

UNITE  
STUDENTS

# SUSTAINABLE CONSTRUCTION FRAMEWORK

November 2023





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**This framework set out our roadmap to achieve the 2030 net zero commitment for our development activity. It builds on the 2030 Net Zero Carbon Pathway released in 2021 and details how we will work both internally and with our supply chain.**

We are already making significant progress to reduce embodied and operational carbon. Our recently completed pipeline of projects are ahead of schedule in meeting the RIBA (Royal Institute of British Architects) 2025 embodied carbon targets, and are on track in terms of operational energy. However, we know there is still significant work to do, which is highlighted within this report. A step change in how we design, construct and operate our developments is required to meet our net zero ambition by 2030.

This framework introduces new areas of focus and targets a wider spectrum of sustainable construction. It reflects progress within our company and the industry as a whole. Key themes such as wellbeing, climate change, resilience and social value are part of our strategy for development, for the first time. This formalises the great work that we have already been driving in these areas.

Our framework sets out how we intend to show leadership within the purpose-built student accommodation sector and how we will drive collaboration through the supply chain and wider industry actors, to ensure that sustainable construction becomes business as usual. I am excited to be leading the way in this vital area.

**Joe Lister**  
Chief Financial Officer



### Purpose of the Sustainable Construction Framework

The Sustainable Construction Framework formalises Unites Students' approach to sustainable design and construction of new builds, refurbishments and retrofits. Building on the our previous commitments to achieving net zero carbon by 2030, BREEAM Excellent for new developments and EPC ratings of A, the framework sets out our wider sustainability aspirations and targets and how they will be achieved through design and construction.

### How to use the Sustainable Construction Framework Implementation Guidance

This document outlines the principles that drive our sustainable construction framework for stakeholders including investors, Internal Unite Students teams, project teams and the wider supply chain as well as external stakeholders such as university partners, students and local authorities. The Sustainable Construction Framework Project Tool is provided to our design and construction teams to outline and track sustainability requirements and performance across each RIBA Stage.

The key features of this report are:

- Our Sustainability Aspirations. To reduce our footprint, optimise the operation of our buildings and enhance the impact of our development
- Sustainable Design Principles guiding our approach to design and construction
- Our 2030 Targets and KPIs
- Our approach to each theme
- Next steps

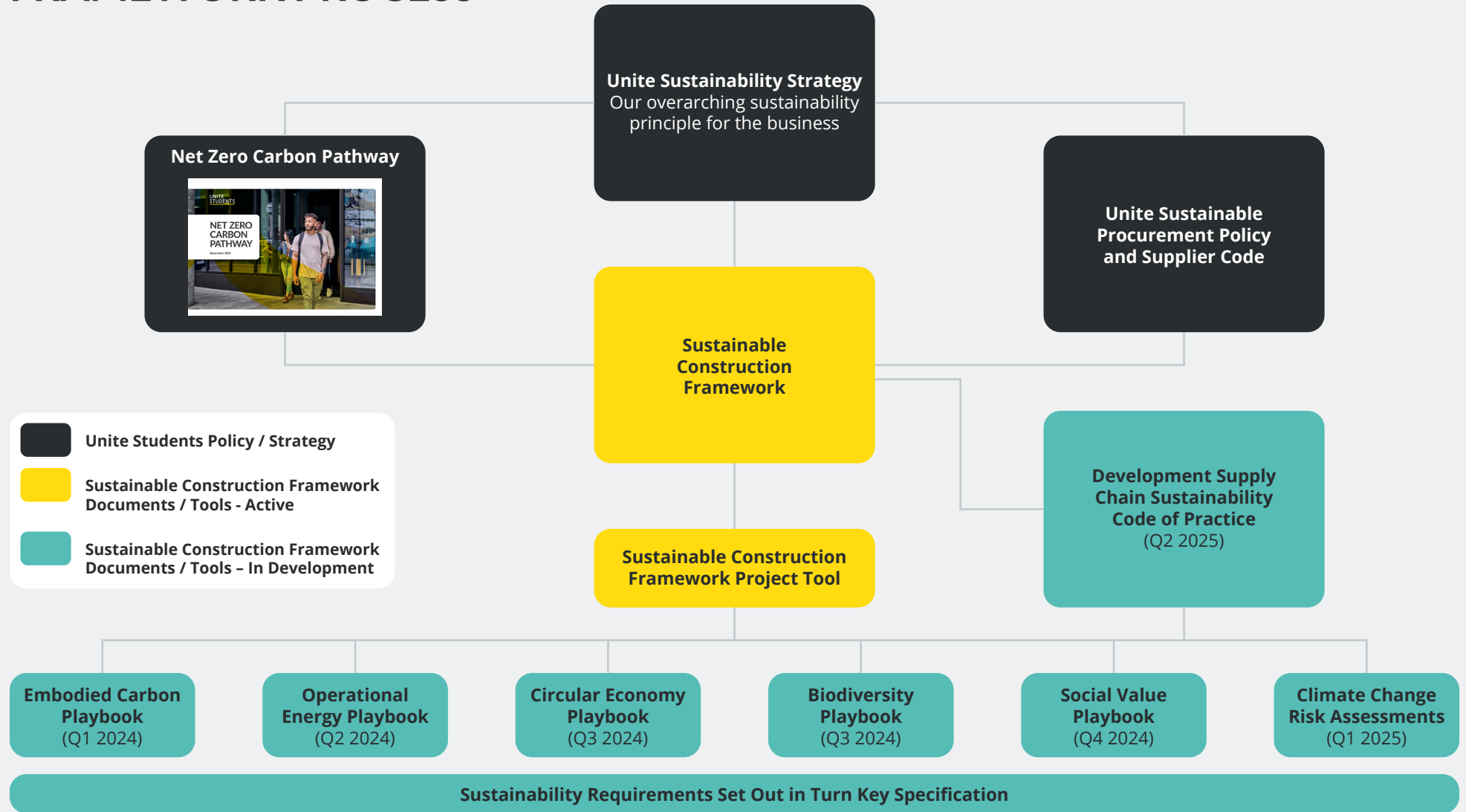
### Future Development of the Sustainable Construction Framework

This document is the first step in formalising the sustainable construction framework. We are developing a series of playbooks focusing on each theme that will be issued to design teams and external stakeholders to provide step by step guidance on integrating initiatives and measurement of performance across the key sustainability themes.



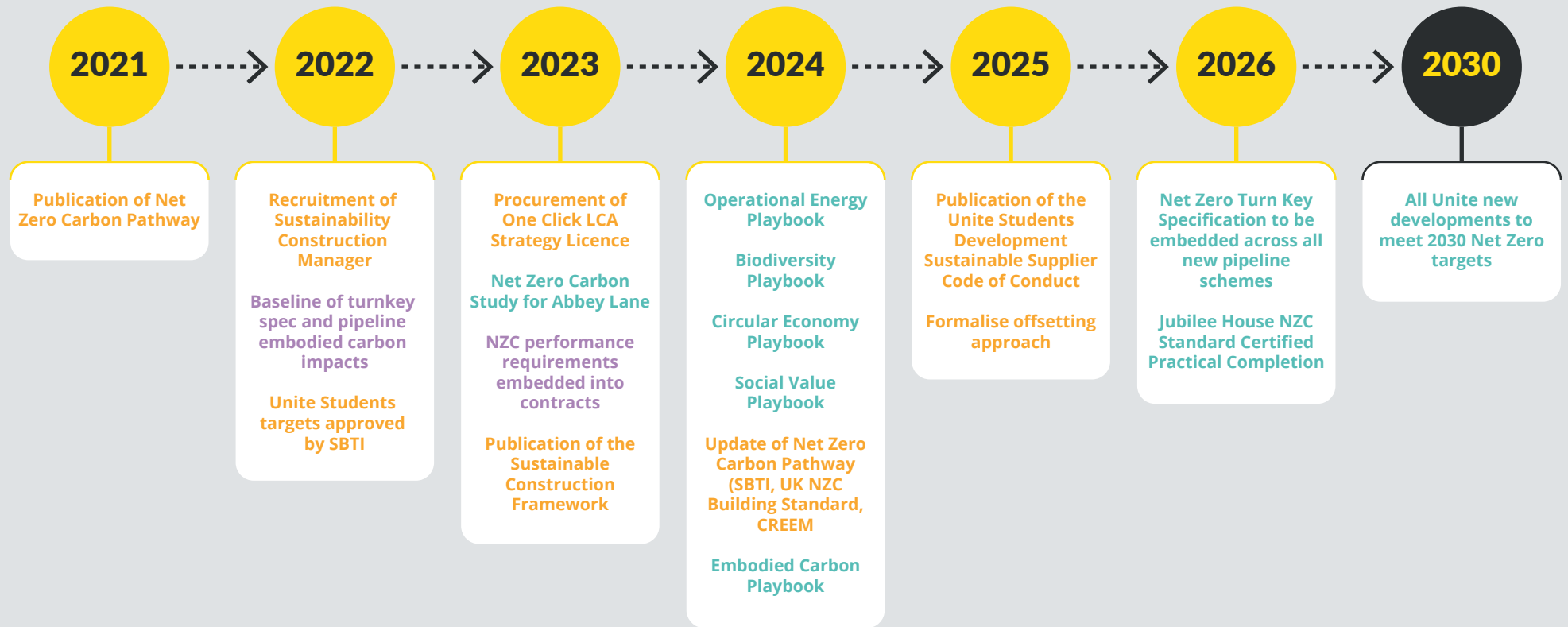


# SUSTAINABLE CONSTRUCTION FRAMEWORK PROCESS





# TIMELINE OF UNITE STUDENTS NET ZERO / SUSTAINABILITY APPROACH



● Design   ● Construction   ● Governance



# NET POSITIVE APPROACH TO STUDENT ACCOMMODATION DEVELOPMENT

All development activity has an impact both on the environment and surrounding local economy and communities.

A do nothing approach to development may on the face of it appear to have the lowest environmental footprint, however Unite Students believe that we can achieve a net positive approach to development, through minimising our environmental impact, and where possible enhance the environment through regenerative design, whilst meeting the growing needs of students for high quality, affordable accommodation and providing long term economic and social benefits to our local communities.





# NET POSITIVE APPROACH TO STUDENT ACCOMMODATION DEVELOPMENT

## Economic Regeneration and Jobs

Our accommodation encourages economic growth in communities, through job opportunities during the construction stage, but also due to the need for services for incoming students.

## Meeting the Demand for High Quality Student Accommodation

Student accommodation is not meeting demand. Students often face high rent and low quality accommodation in the private rental market. Our properties provide affordable, safe and flexible living and study spaces, where students can thrive.

## Integrating and Enhancing Sustainable Transport Networks

This includes support for cyclists, electric charging and improving existing public transport connections.

## Community Amenity Space

We offer community space to local community groups and charities at a peppercorn rent.

## Sustainable Design and Construction

Our roadmap to achieve net zero carbon and operations, by 2030, leads the way in the sector. We aim to achieve EPC 'A' and BREEAM Excellent ratings for all new developments.

## Easing Pressure on Local Private Rented Market

Our properties are located in thriving areas of high demand for private renting. Opening up new purpose-built student accommodation can provide opportunity for local private renters in an often saturated market.

## Brownfield Regeneration

Our projects are often located on existing brownfield sites that can be challenging to regenerate. We consider development types, and improve the safety, appearance and sense of community in areas that require regeneration.

## Improved Biodiversity

We increase local biodiversity with green roofs and open public spaces, by implementing sustainable green and blue infrastructure.

