



Steely resolve can make reuse work

FORE Partnership's TBC.London scheme, notable for its innovative reuse of pre-war steel, shows that recycling materials can be a viable retrofitting development solution. **Tim Clark** reports

“Where you see the tiny holes in the steel beam, that means it's from House of Fraser on Oxford Street,” says Basil Demeroutis, managing partner at property developer FORE Partnership. Above his head, barely visible, is the word Frodingham, denoting that the beam was forged at the ironworks in Scunthorpe, Lincolnshire. Demeroutis is standing on the third floor of what looks to be a brand-new grade-A office space near Tower Bridge, but whose origins are far older.

He is giving *Property Week* a tour of the Stiff + Trevillion-designed Tower Bridge Court, also known as TBC.London. It is the UK's first major commercial building project to include the large-scale reuse of pre-war steel, which

has helped the development to reach net zero targets for operational carbon and ultra-low embodied carbon.

The issue of demolition versus retrofitting is an emotive one. In July, *Property Week* reported on the difficulty many developers face when trying to meet stricter retrofitting standards – particularly in London's core boroughs such as the City of Westminster, the City of London or Camden (p39, 11.07.25).

Many cite the cost and the impact on viability as key issues holding back development.

At Tower Bridge Court, FORE Partnership took an existing five-storey building, constructed in the 1980s, stripped back and altered the structure and added a further three floors, one of which is stepped back to create a terrace and in-house club room.

The result is an example of how high-end retrofitting can be achieved at a similar cost to standard ground-up development without bringing in the wrecking ball. In total, around 40 tonnes, or a fifth of the steel in the scheme,

is repurposed, and the steel framing contains 56% recycled content.

In terms of gross internal area, the development has 114,270 sq ft of high-quality, flexible, grade-A office space, an 8,100 sq ft increase on the original building, with an additional 21,050 sq ft of flexible, ancillary commercial uses at basement level.

The embodied carbon clocks in at below 300kg/sq m, 15% below targets set by LETI (the London Energy Transformation Initiative), a voluntary network of built environment professionals working to improve the sustainability of buildings.

Reusing steel isn't without its challenges. There was no testing protocol, so FORE and its construction team wrote one. This was necessary, Demeroutis says, because with recycled steel "you might get out steel that has the strength of a table leg, or you may get out something that can hold up a building".

To the not entirely serious suggestion that if FORE had waited a little bit longer it could have also used some of the steel from the redevelopment of Marks & Spencer's flagship store on Oxford Street, Demeroutis responds: "Don't get me started."

The Marks & Spencer store was the focus of a fierce planning row between the retailer and former housing minister Michael Gove that cut to the heart of the demolition-versus-retrofitting debate, before the retailer's plans to knock down and rebuild the store were finally approved last year.

From cycling to recycling

Like many good ideas, Demeroutis's plans to reuse steel from a major department store on the scheme near Tower Bridge were formed while he was on a bicycle. A chance conversation with Gareth Atkinson, director at engineer Civic, when they were on an industry-organised bike ride to Milton Keynes, led to an opportunity for the developer to use steel that had been earmarked to be melted down.

"I was talking about the challenges we had and he was talking about their work on the House of Fraser scheme and the steel they had," Demeroutis says. "I said: 'What are you going to do with it? Can I have some?'" Then, on Monday morning, I talked to the team and said 'we're going to try something we've never done before; are you up for it?' – and they said 'yeah'."

For Demeroutis, a key aspect that made the plan affordable was challenging the prices developers are given when attempting something new or different. He says that when FORE first looked at reusing the House of Fraser

steel, it was quoted a six-figure sum. He was told the original concrete encasing the steel beams, a fireproofing method from the 1930s, would be painstaking to remove.

"A lot of people would have accepted that, but we unpacked the cost and went forensically through it line by line to find out what was causing it to be more expensive," he says. "Turns out it was a lot of nonsense. Someone was trying something on. You know what happens when you cut both ends of a beam and it falls down? The concrete falls off."

Interest in maximising reuse of materials has risen up the agenda in recent years as sustainability and lower carbon emissions have become key issues. But arguably, practical guidance for developers on how to build sustainably is still lacking.

Lady Lucy French, chief executive of the Fleet Street Business Improvement District (BID), which aims to increase awareness of the reuse of materials, says: "It is the fear of the unknown; when developers are budgeting, they put in quite a high budget for circular economy and circularity, because they simply don't know [the real costs]."

