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Sustainability Summary Statement

For

41 Sheldon Avenue

For

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June 2024



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Executive Summary

Carbon Plan Engineering have been appointed by Radcliffes to carry out 4 separate but interconnected reports to demonstrate how the 41 Sheldon Avenue, within the Bishop's Conservation Area of Haringey, meets the request by Haringey Planning Department to justify further demolition.

This short statement is intended as a summary only to show how the documents link together and to highlight the outcomes. No further context is given.

The following documents form a suite which together show the justification for demolition and sees the embodied impact of the proposed new dwelling. These documents align with the requirements of the relevant London Plan policies.

- ❑ **Circular Economy Statement** → *Demonstrates how Circular Economy principles have been adopted and provides justification for demolition by referencing the following two studies.*
 - **Pre-Redevelopment Audit** → *Comments on the existing building condition and suitability for refurbishment, or not.*
 - **Pre-Demolition Audit** → *A detailed study of the materials which existing on site and which would form part of the demolition works. This document suggests what materials can be re-used and how best to divert waste from landfill.*
- ❑ **Whole Life Carbon Study** → *Provides an analysis of the overall impact of the construction works and provides examples of how the design team have worked to reduce the embodied impacts through reclaiming materials from site and from careful selection and specification.*

Circular Economy & Pre-Redevelopment Audit Outcomes

The current building comprises a three-storey dwelling and the key outcomes from the pre-redevelopment audit were that:

- ❑ the building fabric quality is poor and uninsulated
- ❑ timber window frames in poor condition with single glazed units.
- ❑ facades are brickwork with cracking and delamination
- ❑ the clay roof tiles are at end of life
- ❑ the conservatory is timber frame with double glazed and in poor repair
- ❑ all existing services are old, inefficient and at end of life

The Pre-Redevelopment Audit shows that reuse of the existing fabric or structure has been considered in detail however, doing this would limit dwelling to adapt climate change and become high-quality energy efficient dwelling. Therefore, a design approach of **Demolish and Recycle** has been selected with the following being incorporated into the designs:

- ❑ reuse as many bricks and roof tiles as far as is possible
- ❑ brickwork and rubble will be crushed on site for re-use as granular fill
- ❑ wherever possible materials will be sourced with medium to high recycled content

- ☐ wherever possible suppliers with Environmental Management Systems such as ISO1401, BES6001 and CARES certified will be selected
- ☐ all concrete will maximise the recycled aggregate and GGBS content

Pre-Demolition Audit Outcomes

The Pre-Demolition Audit (PDA) takes a structured review of the materials that exist on site and quantifies these as far as possible. In following the prescribed process we have identified that 100% of the non hazardous waste should be able to be diverted from landfill.

The PDA also identified several elements which can be re-used on site as noted above.

Whole Life Carbon Assessment Outcomes

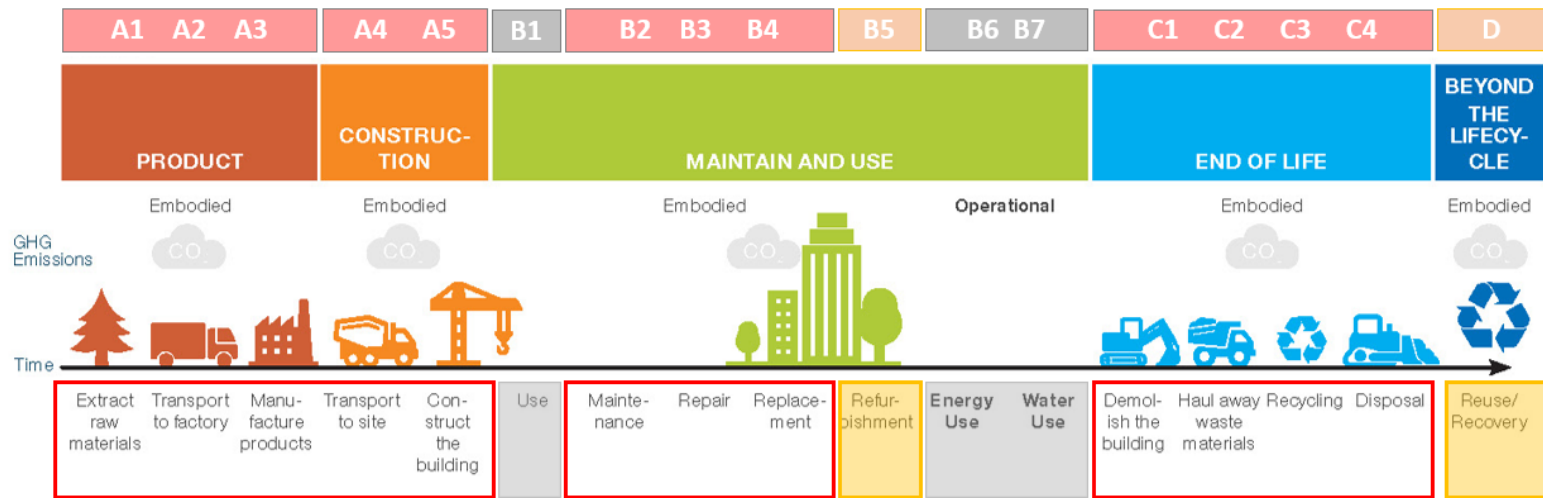
The Whole Lifecycle Carbon Assessment (WLCA) assessed the impact of construction with standard materials as being just over the GLA WLC Benchmark for residential projects of 850kg/CO₂/m².

