

07 Substation Appearance

Prologis Stockley Park West

Doc. Ref: PLON01-CWO-XX-XX-RP-Q-00090

Revision: P02

Substation Appearance

Materials & Design

Substation Design & Detail

The proposed substation forms an essential part of the electrical infrastructure supporting the Data Centre Campus and has been developed to balance technical requirements with clear operational and ownership boundaries. Its location within the DC01 footprint allows it to remain closely integrated with the overall site strategy while being delivered as an independent, self-contained element. The design prioritises straightforward access for future adopting authorities, efficient thermal management, and alignment with conventional substation layouts, ensuring the installation is both functional and visually coherent within the existing site context.

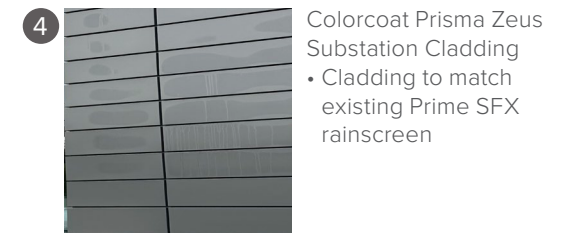
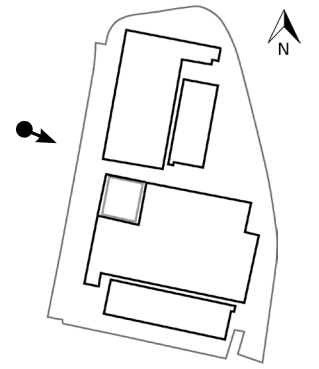
The main west façade of the substation compound is enclosed with a continuous-line aluminium louvre system designed to provide effective natural ventilation while maintaining a clean and unified façade appearance. The louvres incorporate slim blades with concealed mullions, creating an uninterrupted horizontal profile that complements the simple, functional character of the enclosure. This system ensures long-term performance and a consistent, well-resolved external treatment.

The north façade is subject to only minor alterations, consisting of two access doors serving the substation compound - one newly introduced and the other created by replacing the existing single leaf door with a double leaf door. Additionally, a new ventilation louvre is incorporated into the existing insulated external wall panel to provide the necessary airflow.

To maintain visual coherence across the enclosure, two louvred access doors are integrated within the louvred façade at the front. Each door is designed to match the colour, blade profile, and overall appearance of the surrounding panels, ensuring the continuity of the façade treatment. This approach allows practical and secure maintenance access without disrupting the uniform character of the substation elevation.



Substation design - Photomontage View from Iron Bridge Road.



4 Colorcoat Prisma Zeus Substation Cladding
• Cladding to match existing Prime SFX rainscreen



23 Colorcoat Prisma Sirius (RAL 9006) Aluminium Louvre System / Louvred Metal Doors
• Colour to match existing cladding colour "Prisma Sirius"

Substation Appearance

Design Evolution

The original proposal placed a combined substation within the DC01 building envelope, aiming to maximise spatial efficiency and streamline installation logistics.

Discussions with stakeholders highlighted the need to de-risk ownership boundaries and ensure the substation could be clearly distinguished from the data centre in terms of access, responsibility, and future leasing arrangements. This led to the development of a new proposal, which externalises the substation within the footprint of DC01 while retaining the core benefits of the original scheme.

This proposal introduces several key improvements:

Demarcation of Ownership:

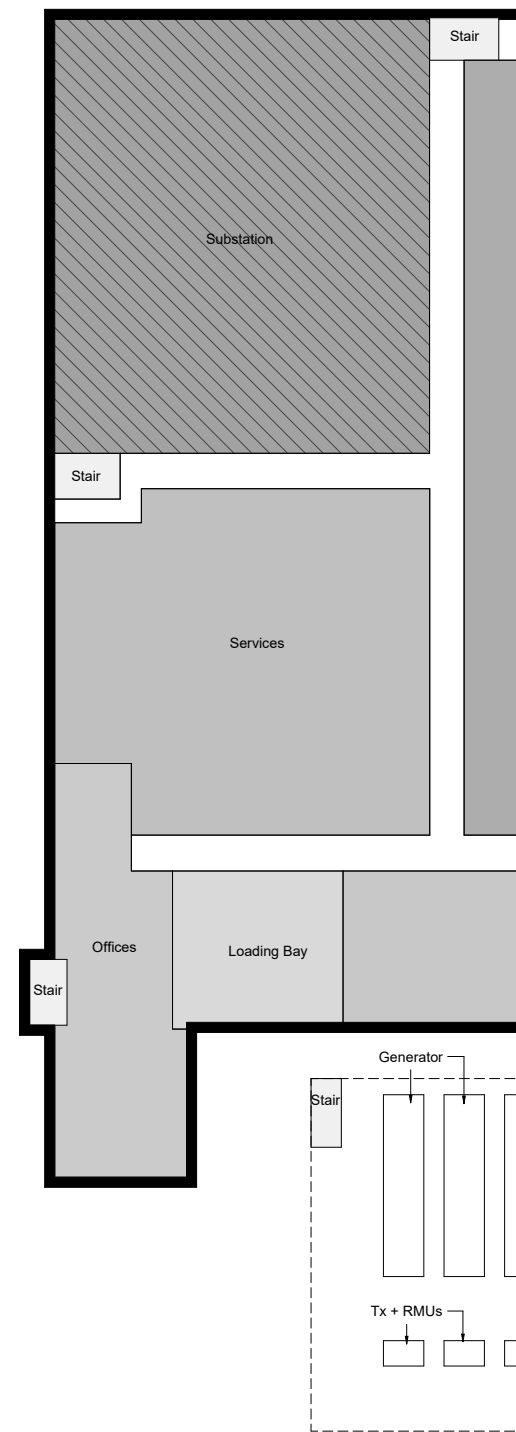
A clear boundary is established between the data centre and substation, supporting independent ownership and operational segregation. This simplifies future adoption by DNO/iDNO and reduces ambiguity in leasing and maintenance responsibilities.

Improved Thermal Management:

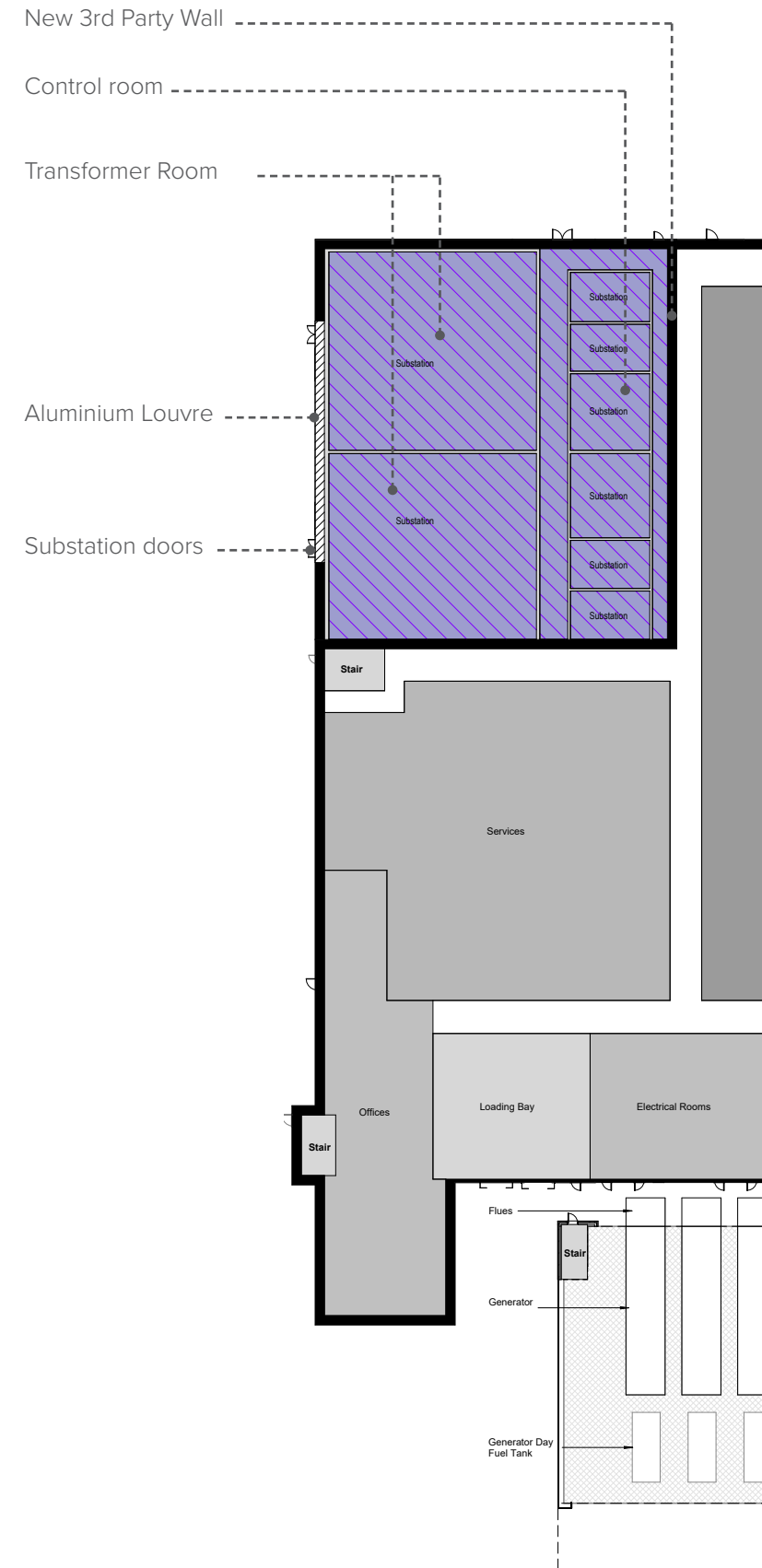
By removing the roof panels above the transformer area and replacing part of the front façade with aluminium louvres, coloured to align with the existing materials, the new design facilitates natural ventilation and passive cooling. This reduces reliance on mechanical systems and mitigates overheating risks, enhancing overall system performance.

