



## Derry City & Strabane District Council

# Decarbonising assets - a case study of Acorn Farm, St Columb's Park

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Climate Programme Manager



Derry City & Strabane  
District Council  
Comhairle  
Chathair Dhoire &  
Cheantar an tSraitha Bain  
Derry Cittyie & Strabane  
Destrack Council



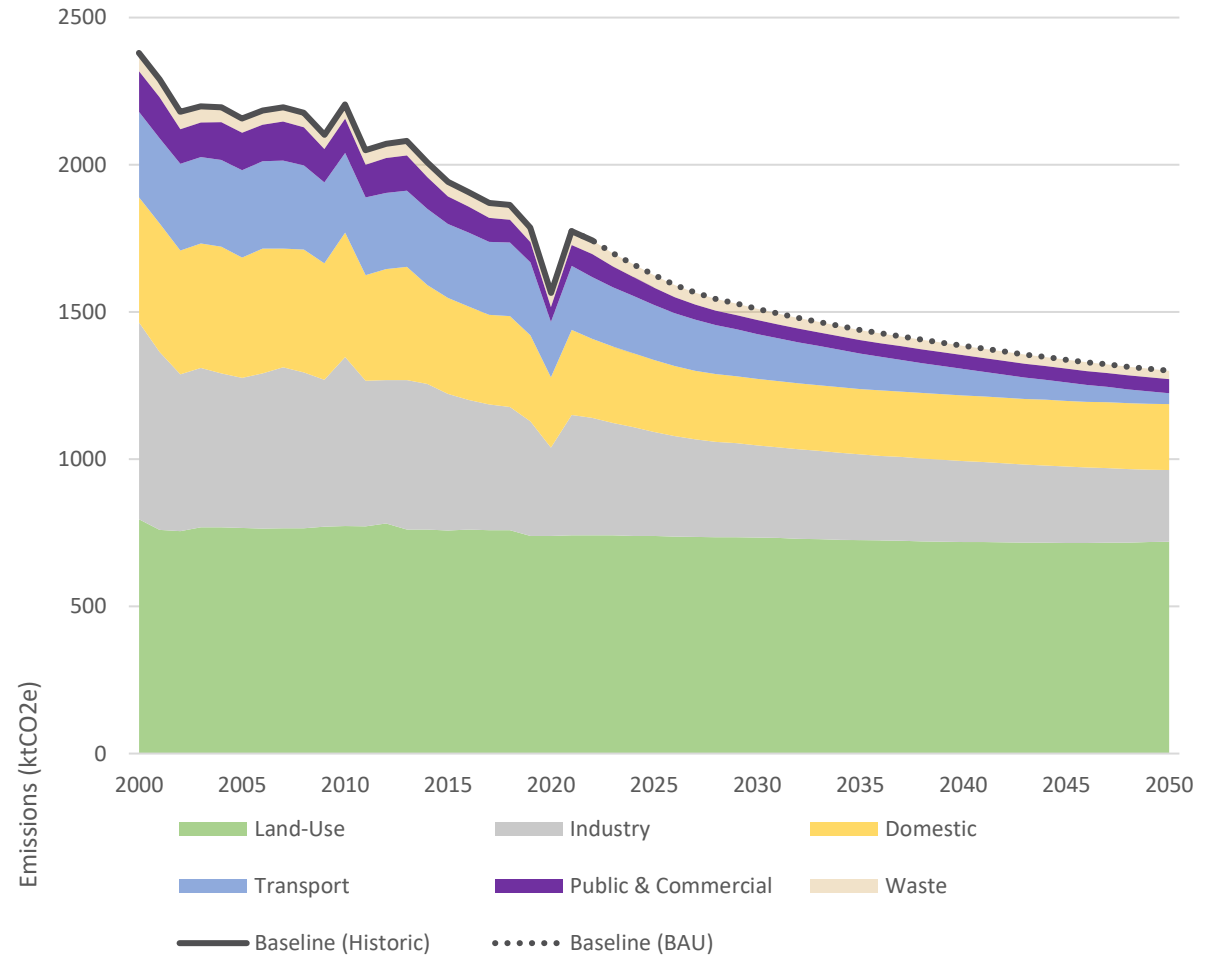
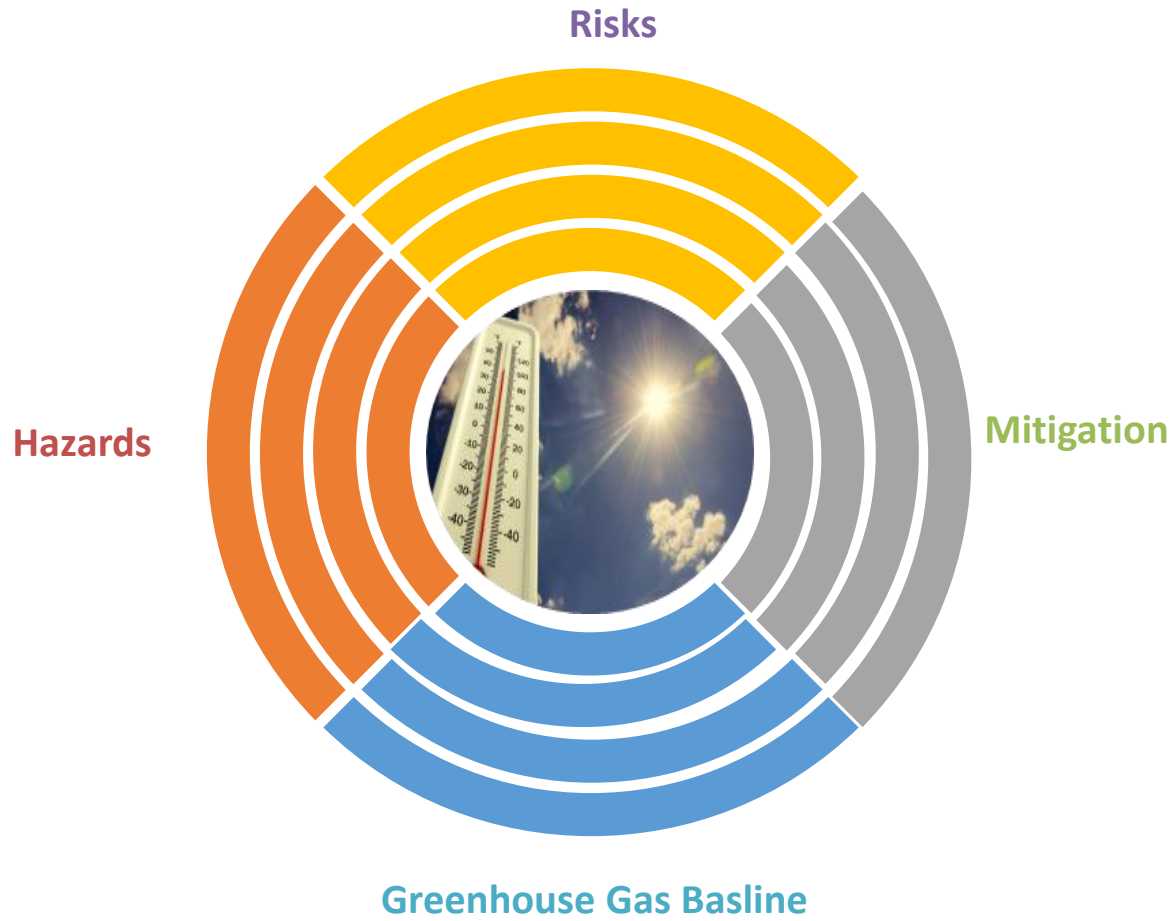
Council undertakes to:

Ensure that all strategic and policy decisions and budgets will immediately fall in line with the shift to **net zero greenhouse gas emissions by 2045** while also ensuring that the Derry City and Strabane District Council area is as far as practically possible prepared for and **resilient to the effects of climate change.**

DCSDC Climate Pledge 2020



# Climate Change



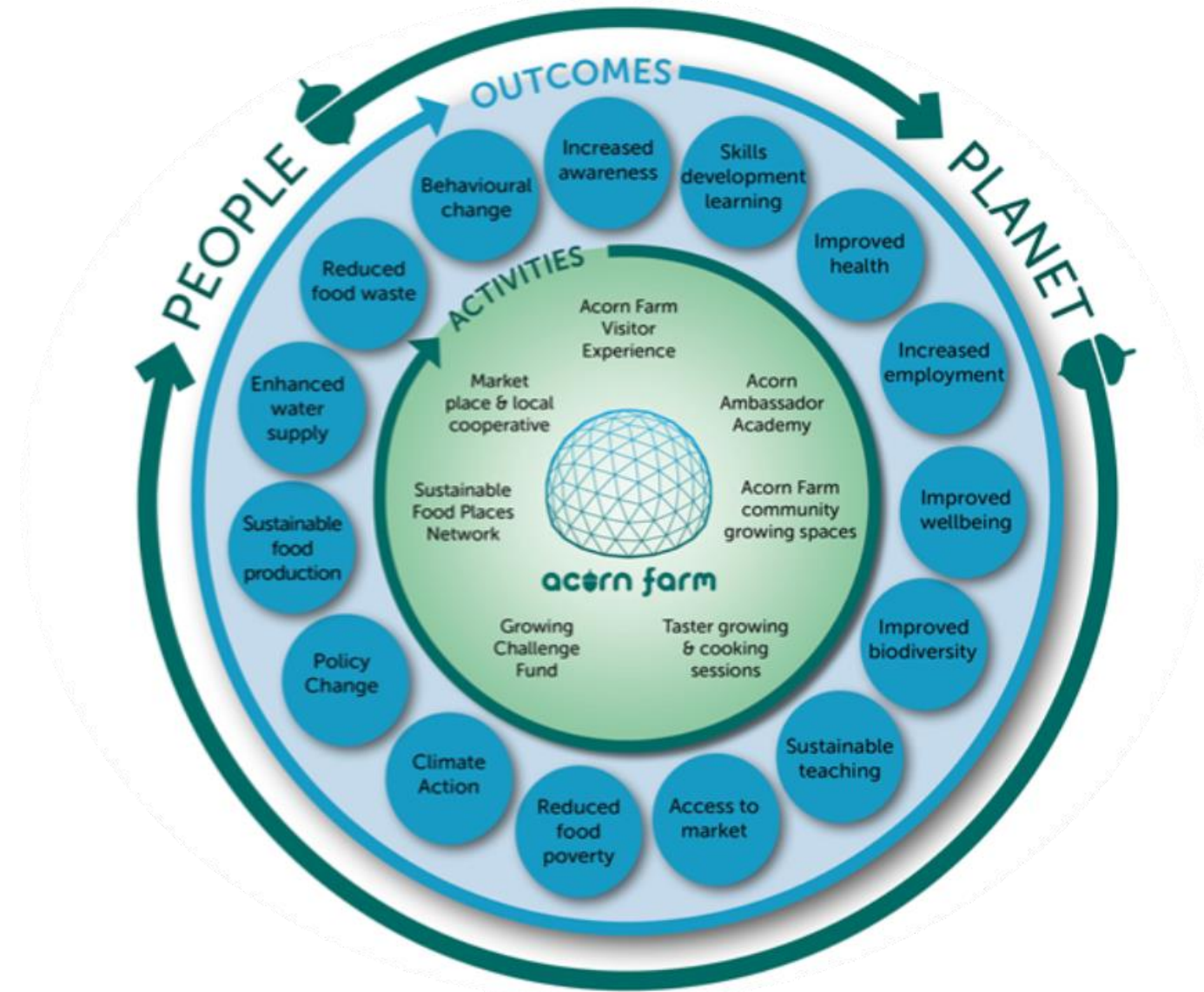
**Derry City & Strabane**  
 District Council  
 Comhairle  
 Chathair Dholre &  
 Cheantar an tSratha Báin  
**Derry Cittyie & Strábane**  
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# Acorn Farm

## Vision

To create a sustainable urban food system which reduces greenhouse gas emissions and is resilient to the effect of climate change





