

4.0 Design Proposal

4.10 Appearance

The proposed building will be a regular rectangular shape with external plant to the extent of the Western elevation. The external plant area is enclosed with louvres acting as a screen and to create a unified elevation.

The design took into consideration the:

- Materiality of the surrounding sites/properties
- The scale and function of the proposed building
- The Wythenshawe Masterplan for the area
- Comments from the MCC planning team during discussions relating to façade and materiality.
- Create interest, texture and to break the monotony of the view.
- Tie in to the type of materials predominately used with the vicinity of the site
- Compliment the anticipated residential scheme proposed for the vacant site opposite Simon House.

The Proposed design, while primarily based on a steel frame structure, utilises a number of materials, colours and patterns to create visual interest and texture while respecting the overall use of the development.

The North elevation (facing inward towards Delta House) primarily uses a smooth finished modular cladding panel coloured silver grey with a darker bay to highlight the entrance area. The cladding is broken up by brick faced columns to the main data centre with a louvre style panel running throughout at high level.

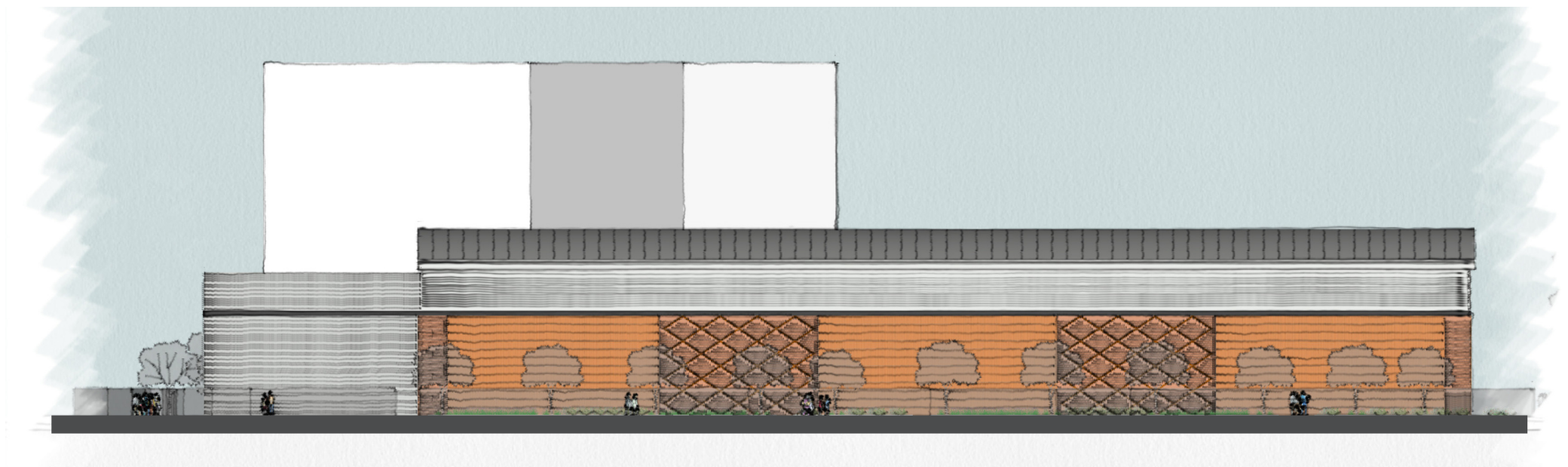
The South and West elevations (facing externally to Wavell road and Brownley road) are predominantly faced using a combination of brickwork and terracotta panels. These materials create a warmer palette more consistent with the local context and the likely future residential developments.

Panelising the facade assists in breaking down the size and scale and contrasting detailing is included within the brickwork panels to add further visual interest .

