

St Mary's House Reading

Aberdeen Standard Investments

Planning Statement

ISSUE 3 8 June 28th 2021

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Purpose	Stage 2 Planning Statement
Project No	3453
Project Name	St Mary's House Reading.
Issue No	Issue 2

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By	bpr	bpr	bpr
Approved	MJM	MJM	MJM



Figure 1 St Mary's House, June 2021, showing safety netting over brick slip cladding

I. Description of the Building.

St Mary's house is a mixed-use building in Reading which comprises retail at ground floor level and three floors of office space above. The building is sited on a prominent corner location in the centre of Reading. The office space accessed via a stair core at street level from St Mary's Butt. St Mary's Butt runs from the building towards the Reading Minster church of St Mary the Virgin. The building was re-clad during 2015-16. The installed cladding is described below.

The existing Façades comprise 3 zones: At ground floor level there is a retail shopfront zone. Above the retail units, at first and second floors there is a band of brick slips punctuated with vertical bands of glazing and spandrel panels. The bricks have been set in a 'basket weave' pattern intended to reflect the checkerboard arrangement of square stones alternating with flints in the bell tower of St Mary's Church, Reading Minster.

At third floor to roof parapet level there is a band of zinc cladding with an apparent ribbon of windows to the length of each façade. The Zinc cladding is also taken to ground level, framing a large glazed section which spans first to third floors above the entrance from St Mary's Butt.

The ground floor retail tenant shopfronts are outwith the scope of Landlord works, and as with the 2015 cladding works are unaffected.

Reading Borough Council approved plans for the re-cladding of the property in on 6th January 2014, under planning reference 131550. Subsequently work began on the façades in April 2015, with completion in early 2016. Shortly afterwards, the brick slip cladding began visibly distorting and cracks were noticed in the brick slip faces.

As a result, the entire brick slip portion of the façade is now netted to protect the public from falling debris.

Remedial works to the existing cladding would not be effective therefore the entire brick clad section of the elevations is required to be stripped off and replaced with a new system, from the structural frame outwards.

This supporting statement, which is to be read in conjunction with the submitted drawings, sets out the reasons for the failure, the logic behind the proposed replacement of the cladding, and the proposed minor alterations to the existing design.