# UNITE STUDENTS SUSTAINABLE CONSTRUCTION PRINCIPLES

The following principles outline Unite Students approach to Sustainable Developments. The principles of Reduce, Optimise and Enhance, with the associated sub themes are the areas we have identified as being most material to our new construction and major refurbishment projects.

**REDUCE**  
THE WHOLE LIFE  
ENVIRONMENTAL  
IMPACT OF OUR  
CONSTRUCTION  
PROJECTS

EMBODIED CARBON  
OPERATIONAL ENERGY  
CIRCULAR ECONOMY

**OPTIMISE**  
THE PERFORMANCE  
OF OUR BUILDINGS  
IN A CHANGING  
CLIMATE

WELLBEING  
WATER  
CLIMATE CHANGE RESILIENCE

**ENHANCE**  
THE IMPACT OF  
OUR PROJECTS  
FOR HUMAN  
AND NATURAL  
SYSTEMS

BIODIVERSITY  
SUPPLY CHAINS AND INNOVATIONS  
SOCIAL IMPACT



# INTRODUCING UNITE STUDENTS SUSTAINABLE CONSTRUCTION CONSIDERATIONS

Our sustainable construction considerations are used to scrutinize and optimize our design and construction processes, ensuring that every aspect of sustainability is considered.



## Materials Selection

Selecting low carbon materials. Prioritising bio-based materials where or where technical materials are required they should be reused or contain high recycled content. Ensuring that the environmental and social impact of the supply chain is optimised.



## Designing for the Future

Designing buildings that respond with positive sustainable outcomes upfront, in-use and at the end of life. Designing and constructing in a way that permits adaptability with minimal resource implications and ultimately to be fully deconstructed in a way that optimises the material cycles.



## Construction Innovation

Optimising the construction approach in terms of modern methods of construction, build quality, data and supply chain management. Facilitating a culture of collaboration and innovation across the supply chain.



## Site Context

Consideration into selection of project sites. Prioritising existing buildings and infrastructure. Selecting sites with favourable conditions to support the other design principles.



## Active Systems

Minimising the carbon emissions associated through the use of electrification and energy efficient systems. Utilising active systems where required to provide improved indoor environmental quality for occupants.



## Regenerative Design

Consideration into selection of project sites. Prioritising existing buildings and infrastructure. Selecting sites with favourable conditions to support the other design principles.



## Feedback

Collecting information from our buildings through metering and stakeholder engagement to optimise operations and feedback into the development process including site selection, design and operation.



## Building Form

Optimisation of building form and efficient elemental design to minimise the consumption of resources and maximise the opportunity for energy efficiency.



## Passive Design

Layout, fabric and form to reduce or remove mechanical cooling, heating, ventilation and lighting demand. Optimising spatial planning, orientation and mass to control temperature and daylighting and natural ventilation.



## Human Centred Design

Designing our buildings with the occupants needs and wants at the centre of decision making. Identifying mutual benefits between occupant comfort and wellbeing with embodied, operational carbon and wider issues such as biodiversity.

# PIPELINE PROJECTS EXAMPLES

## MORRISS HOUSE | DERBY ROAD, NOTTINGHAM | 705 BEDS



|                           |  |
|---------------------------|--|
| <b>Completion</b>         | Q3 2023                                |
| <b>Embodied Carbon</b>    | 801 kgCO <sub>2</sub> e/m <sup>2</sup> |
| <b>Operational Energy</b> | 80 kWh/m <sup>2</sup>                  |
| <b>EPC Rating</b>         | A                                      |
| <b>Certifications</b>     | BREEAM Excellent                       |

### CONSTRUCTION CONSIDERATIONS USED



#### Regenerative Design

Extensive publicly accessible greening has been established across the previous brownfield site. In addition green roofs with 150m<sup>2</sup> of PV have been installed.



#### Site Context

Low lying bed rock meant that short piles c.8m were required. This reduced the embodied carbon of the substructure significantly.



#### Materials Selection

Morriss House was used a test bed for a number of initiatives including low carbon, air purifying paint and a lower carbon adhesive free flooring.



#### Building Form

The medium low rise nature of the campus typology provides a good balance for both embodied carbon and operational energy performance.



#### Human Centred Design

An industry leading 1.4m<sup>2</sup> of amenity space per bedroom combined with smart room controls provides an excellent environment for students to live in.



# PIPELINE PROJECTS EXAMPLES

## JUBILEE HOUSE | STRATFORD, LONDON | 716 BEDS



|                           |   |
|---------------------------|---|
| <b>Completion</b>         | Q3 2026   |
| <b>Embodied Carbon</b>    | 720 kgCO <sub>2</sub> e/m <sup>2</sup> (designed) |
| <b>Operational Energy</b> | 51 kWh/m <sup>2</sup> (designed)                  |
| <b>EPC Rating</b>         | A (targeted)                                      |
| <b>Certifications</b>     | BREEAM Excellent<br>IFLI Zero Carbon Standard     |

### CONSTRUCTION CONSIDERATIONS USED



#### Passive Design

A net zero carbon\* structural target was achieved using high content GGBS mixes that optimise carbon and construction phasing.



#### Building Form

Reduction in basement area since planning submission through the effective reconfiguration of internal space use.



#### Regenerative Design

An urban greening factor of 0.4 is targeted for the site, utilising green roofs and ground level planting.



#### Active Systems

An all electric Air Source Heat Pump servicing strategy provides highly efficient EUI with zero emissions in operation\*.



#### Passive Design

The project is targeting the LETI building fabric performance criteria, pushing thermal performance and operational comfort standards.



#### Feedback

The project has committed to recording and publishing yearly operational energy data as part of the zero carbon certification.

\*As defined by the ILFI zero carbon standard.

# RIBA STAGE APPROACH TO SUSTAINABLE DESIGN AND CONSTRUCTION

## RIBA STAGE OVERVIEW

### 0 STRATEGIC DEFINITION



Stage 0 is about determining the best means of achieving the client's requirements. An open mind is required to identify the most appropriate solution.

#### SUSTAINABLE OUTCOMES

Acquisitions team to identify land with good opportunities for re-use and optimised building form.

### 1 PREPARATION AND BRIEF



Developing the detail of the brief and making sure that everything needed for the design process is in place before Stage 2. This includes ensuring that the brief can be accommodated on the site.

Sustainability targets should be embedded into the project brief and communicated to the design team, with appropriate consultant appointments made. Carry out a pre-demolition Audit to determine opportunities for re-use

### 2 CONCEPT DESIGN



Getting the design concept right and making sure that the look and feel of the building is proceeding in line with the client's vision, brief and budget. The key challenge of this stage is to make sure that the tasks that are undertaken are geared to meeting the stage objectives.

WLC considerations such as climate change, future flexibility, operational performance, intended design life and durability, material optimisation, deconstruction and disposal are all relevant to concept development. WLC analysis of design options for major built systems (structure, cladding, mechanical services etc.) and the relationship with the building's proposed environmental performance should be undertaken.

### 3 DEVELOPED DESIGN



Spatially coordinate the design before the focus turns to preparing the detailed information required for manufacturing and constructing the building. The information needs to be coordinated sufficiently to make sure that the planning application is based on the best possible information.

### 4 TECHNICAL DESIGN



Developing the information required to manufacture and construct the building. This requires information from the design team and the specialist subcontractors employed by the contractor, regardless of which procurement route is used.

Low carbon options and strategies need to be fully incorporated into drawings and specification for tender and procurement. It is important that the tender documentation ensures that competing contractors understand the WLC requirements, the goals and process of delivering and monitoring carbon reductions during construction.

### 5 CONSTRUCTION



Stage 5 is when the building is manufactured and constructed.

The actual carbon impacts of the construction process need to be monitored against the Stage 3 carbon budget taking into account any evolution of the scheme during tender and procurement.

### 6 HANDOVER & CLOSE OUT



By Stage 6 the building will be in use and the emphasis of the project team will have switched to closing out any defects and completing the tasks required to conclude the Building Contract.

Handover) should include a post practical completion final review of the asset information, with a final assessment of the WLC impacts of the completed project – which should be included within the building manual. Light touch post occupancy evaluation might include a more thorough account of operational carbon use.

### 7 IN USE



This is the period when the building is in use, lasting until the building reaches the end of its life.

Any post-occupancy evaluation (POE) process should take account of all WLC impacts. This should include the actual performance of the building's environmental systems; the fabric's physical performance with respect to durability and fitness for purpose; and an assessment of the maintenance regimes for both.



## ROLES AND RESPONSIBILITIES

### Client Team: Acquisitions and Development

#### Acquisitions Manager

Identify potential sites for full or partial refurbishment, and assess viability against new build alternatives from a cost and feasibility perspective. Implement the Unite Students Sustainable Acquisitions Checklist.

#### Planning Manager

Understand the national and regional planning context around sustainability and net zero. Coordinate the design team to achieve an optimal concept design to meet the Unite Students and statutory sustainability requirements.

#### Project Manager

Oversee the delivery technical and detailed design and construction stages and ensure compliance with the sustainable framework. Ensure that appointments and are made that align with the framework.

#### Commercial Manager

Accountable for ensuring that accurate net zero carbon costs are included within the project appraisals. Ensures that all sustainability requirements are including within contracts.

#### Sustainability Manager

Accountable for overseeing the implementation of the Sustainable Construction Framework across the client and design team. Responsible for the updates to the framework.

#### Procurement Manager

Commercially support, develop and embed sustainability initiatives in construction supply-chain. Identify supplier ESG innovation and co-ordinate internal/external reviews.



# ROLES AND RESPONSIBILITIES (CONTINUED)

## Consultant Team

### Planning Consultant

Clearly communicate the planning requirements around net zero carbon and sustainability. Ensure compliance with any statutory requirements.

### Architect

Overall responsibility for ensuring the design proposals meet the Unite Students and Statutory net zero carbon and sustainability requirements. Optimise the building form and orientation at concept design stage with consideration to operational energy and embodied carbon. Providing optimisations during the detailed design stages, linking into LCA process.

### MEP Engineer

Identify opportunities to reduce operational energy demand through passive design initiatives at concept design stage. Utilise energy modelling to ensure compliance with Unite Students and statutory NZC requirements. Design and specification of low energy active systems, providing sensitivity testing for the energy and carbon savings associated with a range of interventions.

### Structural Engineer

At concept design provide a range of structural options and associated embodied carbon figures. At detailed design optimise component level options including rebar content and concrete strengths. Provide low carbon materials specification at elemental level including recycled steel content and cement replacement.

### Sustainability Consultant

Provide LCA, BREEAM and wider sustainability consultancy across the project. Can be embedded in the design team where possible. Carry out LCA of design option prior to the end of each RIBA design stage.

### Cost consultant

Provide elemental whole life costing at concept design stage, and component level whole life costing at detailed design stage, Work with the Sustainability Consultant to feed into the LCA process.

### Project Manager

Coordination of all consultant activities to ensure that each gateway activity within the framework is carried out.

## Contractor

Oversee technical design meets the project brief and targets where undertaking a design and build contract. Ensure that procurement is carried out in line with sustainability requirements and wider Unite policy and standards. Ensure that construction quality, commissioning and aftercare is carried out to minimise environmental impact and reduce the performance gap.

## Client Team: Operations

Ensure that facilities management and operations teams are suitability trained in the building systems and understand how to optimise the buildings operation. Monitor and measure performance of the building and feed back into the design process through supporting POE.



