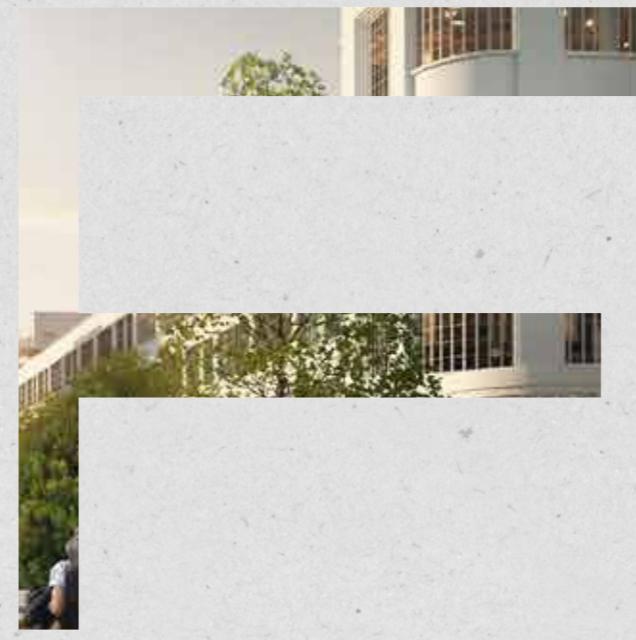
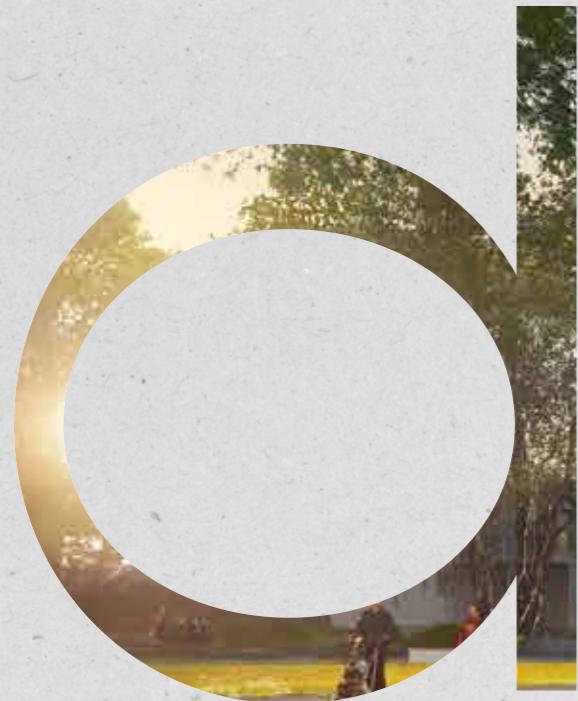