Figure 2 Existing Brick Slip Cladding - St Mary's Butts Elevation

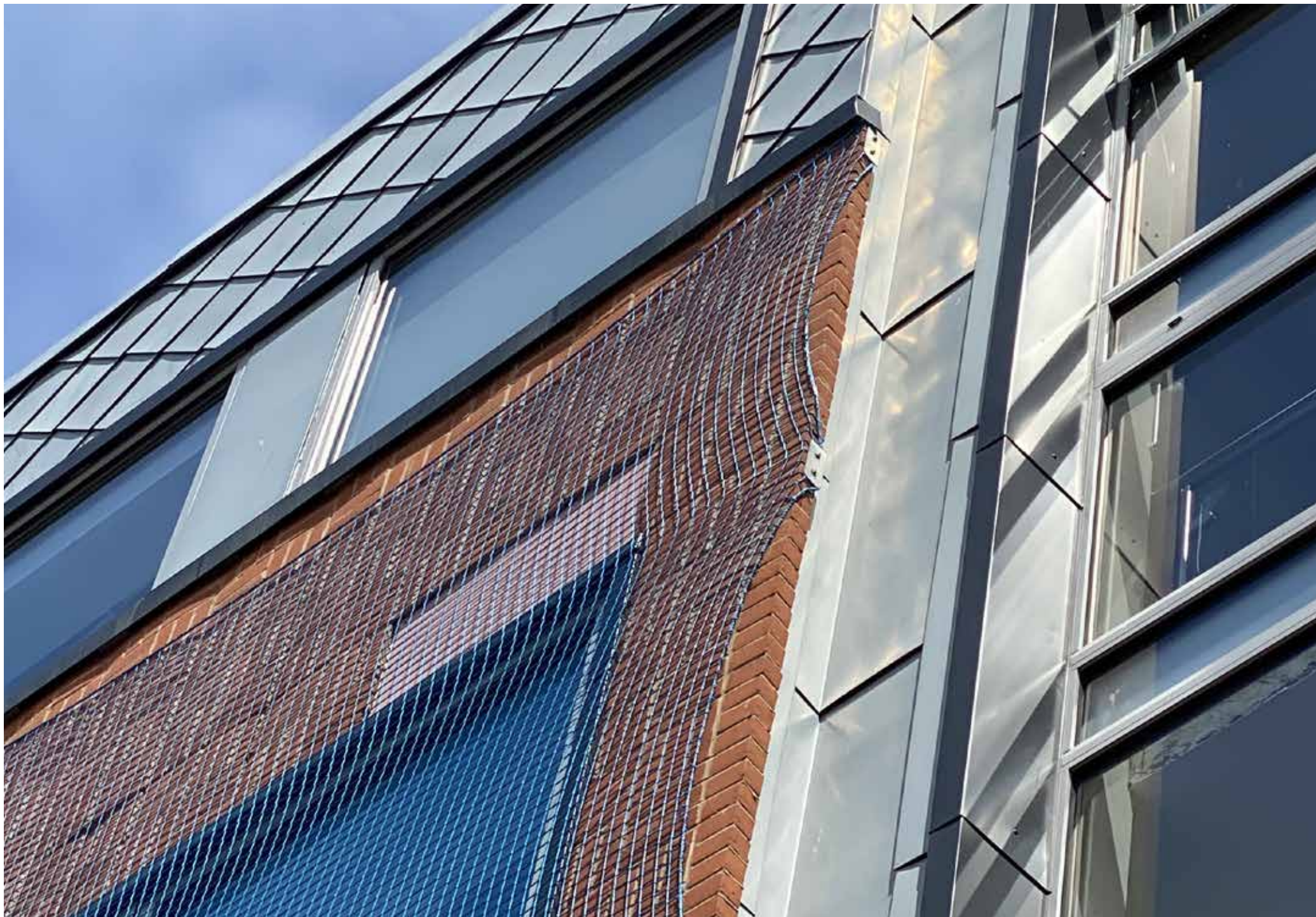


Figure 3 Location of cladding investigation, on St Mary's Butt elevation. - note repeated bowing of panels

2. Cladding Failure and Specialist Report

The building owners, Aberdeen Standard Life, commissioned specialist cladding consultants Wintech to provide an analysis of the reasons for the failure. As background, the existing brick slip cladding comprised thin 'tiles' cut from bricks, these were bonded to a rigid backing board. Each board is then fixed back to the face of the building at a location near each corner. These fixings are on to a series of metal rails spaced off the building using what are commonly referred to as helping hand brackets.

The Wintech report concludes that the backing board to the brick slips failed due to moisture absorption which led to expansion of the boards. This became apparent on the St Mary Butts elevation, where the investigation took place, but is not an isolated problem. Panels are bowing across the entire brick slip clad portion of the façade. The movement of the panels has been exacerbated by an absence of any designed in expansion joints – which is standard practice in rainscreen façades.

It can also be seen from street level that the 135° corners at the splay on the corner of Broad Street and St Mary Butts is ragged. This is in part due to the construction method, where panels have been site cut and mitred to form the splay. This has likely been exacerbated by the expansion of the panels and lack of movement joints in the facade.



Figure 4 St Mary's House near completion showing existing cladding and phenolic Insulation

3. Combustibility

Additionally, in the description of the build-up behind the brick cladding the Wintech report highlights the use of a phenolic insulation within the cavity. This is a combustible material and while it was and remains compliant with the building regulations for a building of this type and height the market is moving towards elimination of combustible materials in cladding generally.

The original architectural design specification called for a mineral fibre product, which would have been non-combustible, it is a thicker material for equivalent thermal performance. It is understood from conversation with the contractor who completed the original project that the available cladding zone, from face of structure to building line was less than expected. Even with the reduced thickness of cavity insulation installed the clear ventilated cavity is, in some areas, below the minimum of 25mm recommended by the cladding industry body, the CWCT.

Beyond the brick slip cladding there is a concern that the supporting framework and backing to the Rheinzink cladding is formed in timber and plywood, again a combustible material. As the brick slip cladding must be replaced, building owners have indicated that combustible materials in the zinc clad zones should be removed simultaneously.

4. Summary of Issues

- The brick slip cladding has failed and must be replaced with a more robust system for the safety of pedestrians below.
- A lack of movement joints has contributed to this, and these must be introduced, which will vary the appearance.
- The corner detail can be made cleaner within an alternative brick/tile cladding system.
- There are combustible materials within the build up behind both the brick slip and Zinc cladding which the building owner wishes to replace.

