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THE PROPOSAL

4.3 APPEARANCE AND MATERIALITY

4.3.1 New Build

The new metal clad extension will contrast with the locally listed brick building, without ever trying to compete with it. The two buildings will complement each other, in appearance and proportion, creating a balanced whole.

The use of expanded metal panels, yellow fabric canopies, neon signage and other lighting, will add interest to what could be just an industrial facility, bringing it back to a more human scale.

Any signage associated with the cafe, music venue / restaurant would be applied for at a later date, by the operator.



Right: Illustrative sketch showing corner cafe and existing building

On the other page: References for external cladding:
Top left - Communal Hall in Mannedorf, SAM Architekten und Partner;
Top right - Sarphatistraat Office in Amsterdam, Steven Holl Architects;
Bottom left - The Young Vic in London, Haworth Tompkins;
Bottom right - Youth Centre of Qingpu, Atelier Deshaus



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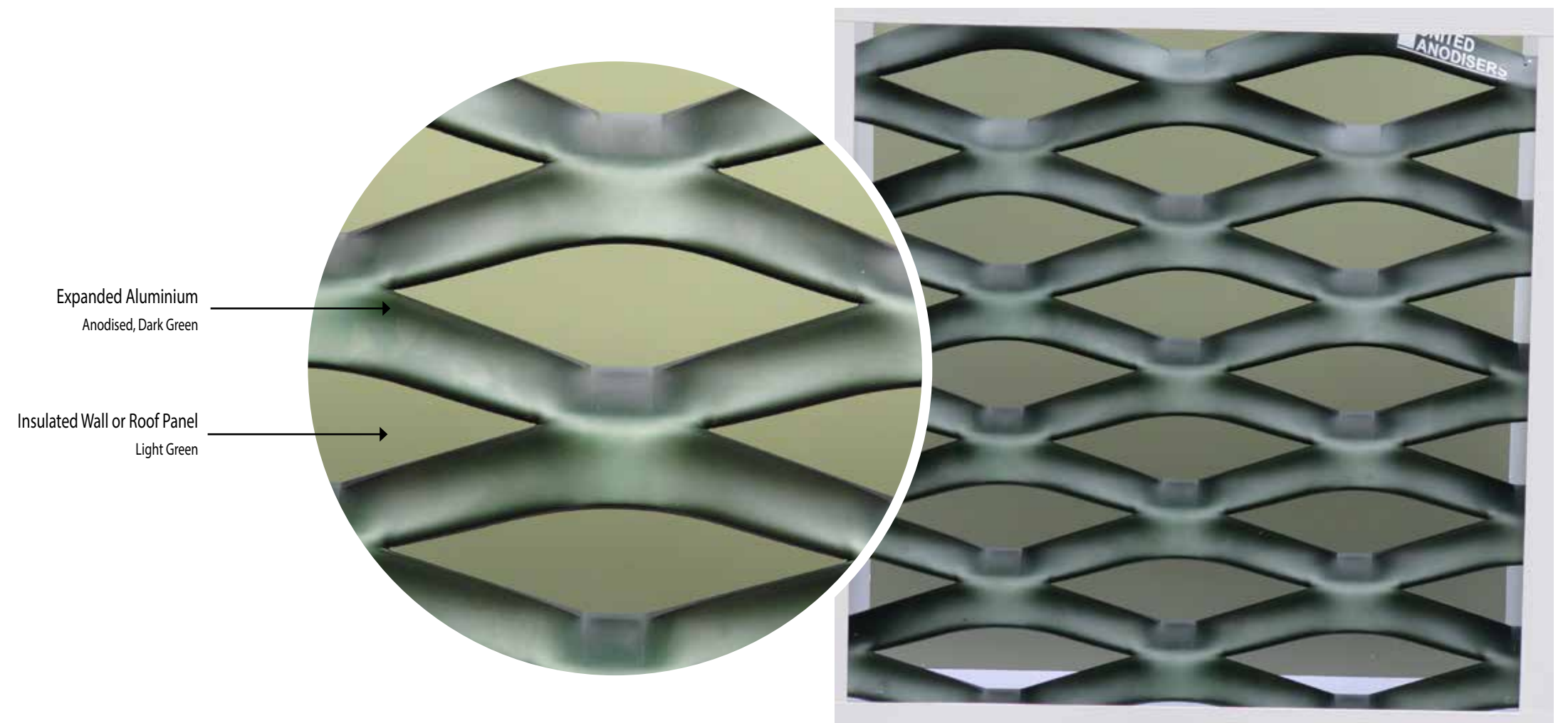
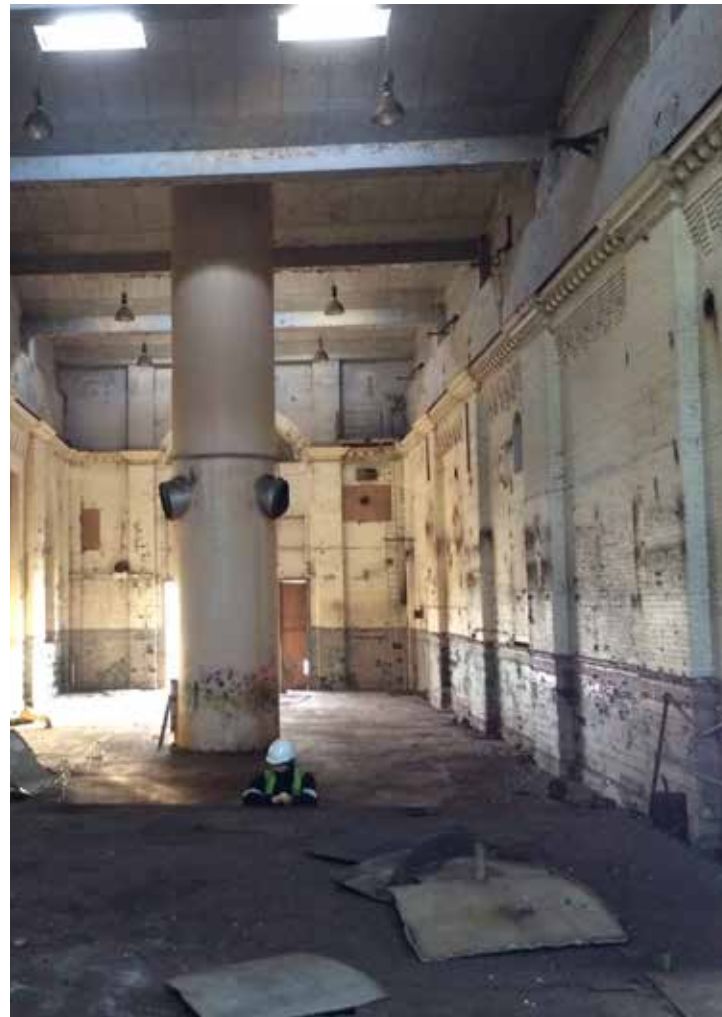
4.3.1.1 Appearance and Tonality

As mentioned before, the choice for expanded metal panels as cladding solution arose from the need to give answer to a series of practicalities, while composing a balanced whole.

