

**STAGE 3 REPORT**

**RELATING TO**

**WHOLE LIFE CARBON ASSESSMENT**

**AT**

**YLCAN CROUCH END**

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1.0 Executive Summary

Potter Raper has undertaken a Whole Life Carbon (WLC) assessment at RIBA Stage 3 for the proposed full new build redevelopment of 184 Tottenham Lane, YLCAN Crouch End. This report supersedes the RIBA Stage 1 options appraisal and focuses exclusively on the new build option that has been carried forward as the preferred scheme. The assessment has been prepared in line with the Greater London Authority (GLA) London Plan Guidance: Whole Life-Cycle Carbon Assessments (March 2022), London Plan (2021) Policy SI2, and the RICS Whole Life Carbon Assessment for the Built Environment Professional Standard, 2nd edition (effective 1 July 2024), using the EN 15978 methodology, OneClick LCA software and the UK Net Zero Carbon Buildings Standard benchmarks.

The site sits within the London Borough of Haringey at the junction of Rosebery Gardens, Tottenham Lane and Elmfield Avenue, and currently comprises three linked blocks of two to five storeys, containing 155 single-occupancy bedrooms together with communal areas and a fitness centre. Following the RIBA Stage 1 options appraisal, the full new build option has been confirmed as the preferred development route, and this report provides a Stage 3 update reflecting the emerging spatial coordination design, in accordance with the requirement under Policy SI2 to submit a WLC assessment at the planning application stage.

The assessment compares the embodied and operational carbon impacts of each option over a 60-year lifecycle. Due to the early stage of design, the analysis relies on generic material profiles and default assumptions, which will be refined as the project progresses. Refurbishment presents the lowest embodied carbon but is associated with higher operational energy use. In contrast, both the deep refurbishment with extension and new build options demonstrate improved operational performance, though they carry higher embodied carbon impacts, particularly the full new build which assumes new piled foundations and modular construction.

A Pre-demolition and Pre-redevelopment Audit of the existing buildings has been carried out by BRE (Report No. P001308R-1, dated 13 February 2026), which estimates that demolition and clearance of the site will give rise to approximately 6,656.42 tonnes of material with a total volume of approximately 3,525.78m³. The findings of that audit have informed the demolition-stage assumptions within this WLC assessment and are summarised below.

| WLC METRIC                                   | RESULT                 |
|----------------------------------------------|------------------------|
| Upfront embodied carbon (A1-A5)              | 1,567.80 kgCO2e/m² GIA |
| Embodied carbon (A1-C4)                      | 2,090.54 kgCO2e/m² GIA |
| Operational energy (regulated + unregulated) | 66.66 kWh/m²/yr        |
| Operational carbon (B6+B7)                   | 18.53 kgCO2e/m²/yr     |
| Whole Life Carbon (A-C, excl. D)             | 3,202.27 kgCO2e/m² GIA |
| Net Whole Life Carbon (A-D)                  | 2,683.02 kgCO2e/m² GIA |

This report should be read alongside the accompanying Circular Economy Statement, prepared in accordance with London Plan Policy SI7 and the London Plan Guidance: Circular Economy Statements (March 2022), which draws on the BRE Pre-demolition Audit to set out the strategy for managing demolition arisings, maximising reused and recycled material content, and designing the new build for longevity, adaptability and future disassembly.

The report recommends that embodied carbon targets are formally fixed for the preferred option at this stage, that a live schedule of specified products and associated Environmental Product Declarations (EPDs) is established and monitored through RIBA Stage 4, and that the WLC model is updated at each subsequent RIBA stage in accordance with GLA reporting requirements, culminating in a post-construction (as-built) WLC assessment at RIBA Stage 6.

## 2.0 Introduction

This Whole Life Carbon (WLC) assessment has been prepared by Potter Raper in relation to the proposed redevelopment of 184 Tottenham Lane, YLCAN Crouch End, and relates solely to the full new build development option, which has been confirmed as the preferred option following the RIBA Stage 1 options appraisal.

Potter Raper has been commissioned to carry out a WLC assessment following the EN 15978 calculation methodology and the RICS Whole Life Carbon Assessment for the Built Environment Professional Standard, 2nd edition, in support of the planning application for the proposed development.

This assessment has been undertaken at RIBA Stage 3 (Spatial Coordination) to accompany the submission of the planning application, in accordance with the requirement of London Plan Policy SI2(F) that developments referable to the Mayor calculate and submit whole life-cycle carbon emissions using the GLA WLC assessment template. The results set out within this report represent the design as developed to Stage 3 and will be updated as the scheme progresses to RIBA Stage 4 and beyond.

