



CASE STUDY

Project: One Thames City
Client: Midgard (JRL Group)



Location: Nine Elms, Vauxhall, London
Classification: Large scale residential infrastructure
Build Type: Concrete shell and core
Item of works: EI120 service penetration seals through floor slab



- Requirements:** 120min Integrity and Insulation
- Services:** HDPE pipework in various sizes
- Problems encountered:** Due to the use of HDPE pipework the difficulty to get to an Integrity & Insulation value of 120mins is increased
- Overview/Summary:** The initially specified Manufacturer provided the Client with details which were not fit for purpose due to the service spacing being outside that of their tested detail.
- On further discussion Fire Stopping London Ltd were asked to liaise with alternative Manufacturers to obtain the correct tested install detail for the site conditions.
- The first detail provided by the alternative Manufacturer allowed for 100mm compound install with mechanically fixed pipe collars to the underside of each seal. This detail would mean that the Craftsman on site would be required to seal penetrations with intumescent compound and then return to the underside of each seal, cut away the sacrificial shuttering and mechanically fix the collar in place. The 2 main downfalls of such a detail would be additional time returning to cured seals and the additional costs to reflect this.
- Solutions:** After further development with the Manufacturer, they were happy to offer a detail which included 2No pipe wraps installed at the top and bottom of the compound seal. This detail would not require any return visits, be easier to install and would therefore also be more cost effective.
- Value Engineering:** Due to the change of Manufacturer and installation detail from mechanically fixed pipe collars to embedded pipe wraps, Fire Stopping London Ltd were able to provide our Client with a cost and time saving equal to circa 19%.
- Installation detail:** Intumescent compound seal including 2No intumescent pipe wraps per service located at the top and bottoms of the compound seal.



Drawn installation detail:

	<p>Materials: Fsi Silverseal Compound Fsi PipeBloc PWP 50mm Mineral Wool Shuttering Batt</p> <p>Notes: All dimensions are in millimeters unless stated otherwise Minimum 100mm thick Silverseal Compound as per Manufacturers guidance The cementitious material is not water proof</p>
<p>Item 1 Concrete slab (minimum thickness 150mm) Item 2 Fsi PipeBloc PWP Item 3 Fsi Silverseal Compound Item 4 Mineral Wool Shuttering Batt Item 5 Minimum distance to substrate (50mm) Item 6 Minimum distance between same service (50mm) Item 7 Wraps embedded in Silverseal Compound (top & bottom)</p>	<p>Contract: Midgard Originator: Fire Stopping London Ltd Location: One Thames City Title: Typical E120 HDPE Multi Service Slab Penetration</p> <p style="text-align: center;"></p> <p>Drawing No.: 1000-001-OTC Rev.00 Creation Date: 21.07.20 This sketch is not to scale</p>