# Acorn Farm



**TARGET 1-5**

BUILD RESILIENCE TO ENVIRONMENTAL, ECONOMIC AND SOCIAL DISASTERS

**TARGET 3-4**

REDUCE MORTALITY FROM NON-COMMUNICABLE DISEASES AND PROMOTE MENTAL HEALTH

**TARGET 8-1**

**TARGET 8-2**

**TARGET 8-3**

PROMOTE POLICIES TO SUPPORT JOB CREATION AND GROWING ENTERPRISES

**TARGET 8-4**

**TARGET 8-5**

**TARGET 8-6**

**TARGET 8-9**

PROMOTE BENEFICIAL AND SUSTAINABLE TOURISM

**TARGET 10-1**

**TARGET 10-3**

ENSURE EQUAL OPPORTUNITIES AND END DISCRIMINATION

**TARGET 12-2**

**TARGET 12-3**

HALVE GLOBAL PER CAPITA FOOD WASTE



**TARGET 2-1**

**TARGET 2-4**

**TARGET 2-A**

INVEST IN RURAL INFRASTRUCTURE, AGRICULTURAL RESEARCH, TECHNOLOGY AND GENE BANKS

**TARGET 4-3**

**TARGET 4-4**

**TARGET 4-7**

EDUCATION FOR SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP

**TARGET 9-1**

**TARGET 9-4**

UPGRADE ALL INDUSTRIES AND INFRASTRUCTURES FOR SUSTAINABILITY

**TARGET 11-5**

**TARGET 11-7**

**TARGET 11-B**

IMPLEMENT POLICIES FOR INCLUSION, RESOURCE EFFICIENCY AND DISASTER RISK REDUCTION

**TARGET 13-1**

**TARGET 13-2**

**TARGET 13-3**

BUILD KNOWLEDGE AND CAPACITY TO MEET CLIMATE CHANGE

# HIGHLIGHTS



Acorn Farm is...

- Contributing to 10 of the 17 SDGs
- Contributing to 27 of 169 SDG Targets
- Contributing to 7 of the 12 Targets of SDG 8 'Decent work and Economic growth'
- Contributing to 3 of the 5 Targets of SDG 13 'Climate Action'.

Additionally, Acorn Farm has been linked to 31 Tags.

Tags represent themes and topics relevant to sustainable development. See the next slide for details.





St Columb's Park - City Context



Derry City & Strabane District Council  
 Comhairle Chathair Dhoire & Ceanntar an tSratha Bain  
 Derry Cittiie & Strabane District Council