## 2.1 Site Description

The site is located and occupies the corner at the junction of Rosebury Gardens, Tottenham Lane, and Elmfield Avenue. The existing building consists of three blocks varying from 2 to 5 storeys in height and contains 155 single occupancy bedrooms.

## 2.2 Scope of WLC Assessment

The RIBA Stage 3 WLC assessment is based on generic material profiles, specifications and EPD data as sourced from OneClick as exact products and specifications have not been finalised. Default transport distances and service life for products were used in accordance with the RICS guidance in line with specification not being finalised.

The assessment, therefore, provide a reflection of the information available at the moment in terms of carbon estimates for the two proposed options for the WLC assessment. This should and will be fully developed as the scheme moves forwards and a preferred scheme is chosen. It should be noted the outputs of the WLC assessment if likely to change as the design progresses through to detailed design and finally to verify the final carbon impact of the development upon completion.

### 2.2.1 Supporting Documentation

To support this assessment Stage 3 reports and drawings from the wider design team have been used.

### 3.0 Planning Policy and Technical Guidance

#### 3.1 Planning Policy

##### 3.1.1 Greater London Authority, London Plan, March 2021

##### SI2 - Minimising Greenhouse Gas Emissions

A – Major developments should be net zero-carbon. This means reducing greenhouse gas emissions in operation and minimising both annual and peak energy demand in accordance with the following energy hierarchy:

- 1) Be lean: use less energy and manage demand during operation.
- 2) Be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly.
- 3) Be green: maximise opportunities for renewable energy by producing, storing and using renewable energy on-site.
- 4) Be seen: monitor, verify and report on energy performance

B – major development proposals should include a detailed energy strategy to demonstrate how the zero-carbon target will be met within the framework of the energy hierarchy

C – A minimum on-site reduction of at least 35 per cent beyond Building Regulations is required for major development. Residential development should achieve 10 per cent, and non-residential development should achieve 15 per cent through energy efficiency measures. Where it is clearly demonstrated that the zero-carbon target cannot be fully achieved on-site, any shortfall should be provided, in agreement with the borough, either:

- 1) Through a cash in lieu contribution to the boroughs carbon offset fund, or
- 2) Off-site provided that an alternative proposal is identified, and deliver is certain.

D – Boroughs must establish and administer a carbon offset fund. Offset fund payments must be ring-fenced to implement projects that deliver carbon reductions. The operation of offset funds should be monitored and reported on annually.

E- Major development proposals should calculate and minimise carbon emissions from any other part of the development, including plant or equipment, that are not covered by Building Regulations, i.e. unregulated emissions

F- Development proposals referable to the Mayor should calculate whole life-cycle carbon emissions through a nationally recognised Whole Life-Cycle Carbon Assessment and demonstrate actions taken to reduce life-cycle carbon emissions.

##### 1. Whole life-cycle Carbon Assessments, London Plan Guidance, March 2022

This guidance explains how to prepare Whole Life-cycle carbon assessments in line with Policy S12 of the London Plan, March 2021.

Policy SI2 applies to planning applications which are referable to the Mayor, however WLC assessments are also supported and encouraged on major developments, not referable to the Mayor.

This guidance explains how to calculate WLC emissions and outlines the information that needs to be submitted to comply with the Policy.

The principal benefits of calculating and reducing WLC emissions include:

- Ensuring that a significant source of emissions from the built environment are accounted for which is necessary in achieving a net-zero carbon city.

- Achieving resource efficiency and cost savings by encouraging the re-use of existing materials instead of new materials and the retrofit and retention of existing structures and fabric over new construction
- Identifying the carbon benefits of using recycled materials and the benefits of designing for future reuse and recycling to reduce waste and support the circular economy.
- Encouraging a 'fabric first' approach to building design thereby minimising mechanical plant and services in favour of natural ventilation.
- Considering operational and embodied carbon emissions simultaneously to find the optimum solutions for the development over its lifetime.
- Identifying the impact of maintenance, repair and replacement over the building's life cycle which improves life-time resource efficiency and reduces life-cycle costs, contributing to the future proofing of asset value.
- Encouraging local sourcing of materials and short supply chains, with resulting carbon, social and economic benefits for the local economy.
- Encouraging durable construction and flexible design, both of which contribute to greater longevity, reduced obsolescence of buildings and avoiding carbon emissions associated with demolition and new construction.