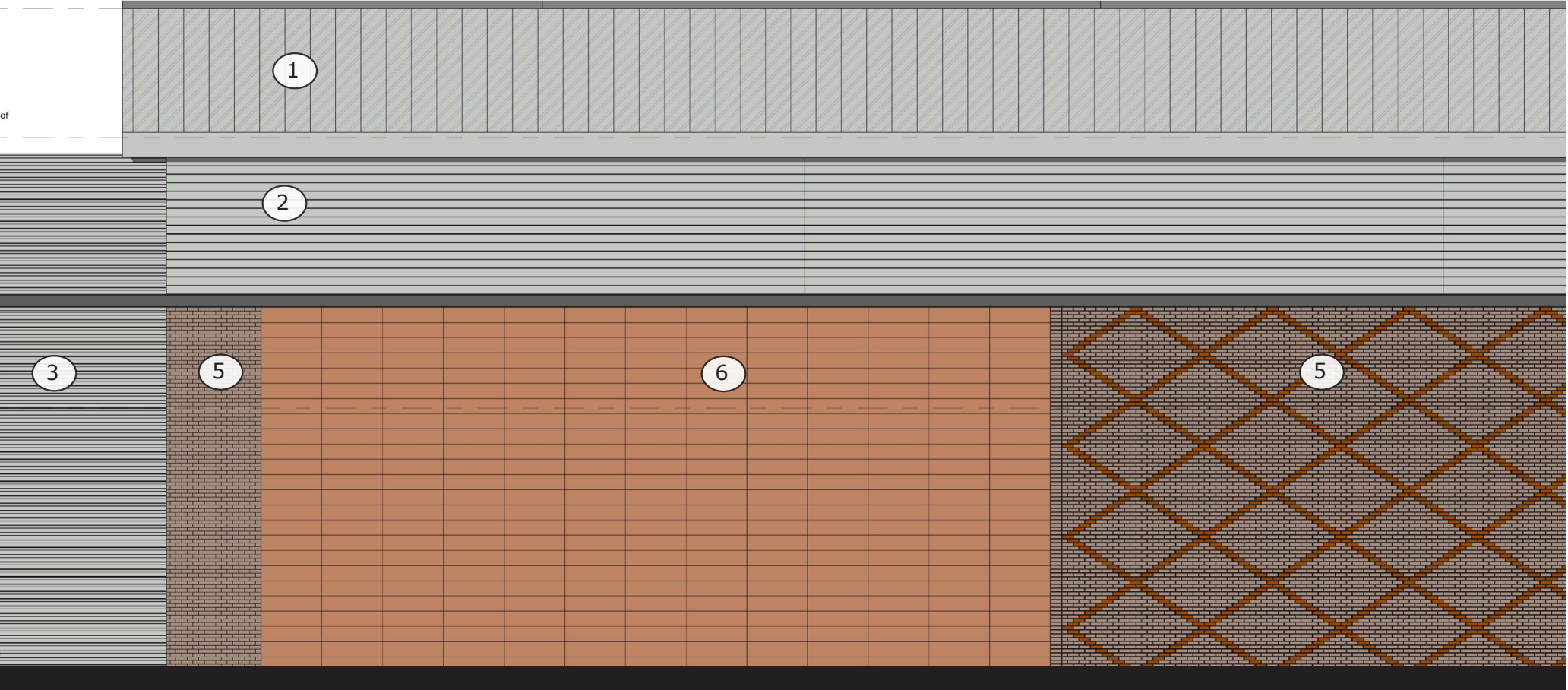
The louvre style panel is maintained to these elevations to provide a coherent and consistent clearstorey element throughout the building.

The East elevation is faced in simple cladding as this is contained within the plant enclosure and not readily visible.

The external plant is to be enclosed with a two-storey full height louvre system to comply with the technical performance requirements for the equipment it houses as well as provide architectural screening along Wavell Road.