FORMER NESTLE CANTEEN

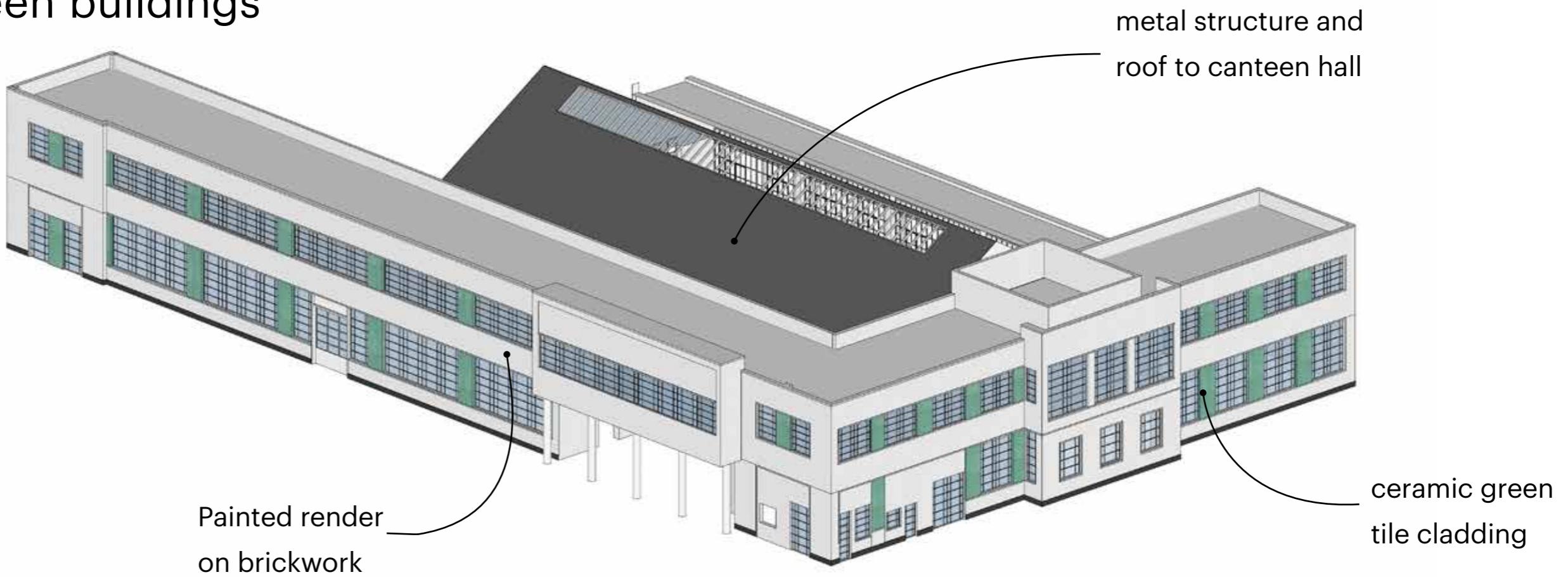
Facade retention study - REV A

April 2022



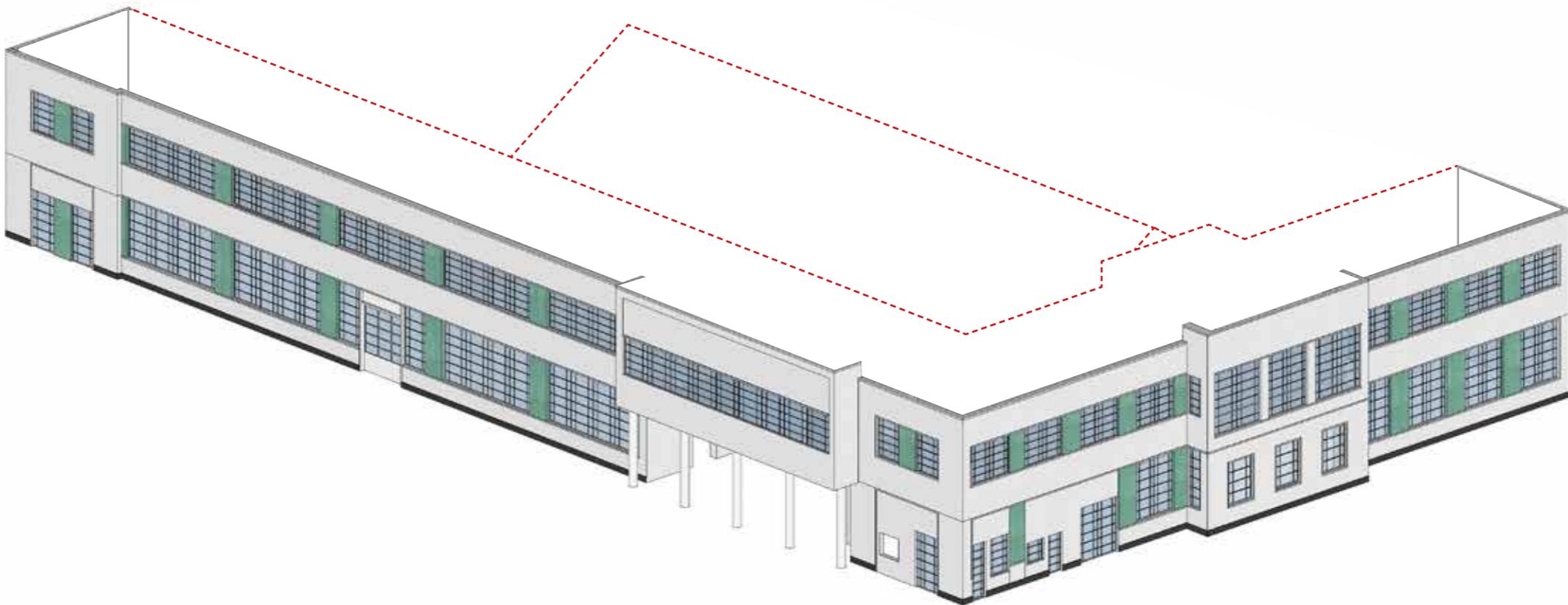
Existing Canteen buildings