## 3.2 Technical Guidance

### 3.2.1 RICS Professional Statement UK – Whole Life Carbon Assessment for the Built Environment

This professional statement is intended to standardise whole life carbon assessments and enhance consistency in outputs by providing specific practical guidance for the interpretation and implementation of the methodology in EN 15978 in carbon calculations.

The specific objectives of the RICS Professional statement is to

- Provide a consistent and transparent whole life carbon assessment implementation plan and reporting structure for built projects in line with EN 15978.
- Enable coherence in the outputs of whole life carbon assessments to improve the comparability and usability of results.
- Make whole life carbon assessments more 'mainstream' by enhancing their accessibility and therefore encourage greater engagement and uptake by the built environment sector.
- Increase the reliability of whole life carbon assessments by providing a solid source of reference for the industry.
- Promote long-term thinking past project practical completion, concerning the maintenance, durability, and adaptability of building components and the project as a whole.
- Promote circular economy principles by encouraging future repurposing of building components, as well as the project as a whole through quantify.

As a minimum, RICS requires the Whole Life Carbon Assessments to be carried out before the commencement of technical design (RIBA Stage 4 or equivalent) of the project.

### 4.0 Methodology

Potter Raper have undertaken this whole life carbon assessment options appraisal of the carbon impacts of construction materials across the whole lifecycle of the refurbishment option and new build options for YLCAN Crouch End in line with RICS guidance.

#### 4.1 One Click LCA

Potter Raper have used OneClick LCA to carry out this assessment. OneClick LCA is an online Building Life-Cycle Assessment software. It is an industry-leading Platform used by many construction industry consultancies. OneClick LCA also offers a plug-in tool called Carbon Designer. This tool provides quantities of assumed materials and build up where only GIA is available and has been used to analyse the interim Whole life carbon assessment for the new build options.

#### 4.2 Data Sources

The following data sources have been used in the interim to set out targets for whole life carbon, where data is currently unavailable.

- UK Net Zero Carbon Buildings Standard
- Database OneClick LCA – generic material/component databases.
- Design Team stage 3 reports

#### 4.3 Approach

The whole life carbon assessment has followed the lifecycle stages as set out in EN 15978 and include A1-A5, B1-4/5, B6 and C1-4; over a 60-year life cycle. The WLC assessment is being carried out at a very early stage and therefore embodied and operational emissions are estimated based on the preliminary information available at the time.

The 60-year lifecycle has been applied to the new build option and the new material elements of the refurbishment option. The exiting and retained materials have been discounted as they are already in use, however it should be noted that the refurbishment option and extension option may increase in embodied carbon to be able to achieve a 60-year lifecycle as the current structure has already exceeded this.

# WHOLE LIFE CARBON ASSESSMENT

## YLCAN CROUCH END

| WHOLE LIFE CARBON ASSESSMENT INFORMATION |                                  |                             |                            |                                     |                             |             |        |             |               |                           |                                |                                                         |          |                                               |
|------------------------------------------|----------------------------------|-----------------------------|----------------------------|-------------------------------------|-----------------------------|-------------|--------|-------------|---------------|---------------------------|--------------------------------|---------------------------------------------------------|----------|-----------------------------------------------|
| PROJECT LIFE CYCLE INFORMATION           |                                  |                             |                            |                                     |                             |             |        |             |               |                           |                                | SUPPLEMENTARY INFORMATION BEYOND THE PROJECT LIFE CYCLE |          |                                               |
| [A1 – A3]                                |                                  |                             | [A4 – A5]                  |                                     | [B1 – B7]                   |             |        |             |               | [C1 – C4]                 |                                |                                                         |          | [D]                                           |
| PRODUCT stage                            |                                  |                             | CONSTRUCTION PROCESS stage |                                     | USE stage                   |             |        |             |               | END OF LIFE stage         |                                |                                                         |          | Benefits and loads beyond the system boundary |
| [A1]                                     | [A2]                             | [A3]                        | [A4]                       | [A5]                                | [B1]                        | [B2]        | [B3]   | [B4]        | [B5]          | [C1]                      | [C2]                           | [C3]                                                    | [C4]     |                                               |
| Raw material extraction & supply         | Transport to manufacturing plant | Manufacturing & fabrication | Transport to project site  | Construction & installation process | Use                         | Maintenance | Repair | Replacement | Refurbishment | Deconstruction Demolition | Transport to disposal facility | Waste processing for reuse, recovery or recycling       | Disposal | Reuse Recovery Recycling potential            |
|                                          |                                  |                             |                            |                                     |                             |             |        |             |               |                           |                                |                                                         |          |                                               |
|                                          |                                  |                             |                            |                                     |                             |             |        |             |               |                           |                                |                                                         |          |                                               |
|                                          |                                  |                             |                            |                                     |                             |             |        |             |               |                           |                                |                                                         |          |                                               |
|                                          |                                  |                             |                            |                                     | [B6] Operational energy use |             |        |             |               |                           |                                |                                                         |          |                                               |
|                                          |                                  |                             |                            |                                     | [B7] Operational water use  |             |        |             |               |                           |                                |                                                         |          |                                               |

