

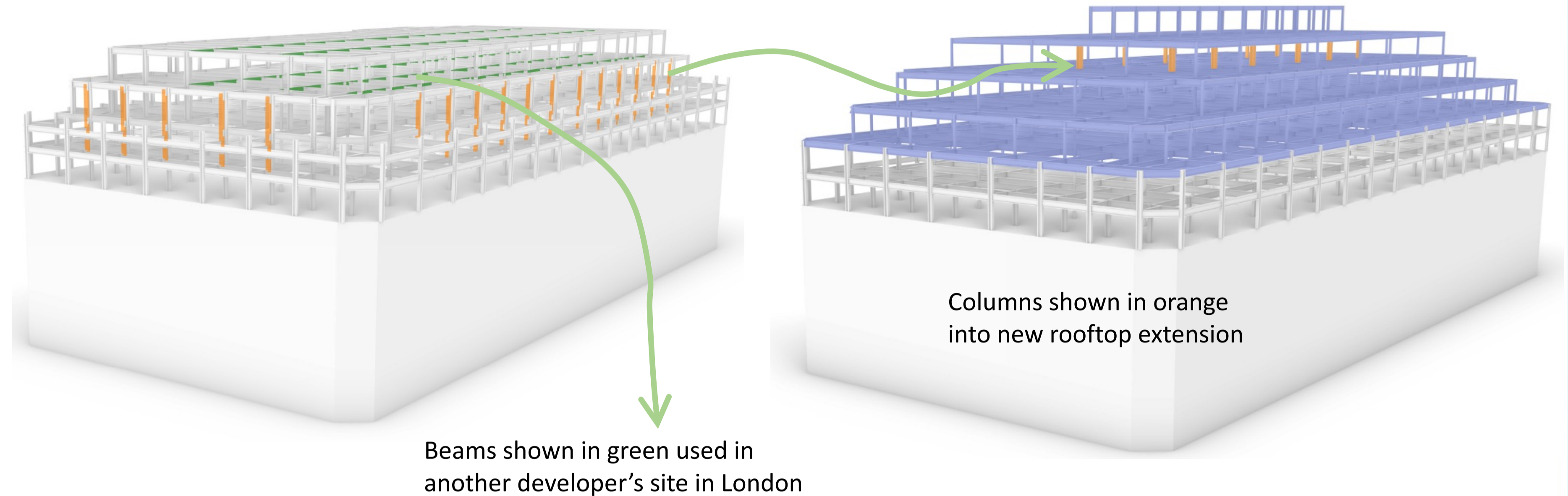
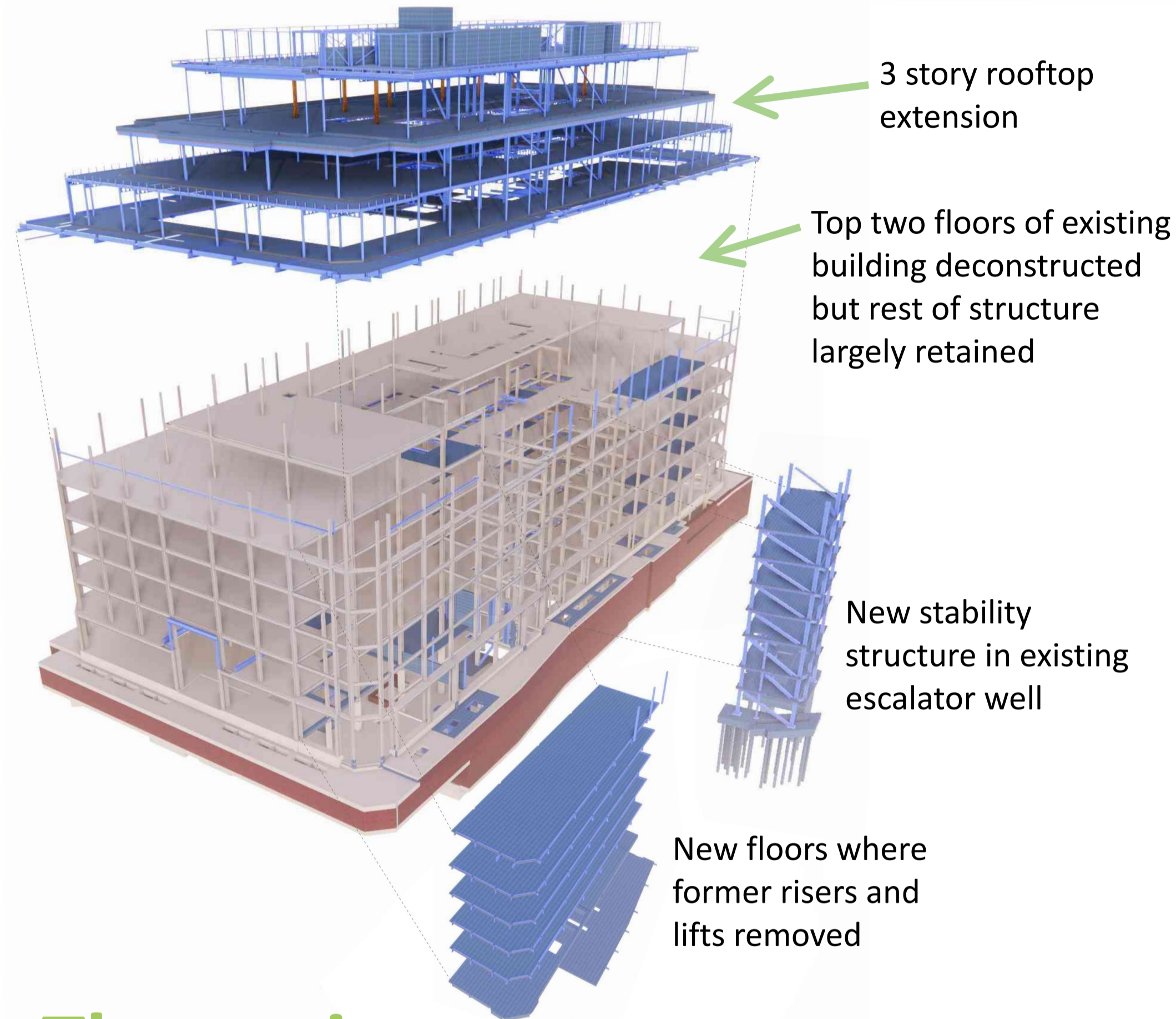
318 Oxford Street (House of Fraser) – Case study