UK Government Northern Ireland



LEVELLING  
— UP —



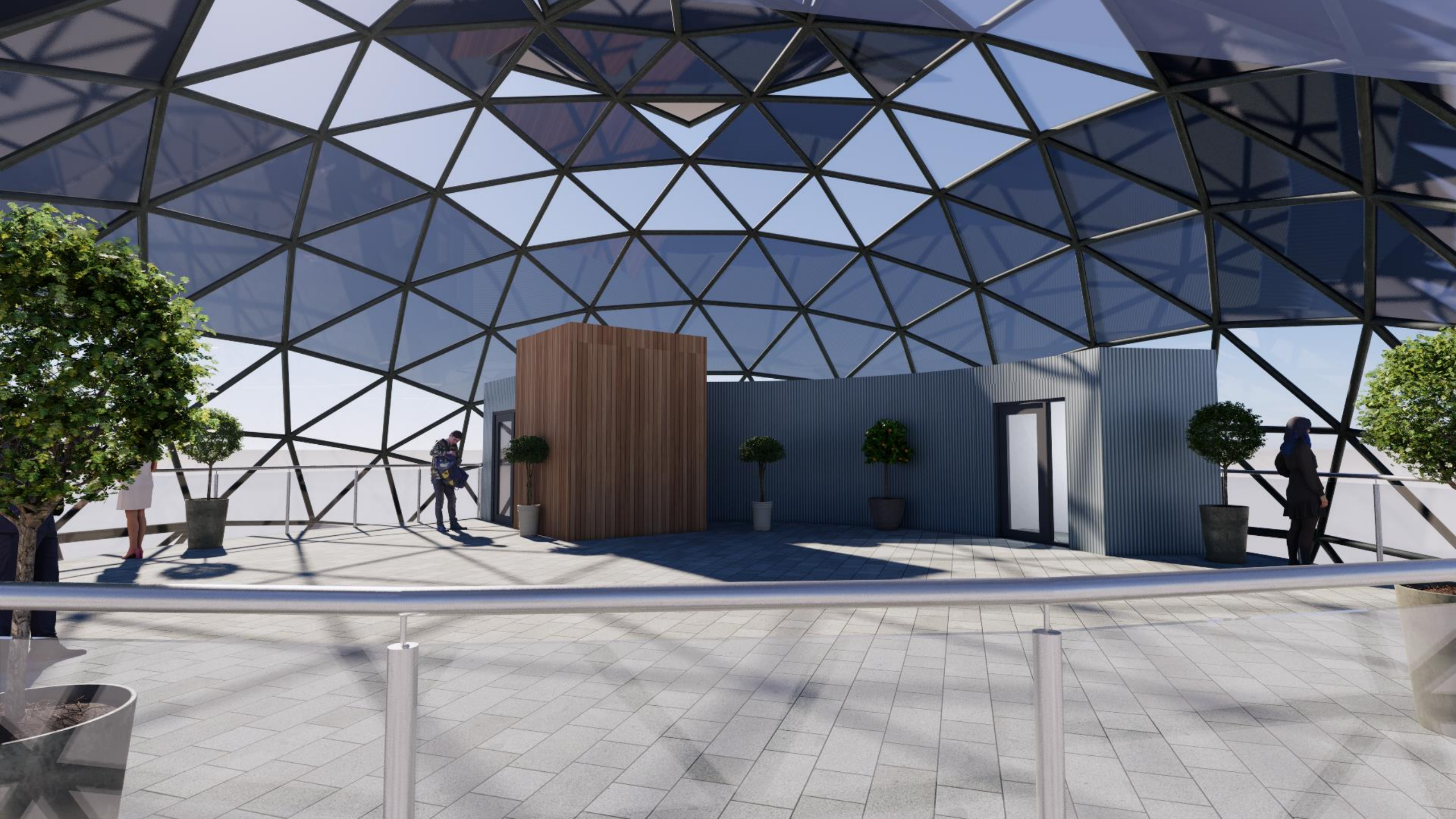


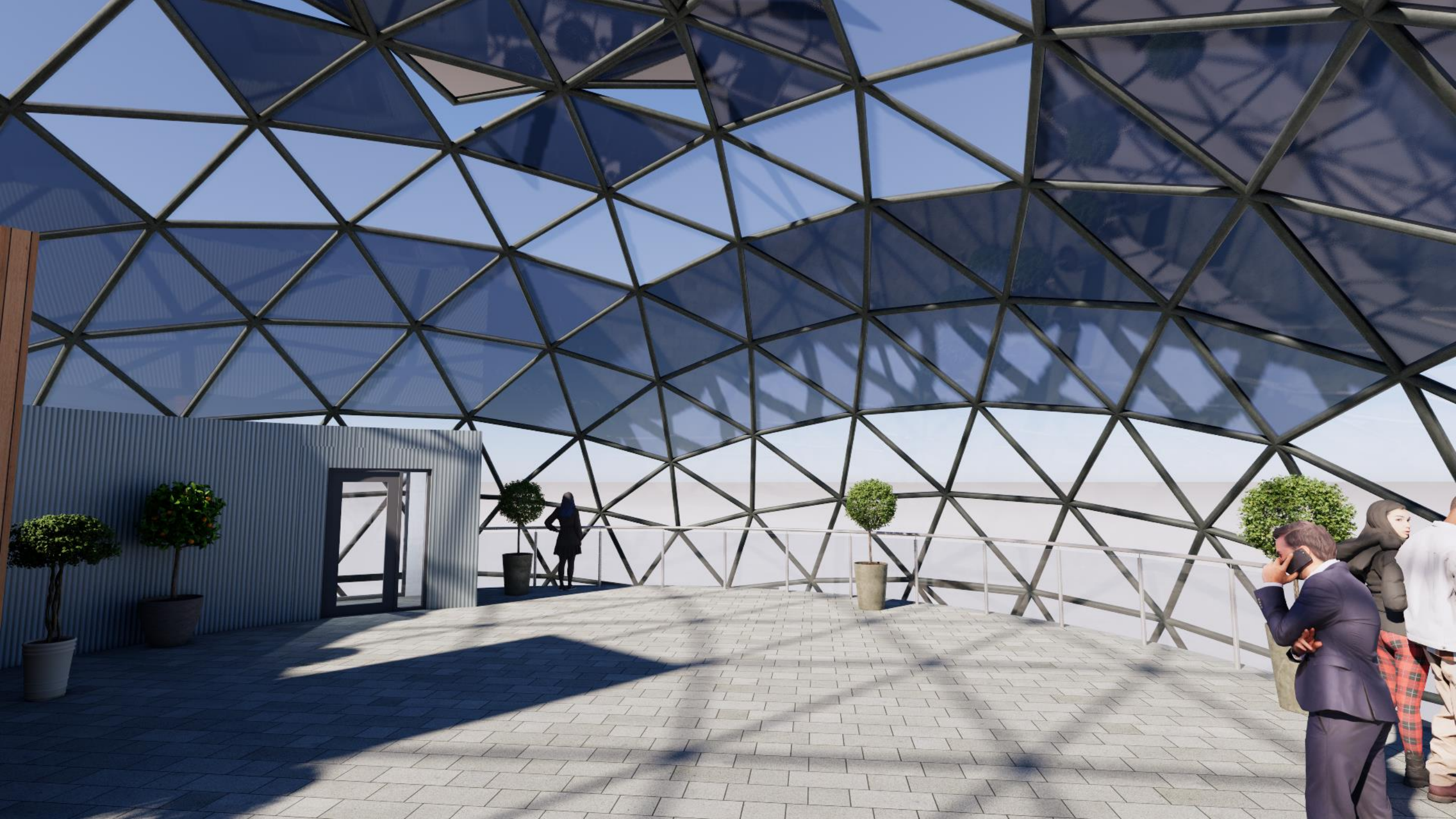


paul  
mcalister  
chartered architects



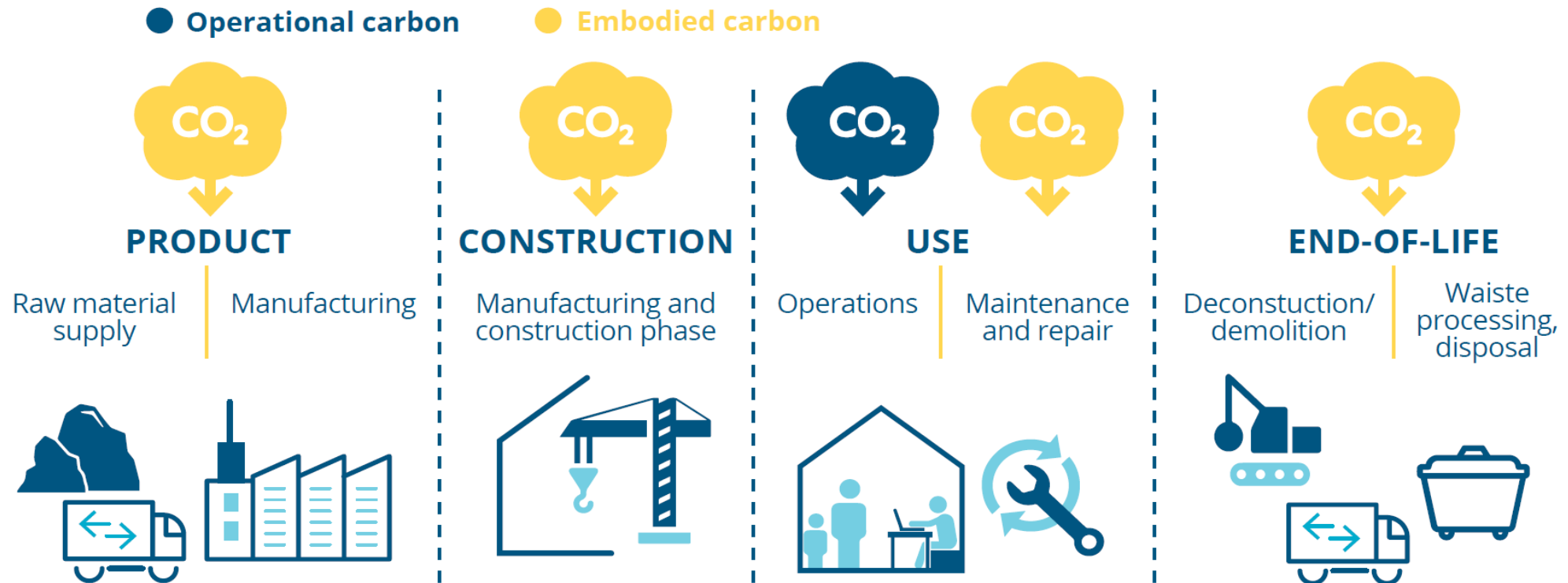
Acorn Farm Visitors Centre







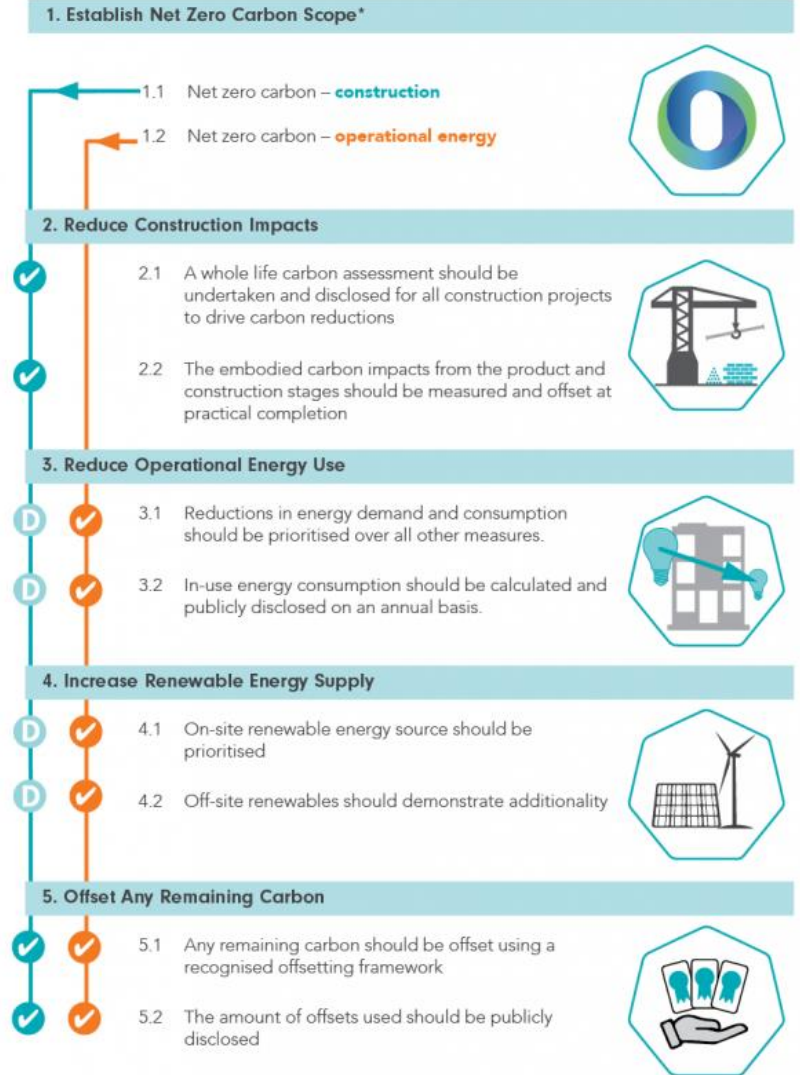
“Buildings and the construction sector contribute significantly to carbon emissions and climate change. The sector presents great untapped potential to help decarbonise