4.11 Material Study - South and East Elevation



Partial Elevation



1. Standing seam roof with PV panels

Proposed Materials:

- 1. Standing seam roof with PV Panels
- 2. Louvre/corrugated metal panel system
- 3. Louvre Screen System
- 4. Metal Panel System
- 5. Brick Rainscreen Cladding
- 6. Terracotta Rainscreen Cladding
- 7. Feature Band



2. Louvre/corrugated metal panel



3. Louvre Screen



4,5,7 Brick system with feature panel and louvred panel system above and pattern brick panels



6. Terracotta rainscreen cladding



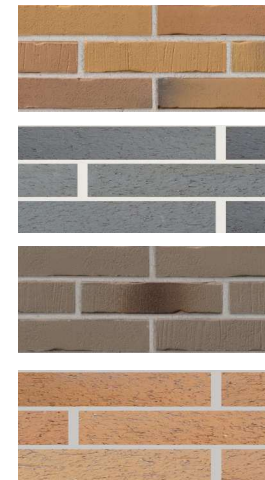
Sectional 3d View



1. Standing seam roof



2. Corrugated/Louvred metal panels



3. Brick panels

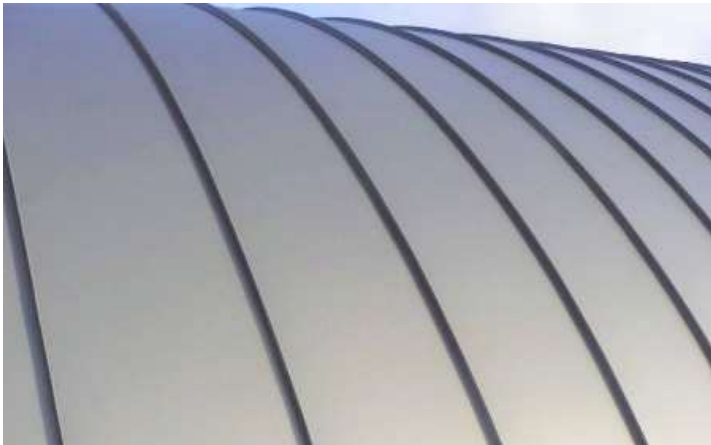


4. Terracotta cladding system

Proposed Materials South and East Elevations:

1. Standing seam roof, with external RWO and bull nose gutter profile
2. Louvre/corrugated metal panel system
3. Brick rainscreen cladding
4. Terracotta rainscreen cladding system
5. Feature band

4.12 Material Study - North and West Elevations



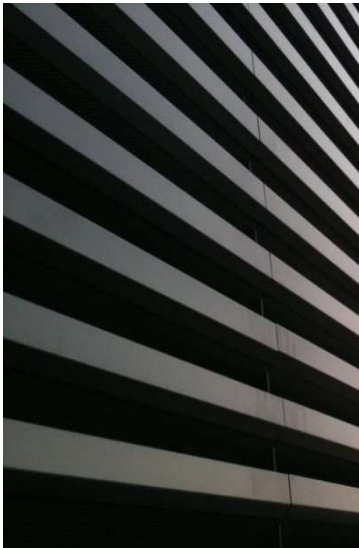
1. Standing seam roof



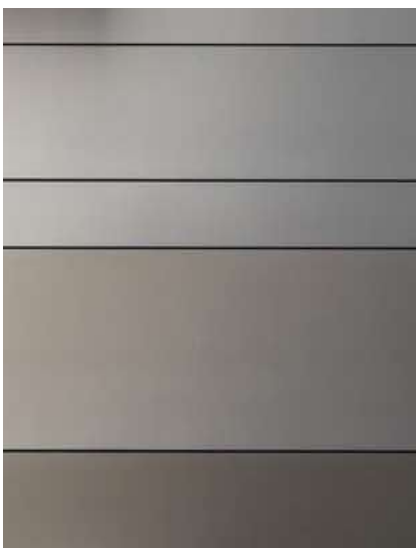
2. Corrugated/Louvred metal panels

Proposed Materials:

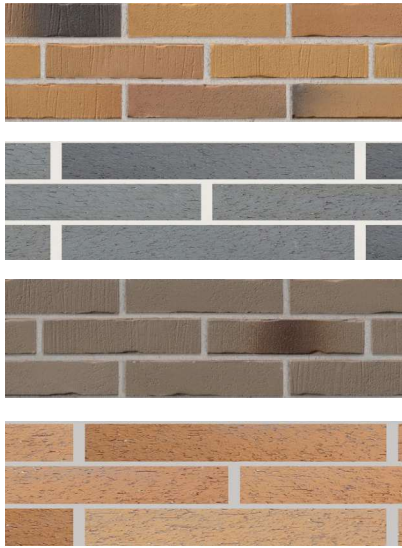
- 1. Standing seam roof
- 2. Corrugated metal panel system
- 3. Inverted Louvre System
- 4. Metal Panel System
- 5. Brick Rainscreen Cladding
- 6. Terracotta Rainscreen Cladding
- 7. Feature Band



3. Louvre screen



4. Metal panels



5. Brick Panels/Piers

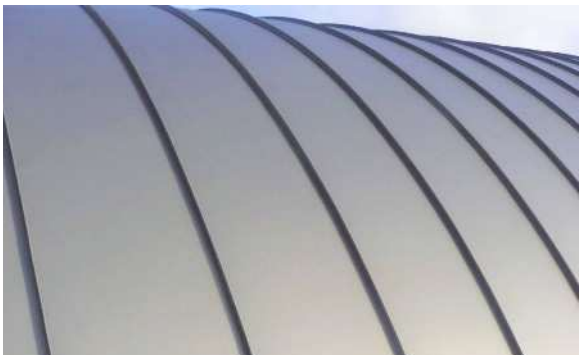


4. Light and dark grey metal panels

4.12 Material Study - North and West Elevations



Sectional 3d View



1.Standing seam roof



2,3,5.Louvre/corrugated panel with flat panel



4.Brick cladding system

Proposed Materials North and West Elevations:

- 1. Standing seam roof, with external RWO and bull nose gutter profile
- 2. Louvre type insulated metal panel system
- 3. Dark grey metal panel system to main entrance.
- 4. Brick rainscreen cladding
- 5. Light grey metal panel system to North and West elevations.
- 6. Feature band

5.0 Access

5.1 Existing Access

Vehicular access to Simon house is via Wavell road, via security controlled separate car and pedestrian entrances. Parking spaces are located within the fenced area of the general external site.

The main pedestrian access is to the South of the building via Wavell Road.

5.2 Transport and Connections

The site is located on the junction of Wavell Road and Brownley Road. The M56 can directly be accessed from Brownley Road and this is one of the main transport routes within Wythenshawe.

The site is well connected with easy access to public transport and is within walking distance of the town centre. The site is approximately 2 miles to the North of Manchester airport.