As a result of the above considerations, it has been concluded that complete façade replacement should be undertaken, as outlined in the following section.



Figure 5 Extract from S+N drawing 431 - Note Steel angles to Support outer windows.



Figure 6 Extract from HFM drawing P301 - showing existing and proposed cladding bay's side by side.

5.The Proposal

To make the building safe a mechanically fixed brick tile system is proposed to replace the existing bonded brick slips while matching the existing as closely as possible, while being safe, making allowance for building movement and improving the existing corner detail by eliminating cut brick slips of the existing façade. Although the cladding will be set on metal rails it is also capable of replicating the previously consented 'basket weave' brick pattern. The proposed system is Corium which is formed with extruded clay tiles coloured to match the existing brick as closely as possible, while at the same time introducing a number of features such as the movement joints and stack bonded piers. These feature both improve the construction and, by clearly acknowledging the construction visually enhance the facade.

In addition, the existing Rheinzink cladding is to be replaced like-for-like with Rheinzink cladding on non-combustible framing and support sheeting. The scope in the brick slip areas is as follows;

Demolition

- Remove existing metal trims and flashings as required.
- Strip existing brick slip cladding and associated support systems to first and second floors.
- Strip off combustible cavity insulation.
- Remove existing outer windows and supports carefully, retain for re-use, paying careful attention to metal trims between inner & outer glazing.
- Remove Sheathing board while retaining supporting frame & insulation.

Reconstruction

- Check and make good if required, existing structural elements behind cladding.
- Re-install window supports and windows.