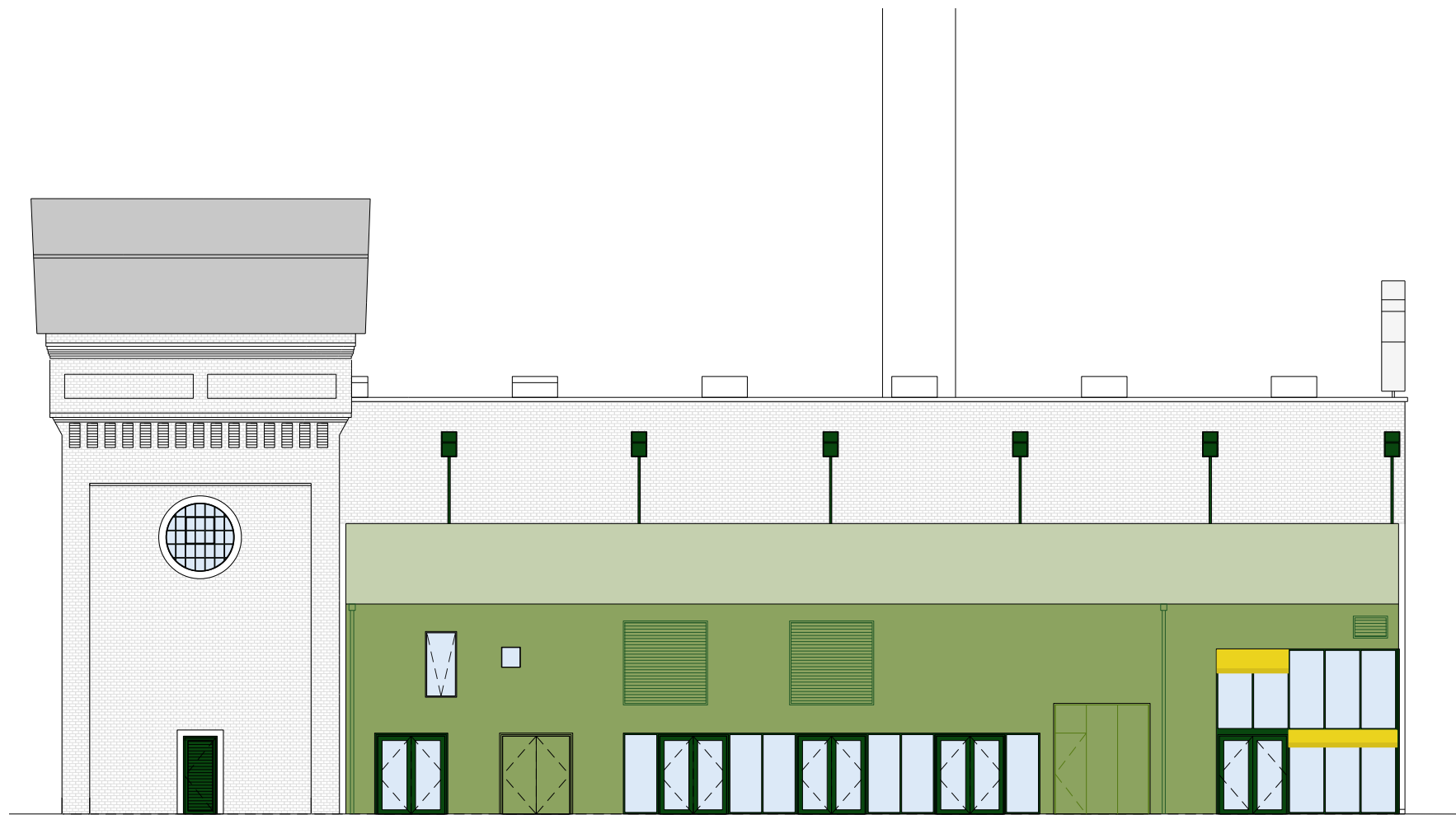
The choice of using two contrasting green tones for the external cladding of the new extension relates back to the original tiling of the main hall. The green details along the internal walls of the existing building give it a particularly dignified appearance, rare in this type of utilitarian facilities. The use of the same tonalities for the cladding of the new volume is a subtle way to strengthen the relationship between the two buildings, and also a way to celebrate its original architectural features.

The use of dark green anodised expanded metal panels over a light green internal surface will create different nuances along the new extension's facades, discretely veiling louvered areas, doors and small windows behind the mesh. Also, thanks to the nature of this material, the facade will be read differently depending on the angle of approach. With this cladding solution, the sections of the elevation that, for technical requirements, had to be enclosed, will in fact be visually animated.

Careful detailing, together with the interest added through colour, will elevate the expanded metal panels, usually seen as an industrial material, to a higher quality level, and help deliver a refined building solution.