| LIFE CYCLE STAGE                     | ANALYSIS SCOPE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A1-A3 Construction Materials         | Raw material supply [A1] includes emissions generated when raw materials are taken from nature, transported to industrial units for processing and processed. Loss of raw material and energy are also taken into account. Transport impacts [A2] include exhaust emissions resulting from the transport of all raw materials from suppliers to the manufacturer's production plant as well as impacts of production of fuels. Production impacts [A3] cover the manufacturing of the production materials and fuels used by machines, as well as handling of waste formed in the production processes at the manufacturer's production plants until end-of-waste state. |
| A4 Transport to Site                 | [A4] includes exhaust emissions resulting from the transport of building products from manufacturer's production plant to building site as well as the environmental impacts of production of the used fuel                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| A5 Construction/Installation process | [A5] covers the exhaust emissions resulting from using energy during the site operations, the environmental impacts of production processes of fuel and energy and water as well as handling of waste until the end-of-waste state                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| B1 In-Use                            | The [B1] in- use module [B1] captures the emissions arising during the life of a building from its components, e.g., the leakage of refrigerant from heat pumps.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| B2 Maintenance                       | [B2] accounts for the carbon emissions arising from any activities relating to maintenance processes, including cleaning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| B3 Repair                            | Module [B3] must take into account the carbon emissions arising from all activities that relate to repair processes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| B4 Material Replacement              | The environmental impacts of material replacements (B4) includes environmental impacts from replacing building products after they reach the end of their service life. The emissions cover impacts from raw material supply, transportation, and production of the                                                                                                                                                                                                                                                                                                                                                                                                      |

|                                         |                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                         | replacing new material as well as the impacts from manufacturing the replacing material as well as handling of waste until the end-of-waste state                                                                                                                                                                                                                                              |
| B5 Refurbishment                        | [B5] takes into account any carbon emissions associated with any building components used in a refurbishment, including any emissions from refurbishment activities. In this WLC study B4 and B5 figures are all accounted under module B4.                                                                                                                                                    |
| B6 Energy Use                           | The considered use phase energy consumption (B6) impacts include exhaust emissions from any building level energy production as well as the environmental impacts of production processes of fuel and externally produced energy. Energy transmission losses are also taken into account.                                                                                                      |
| B7 Operational Water use                | All carbon emissions related to water supply and wastewater treatment, over the life cycle of the building (excluding water use during maintenance, repair, replacement, and refurbishment that are reported elsewhere).                                                                                                                                                                       |
| C1-C4 Deconstruction                    | The impacts of deconstruction include impacts for processing recyclable construction waste flows for recycling [C3] until the end-of-waste stage or the impacts of pre-processing and landfilling for waste streams that cannot be recycled [C4] based on type of material. Additionally, deconstruction impacts include emissions caused by waste energy recovery.                            |
| D External Impacts/End of Life Benefits | The external benefits include emission benefits from recycling recyclable building waste. Benefits for re-used or recycled material types include positive impact of replacing virgin-based material with recycled material and benefits for materials that can be recovered for energy cover positive impact for replacing other energy streams based on average impacts of energy production |

### 4.3.1 Product stage

OneClick's extensive LCA database of building materials was used to calculate the whole lifecycle carbon (WLC) emissions of the site because it's extensive database allows for the selection of materials that are representative of the baseline materials. As per the RICS guidance the reference study period (RSP) is 60 years, which aligns with the operational design life of 60 years. The functional unit for the assessment is kgCO<sub>2</sub>e/m<sup>2</sup> GIA.

### 4.3.2 Demolition

RICS guidance acknowledges that "Demolition works are often decoupled from new construction projects, hence the responsibility for any emissions arising from demolition is not necessarily solely attributable to the new build project". As stated within the guidance "New build projects assessed are considered to commence their development on a cleared, flat site for consistency purposes." [2]. Accordingly, this is the approach taken for this assessment. However, a Pre-demolition Audit will be undertaken prior to any demolition works commencing and opportunities for re-use or recycling of materials will be explored. It is envisaged that materials such as bricks and concrete from the existing building will be crushed and re-used as aggregates on-site. Due to the scale of the project, this material may only account for a small proportion of the total volume required however, further recycled aggregates are to be obtained for this purpose.