5.3 Vehicular Access and Parking

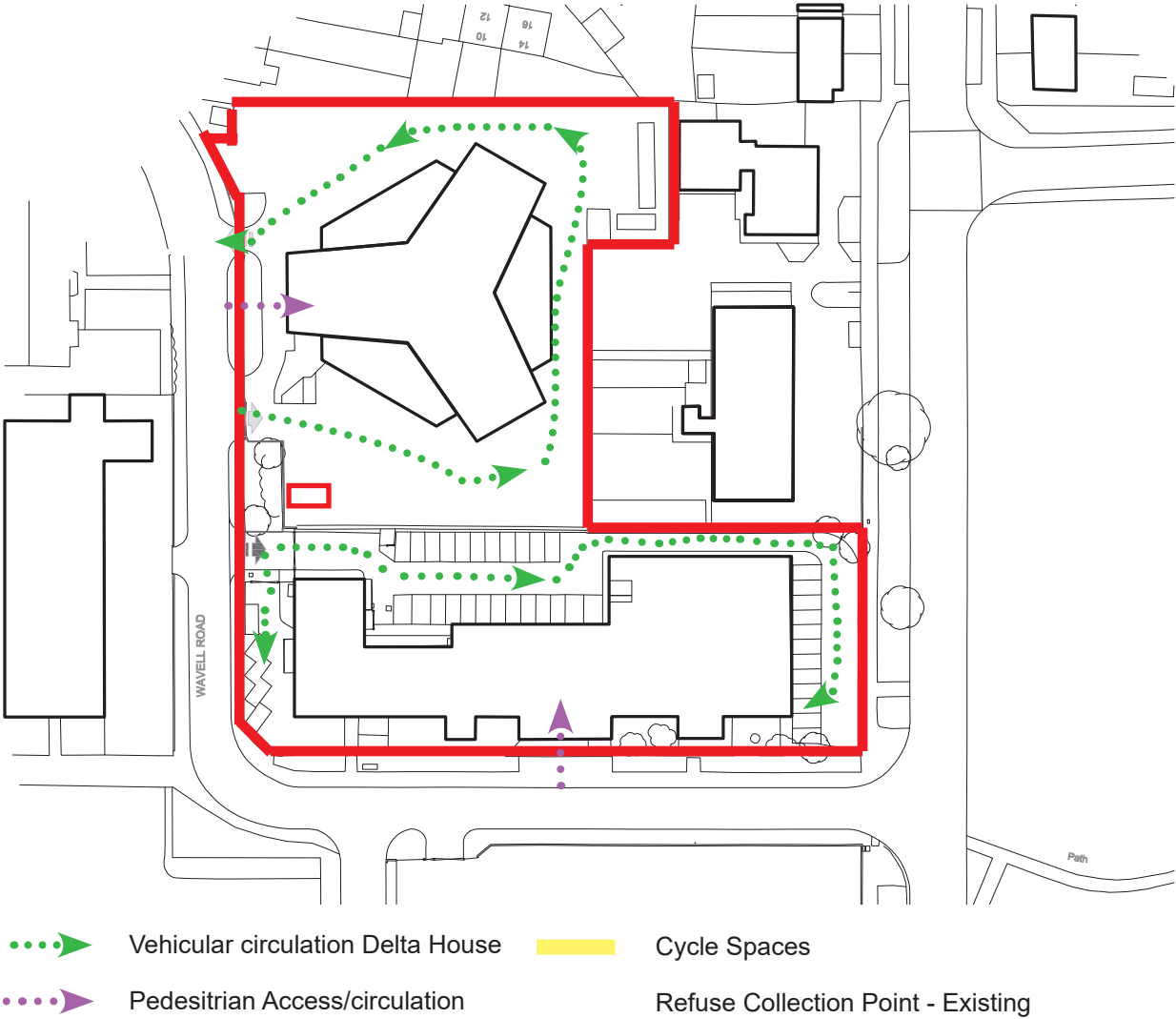
The existing vehicular access to the Simon House site is to the West via Wavell Road, with a total number of 41 parking spaces within the Simon House site.

The Delta House site is also accessed via Wavell Road and there are currently 43 parking spaces on site

5.4 Existing Cycle and Pedestrian Access

The main pedestrian access to Simon House is to the South of the building via Wavell Road with cycle parking next to the entrance. There is stepped access to the west and southern elevations, with level access to the main entrance.

Delta House has a single pedestrian access point via Wavell road.



Existing site movement and use

5.0 Access

5.5 Deliveries and Refuse

Delta House has a commercial refuse contract for waste disposal. There are currently 3 x large dedicated bins for cardboard/limited mixed waste, which are located to the South of the Delta House site car park, at the fence border to Simon House.

Manchester City Council guidance document - GD04 'Waste Storage and Collection Guidance for New Developments'. The storage requirement for commercial buildings is 2600 litres per 1000m2 with 50% allowed for recycling.

The proposed building use falls under Sui Generis (Mixed Use - Data Centre and Offices). There is no specific guidance for this type of building within the GD04 document.

The proposed refuse strategy for the combined site (Delta House and Simon House) located to the West of the site, with the possibility of direct refuse collection off Wavell road. It is proposed to have a sheltered refuse storage area.