# NET ZERO CARBON WHOLE LIFE CARBON

Measurement of embodied and operational carbon is based on the Royal Institute of Chartered Surveyors (RICS) guidance and the Standard EN15978. Measurement is across four Modules:

- A1–A5 Upfront** (embodied–practical completion)

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- B1–B5 In Use** (embodied–replacement and maintenance)

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- B6–B7 In Use** (operational emissions)

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- C1–C4 End of Life** (embodied)

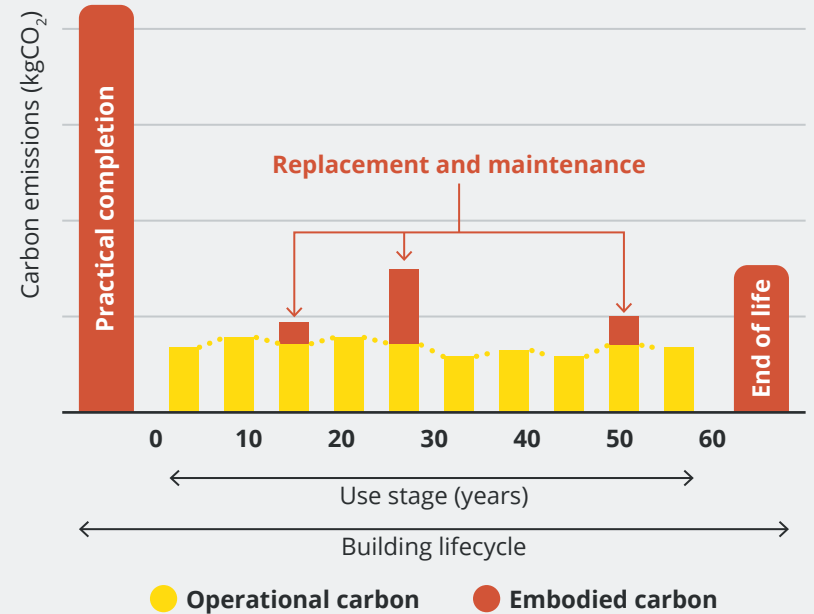
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- D Circular Economy** (embodied–not currently considered as part of WLC measurement)

The Unite Students embodied carbon target in our Net Zero Carbon Pathway is derived from the RIBA 2030 Climate Challenge and covers modules A-C. Other industry targets including LETI cover Modules A1-A5 only. This is in line with industry guidance around offsetting, and can also be fully verified at the point of construction, whereas modules B-C require assumptions to be made around future decision making.

Operational carbon emissions occur yearly through a building’s lifecycle in the form of the energy used in the building. The Unite Students target for operational net zero carbon is derived from both the RIBA 2030 Climate Challenge and LETI. The target is presented as energy use intensity (EUI), the amount of energy consumed by the building normalised by m<sup>2</sup> of floor area.

WHOLE LIFE CARBON  
(ADAPTED FROM LETI: CLIMATE EMERGENCY DESIGN GUIDE)



RIBA 2030 CLIMATE CHALLENGE TARGETS

| RIBA Sustainable Outcome Metrics                   | Business as usual (new build, compliance approach) | 2025 Targets                             | 2030 Targets                             |
|--|--|--|--|
| Operation Energy kWh/m <sup>2</sup> /y             | 120 kWh/m <sup>2</sup> /y                          | < 60 kWh/m <sup>2</sup> /y               | < 35 kWh/m <sup>2</sup> /y               |
| Embodied Carbon kgCO <sub>2</sub> e/m <sup>2</sup> | 1200 kgCO <sub>2</sub> e/m <sup>2</sup>            | < 800 kgCO <sub>2</sub> e/m <sup>2</sup> | < 625 kgCO <sub>2</sub> e/m <sup>2</sup> |

# REDUCE THE WHOLE LIFE ENVIRONMENTAL IMPACT OF OUR CONSTRUCTION PROJECTS

EMBODIED CARBON  
OPERATIONAL ENERGY  
CIRCULAR ECONOMY





## TARGETS AND KPIS

### EMBODIED CARBON

#### 2030 TARGET

**625 kgCO<sub>2</sub>e/m<sup>2</sup>  
(MODULES A-C)**

Unite students want to reduce embodied carbon of their developments across the whole life 60 year period. This includes upfront (construction), in-use (refurbishment and replacement cycles and end of life impacts.

#### KPIs

- kgCO<sub>2</sub>e/m<sup>2</sup> (modules A1-A5)
- Embodied Carbon intensity for:
  - Substructure
  - Superstructure
  - Envelope
  - Glazing
  - Internal Walls
  - Finishes
  - MEP

### OPERATIONAL ENERGY

#### 2030 TARGET

**<35 kWh/m<sup>2</sup>**

Unite Students are following the residential EUI target set out by RIBA 2030 Climate Challenge, however this will be superseded with the UK NZC Buildings Standard when released.

#### KPIs

- % Onsite renewable energy generation
- U-values
- Air Tightness
- Glazing ratios (%)
- Form Factor

### CIRCULAR ECONOMY

#### 2030 TARGET

**DEMATERIALIZATION –  
kg\*/m<sup>2</sup>/60 YEARS**

Our aim is to reduce the amount of materials we use in construction, particularly virgin material consumption. Our KPI is measures the total virgin technical material used per m<sup>2</sup> of our developments, which can be minimised by a number of CE principle including re-use/ refurbishment, bio-based materials, designing for adaptability and deconstruction.

#### KPIs

- Diversion from Landfill %
- Re-use, Recycling and Downcycling %
- Designing for Deconstruction %
- Bio-based / renewable materials %

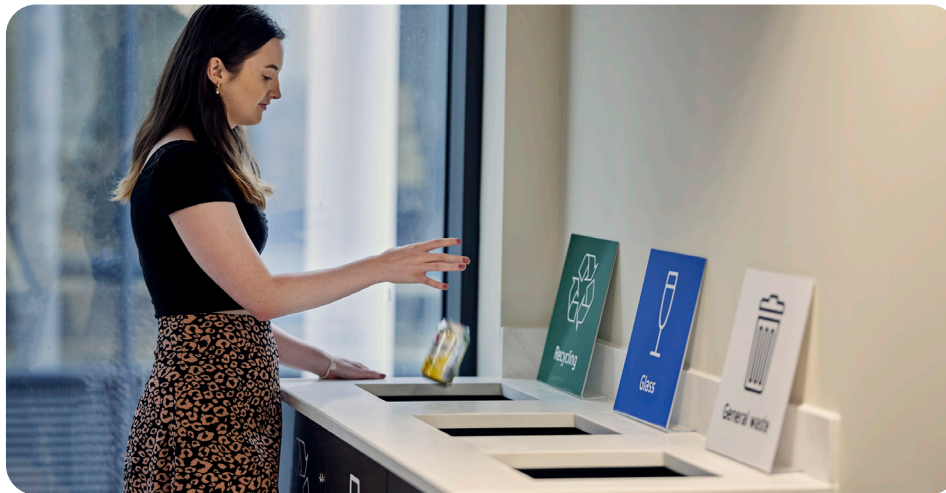
\*virgin technical materials

# EMBODIED CARBON APPROACH

## Embodied Carbon Targets

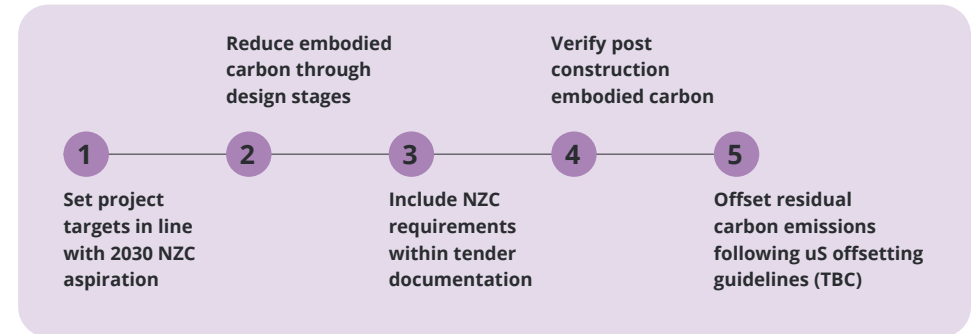
As defined in the Unite Students Net Zero Carbon Pathway, our development pipeline will follow the embodied carbon targets outlined in the RIBA 2030 Climate Challenge. Interim annual targets will be derived for the developments with PC dates between 2025 and 2030

| RIBA Sustainable Outcome metrics                      | Business as usual<br><small>(new build, compliance approach)</small> | 2025 Targets                            | 2030 Targets                            |
|---|--|---|---|
| Embodied Carbon<br>kgCO <sub>2</sub> e/m <sup>2</sup> | 1200 kgCO <sub>2</sub> e/m <sup>2</sup>                              | <800 kgCO <sub>2</sub> e/m <sup>2</sup> | <625 kgCO <sub>2</sub> e/m <sup>2</sup> |



## Approach

Unite students “currently” follow the approach to net zero carbon outlined with in the UKGBC Net Zero Carbon for Buildings A Framework Definition. However, we are currently tracking progress of the UK Net Zero Carbon Buildings Standard and will review our approach to net zero developments upon publication. In achieving net zero carbon in construction (embodied) we will first reduce our embodied carbon in line with the RIBA 2030 Climate Challenge targets, and then offset the residual carbon using an offset approach to be defined by the business.



## Next Steps

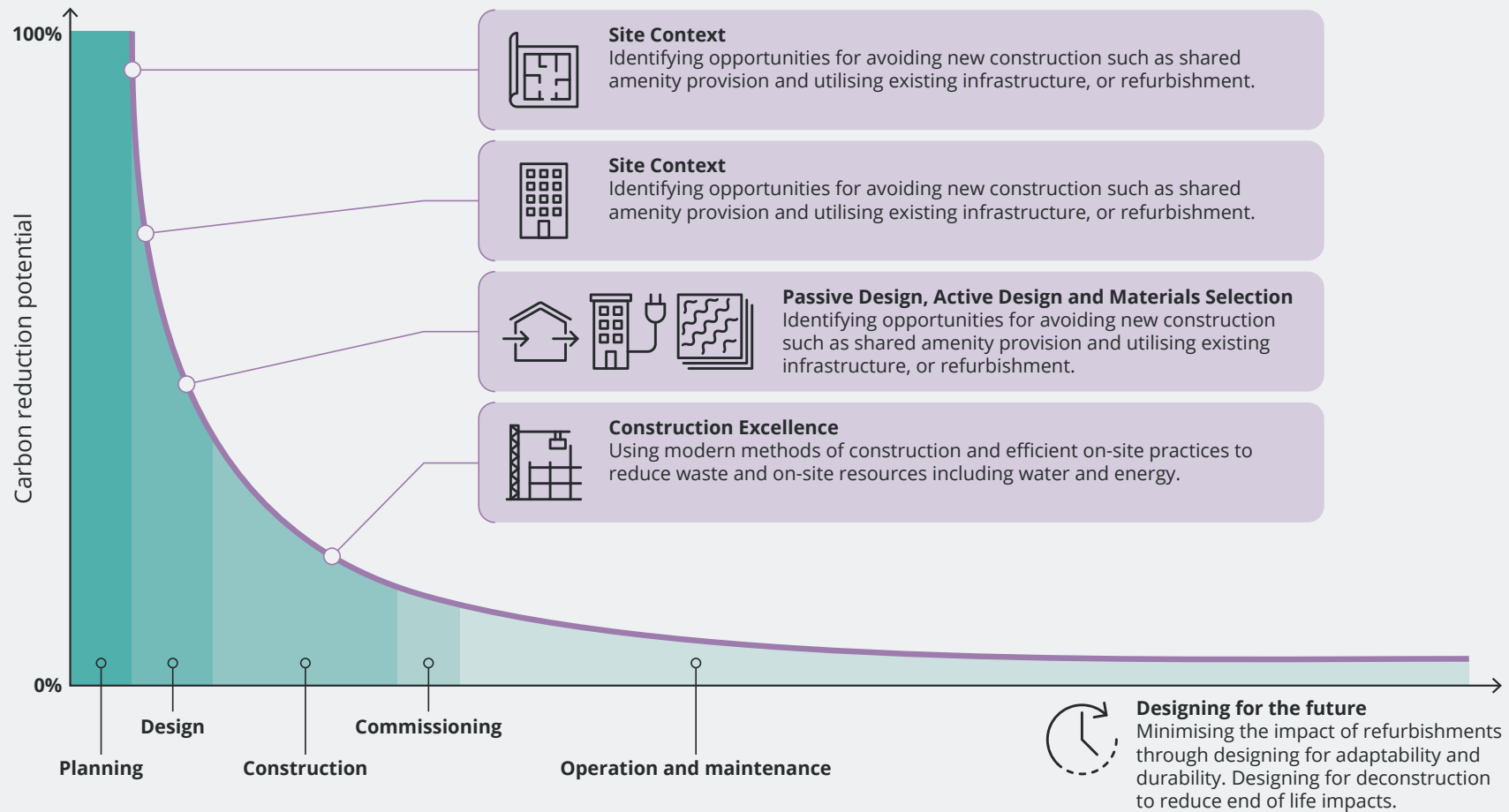
Conduct skills gap analysis of supply chain and continue to work alongside design teams and developers to embed Unite Students’ Sustainable Construction Framework.