We therefore identified a range of interventions which could reduce the impact of the building and the final – As Designed impact was **679kg/CO₂/m²** which is close to the aspirational GLA WLC Benchmark for residential projects of 600kg/CO₂/m².

Further work will be undertaken during detailed design to reduce the impact further based upon the opportunities that we have identified which would further reduce the impact by at least 34kg/CO₂/m².

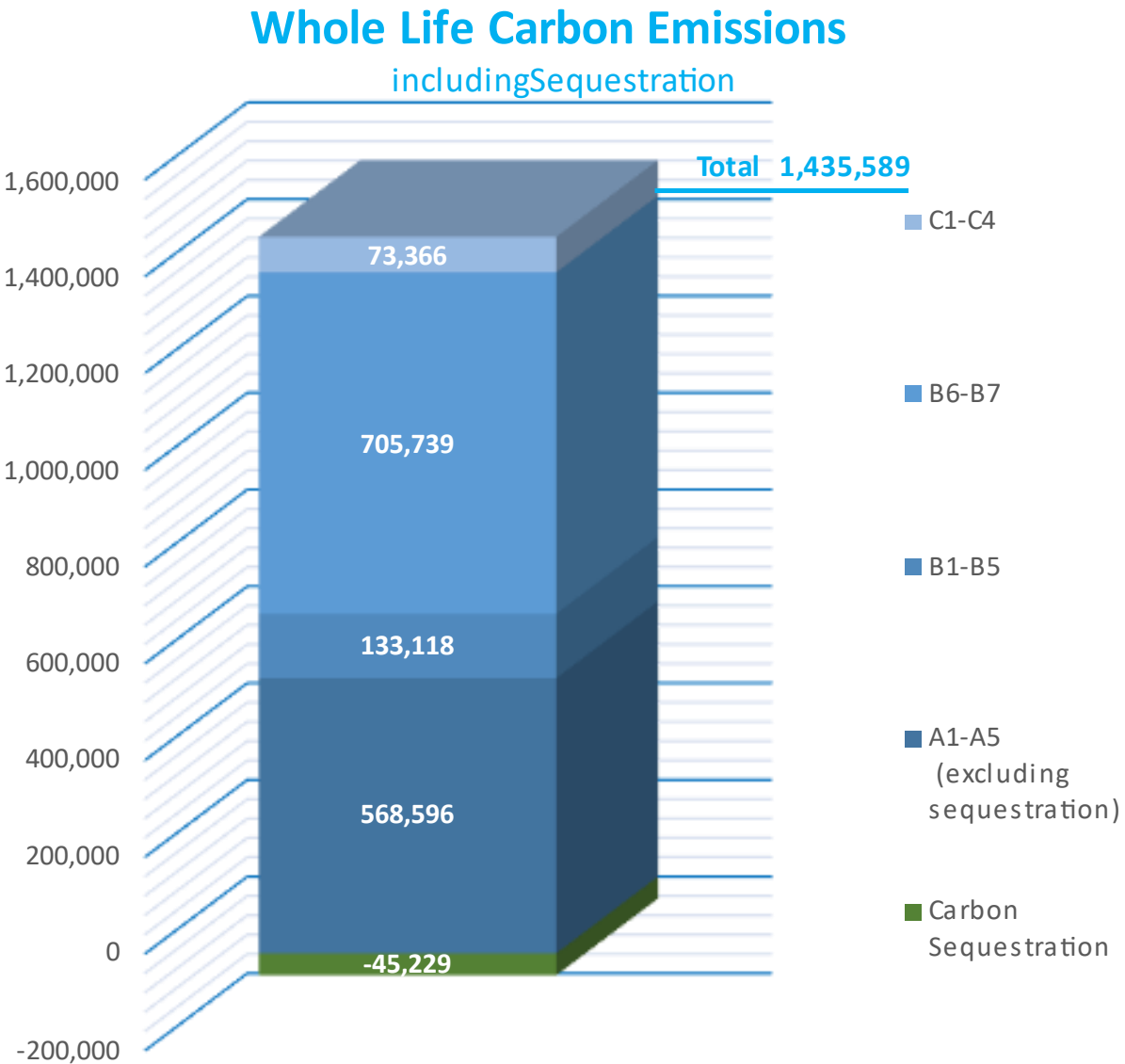
For greater clarity on the WLCA process we provide the following graphic to show the Lifecycle stages / modules.