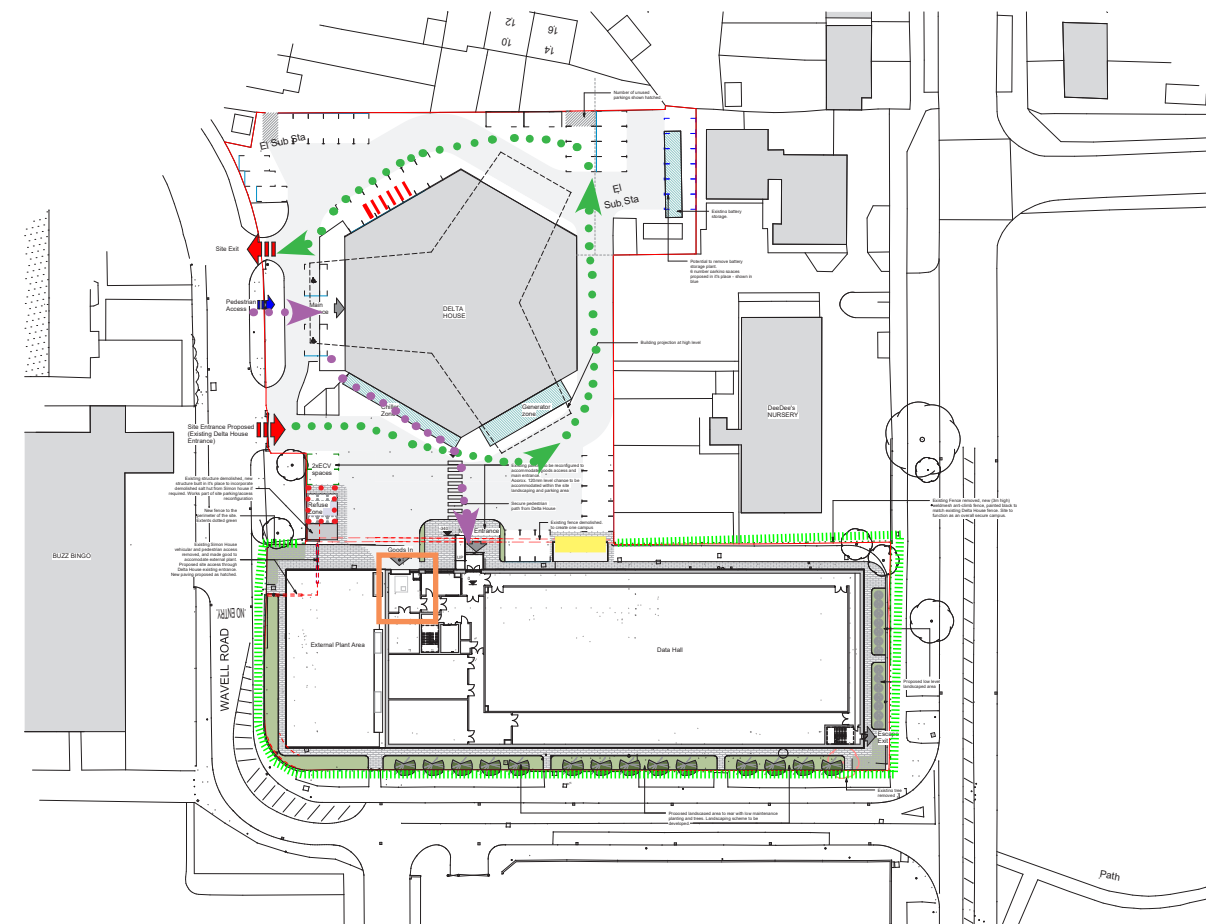
The refuse provision both existing and proposed is as itemised below with the proposed scheme allowing for larger capacity bins.