Development of Unite Student carbon offsetting and pricing principles. These will outline the criteria and carbon price that should be applied to embodied carbon offsets for our 2030 developments.

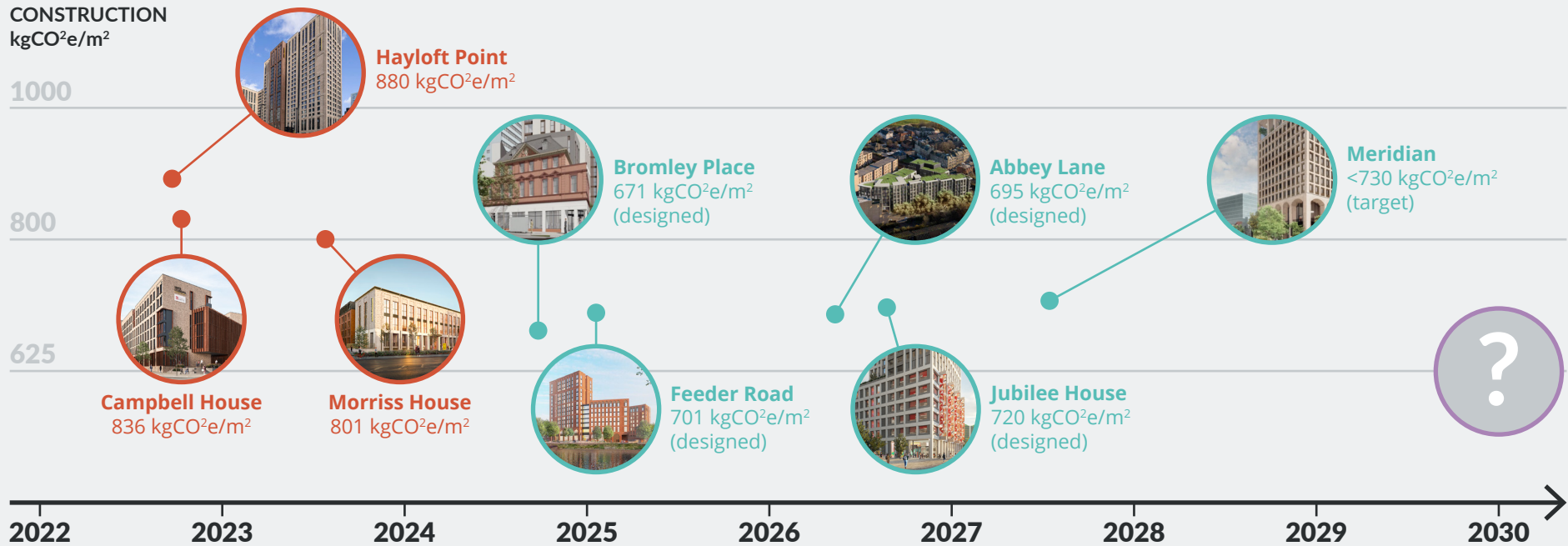


# EMBODIED CARBON APPROACH (CONTINUED)

## OPPORTUNITIES FOR CARBON REDUCTION THROUGH THE DEVELOPMENT LIFECYCLE



# EMBODIED CARBON PERFORMANCE TIMELINE



## DESIGN APPROACH

### Current Spec

**Structure:** RC 0% GGBS  
**Façade:** Brick Slip  
**Glazing:** Aluminium Double Glazed  
**Internal Walls:** Turnkey Spec  
**Finishes:** Turnkey Spec  
**Building Services:** Mixed mode - panel heaters

### NZC Interim Spec

**Structure:** RC 25-70% GGBS  
**Façade:** Brick Slip  
**Glazing:** 70% Recycled Aluminium Double Glazed  
**Internal Walls:** Turnkey Spec  
**Finishes:** Turnkey Spec / Linoleum Flooring  
**Building Services:** Mixed mode - panel heaters / wet systems

### NZC Spec (TBC)



# EMBODIED CARBON LIFE CYCLE ANALYSIS MODELLING

## Overview of One Click LCA Modelling

One Click LCA is a standardized, science-based tool for quantifying the lifecycle environmental impact of our buildings. LCA takes into consideration all the steps that lead from raw material through manufacture, distribution and usage to final disposal. Unite Students have committed to using One Click LCA software to ensure consistency and transparency across our projects and the industry.

In the construction sector conducting an LCA provides a number of tangible benefits:

Reduced environmental impact by:

- Evaluating building site options to select the lowest impact choice.
- Comparing the environmental impacts of renovating rather than demolishing and building anew.
- Comparing design alternatives to choose the lowest impact ones.
- Identifying a building's environmental hotspots and taking action to reduce them.
- Calculating the lifetime impact of building materials and products to help find the most sustainable option.

## LCA Protocols Document

Unite Students have produced an LCA protocols document to ensure that the quality and consistency of our in-house and consultant LCA modelling practices. The protocols document ensures that the requirements of the RICS WLC methodology and the GLA WLC Statement are met on all projects. Finally, the protocols document ensures that all projects can be compared to the RIBA and LETI embodied carbon targets.

## Materials Library

Unite Students have developed a materials library using One Click LCA. Our Turnkey specification has been modelled, alongside a range of net zero carbon options for design teams to review and update where optimisations have been identified. This collaborative approach across our projects will help to drive down embodied carbon across our current and future development pipeline.



# EMBODIED CARBON LIFE CYCLE ANALYSIS MODELLING (CONTINUED)

## RIBA STAGE APPROACH TO LCA MODELLING

|                           | RIBA Stage 0/1                           | RIBA Stage 2   | RIBA Stage 3/4   | RIBA Stage 5   | RIBA Stage 6/7   |
|---------------------------|--|--|--|--|--|
| <b>Responsible</b>        | Unite Students                           | Design Team<br>• Architects<br>• Structural Engineers  | Design Team<br>• Architects<br>• Structural Engineers<br>• MEP Engineers   | Unite Students, Design Teams and Contractors                       | Unite Students and Design Teams  |
| <b>Tool</b>               | One Click LCA Carbon Designer            | One Click LCA uS Materials Library   | One Click LCA uS Materials Library   | One Click LCA uS Materials Library                                 | One Click LCA uS Materials Library   |
| <b>Design Information</b> | Basic Building parameters                | Revit:<br>• Structural volumes<br>• Envelope area<br>• Internal wall areas<br><br>Rule of thumb:<br>• MEP<br>• Finishes<br>• FFE | Revit:<br>• Structural volumes<br>• Envelope area<br>• Internal wall areas<br>• MEP<br>• Finishes<br>• Landscape<br><br>Schedule of FF&E | Contractor supplied as built quantities<br><br>Stage 4 Revit model | Revit:<br>• Structural volumes<br>• Envelope area<br>• Internal wall areas<br>• MEP<br>• Finishes<br>• Landscape<br>or<br>Benchmarks for TK Spec where design information is limited |
| <b>Outcomes</b>           | Establish high level embodied [estimate] | Compare elemental options including structures, envelope, internal walls and finishes where possible                             | Test component level embodied carbon limits<br><br>Review rebar content and concrete strengths   | Verification of final embodied carbon numbers for offsetting       | Measurement of ongoing refurbishment and AMI projects  |



# OPERATIONAL ENERGY PERFORMANCE APPROACH

## Operational Energy Targets

As defined in the Unite Students Net Zero Carbon Pathway, our development pipeline will follow the operational energy targets outlined in the RIBA 2030 Climate Challenge.

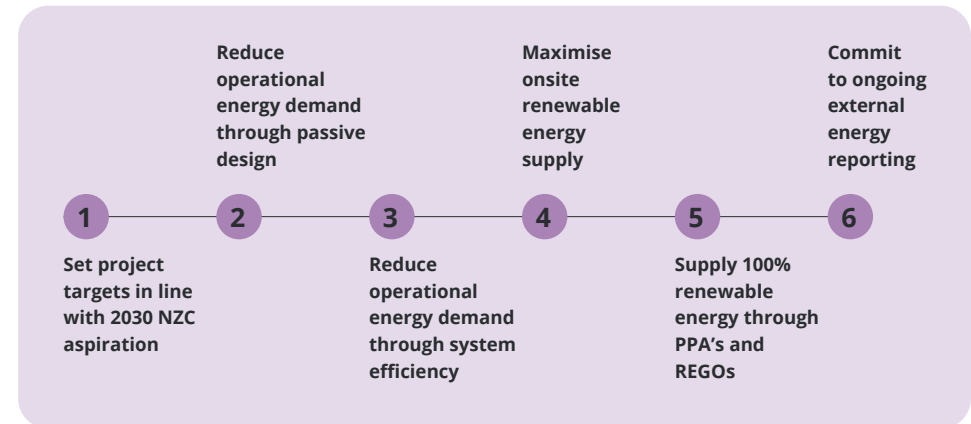
| RIBA Sustainable Outcome metrics         | Business as usual<br><small>(new build, compliance approach)</small> | 2025 Targets              | 2030 Targets              |
|--|--|---------------------------|---------------------------|
| Operational Energy kWh/m <sup>2</sup> /y | 120 kWh/m <sup>2</sup> /y  | <60 kWh/m <sup>2</sup> /y | <35 kWh/m <sup>2</sup> /y |

## Approach

The approach used to reduce energy demand and consumption will vary between buildings dependent on its characteristics. Below is a list of the required by our design teams considerations:

- **Building fabric and passive design** – Reducing the overall energy demand required to operate the building. Improvements include efficient fabric and shading design to reduce heating and cooling demand, natural daylighting to reduce artificial lighting demand, natural ventilation to reduce HVAC demand, appropriate sizing of building systems to limit over-engineering.
- **Systems efficiency** – Increasing the energy efficiency of the building systems. Improvements include highly energy efficient building systems – HVAC, lighting, vertical transport etc.

