product or building and any transportation relating to the above.

Operational carbon: the greenhouse gases associated with the in-use operation of the building.

- heating, hot water, cooling, ventilation, and lighting systems, as well as cooking, by equipment and lifts.

(LETI Embodied Carbon Primer, 2020)

Proportion of WLC that is embodied carbon

Figure 4: Estimated distribution of carbon emissions per life cycle stage

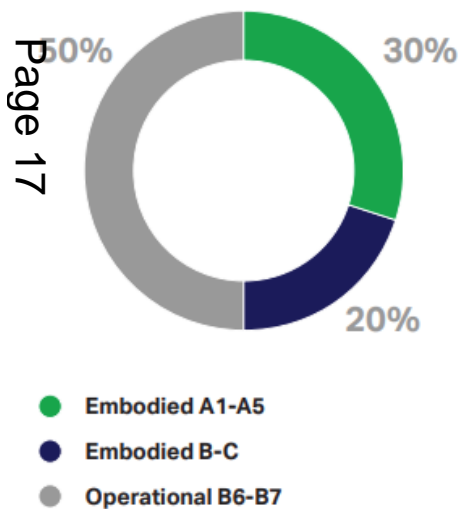
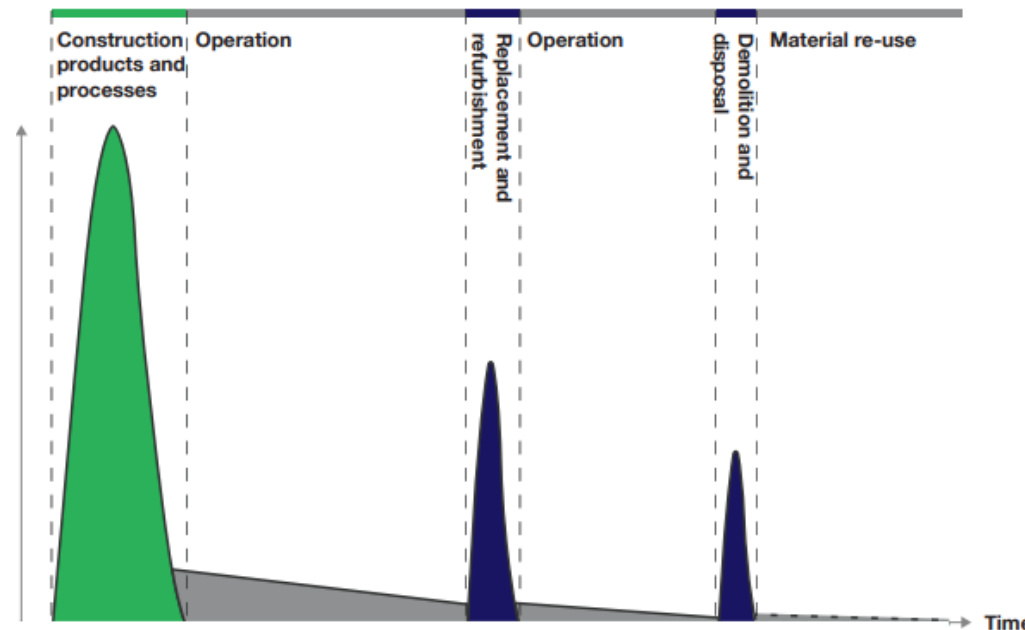


Figure 5: Whole life carbon emissions, Arup (2020)⁷



Currently >50% of WLC emissions from new buildings are anticipated to be from embodied carbon

As building envelopes are improved and heating and electric decarbonises operational carbon is going to decrease.

Therefore embodied carbon will become a greater proportion of a building's emissions.

World Business Council for Sustainable Development (2021) Net-zero buildings Where do we stand?

<https://www.wbcsd.org/contentwbc/download/12446/185553/1>

The scale of the issue

Embodied carbon ... contributes around 11% of all global carbon emissions.

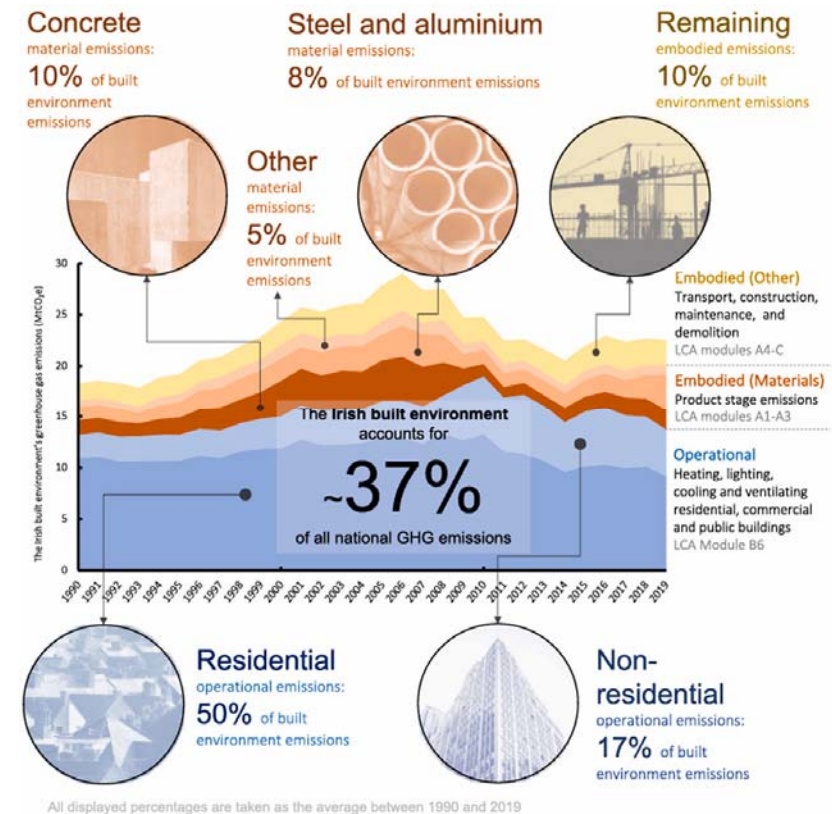
Carbon emissions released before the building or infrastructure begins to be used, sometimes called upfront carbon, will be responsible for **half of the entire carbon footprint of new construction between now and 2050**, threatening to consume a large part of our remaining carbon budget.

WGBC (2019) Bringing embodied carbon upfront

https://www.worldgbc.org/sites/default/files/WorldGBC_Bringing_Embodied_Carbon_Upfront.pdf

Embodied carbon accounts for ~12% of national GHG emissions in RoI

O'Hegarty, R., Wall, S. and Kinnane, O. (2022) 'Whole Life Carbon in Construction and the Built Environment in Ireland', Building and Environment. 226(October), p. 109730. DOI: 10.1016/j.buildenv.2022.109730.



Public bodies reporting duties: Reflections from QUB

Travel 37%

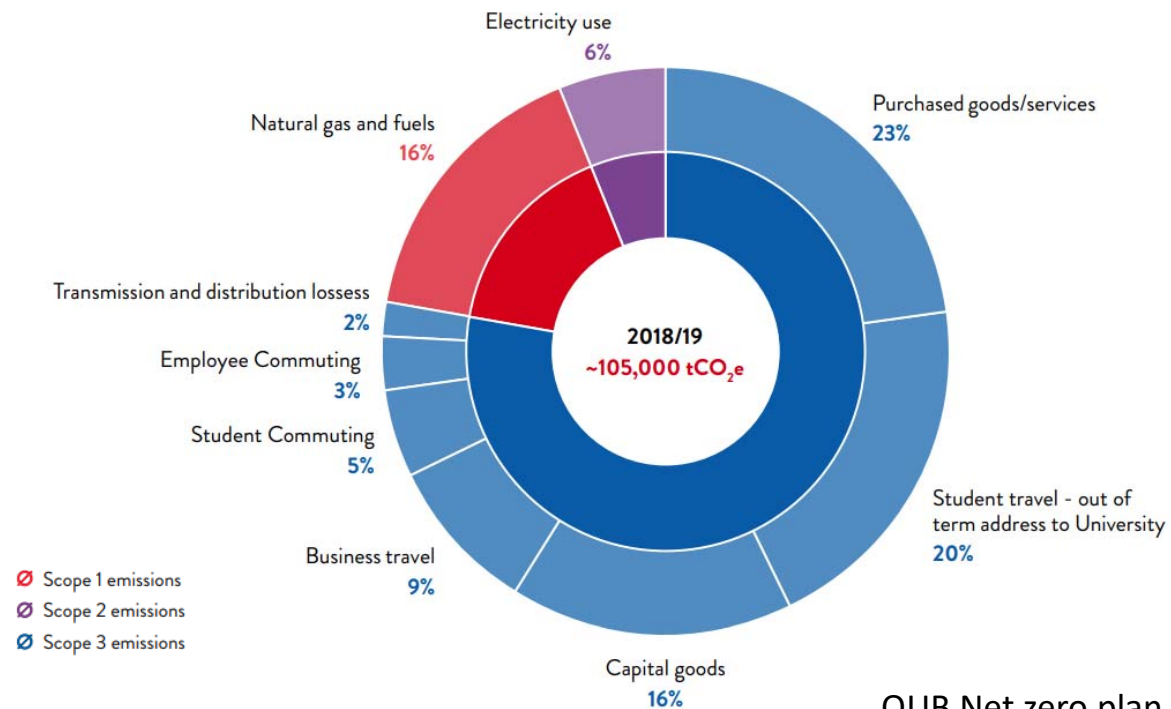
- Student travel to home
- Business travel
- Student and employee commuting

Operational energy 24%

- Electricity
- Natural gas and fuels
- Transmission and distribution losses

Purchased goods and services: 23%

New builds and refurbishments 16%



QUB Net zero plan

<https://www.qub.ac.uk/about/sustainability/files/Filetoupload,1870172,en.pdf>

Carbon reduction targets and construction

Climate Change Act (Northern Ireland) 2022

- at least 48% reduction in net GHG emissions by 2030
- At least 100% reduction in net GHG emissions by 2050.

for Northern Ireland compared to baseline (1990)

Belfast City Council targets

- 66 per cent reduction by 2025
- 80 per cent reduction by 2030
- 100 per cent reduction by 2050

on the 2000 level of GHG emissions

By 2030, new buildings, infrastructure and renovations will have at least 40% less embodied carbon with significant upfront carbon reduction, and all new buildings must be net-zero operational carbon.¹⁸

Whole life carbon vision (WorldGBC)

World Green Building Council (2021), Whole Life Carbon Vision
<https://www.worldgbc.org/advancing-net-zero/whole-life-carbon-vision>

Measuring whole life carbon

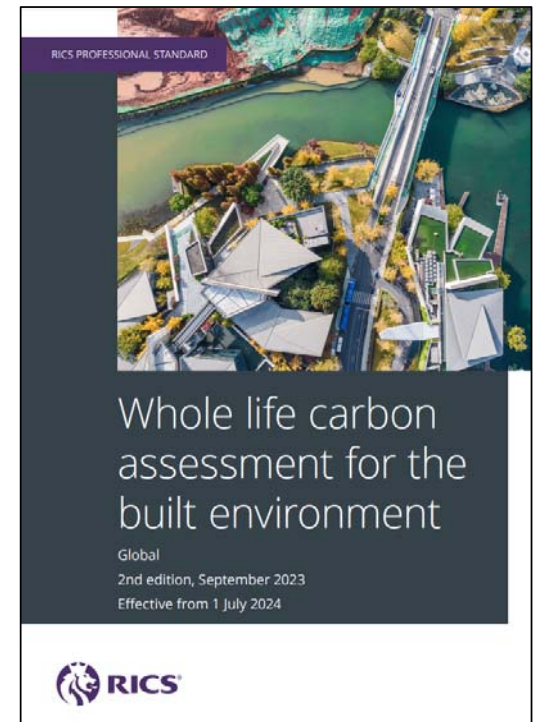
Whole life carbon measurement

“It’s not about calculating – it’s about **reducing**. Calculating carbon lets you see where carbon is hiding so you can reduce it.”

Penny Gowler

RICS methodology

- Sets out how to do a whole life carbon assessment for a building.
- Varying levels of detail expected at different stages of projects.
- Minimum reporting requirements with increasing detail are mandated at
 - early design
 - technical design
 - post project completion.
- It is always best practice to report the highest level of detail possible.



RICS Whole life carbon assessment for the built environment (2023)

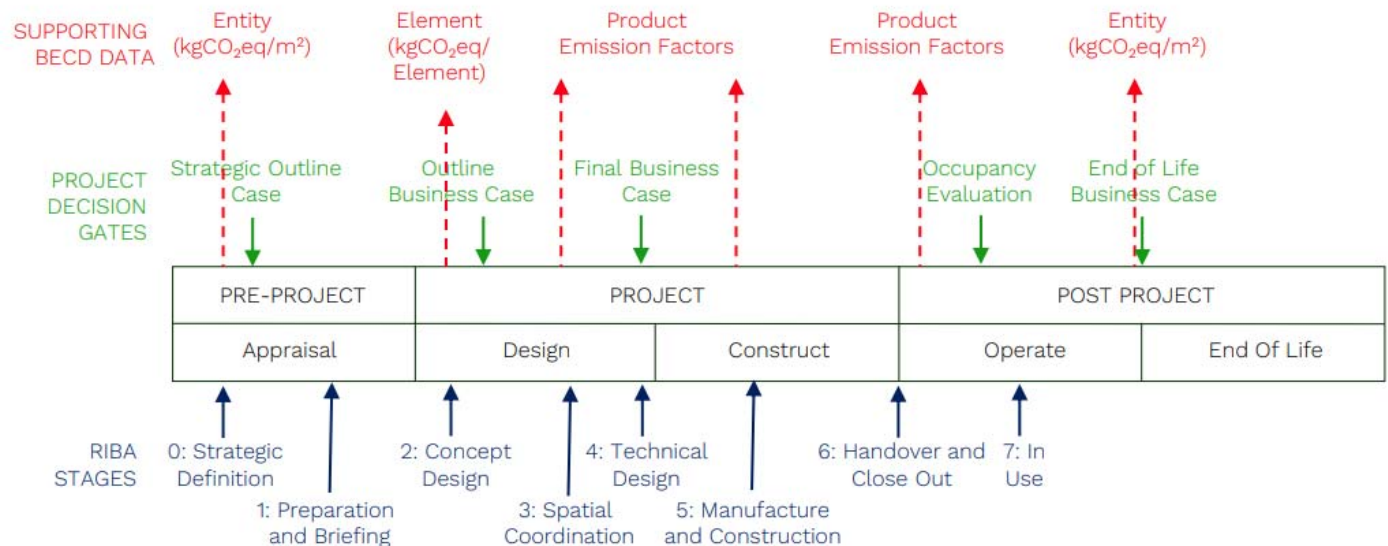
Built Environment Carbon Database (BECD)

Database of embodied carbon from all parts of a project, launched Oct 2023.

Professional bodies are asking their members to use the BECD on every project they work on, both to estimate carbon due to the project and share data from the project with other professionals

Register to be kept informed of developments with the database at:

<https://www.becd.co.uk/>



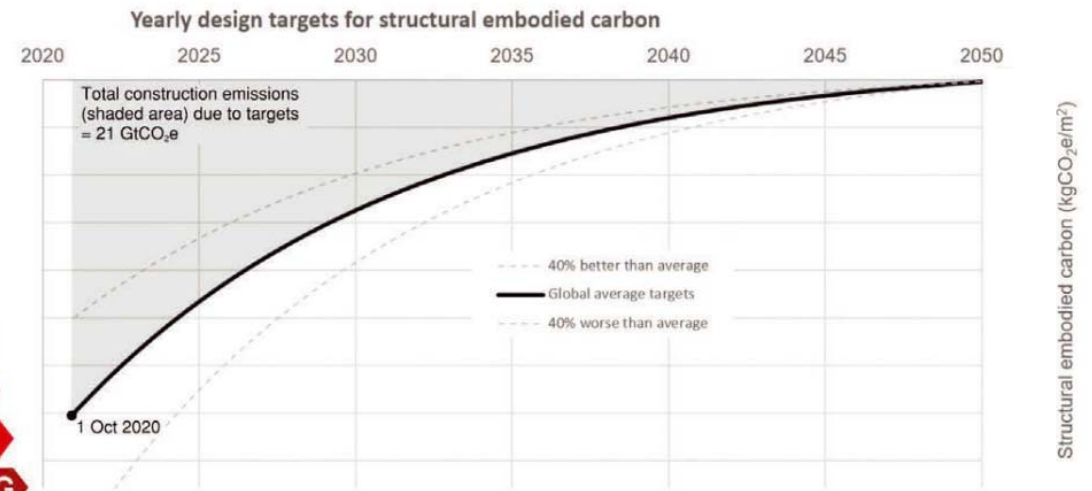
Embodied carbon standards

“Standards are about helping people understand what good looks like.”