Existing Refuse Provision Delta House

- 3 x 1100l bins

Proposed Refuse Provision combined site of which 50% is allocated for recycling

- 6 x 1280l bins



- | | | | |
|-------|-----------------------------------|---|------------------------------------|
| ●●●➔ | Vehicular circulation Delta House | ■ | Cycle Spaces |
| ●●●➔ | Pedestrian Access/Circulation | ▭ | Refuse Collection Point - Existing |
| | Disabled Parking Spaces | ▭ | Loading Bay |
| ----- | New Secure Fence Line | | |

Proposed site movement and use

5.0 Access



View of Delta House access



View of Simon House access



Image of security rated anti climb fencing

5.6 Security

TeleData takes pride in providing a safe and secure environment for its staff, customers, and visitors to each of its data centres. the proposed devolpment is a mission critical environment with commensurate physical, electronic, and procedural measures in place to address identified risks and provide high standards of security that demonstrate compliance with specific legislation, regulations, and industry standards based on best practices.

A range of technical and electronic security measures are to be deployed across the campus to maintain a robust layered, defence principle upon which the security strategy is based. This includes secure perimeter fencing throughout with electronic access control measures such as card readers introduced to manage, and control authorised movement throughout the campus. CCTV cameras are to be located throughout internal and external areas of the site to provide situational awareness and to conduct post incident investigations. The CCTV system is managed in accordance with the TeleData's CCTV surveillance code of conduct and monitored 24/7 inside a dedicated Security Control Room. Images are retained and managed in accordance with Data Protection guidelines.

Access to the campus and into the Data Centres is strictly controlled. Only authorised vehicles and personnel are allowed to enter the facility.

All visitors must report to reception where credentials are checked before any access permissions are granted.

Externally the proposed new anti-climb welded mesh security fence along the extents of the site ensures perimeter security integrity is maintained.

The building construction is designed to provide physical protection against intrusion and external environmental events. The external walls and external finishes up to 3m from ground level are to be robust and provide sufficient protection.

6.0 Landscaping

6.1 Decorative Shrub Planting

The existing Simon House site currently has little or no planting or green areas with the exception of a few poor quality/overgrown shrubs. It is proposed to introduce planting along the whole length of the Southern and Western facades. Significantly increasing the landscape component of the site and benefiting the adjacent public realm.

The introduction of pockets of decorative shrub planting along the perimeter will be visually enhance he proposed building. The planting will contain a variety of species including herbaceous, shrub and grass varieties. It will provide texture and colour, whilst helping to break up the hard landscaping and the long facades. The planting should contain wildlife friendly species to improve the ecological aspect of the site.

The introduction of ornamental, pleached or trimmed trees will be proposed to enhance the existing site boundary vegetation and provide a visual buffer. Care will be taken to ensure that the proposed planting is suitable for growing in a facility like the data centre where external plant is located and is critical to the functioning of the building.

To the Northern facade raised planters are to be proposed to help provide physical separation between the car park and main entrance.