Axo from South west

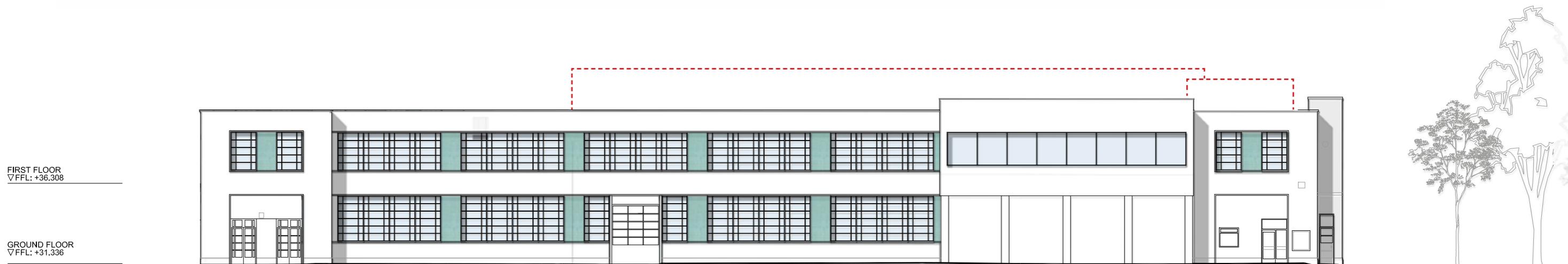


West Elevation

Key facades considered for retention

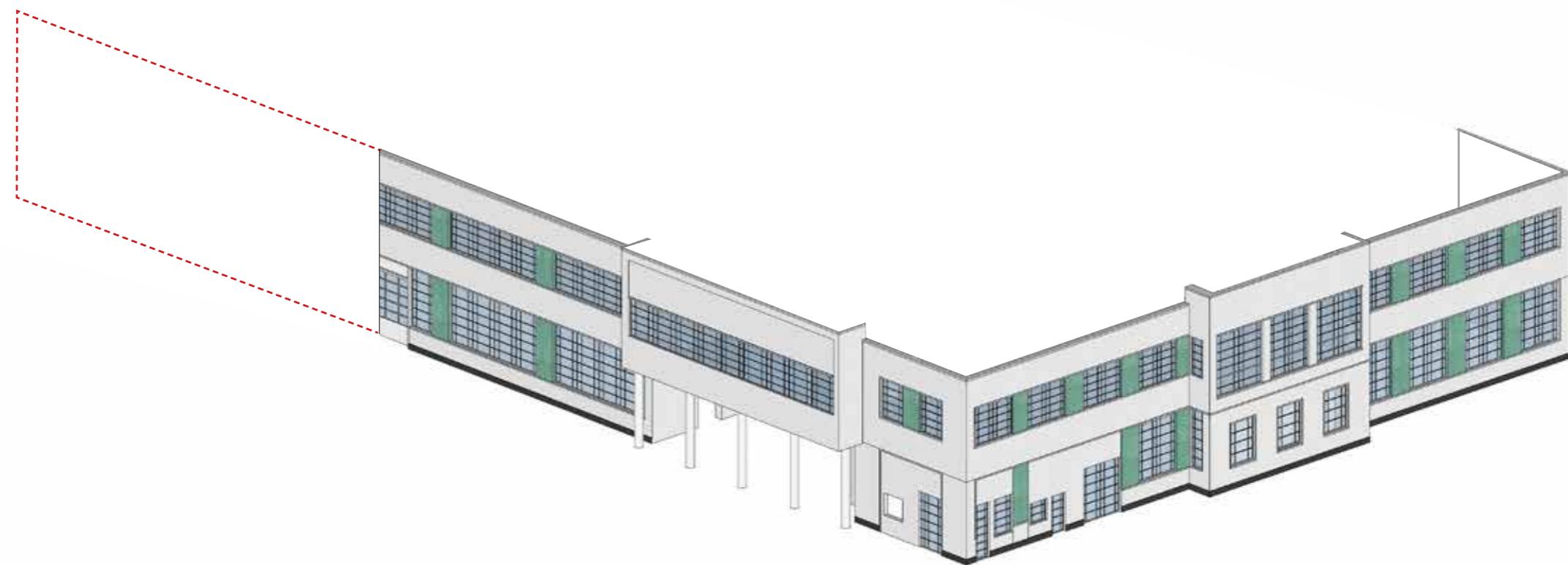


Axo from South west