- **Energy management** – Implementing smart energy/building management systems. Improvements include conducting an energy audit, managing occupant behaviour, managing 'peak loads', adjusting HVAC temperature set points, achieving ISO 50001 accreditation.
- **Further considerations** – The physical wellbeing of building occupants should be considered alongside energy reductions. These include considerations around indoor air quality, daylight and overheating. Additionally, as we develop our embodied carbon modelling of building systems including heat pumps and battery storage, we will make more integrated decisions around whole life carbon impacts.



## Next Steps

We have identified PassivHaus and EnePhit as potential routes to meeting our 2030 energy performance target, and will be engaging with our design teams and contractors to understand the implications of pursuing these accreditations.

# OPERATIONAL ENERGY PERFORMANCE APPROACH (CONTINUED)

APPROACH TO REDUCING OPERATIONAL ENERGY CONSUMPTION (ADAPTED FROM LETI: CLIMATE EMERGENCY DESIGN GUIDE)

**1** **Active Systems**  
The transition from gas boilers to high COP heat pumps producing c.3 units of energy per unit consumed.

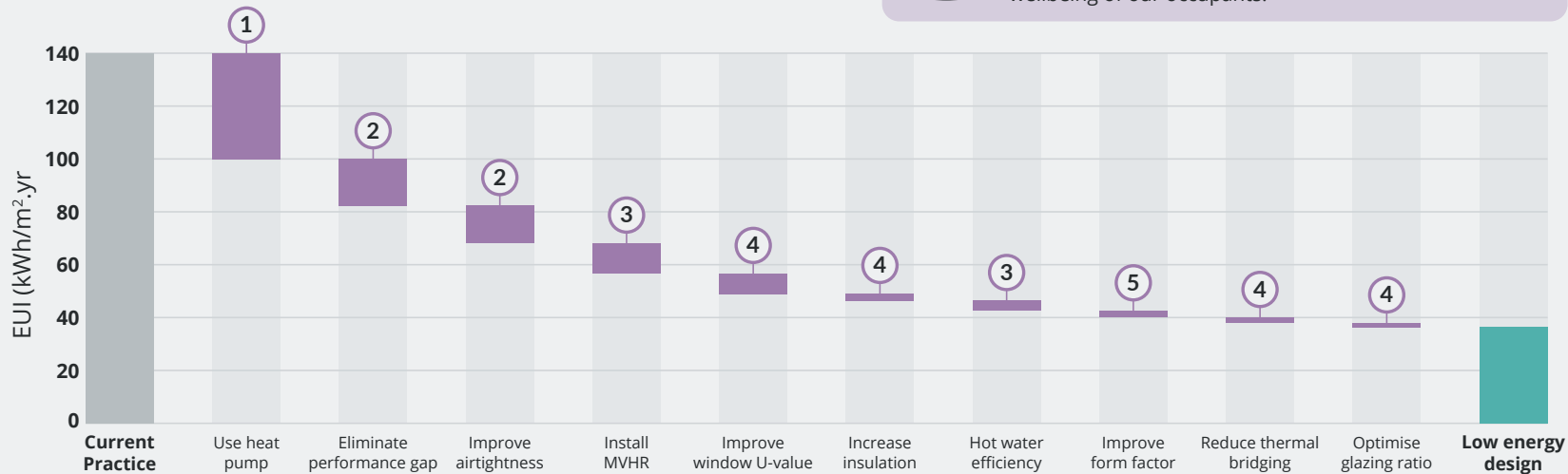
**3** **Active Systems**  
Heat recovery and reducing system losses from heating, ventilation and hot water systems.

**5** **Efficient Form**  
Reducing the heat loss from the building and minimising insulation required.

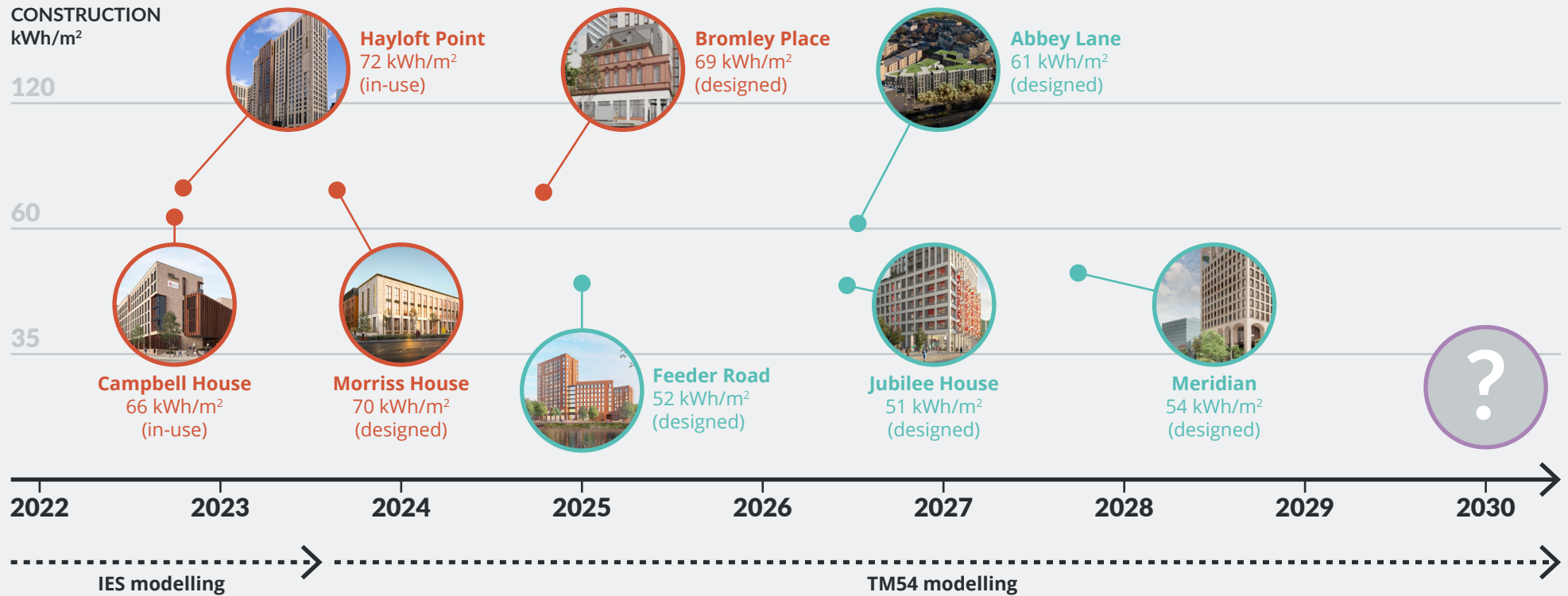
**2** **Construction Excellence**  
Reducing the performance gap through improving the quality of construction, commissioning and handover of the building.

**4** **Passive Design**  
Reducing energy demand of the building through enhanced fabric performance, glazing and shading. Ensuring the building responds to its environmental conditions in terms of heat loss, solar gain and daylighting, with minimal intervention from active building systems.

**Human Centred Design**  
Underpinning all of the decisions made around building performance, is the thermal comfort and health and wellbeing of our occupants.



# OPERATIONAL ENERGY PERFORMANCE TIMELINE



## DESIGN

### Current Spec

**Fabric Performance:**  
Exceeding Building Regs  
**Systems:** ASHP/ Electric Panel Heaters

### Interim Spec

**Fabric Performance:** LETI  
**Systems:** ASHP/ Electric Panel Heaters

### NZC Spec

**Fabric Performance:** LETI  
**Systems:** TBC



# OPERATIONAL ENERGY PERFORMANCE MODELLING

## Overview of Energy Modelling

As energy performance legislation becomes more stringent, and we aspire to provide occupants with high levels of thermal comfort in a changing climate, it is necessary to better understand the way that our buildings behave.

Changes in building design and occupation affect the energy and thermal performance of buildings and building energy modelling enables a deeper understanding of the likely effects of these changes. Energy consumption and risk of overheating are particularly pertinent issues.

In new buildings, energy modelling should be carried out at an early stage of the design process in order to inform further development of the design and construction.

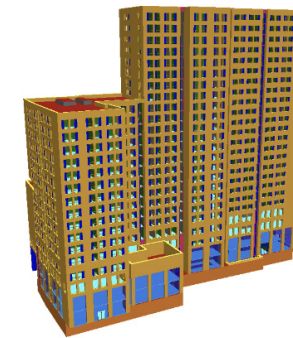
In existing buildings identified for refurbishment, modelling can help to evaluate and prioritise the options for reducing carbon emissions cost effectively.

To date Unite Students have been carrying out energy modelling for Part L requirements under Building Regulations using IES software. Whilst this tool has been used successfully to achieve compliance with planning and meet our baseline NZC targets, we acknowledge that Part L modelling is neither fit for purpose in terms of delivering energy performance requirements, nor reporting at design stage against real world energy consumption.

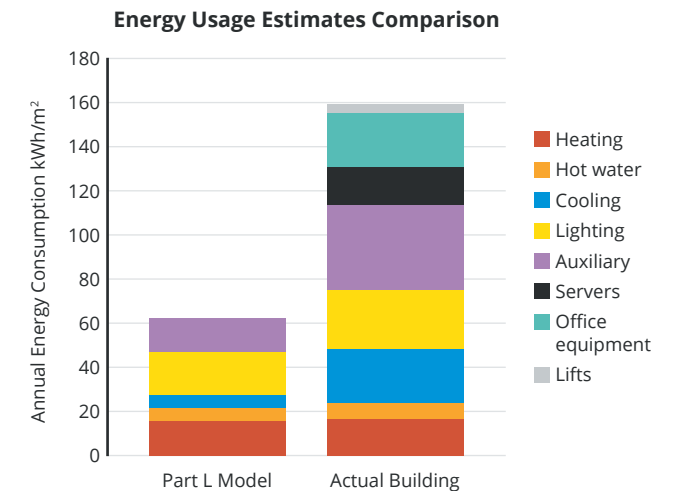
## Next Steps

Over 2023 we will transition to reporting our operational energy performance at design stage against the TM54 Methodology. This is in line with the requirements of the GLA Whole Life Carbon Assessment and guidance from LETI.

Additionally we will include in our Employers requirements a commitment to early design stage environmental analysis in addition to Part L compliance modelling.



IES Energy Model: Hayloft Point



TM54 comparison with Part L - CIBSE

## OPERATIONAL ENERGY PERFORMANCE MODELLING (CONTINUED)

### RIBA STAGE APPROACH TO ENERGY MODELLING

|                    | RIBA Stage 1  | RIBA Stage 2  | RIBA Stage 3/4   | RIBA Stage 5   | RIBA Stage 6/7                            |
|--------------------|---|---|--|--|---|
| <b>Responsible</b> | Unite Students / Design Team  | Design Team   | Design Team  | Contractor   | Unite Students                            |
| <b>Tool</b>        | Early stage modelling tool  | IES Part L Modelling TM54 Methodology<br>Early stage modelling tool   | IES Part L Modelling TM54 Methodology  | IES Part L Modelling   | IES Part L Modelling TM54 Methodology     |
| <b>Outcomes</b>    | Test early design parameters including building orientation, massing and glazing ratios | Compliance with Part L building regs<br><br>Identify optimisations to building fabric and systems<br><br>TM54 model to provide compliance with Unite Students | Compliance with Part L building regs<br><br>Detailed sensitivity testing of building fabric and services optimisations | Compliance with Part L building regs – discharge planning conditions | Ensure that EPC ratings remain up to date |

# CIRCULAR ECONOMY

## Overview of the Circular Economy

The circular economy is a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended.