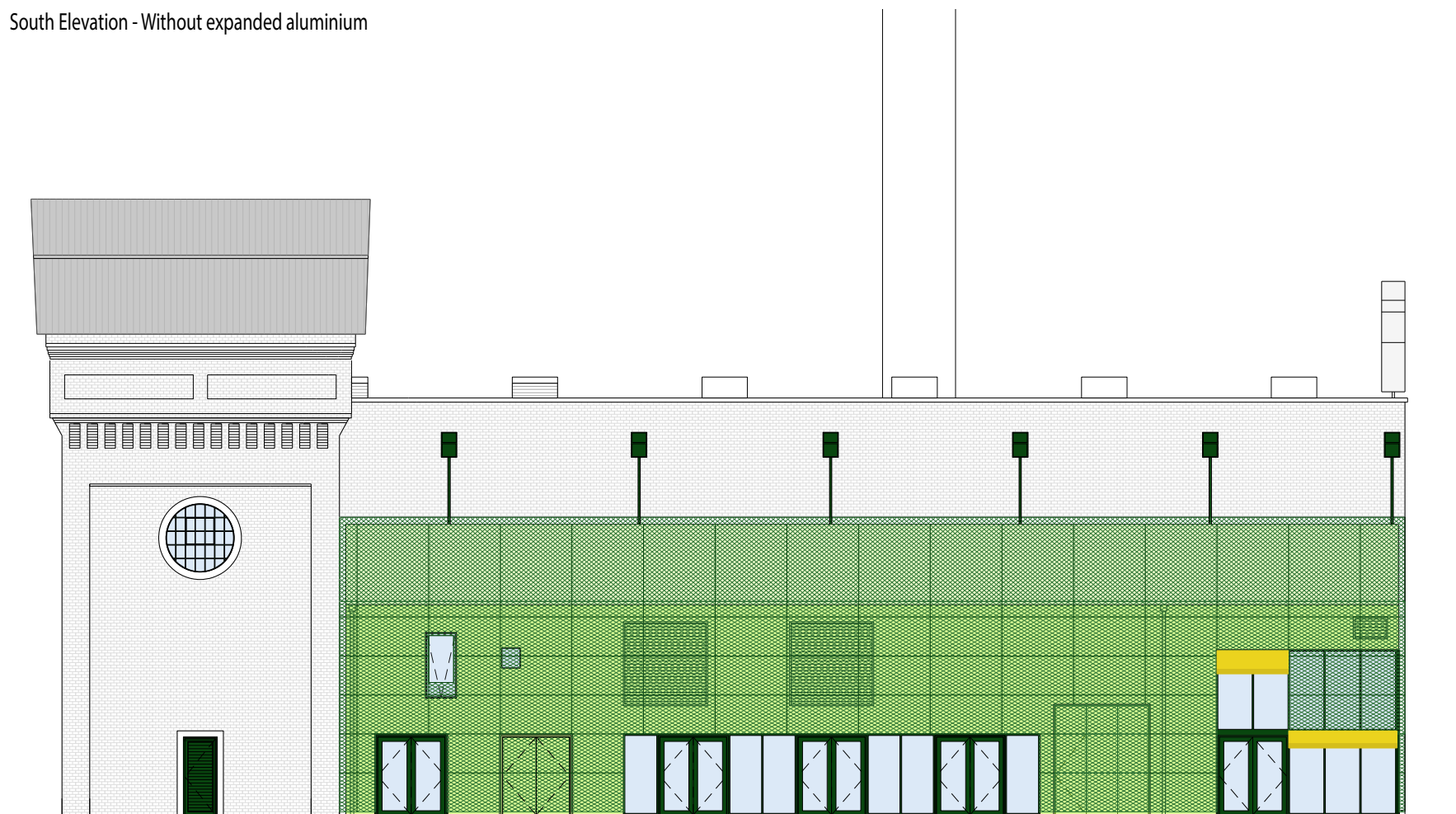
Right: Top - Internal photos of main hall and existing green tiling; Bottom - Photos of external cladding sample
On the other page: South and East elevations with and without the expanded metal panels layer (Not to scale)



South Elevation - Without expanded aluminium



East Elevation - Without expanded aluminium



South Elevation - With expanded aluminium



East Elevation - With expanded aluminium

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4.3.1.2 Louvres

Throughout the evolution of the project, satisfying all the ventilation requirements of the energy centre, without compromising the existing building's integrity, and while proposing an interesting and attractive new extension, turned out to be a complex challenge. The Powerhouse, by including in the same premises an energy centre, a cafe and a main hall for public or commercial use, had to be able to accommodate and coordinate all the different uses' requirements.

With that in mind, all the required louvred areas were designed from the beginning to carefully integrate the building's different elevations, so that they are read as part of a thoughtful composition instead of looking like undesirable practicalities.

Within the new extension, all louvres are light green powder coated to blend in the internal layer of the external cladding, and are then disguised by the expanded metal panels that wrap the whole building.

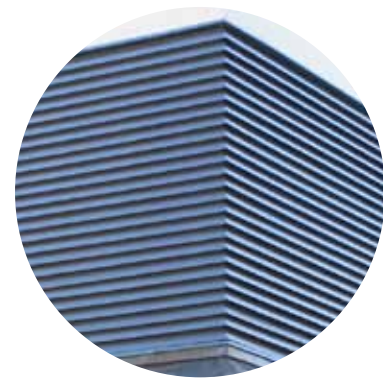
In the existing building, all louvred areas are accommodated within the water tank, that has to be replaced for structural reasons, and the west semicircular opening to the main hall, which will stand uncovered by surrounding buildings almost for the first time since it was built. Since these portions of the existing building already required a redesign, it was easier to consider the louvres as one of their compositional elements from the beginning.

The framed louvres on the west opening outline a similar composition to the one used originally in the east facade of the existing building, in an attempt to better integrate them in the architectural language of the whole.

Right: West facade elevations and detailed section showing framed louvres opening, and photos of three different types of louvres used in the Powerhouse project (Not to scale)