Dr Scott Steedman, Director of Standards, British Standards Institution

Embodied carbon standards:

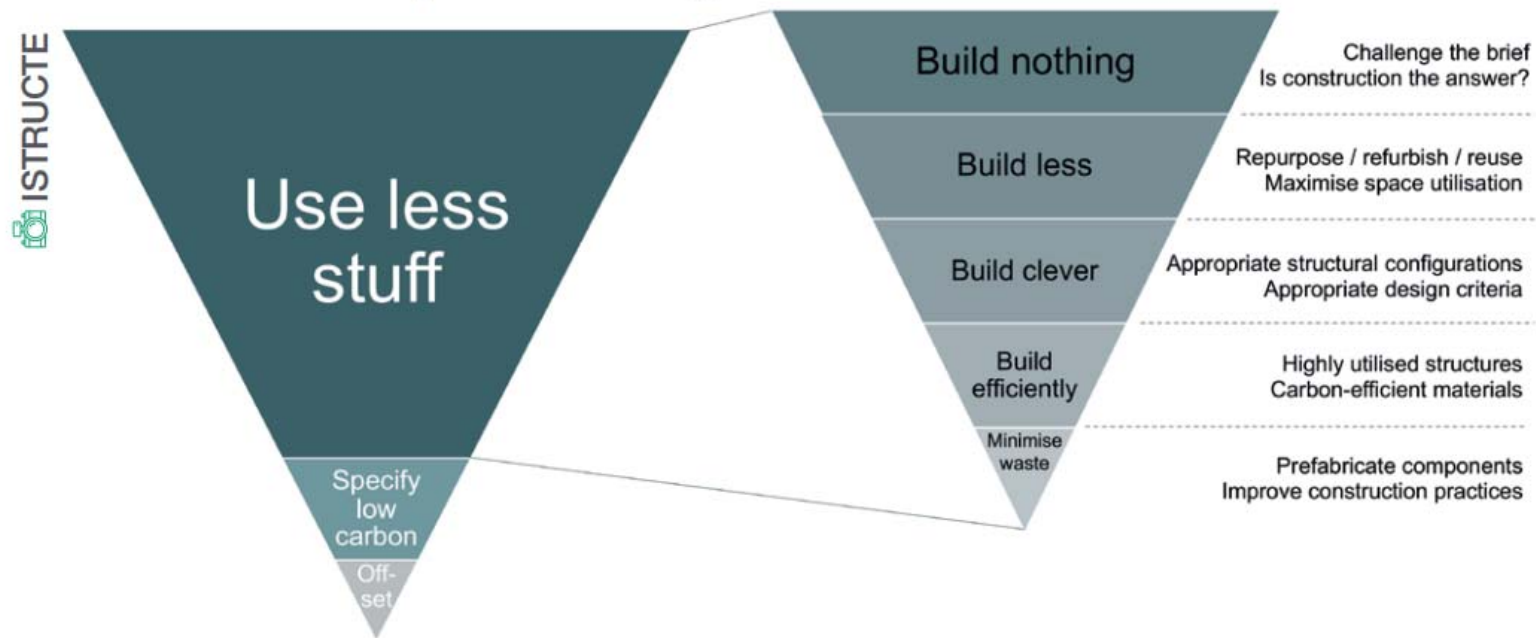
- RIBA Whole building Whole life cycle
- LETI Whole building Upfront only
- SCORS Structure Upfront only



Reducing embodied carbon

Hierarchy for net-zero design

↓ FIGURE 5: Hierarchy of net-zero design



White (2022) Engineering in the climate emergency: doing less, better [Available at

[https://www.istructe.org/journal/volumes/volume-100-\(2022\)/issue-10/engineering-in-climate-emergency-less-better/](https://www.istructe.org/journal/volumes/volume-100-(2022)/issue-10/engineering-in-climate-emergency-less-better/)]

Repurpose existing buildings



Reuse building elements

- Reused steel causes only 5% of the GHG emissions of replacing with new steel



Design for low carbon

When new build cannot be avoided:

Design for low carbon

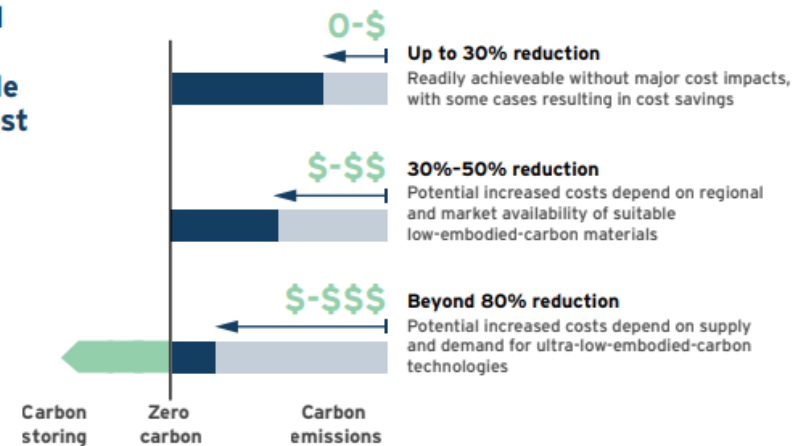
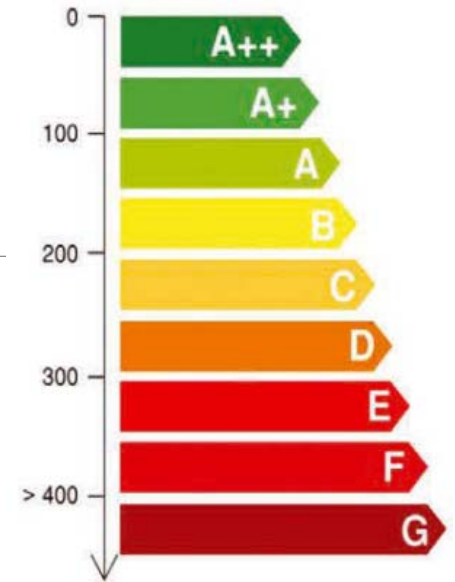
- Consider carbon reduction from project conception

When the structure is fully optimised, consider using green materials

- Make appropriate use of timber and other biobased materials
- Use recycled materials (circular economy)

The first 30% of embodied carbon reductions are likely to be cost neutral or even save money

**Substantial
reductions
are available
today at cost
parity**



Opportunities for Belfast City Council

BCC capital works portfolio

£300M of projects currently in the portfolio
(from design phase to construction on site)

Opportunity to undertake whole life carbon assessments for all new builds.

- BCC would be a civic leader
- Potential to move early and identify a pilot study – Belfast Stories?
- Introduce targets for embodied carbon reduction after baseline established

Potential to work with undergraduate students at our universities



Measurement of WLC and phased implementation of EC targets more widely

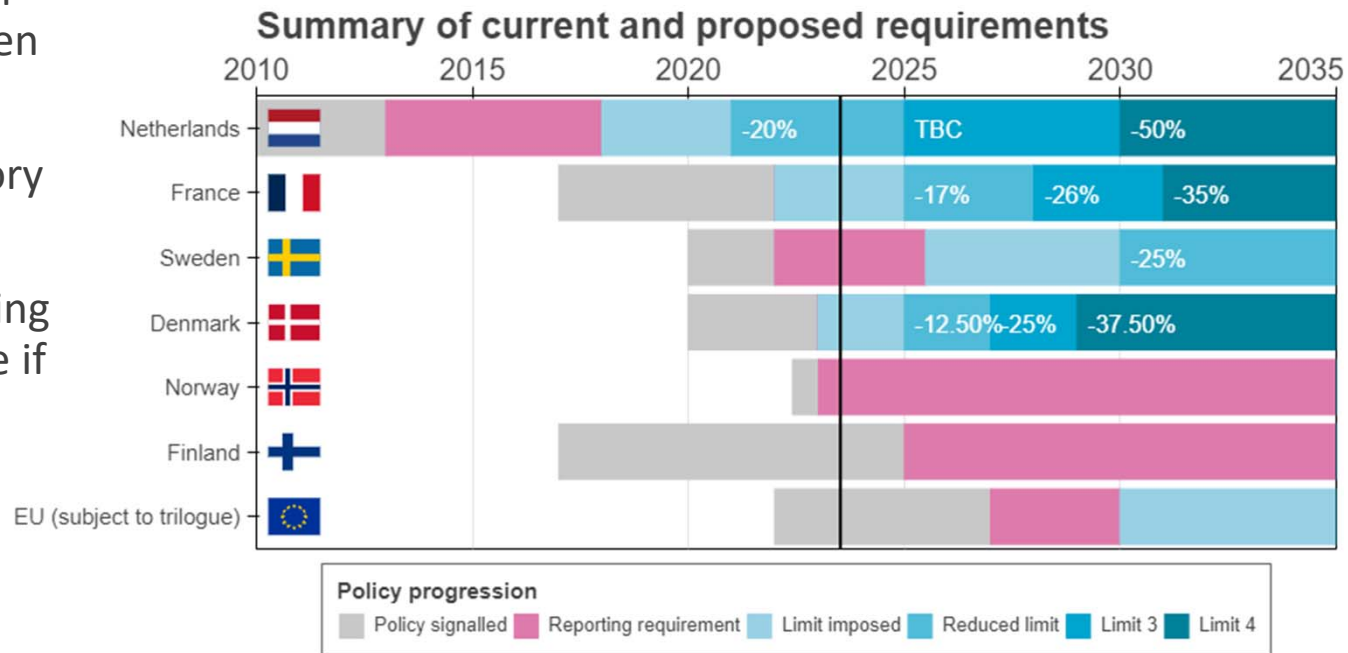
Mandatory reporting introduced in the Netherlands in 2012. Since then targets imposed and reduced.

EU Directive to introduce mandatory reporting and targets proposed.

Rol proposes to implement reporting and targets before the EU directive if possible*

England and Wales considering Part Z for the building regulations which would introduce mandatory reporting and targets

*https://data.oireachtas.ie/ie/oireachtas/committee/dail/33/joint_committee_on_housing_local_government_and_heritage/reports/2022/2022-10-14_report-on-embodied-carbon-in-the-built-environment_en.pdf



<https://www.jannikgiesekam.co.uk/embodiedcarbon/>



Planning policy

“Development proposals should, where feasible, seek to avoid demolition and should consider how existing buildings or their main structures could be reused. Development proposals that include the demolition of existing buildings should demonstrate that reuse is not appropriate or feasible. Where demolition is proposed, measures should be included to minimise any waste through the reuse of as much building material as possible.”

Belfast City Council, Local Development Plan

This could be strengthened in supplementary guidance to require

- Whole life carbon assessment
- Demonstrate actions to reduce whole life carbon
- Justification of demolition on the basis of whole life carbon

(see approach adopted by Leeds City Council:
<https://www.leeds.gov.uk/planning/planning-policy/local-plan-update/proposed-policy>)



Any questions?

This page is intentionally left blank



@swccollege

Page 35



Dr. Barry McCarron

Head of Business and Industry Support at South West College

7th December 2023 – *Belfast City Council Climate & City Resilience Committee*

Agenda Item 3





MONASH
University

Page 37





Page 38



**CORNELL
TECH**



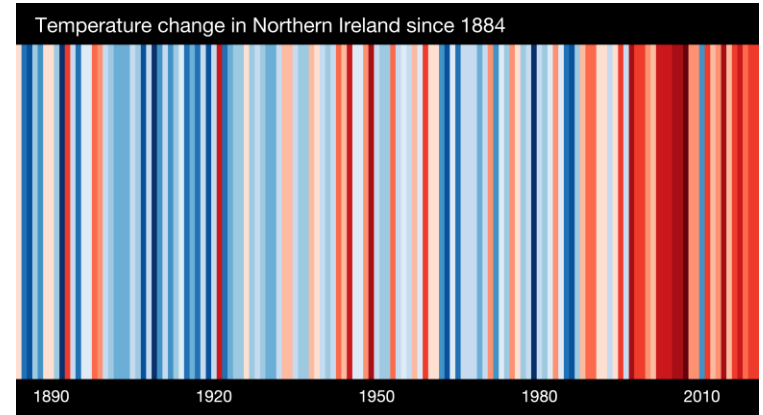




United Nations
Framework Convention on
Climate Change

Climate Change

- Buildings Account for ~40% of emission's
- Passive House mentioned since 2007 by UN
- 4th Assessment Report
- Emissions Gap Report
- nZEB is PH
- FE has a pathway to Zero Carbon



Passive House and the UN SDGs

Page 41

SWC
ERNE CAMPUS

Press Release

8 July 2021

Passive House meets social goals

#EfficiencyFirst: Highly energy efficient buildings support aims of United Nations

Darmstadt, Germany. The United Nations set 17 Sustainable Development Goals to be reached by 2030. Envisioned as a "blueprint to achieve a better and a more sustainable future for all", the goals cover a wide array of fields and topics. With a new article and accompanying infographic, the International Passive House Association illustrates how highly energy efficient buildings built to the Passive House standard play a direct role in achieving these global aims.

The article "Passive House and the Sustainable Development Goals (SDGs): Connecting an international building standard with global aims" comes at a time when policymakers and the private sector are making decisions about the direction their building guidelines and business development will take. The article details the performance-based Passive House standard with its transparent quality-assurance processes and application for both new-builds and retrofits across all climate zones.



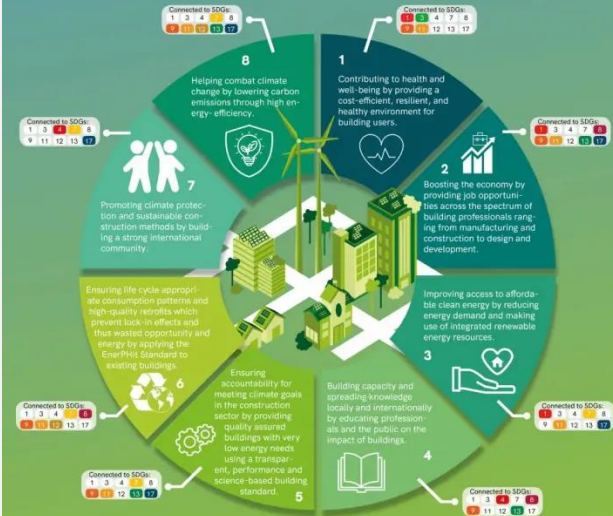
SUSTAINABLE DEVELOPMENT GOALS



Passive House and the Sustainable Development Goals

Connecting an international building standard with global aims

Eight umbrella categories under which the Passive House Standard contributes to the Sustainable Development Goals (SDGs):



Source: "Passive House and the Sustainable Development Goals (SDGs)", IPHA 2021. Article available on Passipedia.org



Why Passive House

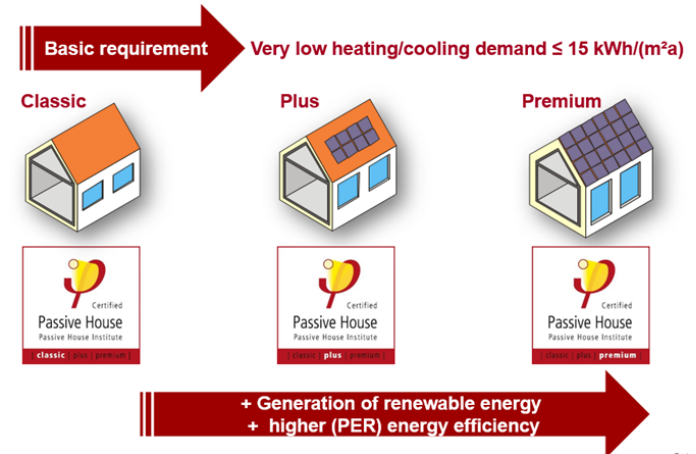
- Fastest Growing Building Standard in the World
- Best Energy Efficiency Standard in the World
- International Standard provides opportunities for SWC
- Not a Brand "Open-Source Standard" Free to all.



"A rigorous, voluntary building energy standard focusing on highest energy efficiency and quality of life at low operating cost."

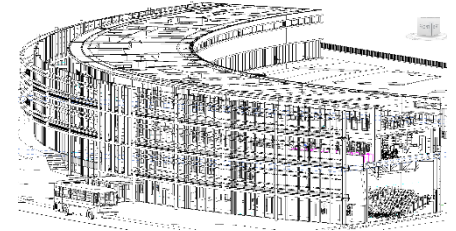
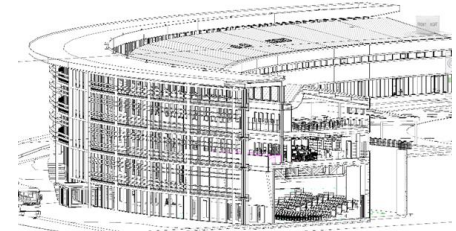
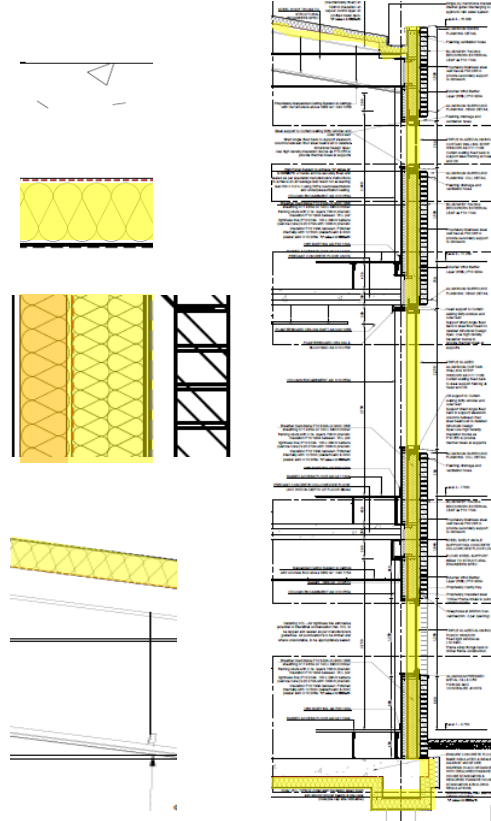
Future Building Standards

- Five Classifications can be Awarded:
- PH Low Energy Building
- PH EnerPHit
- PH Classic
- PH Plus
- PH Premium



