



Case Study

ICL/TSS_RVK/STUDY/META/01/0424

Project
Meta Headquarters, London N1C

Architect
Bennetts Associates

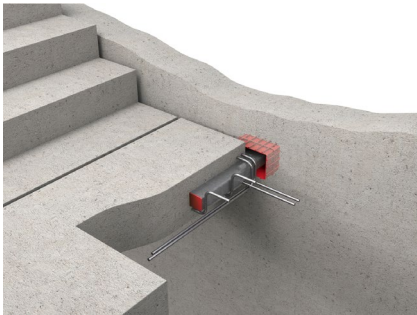
Engineer
Ramboll, BAM

Main Contractor
BAM Construction

Frame Contractor
Mitchellson

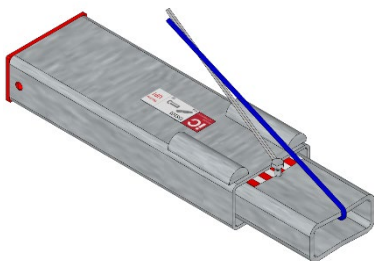
Precaster
Cornish Concrete Products

Application

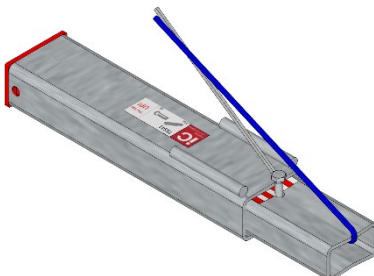


Product(s) supplied

TSS 101 STD
Precast Concrete Stair Landing Connector
(100kN, Cord Operated, No Screed Required)



TSS 41 STD
Precast Concrete Stair Landing Connector
(40kN, Cord Operated, No Screed Required)



Project description

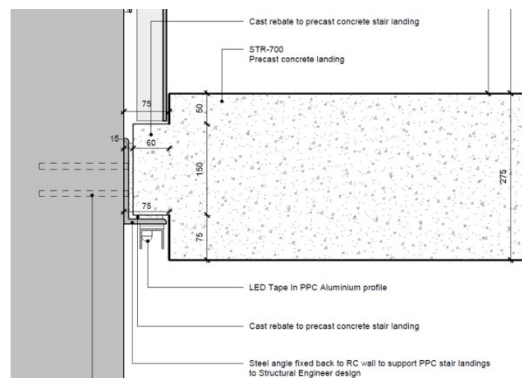
The UK headquarters for social media giant, Meta, is currently the largest building on the regenerated King's Cross Central estate, and a showcase for low carbon technology and employee wellbeing.

11-22 Canal Reach varies between 9 and 12 stories in height and stretches to 180m, making the 'groundscraper' as long as the Gherkin is tall. The vast footprint accommodates more than 5,000 employees on 37,000m² of large, open floorplates. Above, the roof has enough space for a 3,900m² park, complete with trees and beds of wildflowers.

Embodied carbon was measured and monitored from the outset. Carbon savings of 20-25% were achieved by adopting leading sustainable building techniques during design and construction. Long spans and flexible spaces future-proof the structure for shifting use during its 100-year design life. The low-rise linear form made 30-70% GGBS viable, and the high-quality matt finish of exposed concrete for the ceilings, floors and stairs was accomplished using ply-faced metal formwork. BREEM Outstanding has been awarded.

Our role

The architect's design called for a hidden means of support for the precast stairs and landings. A blemish free finish to the exposed concrete stair core interior was desired. An LED strip and balustrade rebate was required on 3 sides of the landing against the core walls.



Original (unworkable) design using steel angle

The original design proposed a steel angle to support the 275mm thick landing around its 150mm perimeter.

However, the reduction in thickness at the landing edge meant there would be insufficient depth for adequate reinforcement at this location, so Cornish Concrete recommended using our telescopic connectors.

We proposed specially modified TSS 101 connectors (where both the casing and the inner were extended by 60mm), to form a connection which bridged the air gap between the rebated landing and the wall. By extending the length of the connector outer, the local reinforcement around the TSS 101 connectors remained within the deeper part of the landing, providing structural integrity.