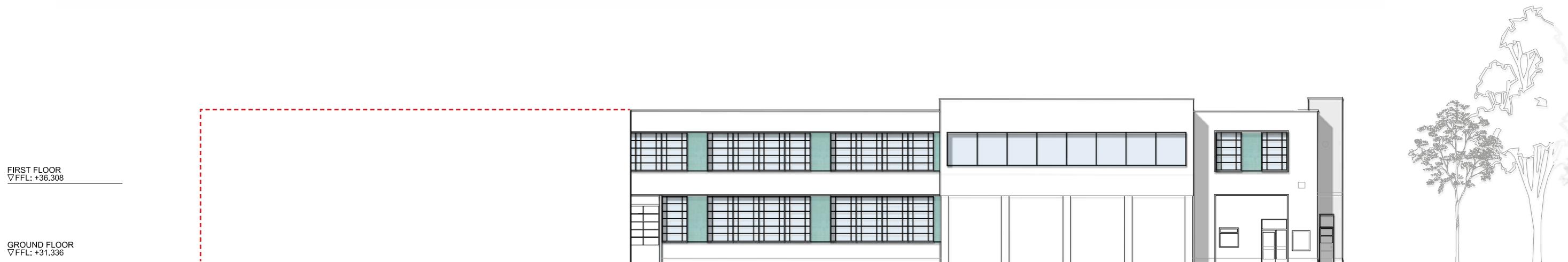


West Elevation

End nib removed for Block H



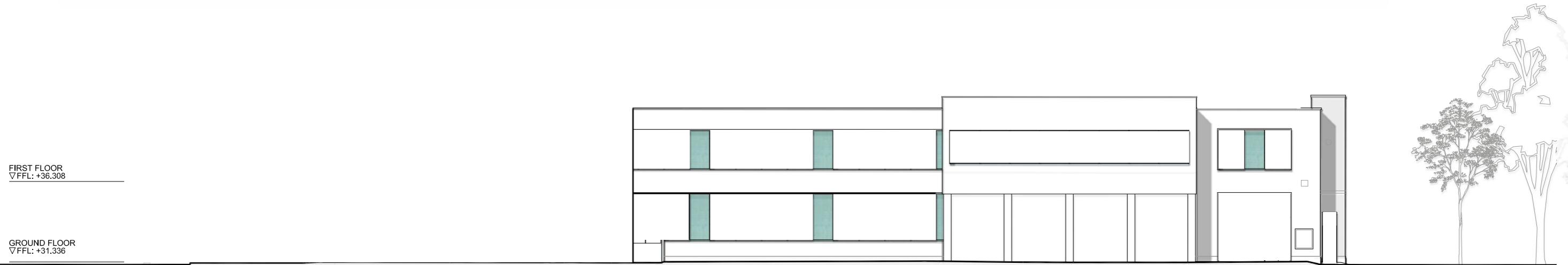
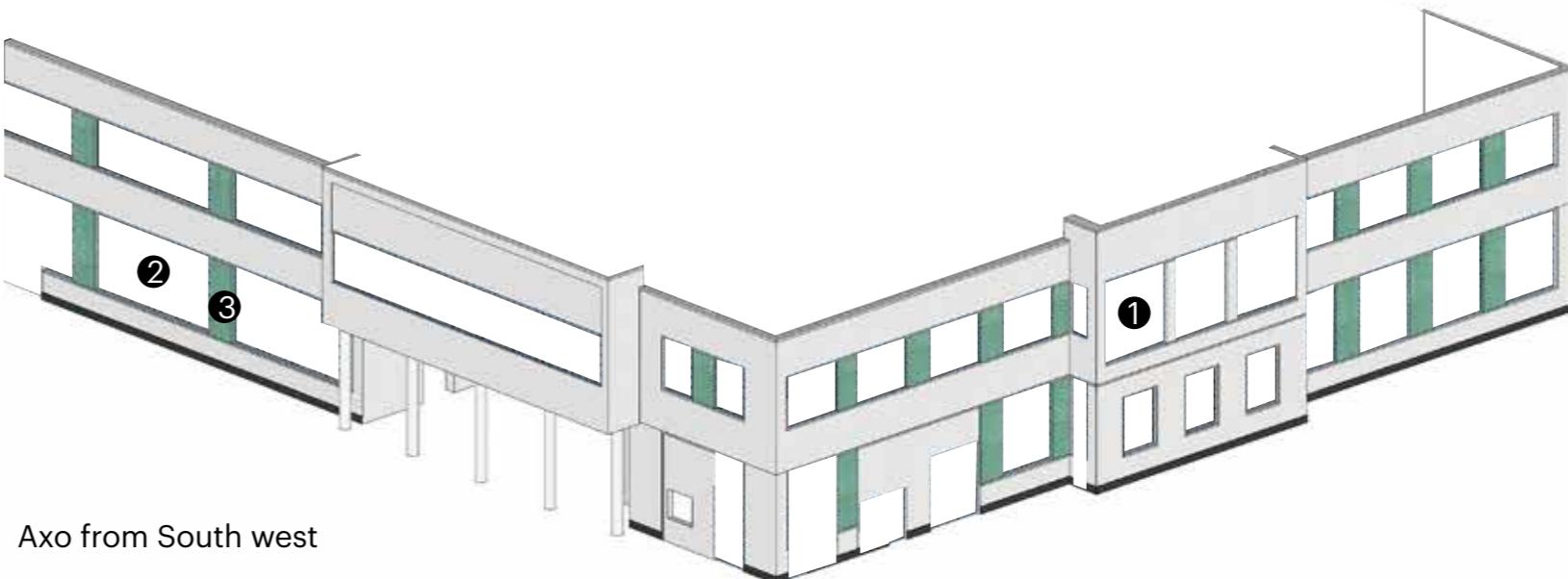
Axo from South west