the global economy while also addressing other pressing societal issues, including energy security, resilience, health and well-being.  
(WGBC, 2022)



# Net Zero Building Standards



## Steps to Achieving a Net Zero Carbon Building

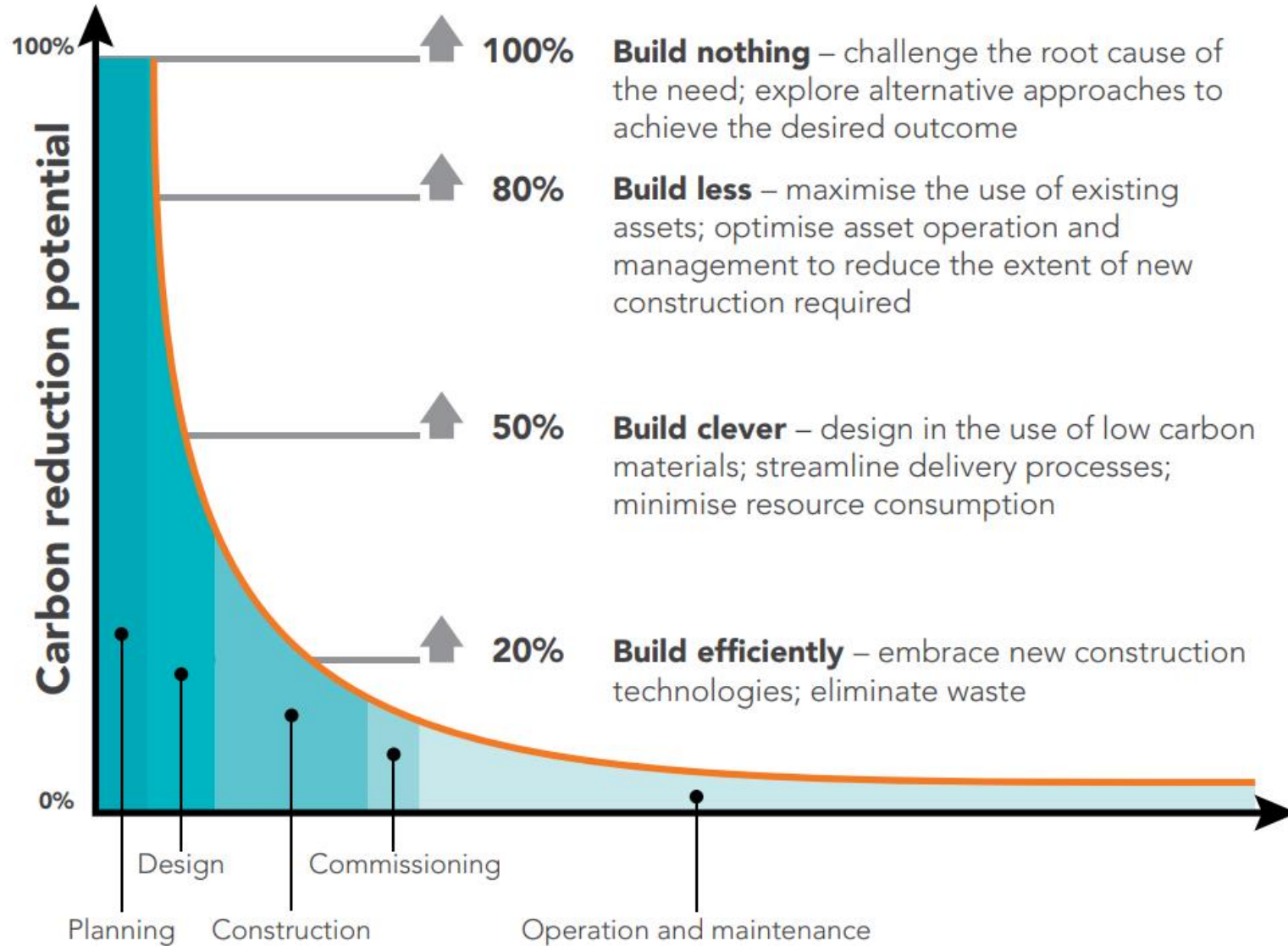


**D** New buildings and major refurbishments targeting net zero carbon for construction should be designed to achieve net zero carbon for operational energy by considering these principles.