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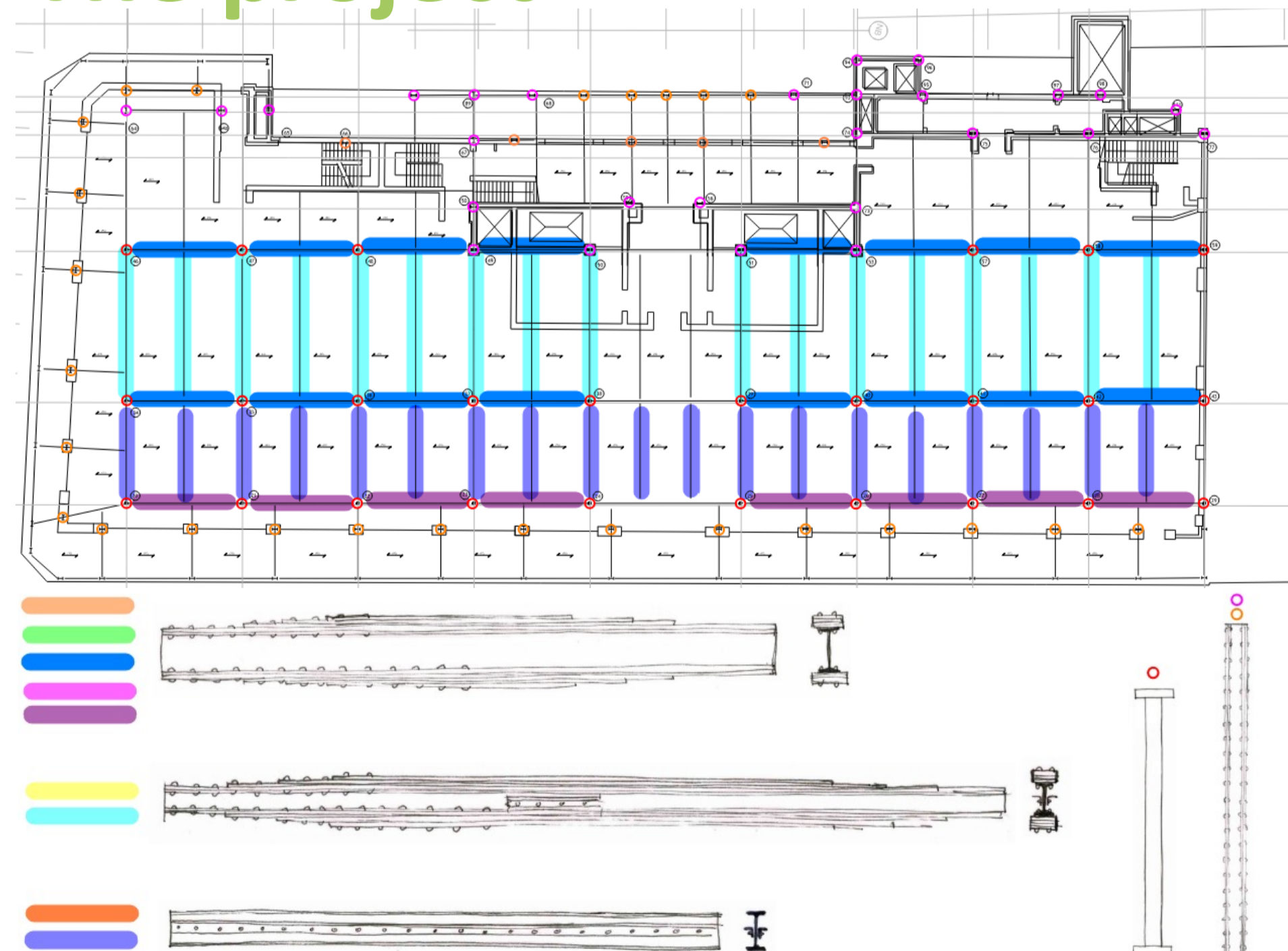