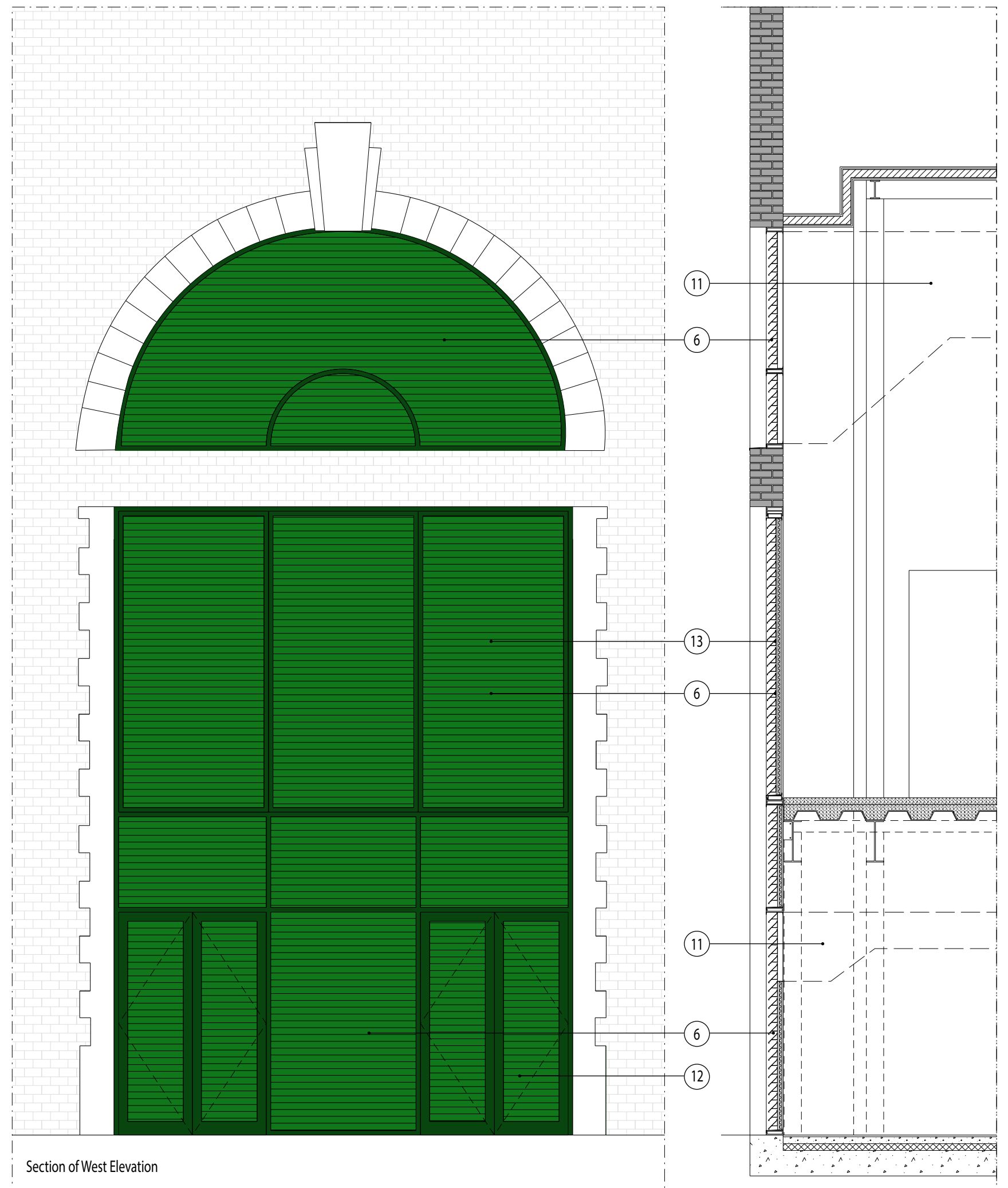
Framed louvres used in West facade opening