For Unite Students there are numerous potential benefits with the transition to a circular economy including material cost savings, reduced price volatility, improved security of supply, employment creation, as well as reduced environmental pressures and impacts. Circular economy thinking is long term planning. It must cut across all phases of project development, from design to delivery and use.

## Next Steps

We have already identified industry leading circular economy metrics that we will be reporting against our development pipeline from 2023. The indicators that we have selected are relatively new within the industry, but reflect guidance from industry bodies including LETI and the UKGBC. We will produce a circular economy playbook to provide in-depth design and implementation guidance for our projects.

## HOW ARE WE APPROACHING CIRCULAR ECONOMY



### Designing for the Future

Spaces that are functionally, volumetrically and temporarily adaptable. Optimising the use of available floor spaces and building in future adaptability to the building services. Each building layer should be considered independently based on maintenance and replacement cycles to minimise the impact on other elements when works are required. Where new building elements will be introduced there will be the opportunity to disassemble them in the future to extract the maximum value, where feasible reusing the material in the same form, re-manufacturing, and dissembled to optimise material cycles.



### Material Optimisation

Specifying out virgin technical materials by prioritizing low toxic, bio-based materials where replacements or new construction is required. Ensuring performance, durability and quality of materials specification. Where possible a move to leasing and/or adopting manufacturer take back schemes are pursued. This will re-focus material flows through the value chain, placing incentives for manufacturers to place materials in high value cycles.



### Site Context

Retaining materials in situ, and/or re-using existing materials on site is our best opportunity to reduce material consumption across our developments. Identifying opportunities for refurbishment over new construction, or carrying out pre-demo audits and incorporating existing materials into schemes where new developments are required.



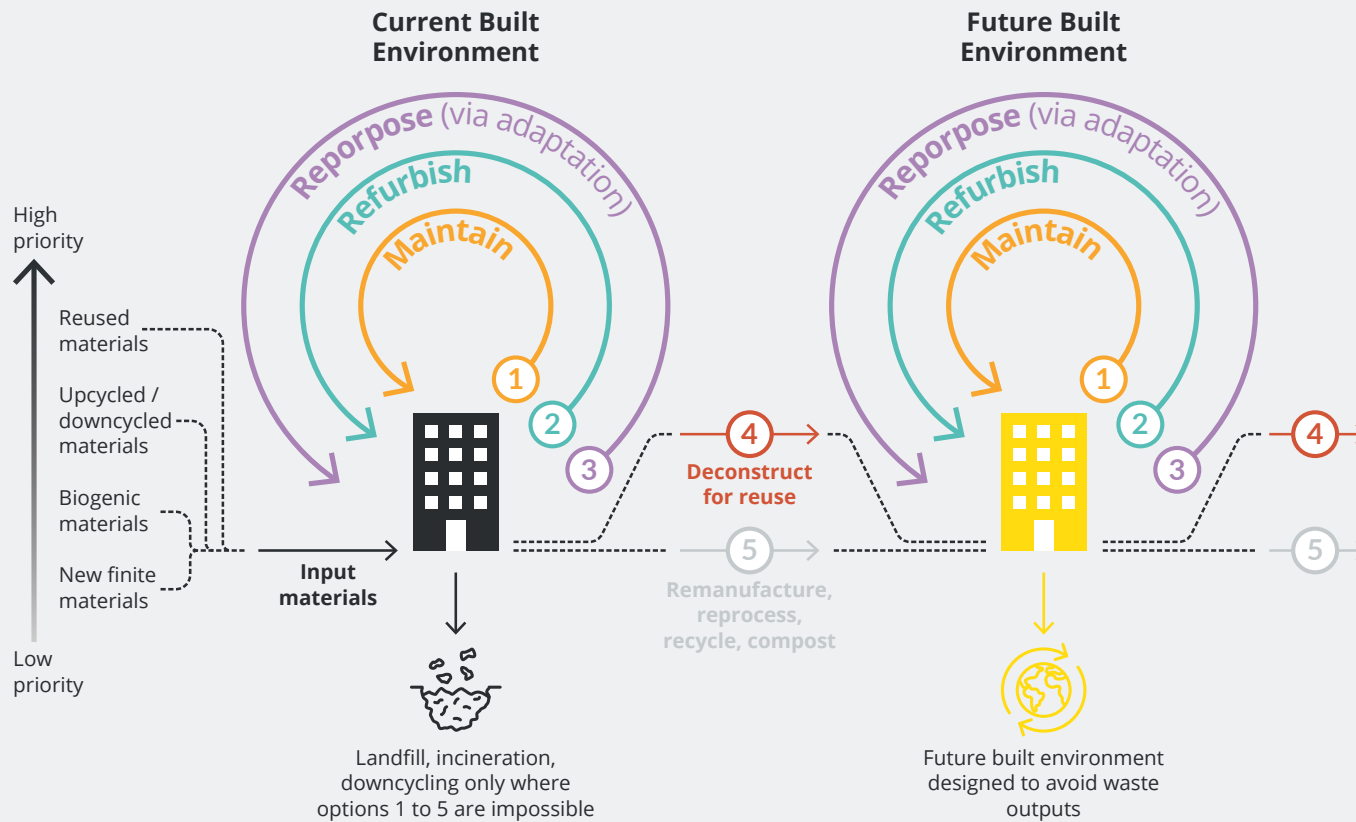
### Efficient Form

This includes rationalising the level of intervention in the first instance. Additionally waste can be designed out through selecting products that can be manufactured with minimal waste byproducts and using standardised components and sizing.

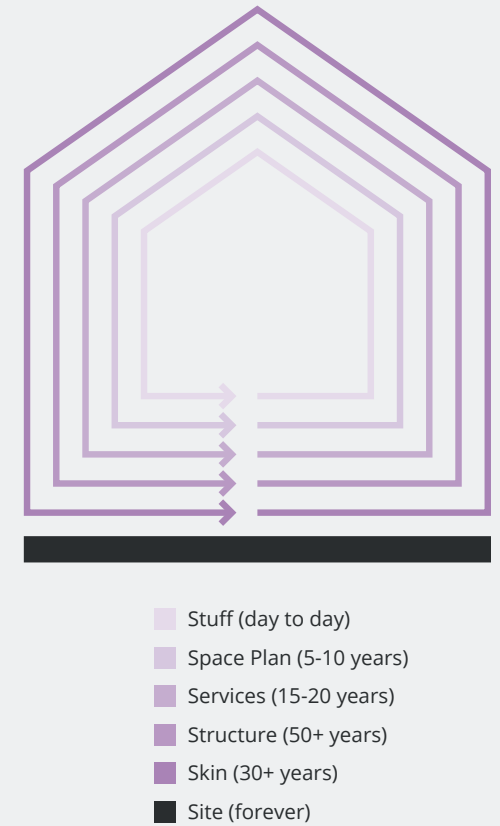


# CIRCULAR ECONOMY (CONTINUED)

## CIRCULAR ECONOMY PRINCIPLES



## DESIGNING IN LAYERS



# OPTIMISE THE PERFORMANCE OF OUR BUILDINGS IN A CHANGING CLIMATE

WELLBEING  
WATER  
CLIMATE CHANGE RESILIENCE



## TARGETS AND KPIs

### HEALTH AND WELLBEING

#### 2030 TARGET

#### WELL BUILDING STANDARD

We are reviewing our current pipeline against the Well building standard “and other assessments” work towards establishing a target around wellbeing certification for 2030.

#### KPIs

- Overheating (% Time 25-28°C)
- Daylighting (Average Daylight Factor)
- CO<sub>2</sub>e Levels (ppm)
- VOCs (mg/m<sup>3</sup>)
- Formaldehyde (mg/m<sup>3</sup>)
- Construction Site H&S incidents (no.)

### WATER

#### 2030 TARGET

#### <75 L/P/DAY

Reduce potable water consumption through water efficiency and grey water and rainwater harvesting.

#### KPIs

- Grey water harvesting %
- Rain water harvesting %

### CLIMATE CHANGE RESILIENCE

#### 2030 TARGET

#### ASSET LEVEL CLIMATE CHANGE RISK ASSESSMENTS (CCRAs)

Our aim is to carry out CCRAs for all new construction projects from 2024, developing mitigation strategies for all medium and high risks identified. These would feed into our wider climate-related risk management and adaptation strategy.

#### KPIs

- Climate related events (no.)
- Supply chain risk assessments completed for key development suppliers and subcontractors



# HEALTH AND WELLBEING

## Overview of Approach

Health and Wellbeing is a critical issue throughout the life cycle of our developments in terms of design, construction and operations. Design decisions we make will effect the whole value chain. The materials we select will impact health and wellbeing at the points of manufacturing, installation, exposure in use and disposal. Additionally the internal and external environments we create can have a positive impact on our students and local communities' physical and mental health.

Whilst health and Wellbeing is an expansive topic, there have been recent developments in certification systems aimed at implementing and measuring the impact in the built environment. Unite Students utilise the principles of such certifications including the WELL Building Standard and Fitwel. We intend to initially benchmark our performance against these standards, with a view to potential certify schemes in the future.

## Next Steps

We will undertake a series of WELL Building Standard Pre-Assessments to benchmark the performance of our existing pipeline against the system. Based on the outcome of our initial pre-assessments a target for Wellbeing will be established.

A playbook for health and wellbeing will be developed to provide in-depth design and implementation guidance for our projects.