"Those costs are never as high as predicted and the actual long-term benefit of saying to your tenant or occupier in the future that materials have been sustainably sourced is a great selling point."

The Fleet Street BID has looked into the use of materials passports and also what is known

Reusing materials isn't as hard as [developers think] and will not break the bank

Lady Lucy French, Fleet Street BID

as 'urban mining': the process of recovering materials from old buildings. In June, the body organised a series of sessions focusing on the circular economy, materials reuse and challenging ESG scepticism within the property industry.

"We have got to start doing small steps and getting developers to understand that it is not as hard as [they think] it might be and will not break the bank," French adds.

Rising occupier demand for sustainable buildings should also help developers consider reuse and retrofitting. Demeroutis notes how TBC.London's sustainability credentials have been a factor in signing up tenants and reaching rents of £100/sq ft for the refurbished building. Accounting firm Sage has taken two



floors, totalling 30,800 sq ft, with Allfunds Group taking 16,500 sq ft on the upper floors.

Architect Richard Dudzicki, director at architecture and interior design firm RDA UK, says another key issue for developers is understanding the particular product that could solve the problem they have. He adds that early engagement is also vital to ensure that retrofitting and reuse are managed without adding in costs and time.

Getting in early with salvage

Dudzicki says: "You have to look at a building and go in early with an engineer, such as Civic or CTP; we scratch our heads and think 'what can we salvage here and what's the best process?'"

"If a developer buys a big warehouse and wants to turn it into a block of flats and reach Passivhaus or a high sustainability level, you've got to go in not after you have planning [permission], but before. The analysis needs to be done early on."

Understanding what can be reused is also key. Here, changing industry behaviour could be as important as adopting sustainable practices.

"The litigious nature of the construction industry means people have always wanted a warranty on things," Atkinson says. "So, ripping things out and going back in again has been the way forward, as you get the guarantee on new kit. But people are beginning to say: 'If they are going to change the plant at

one end, do they really need to rip out all the ducts in between? They are just bits of square metal that pump air around.'"

Smart solutions

Working smart solutions into a retrofitting agenda can also help. TBC.London's ventilation has been engineered to work through the floor, which is 30% more efficient than the ceiling equivalent. "With a traditional system, you basically create a mixing bowl of air coming down from the top and you are going to catch the cold someone has at the end [of the office]," Demeroutis says. "Here, it's localised."

Back up on TBC.London's terrace facing the iconic Victorian Tower Bridge, hundreds of years of London's development is on show,

Reuse gets a collective push

The long-term impact of TBC.London may be felt far beyond the boundaries of the scheme. The work bringing in steel from Oxford Street to Southwark led engineers at Civic and other practices to discuss how to turn a one-off project into something more substantial.

Those conversations gave birth to The Engineers Reuse Collective (TERC), a not-for-profit group of engineers who champion and look to accelerate reuse of materials in the built environment.

According to Gareth Atkinson, director at engineer Civic, there was already a baseline of understanding between many different people; the TBC.London project simply provided the spark.

"We met in a pub about a year and a half ago and said: 'We've got to start working out how we can collaborate to make this [reuse of materials] happen, which would benefit us all, benefit the circular economy and reduce carbon.' That's what we're trying to achieve."

With support from the Institution of Structural Engineers, TERC now has 40 members from firms including Aecom, Arup, Civic, WSP and Webb Yates, who are looking to develop specifications, innovate on material reuse and encourage clients on different projects.

"There's a WhatsApp group," Atkinson adds. "People may say: 'My client wants to put a staircase through some CLT [cross-laminated timber] – does anybody want it?' And before you know it, it's off to another site."

from the Tower of London's White Tower, built shortly after 1066, all the way through to 22 Bishopsgate, completed in 2020.

Five storeys below, a group of people can be seen scouring the shore of the Thames, mudlarking perhaps. If they are lucky, they may pick up a piece of London's history. If it's a brick, perhaps Demeroutis will ask if he can use it.

"I don't want to be too preachy, but we do want to drive system change," he says. "I think we need to be bold and tell the story of the choices we've made and why we've made them. And you know what, the building didn't fall down, people like it and the product is great. I would say 'don't be afraid – it didn't cost any more'."

JACK HOBHOUSE / FORE PARTNERS