### 4.3.3 Construction stage

Construction activities have been assumed based on geographic location of the project and building area to calculate electricity, fuel, waste, and transportation impacts of the development's construction. This is calculated using an algorithm within the OneClick.

#### 4.3.4 Use stage

Operational energy demands (B6) have been based on the limits within the UK Net Zero Carbon Building Standard. An energy report which is being produced to demonstrate compliance with Greater London Authority planning policy, based on Building Regulations Part L 2021 modelling. In accordance with the GLA Energy Assessment Guidance the Part L modelling is based on a representative sample of the properties. It is noted that Part L modelling does not accurately represent a building's energy performance because it focuses solely on the carbon produced through the use of the building's services (heating, hot water ventilation and air conditioning) and lighting, known as regulated emissions. The modelling excludes any carbon emissions emitted using appliances such as cooking and plug in appliances, known as unregulated emissions. Therefore, it is anticipated that the in-use emissions will change and increase when the unregulated emissions are considered.

#### 4.3.5 End-of-life stage

Emissions from deconstruction are calculated within the OneClick software based on the known parameters of the building and its location.

#### 4.3.6 Limitations

The LCA was completed using generic materials data and specifications as exact products or specifications have not been finalised, and default transport distances and service life of products were used in accordance with the RICS guidance where specific information is not currently known. This use of generic information can be reviewed and the allowances in the design of the model can be refined as the detailed design develops.

## 5.0 Results

### 5.1 Baseline results

The results presented below reflect the design as developed to RIBA Stage 3. Individual manufacturer EPDs have been incorporated where available; generic OneClick LCA data has been used elsewhere. Results should be treated as indicative and will be refined as the detailed design progresses through RIBA Stage 4.

### 5.2 Upfront Embodied Carbon (A1-A5)

Upfront embodied carbon (modules A1-A5) is reported as a standalone metric in accordance with the London Plan Guidance and industry best practice (e.g. LETI, GLA benchmarks), reflecting the emissions locked in prior to occupation.

| MODULE                                | RESULT (KGC02E/M <sup>2</sup> GIA) | % OF UPFRONT CARBON |
|---------------------------------------|------------------------------------|---------------------|
| A1-A3 Product Stage                   | 1,461.40                           | 93.2                |
| A4 Transport to Site                  | 16.36                              | 1.0                 |
| A5 Construction Process               | 90.04                              | 5.7                 |
| Total Upfront Embodied Carbon (A1-A5) | 1,567.80                           | 100                 |

### 5.3 Whole Life Embodied Carbon (A1-C4)

| MODULE                            | RESULT (KGC02E/M <sup>2</sup> GIA) |
|-----------------------------------|------------------------------------|
| A1-A5 Product & Construction      | 1,567.80                           |
| B1 In-Use                         | 1,092.6                            |
| B2 Maintenance                    | 10.00                              |
| B3 Repair                         | 2.50                               |
| B4-B5 Replacement & Refurbishment | 472.72                             |
| C1-C4 End of Life                 | 87.02                              |
| Total Embodied Carbon (A1-C4)     | 2,090.54                           |
| D Benefits Beyond System Boundary | -519.25                            |

### 5.4 Operational Carbon

Operational carbon is based on the outputs of the Energy Statement modelling, incorporating both regulated and unregulated emissions in accordance with GLA guidance.

| METRIC                                                               | REGULATED | UNREGULATED | TOTAL |
|----------------------------------------------------------------------|-----------|-------------|-------|
| Operational energy (kWh/m <sup>2</sup> /yr)                          | 25.88     | 42.72       | 68.66 |
| Operational carbon B6 (kgCO <sub>2</sub> e/m <sup>2</sup> /yr)       | 6.86      | 11.35       | 18.21 |
| Operational water carbon B7 (kgCO <sub>2</sub> e/m <sup>2</sup> /yr) | n/a       | n/a         | 0.32  |