West Elevation

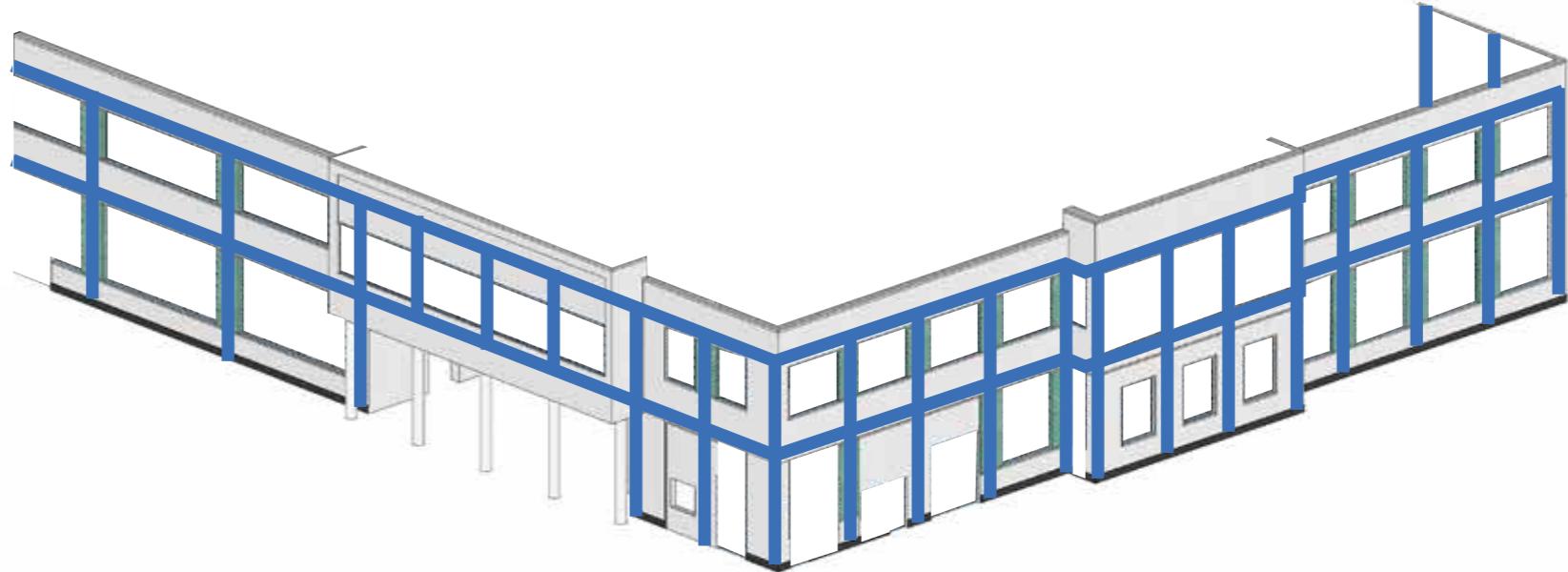
Single-glazed windows to be replaced

1. The existing windows are single-glazed steel framed, and need to be replaced with thermally broken double glazed in order to meet the NHS requirements of a sustainable BREEAM excellent medical centre. The proposal is for the same crittal style aluminium window frames used on blocks F1 and G, which appear in keeping with the original aesthetic.
2. To facilitate the medical centre design and room sizes, the existing window spans on the West facing elevation will need to be subdivided by half; the junction of wall to window detail draws from the original design, using a vertical green tile panel junction.
3. The existing green tiles are damaged or missing in areas; to ensure consistency with the new panels, all the tiles are to be removed and replaced with new green tiles, using the same product and supplier as the tiles used on blocks G and F1; these three buildings will complete the composition around Wallis Gardens