Bank louvres used in water tank structure



Concealed framed louvres used in new extension

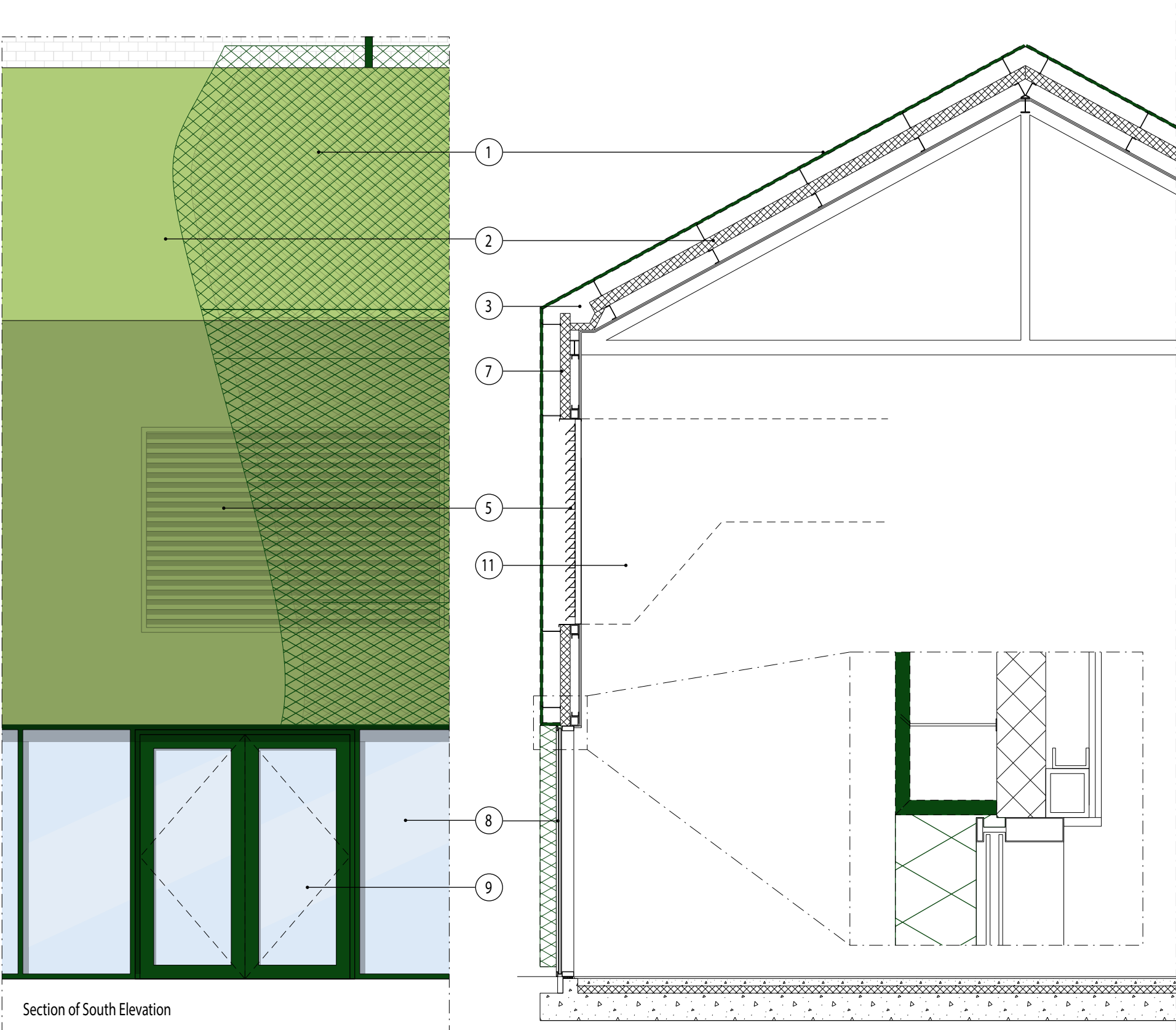


Section of West Elevation

1. Expanded Aluminium
Anodised, Dark Green
2. Insulated Roof Panel
Light Green
4. Concealed Gutter
5. Extruded Aluminium Framed Weather Louvres
Polyester Powder Coated, Light Green

6. Extruded Aluminium Framed Weather Louvres
Polyester Powder Coated, Dark Green
7. Insulated Wall Panel
Light Green
8. Aluminium Curtain Walling
Polyester Powder Coated, Dark Green
9. Aluminium Framed Double Glazed Door
Polyester Powder Coated, Dark Green

10. Silicate Masonry Paint to Existing Building
White
11. Notional Ductwork
Polyester Powder Coated, Dark Green
12. Aluminium Framed Louvre Door
Polyester Powder Coated, Dark Green
13. Demountable Panels



4.3.1.3 Cladding Detail

Left: Detailed section of external cladding and coloured extract of south elevation of new extension showing louvres behind the expanded metal panels (Not to scale)

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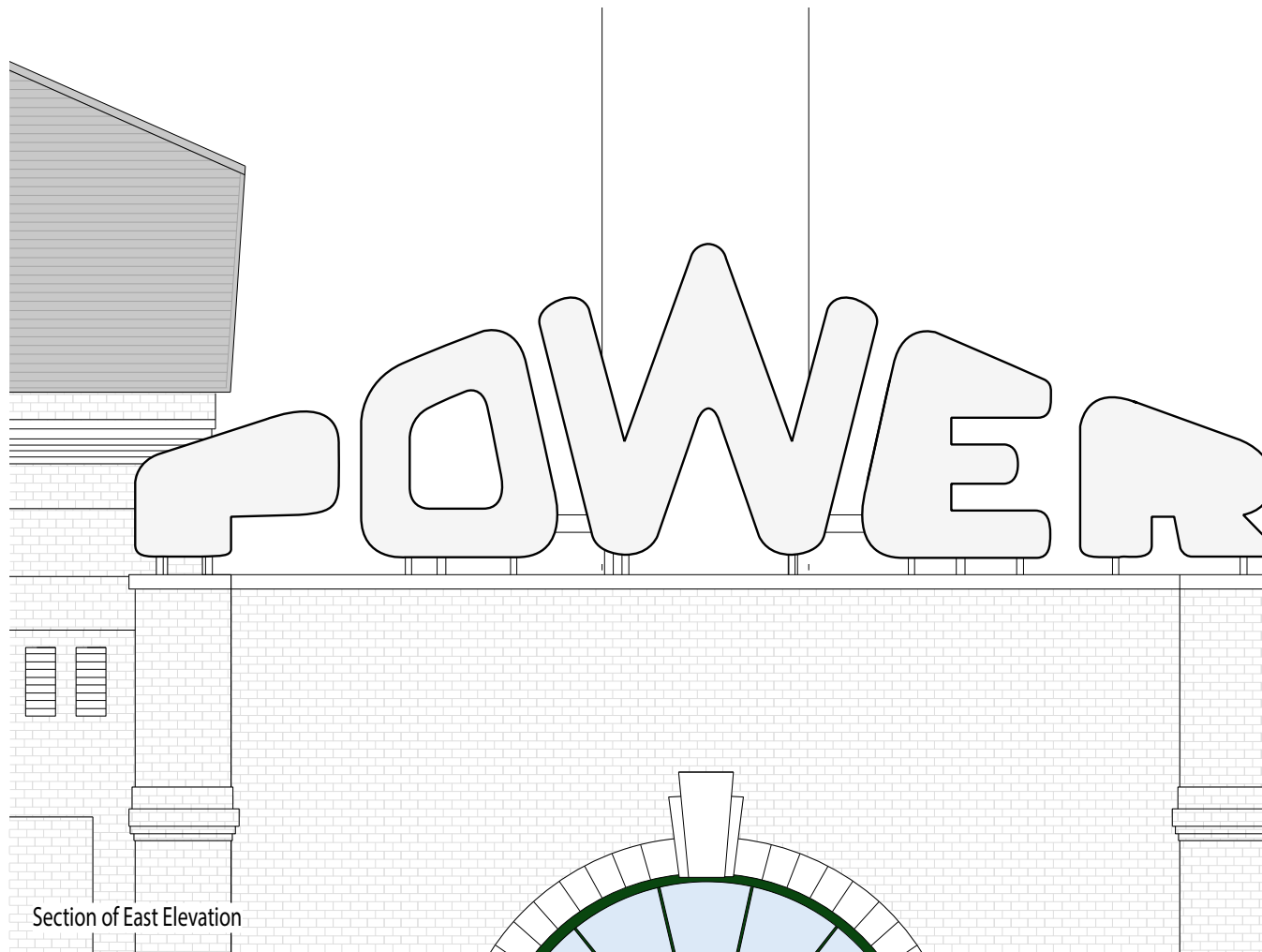
THE PROPOSAL