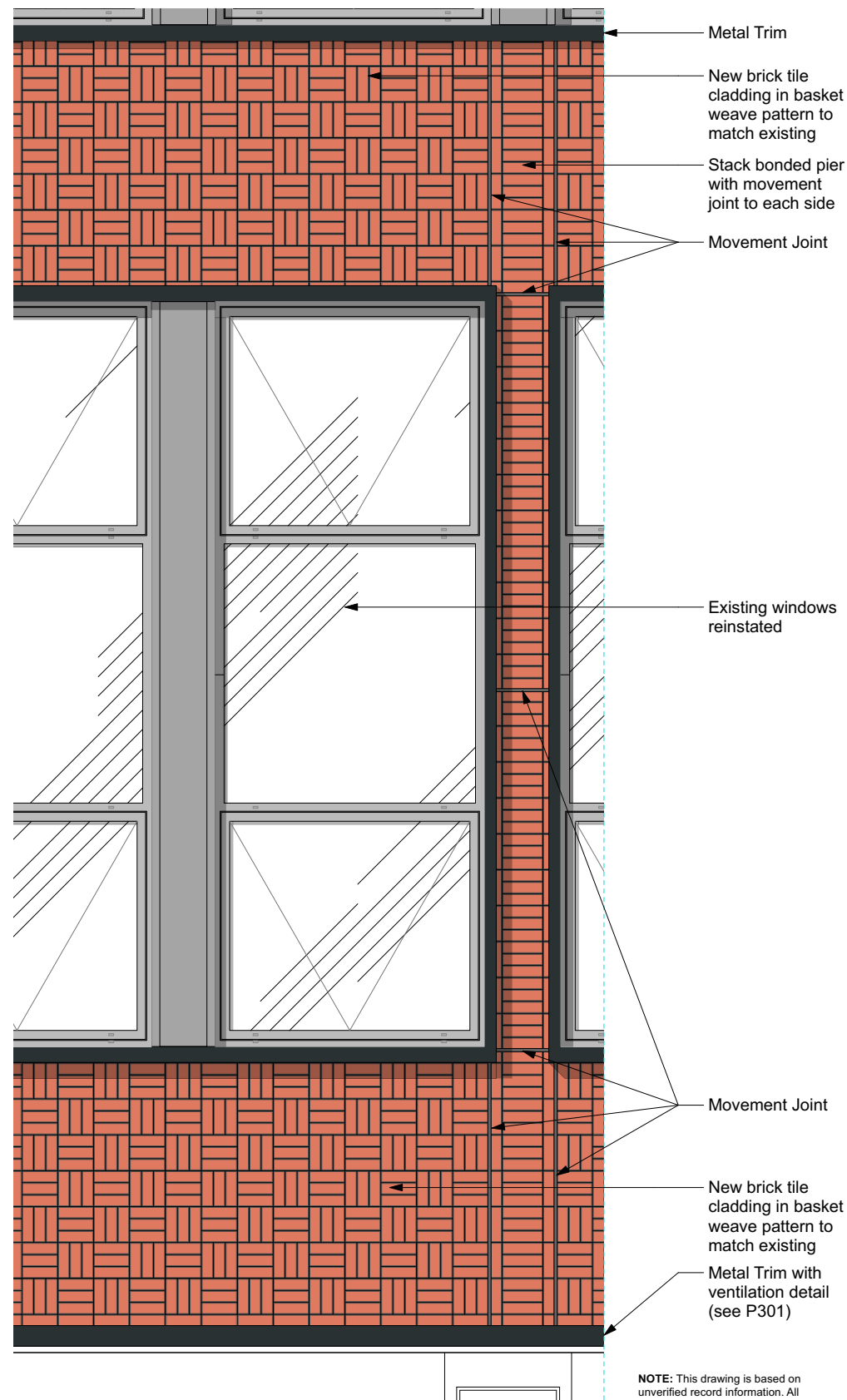


Figure 7 Extract from HFM drawing P207 - showing detail of proposed brick tile cladding bay.

