

Rylands Building – Design Comment

23rd April 2025

From email received from Clan Contracting on 22nd April 2025
and further email from Domis 24th April 2025:

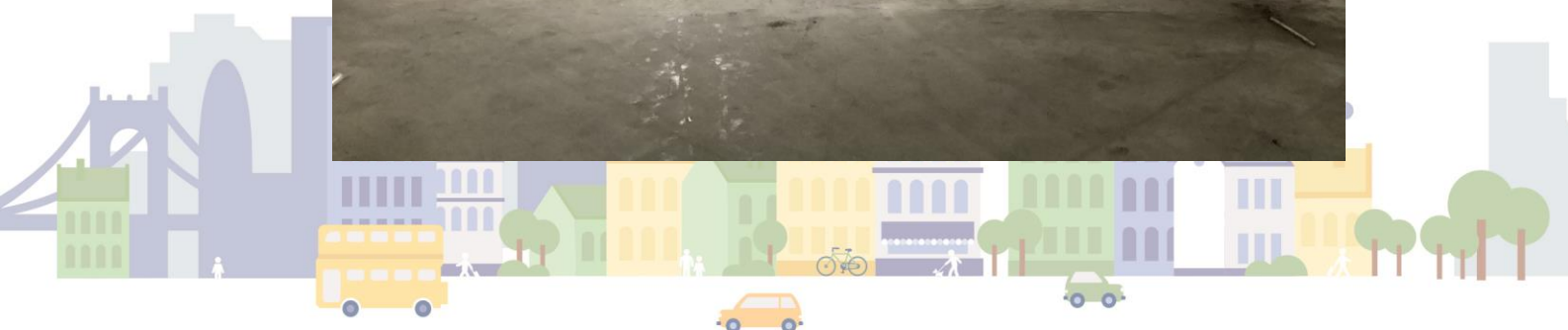
The points raised by the council include:

- *How will the installation affect the existing fabric?*
- *What elements will be visible?*
- *What services, control boxes, etc., will be required, and where will they be located?*
- *Will the Portland Stone façade be impacted in any way, including whether joints would need to be widened to accommodate the CP system?*

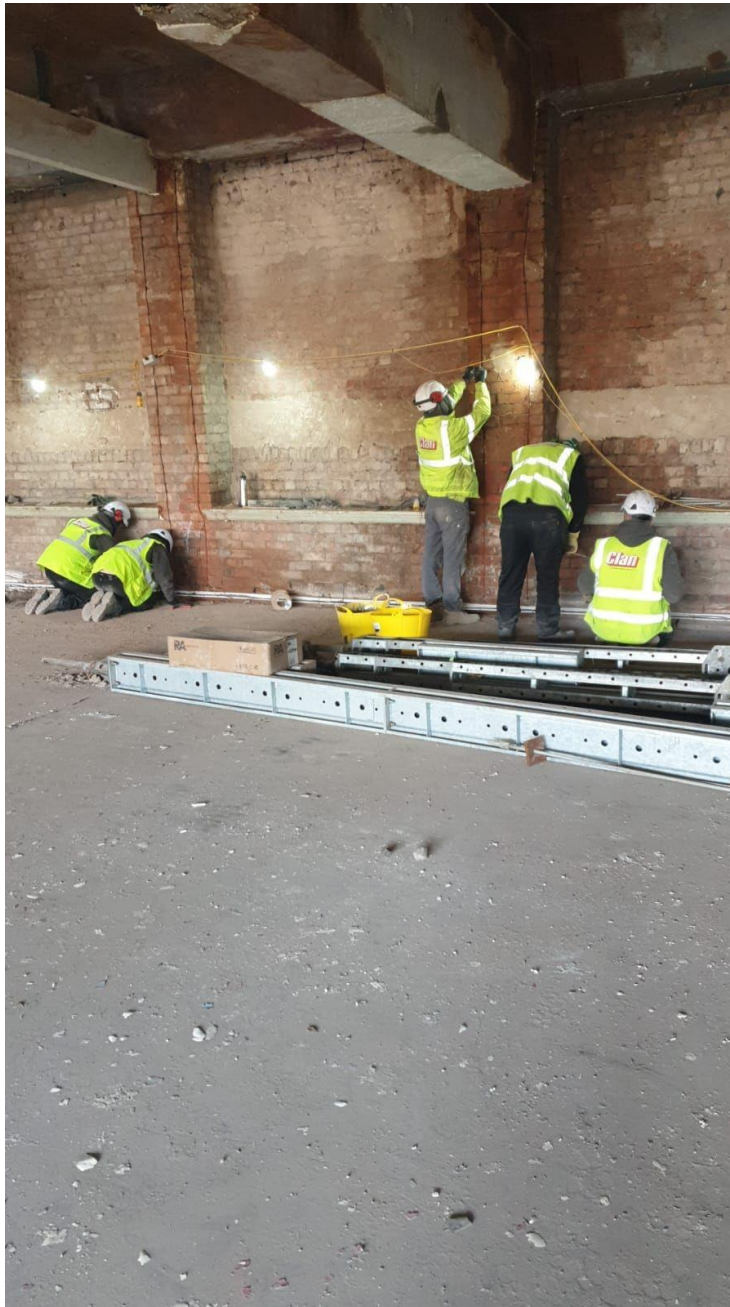
We can respond taking each bullet query in turn as follows:

1. The intent of the ICCP system is to protect the structural steel behind the brick and stone cladding from corrosion into the future. It achieves this by installing the anode mortar within chases and drill holes from the internal faces of the building; there are no areas installed from the external Portland stone elevations.

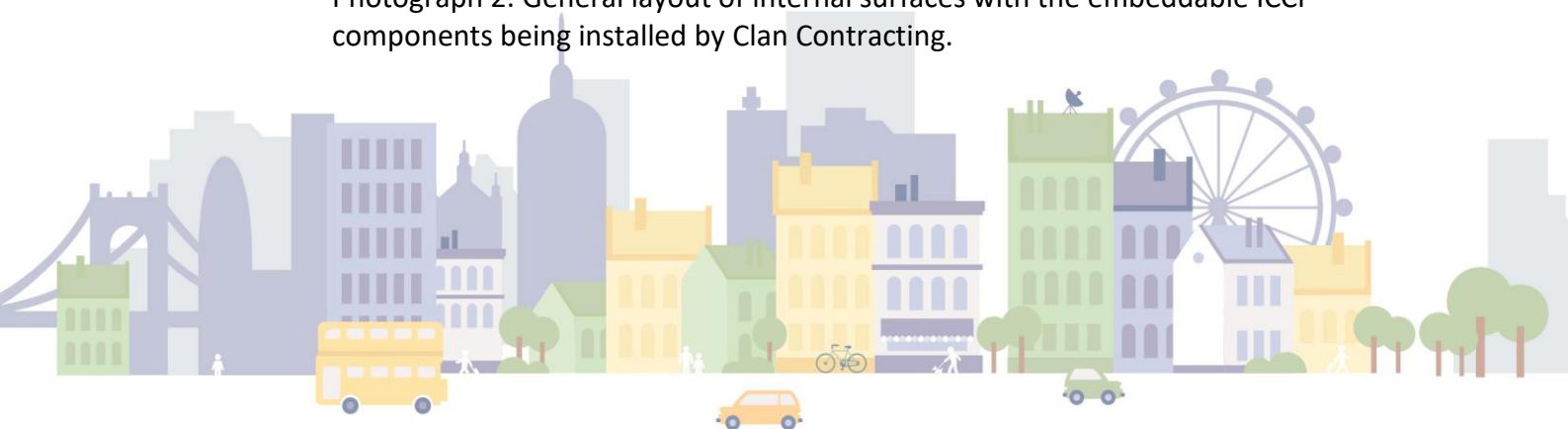
The following photographs show the setting out process (photo 1) annotated on to the image where the contractor has then installed the anode mortar within the chases and drill holes (photo 2).