4.3.1.4 Lettering and Lighting

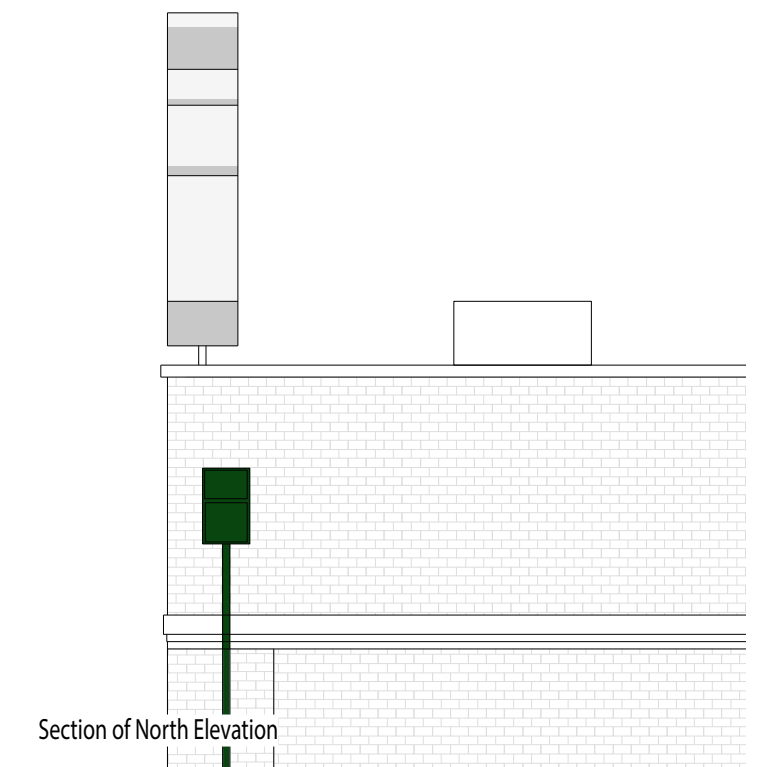
Lettering and lighting will play an important role in the Powerhouse building, as a way to bring back some of its original features or take advantage of the new materiality of the extension. It will also contribute to introduce an element of change to the building, when seen during the day or in the evening.

The design of the lettering on top of the existing building evolved throughout the project, from a simple replica of 1920's signage to a more contemporary solution, where the 3-dimensional letters are read as part of the building. The latest design is an attempt to add a contemporary twist, while still following the main design concepts previously mentioned: suggest the shape of the original pitch roof, balance the building's proportions and draw attention to its main entrance.

On the new extension, the possibility of including lettering in the east facade, and lighting throughout the whole building, between the expanded metal panels and the curtain walling, will accentuate the external cladding texture and colour, while adding an element of surprise.

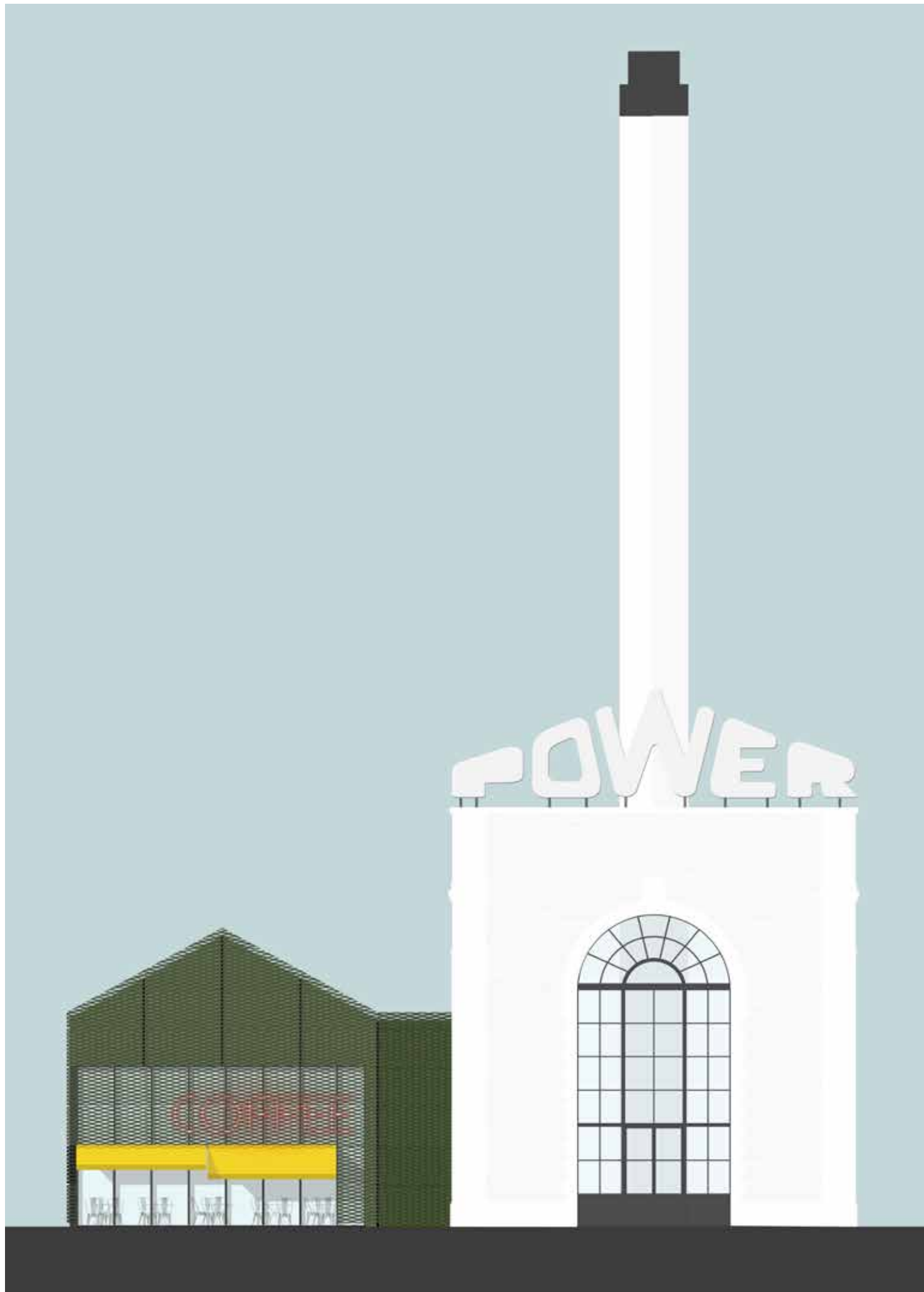


Section of East Elevation



Section of North Elevation

Right: Top - Examples of contemporary signage used as reference;
Bottom - Front and side elevations of lettering (Not to scale)
On the other page: Day and night elevation studies



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4.3.2 Refurbishment and Retain Works

The Powerhouse existing building was designed and built with particular attention to detail. This proposal tries to bring the Powerhouse back to its glory, without masking the passage of time.