Erne Campus – Thermal Envelope

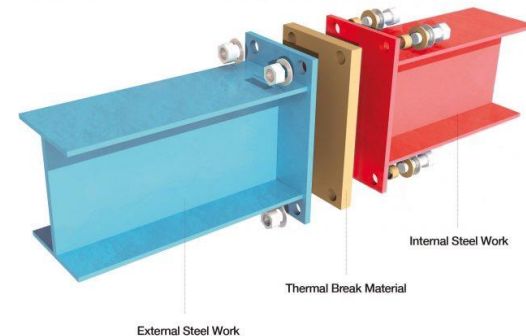
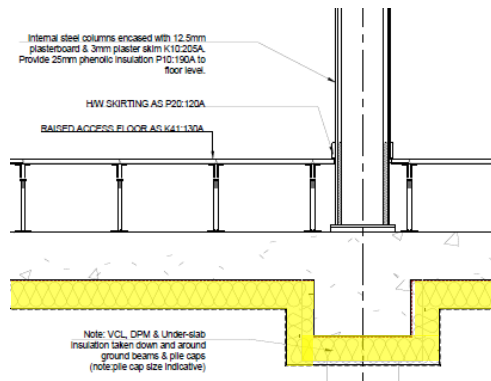
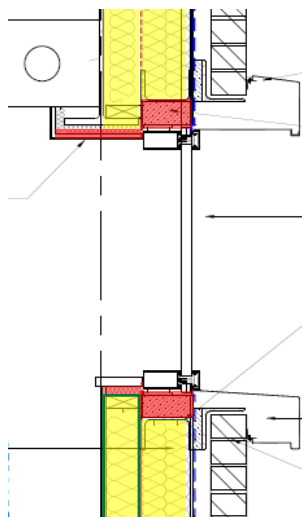
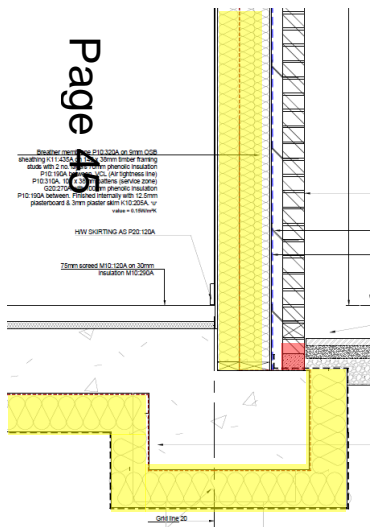
- Floor **U-Value 0.25 W/m²K**
90mm Insulation
27.8%
- Wall **U-Value 0.13 W/m²K**
240mm Insulation
17.6%
- Roof **U Value 0.15 W/m²K**
140mm Insulation
27.8%



Erne Campus – Thermal Bridging



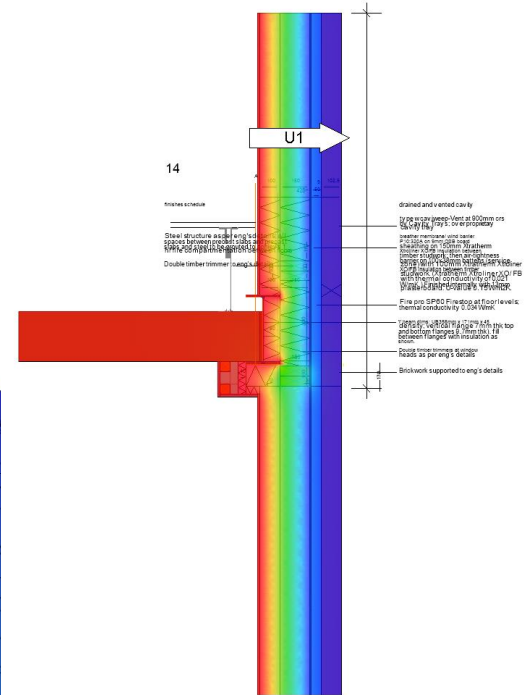
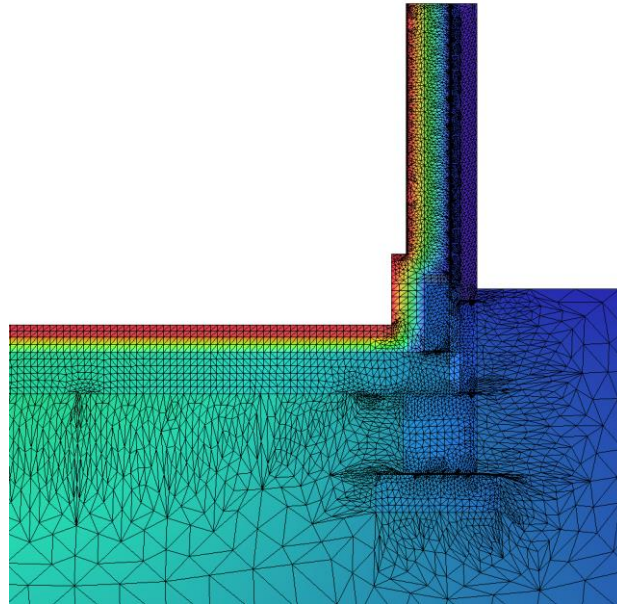
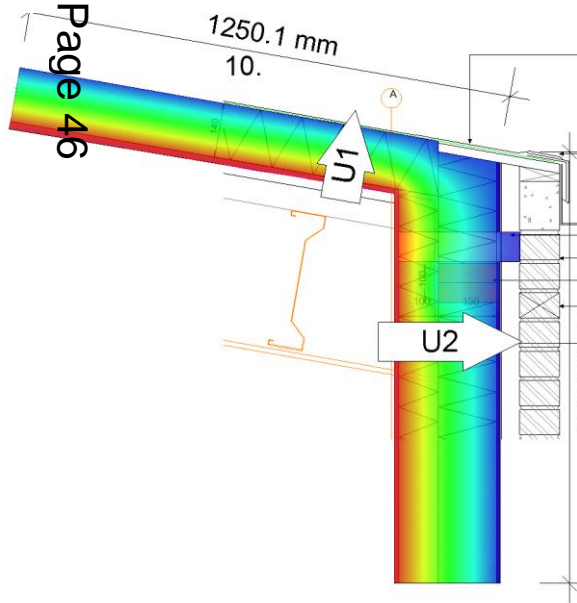
- All details have been Thermal Bridge mitigated



Erne Campus – Thermal Bridging

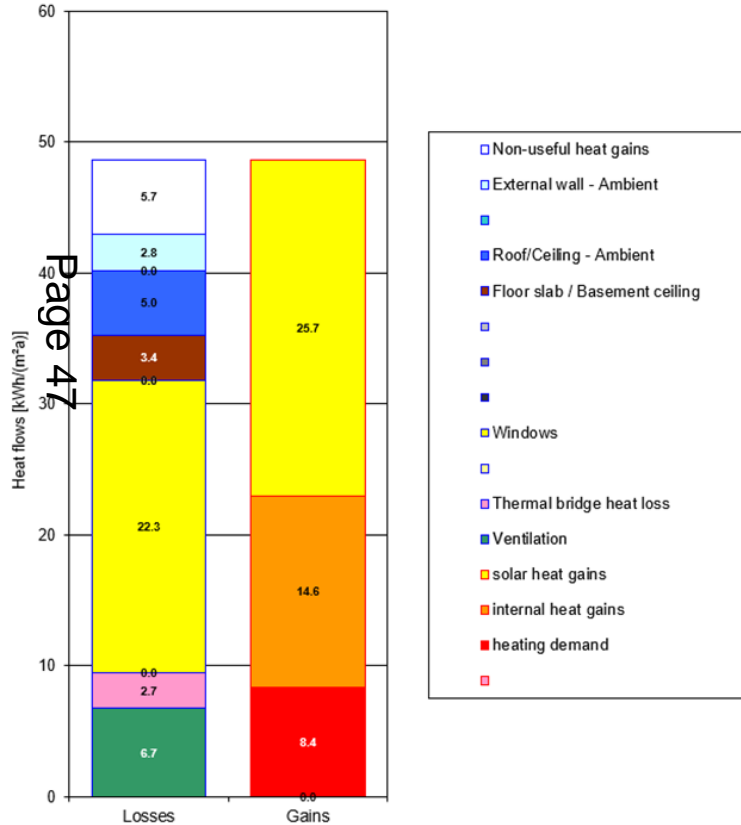


- There is just less than 4.5 km of Thermal Bridge accounted for in PHPP
- All have a better Psi Value than 0.07 W/mK

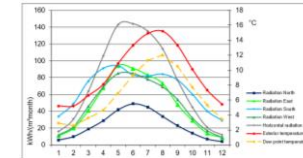
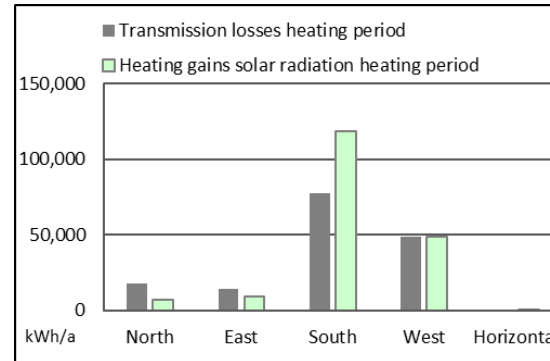


Erne Campus – Window Glazing

Energy balance heating (annual method)



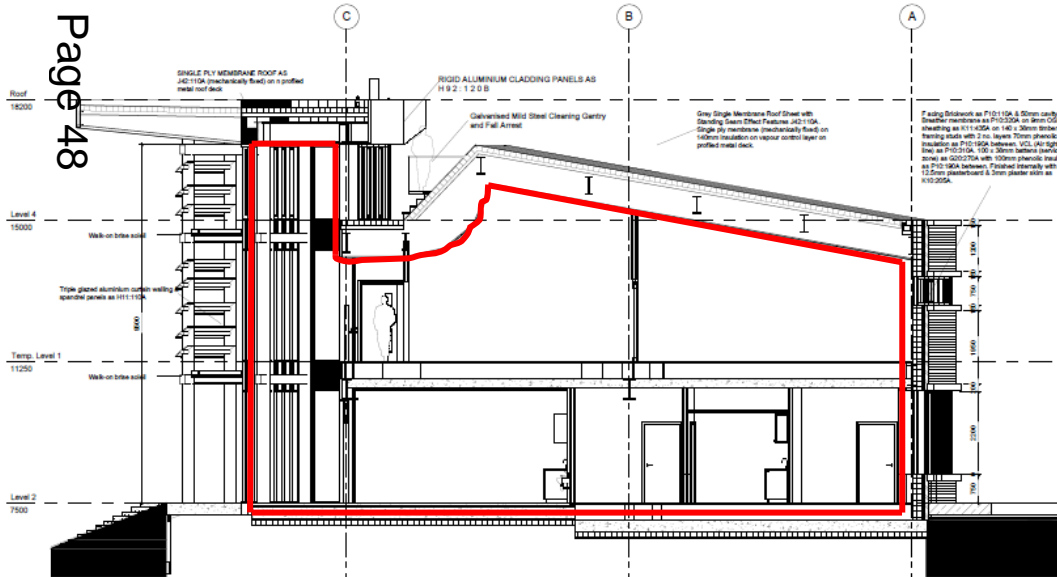
- g Value 0.41
- U Value Glazing 0.53 W/m²K
- U Value Frame 0.96 W/m²K
- U Value Installed 0.74 W/m²K
- Belfast Aldergrove Climate Data



Erne Campus – Airtightness

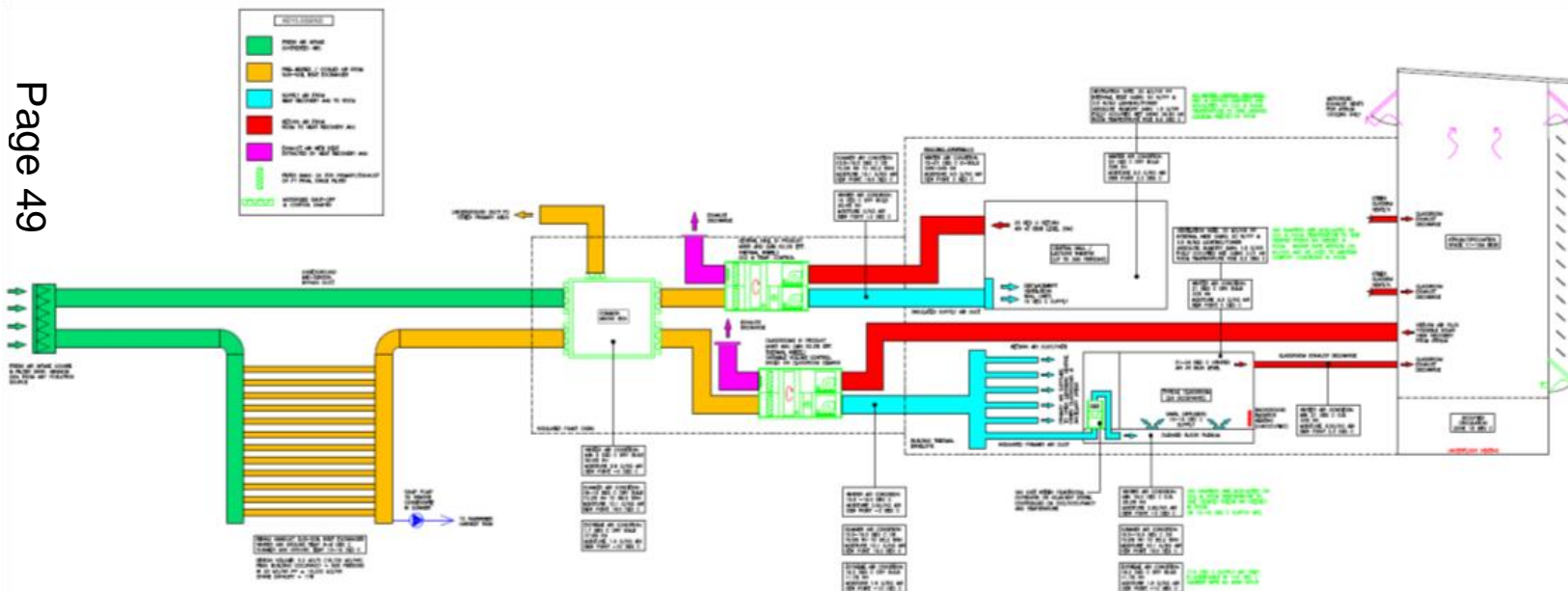
- Airtightness Target of 0.36 ACH @ 50 PA

Page 48



Erne Campus – MVHR

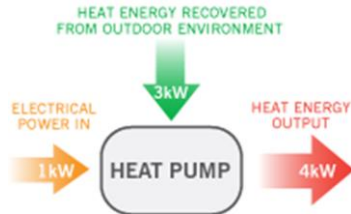
- The ventilation strategy is mixed mode, employing both mechanical and natural ventilation systems.



Erne Campus – Heating

- The heating system is a combination of a bio-oil micro-CHP unit producing 80% of the space heating demand as well as 100% of the DHW Demand and finally an air to water heat pump technology providing the remaining 20% of the space heating demand. Both these systems will use a mix of underfloor heating sections and responsive low water content radiators as the heat emitters.

Page 50





Erne Campus – Renewable Energy

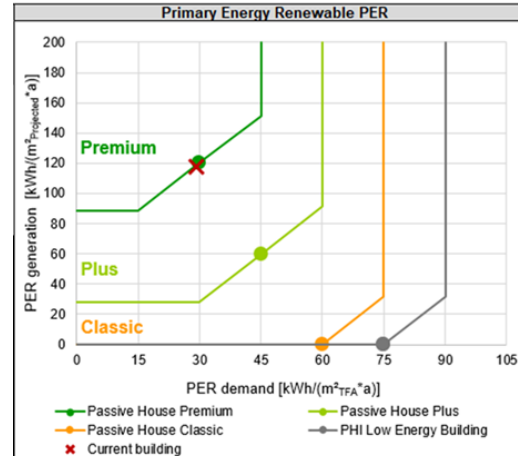
- On site generation and consumption at the Erne campus was significantly increased for the high demand of power consumption in the campus. The roof has significant capacity 3400m² to allow a solar photovoltaic system (520kwp) which will provide a renewable energy generation figure of 120 Kwh/m²/year.
- 2668m² of PV equivalent of nearly 14 tennis Courts



Erne Campus – Energy Storage

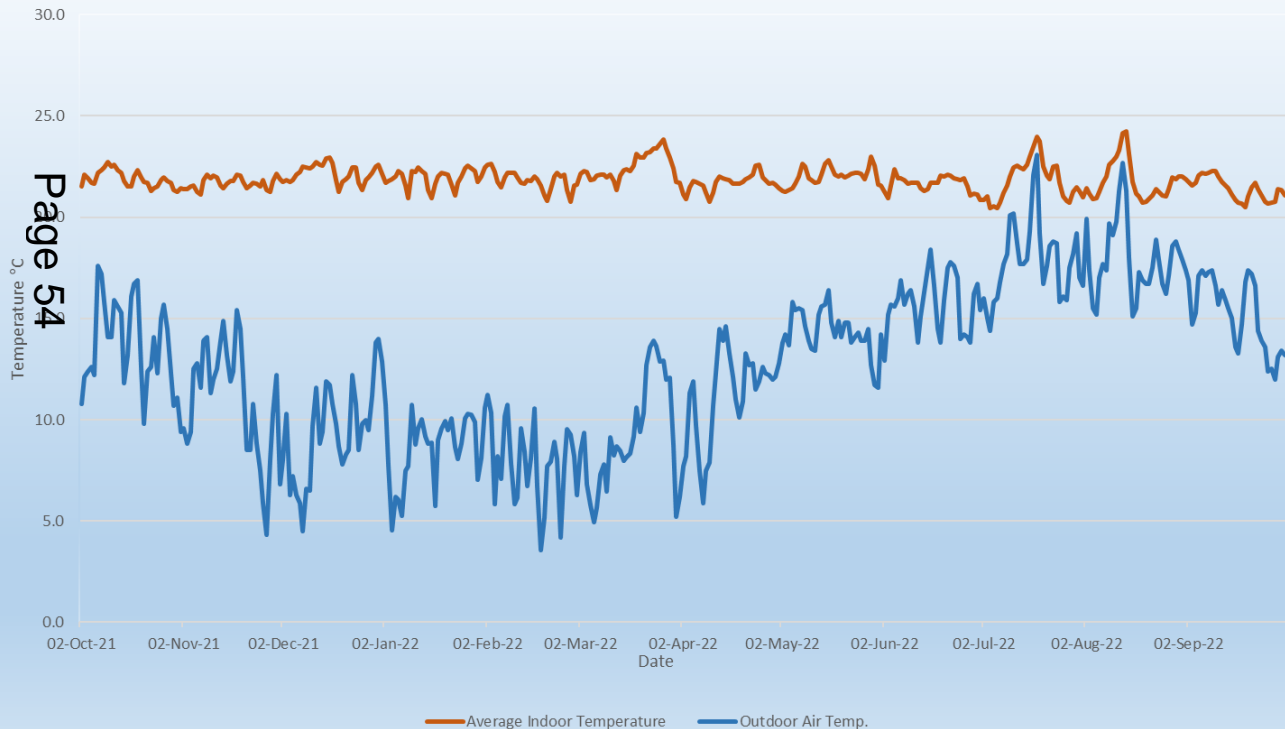
- There is 460Kwh of battery storage in the design that will allow for reasonable amount of short-term storage.
- There is 460kWHr/180kWpk of Lithium battery storage in the design that will allow for a reasonable amount of short-term storage.