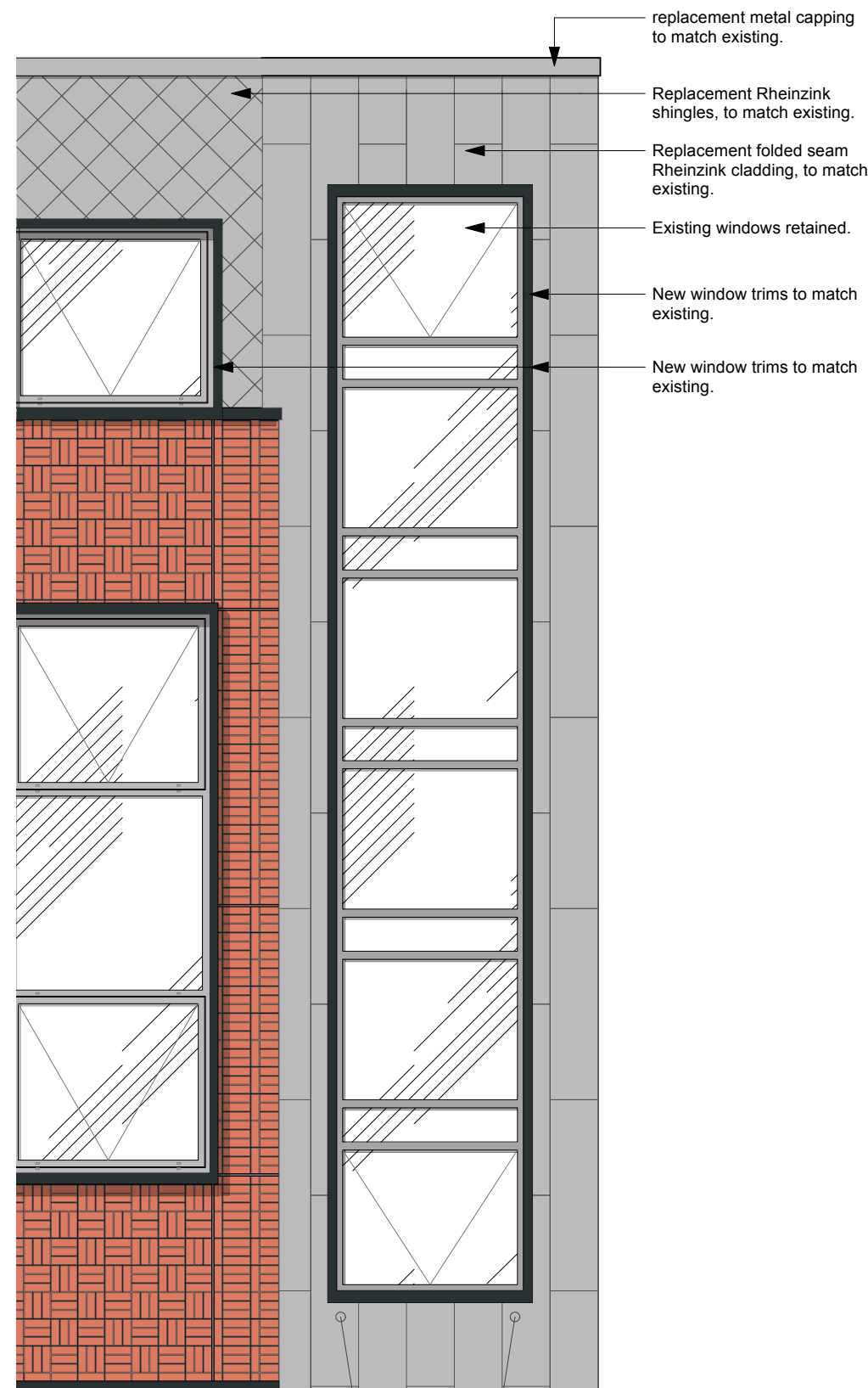


Figure 8 Extract from HFM drawing - showing detail of proposed Like-for like Zinc cladding.

- Install new cladding support system.
- Install new cladding, incorporating movement joints and revised corner detail.
- Install new metal flashings and trims as required, including new abut.

For the Zinc & Alucobond clad areas the scope is as follows;

Demolitions

- Remove existing metal trims and flashings as required.
- Strip existing Zinc and Alucobond cladding and backing boards.
- Remove existing outer windows and supports carefully and retain for re-use, paying careful attention to metal trims withing space between inner & outer glazing.
- Remove Sheathing.

Reconstruction

- Check and make good if required, concrete slab edges
- Check rockwool insulation behind sheathing and fill any gaps due to settlement.
- Install additional supports such as may be required by structural engineer.
- Install new sheathing and breather membrane.
- Re-install window supports and windows.
- Install new cladding support system.
- Install new cladding.
- Install new metal flashings and trims as required.