4.3.2.1 Retained Details

The glazed wall tiling has, in its majority, survived the last century of building adaptations, and is one of the features to be retained.

Also, all the fine brick work, shaping cornices and pilars should be kept as much as possible, and restored where needed.

Another curious feature of this building is how its walls seem a palimpsest of the interventions it went through since it was first built. It seems logical to keep these traces of history, instead of trying to cover them up.

All the remaining pipework and the crane, like the existing crane or the ducts in the water tower, will be kept, whenever possible, as proof of the building's history.

Externally, all render is to be removed. The external brickwork is to be repointed where necessary and repainted white.

All rain water hoppers to be retained where possible, and repainted dark green.

Right: Top (left to right) - Existing crane; Internal mouldings; Detail of unpainted brick on external wall of existing building;
Bottom (left to right) - Existing green tiling; Detail of internal wall; East external facade





4.3.2.2 Replaced Elements

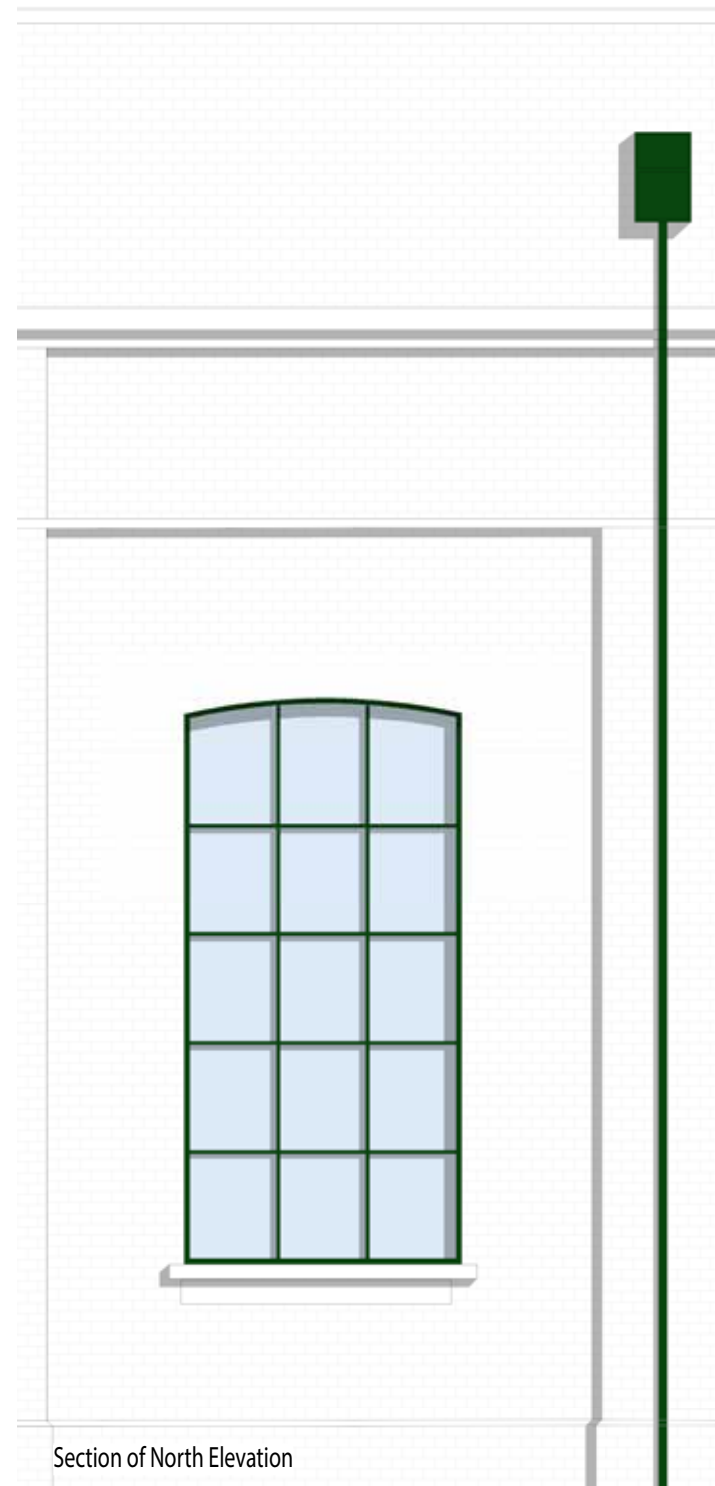
Some of the elements of the existing building will, for different reasons, need to be completely replaced.

The existing windows are in poor repair, have suffered many alterations over the years, and in order to make the building suitable for use it is necessary to replace them. In that way, all windows / doors will be replaced with steel frame double glazed windows / doors, to match the original design.

The existing chimney will need to be replaced for structural reasons, but the original design and appearance will be kept as much as possible. It will be painted white, with a high performance gloss finish with long term exterior gloss and colour retention characteristics.

The existing water tank (upper structure of the water tower) will also need to be replaced for structural reasons. Its original design will be kept as much as possible, and it will be cladded in corrugated aluminium, with two louvred sides, for ventilation purposes.

Finally, all existing rain water pipes will be replaced with polyester powder coated aluminium pipes.



Section of North Elevation

Left: (left to right) Existing chimney; Steel framed windows used as reference (top); Existing water tank (bottom); Coloured extract of North elevation showing a steel framed window after proposed renovation works.