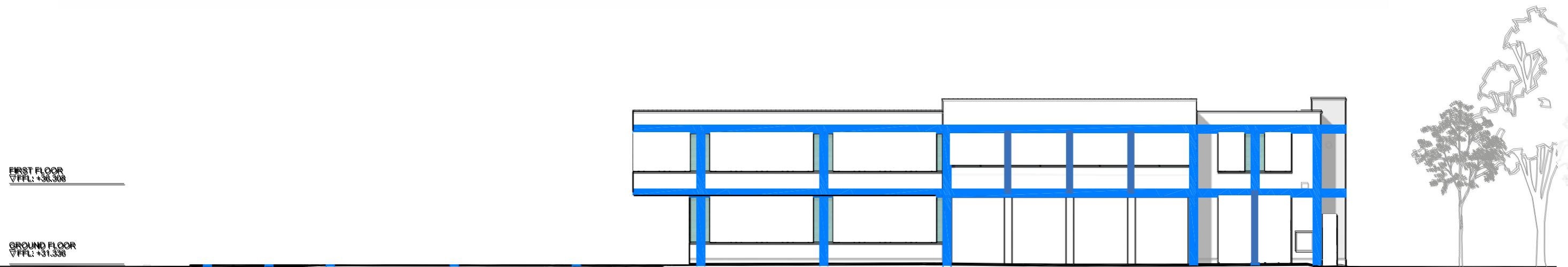


West Elevation

Corroded steel structure embedded in brick facade



Axo from South west

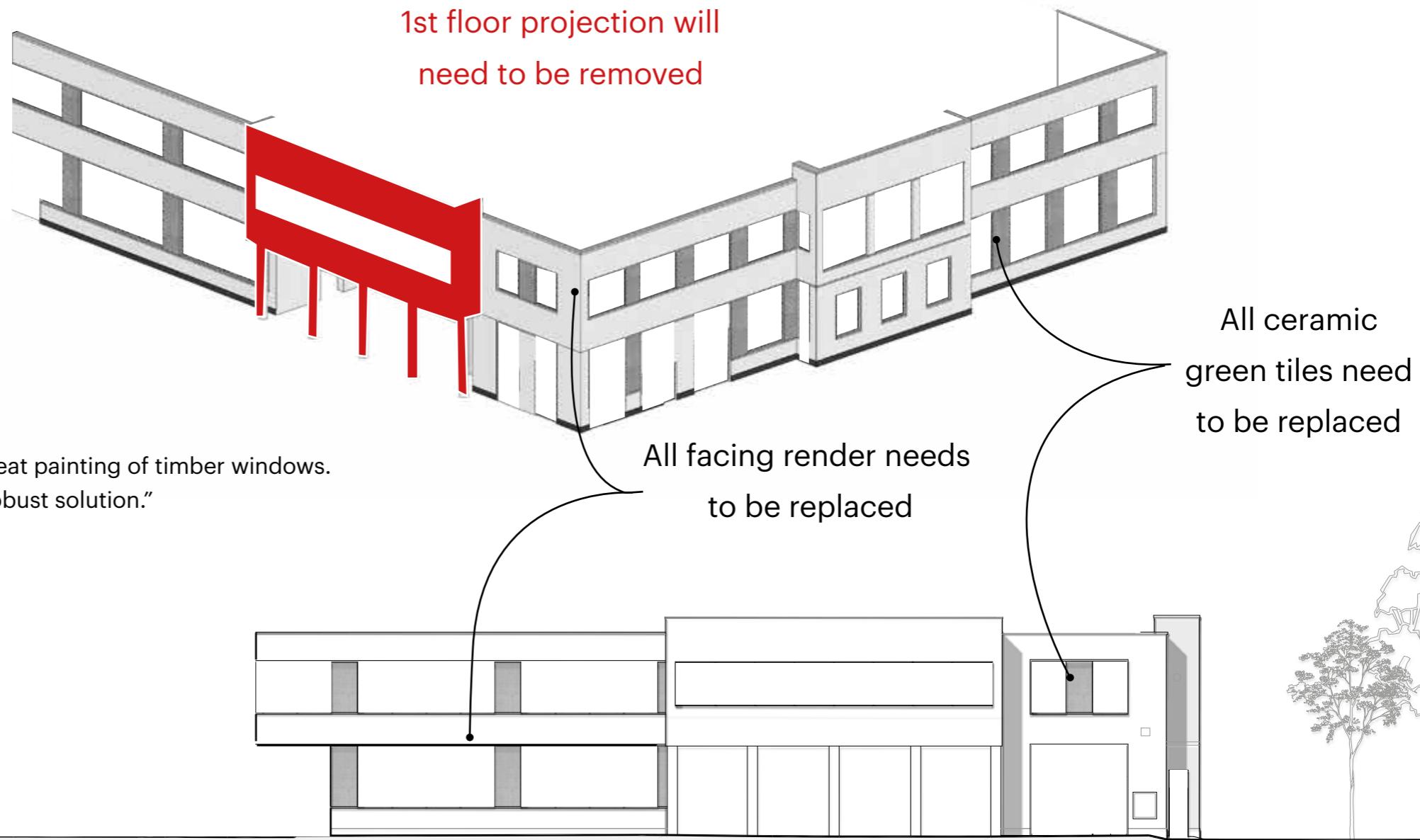


West Elevation

OPTION 1 - Extent of facade remaining if steels do not require treatment

The steel beams and columns are encased in brickwork. This detail was typical during midcentury construction - particularly as a way of creating a modernist concrete aesthetic - but is now understood as a poor detail due that allows water ingress to damage the steelwork, often creating structural damage referred to as 'Regents street disease.' By today's standards, any retained steelwork would be categorised as primary structural elements, and would therefore need to provide a 60 year minimum lifespan.