Design Development and Conventional Alignment:

The externalised layout aligns more closely with traditional iDNO substation configurations. It enables the use of open compound designs with fire-rated and blast walls, simplifying compliance and reducing the need for bespoke engineering solutions.



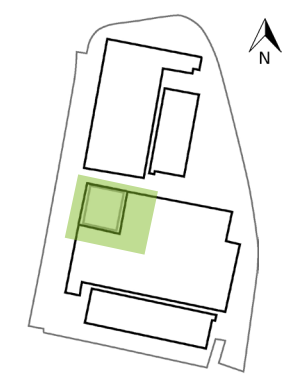
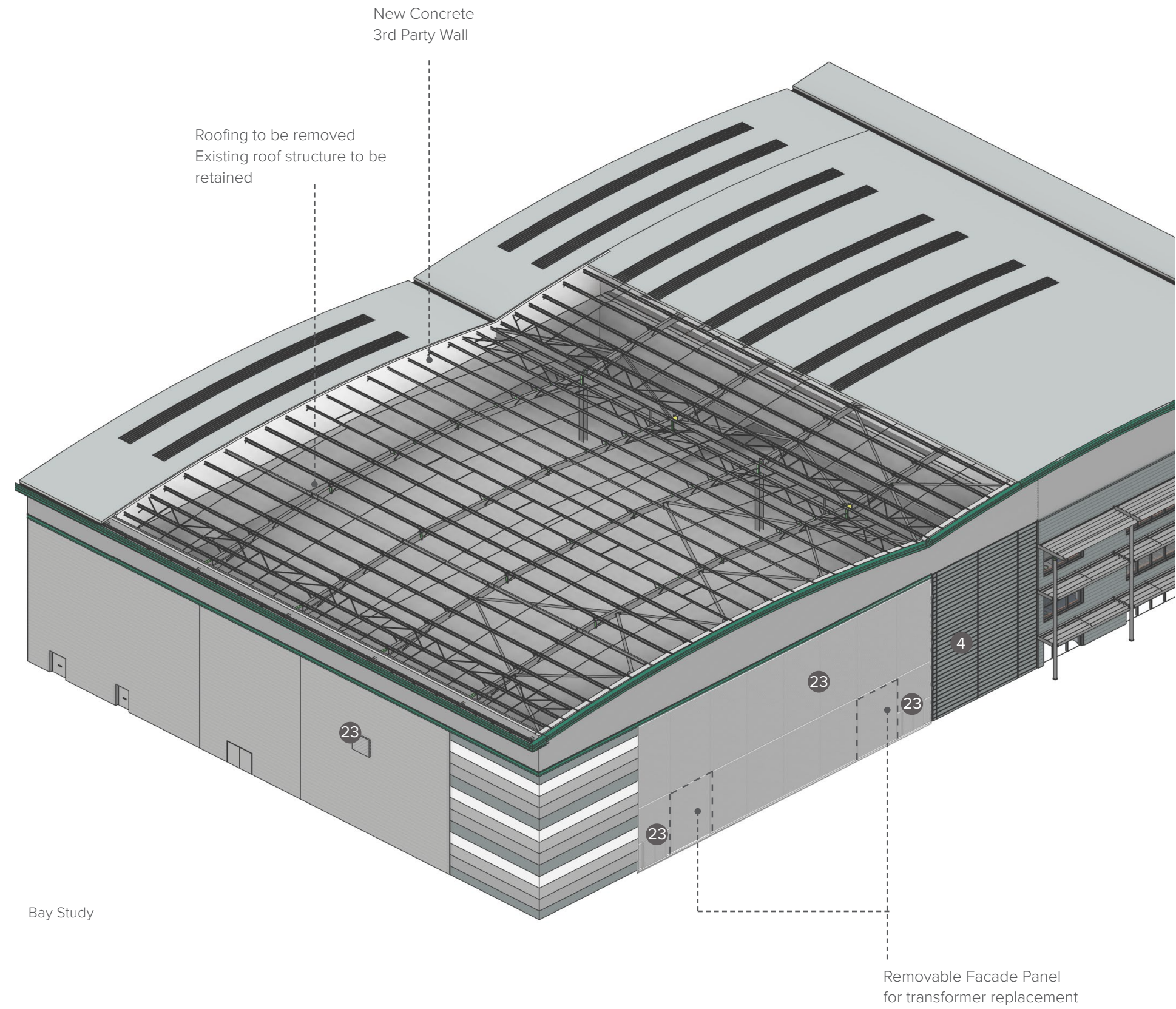
DC01 Level 00 Diagram - Pre-Application meeting 1