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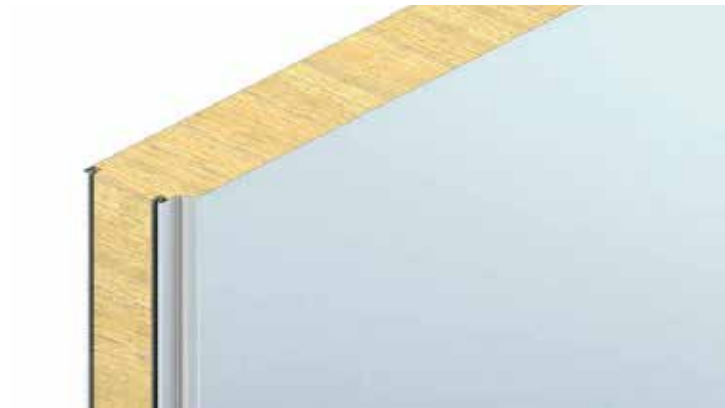
4.3.2.3 Schedule of Repair Works

SCHEDULE OF REPAIR WORKS		
1. EXTERNAL		
	1.1	Repoint brickwork where necessary and repaint with long lasting white silicate paint.
	1.2	Retain rain water hoppers where possible and repaint dark green.
	1.3	Replace all existing rain water pipes with polyester powder coated aluminium pipes.
	1.4	Replace existing chimney with similar structure, painted white, with a high performance gloss finish with long term exterior gloss and colour retention characteristics.
	1.5	Replace existing water tank (upper structure of the water tower) with similar structure with corrugated aluminium roof, two corrugated cladded sides and two louvred sides.
	1.6	Insulate existing concrete roof and install new water proofing system.
	1.7	Brick up 2 door openings to West façade, to match existing brickwork.
	1.8	Add 1 new central opening to West façade, below semi-circular and rectangular existing openings, as shown in drawings.
	1.9	Brick up 3 openings to South façade, to match existing brickwork.
	1.1	Brick up arched opening between mainhall and water tower to match existing brickwork.
	1.11	Introduce 1 new door opening to South façade, as shown in planning drawings.
	1.12	Remove blocking up to existing window and door openings on the North and East facades.
	1.12	Enlarge door opening on North façade and make good, as shown in planning drawings.
	1.13	Replace all remaining windows / doors with steel frame double glazed windows / doors, to match the original design.
	1.14	4 roof lights to have glazing replaced with weather louvres panels, and remaining roof lights to be replaced with a double-glazed system.
2. INTERNAL		
2.1 Ground Floor		
	2.1.1	Retain glazed wall tile details.
	2.1.2	Remove all paint from existing glazed tiles.
	2.1.3	Retain existing brick work (moldings, cornices and pilars).
	2.1.4	Retain all remaining pipework and crane, where possible.
	2.1.5	Fitting of a secondary glazed plane across the bottom of the roof lights.
	2.1.6	Fitting of acoustic shutters to the rear of all windows leaving a 100mm air gap.
	2.1.7	Treatment of the ceiling with an acoustic plaster system, for control of reverberation.
	2.1.8	Repaint all internal brickwork walls and concrete ceiling.
	2.1.9	Remove existing floor slab and replace with new stepped slab.
	2.1.10.	Remove stage and associated stairs.
	2.1.11	Insulate south side of partition wall between main hall and new energy centre, along energy centre's extension.
	2.1.12	Introduce new concrete slab in water tower to match FFL of energy centre.
	2.1.13	Internally insulate water tower with insulated plasterboard to reduce the risk of condensation.
2.2 Basement		
	2.2.1	Remove all concrete structures and stairs within the new basement area, as shown in planning drawings.
	2.2.2	Introduce new concrete slab in new basement area, as shown in planning drawings.
	2.2.3	Introduce new set of stairs to access basement area, as shown in planning drawings.

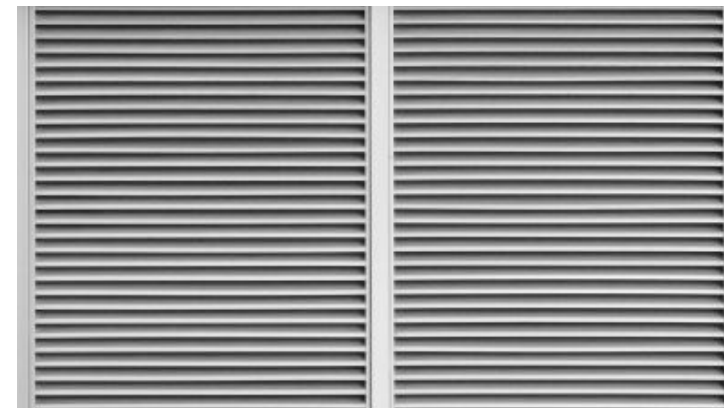
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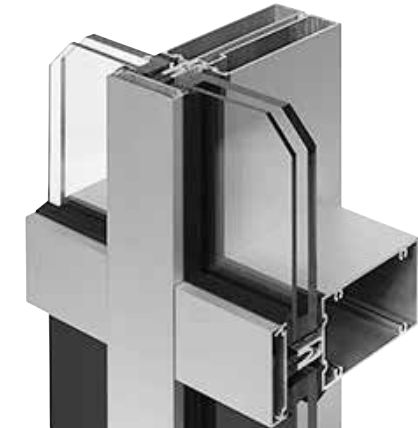
4.3.3 Materials Board



Insulated Roof and Wall Panels
Light Green



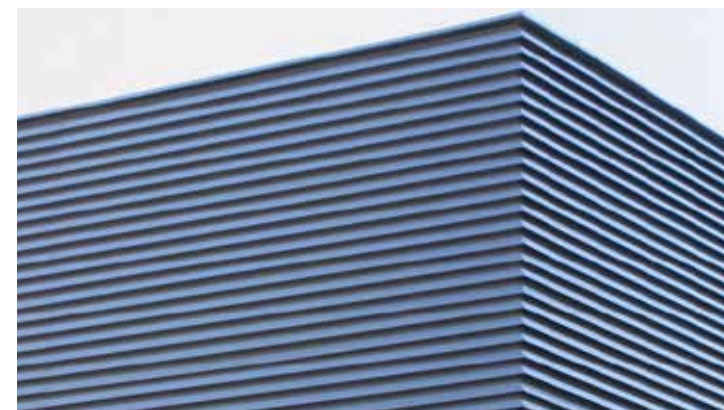
Extruded Aluminium Framed Weather Louvres
Polyester Powder Coated, Light and Dark Green



PPC Aluminium Curtain Walling
Polyester Powder Coated, Dark Green



Expanded Aluminium
Anodised, Dark Green



Bank Aluminium Weather Louvres
Polyester Powder Coated, Light Grey



PPC Aluminium Doors
Polyester Powder Coated, Dark Green



Painted Brick
White



Fabric Canopy
Yellow



Steel Framed Windows and Doors
Painted, Dark Green



Lighting



Neon Signage



Glass Reinforced Plastic Lettering
White