\* Please also note, a further scope for net zero whole life carbon (1.3) will be developed in the future.

# Embodied carbon reduction potential at different stages of a building project

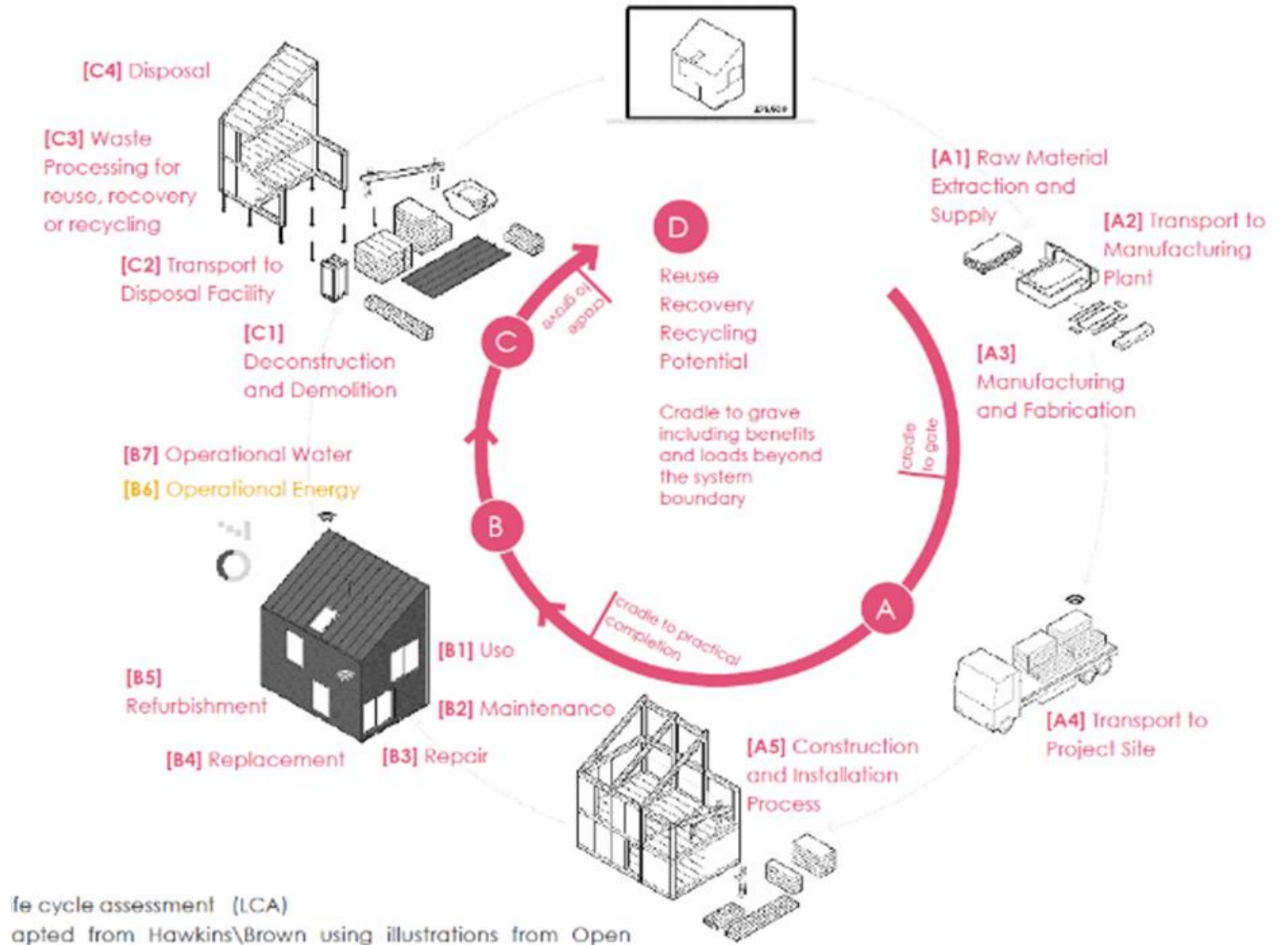
© HM Treasury; Green Construction Board





A WLC approach aims to provide a means to acquire an overall understanding of a built project's total carbon impact, through assessment of both the anticipated operational and embodied emissions over the whole life of the asset.

(LETI, 2020)



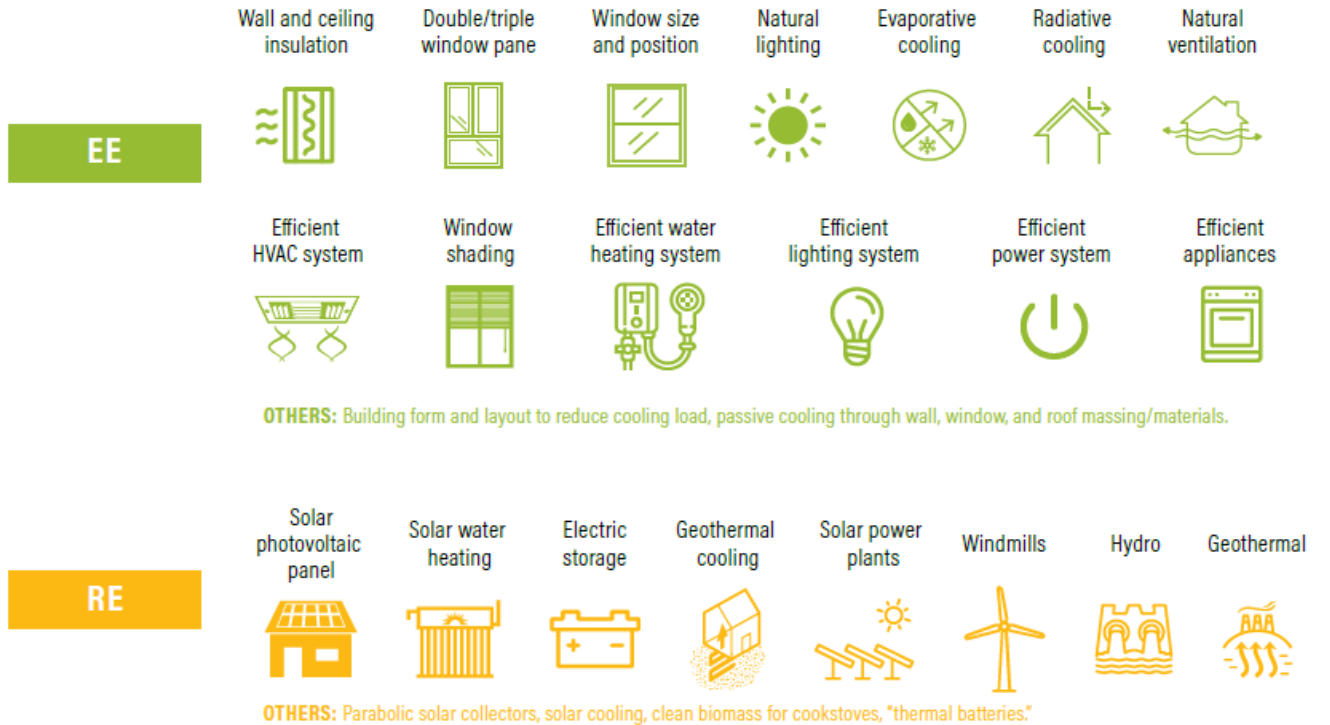
Whole life cycle assessment (WLC) adapted from Hawkins\Brown using illustrations from Open

