

65 Gresham Street – Steel Salvage

Introduction

- Prior to project commencement, Buro Happold provided Getjar with a steelwork recovery model (bottom of page).
- The model identified steel elements suitable for salvage and reuse.
- To date, Getjar has salvaged over 40 tonnes of structural steel from the project.

Size	Length (m)	Quantity
UC 305x305x198	7.7	2
UC 254x254x107	6.8	2
UC 203x203x52	Varying between 5-7	24
UC 305x305x97	8	7

Size	Length (m)	Quantity
UB 533x210x82	8	4
FB 540x210x40x20	8	1
FB 540x300x60x30	8	1
FB 540x210x40x20	7.25	1
FB 540x210x20x10	5.7	1

Getjar stock list of available steel

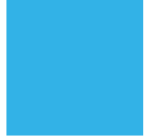


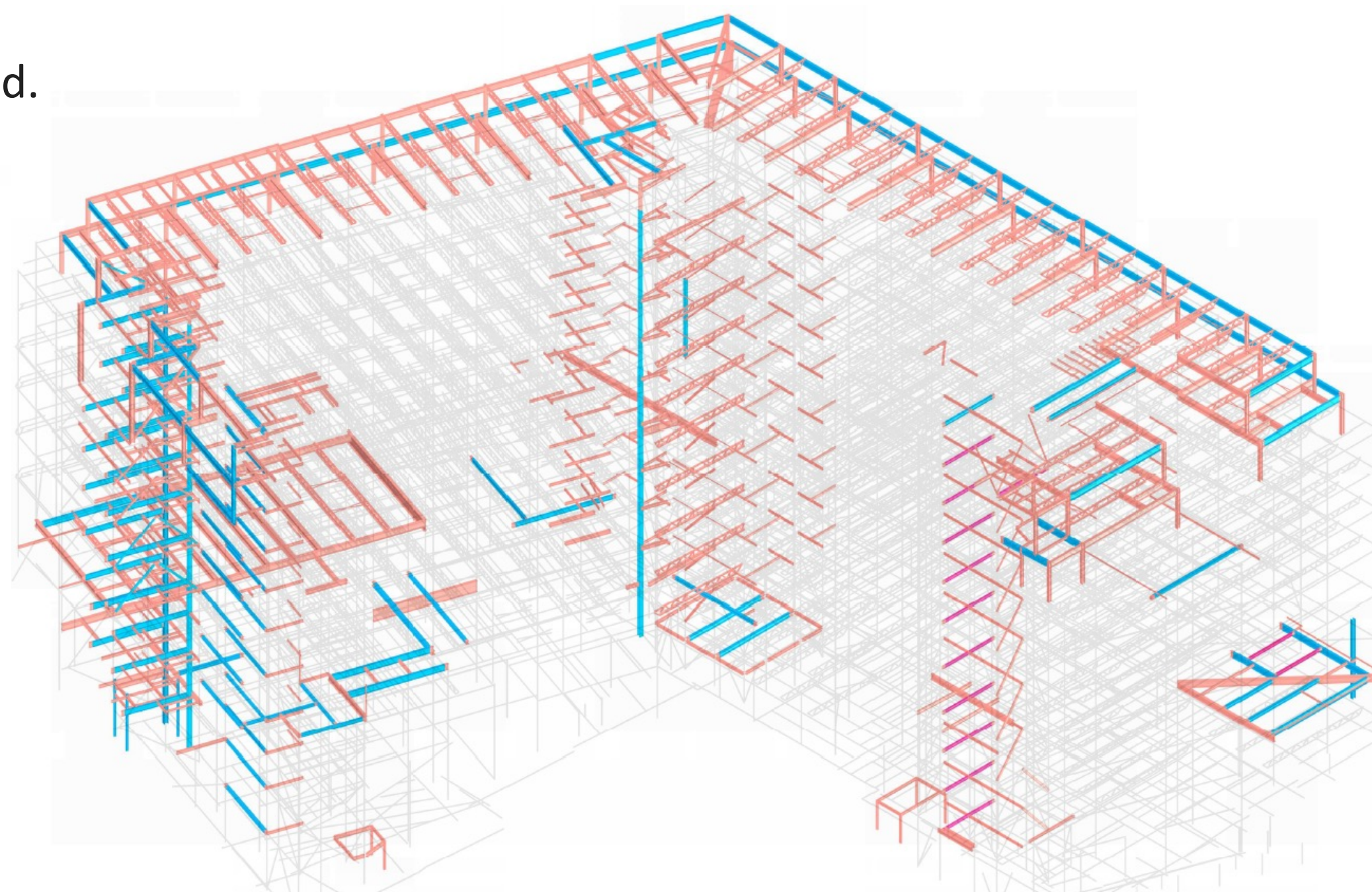
Why salvage steel?

- As the contractor, we control what happens to steel during demo. Salvaging it keeps material in use and out of the waste stream, the core of the circular economy.
- 99% of UK structural steel is recovered, but 86% goes to recycling and only 13% to reuse; reuse avoids the energy of re-melting.
- Reused steel cuts embodied carbon by up to 97% versus new sections and is around 10 times less carbon intensive than recycling.
- Steel prices fluctuate massively. Salvaged stock shields the project from price spikes and supply delays on new sections.
- Demolition becomes a supply chain: careful deconstruction turns a waste cost into a material with real value.

Dismantled Steelwork Recovery Review

- Cellular beams excluded as they are unlikely to be reused in stock.
- Bracing elements excluded as they are likely to be retained for temporary works.
- Steel beam weights less than 50kg/m excluded as they are likely to be damaged during removal of composite decking.
- Lengths shorter than 4.5m excluded.

-  Steelwork to be prioritised and carefully dismantled for reuse opportunities (**94.7 tonnes**)
-  Steel beams larger than 40kg/m which may have potential for reuse (**2.8 tonnes**)
-  Steelwork to be dismantled
-  Steelwork to be retained



Why tensile strength testing is needed

- Reclaimed steel rarely comes with mill certificates, so its grade and properties must be proven before reuse.
- Tensile tests on coupons cut from sample beams measure yield strength, ultimate strength and elongation (see diagram).
- Results let the engineer assign design strengths to the salvaged sections in line with SCI P427 and BS EN 1090-2.
- Without testing, only conservative default values could be assumed, limiting how the steel can be reused.