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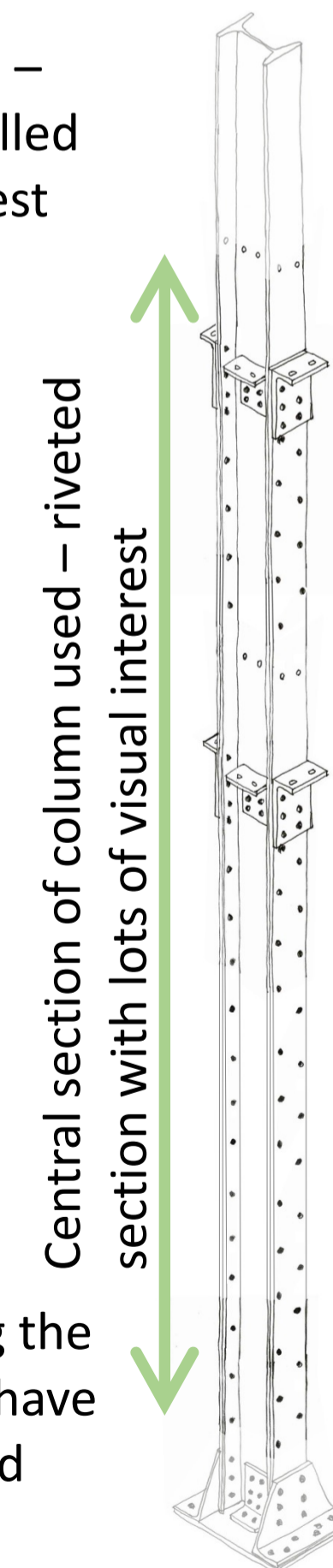


Where the steelwork is going

The project



Top of column trimmed – section lost is simple rolled section with little interest



We considered re-using the baseplate but it would have projected above FFL and caused a trip hazard

- Original building constructed mid 1930s, as a department store for DH Evans (latterly House of Fraser).
- Largely riveted steel frame with precast concrete floors
- 6th and 7th floor of the original building had very restricted floor-floor height – unsuitable for modern commercial use.
- Current scheme is a heavy retrofit with office-led mixed use. Ground floor to be retail and top floor will be signature restaurant.
- Scheme involves deconstruction of roof, columns 7th to roof and 7th floor. Columns 6th -7th kept and re-used in-situ.
- New steel frame from 6th floor upwards provides better floor-floor heights and net one extra story
- Most steel members re-used were tested – because there were a large number of different section types making grouping members difficult
- Steelwork tested found to vary generally between modern S235 and S275. S235 used in design with a reduction factor to account for potential variability.
- Steel composition tested for weldability – found to be acceptable
- Additional capacity justified by using Eurocode rather than contemporary steelwork codes (LCC 1932). Justified roughly 15% higher loads.
- Reused columns will be exposed and painted as a feature in the restaurant. (Only support roof so fire protection not needed.)