WLCA – Lifecycle Stages / Modules



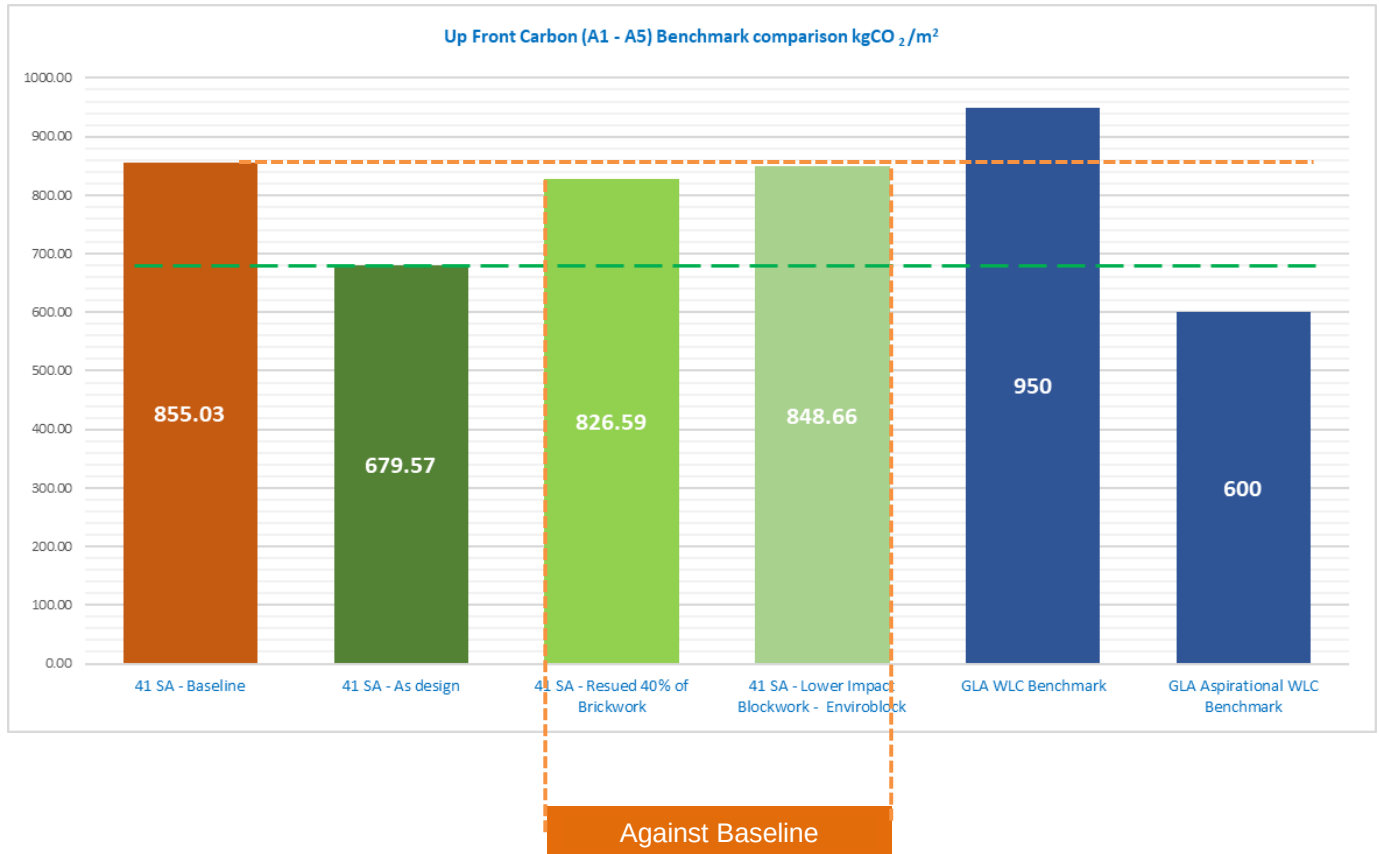
The chart below shows the WLC breakdown for the building, with module A1-A5, B1-B5, and C1-C4.

As Designed – Overall Whole Life Carbon showing sequestration



The following bar chart shows the A1-A5 impact between Baseline, as design and two further consideration option with the WLCA benchmark.

WLCA Results and Options – Summary



Targets and Commitment

This project referred to the GLA Circular Economy Guidance and take the following CE targets into consideration while constructing and procuring.

- ☐ Minimum of **95% of demolition waste** (non-hazardous) to be diverted from landfill for reuse, recycling, or recovery.
- ☐ Minimum of **95% of excavation waste** (non-hazardous) to be diverted from landfill for beneficial reuse.
- ☐ Minimum of **95% of construction waste** (non-hazardous) diverted from landfill for reuse, recycling, or recovery.
- ☐ Minimum of a **65% recycling rate** for operational waste by 2030.
- ☐ Minimum of **20% of the total building material elements** to be comprised of recycled or reused content.