DC01 Level 00 Diagram - New Proposal - Pre-Application meeting 2

Substation Appearance

Bay Study - Axonometry



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Bay Study

Substation Appearance

Detailed Elements

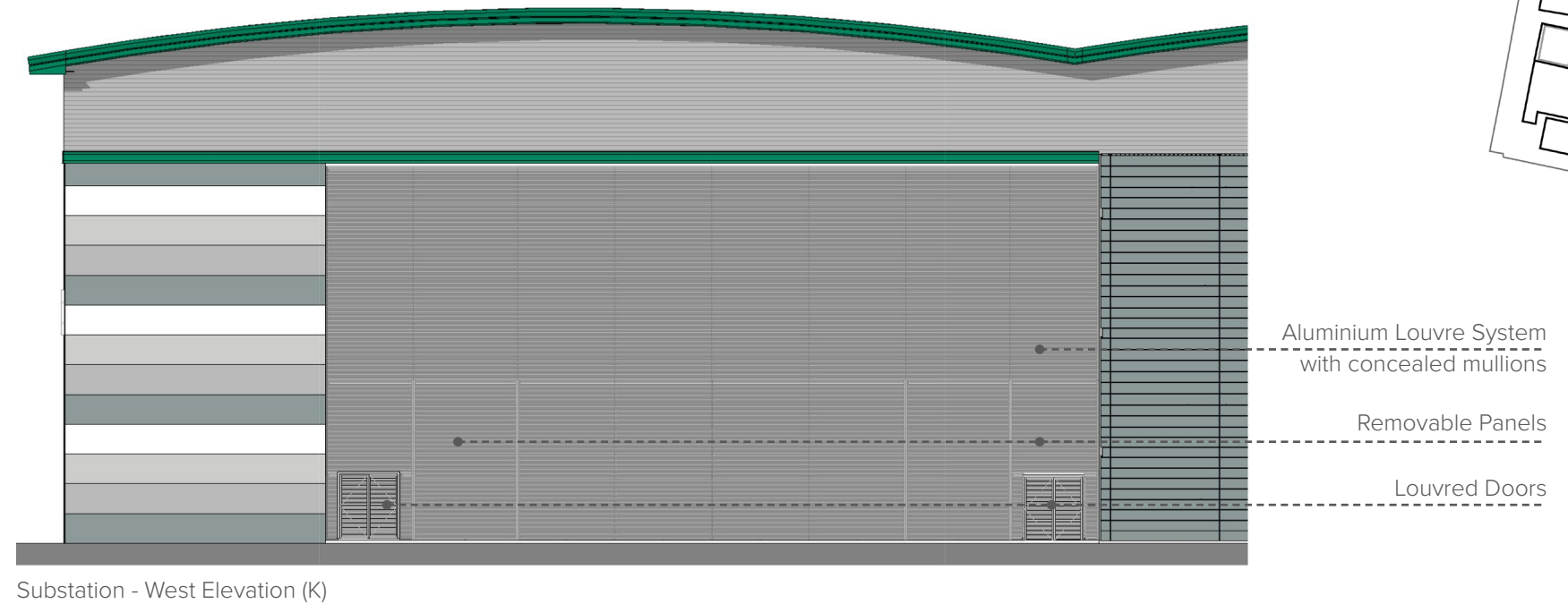
Substation Bay Study & Louvred Facade

The existing insulated façade panels are replaced with a continuous aluminium louvre system featuring concealed mullions. Finished in a grey tone matching the upper portion of the warehouse, the dense, dark blades effectively screen the substation behind. The modular system incorporates extruded aluminium blades set horizontally with a 75 mm pitch, providing the required privacy, security, airflow, and a degree of rain protection.

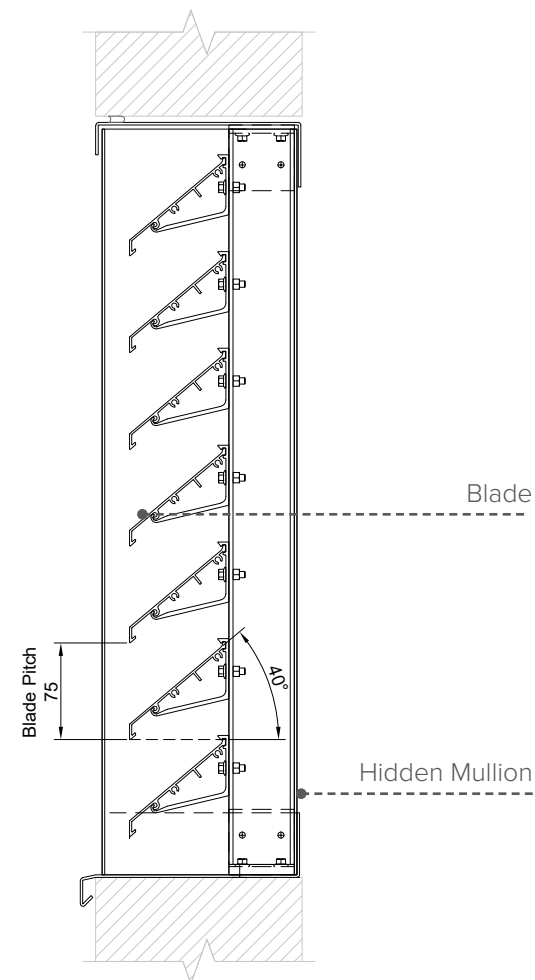
The proposed façade maintains visual coherence with the existing building, while associated roof alterations remain minimally perceptible from pedestrian viewpoints. Two removable louvre panels enable maintenance access and facilitate transformer installation and replacement without disrupting the overall elevation.

The ventilation louvre extends to align precisely with the projection of the barrel roof's lowest point, while a rainscreen treatment matching the office façade integrates seamlessly with the adjoining block, reinforcing architectural continuity and creating a fluid transition between the substation and the office.

All elements, including blade spacing, pitch, and mullion concealment are carefully coordinated to optimise thermal ventilation, operational accessibility, and visual uniformity. The design balances functional requirements with a refined architectural expression, ensuring the substation reads as a coherent and purposeful element within the wider Data Centre campus composition.



Substation - West Elevation (K)



Ventilation Louvre Hidden Mullion - Section Detail



Ventilation Louvre Hidden Mullion - Manufacturer Image

Substation Appearance

Visuals Study

Existing View

View from Iron Bridge Road - Site visit, June 2025



Substation Proposals - Photomontage

Roof to be removed above the substation, structure to be retained, and existing cladding to be replaced with louvred cladding aligned with the existing facade subdivision and colours.