Audit of dismantled steelwork

Columns

Details

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Original construction – mid 1930s

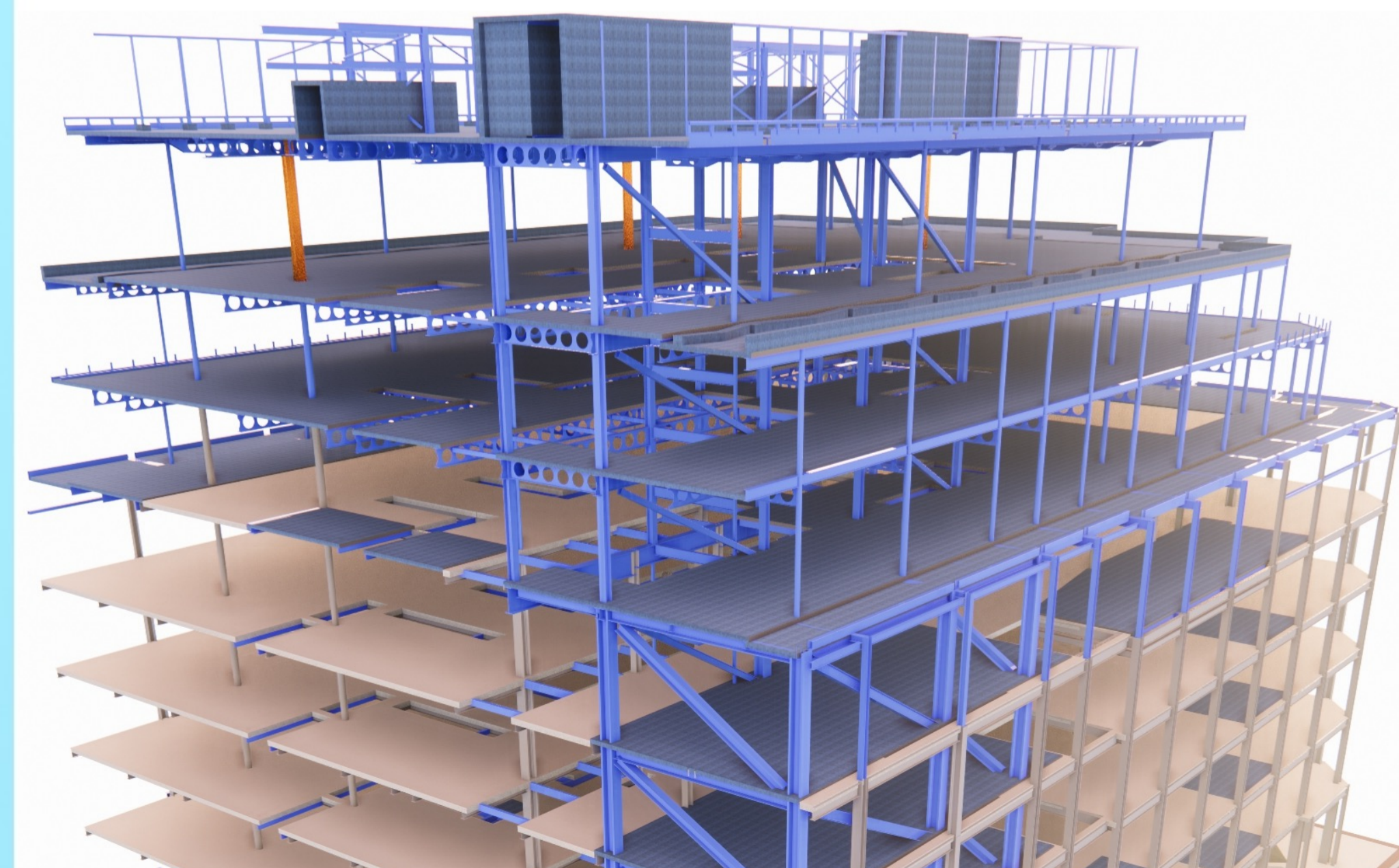


Initial sampling and testing of steelwork for design



Members exposed and inspected on site