This option relies upon a sealant applied to the outer layers of render to prevent future moisture ingress. However, initial comments from NHBC is that relying on, "a paint-on solution requires periodical application and may affect how the building breaths (interstitial and surface condensation). Any periodical maintenance required would need to be done by operatives who are suitably trained in the product and this is likely to be part of a condition of warranty - for example similarly to the repeat painting of timber windows. Given the end user and possible cost, this is a risk and is not a robust solution."



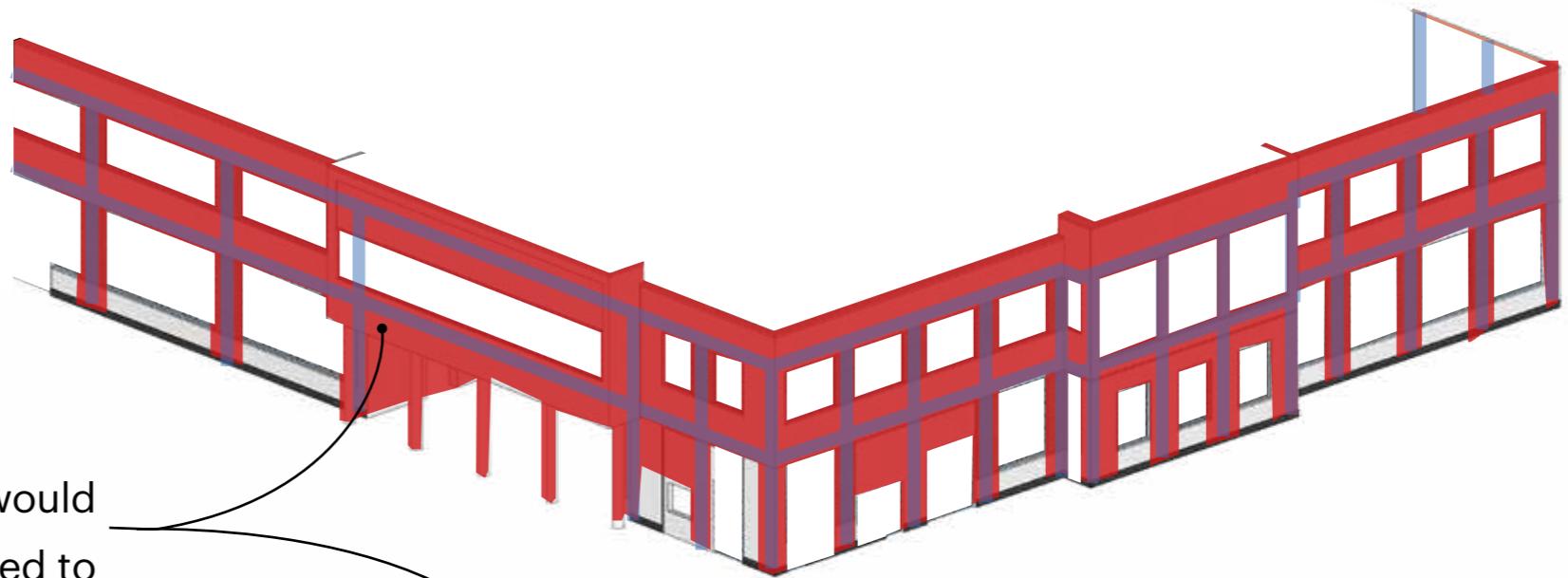
OPTION 2 - Extent of facade removed if steels require treatment

In order to achieve a robust remedial detail to retain the steels and provide a 60 year lifespan that would satisfy the NHBC warranty, it is likely that the steels would need to be fully exposed in order to provide repairs and protection from future moisture. This would require the removal of all the brickwork shown in red opposite, to be rebuilt.

By this point, for all intents and purposes, only the steel-work remains from the original fabric.