# HEALTH AND WELLBEING (CONTINUED)

## DESIGN AND CONSTRUCTION APPROACH TO HEALTH AND WELLBEING

|                                    | Indoor Environmental Quality   | Water  | Materials  | Sound  | Mental Wellbeing   | Light   | Physical Exercise  | Community  |
|------------------------------------|--|--|--|--|--|---|--|--|
| <b>Objectives</b>                  | Providing our students with high indoor air quality and thermal comfort irrespective of external conditions.   | Accessible, and clean water provision free from contaminants and legionella for all students and building users.   | Ensuring the materials in our properties are safe and where possible provide wider benefits such as biophilia.   | Providing acoustic comfort for all students within the accommodation, across the diverse space types.  | Environments that enhance a sense of wellbeing and providing facilities for mental health support.                               | Utilising natural and artificial lighting to support students' circadian rhythms promoting healthy sleep patterns and concentration.  | Environments that support students and building users to engage in physical activities both within the building and travel to and from the site.                                 | Creating safe and engaging working environments, community spaces and living accommodation.  |
| <b>Design Considerations</b>       | <ul style="list-style-type: none"> <li>Window design and control</li> <li>Thermal zoning</li> <li>HAVC strategy</li> <li>Humidity control</li> <li>Filtration</li> </ul> | <ul style="list-style-type: none"> <li>Location of accessible water points</li> <li>Water treatment where required</li> <li>DHW system design</li> </ul> | <ul style="list-style-type: none"> <li>Avoiding red list materials</li> <li>Selection of bio-based materials</li> <li>Low VOC finishes</li> </ul>                            | <ul style="list-style-type: none"> <li>Acoustic modelling including sound mapping</li> <li>Materials selection</li> </ul>                            | <ul style="list-style-type: none"> <li>Restorative spaces</li> <li>Access to nature</li> <li>Interior design features</li> </ul> | <ul style="list-style-type: none"> <li>Light exposure / glazing levels</li> <li>Glare control</li> <li>Artificial lighting controls / quality</li> <li>Daylight simulation</li> </ul> | <ul style="list-style-type: none"> <li>Cycle and sustainable travel facilities</li> <li>Gym and exercise spaces</li> <li>Active furniture</li> <li>Active circulation</li> </ul> | <ul style="list-style-type: none"> <li>Civic engagement through planning</li> <li>Provision of amenity space</li> <li>Provision of public and community space</li> </ul> |
| <b>Construction Considerations</b> | <ul style="list-style-type: none"> <li>Construction air quality plan</li> <li>Commissioning of HVAC</li> <li>Use of electric / hybrid plant on site</li> </ul>           | <ul style="list-style-type: none"> <li>Commissioning of DHW systems</li> <li>Discharge permits and water treatment on site</li> </ul>                    | <ul style="list-style-type: none"> <li>Minimising solvents and adhesives</li> <li>Responsible sourcing</li> <li>Material transparency and certification e.g. EPDs</li> </ul> | <ul style="list-style-type: none"> <li>Non percussive construction approaches</li> <li>Use of sound monitoring</li> <li>Acoustic barriers</li> </ul> | <ul style="list-style-type: none"> <li>Contractor mental health and wellbeing programmes</li> <li>Toolbox talks</li> </ul>       | <ul style="list-style-type: none"> <li>Commissioning of lighting systems and controls</li> </ul>  | N/A  | <ul style="list-style-type: none"> <li>CCS Considerate constructors' scheme</li> <li>CDM Construction design management</li> </ul>                                       |
| <b>Operational Considerations</b>  | <ul style="list-style-type: none"> <li>Operational schedules</li> <li>Maintenance and cleaning regimes</li> <li>Student / building user feedback</li> </ul>              | <ul style="list-style-type: none"> <li>Water quality testing</li> <li>Cleaning and maintenance regimes</li> </ul>  | <ul style="list-style-type: none"> <li>Cleaning product selection</li> <li>Sustainable procurement strategy</li> </ul>   | <ul style="list-style-type: none"> <li>Student / building user feedback</li> </ul>   | <ul style="list-style-type: none"> <li>Provision of mental health services</li> </ul>  | <ul style="list-style-type: none"> <li>Operational schedules</li> <li>Maintenance and cleaning regimes</li> </ul>   | <ul style="list-style-type: none"> <li>Activity programming</li> </ul>   | <ul style="list-style-type: none"> <li>Social activity programming</li> </ul>  |

# WATER

## Overview of Approach

In the face of a changing climate, water consumption and management is becoming an increasingly important issue for our developments not only as a responsible developer and operator of PBSA but also in terms of operational resilience.

The impact of water consumption is cross cutting with other sustainability themes. The largest component of energy use within our new build pipeline is Domestic Hot Water – driven by consumption associated with showers. Our approach to green infrastructure can have a significant impact on both potable water consumption and water quality.

The BREEAM Wat 01 tool is used to determine water consumption at design stage, however actual performance against the target will be reviewed through metered data.

## Next Steps

Water is one of the most challenging areas for improvement as, unlike energy, returns on investment are often difficult to achieve and the infrastructure required to optimise opportunities for grey water and rain water harvesting can be unfeasible. We will continue to identify and trial new innovations in water efficiency where possible.

Advancing out smart water metering and leak detection strategies are likely to provide the greatest opportunities in this area for the short to medium term.





# WATER (CONTINUED)

## HOW WE ARE APPROACHING WATER



### Active Systems - Water Efficiency

Selecting water efficient fittings by limiting flow and flush rates is the most cost effective and feasible means of limiting potable water consumption in our PBSA. As a minimum these flow rates are recommended:

**Hand basin taps: <4 litres/min**  
**Showers: <5 litres/min**  
**Toilets: <3.5 litres/flush**

A significant amount of water can be lost through leaks, including damaged pipes and connections and toilets through flowing. We will target installing leak detection and smart water metering to be able to enable early identification of leaks.



### Regenerative Design - Water Reuse

The opportunity for installing grey water recycling and rain water harvesting should be explored on all projects at concept design stage. Whilst there are challenges with locating plant and infrastructure associated with these initiatives, they present the greatest opportunity for reducing potable water consumption beyond current levels.



### Regenerative Design - Sustainable Urban Drainage

Sustainable drainage systems (SuDS) present an opportunity for Unite to add ecological and social value to our schemes whilst at the same time meeting local planning requirements around increasing sustainability and managing flood risk. SUDs can provide a range of onsite and offsite benefits including, biodiversity, reduced maintenance & costs, ground water recharge, improved local air quality and additional amenity space.



### Regenerative Design - Xeriscaping

Our approach to greening can enhance biodiversity, but it can increase the burden of on potable water consumption, particularly where rainwater harvesting isn't possible. Design teams should consider the principles of xeriscaping, which reduces or eradicates the need for additional irrigation through selecting native drought tolerant plant species.



# CLIMATE CHANGE RESILIENCE

## Overview of Approach

Unite Students reports under the Task Force for Climate related Financial Disclosures (TCFD) “and UK Climate Related Financial Disclosure (CRFD) scheme”. While TCFD and CRFD provides a common basis for climate related risks management, we plan to go further and take a more detailed view of our individual developments against climate vulnerability.

Within the built environment industry guidance and tools for climate risk reporting are increasing, as are proprietary analysis tools that can provide organizations with scenario-driven assessments of climate change risks. As these become more widely understood and used within our sector we will investigate their potential application to our projects.

As an interim measure and to ensure that climate change impacts are considered on our projects at the earliest design we will carry out climate change risk assessments to ensure that the most prominent risks to our assets and occupants are identified, recorded and mitigation measures are implemented:

### Increased rainfall

- Pluvial flooding (overland)
- Fluvial flooding (river)
- Localized water damage associated with drainage and roofing

### Increased Temperature

- Over heating
- Infestations
- Damage to infrastructure
- Drought

### Increased Extreme Weather Events

- Damage to façade / envelope
- Damage to infrastructure
- Disruptions to supply chain

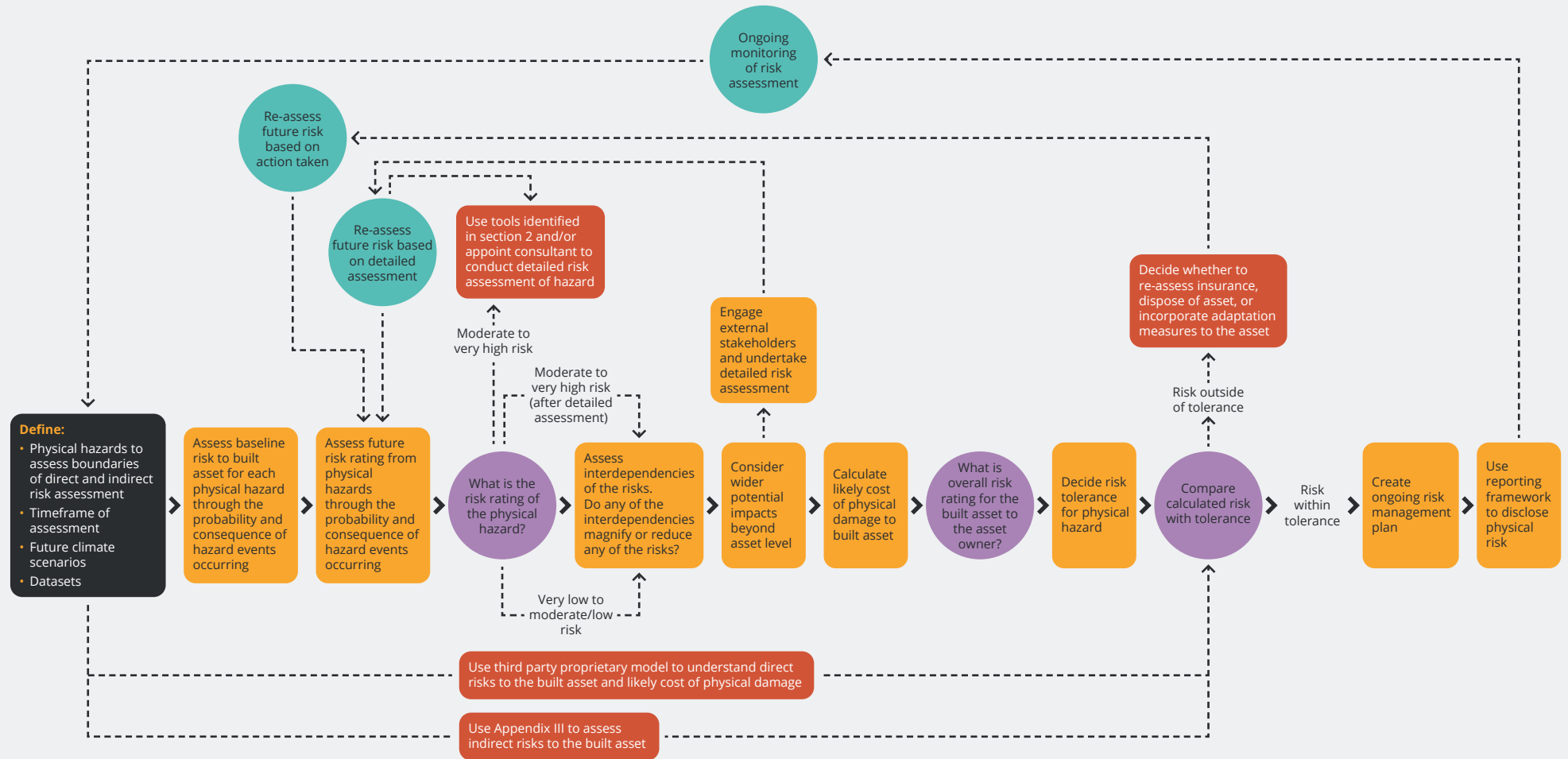
### Next Steps

In 2024 Unite Students will implement climate change risk assessments for new development projects. The risk assessments will be carried out to support BREEAM certification, but will exceed the requirements. They will be updated through design stages and be including in the building user guides.



# CLIMATE CHANGE RESILIENCE (CONTINUED)

UKGBC – A FRAMEWORK FOR MEASURING AND REPORTING OF CLIMATE-RELATED PHYSICAL RISKS TO BUILT ASSETS





# ENHANCE THE IMPACT OF OUR PROJECTS FOR HUMAN AND NATURAL SYSTEMS

BIODIVERSITY  
SUPPLY CHAINS AND INNOVATIONS  
SOCIAL IMPACT



## TARGETS AND KPIs

### SUPPLY CHAINS & INNOVATION

#### 2030 TARGET

100% OF QUALIFYING SUPPLY CHAIN PARTNERS SIGNED UP TO UNITE STUDENTS SUSTAINABLE CONSTRUCTION CODE OF PRACTICE

#### KPIs

- % Investment in SMEs
- Responsible Sourcing (% project spend)
- Use of Modern Methods of Construction (% project value)
- Supply Chain Sustainability Training (Hrs)
- BIM maturity level

### BIODIVERSITY

#### 2030 TARGET

>25% BIODIVERSITY NET GAIN (ONSITE)  
URBAN GREENING FACTOR OF >0.4

#### KPIs

- Biodiversity Net Gain Offsite (%)
- FSC Certification (%)
- Construction related biodiversity initiatives (no.)
- Pollution Incidents (no.)