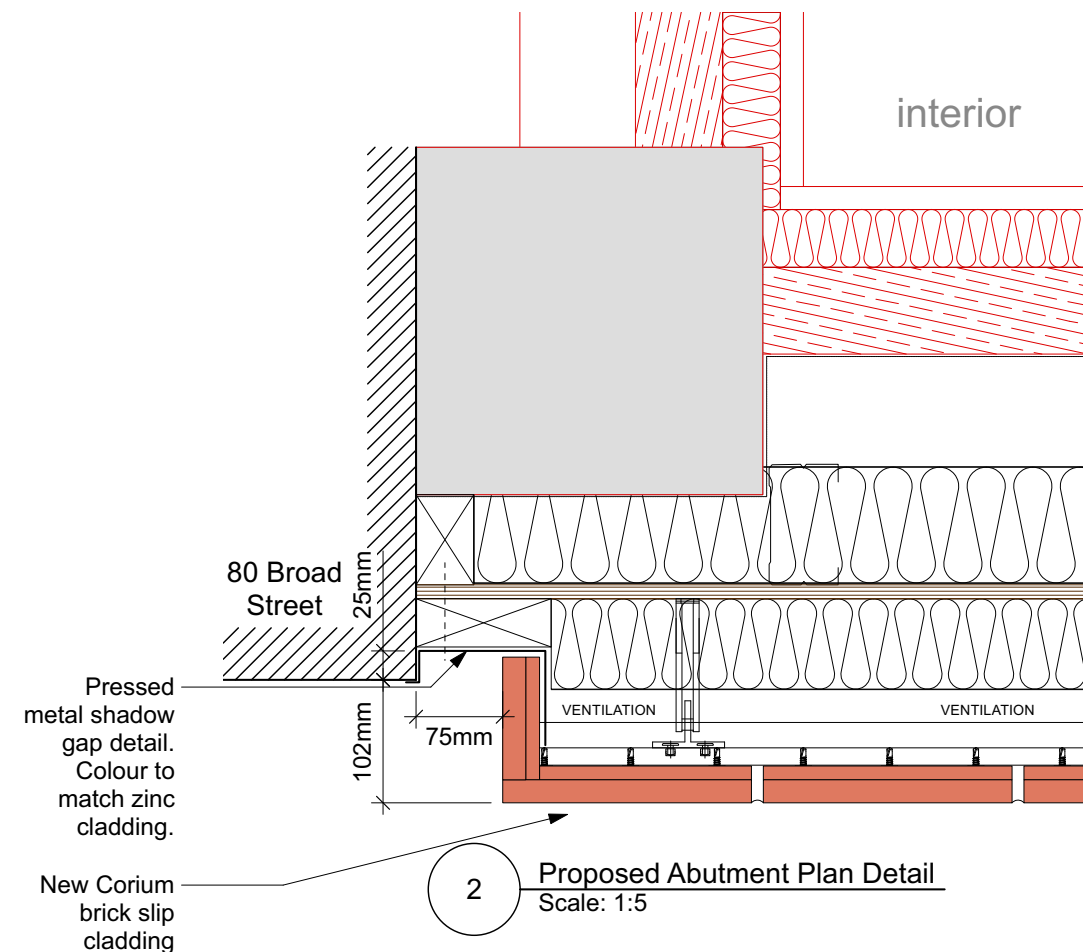
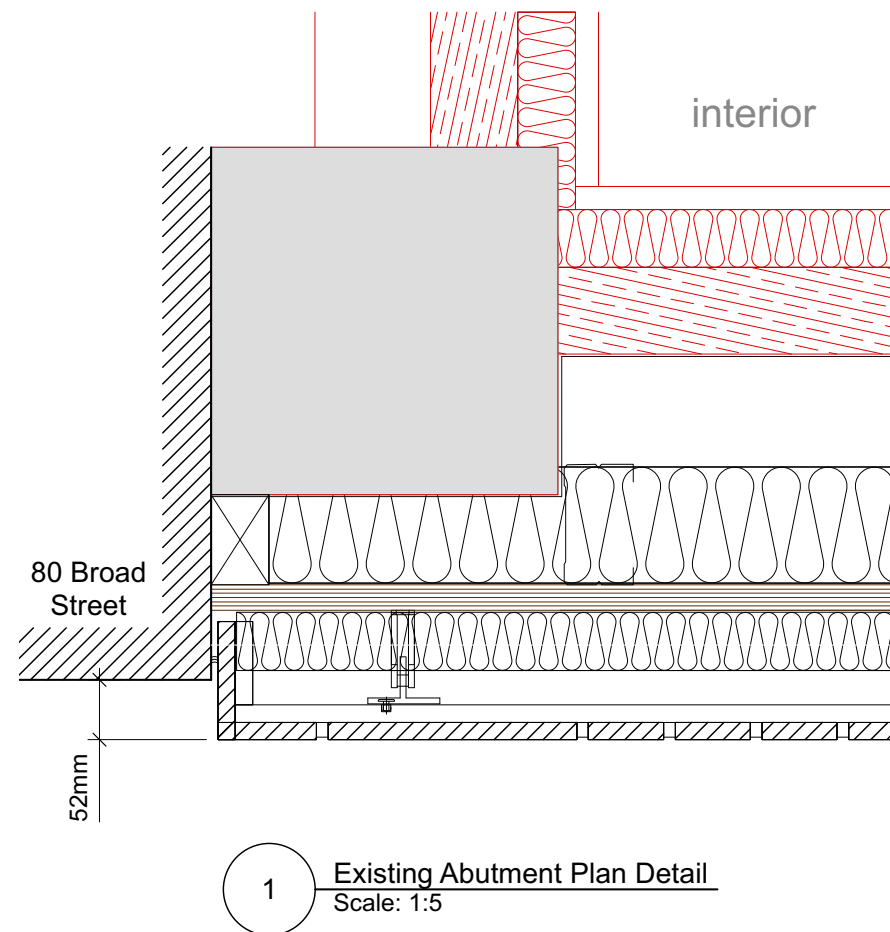


Figure 9 Extract from HFM drawing P503 - proposed abutment with 80 broad Street



Figure 10 Photograph of existing abutment with 80 Broad Street.