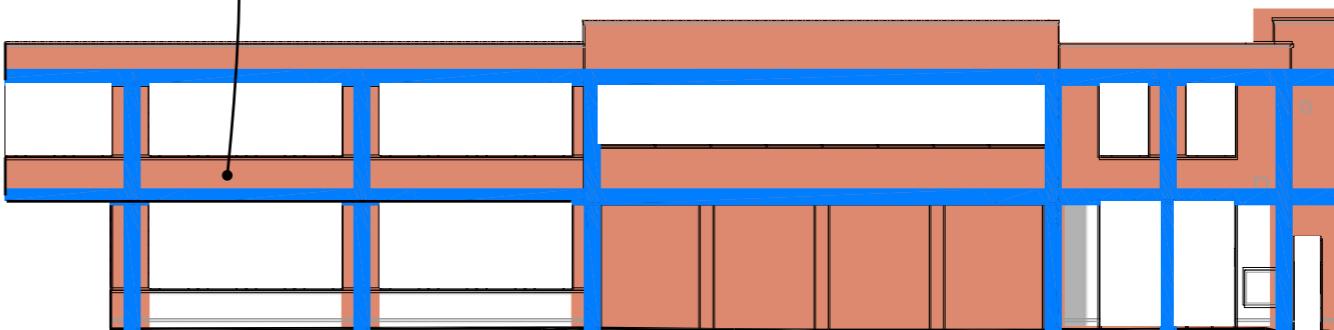
Axo from South west

majority of brickwork would need to be removed to enable access to steels



FIRST FLOOR
▼FFL: +36.308

GROUND FLOOR
▼FFL: +31.308



West Elevation



Proposed design (based on OPTION 1)

The application is based on option 1, retaining as much facade as possible, while providing a new, purpose built health centre behind. All windows are to be double glazed, in glazing patterns of original. Green verre-de-terre tiles to match the original and as used on blocks F1 and G are proposed to subdivide window bays. The render finish will be reapplied to match the original.

Axo from South west



West Elevation



new green ceramic tiles
to match original
(as used on adjacent
blocks F1 and G)

render finish reapplied to
match original

Completed Block F1



Completed Block G



Appendix A

NHBC comments on steel retention

NHBC comments on steel retention

From: Philip Pettinger
Sent: 13 January 2023 11:02
To: Kanabar, Shane
Cc: Nasalska-Olczyk, Anna; Jonny Wong; Tony Watkin; Scholar, Martin
Subject: RE: *EXTERNAL:RE: *EXTERNAL:RE: Canteen building: Independent Review

Good morning Shane

I will send over the report and comments to Joe, our engineer but in the meantime to answer your question below...

From an NHBC warranty perspective we would consider the façade retention as a primary part of the building. Secondary elements are items which are largely replaceable without destructive works.

Whilst the facade is not necessarily a primary part of the structure, it is a fundamental element in ensuring the building remains fit for purpose for the life of the building, i.e., 60 years from completion. It is for this reason why we would seek a further design life of 60 years for the building.

With any retained facade, a thermal assessment needs to be undertaken especially at the location of the steels to ensure there is no risk of interstitial or surface condensation. Condensation can be just as detrimental as water ingress so an assessment would need to be undertaken to see the effects of the change of use and any repair treatment has on the complete wall build up.

Kindest Regards

Phil Pettinger C.Build E FCABE, MCIOB

Principal Technical Building Consultant
NHBC Technical Operations - Major Projects

Mobile: | Direct tel:
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NHBC, NHBC House, Davy Avenue, Knowlhill, Milton Keynes, MK5 8FP
Tel: | www.nhbc.co.uk

From: Philip Pettinger <PPettinger@nhbc.co.uk>
Sent: 20 January 2023 14:44
To: Kanabar, Shane <shane.kanabar@barrattlondon.com>
Cc: Nasalska-Olczyk, Anna <anna.nasalska@barrattlondon.com>; Jonny Wong <jonny@dmfk.co.uk>; Tony Watkin <Tony.Watkin@gravity-ce.co.uk>; Scholar, Martin <martin.scholar@barrattlondon.com>
Subject: RE: *EXTERNAL:RE: *EXTERNAL:RE: Canteen building: Independent Review

Hello Shane

There is little more to add from our end as we should not design, other than the requirement of the 60 year design life. The level of removal works would be determined by and would be down to the specialists to review the current condition of the façade and its materials and work out a strategy of remedial works to ensure the design life is met.

I'd be hesitant on just relying on a paint on solution as this usually requires periodical application and may affect how the building breaths (interstitial and surface condensation). Any periodical maintenance required would need to be done by operatives who are suitably trained in the product and this is likely to be part of a condition of warranty – for example similarly to the repeat painting of timber windows. Given the end user and possible cost, is this likely to happen? If not, then perhaps it's not the most robust solution.

Kindest Regards

Phil Pettinger C.Build E FCABE, MCIOB

Principal Technical Building Consultant
NHBC Technical Operations - Major Projects

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