Page 53



ACTUAL PERFORMANCE

Erne Indoor and Outdoor Temperature Data Oct '21 - Sept' 22



Erne Data – Oct '21 – September '22

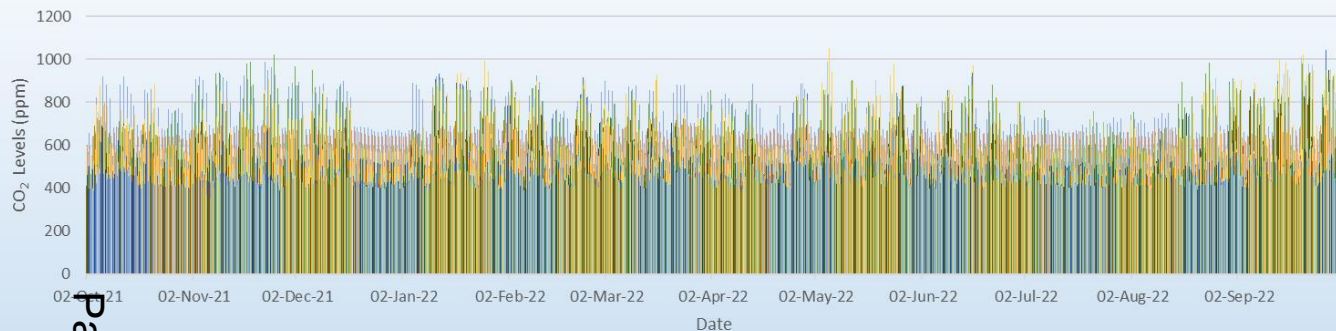
Temperature °C

Oct 21	21.9°C
Nov 21	21.7°C
Dec 21	22.2°C
Jan 22	21.9°C
Feb 22	21.8°C
Mar 22	22.6°C
April 22	21.7°C
May 22	22.1°C
June 22	21.7°C
July 22	21.8°C
Aug 22	21.8°C
Sept 22	21.4°C

Average Temperature over the year = 21.88°C

ACTUAL PERFORMANCE

Erne CO₂ Data Oct '21 - Sept '22



- Page 35
- EF01-RoomCO2(ppm)
 - ES01-RoomCO2(ppm)
 - ES03-RoomCO2(ppm)
 - ET01-RoomCO2(ppm)
 - ET03-RoomCO2(ppm)
 - ?ET05-RoomCO2(ppm)
 - ET09-RoomCO2(ppm)
 - ET12-RoomCO2(ppm)
 - ET16-RoomCO2(ppm)
 - ET20-RoomCO2(ppm)
 - ET24-RoomCO2(ppm)
 - Beauty Room 2 ES40 Co2(ppm)
 - ClassRm Numeracy EG18 Co2(ppm)
 - Dispensary Room ES32 Co2(ppm)
 - Exam Room ES48 Co2(ppm)
 - General Classroom EF13 Co2(ppm)
 - Healthcare EF02 Co2(ppm)
 - IRL Room ES77 Co2(ppm)
 - Life Skills EF15 Co2(ppm)
 - Multi Function Room 2 ET11 Co2(ppm)
 - Office Area ES86 Co2(ppm)
 - Open Plan Office EF37 Co2(ppm)
 - Project Base Learning EF03 Co2(ppm)
 - Science Lab 1 EF20 Co2(ppm)
 - Student Support EF34 Co2(ppm)
 - Study Room ES80 Co2(ppm)
 - EF02-RoomCO2(ppm)
 - ES06-RoomCO2(ppm)
 - ET01-RoomCO2(ppm)
 - ET05-RoomCO2(ppm)
 - ET09-RoomCO2(ppm)
 - ET13-RoomCO2(ppm)
 - ET17-RoomCO2(ppm)
 - ET21-RoomCO2(ppm)
 - 1 To 1 Teaching ES50 Co2(ppm)
 - Caretaker ES59 Co2(ppm)
 - ClassRm Prince Trust EG21 Co2(ppm)
 - Essential Skills ES74 Co2(ppm)
 - First Aid EF39 Co2(ppm)
 - General Classroom EF18 Co2(ppm)
 - HLS Room ES55 Co2(ppm)
 - IT Classroom EF41 Co2(ppm)
 - Managers Room ES51 Co2(ppm)
 - Multi Function Room 5 ET14 Co2(ppm)
 - Office Area ET01 Co2(ppm)
 - OpenPlanOfficeES41Co2(ppm)
 - Project Learn ES29 Space Co2(ppm)
 - Science Lab 2 EF26 Co2(ppm)
 - Student Support ES54 Co2(ppm)
 - Technology ES53 Co2(ppm)
 - ES01-RoomCO2(ppm)
 - ES07-RoomCO2(ppm)
 - ET02-RoomCO2(ppm)
 - ?ET06-RoomCO2(ppm)
 - ET10-RoomCO2(ppm)
 - ET14-RoomCO2(ppm)
 - ET18-RoomCO2(ppm)
 - ET22-RoomCO2(ppm)
 - Audio Room ES85 Co2(ppm)
 - Child Care EF19 Co2(ppm)
 - ClassRm Tourism EG19 Co2(ppm)
 - Essential Skills IT ES72 Co2(ppm)
 - Fitness Suite ES15 Co2(ppm)
 - Hair 1 Room ES25 Co2(ppm)
 - HR Interview Rm ES44 Co2(ppm)
 - Lab ClassRm EF21 Co2(ppm)
 - Meeting Room EF36 Co2(ppm)
 - Nail Bar ES30 Co2(ppm)
 - Office EF38 Co2(ppm)
 - Prep Room EF22 Co2(ppm)
 - Reception ES61 Co2(ppm)
 - Staff Social Area EF43 Co2(ppm)
 - Study Room ES78 Co2(ppm)
 - Union Office EF25 Co2(ppm)
 - ES02-RoomCO2(ppm)
 - ES08-RoomCO2(ppm)
 - ET03-RoomCO2(ppm)
 - ET07-RoomCO2(ppm)
 - ET11-RoomCO2(ppm)
 - ?ET15-RoomCO2(ppm)
 - ET19-RoomCO2(ppm)
 - ET23-RoomCO2(ppm)
 - Beauty Rm1 ES39 Co2(ppm)
 - ClassRm Catering EG22 Co2(ppm)
 - Collab Learning ES42 Co2(ppm)
 - Estate Room ES57 Co2(ppm)
 - General ClassRm EF05 Co2(ppm)
 - Hair 2 Room ES28 Co2(ppm)
 - HR Office ES45 Co2(ppm)
 - Lecture Theatre Space Co2(ppm)
 - Meeting Room ET05 Co2(ppm)
 - Network Lab ET39 Co2(ppm)
 - Open Learning ES81 Co2(ppm)
 - Private Dining ET61 Co2(ppm)
 - Reprographics ES60 Co2(ppm)
 - Student Social ES56 Co2(ppm)
 - Study Room ES79 Co2(ppm)
 - Workshop EG02 Co2(ppm)

CO₂ (ppm)

Oct 21	476 ppm
Nov 21	487 ppm
Dec 21	463 ppm
Jan 22	485 ppm
Feb 22	496 ppm
Mar 22	503 ppm
April 22	472 ppm
May 22	491 ppm
June 22	471 ppm
July 22	450 ppm
Aug 22	465 ppm
Sept 22	501 ppm

Average over the year = 480ppm

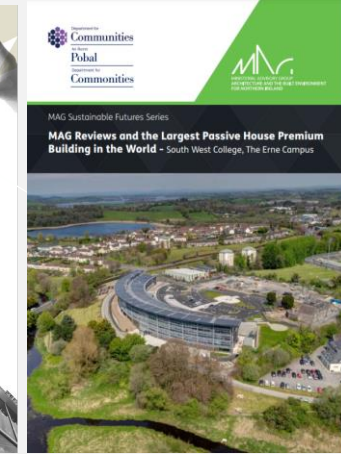
Minimum CO₂ Daily Average Oct '21-Sept '22 – 354ppm

Maximum CO₂ Daily Average Oct '21-Sept '22 – 1055ppm

Erne Campus – Project Costs

- The total construction budget for the Erne campus is ~£29,128,000.00 which is the equivalent to £3,552 per m² of floor area





CULTURAL SHIFT & FUTURE

- COP 26 and COP 27 Participation
- iPHA Boot Camp Sept 2022
- International Passive House Open Days
- SRMA Guest Invite to Provide Case Study on Erne Campus
- Queens Jubilee Sustainability Challenge Publication
- FODC, Belfast City Council, DAERA Passive House Project Influence

Thank You

Barry.McCarron@swc.ac.uk

www.swc.ac.uk



[@swccollege](https://www.instagram.com/swccollege)



For over a decade my practice has worked tirelessly in promoting/supporting Peace, Shared Future, Equality and now Climate Action.



On the back of my many programmes to date. Northern Ireland's leading university, Queen's, created a new position for me as their first Artist In Residence for Sustainability, Equality and Climate Action.

With the climate crisis catastrophe escalating here in Northern Ireland.

Focusing on 'Reuse Reduce Recycle' should be fundamental to every business/government organisation and educational establishment in the





ALL recyclable and
near-end-life waste can
be reused.

We just have to source
and redistribute to
those that **NEED** it.

With this as the core point in mind, I have created a self-initiated sustainability programme.

Page 63

Which links the 'have reusable waste' bodies to those in need of these products.





RETAIN: SUSTAIN

Programme



This programme aims to help the companies who come onboard, to reduce their recycling costs.

While feeding into their corporate responsibility of helping their local communities. Through supporting struggling,

RETAIN:SUSTAIN is a pro-gramme that also gives organisations the opportunity of being more sustainable and economically viable.

Page 66

I shall be the Project Manager who will also act as facilitator between the businesses, schools and funding bodies. Thus reduce time and effort required by all parties





Bringing two or more bodies together (schools and businesses). The project premise is for the former to retain recyclable waste in order to help sustain the latter.

The programme outline is general and can be changed to create a tailor made and designated model to suit each particular twinning

I shall discuss the individual sustainability practice of each company with their sustainability team. Focusing on how their waste management strategy can be further enhanced to help their business financially. Also, in the process help local schools benefit.





Through supporting
strugg-ling, disadvantaged
primary schools. A win win
for the all involved.

But the main winner shall
be -

Mother Nature.

Although developed by my practice prior to starting the residency. After meeting Queen's top management to discuss the programme. The university is now very interested in financing a pilot of this programme.

Top bosses are already looking at sourcing funding for a potential roll out in





In addition, I have secured Nespresso (UK) as the first global company to come on board for this initial stage of the programme.

If funding is secured, I will work with Queen's to connect with the most disadvantaged of the city's schools. Namely, those which will benefit the most

So, what am I
looking from
Belfast City
Council?

Already the eco-friendly partnership between QUB and BCC could not be stronger. With the Belfast Climate Commission entering into its fourth year in January





So, since QUB is now in the process of sourcing funding. To roll out a pilot of this eco-friendly, business/community environmental project.

Would BCC be interested in funding phase two of the programme?

Legacy and long term objectives

My aim would be to first grow this sustainability programme throughout the city.

Then, piggy backing on this. I hope to work in partnership with BCC and other councils and leading businesses. To duplicate its benefits in other cities and towns throughout NI.

With a projection of then taking it to councils in Ireland and UK and further afield. I shall be talking with all global companies that come onboard as partners. With a bid to grow my staff numbers and scale the programme up internationally. Through duplicating these companies' eco partnerships, with them in other international cities, where they have company headquarters.

Climate Action is the single most important issue on our planet today. Thus, as a former photojournalist, I have worked hard with local media. To highlight the eco-friendly work I am doing with QUB.

Since starting my residency in Nov 2022. The free press/media coverage I have gained for QUB, has been across both on/offline mediums. And this will continue to grow with the pilot roll out and other projects.

BCC will enjoy similar pro-bono coverage, should you decide to come on board. But the real winner will be our natural environment.

Thank you for your time today. It is the most

precious gift we can gift one another.

Climate & City Resilience Committee

Belfast Local Development Plan 2035

LDP Plan Strategy

Adopted 2 May 2023



Belfast
City Council

Local Development Plan

- Key element of council's new planning powers
- Long term **spatial** plan for 15-20 yrs
- Primary basis of all planning decisions
- Will shape and guide future development / growth
- Helps provide certainty & framework for investment
- Replaces BMAP & most regional planning policies



28/11/23

Belfast
City Council

The Plan-Led System

- Section 6 (4) of the Planning Act (2011) directs that in making any determination under its provisions, regard is to be had to the LDP and that determination must be made in accordance with the plan unless material considerations indicate otherwise.
- This establishes the primacy of the LDP in the plan-led system as acknowledged by paragraph 5.11 of the SPPS



LDP - Transitional Arrangements

- Any conflict between the policy contained in a departmental development plan and those of the PS must be resolved in favour of the PS.
- A departmental development plan will therefore remain in effect for the area for which it was made until the council adopts the Local Policies Plan.

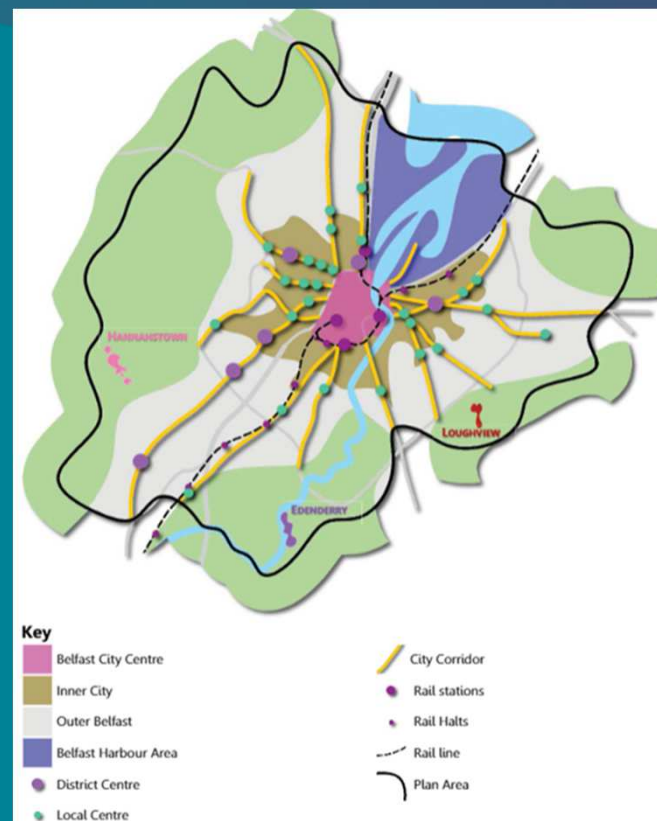


28/11/23

Belfast
City Council

Strategic Policies

- Growth Strategy
- Sustainable Development
- Improving Health and Wellbeing
- Community Cohesion
- Positive placemaking
- Environmental Resilience
- Connectivity
- Green and Blue Infrastructure



Growth
strategy

Sustainable
development

Improving
health and
wellbeing

Community
cohesion and
good relations

Positive
placemaking

Environmental
resilience

Connectivity

Green and blue
infrastructure



Belfast
City Council

28/11/23

Growth & Sustainable Development

Policy SP1 – Growth strategy

The growth strategy for the LDP can be summarised as follows:



Support
46,000
additional jobs



Our city is home
to an additional
66,000
people



550,000m²
of employment
floor space
(B-Use Class) 2020-2035



31,600
additional homes
2020-2035

Policy SP2 – Sustainable development

The council will have an overarching presumption in favour of sustainable development where it accords with the LDP, unless material considerations indicate otherwise.

Policy SP1 – Growth strategy

Policy SP1A – Managing growth and supporting infrastructure delivery

Policy SP2 – Sustainable development

The LDP is one of the key spatial tools to shape the physical form of Belfast through a sustainable approach that delivers the growth aspirations of the Belfast Agenda and RDS.



28/11/23

Belfast
City Council

Resilience and Green & Blue Infrastructure

SP6 - Environmental resilience

The council will support development where it helps to reduce greenhouse gas emissions and is adaptable in a changing climate to build environmental resilience.

Policy SP8 – Green and blue infrastructure network

The council will support the development of a green and blue infrastructure network, designating and safeguarding sites and accesses required for the green and blue infrastructure network across the plan area.

Recognises the multi-benefits of green and blue infrastructure, including for climate resilience, biodiversity, wellbeing and community cohesion.