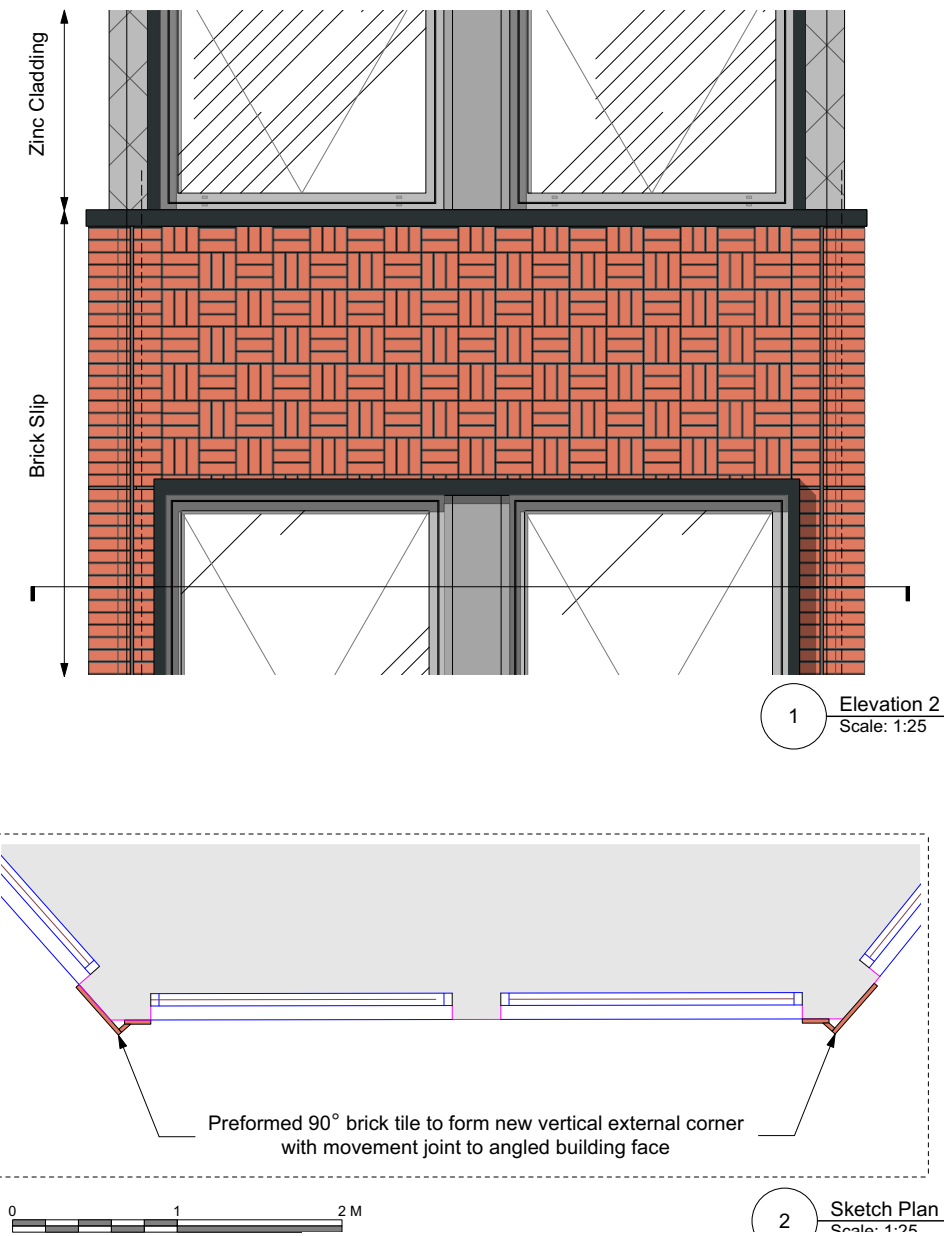
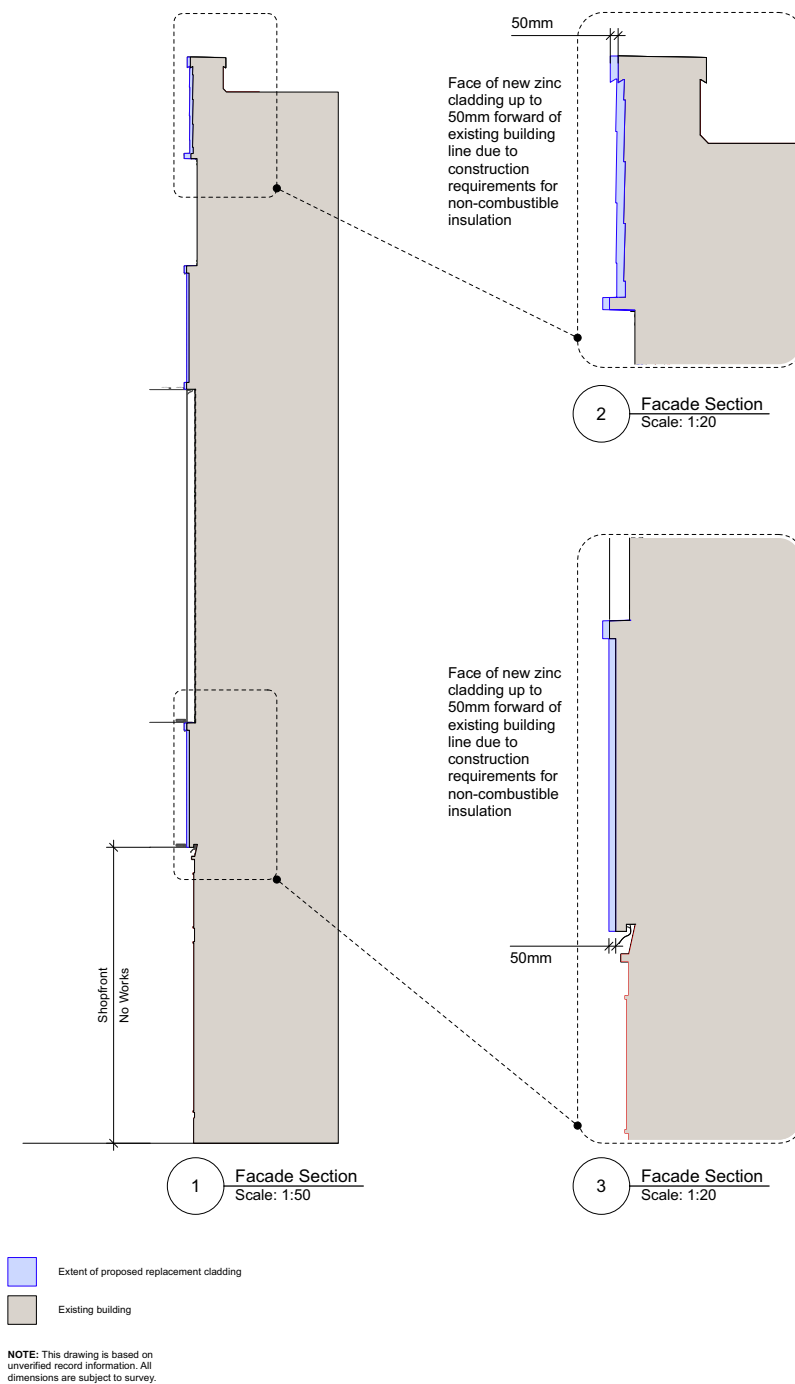
6. Visual Impact