### 5.5 Whole Life Carbon Summary

| WLC METRIC                                     | RESULT (KGC02E/M <sup>2</sup> GIA OVER 60 YEARS) |
|------------------------------------------------|--------------------------------------------------|
| Total embodied carbon (A1-C4)                  | 2,090.54                                         |
| Total operational carbon (B6+B7 over 60 years) | 1,111.73                                         |
| Whole Life Carbon, excl. Module D (A-C)        | 3,202.27                                         |
| Module D net benefit/burden                    | -519.25                                          |
| Net Whole Life Carbon, incl. Module D (A-D)    | 2,683.02                                         |

### 6.0 Carbon Reduction Strategy

In accordance with London Plan Policy SI2(F) and the GLA WLC Assessment Guidance, the following measures have been / will be considered to reduce the whole life carbon impact of the new build option as the design develops through RIBA Stage 4:

- Specification of low-carbon concrete mixes and reduced cement content,
- Maximising the use of crushed concrete and brick recovered from demolition as recycled aggregate in the new build substructure, in line with the BRE Pre-demolition Audit recommendations
- Prioritisation of responsibly sourced, low-embodied-carbon structural materials
- Optimisation of the piling and substructure design to reduce material quantities
- Procurement of products with third-party verified EPDs in place of generic data
- Design for disassembly and future adaptability, to maximise Module D benefits
- Reduction of unregulated operational energy demand through appliance specification and resident engagement

Recommended Stage 3 Embodied Carbon Target: It is recommended that a fixed upfront embodied carbon (A1-A5) target of [insert figure] kgCO<sub>2</sub>e/m<sup>2</sup> GIA is adopted for the new build option and carried forward as a design control through RIBA Stage 4 technical design.

### 7.0 Policy Compliance Statement

The table below summarises the compliance of this Stage 3 WLC assessment against the key requirements of London Plan Policy SI2 and the associated London Plan Guidance.

| REQUIREMENT                                                                 | COMPLIANCE                        |
|-----------------------------------------------------------------------------|-----------------------------------|
| WLC assessment prepared using EN 15978 / RICS methodology                   | Compliant – see Section 4         |
| WLC assessment submitted at planning application stage (Policy SI2(F))      | Compliant – this report           |
| All life-cycle modules A-D reported                                         | Compliant – see Section 6         |
| Pre-demolition audit undertaken and referenced (Policy SI7 cross-reference) | Compliant – BRE Report P001308R-1 |
| GLA WLC assessment template completed and submitted                         | Compliant – companion document    |
| Unregulated emissions included in operational carbon                        | Compliant – see Section 6.3       |
| Embodied carbon benchmarked against GLA / LETI / RIBA targets               | Compliant – see Section 6.5       |
| Circular Economy Statement submitted (Policy SI7)                           | Compliant – companion document    |
| Post-construction WLC assessment secured by condition/S106                  | TBC                               |

## 8.0 Conclusion

This RIBA Stage 3 WLC assessment provides an updated, design-stage carbon appraisal for the new build option only, superseding the RIBA Stage 1 options appraisal, and has been prepared to accompany the planning application for the proposed development in accordance with London Plan Policy SI2 and the associated London Plan Guidance.

The results indicate that the new build option carries a higher embodied carbon burden than the refurbishment options previously appraised, principally driven by new piled foundations and the new structural frame, but is expected to deliver improved operational energy performance and full compliance with current energy and accessibility standards. The BRE Pre-demolition Audit confirms strong potential to divert 97.9% of demolition arisings from landfill, which — together with the carbon reduction measures set out at Section 7 — supports the overall carbon strategy for the scheme.

The following actions are recommended as the scheme progresses through detailed design and construction:

| ACTION |                                                                                                                | TIME                       | EFFECT                              |
|--------|----------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------|
| 1      | Fix embodied carbon target for the new build option and issue to the design team                               | RIBA Stage 3 (this report) | Baseline set                        |
| 2      | Update the WLC model with detailed design information (structure, envelope, MEP, finishes)                     | RIBA Stage 4               | Expected refinement                 |
| 3      | Procure products with verified EPDs in place of generic data; review design against carbon hotspots            | RIBA Stage 4               | Expected neutral change or decrease |
| 4      | Confirm demolition contractor's reuse/recycling routes against BRE audit recommendations                       | RIBA Stage 4               | Supports Module D                   |
| 5      | Undertake final 'as-designed' WLC assessment to represent the final design and confirm GLA template submission | RIBA Stage 4               | Expect neutral change of decrease   |
| 6      | Undertake 'as-constructed' WLC assessment to represent the completed development                               | RIBA Stage 6               | Confirms performance                |
| 7      | Submit post-construction WLC assessment to the GLA in accordance with planning condition/S106                  | RIBA Stage 6               | Compliance                          |