SP6 - Environmental resilience

Policy SP8 – Green & blue infrastructure network

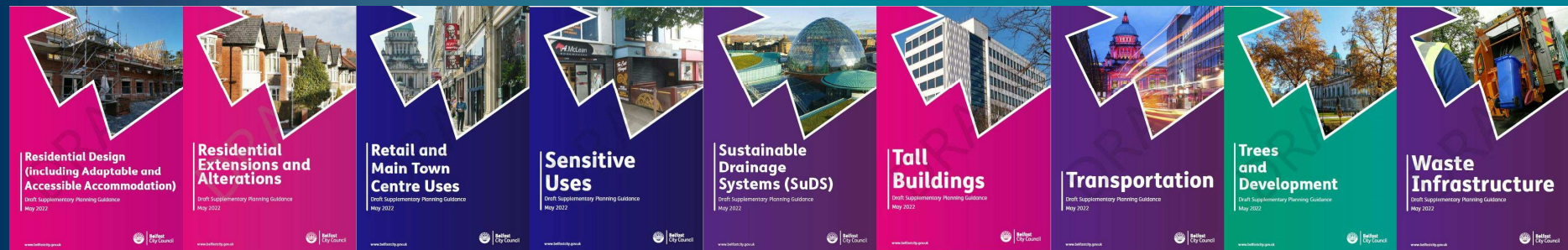


28/11/23

Belfast
City Council

107 Operational Plan Strategy Policies

17 Supplementary Planning Guidance Documents



Belfast
City Council

Growth: Policy HOU1– Accommodating new homes

There is a requirement for 31,660 new homes in Belfast over the period 2020-2035. This will be delivered in accordance with the requirements set out in the following table.

Settlement / Area	2020-2025	2026-2030	2031-2035	Total
Belfast city centre	1,600	2,800	3,600	8,000
Belfast Harbour estate	600	1,300	1,600	3,500
Rest of Belfast city	3,600	6,400	8,100	18,100
Small settlements total	-	30	30	60
Windfall	400	700	900	2,000
Total	6,200	11,230	14,230	31,660
Indicative Annual Average Rates	1,100-1,300	2,100-2,300	2,700-2,900	2,000-2,200



Support
46,000
additional jobs



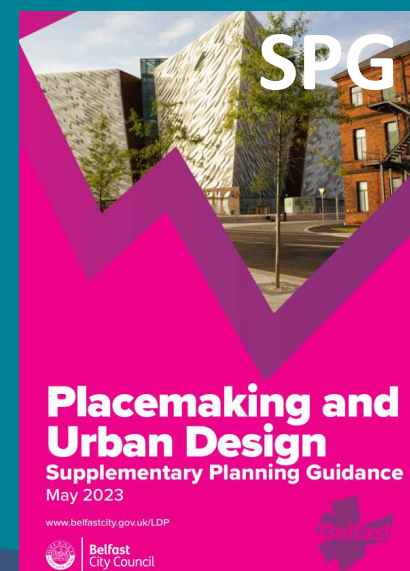
Our city is home
to an additional
66,000
people



550,000m²
of employment
floor space
(B-Use Class) 2020-2035



31,600
additional homes
2020-2035



Belfast
City Council

Policy ENV2 – Mitigating environmental change

Planning permission will be granted for development that incorporates measures to mitigate environmental change and reduce GHG by promoting sustainable patterns of development.

Development proposals should, where feasible, seek to avoid demolition and should consider how existing buildings or their main structures could be reused. Development proposals that include the demolition of existing buildings should demonstrate that reuse is not appropriate or feasible. Where demolition is proposed, measures should be included to minimise any waste through the reuse of as much building material as possible.

All new development proposals (including changes of use) will maximise opportunities to incorporate sustainable design features where feasible (such as grey water recycling, green roofs, maximising use of recycled materials, orientating buildings to optimise solar gain, energy efficiency).

Development proposals should, where appropriate, demonstrate the highest feasible and viable sustainability standards in the design, construction, operation and “end of life” phases of development in line with the ‘nearly zero carbon buildings’ strategy set out in the EU energy performance and buildings directive, where all new buildings are required to be ‘nearly zero carbon’ by 2020.

New policy to help mitigate climate change.

Sustainable patterns of development that reduce the need to travel, private car use, congestion, carbon emissions and air pollution.

Demolition of buildings should be last resort – such proposals must demonstrate why and reuse as much as possible.

Promote innovative building technologies and passive design.

Possible Statement of Sustainability – future guidance proposed.



ENV3 – Adapting to environmental change

Planning permission will be granted for development that incorporates measures to adapt to environmental change, in order to support sustainable and enduring development.

Measures to help adapt to the potential impacts may include the following:

- a. Managing coastal erosion, land instability, flood risk and promoting SuDS;
- b. Protecting and enhancing a green and blue infrastructure network in the city, including enhancing biodiversity and ecosystem services;
- c. Encouraging greater resilience to extreme weather conditions in the built environment and in transport, energy and other infrastructure; and
- d. Demonstrating how the design of the development minimises overheating and reduces reliance on air conditioning systems.

In order to minimise the impact of extreme weather conditions, new developments should also embed resilience to current and future climates, including:

- e. Where feasible, viable and sustainable, provide an accessible green roof to aid cooling, insulation and enhance biodiversity;
- f. Incorporate SuDS, including landscaping and tree planting;
- g. Demonstrate what measures have been included to ensure the safety of people and the protection of the development during extreme weather events;
- h. Demonstrate how the development integrates passive design and green infrastructure as part of the design process; and
- i. Demonstrate how the development is resilient to flood events.

New policy to help climate change adaptation.

Adaptation measures to ensure resilience, endurance and safety.

Demonstration of resilience measures for new development.

Green measures, passive design, public safety and severe weather/ flood resistance.

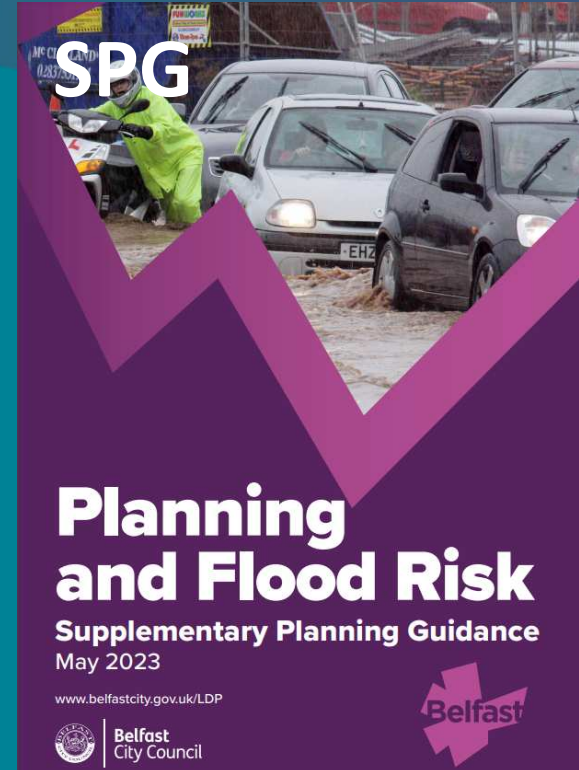


Policy: ENV4 – Flood risk

Planning applications in flood risk areas must be accompanied by an assessment of the flood risk in the form of a Flood Risk Assessment (FRA). The council will have regard to guidance publications produced by other authorities and prospective developers/applicants are advised to liaise early in the formulation of their proposals with DfI Rivers to clarify flooding or flood plain issues that may affect particular sites.

In all circumstances, the council will adopt a precautionary approach in assessing development proposals in areas that may be subject to flood risk presently or in the future as a result of environmental change predictions. All planning applications will be determined with reference to the most up to date flood risk information²⁴ available and in consultation with DfI Rivers and other relevant bodies as appropriate.

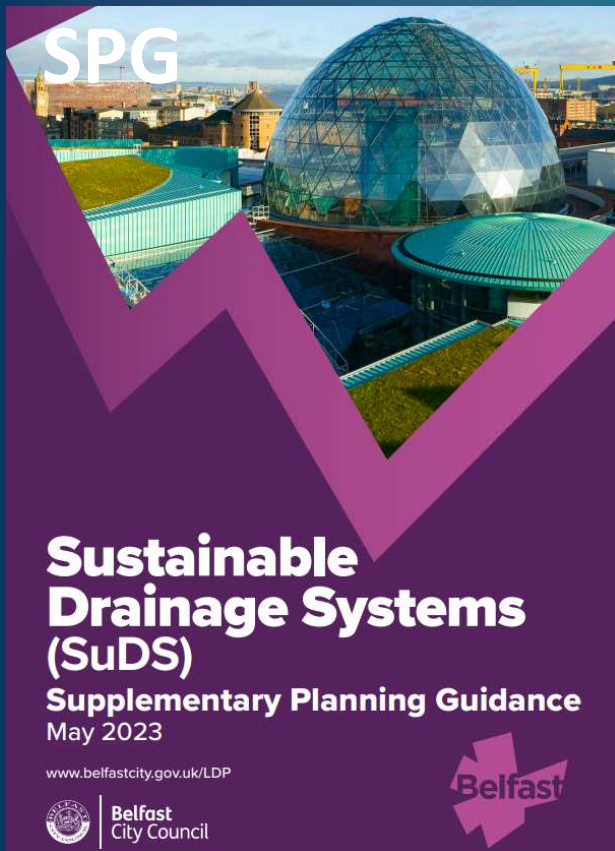
The SPPS sets out the planning policies for flood risk to minimise flood risk to people, property and the environment. The council will take full account of these in assessing development proposals.



Short policy based on the precautionary approach, cross referencing policies in SPPS. Accompanied by SPG to provide technical guidance. Taken together, generally in accordance with current flood risk policy – updated to take account of DfI Rivers guidance. DfI Rivers remains statutory consultee. No significant change in approach.



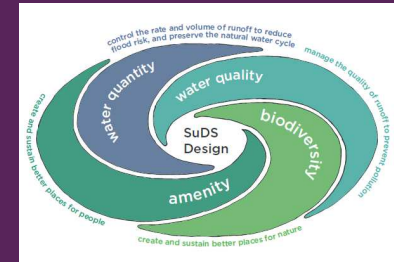
Policy: ENV5 – Sustainable drainage systems (SuDS)



All built development should include, where appropriate, SuDS measures to manage surface water effectively on site, to reduce surface water runoff and to ensure flooding is not increased elsewhere. A two stage SuDS treatment should be used, where possible, in order to improve water quality. An appropriate maintenance and management plan for all SuDS will require to be agreed with the council and a s76 planning agreement may also be sought.

Developers should consider the following SuDS measures to assist in minimising flood risk:

- a. Green roofs (intensive and/or extensive systems);
- b. Swales;
- c. Filter strips and filter drains;
- d. Permeable or porous paving;
- e. Detention basins;
- f. Open areas, ponds and wetlands; and
- g. Trees and landscaping.



Now an LDP requirement based on multiple benefits of 'soft SuDS'. The policy requires SuDS for most new developments.

Aligns with Green and Blue Infrastructure Plan (GBIP) and accompanied by SPG to provide additional context and guidance.



Belfast
City Council

Policy: GB1 – Green & blue infrastructure network

Planning permission will be granted for proposals that protect, augment, complement and/or improve the network and connectivity of green and blue infrastructure across the district. This includes the development of a network of community paths and greenways across the district, including those designated in the LDP, as well as the provision and improvement of public access to open space and other green and blue infrastructure resources, where this does not conflict with natural heritage interests or other matters, including amenity and public safety.

New development should incorporate green infrastructure features as part of the design, including green roofs and walls, SuDS, tree and hedgerow planting, and creating safe accessible links with neighbouring open space, in addition to providing open space on site, where appropriate.

The LDP will seek to secure improvements and expansion of the green and blue infrastructure network, including those identified in the LDP and/or the council's GBIP and associated strategies/action plans, as a result of new development. This may include the carrying out of agreed works by the developer or a financial contribution from the developer in lieu, having regard to the scale, nature and location of the proposed development and to the terms of supplementary guidance on these matters as published by the council.

The LDP will seek to safeguard designated and potential sites and corridors that form part of the network of green and blue infrastructure across the district and will only permit development either within or adjacent to such sites and corridors where it does not prejudice the retention, use, enhancement or further development of the network. Such development proposals should, where appropriate, incorporate access to the green and blue infrastructure network.

New policy to help create and protect network of G&B infrastructure across Belfast to help deliver multiple benefits.

Aligns with GBIP and brings it (and associated plans/strategies) into LDP.

Generally informs other operational policies, including open space, trees, resilience.



28/11/23

Belfast
City Council

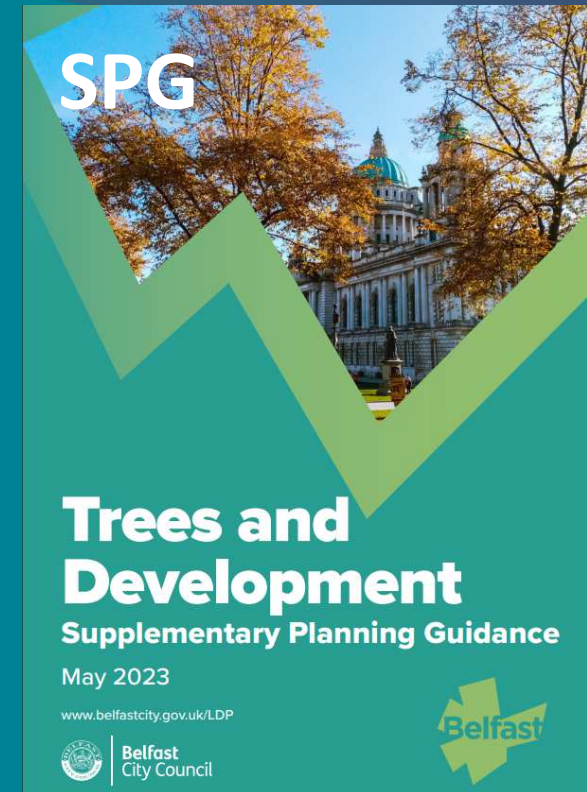
Policy NH1—Protection of natural heritage resources

The council will adopt the precautionary principle when considering the impacts of a proposed development on local, national or international natural heritage resources, including designated sites, protected species and the other important interests of biodiversity and geodiversity.

In assessing new development proposals, the council will seek to ensure the protection of the district's natural heritage and biodiversity. New development will not have an unacceptable effect, either directly, indirectly, or cumulatively, on sites, habitats, species or ecosystems and networks that are important for their nature conservation, biodiversity or geodiversity value. This includes designated sites, habitats and species protected by law, priority habitats & species and other important nature conservation and biodiversity interests and ecological networks.

The council will have due regard to the relative importance and levels of protection afforded to the hierarchy of international, national and local designated sites and to habitats and species in considering development proposals. In this regard, proposals that have, or could have, a significant effect on an international site will not be supported by the council. Proposals that have an adverse effect on a national site or a significant adverse effect on a local site will not be supported.

The council will require developers to undertake appropriate site surveys and assessments for consideration prior to planning applications being determined.

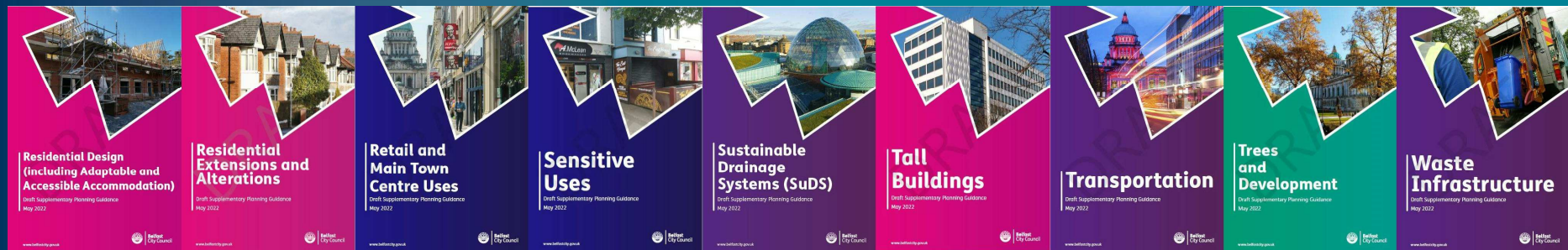
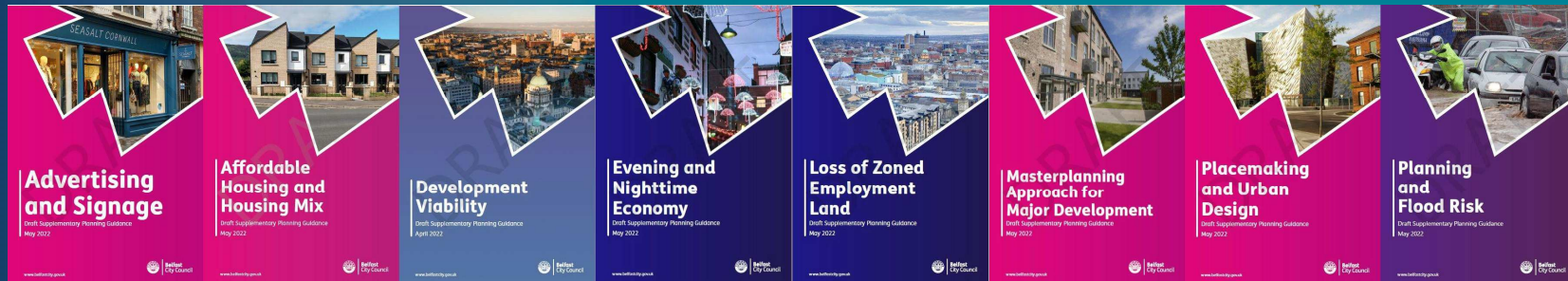


- The careful design of new development should ensure that there is no damage to nature conservation interests.
- Through the application of this policy the precautionary principle approach seeks to ensure the protection of important natural heritage interests.



