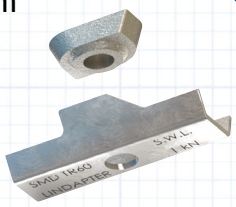
Riverside Sunderland Regeneration

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Lindapter provided a solution for securing building services to the roof decking profile.

Project Background

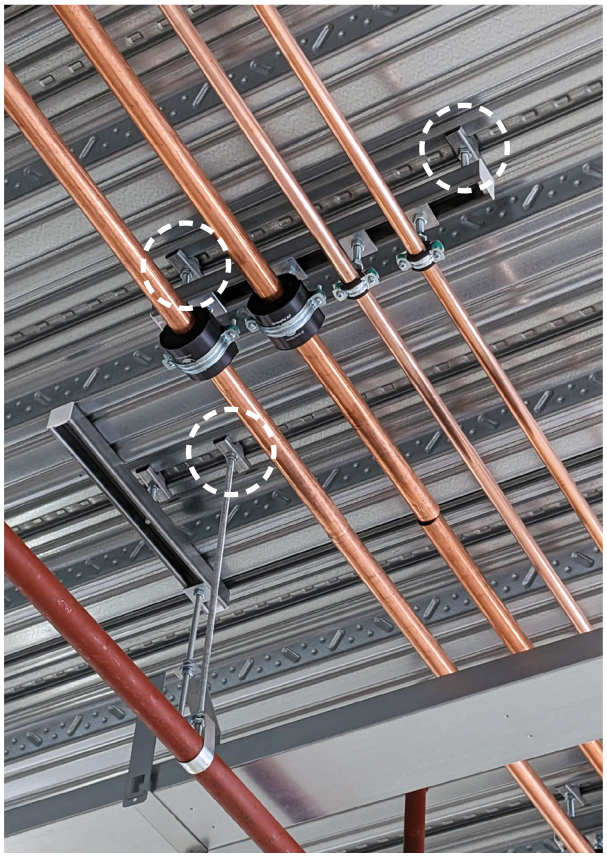
Location: Sunderland, United Kingdom
Product: Type TR60
Client: Legal & General
Engineer: Cundall
Main Contractor: Sir Robert McAlpine
Steel Fabricator: Elland Steel
M&E Installer: Integral



The regeneration of the north side of Sunderland city centre has been a long-standing aspiration for the region. In October 2020 The Riverside Sunderland Masterplan was published which set out the strategy for the development and regeneration of the 32-hectare site, providing a unique setting for a new urban quarter. As part of the development 1 million square feet of modern offices was planned to create an exciting new place for businesses to grow.

Client Requirement

With such a large-scale project the client was keen to make sure the office buildings came in on budget and so a decision was taken early on in the design phase to specify a composite slab. Made up of steel decking profiles that are fixed to the primary steel beams and then filled with concrete, composite slabs offer design flexibility as well as a cost-effective alternative to traditional forms of construction. The composite slab would also be required to carry all the necessary building services including pipes and electrical cables.



The zero-impact method for TR60 avoids delamination to the deck, making it easy to install building services

Riverside Sunderland Regeneration

Design Solution



As part of the overall building design a composite slab with a SMD decking profile manufactured by Structural Metal Decks Ltd was specified. The dovetail re-entrant profile of the SMD profile along with Lindapter's Type TR60 decking fixing allows for easy installation of building services.

The Type TR60 is a high quality, cost-effective fixing that comes in two parts (locking plate and wedge) and provides a zero-impact method of connection that avoids delamination and damage to the concrete deck as well as eliminating the need to drill the concrete slab which can expose workers to dangerous silica dust.

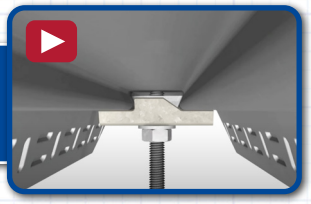
Installation



After the concrete deck had been poured and reached full strength the contractor could begin installing over 5,000 Type TR60 decking fixings. The Type TR60 consists of a profiled locking plate and threaded wedge installed with an appropriate threaded rod and nut.

The locking plate and wedge were pre-assembled onto the threaded rod, the locking plate was then inserted into the re-entrant channel of the decking profile and the wedge rotated until tight against the sides of the channel. To complete the installation the nut on the threaded rod was tightened up to the locking plate to secure the whole connection and provide the contractor a system from where the building services could be easily and quickly suspended.

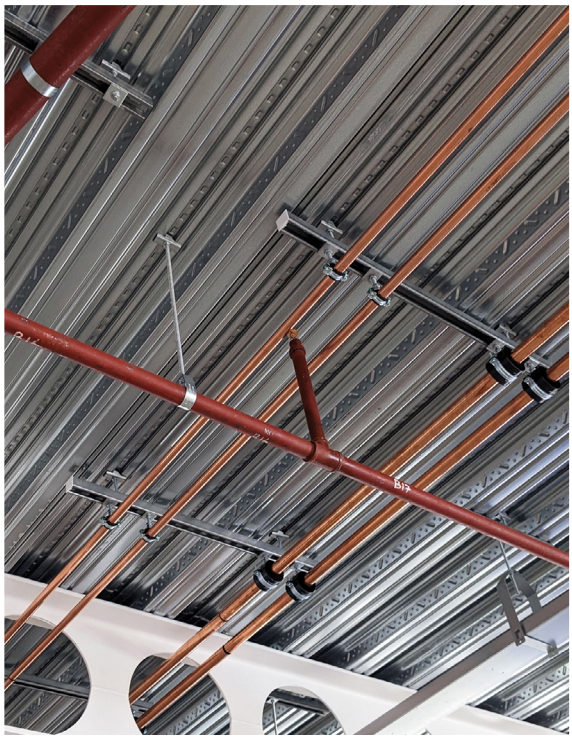
Click here to watch the installation video >>>



Result

The specification of Type TR60 decking fixings along with the SMD decking provided a quick, cost effective and easy to install connection.

It also provided a zero-impact method of connecting the building services that avoided delamination and damage to the decking. By eliminating the need to drill the concrete slab there was also no dust which resulted in a safer and healthier environment for the workers.



No drilling so no exposure to silica dust

Benefits

UK CA CE Fire Rated

- ✔ Cost effective.
- ✔ Quick and easy to install.
- ✔ Zero impact connection to roof deck.
- ✔ No drilling so no exposure to silica dust.
- ✔ No damage to the decking.
- ✔ No requirement for specialist labour / tools.