### SOCIAL IMPACT

#### 2030 TARGET

INTRODUCE SOCIAL VALUE AND IMPACT REPORTING FOR EACH NEW DEVELOPMENT

#### KPIs

- Provision of affordable community space (% GIA)
- Community Volunteering (hrs)
- Re-investment into local communities (% Build Cost)

# SUPPLY CHAINS AND INNOVATION

## Overview

Unite Students have a longstanding relationship with our key supply chain partners, with experience in delivering high quality student accommodation to programme and budget. We need to build on the existing relationships and skill sets of our supply chain and build new relationships and drive innovation to deliver the net zero carbon and sustainability aspirations of the Sustainable Construction Framework.

It is critical Unite Students and our supply chain continue to innovate and mitigate risk in a collaborative nature. Key areas of focus for the supply chain and innovation are:

## Skills Gaps

It is widely regarded that within the UK built environment one of the most significant challenges to meeting NZC construction is the industry wide skills gap. Unite Students will work to ensure that our supply chain has the capability to deliver our 2030 aspirations and beyond. Training through the supply chain is a critical part of upskilling, but also enables a platform of understanding across disciplines and stakeholders regarding sustainable design and construction.

## Collaboration

To meet the net zero carbon target we need to transform the way we design and build at pace. This means enhanced collaboration across supply chain disciplines. Early engagement involvement with contractors and manufacturers is required to ensure feasibility and de-risk new construction approaches. Likewise, carrying out cost analysis and sensitivity testing of embodied carbon and operational energy options should be combined.

## Innovation

Innovations in design and construction are required through-out the supply chain. Moving to BIM level 3 will be essential in optimising sustainability within our buildings over the whole life cycle. Modern Methods of Construction including DFMA present an opportunity for driving efficiency in terms of sustainability and programme, but these must be fully understood and tested so the benefits can be quantified and any undesirable consequences avoided.

## Data

It is essential that the supply chain provide high quality data to measure and monitor sustainable impact and performance including EPDs, Responsible Sourcing, and construction site environmental data.

## Next Steps

Develop the Unite Students Development supply chain code of practice and identify qualifying scope. The code of practice will set the sustainability criteria for working on Unite Students' developments and the requirements for evidencing the management of their own environmental and social impacts. This will ensure that our supply chain is genuinely committed to improving their own sustainable agenda in addition to supporting Unite Students' sustainability aspirations.

Unite Students are currently reviewing how we can work with industry bodies and external partners to deliver our aspirations around training and upskilling our supply chain partners.





## SUPPLY CHAINS AND INNOVATION (CONTINUED)

### KEY SUPPLY CHAIN RELATIONSHIPS

| Supply Chain Partner             | Relationship to Sustainable Construction Framework   |
|----------------------------------|--|
| <b>Design / Project Teams</b>    | <p>Unite Students to ensure that design and project management consultant teams are suitably qualified and have the skills to deliver the NZC and sustainability agenda.</p> <p>Project teams to utilise the sustainable construction framework to establish early design interventions to meet the 2030 targets and implement the appropriate modelling where required.</p> |
| <b>Contractors</b>               | <p>Engage at the earliest opportunity with the design teams to test the feasibility and cost implications of the design proposals.</p> <p>Identify sub contractors with the relevant skills and experience in delivering net zero and sustainable construction.</p>  |
| <b>Sub-Contractors</b>           | Innovate in construction methods and deliver high quality construction practices on site, minimising on site impacts and optimising building performance.  |
| <b>Manufacturers / Suppliers</b> | Direct engagement between Unite Students and manufacturers is required to understand the capability of the projects to meet current and future sustainability targets.   |
| <b>Insurance</b>                 | Insurance providers to work with the design teams and contractors to enable the use of low carbon construction techniques and materials, adapting design proposals and minimising risk where required.   |



# BIODIVERSITY

## What is Biodiversity

Under the Environment Act 2021 Biodiversity Net Gain will become mandatory in England. Some local authorities are already implementing Biodiversity Net Gain into their planning policies which make it a mandatory planning requirement ahead of it being a legal requirement.

As a developer of typically brownfield sites, Unite Students have a proven track record of delivering high quality green amenity space for students and local communities

## Next Steps

All Unite Students projects should be achieving an urban greening factor of 0.4 in line with the requirements of the GLA.

All projects will be undertaking biodiversity net gain calculations achieving a minimum of 10% with a view to increase this to 25% by 2030.

A biodiversity playbook will be developed to outline the approach to implementing biodiversity net gain on and offsite.

## HOW ARE WE APPROACHING BIODIVERSITY



### Regenerative Design

Green infrastructure is a critical part of our developments, with cross cutting impacts for both the environment and benefits to building users and local communities.

Many of our new developments are located on brownfield sites and therefore provide a significant opportunity for increasing the biodiversity value of the site. As part of BREEAM we target at a minimum 10% increase in biodiversity for all sites. It is equally critical to ensure that we protect existing green infrastructure onsite, through the design and construction stages.

We promote the use of biodiverse rich species for landscaping on our schemes, with particular focus on native species that benefit hydrological cycles and benefit local fauna, and the inclusion of SUDs



### Material Optimisation

Possibly our greatest impact on biodiversity is the impact of our materials sourcing. All materials within our supply chain will have an impact on biodiversity, either through the direct sourcing of materials such as timber and other bio-based materials, or through the indirect impacts such as pollution from materials extraction and the manufacturing and end of life processes.

For the purposes of BREEAM, our projects set targets around responsible sourcing, including ISO 14001 certification (for suppliers) and FSC certified timber, which contributes to de-risking our supply chain, however we will continue to identify how through collaboration with the supply we can measure and improve our impact on biodiversity.

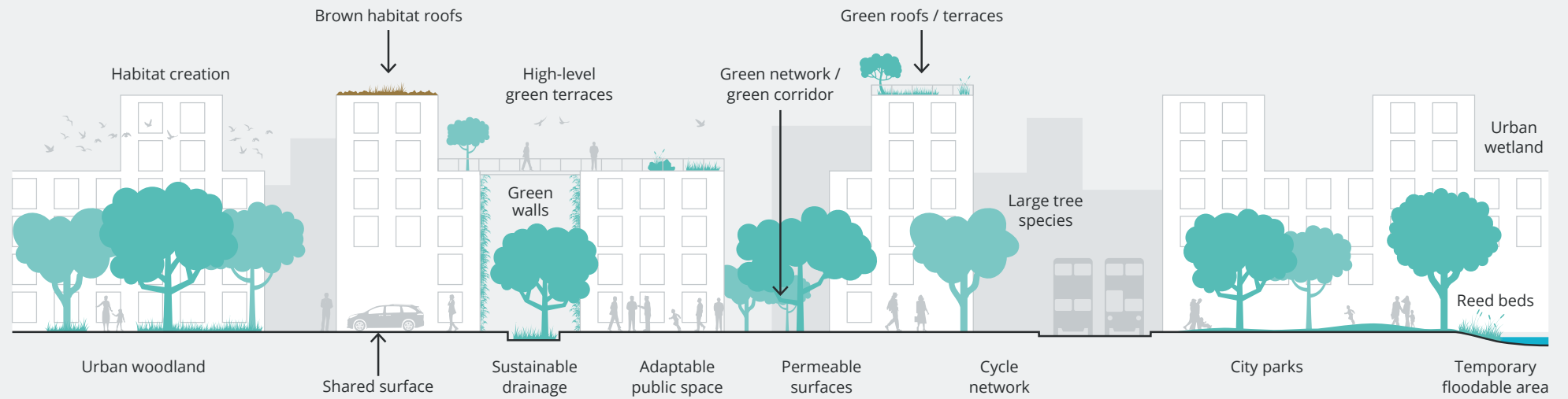


### Human Centred Design

Our outdoor amenity space provides excellent opportunity not just to increase biodiversity, but also to improve the students and local communities with high quality restorative green spaces, promoting physical and mental wellbeing. Incorporating human considerations such as sensory needs or provision of spaces to protect from extreme weather conditions into landscape design can further add to the value of the stakeholders interaction with nature.

# BIODIVERSITY (CONTINUED)

## BIODIVERSITY FEATURES FOR OUR BUILDINGS





## SOCIAL IMPACT

### Overview

Unite Students have been following the UKGBC definition of social value in the context of developments. Which is created when buildings, places and infrastructure support environmental, economic and social wellbeing, and in doing so improve the quality of life of people.

The process for delivering social value should start at the conception stage of a project and iterate across the asset lifecycle, identifying the priority outcomes and allowing each new delivery partner to pick up on earlier work but also take stock of the changing context and factor that in.

### How are We Approaching Social Value

Whilst our approach to social value to date has been informal, we have strived to achieve a positive social impact. Activities include:

- **Positive Impact Programme**

As part of the Unite Students Positive Impact programme the Development Team have been undertaking the following activities:

- Mentoring opportunities for community groups within the Westminster area.
- Re-decorating community centre amenity space.

- **10k Black Interns**

The Development Team have participated in the 10k Black Interns programme, offering employment experience for under-represented communities within the real estate sector.

- **Community Amenity Space**

Our recent and current pipeline projects have provided community space at a peppercorn rent, including a space at Hayloft for the charity Streets of Growth.

- **Onsite Contractor Activities**

Our principle contractors register our schemes with the considerate constructors scheme, which promotes best practice in construction site practices across numerous areas including environment, health and wellbeing and community engagement.

- **Unite Foundation**

The Unite Foundation is an independent charity that runs a nationwide accommodation scholarship, supporting estranged and care experienced students. Unite Students are the charity's accommodation partner and principal corporate donor.

### Next Steps

We will develop a social value Playbook for development that outlines the strategic approach to social impact, in terms of delivery for each project and measurement of social impact and social value created.



# SOCIAL IMPACT (CONTINUED)

## CREDIT UKBC SOCIAL VALUE DEFINITION

| Jobs and Economic Growth  | Health, Wellbeing and the Environment             | Strength of Community  |
|---|---|--|
| Decent jobs for local people, including hard to reach groups            | Good accessibility and sustainable transportation | Strong local ownership of the development                      |
| Local people with the right skills for long-term employment             | Resilient buildings and infrastructure            | Existing social fabric is protected from disruption            |
| School leavers with career aspirations of the industry                  | High-quality public and green spaces              | The new community is well integrated into the surrounding area |
| The local supply chain is supported and grown                           | Good mental health                                | Thriving social networks                                       |
| Future residents have comfortable homes which are affordable to operate | Good physical health                              | Vibrant diversity of building uses and tenures                 |
| Thriving local businesses   | Healthy local air quality                         | Strong local identity and distinctive character                |
|   | Limit resource use and waste                      |  |

## KEY GATEWAYS FOR SOCIAL IMPACT



“I was a property intern at Unite Students for 10 weeks, working in the Development Team with a focus on sustainability. Throughout this experience, I engaged with different members of the wider team, learning about the different job roles within the business.

During this internship, I gained a good foundation of knowledge in sustainable development. I began my internship by learning about the RIBA plan of work, Unite Students’ sustainability goals (including the 2030 Net Zero Carbon target), and sustainable certification that Unite Students’ properties aim to achieve including BREEAM.

My final project was to produce a performance dashboard for Unite Students’ development projects and their alignment against the sustainability goals. To carry out this final project, I learnt how to use a tool called One Click LCA, in which you measure the embodied carbon of projects using design information and a materials database. It was interesting to see the difference in carbon intensity between various materials and construction approaches

**Angel Johnson, 10,000 Black Interns 2023 Cohort**



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