Case Study

Product(s) supplied (cont)

REDiBOX® PRF-STD
Concrete Wall Permanent Recess
Former - Standard



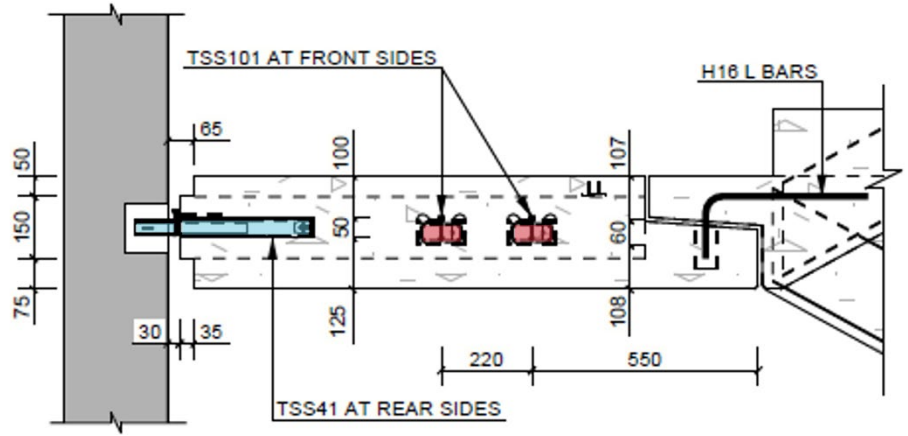
About Invisible Connections

We are the specialists in hidden structural connections for precast and in situ construction. Our range of telescopic connectors are purpose-designed to overcome the challenges of traditional construction and have multiple applications. We are also the manufacturers of FERBOX® bespoke reinforcement continuity strip.

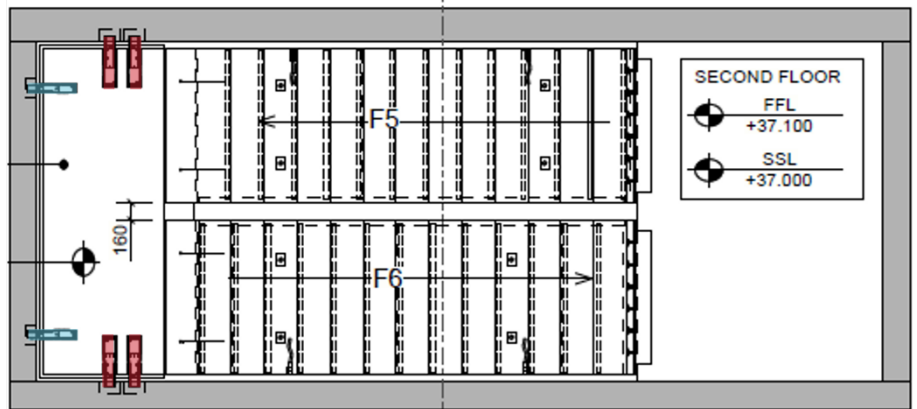
All our products meet industry demands for improved safety, construction efficiency and cost competitiveness.

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Where loads were lower at the rear of the landing, standard TSS 41 connectors were used conventionally in the thinner 150mm depth of the landing.



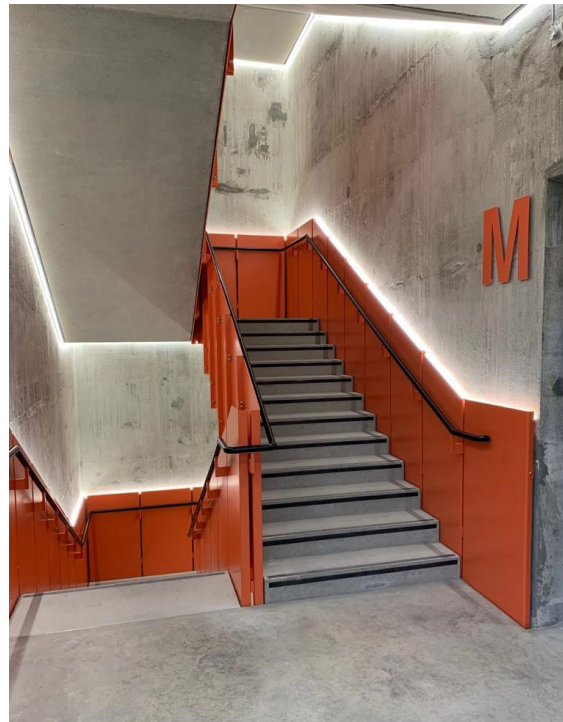
Section through landing to wall connection using standard TSS 41 and modified TSS 101 connectors



Key:

- TSS 101 connector (modified)
- TSS 41 STD connector

Plan view of typical Meta landing using telescopic connectors



Completed stairwell at Meta

Outcome

Using standard and specially modified TSS connectors to invisibly support the stair landings enabled the provision of a recess for LED lighting and balustrade around the landing perimeter.

Clean, architectural lines and the desired exposed concrete finish in the stair core were achieved.

Structural requirements were satisfied efficiently with minimal material usage and wastage, contributing to carbon savings and sustainability aspirations.