

BROADCASTING PLACE

Feilden Clegg Bradley Studios

Facade construction

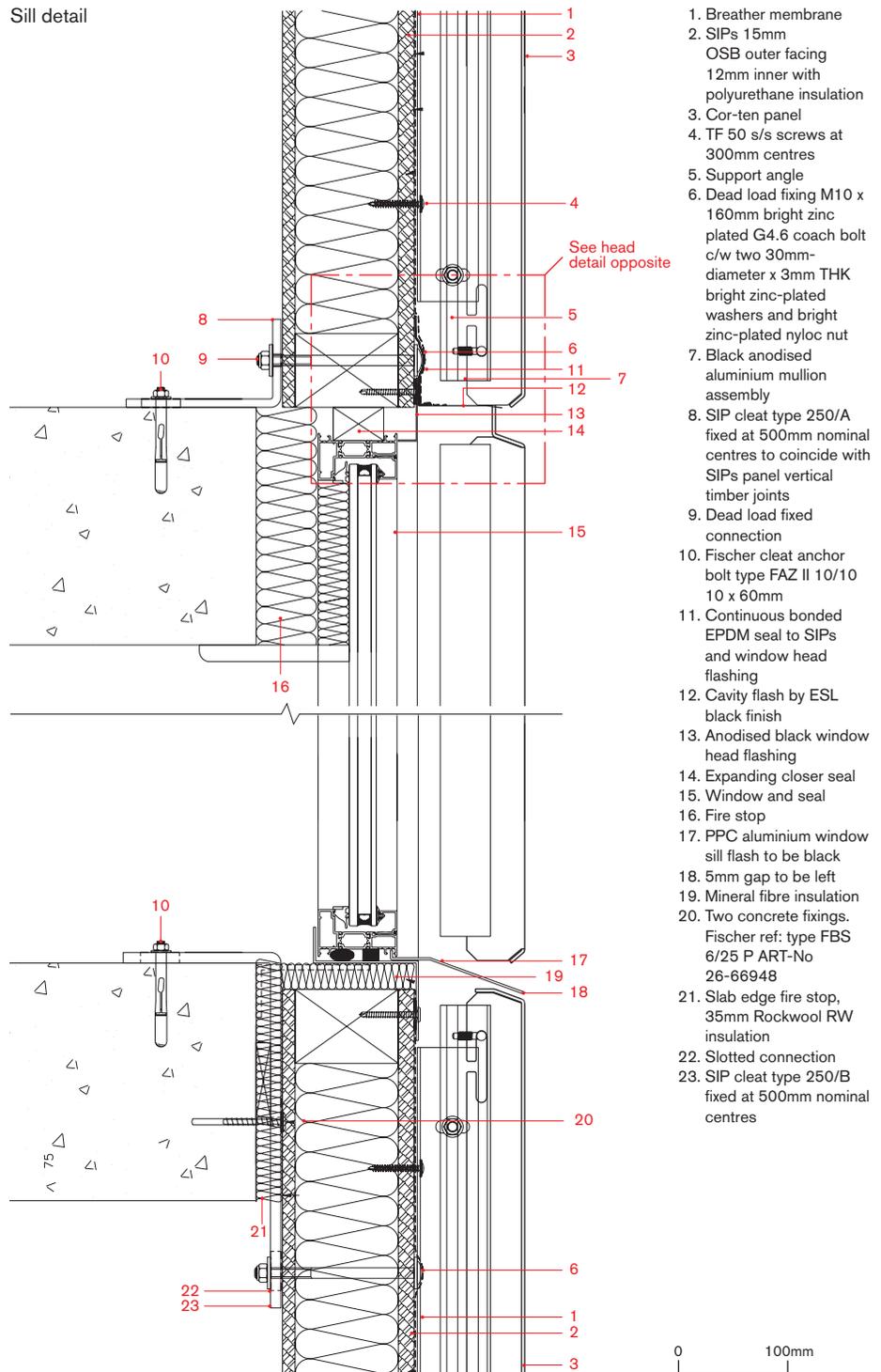
At the earliest stages of concept design, the facade system was developed in detail around the particular material properties of Cor-ten steel. As long as it is detailed and installed correctly, weathering steel will last a very long time. One of the keys to developing a robust Cor-ten facade is to ensure that the system is well-drained. Gaps between components must be at least 5mm wide to ensure water cannot get trapped and cause corrosion.

We originally proposed an insulated cold-formed framing system to support the inner leaf of the facade as part of a ventilated rainscreen (see drawing, far right). However, during the package tender stage, the subcontractor proposed an alternative solution. This consisted of Cor-ten cassettes on a modified version of a standard rainscreen carrier system fixed to SIPs (structurally insulated panels). This approach offered significant programme advantages to the contractor because the building could quickly be made watertight, thus allowing interior construction to proceed well before installing the Cor-ten. The component supplier was also able to offer the reassurance of a comprehensive 'through-wall' warranty for the full assembly.

The rails of the rainscreen cladding system are continuously supported on the SIPs, which are bolted to the floor slabs. The Cor-ten has a relatively high mass due to the thickness of the metal. The infill glazing consists of a 'window-wall' system – a type of hybrid window/curtain walling system spanning from floor to floor.

The cladding panels, which are made from 3mm-thick Cor-ten cassettes in various module widths, have acquired their patina at differing rates, dependent on their location and exposure. After approximately six months, all the panels have weathered to a uniform rich red/brown colour. *Simon Carter, architect, Feilden Clegg Bradley Studios*

Sill detail



1. Breather membrane
2. SIPs 15mm
3. OSB outer facing 12mm inner with polyurethane insulation
4. Cor-ten panel
5. Support angle
6. Dead load fixing M10 x 160mm bright zinc plated G4.6 coach bolt c/w two 30mm-diameter x 3mm THK bright zinc-plated washers and bright zinc-plated nyloc nut
7. Black anodised aluminium mullion assembly
8. SIP cleat type 250/A fixed at 500mm nominal centres to coincide with SIPs panel vertical timber joints
9. Dead load fixed connection
10. Fischer cleat anchor bolt type FAZ II 10/10 10 x 60mm
11. Continuous bonded EPDM seal to SIPs and window head flashing
12. Cavity flash by ESL black finish
13. Anodised black window head flashing
14. Expanding closer seal
15. Window and seal
16. Fire stop
17. PPC aluminium window sill flash to be black
18. 5mm gap to be left
19. Mineral fibre insulation
20. Two concrete fixings. Fischer ref: type FBS 6/25 P ART-No 26-66948
21. Slab edge fire stop, 35mm Rockwool RW insulation
22. Slotted connection
23. SIP cleat type 250/B fixed at 500mm nominal centres

0 100mm