Belfast
City Council

17 x Supplementary Planning Guidance



Belfast
City Council

Supplementary Planning Guidance (SPG)

- Advertising and Signage
- Affordable Housing and Housing Mix
- Development Viability
- Evening & Night time Economy
- Loss of Zoned Employment Land
- Masterplanning Approach for Major Development
- Placemaking and Urban Design
- Planning and Flood Risk
- Residential Design (including Adaptable and Accessible Accommodation)
- Residential Extensions and Alterations
- Retail & Main Town Centre Uses
- Sensitive Uses
- Sustainable Drainage Systems (SuDS)
- Tall Buildings
- Transportation
- Trees and Development
- Waste Infrastructure



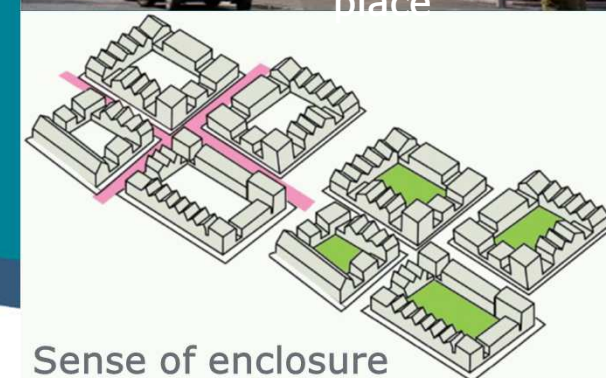
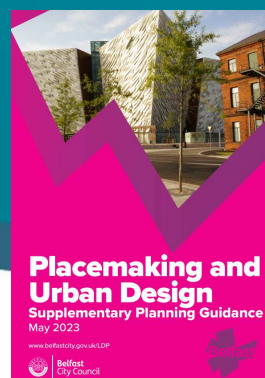
Supplementary Planning Guidance (SPG)

- Non statutory planning guidance that support clarifies and illustrates by example policies included in the proposed planning policy framework
- It is a material consideration in determining planning applications but must be read in conjunction with the LDP
- In addition to local SPG produced by the council, the DfI may produce regional SPG in relation to regional planning policies.
- Commitment at Independent Examination (Consultation and parallel adoption with Plan Strategy)



SPG – Placemaking and Urban Design

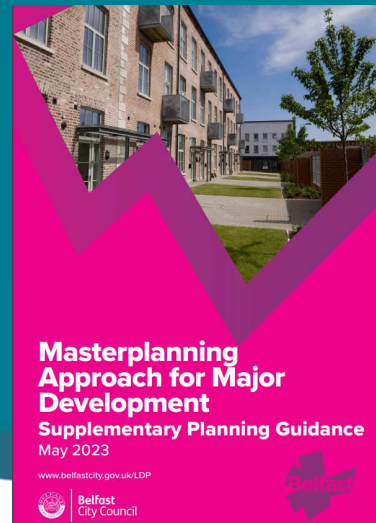
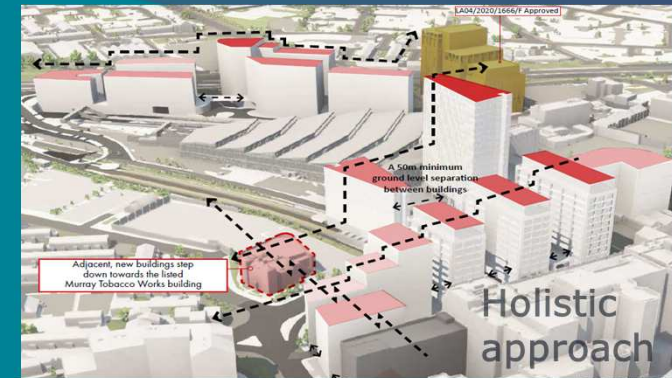
- Supports development that maximises core principles of good placemaking
- Emphasis on the importance of design as a strategic consideration
- Understanding how local context and character influences built form including heritage, layout, scale, height, materials and architectural language
- Reinforces a sense of place by emphasising locally distinctive features



Belfast
City Council

SPG – Masterplanning Approach

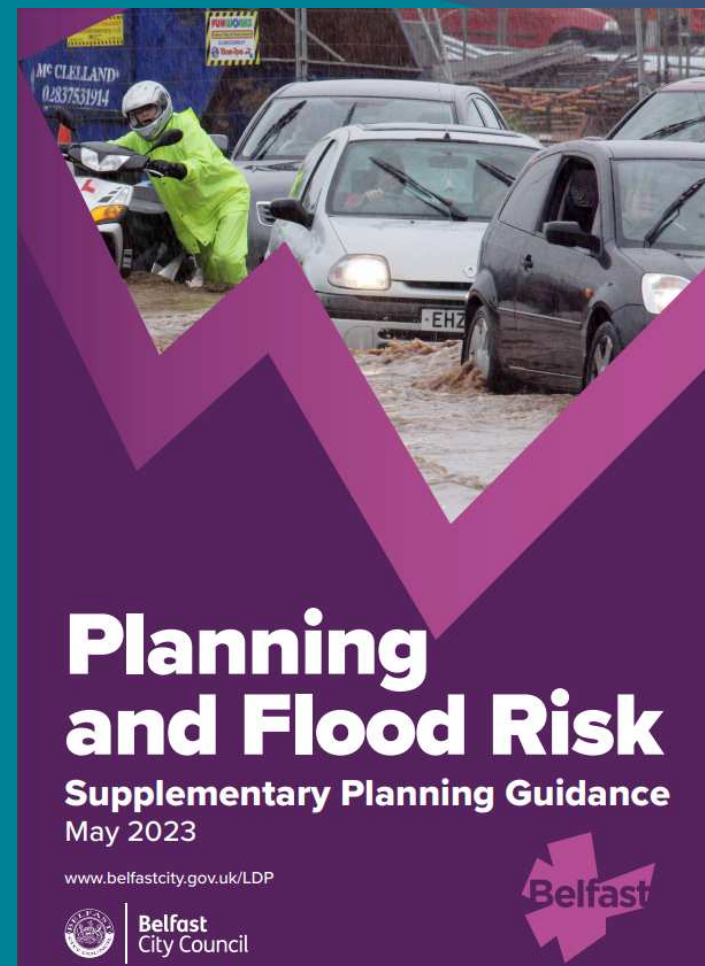
- Promotes a holistic approach to site assembly, layout and design that is mindful of adjacent sites
- Encourages higher densities appropriate for city living and a growing economy
- Maximises solutions to deliver energy efficiencies (BREEAM 'excellent')
- Promotes opportunities for urban repair and greater connectivity



Belfast
City Council

SPG – Planning and flood risk

4	Flooding Guidelines	10
4.1	Flooding Guidelines	10
4.2	Development in Flood Plains	10
	Exceptions in defended areas.....	13
	Exceptions in undefended areas	17
4.3	Development Proposals of Overriding Regional or Sub-Regional Economic Importance	23
4.4	Minor Development.....	24
4.5	Unacceptable Flood Protection/ Management Measures	24
4.6	Protection of Flood Defence and Drainage Infrastructure	27
4.7	Development and Surface Water (Pluvial) Flood Risk	28
4.8	Thresholds for provision of a Drainage Assessment	29
4.9	Artificial Modification of Watercourses.....	33
4.10	Development in Proximity of Controlled Reservoirs	35
4.11	Consideration of hydro-electric power generation schemes.....	38
	Appendices	39
	Appendix A: Technical Definitions (Source DfI Rivers June 2018).....	39
	Appendix B: Impacts of Flooding and Climate Change.....	46
	Appendix C: Impact of Flooding on People and Property	51
	Appendix D: Sustainable Drainage	56
	Appendix E: Assessing Flood Risk and Drainage Impact.....	59
	Appendix F: Flood Proofing - Resistance & Resilience Construction	65



Belfast
City Council

SPG – Sustainable drainage systems (SuDS)

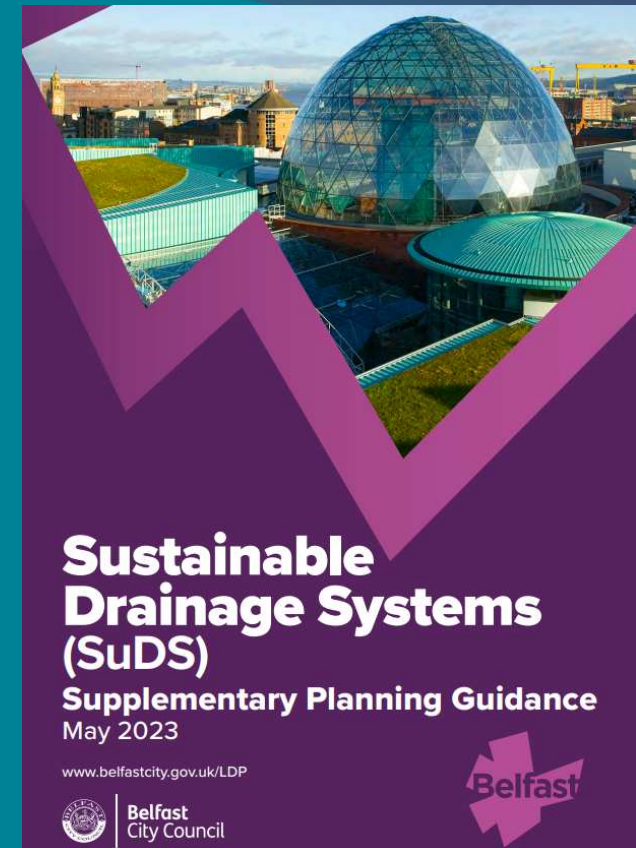
Sets out context of traditional drainage arrangements and implications for Belfast.

Includes “Myth-busting” section.

Aimed at all scales of development.

Non-technical design guidance - illustrated with photos of examples and simple diagrams.

Provides practical solutions for a range of typical types, scales and locations of development.



Belfast
City Council

SPG – Trees and Development

Replaces best practice guide by former DoE.

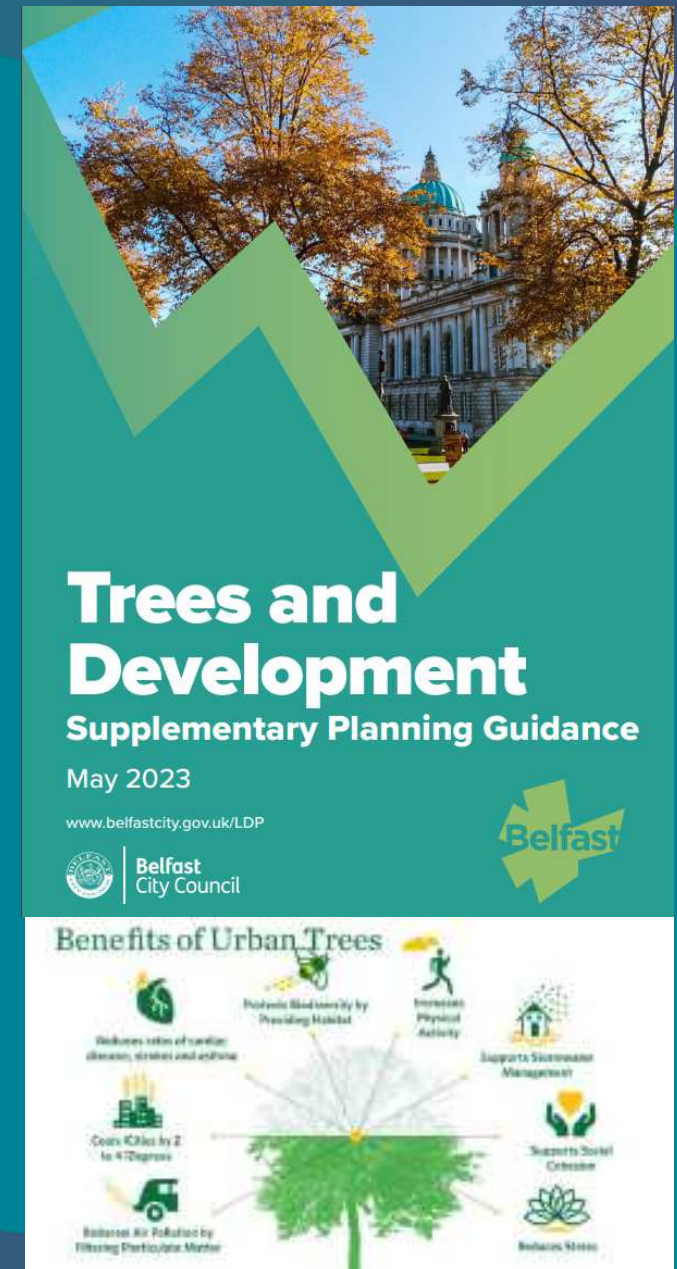
Sets out multiple benefits and value of trees
- links to other environmental policy aims.

Advice on incorporating existing and new trees in development.

Advice on how to carry out works around trees.

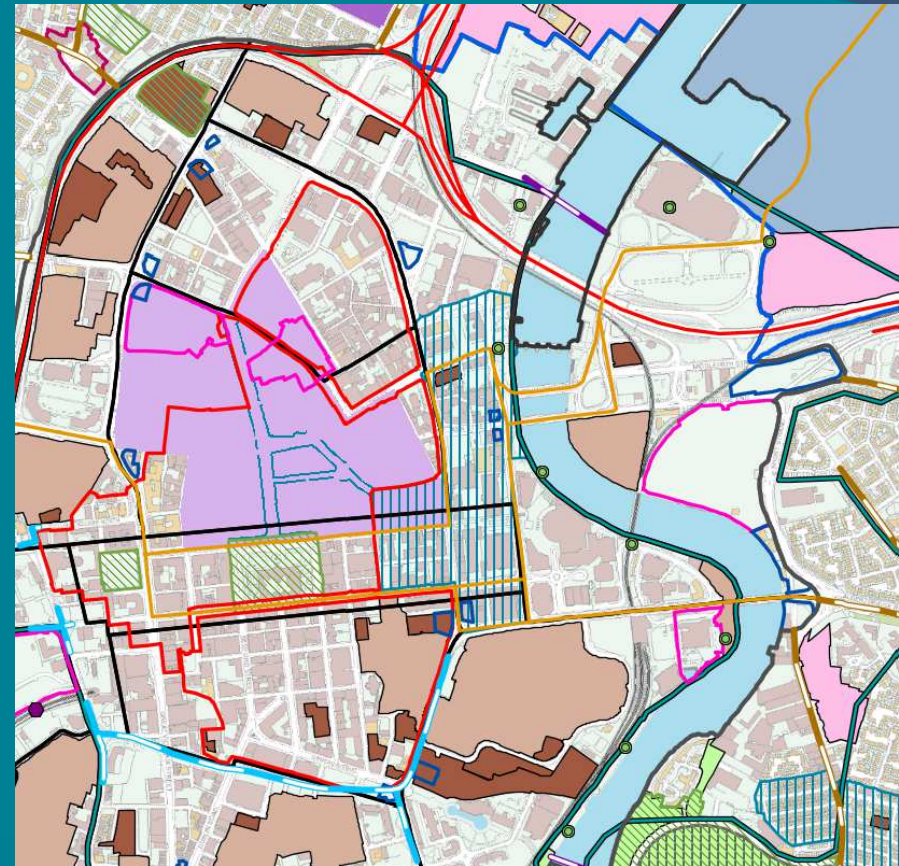
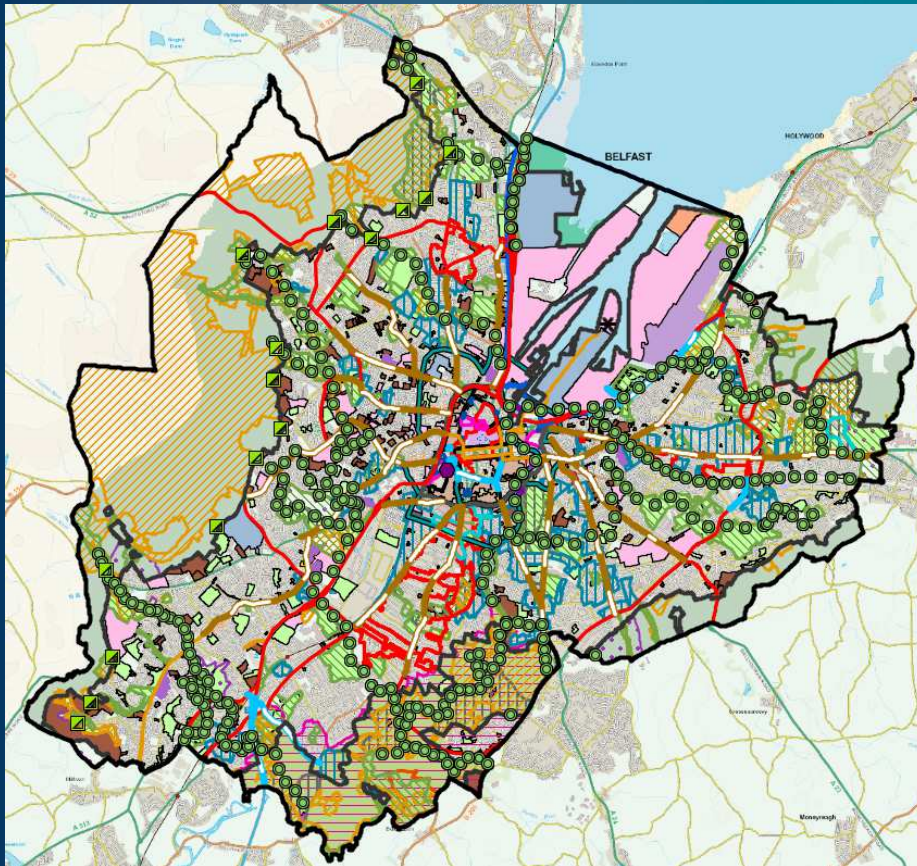
Photos and illustrations of best practice.

Outlines some technical terms and further sources of information.



Belfast
City Council

Next Stage: Local Policies Plan



Belfast
City Council

Adoption of LDP Plan Strategy

[Home](#) > [Planning and building control](#) > [Planning](#) > [Local Development Plan](#) > [Adoption of LDP Plan Strategy](#)

[About the Belfast Local Development Plan \(LDP\)](#)
[Adoption of LDP Plan Strategy](#)
[LDP Supplementary Planning Guidance](#)
[Draft plan strategy \(dPS\)](#)
[Preferred options paper \(POP\)](#)
[Local Development Plan document library](#)
[Sign up to our Local Development Plan mailing list](#)

[Adoption of LDP Plan Strategy](#)

Adoption of LDP Plan Strategy

Belfast Local Development Plan – Plan Strategy (May 2023) is formally adopted

Belfast City Council's Local Development Plan Strategy has been agreed for formal adoption on the 2 May 2023.

