



81515-SRL-RP-YA-01-P2

04 September 2023

Christopher Box
Project Manager
RG Group
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Kings Hill
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Kent
ME19 4AB

Dear Christopher

Bridgewater Heights, Manchester – Acoustic Assessment of External Cladding Replacement

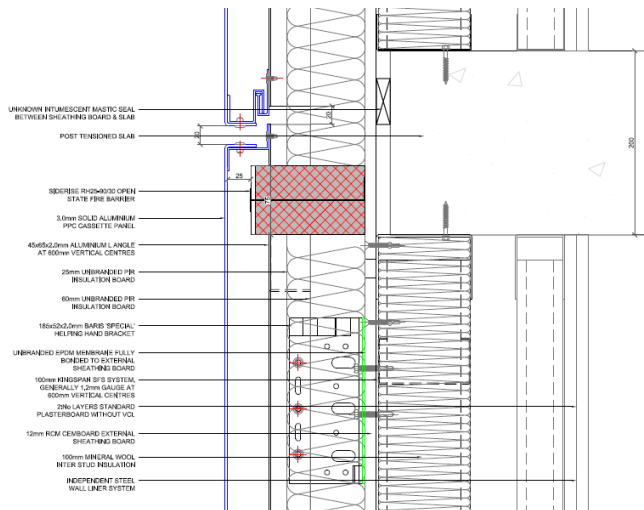
You are replacing the existing external cladding at Bridgewater Heights and have asked us to assess the acoustic performance of the new cladding system and confirm that this will be no worse than the performance of the existing cladding system.

I have assessed the direct and flanking performance of the external wall build ups with the existing and proposed cladding systems and this letter confirms the results of this work.

Aluminium cladding (EWS01)

EWS01 wall build up is as follows:

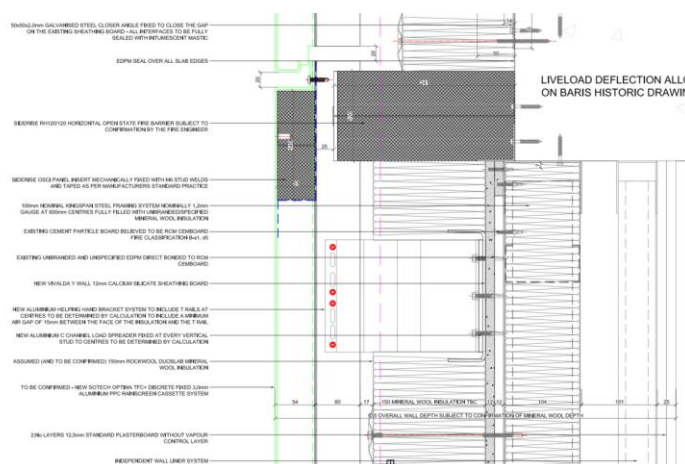
Figure 1 Extract from drawing BRID-DE-X-X-SK-Y-EWS-0001-P02 showing existing wall build-up



I understand that it is proposed to remove the existing external wall up to the SFS system (with the existing cement particle board retained to the rooms, but cut back at the slab edge) and then replace this with the following build up:

- 12mm layer of calcium silicate sheathing board fixed direct to the cement particle board.
- 3mm aluminium rainscreen cladding system installed on new bracket and rail system to create ~200mm cavity with 150mm Rockwool Duo Slab mineral wool insulation fixed back to the calcium silicate sheathing board.
- New Siderise slab edge closer at junction with concrete separating floors

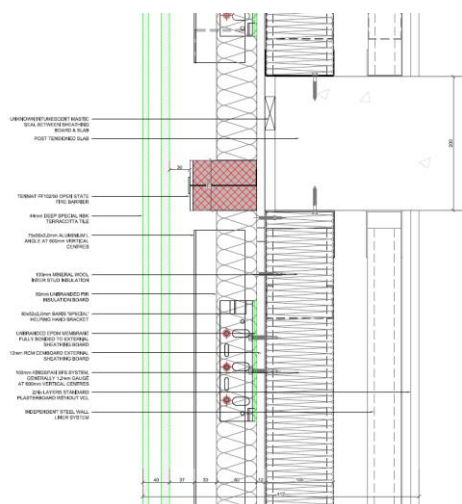
Figure 2 Extract from drawing BRID-DE-X-X-SK-Y-EWS-0003-P01 showing proposed wall build-up



Terracotta cladding (EWS02)

EWS02 wall build up is as follows:

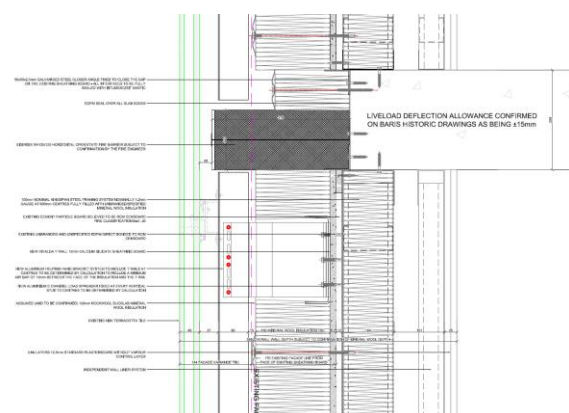
Figure 3 Extract from drawing BRID-DE-X-X-SK-Y-EWS-0002-P02 showing existing wall build up



Again, I understand that it is proposed to remove the existing external wall up to the SFS system (with the existing cement particle board retained to the rooms, but cut back at the slab edge) and then replace this with the following build up:

- 12mm layer of calcium silicate sheathing board fixed direct to the cement particle board.
- 42 mm terracotta tile rainscreen cladding system installed on new bracket and rail system to create ~200mm cavity with 150mm Rockwool Duo Slab mineral wool insulation fixed back to the calcium silicate sheathing board.
- New Siderise slab edge closer at junction with concrete separating floors

Figure 2 Extract from drawing BRID-DE-X-X-SK-Y-EWS-0004-P01 showing proposed wall build up



Analysis

The use of mineral wool in cladding systems inherently achieves a better performance than equivalent cladding build-ups with rigid (PIR) insulation. Furthermore, the increased mass per area of the sheathing board and cavity depth will also improve the sound insulation performance over the previous build-ups.

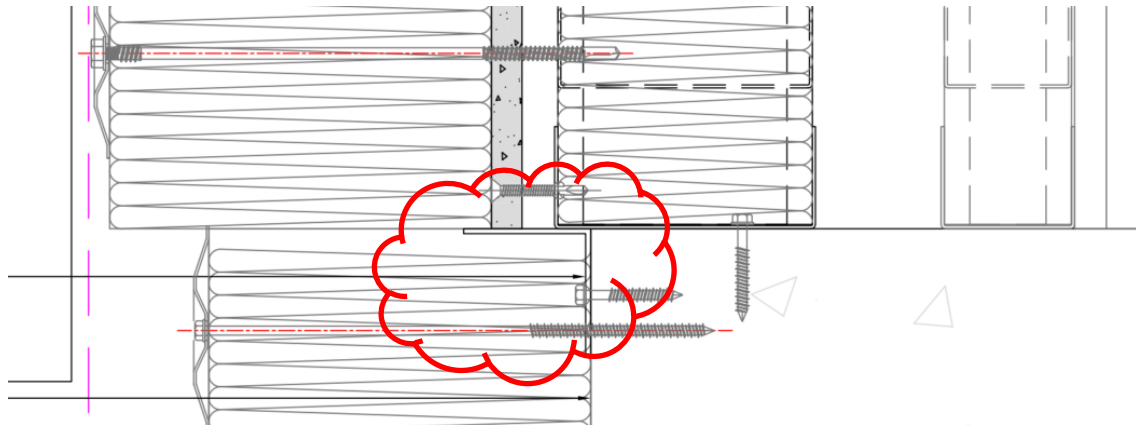
The rainscreen cladding systems are near direct replacements for the existing systems (albeit on deeper brackets) and we therefore assume the spacing of the new fixing brackets and rails will not be substantially different to those for the existing cladding systems.

The removal of the cement board at the junction with separating floors takes away a potential (albeit minor) path for vertical flanking transmission between flats.

On this basis we consider it likely that both the external and internal sound insulation performance with the new cladding system will be at least as good as the existing system, if not better.

We recommend the following workmanship issues are addressed during the works:

- Any hole or gaps left in the cement board following strip out of the existing cladding system should be made good before the calcium silicate board is installed. Small fixing holes can be sealed with flexible mastic.
- There should be no gaps or weaknesses at the junction between the SFS sheathing and slab edge.



Conclusions

As a result of our assessment, summarised above, we are confident that the proposed external cladding will not compromise the external noise break-in through the façade, nor will it compromise the vertical sound insulation between rooms via the external façade, provided the advice above is followed.

Therefore, based on our understanding and advice as described above, the proposals have been reviewed acoustically and are deemed to be as good as, if not better than the existing (as built) external wall.

Yours sincerely,

Alex Clark



For and on behalf of
SRL Technical Services Limited

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