



Moneypenny HQ

The needs and well-being of staff is increasingly on the agenda when designing new offices. A case in point is Moneypenny's new headquarters in Wrexham, North Wales.

A precise brief

The offices, situated in 10-acres of stunning landscaped grounds and designed by AEW Architects, boast a pioneering glued laminated timber roof linking two spacious three-storey office buildings that straddle a triple-height light-filled atrium, housing a restaurant, bar, stadium seating and a sun terrace with picnic tables. It even includes its own treehouse meeting room.

As a demonstration of the company's gratitude, the names of all the people who worked for the UK's leading telephone answering service at the time of its opening, have been inscribed on a timber board located at the building's entrance.

'The client was very clear in the brief that the design had to reflect the staff's needs and the new offices should help to make them feel happy,' says Phil Hepworth, Associate Director at AEW Architects. 'This wasn't a speculative office building; we were creating a home and that meant engaging with the staff early on and asking them what they wanted. Making a 91,000 sq office building feel homely was a huge challenge.'

When AEW won the competition to design the new headquarters, Moneypenny's previous offices were spread across four separate buildings. A key aim of the rapidly expanding company was to bring all the staff under one roof. The client also wanted the design to show a strong connection to its rural surroundings and nature by bringing the outside in and to create office space that was flexible and a bit different.

The client was very clear that, to create a comfortable working environment, sustainability had to be at the heart of the scheme. The architects achieved this by creating large openable windows to draw in as much daylight as possible into the unusually tall office floors (3.3m floor-to-ceiling height), allowing for natural ventilation. Ground floor heat pumps have also been installed. To reinforce the interior's connection with nature, natural materials were employed as much as possible.

Timber innovation

Specifying timber was a key move, particularly for the atrium roof, where the ambition was to make a powerful architectural statement and to create a warm, natural finish. AEW proposed to use spruce glulam beams for the main structure and an intricate glulam gridshell fixed over the beams at concept stage. Given that the project had a very tight budget of £110 per square foot, which was one of the key challenges of the project, the architects anticipated that such a material would be too expensive. However, after discussions with the main contractor, who favoured the timber option, the prefabricated glulam was reinstated.



Phil Hepworth
AEW Architects

Figure 3.8 (opposite)
Moneypenny HQ,
Wrexham

Photograph
Pochins Ltd



Figure 3.9 (above)
The client wanted the design to have a connection to the rural surroundings by bringing the outside in
 Photograph
 Pochins Ltd



Figure 3.10 (right)
The new headquarters even boast a treehouse meeting room
 Photograph
 Pochins Ltd

The Furness Partnership became involved at a later stage in the design process, to design and engineer the timber elements of the roof. G-frame Structures was appointed to build the complex roof. The 37m-long atrium gradually tapers, 'like a bird's mouth', says Leon Furness, Director at Furness Partnership, being narrow at the front of the building and opening out at the other end where it is at its widest. This meant that unusually long structural glulam beams, at 23m long, had to be specified.

'Using Revit software we modelled every single one of the different sized glulam beams,' says Furness. 'We cut notches into them for the large bolts to clip through where the beams get attached to the building's two steel frames. All of this, along with the gridshell information, was modelled and sent as a 3D file to the factory in Germany, where the guys there used our model to cut the timber.'



Leon Furness
 Furness Partnership

Figure 3.11
Large openable windows draw in an abundance of daylight

Photograph
Pochins Ltd



Figure 3.12 (opposite)

The client wanted to create an office space that was flexible and a bit different

Photograph
Pochins Ltd



Furness says that the integration of all the processes – the unusually long glulam beams, connecting the timber to the steelwork, placing a complex glulam gridshell on top and ensuring it was made safe for G-frame to construct it – was the primary innovation and a challenge.

Collaborative solutions

AEW also used the Revit software, a Building Information Modelling (BIM) authoring tool, which helped to streamline the design process and overcame complex geometry. BIM enabled everyone in the project team to discuss and engage in changes made to the design. One aspect that everyone in the project team wanted involved concealing all the connection details, such as screws and large steel plates, of the new timber roof.

‘We solved this by cutting a plate through the middle of the main beams and placing the connection details in the gap where they would be covered up,’ says Furness. ‘When fixing the gridshell, we had to make sure all the fixings were connected from the top, not the underside, so that these details were hidden from below. This innovation involved a lot of discussion and was a really successful collaboration.’

Resolving the connections and tolerances were the main challenges of the timber roof. Craning in a 23m-long beam and fitting it within the steel supports at either end was technically difficult, and involved a great deal of discussion with the structural engineer, G-frame, and the architect. A pivoting bracket that could rotate allowing the glulam beam to be lined up with the steel supports and screwed down was another innovation.

Outcomes

Reflecting on the roof’s design, Furness says if they had more time, aspects such as resolving the tolerance on the long beams hitting the steel frame, would have been easier. But he admits that time on these projects is a great luxury and, typically, these difficult decisions tend to get bunched up towards the end, putting great pressure on the team.

Hepworth agrees that more time always helps and so does involving the contractors and sub-contractors earlier in the process.

‘The construction industry is trying to move to a more collaborative approach of involving the sub-contractors earlier, but it is a slow process,’ says Hepworth. ‘It was good that we were involved with the client from the outset and we had a productive relationship with them.’

This relationship has created an office that the staff are really happy to work in. According to Hepworth, they have received only positive feedback for the new headquarters.

‘The client [Ed Reeves, Co-founder and Director at Moneypenny] always said he didn’t want a normal building and he was always challenging us. This approach led to some great features and was a positive experience,’ says Hepworth. ‘Ed told us that, since it has been occupied, staff attrition has gone down with employees having less sick days, more people are wanting to work for them and customer complaints have dropped. Overall, the company has benefited greatly from its new building.’

Project team

Client
Moneypenny

Architect
AEW Architects

Structural engineer
Furness Partnership

Timber contractor
(design, supply and installation of glulam roof)
G-frame Structures

Project summary

- A 91,000 sq ft headquarters for Moneypenny HQ
- The offices boast a treehouse meeting room, nature trails, vegetable gardens and its own pub
- The brief focused on the health and well-being of the employees