The Belfast Local Development Plan – Plan Strategy (May 2023) and supporting documentation is [available in our LDP Library](#).

[Supplementary planning guidance documents](#) associated with a number of the policies in the new Plan Strategy (May 2023) are now available.

All documentation is also available to view at the Planning Service reception during normal public opening hours in Cecil Ward Building, Linenhall Street.

[View the Adoption of LDP Plan Strategy documents ▶](#)

Supplementary Planning Guidance - May 2023

These SPG documents were subject to public consultation at draft stage from 12 May 2022 to 4 August 2022.

Document title	File format and size
Affordable housing and housing mix	HTML
Download SPG001 Affordable Housing and Housing Mix	PDF - 3.3MB
Development viability	HTML
Download SPG002 Development Viability	PDF - 3MB
Download SPG002A Viability Key Assumptions	PDF - 1.5MB
Residential design (including adaptable and accessible accommodation)	HTML
Download SPG003 Residential Design (including Adaptable and Accessible Accommodation)	PDF - 9.9MB
Residential extensions and alterations	HTML
Download SPG004 Residential Extensions and Alterations	PDF - 6.5MB
Placemaking and urban design	HTML
Download SPG005 Placemaking Urban Design	PDF - 9.6MB
Tall buildings	HTML
Download SPG006 Tall Buildings	PDF - 3.4MB

[https://www.belfastcity.gov.uk/Planning-and-building-control/Planning/Local-development-plan-\(1\)/Local-development-plan/Adoption-of-Plan-Strategy-documents](https://www.belfastcity.gov.uk/Planning-and-building-control/Planning/Local-development-plan-(1)/Local-development-plan/Adoption-of-Plan-Strategy-documents)



Thank You



Belfast
City Council



Subject:	Results from the annual disclosure to the Carbon Disclosure Project and the UK Score Cards 2023
Date:	7 th December 2023
Reporting Officer:	Debbie Caldwell, Climate Commissioner, Claire Shortt, Monitoring, Learning and Reporting Officer
Contact Officers:	Claire Shortt

Restricted Reports	
Is this report restricted?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
If Yes, when will the report become unrestricted?	
After Committee Decision	<input type="checkbox"/>
After Council Decision	<input type="checkbox"/>
Some time in the future	<input type="checkbox"/>
Never	<input type="checkbox"/>

Call-in
Is the decision eligible for Call-in? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

1.0	Purpose of Report or Summary of Main Issues
1.1	To update members on the recent award of A status to Belfast through the Carbon Disclosure Project (CDP) cities reporting framework and the results of the UK Climate Score Cards.
2.0	Recommendations
2.1	The Committee is requested to note the 2023 CDP award of A status to Belfast, which follows the 2022 award of A status and the 2021 CDP award of B status to Belfast, and to support the annual submission by Belfast through this internationally recognised carbon and climate reporting framework. The Committee is also asked to note the scores for Belfast in the UK Climate Score Cards rankings.
3.0	Main report

3.1	Background - Carbon Disclosure Project (CDP)
3.2	In July 2021, the Council made the first annual submission to the Carbon Disclosure Project (CDP), with an update provided to Council in October 2021 and December 2022. The submission was undertaken to support baselining of activity and emissions in Belfast, and to enable full participation by Belfast in global climate action campaigns such as the Race to Zero, the Cities Race to Resilience campaign, Cities Race to Zero campaign, the Global Covenant of Mayors, and the WWF One Planet City competition. All of these campaigns require members to have made a submission through a recognised reporting mechanism, of which CDP is the most well-known. The survey consisted of multiple questions across themes such as, waste, transport, energy, emissions, climate risk and vulnerability, adaptation, mitigation, public health, planning and finance.
3.3	Belfast has been recognised by CDP as one of 119 cities across the globe that is taking bold leadership on environmental action and transparency, despite the pressures of a challenging global economic situation. The process has been designed to encourage and support cities to ramp up their climate action and ambition, CDP's Cities A List is based on environmental data disclosed by cities to CDP-ICLEI Track. A clear momentum in city climate disclosure and action is building – over 900 cities (939 in total) received a rating for their climate action from CDP in 2023. In 2023, just over one in ten cities scored by CDP (13% of such cities) received an A.
3.4	A city submission to CDP illustrates the level of ambition, activity and transparency each city adopts. Belfast has made its submission public in all three submission years to ensure maximum openness and transparency around our plans. The Belfast submission in 2021 was the first time Belfast had participated in CDP, and we were congratulated on having achieved a B ranking at such an early stage. In 2022, our second submission achieved an A ranking and this ranking has been preserved in 2023.
3.5	Along with the projects mentioned in previous submissions such as the Belfast Net Zero Carbon Roadmap (2020), One Million Trees, Living with Water Programme, UPSURGE and the Belfast Tidal Defence Project, the submission this year also included evidence such as the updated Belfast Agenda, the Met Office Heat Maps and the Local Development Plan. The current development of the Climate Action Plan was also highlighted in this submission along with the progress towards a Local Area Energy Plan. Projects such as the solar PV potential in the city and the work around the circular economy helped maintain this year's A ranking.
	UK Climate Score Cards
3.6	Climate Emergency UK assessed all UK councils on the actions they've taken towards net zero. The scorecard assessment consists of 91 questions or less, depending on council type, across 7 different sections, created in consultation with over 90 different organisations and individuals. Each council was marked against these criteria and given a right to reply before the scores underwent a final audit. This work was completed between January and August 2023 and results were announced November 2023.
3.7	<p>Belfast scored 43%, ranking number one in N. Ireland with the average ranking in the region being 21% this year. The councils are scored on themes based around building and heating, transport, planning and land use, governance and finance, biodiversity, collaboration and engagement and waste reduction and food.</p> <p>The link at appendix 6.2 illustrates Belfast's scores across each of the categories and compares them across all other councils.</p> <p>The questions are answered using information gathered by volunteers that is published and collected through FOIs to councils. This is then combined, and councils get a right to reply to its accuracy.</p>

3.8	In 2023, Westminster Council received the highest score in the UK and Thurrock Council received the lowest.
4.0	Financial & Resource Implications
4.1	There are no financial and resource implications.
5.0	Equality or Good Relations Implications/Rural Needs Implications
5.1	Any good relations or equality implications will be identified as part of the Council's screening process.
6.0	Appendices
6.1	https://www.cdp.net/en/cities/cities-scores
6.2	https://councilclimatescorecards.uk/scoring/northern-ireland/

This page is intentionally left blank

Carbon Disclosure Project
939 Cities – 119 (13%) received an A score
Leadership and accountability

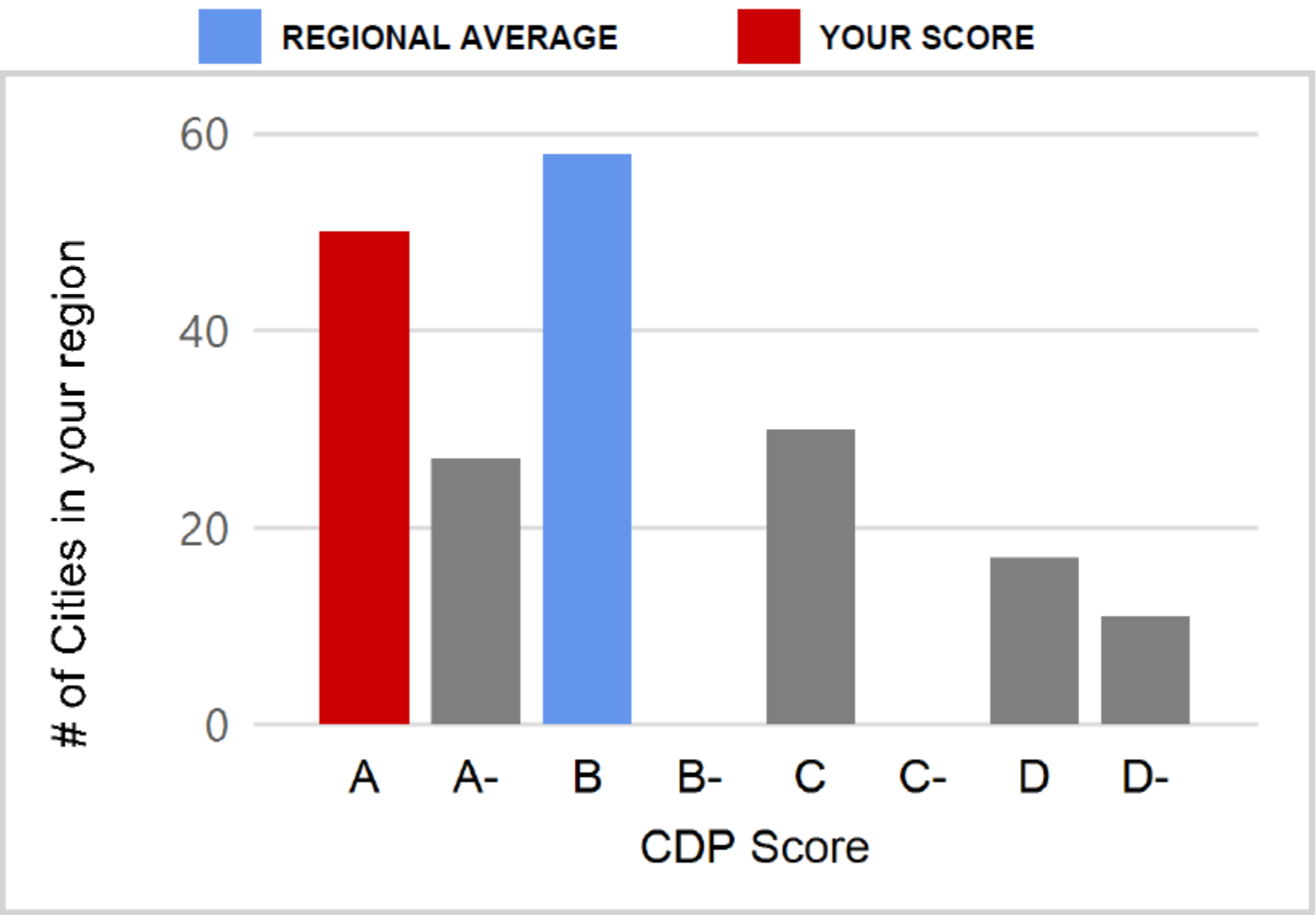


Belfast

COMPARE YOUR SCORE

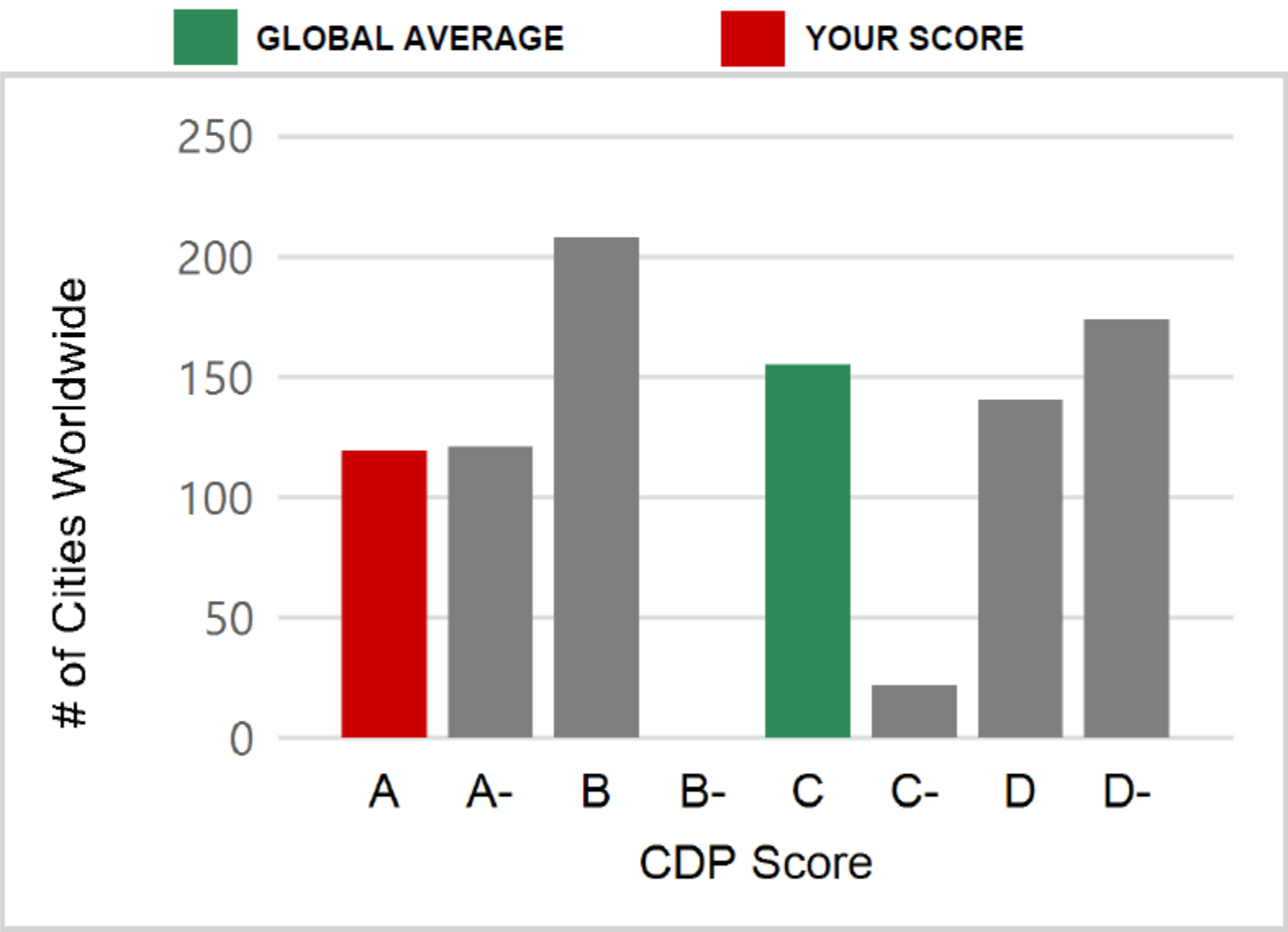
REGIONAL DISTRIBUTION

Average : B



GLOBAL DISTRIBUTION

Average : C



FROM DISCLOSURE TO ACTION

CDP's scoring methodology provides a robust review of cities' responses to our annual questionnaire. It identifies cities' progress on their journey to becoming a climate leader taking bold action in line with the goals of the Paris Agreement.



CITIES A LIST 2023

Belfast



What it takes to be a leader

- Political commitment from the Mayor
- Risk assessment
- Adaptation plan
- City-wide emissions inventory
- City-wide action plan
- City-wide emissions reduction target
- Collaboration with companies
- 100% city-wide renewable energy target
- Water risk assessment and actions
- Reports high quality data transparently

Understand your score: Essential Criteria 2022

These *must* be met to receive the associated score

Awareness (C-/C)

- ☒ Report a climate hazard in 1.2

Management (B-/B)

- ☒ At least be intending to undertake a **climate risk and vulnerability assessment** in the next two years in 1.1
- ☒ Have a community-wide **GHG inventory** and attach it in 2.1a
- ☒ Have either an integrated climate plan OR a **mitigation plan OR an adaptation plan** and attach or provide a weblink in 7.1a

Leadership (A-)

- ☒ Have a **climate risk and vulnerability assessment** and attach or provide a link in 1.1
- ☒ Have a fully-reported **adaptation goal** in 4.1
- ☒ Have a fully-reported **emissions reduction target** in 5.1
- ☒ Have either an integrated climate plan OR a **mitigation plan AND an adaptation plan** and attach or provide a weblink in 7.1a

A-List (A)

- ☒ GHG Target must be a **Science-Based Target** (at least partial alignment)
- ☒ Response must be **submitted publicly**

Strengths



Belfast

- ▼ Maintaining Belfast's A score, in the 3rd year of reporting
- ▼ Level of detail submitted – Hazards facing the city – research done around the Resilience Strategy, updates with the Emergency Preparedness team, Met Office links and heat maps, flood maps, gorse fires in the Belfast Hills
- ▼ Retrofit Hub, Living with Water, Local Area Development Plan (and supplements), Belfast Agenda, Inclusive Growth
- ▼ Supply chain analysis work, travel to work survey – contributions to scope 3 analysis
- ▼ Adaptation – Goals around 1 million trees, Climate Action Plan and Monitoring Framework, renewable energy studies
- ▼ Partnership working – Climate and Resilience Board, Climate Commission, Food Network, UPSURGE, Solar PV

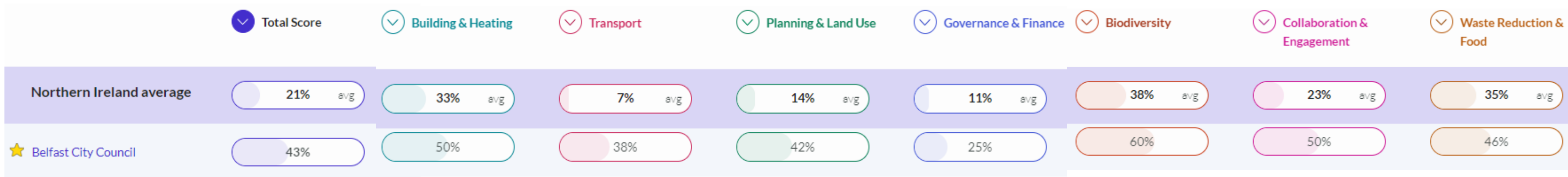
Areas to be Improved



- ▼ Adaptation goals – Encourage to provide detail on progress made so far and inclusion of our evaluation progresses
- ▼ Climate Action Planning – Plans for a more detailed adaptation and mitigation action plan

2023

Action Scorecards



Buildings & Heating

Buildings and Heating is one of the biggest sectors of carbon and other greenhouse gas emissions in the UK. This section covers the main actions that councils can take to support both private rented and owned homes and socially renting households to reduce the emissions from their homes.