Refabricated steelwork incorporated in 318 Oxford St extension soon



2.5T

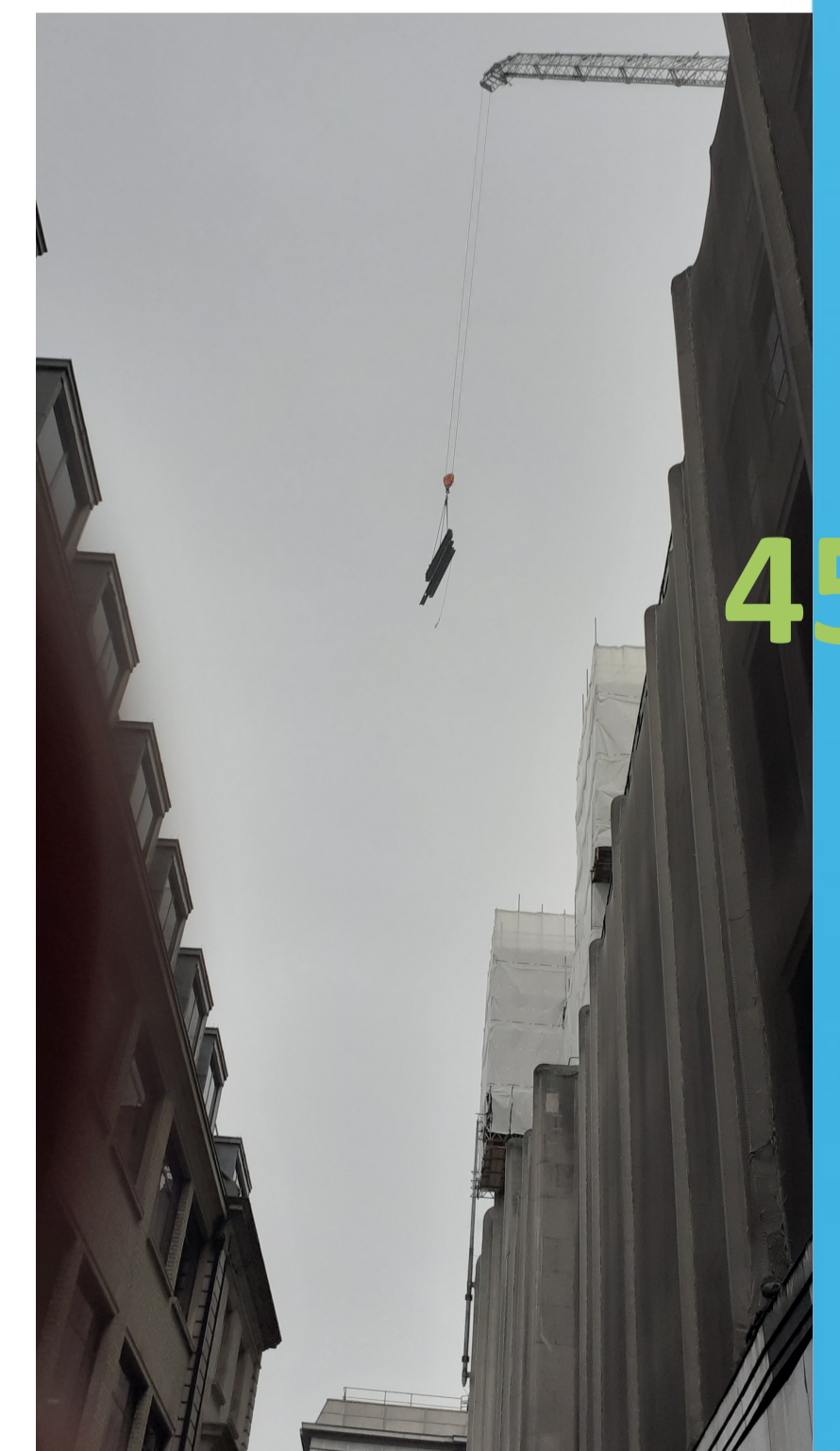
Steelwork sent for further testing and refabrication

Fabrication losses – sent for recycling

20T



Refabricated steelwork erected on another site in London



45T

Tower crane lifts members down