As the scope makes clear complete replacement of the existing façade to improve the safety of the elevations is the preferred approach. The intention is to achieve this while matching the existing façades as closely as possible. The Zinc clad portion will be visually identical, the brick slip replacement has technical requirements that lead to minor variations in appearance, while retaining the overall feel of the current elevation.

These minor variations are the result of a market review of a mechanically fixed cladding systems available. From which we have determined that the Corium system is best placed to provide a the required safe mechanical fixing and matching of the basket weave pattern. This system is slightly thicker overall than the existing cladding, which will bring the façade fractionally forward of the current line. It is anticipated that this will be in the order of 50mm.

We have also introduced detail changes, which will help introduce movement joints and provide additional assistance with matching existing structure panels and accommodating dimensional tolerances. These include acknowledging the glazing pattern with 'piers' of stack bonded brick tiles, with movement joints either side. At the chamfer corners the current cut brick detail is ragged, which was the nature of a cut bricks required by the existing cladding system. In our proposal we have introduced an oversail, this allows for the use of 90° corner tiles that will give a crisp, sharp detail. These will close against the splayed brick with a flexible joint.

The facing of the Corium system is a bespoke extrusion, and the colour of which can be matched to any colour. In this instance we propose to colour match the existing cladding. The mortar joints will also be colour matched to or utilise the original mortar.



Due to the modifications to the zinc cladding to eliminate combustible materials this will also project slightly further than the existing condition. The intention in this instance is to retain the existing relationship between brick slip and zinc as closely as possible. The impact of this slight alteration to the building line can be seen on drawing P300..

Conclusion

As can be seen from the proposals in this report we have retained the visual appearance of the existing cladding as far as possible, with some minor enhancements, while replacing the failing bonded cladding with a safe mechanically fixed alternative that complies with current standards, while removing combustible materials from the façades.

Figure 11 Extract from HFM drawing P300 indicating extent of proposed cladding

Figure 12 Extract from HFM drawing P21 I - showing proposed chamfered corner detail..

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