# Opportunities

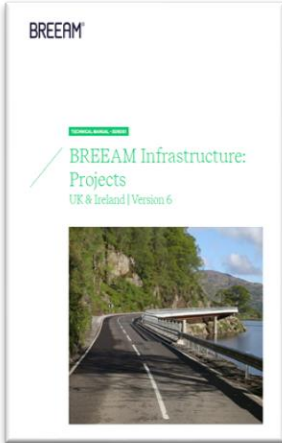
Carbon reduction opportunities within materials include:

- Design with efficiency in mind
- Design for less material
- Design for less waste
- Design for the long haul
- Use sustainable alternative material

## Energy Efficiency and Renewable Energy Technologies that Support Zero Carbon Buildings



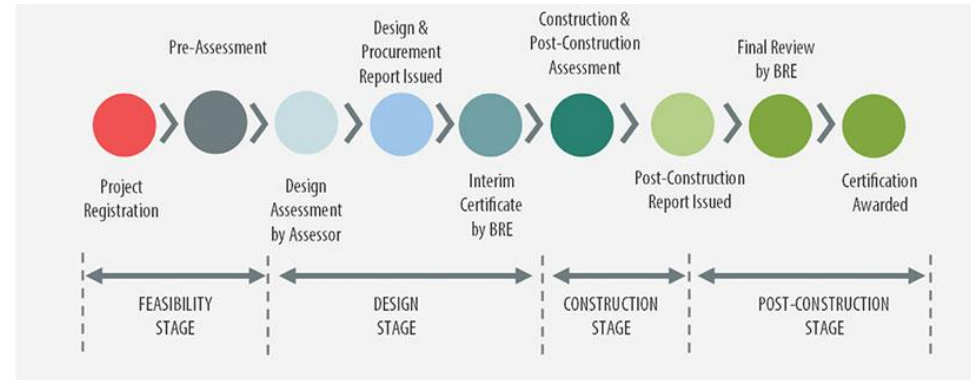
# BREEAM



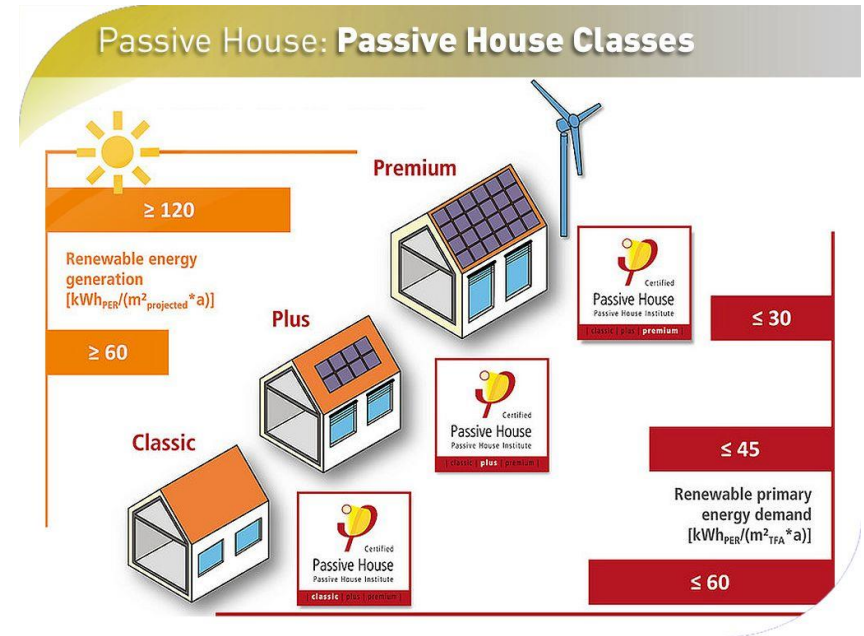
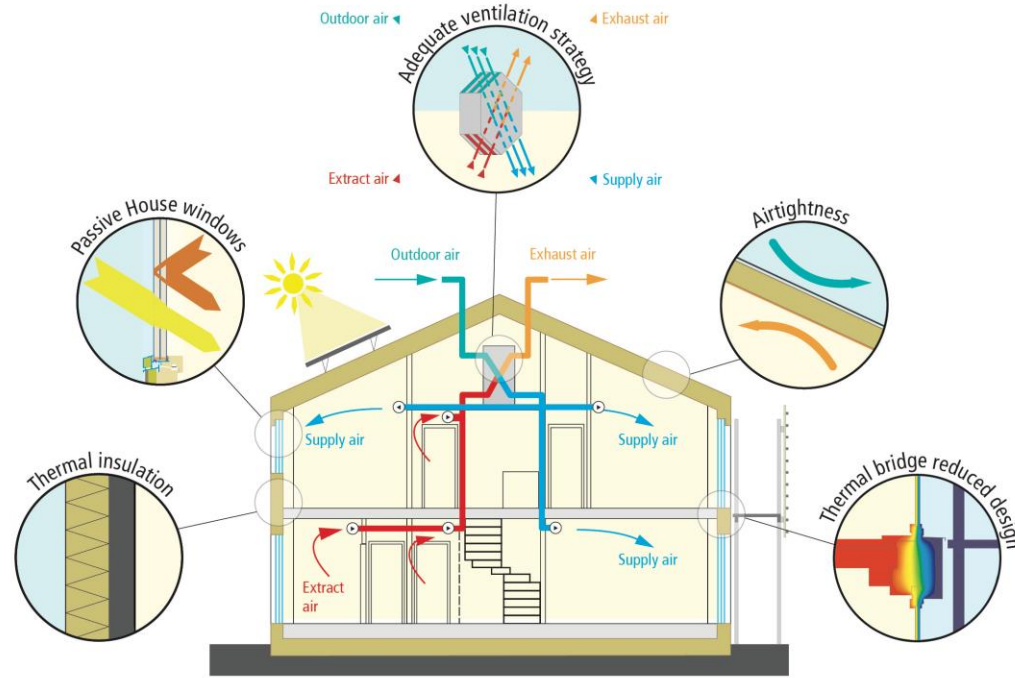
Management
Resilience
Communities and Stakeholders
Land Use and Ecology
Landscape and Historic Environment
Pollution
Resources
Transport