Photograph 1: embeddable ICCP components set out to the internal face of the building.



Photograph 2: General layout of internal surfaces with the embeddable ICCP components being installed by Clan Contracting.

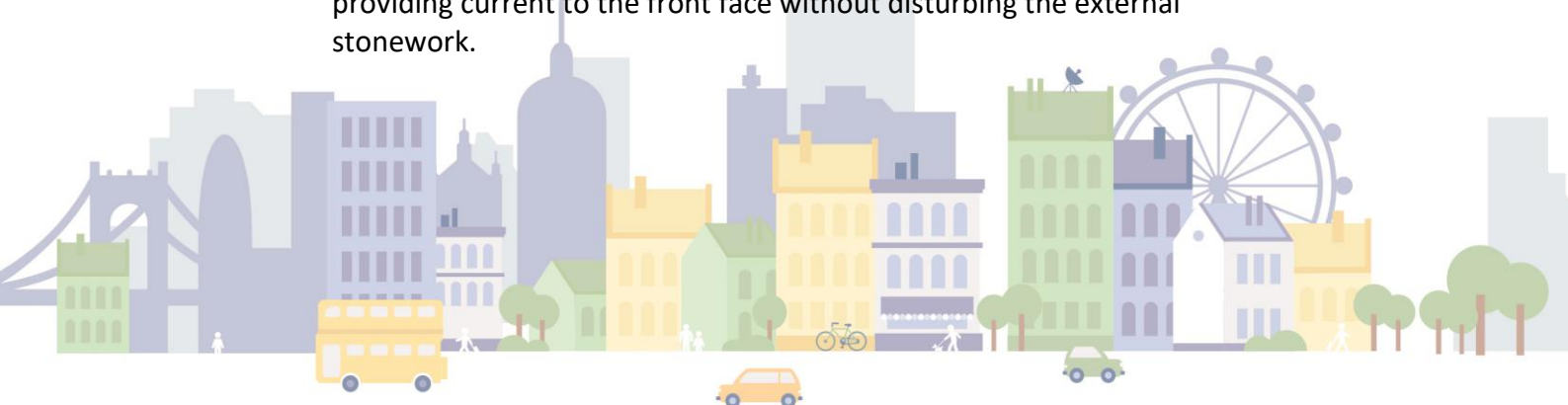




Photograph 3: Close-up view of chases and drill holes for anode mortar installation

The anode system is connected using embedded mixed metal oxide (MMO) titanium wire (0.8mm dia) encapsulated within the chases (so hidden from view). Connections are made by crimping an insulated multi-stranded copper core cable to the wire and this cable is routed within electrical containment (surface-mounted). This is formed as a positive dc ring main to the zonal enclosure.

On completion and energisation the embedded anode system will provide 360 degree protection to the whole steel frame with the anode drill holes providing current to the front face without disturbing the external stonework.



In addition, there are openings made to the steel frame to connect for the dc cathode circuit routed as the dc negative ring main and terminated at the zonal enclosure.

Additional inserts within the fabric are 4no corrosion rate probes per zone with steel connections made to the steel frame. The integrated 3c cabling is routed within electrical containment to the zonal enclosure.

The zonal enclosure housed the power, control and monitoring network electronics. Each zonal enclosure is interconnected using power and communication networks that are also routed within the electrical containment.

2. The following summary explains the components positioning:
Embedded components – anode mortar, anode connections, steel (cathode) connections, corrosion rate probes and steel connections.
Surface-mounted components – zonal enclosures, electrical containment (with dc, monitoring and network cabling) and the Network Access Unit (housing the network termination, AC power connection and broadband communications).
3. These are summarised in 2 above (surface-mounted components). The zonal enclosures are routed per level with network routed between levels in the risers. The Network Access Unit position can be anywhere on the network and can be decided with the Engineer and Architect's requirements.
4. There are no external works so there will be no requirement to use the stonework bed joints.
5. The containment runs at low level around the perimeter of the building internally, under the raised access floor and down the risers.

Reply compiled by:

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