Biodiversity

The climate emergency is deeply connected to the ecological emergency. This section looks at what councils can do to protect and increase biodiversity in the area through their direct actions, the management of their green spaces, and biodiversity net gain requirements for developers.

Transport

Transport is the other biggest sector of greenhouse gas emissions in the UK. This section covers the main enabling actions councils can take to reduce car use and encourage more sustainable transport within their area.

Collaboration & Engagement

This section addresses how councils can collaborate with others to improve their own climate action and to support others in the area to decarbonise. More than half of the emissions cuts needed to reach net zero rely on people and businesses taking up low-carbon solutions, and councils can work with those in their local area to enable those solutions.

Planning & Land Use

This section focuses primarily on how councils are using their planning powers, primarily through their Local Plans, to ensure low emission new buildings and homes, as well as ensuring new developments are built to minimise their environmental impact. This section also covers the renewable energy generation and fossil fuel generation planning applications in the area.

Waste Reduction & Food

This section looks at the influencing role councils can play in supporting sustainable food production on their land and in their schools, and circular economy initiatives locally. Councils also have an important role to play in waste and recycling locally and improving this.

Governance & Finance

This section aims to understand to what extent climate action has been incorporated and embedded across the whole of the council in all its activities and services in its decision making, forward planning and structures. This section also looks at how councils are raising funds for climate action and whether the councils' investments are sustainable or supporting high carbon infrastructure and industries.



Subject:	Tree Cutting at Orangefield Playing Fields Undertaken by NIE Networks
Date:	7th December 2023
Reporting Officer:	David Sales, Strategic Director of City and Neighbourhood Services
Contact Officer:	Stephen Leonard, Neighbourhood Services Manager, Neighbourhood Services

Restricted Reports

Is this report restricted?

Yes

☐

No

☒

If Yes, when will the report become unrestricted?

After Committee Decision

After Council Decision

Some time in the future

Never

☐
☐
☐
☐

Call-in

Is the decision eligible for Call-in?

Yes

☒

No

☐

1.0	Purpose of Report or Summary of Main Issues
1.1	<p><u>Tree cutting at Orangefield Park undertaken by NIE Networks</u></p> <p>In May 2023 a contractor working on behalf of NIE networks commenced tree works at Orangefield Park in order to provide mandatory clearances from the overhead lines that run along the western boundary of the Park and through a woodland adjacent to Orby Drive. These works were ceased once council officers became aware that the work carried out differed significantly from those agreed with the Council.</p>
1.2	<p>This report provides members with information as to what occurred in May and next steps including a replanting scheme to be funded by NIE. It also updates on learnings from the incident and changes to working practices that will prevent a recurrence.</p>
2.0	Recommendations

2.1	Members are asked to note this report and the next steps in section 3.8.
3.0	Main Report
3.1	The overhead powerlines are owned and managed by NIE Networks who are obliged to ensure the safety of its electrical networks where there is encroachment of trees. On 13th April 2023 permissions were sought from a contractor working on behalf of NIE Networks to gain access to Orangefield Park in order to undertake tree cutting to provide mandatory clearances from the overhead powerlines.
3.2	Tree cutting works started 18th May 2023 under a licence agreement provided by the council's Estates Team. On 19th May the Council's Woodland Officer spoke to the contractors undertaking the works and raised concerns regarding the extent of the pruning works and discussed this with the contractor on site. On the 22nd May following a further inspection by the Council's Woodland Officer, it was evident that the tree cutting works deviated significantly from those agreed with Council and as detailed in as part of the access agreement.
3.3	Council sought clarification from NIE Networks as to why the works exceeded the agreed Schedule of Works and after review and investigation received a detailed response from NIE Networks 2023-06b_0823_01 (appendix 2).
3.4	This response references the work carried out on the 18 th & 19 th May as technically competent but acknowledges that significant deviation took place from the agreed work instruction with the effectiveness of the communication between the working party and their NIE counterpart on the 19 th May being an issue. The letter details a number of amendments to NIE working procedures. These have been considered by officers who are content they provide sufficient rigour to prevent an incident like this from occurring again. Full details of the proposed amendments are included in Appendix 2.
3.5	<p>The letter from NIE also includes a proposal to restore this area of the site as an Urban Woodland. This project shall be funded and managed by NIE Networks, at no cost to BCC. The works shall be undertaken in partnership with Conservation Volunteers (tCV) and (with the proviso that BCC approve such) following the advice and guidance provided in tCV's document <i>Proposed Tree Planting Under Power Lines at Orangefield Park</i> (Appendix 3). Specifically, this project shall include:</p> <ul style="list-style-type: none"> • the planting on the site of replacement tree saplings of various native species • the agreed management of regrowth of cut trees (i.e. Black Alder) • under tCV direction, any necessary maintenance (weed control etc) until new planting becomes firmly established (i.e. a commitment to such over a minimum two growing seasons).
3.6	The proposal has been considered by Officers from the Council's Woodland team and Biodiversity officer and they have no concerns with the proposal.
3.7	<p><u>Next Steps</u></p> <ul style="list-style-type: none"> • NIE to return to the site to complete the necessary works to ensure mandatory clearance requirements under overhead powerlines. • Works to restore the site to commence following the completion of the above. • The access agreement to complete the outstanding tree cutting and restoration works will be issued under Delegated Authority by the Council's Estates team. These will reflect the learnings from this incident.

	<ul style="list-style-type: none"> Officers in CNS to liaise with Corporate comms in advance of any work commencing.
3.8	<p><u>HR & Financial Implications</u></p> <p>None. All works proposed are at no additional cost to the Council.</p>
3.9	<p><u>Equality or Good Relations Implications/Rural Needs Assessment</u></p> <p>Equality implications are addressed through the consultation.</p>
4.0	Appendices – Documents Attached
	<p>Appendix 1 – NIE Networks 2023-06b_0823_01</p> <p>Appendix 2 – Proposed amendments to NIE Networks procedures to ensure rigour in the revision of any work instructions.</p> <p>Appendix 3 – Proposed Tree Planting Under Power Lines at Orangefield Park</p>

This page is intentionally left blank

Friday, 25 August 2023

Mr Anthony Conway
Parks Manager, Belfast City Council
Belfast City Hall
BELFAST
BT1 5GS

Our Ref: 2023-06b/0823/01
Your Ref:

RE. Statement on tree-cutting at Belfast City Council (BCC) property, Orangefield Park.

Dear Mr Conway,

NIE Networks has concluded its examination of the events that led to excessive tree-cutting at the Orangefield Park site in May 2023.

We conclude that

1. the original inspection and survey of the site was carried out correctly and to a high standard by NIE Networks' patroller. We find evidence that the works requested by him were appropriate to the character of the site, consistent with previous work on the trees, respectful of NIE Networks' environmental policies and procedures, and were presented for BCC's consideration in a proper and respectful manner.
2. A detailed and comprehensive work instruction was generated for the site from the patrol data. Included were specific instructions to lop trees as opposed to felling, and a direction that the works be completed outside the closed nesting season. Full contact details for relevant BCC officers were also included.
3. The works of 18th and 19th May were carried out in a technically competent manner - that is, that good arboricultural practice was followed in terms of the physical cuts taken, and that the site was operated in a manner that protected the safety of the work team and the public.
4. The works themselves deviated significantly from those agreed with BCC as detailed in the published work instruction. Changes to cut-type and the disposal of arisings were made without rigour and on an ad-hoc basis, with the effectiveness of communication between the working-party and their NIE Networks contact on the 19th May being a particular issue.

In light of these findings, NIE Networks proposes

- A. an amendment to its procedures to ensure rigour in the revision of work instructions. Specifically,
- a. verbal changes to the work instruction will be permitted only where the contractor, landowner and NIE Networks' representative have discussed the proposed changes in detail and have reached a considered agreement on them.
 - b. Any agreed deviations in the instruction shall be detailed in writing on a dedicated *Variation Certificate*.
 - c. The full scope and extent of the deviation shall be recorded on the certificate (including the specific reason(s) for the variation and any changes to cut-type, quantities, debris disposal etc).
 - d. The variation certificate shall be signed* by competent representatives of the contractor and NIE Networks, and by the landowner requesting and/or authorising the variation.
 - e. No deviation from the published work instruction shall be permitted in the absence of an authentic variation certificate.
 - f. A copy of the variation certificate shall be held on record by NIE Networks for a period equal to two patrol/cutting cycles (four years in this case) and in keeping with GDPR guidelines.
 - g. A copy of the variation certificate shall be made available to the landowner.
 - h. To ensure any variation is properly considered in terms of future works on the site, a copy of the variation certificate shall be included in pre-patrol information supplied to NIE Networks' patroller at the time of the next scheduled inspection survey.

B. The site is to be restored as an urban woodland.

This project shall be funded and managed by NIE Networks. The works shall be undertaken in partnership with Conservation Volunteers (tCV) and (with the proviso that BCC approve such) following the advice and guidance provided in tCV's document *Proposed Tree Planting Under Power Lines at Orangefield Park* (attached).

Specifically this project shall include

- the planting on the site of replacement tree saplings of various native species,
- the agreed management of regrowth of cut trees (i.e. Black Alder), and
- under tCV direction, any necessary maintenance (weed control etc) until new planting becomes firmly established (i.e. a commitment to such over a minimum two growing seasons).

C. The development of enhanced liaison arrangements regarding future tree-cutting works on BCC property.

The company carries out pro-active tree-cutting operations in an effort to ensure the safety and viability of its systems, seeking to meet statutory requirements in this regard with the cooperation and support of all parties who have an interest in the trees. NIE Networks would emphasise that its primary obligation in permissioning tree-cutting works is to inform and agree such with the legal owner(s) of trees. However, the company is willing to support any practicable initiative by BCC that seeks to explain to relevant, interested parties why such works on BCC property are necessary. A representative of NIE Networks' vegetation management team (Mr Ian Peden) shall contact BCC to explore in depth how this offer might take effect.

As background to such a discussion, NIE Networks is willing to educate relevant BCC staff as to its tree-cutting policies and practices, and would offer an on-site demonstration of tree patrol basics including hazard identification, quantifying of works, and data collection/reporting. In so doing we would hope to develop BCC's ability to critically evaluate and assess future work requests on its property.

Finally, NIE Networks shall provide the contact details of a representative of our tree-cutting department (Mr Peden) who shall act as a designated first-point-of-contact to expedite any future issues or queries relating to tree-cutting works on BCC sites.

NIE Networks offers these observations, conclusions and proposals in an effort to resolve the issues which have arisen from the works of 18th and 19th May and which impede the conclusion of the necessary tree-cutting works at the Orangefield Park site.

Mindful of our duty to ensure the electrical safety of our equipment, NIE Networks is eager to progress toward a resolution of these matters that allows the works at this location, and on other embargoed BCC properties, to be concluded as quickly as possible. We would respectfully ask, therefore, that BCC provide a response to these proposals at its earliest opportunity. To help achieve this end, Mr Peden will be happy to respond to any immediate query or comment you may have on the foregoing.

In closing, Mr Conway, please accept my thanks for your consideration of this letter and do please feel free to contact me directly if necessary.

Yours sincerely,

Nigel McQuillan
Tree Programme Manager

* Where NIE Networks' representative cannot be present on site at the time the variation is discussed, the contractor's representative and the landowner shall sign the certificate. The contractor's representative shall note on the certificate that NIE Networks' representative was fully included by 'phone in the discussion and his/her informed approval of the variation was given. NIE Networks shall consider such as an authentic variation certificate. NIE Networks' representative is required to sign the variation certificate at the first practicable opportunity.

Appendix 2

Proposed amendments to NIE Networks procedures to ensure rigour in the revision of any work instructions.

1. Future access agreements will be directly between BCC and NIE Networks.
2. Verbal changes to the work instruction will be permitted only where the contractor, authorised BCC Officers and NIE Networks representative have discussed the proposed changes in detail and have reached a considered agreement on them.
3. Any agreed deviations in the instruction shall be detailed in writing on a dedicated Variation Certificate.
4. The full scope and extent of any deviation shall be recorded on the certificate (including the specific reason(s) for the variation and any changes to cut-type, quantities, debris disposal etc).
5. The variation certificate shall be signed by competent representatives of the contractor and NIE Networks, and by the BCC Officer requesting and/or authorising the variation.
6. No deviation from the published work instruction shall be permitted in the absence of an authentic variation certificate.
7. A copy of the variation certificate shall be held on record by NIE Networks for a period equal to two patrol/cutting cycles (four years in this case) and in keeping with GDPR guidelines.
8. A copy of the variation certificate shall be made available to BCC.
9. To ensure any variation is properly considered in terms of future works on the site, a copy of the variation certificate shall be included in pre-patrol information supplied to NIE Networks patroller at the time of the next scheduled inspection survey.
10. NIE Networks shall provide the contact details of a representative of our tree-cutting department who shall act as a designated first-point-of contact to expedite any future issues or queries relating to tree-cutting works on BCC sites.
11. The development of enhanced liaison arrangements regarding future tree-cutting works on BCC property. NIE Networks propose supporting initiatives by BCC that seeks to explain to relevant, interested parties why such works on BCC property are necessary.
12. NIE Networks is willing to provide training to BCC staff as to its tree-cutting policies and practices and would offer an on-site demonstration of tree patrol basics including hazard identification, quantifying of works, and data collection/reporting. In so doing they would hope to develop BCC's ability to critically evaluate and assess future work requests on its property.

This page is intentionally left blank

Proposed Tree Planting Under Power Lines at Orangefield Park

August 2023

Orangefield Park is part of a substantial area of green space running through east Belfast and parallel with the Castlereagh Road and following the Connswater River and tributaries. Orangefield Park is a large open space area of grass, woodland, and sports facilities, bounded on the south by Houston Park and Grand Parade on the north.

High voltage power lines supported by metal towers follow the line of the Castlereagh Road and then the Connswater River. The power lines cross an area of young woodland at the southern edge of Orangefield Park, adjacent to Orby Drive and Manna Grove. An area of trees has been felled under the power lines in spring 2023 and there is now a linear clearing, measuring approx. 120 metres by 12 metres and with a random edge line and a few trees remaining under the lines.

The woodland that has been cleared is quite young and planted around 25 to 30 years ago. Species include oak, willow, birch, grey alder, sycamore, lime, elder and pine. The woodland has a dense understory of elder, bramble, cow parsley, nettles, hogweed, and other vegetation. Most of the trees that have been removed are grey alder, sycamore and lime.

There is evidence of past tree management under the powerlines and many trees have been cut at around 20 feet and then regrown additional height since cutting. The recent cutting is a renewal of this periodic trimming, but on this occasion the trees have been felled rather than reduced and this has created a clearing in the woodland.

A public path runs parallel with the powerlines and the area of trees between the path and the cleared area is quite thin and only a few trees deep.

Site location in Orangefield Park, East Belfast



Path through Orangefield Park with cleared area visible to the left



Cleared area under power lines looking north.



Cleared area under the power lines looking south including regenerating grey alder



Regenerating grey alder



A small stream runs along the western edge of the cleared area



Planting design considerations

The main site considerations are as follows:

1. Power lines

NIE Networks have advised that trees should not grow to a size which would pose a future hazard to the power lines, so smaller growing species need to be used. The whole of the cleared area is under or very close to the power lines.

2. Path along the eastern side of the site

There are several tracks where people are entering the cleared area from the public path. There would be some benefit in running a basic fence along the edge of the woodland at this point, to discourage the public from wondering into the new planting, but this is not essential.

3. Soil and drainage

The site has a loamy/clay soil and is suitable for planting trees. The site is flat and drainage is not a problem, with the stream along the western side supporting good drainage, although flooding may be an issue in extreme winter weather.

4. Vegetation

The many grey alder stumps are regrowing or coppicing vigorously. Some other tree species including sycamore and lime are also regenerating. There is also growth of bramble, hogweed, ivy, and other vegetation. By late summer 2024 the site vegetation will be significant and four or five feet high. New trees will need some hand weeding during the first summer and should be planted through mulch mats to help suppress weed competition.

5. Choice of species

Most of the trees which have been cut down are exotic species and predominantly sycamore and grey alder. The biodiversity and nature conservation of the site could be enhanced by replanting with native tree species such as hazel.

6. Biodiversity benefit of the clearance

Whilst the clearance of trees looks unsightly, it has various benefits:

- a) Creation of a clearing or glade in a woodland allows a greater diversity of wildlife, for example butterflies and moths.
- b) The woodland before cutting was even aged and the clearance is creating a multi-aged woodland, with different ages and sizes of trees, which in turn supports a wider range of wildlife.
- c) The stream down the western side of the site was completely shaded by the woodland until the trees along the power lines were cut down. Letting some light in to the stream is beneficial for greater diversity of wildlife.

Proposed planting

To avoid any future conflict with the power lines we would recommend planting low growing species which will never reach the power lines and this removes the need for any future cutting. All the species recommended will grow back vigorously should cutting become necessary. Using 60-90cm trees, and planted at a 2-metre random spacing with mulch mats.

Trees species to be planted:

Common name	Scientific name	Percentage
Crab apple	<i>Malus sylvestris</i>	10
Elder	<i>Sambucus nigra</i>	10
Hawthorn	<i>Crataegus monogyna</i>	10
Hazel	<i>Corylus avellana</i>	60
Holly	<i>Ilex aquifolium</i>	10

The cleared area extends to around 1400 square metres and 400 trees would be sufficient to replant the whole area.

Aftercare of new trees

The weeds and regenerating grey alder will quickly fill the site and could smother the young trees. A decision needs to be made on the final species mix and policy on grey alder in particular. If left to regenerate the grey alder has the potential to reach the power lines again in the future. Cutting back regrowth to allow the new native tree species to flourish will be important and possibly applying herbicide to control the grey alder.