<b>GOOD</b>	<b>VERY GOOD</b>	<b>EXCELLENT</b>	<b>OUTSTANDING</b>
≥ 45% score	≥ 55% score	≥ 70% score	≥ 85% score



# Passive House





UK Government Northern Ireland



**LEVELLING  
— UP —**

# Net Zero - Derry & Strabane - From Ambition to Action

## Programme Vision

“Realise the ambition of a net zero climate resilient City & District by 2045 through transformational systems including SMART climate action plans underpinned by place based insights, collaboration and capacity building.”

### Objectives

- Enable effective collaboration through appropriate governance structures & policy frameworks
- Provide FAIR place based system insights ensuring knowledge based climate action
- Increase stakeholder climate change awareness and capacity for action
- Provide effective delivery frameworks through development of a SMART climate action plan and project pipeline
- Identify the economic & finance models necessary to deliver a climate resilient and net zero city & district
- Innovatively address non technical barriers within the Derry & Strabane City Deal programme to inlock potential adoption at scale solutions for heat, power and green infrastructure

## Pilot Project – Derry & Strabane City Deal

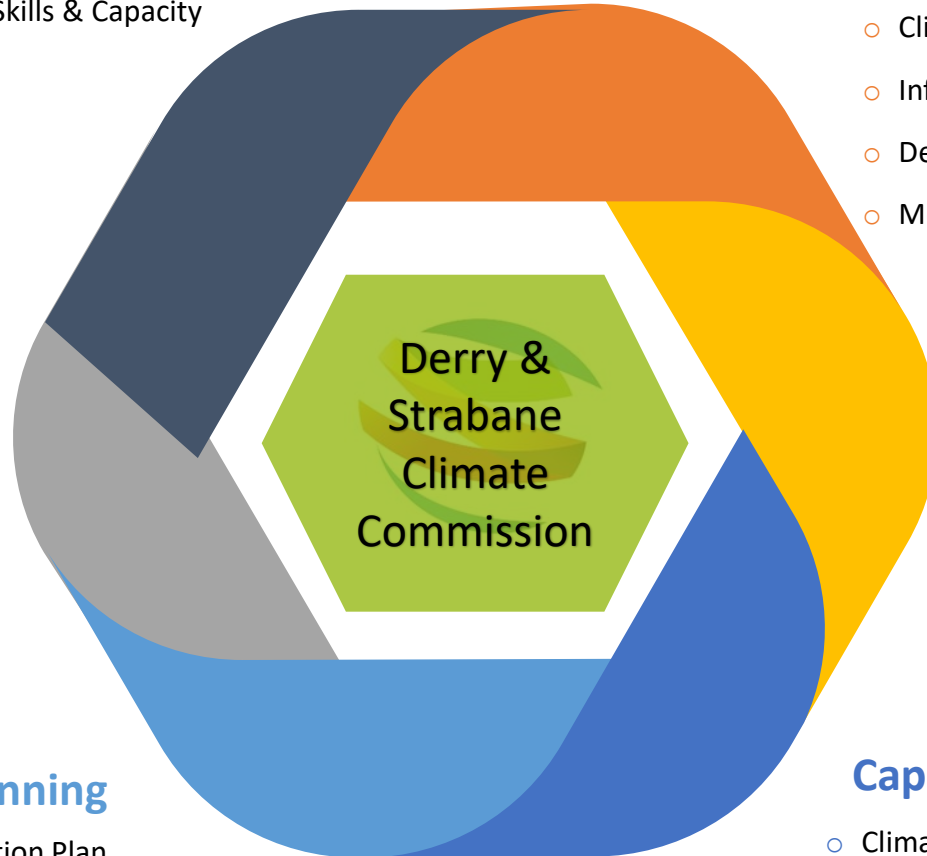
- Apply systems innovaton approach to City Deal Projects:  
Environment & Climate Task Force / Screening / Finance /  
Whole Life Carbon Assessment & Energy Modelling  
/ Skills & Capacity

### Finance

- Develop Green Finance & Investment Plan
- Align to Climate Action Plan & Project Pipeline
- Develop Sustainable Procurement Strategy

### Action Planning

- Derry City & Strabane District Council Mitigation Plan
- Derry & Strabane City & District Climate Action Plan
  - Develop Climate Action Project Pipeline



## Governance & Policy

- Establish Derry & Strabane Climate Commission
- Establish Thematic Sub Groups
- Agree Terms of Reference / Climate Charter / Mission
- Climate Action Readiness Assessment
- Influence & Develop Policy – Practice
- Develop Sectoral Climate Screening Processes
- Monitoring & Evaluation

## Data & Information

- Collate City & District Geo-spatial Data (Emissions, socio-economic, climate risk, NBS, waste, water, energy, transport, land use)
- Collate Climate Action Best Practice & Skills Repository
- Link to SMART City Data Portal & Make Accessible

## Capacity Building

- Climate Change Training Programme
- Knowledge Transfer & Application of Fast Follower Peer Network & Training Module Learning (Via D&S Climate Commission Frameworks & Subgroups & City Deal Pilot Project)
- Stakeholder Engagement Programme (Including community & sectoral events & meetings)



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Destrack Coouncil

Thank-you

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[www.derrystrabane.com/climate](http://www.derrystrabane.com/climate)

Links

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

<https://ukgbc.org/>

