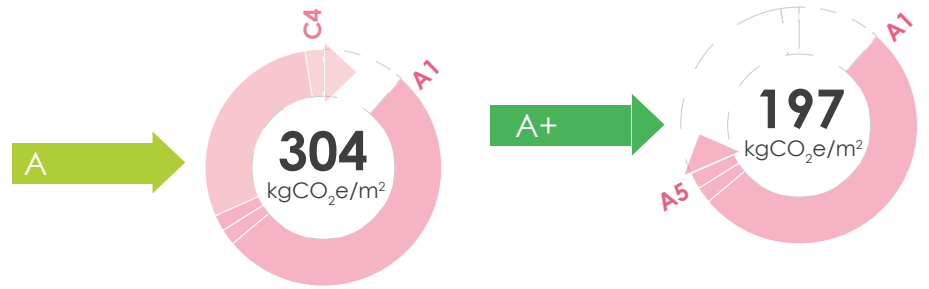
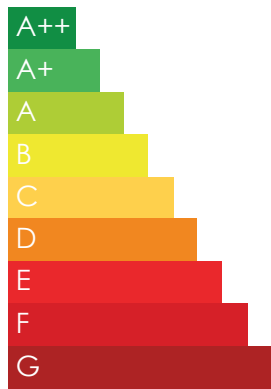


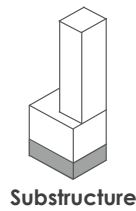
The Standard by Orms



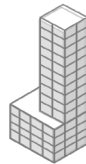
Life cycle embodied carbon
A1-C4 ex B6,B7

Upfront embodied carbon
A1-A5

Building elements included



Substructure



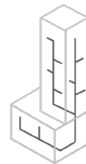
Superstructure



Finishes



FF&E



Building services

Project overview

Housed in the former Camden Town Hall Annexe, a 1974 Brutalist structure overlooking King's Cross, the 266-room hotel marks the first in The Standard's global growth ambitions. As lead consultant, Orms was responsible for the exterior architecture / shell and core on behalf of Crosstree Real Estate Partners and The Standard.

Project sector

Hotel

Assessment date

2020 (at RIBA Stage 7 - In Use)

RIBA work stage

6

GIA (m²)

17,317 m²

Year of project completion

2019 (Complete)

Analysis

Sturgis Carbon Calculator

Database(s) used

RICS professional Statement

Type of building

Retrofit of an existing building and new addition

Ref. study period

60 years

Location

UK

Data notes

Storeys 3 New, 8 Existing, Existing Pre-cast Concrete, New PVD Stainless Steel Cladding and Double Glazed Curtain Walling System



Image c. Timothy Soar

Assessment objective

The assessment was undertaken to understand the benefits of reusing and adapting an existing structure, using stage 3 design information, by a sub consultant.

Key lessons learned

The assessment demonstrates that through Orms's long practiced strategy of maximum retention of existing building fabric the embodied carbon impact of a project may be reduced significantly.

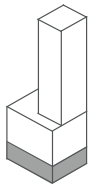
By using clever design solutions the character of our existing urban fabric can be preserved and enhanced while repurposing buildings which are innovative and exciting as well as sustainable.

Key barriers and challenges

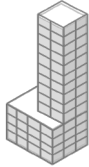
The existing structure is unusual in that the characteristic precast façade supports the frame. The depth of the plan and the low floor to ceiling heights combined with structural complexities led the former owner to vacate and sell the building in 2011. As such most of the other bids for the site involved demolition and rebuilding.

Archive drawings and BIM were used in collaboration with Heyne Tillet Steel at an early stage to understand the potential and limitations of the existing fabric and inform the persuasive initial design proposal.

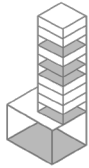
Building elements embodied carbon (A1-A5)



Substructure
5 kg CO₂e/m² (A1-A5)



Superstructure
182 kg CO₂e/m² (A1-A5)



Finishes
9 kg CO₂e/m² (A1-A5)



FF&E
N/A kg CO₂e/m² (A1-A5)



Building services
N/A kg CO₂e/m² (A1-A5)

Success stories

The team sought to work with the existing building as much as possible. This required the team to first understand the existing building, identify and realise the opportunities it presented. This approach minimised the amount of demolition and maximised the amount of reuse of the structure in situ. Risers, lift shafts and most of the staircases were reused.

Material selection

The PVD (Physical Vapor Deposition) stainless steel cladding to the new extension was chosen for its durability and is also recyclable at end of life. Timber was also used to clad the facade around eighth floor terraces and the ground floor. For other materials and products, local sourcing was an important consideration.

Design decision justification

The façade's existing precast concrete panels formed an integral part of the building's structure and so could not be removed or altered without significant structural remodelling to accommodate the additional weight of the three new floors. Orms collaborated with Structural engineers Heyne Tillett Steel to add new steel columns to the existing structure. These were threaded like needles down through the existing waffle slabs to the first floor transfer slab and concrete columns below and incorporated into the build-up of the new dividing walls between bedrooms. A lightweight steel frame solution was developed for the roof extension to minimise the impact on the overall loadings to the existing concrete frame and foundations.

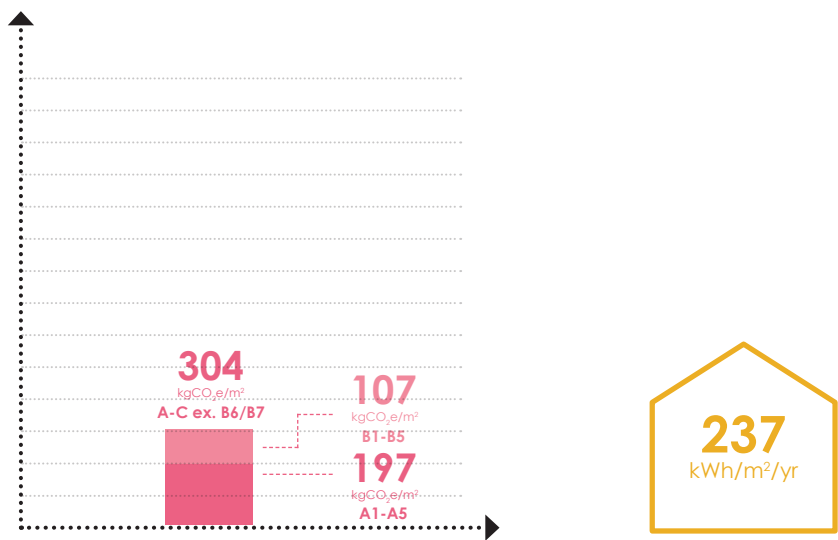
Client engagement

The existing building was not listed and had been previously identified as one which detracted from the character and appearance of the local conservation area. However, the design team felt that it was under-appreciated and, along with the client, Crosstree Real Estate Partners, developed ideas to retain it.

Design benchmarks

Embodied carbon targets/benchmarks did not exist at the time of design, however a BREEAM Very Good rating was achieved (BREEAM 2014 Non-Domestic Refurbishment).

Life cycle embodied carbon reporting summary



Operational energy estimation method:
PHPP at design stage

Client:

Crosstree Real Estate Partners and The Standard

Lead consultant, envelope and shell and core architect:

Orms, Director John McRae and Associate Director Simon Whittaker

Structural engineer:

Heyne Tillett Steel

M&E consultant:

Arup

Quantity surveyor:

Gardiner & Theobald

Project manager:

Tower Eight

Main contractor:

McLaren

Interior architect:

Archer Humphries

Interior designer:

Shawn Hausman Design