View of existing Southern elevation and fencing



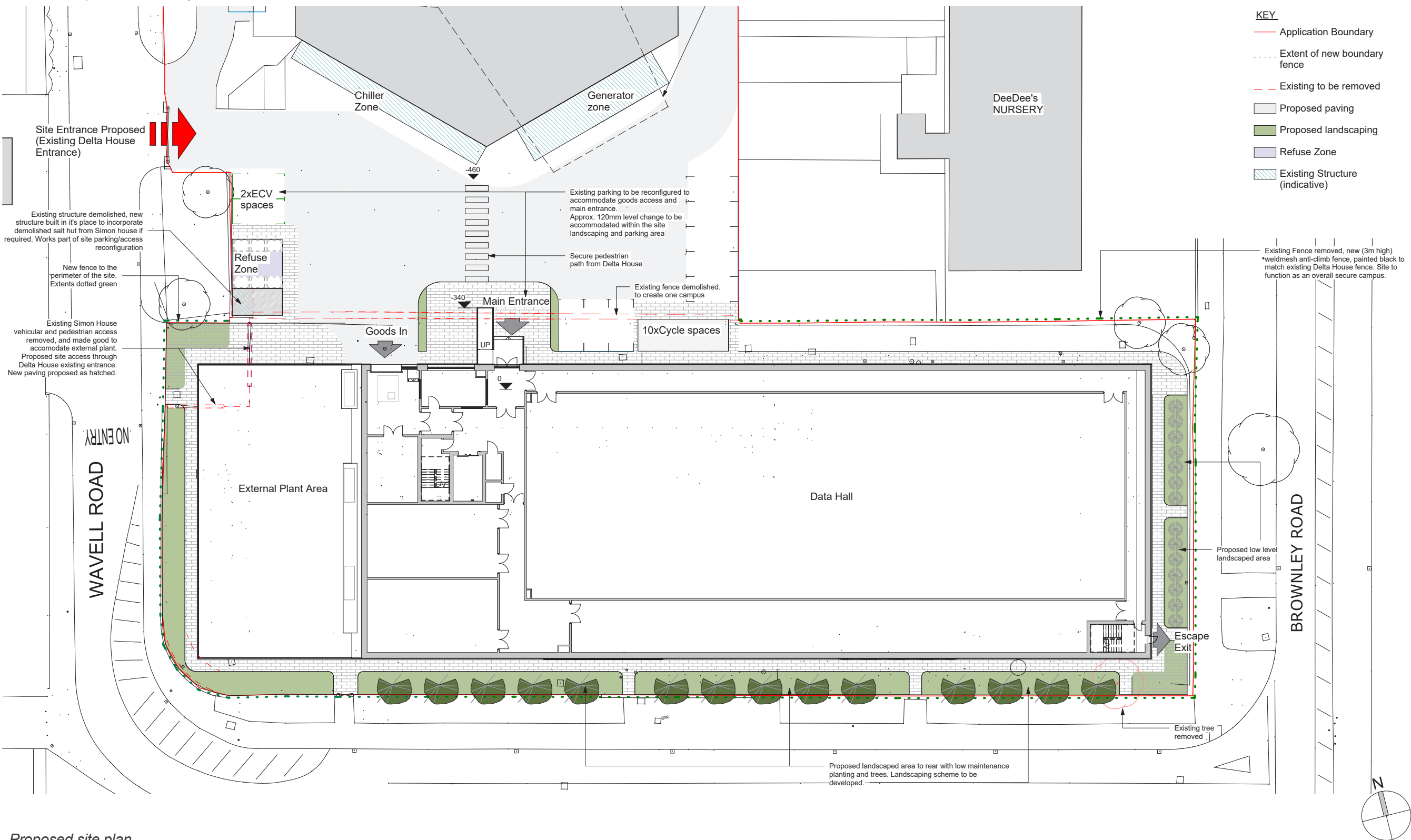
Artist's impression - proposed design



Inspiration and thoughts

6.0 Landscaping

6.2 Proposed Site Layout



Proposed site plan

7.0 Sustainability

7.1 Sustainability

The client’s environmental, social, and governance principles and sustainability standards have been intergrated in the design process for a more sustainable data centre.

The client’s aspiration and brief is for the proposed building to be approached and designed to a BREEAM V.Good standard.

BREEAM is an international scheme that provides independent third-party certification of the assessment of the sustainability performance of individual buildings, communities and infrastructure projects.

The team have taken into consideration the use of sustainable materials and practices during the design development.

The scheme has been designed to achieve a high standard of energy efficiency, through application of the energy hierarchy, both in terms of the occupied spaces as considered under Part L of the Building Regulations and in terms of minimising Power Usage Effectiveness (PUE) through modern design and technology.

7.2 USB Sustainaility/ESG

Key ESG opportunities and risks	
Energy efficiency solutions	▪ Modern design and technology would allow to achieve energy efficiency, targeting PUE of 1.2 ▪ Securing supply of clean energy from renewables sources using green certificates ▪ Including solar PV panels in the new building rooftop ▪ Efficient chilled water-cooling system adopted with free cooling technology ▪ Adoption of renewable HVO biofuels to fuel emergency generators ▪ Installation of EV charging for employees and clients ▪ Potential of heating recovery to supply local homes ▪ Specific design to handle external temperature of 40°C, to mitigate risk of heatwaves
Construction works	▪ Considering a Carbon Impact Assessment of carbon embodied in the construction of the plant ▪ Minimizing impact of construction works, avoiding night-time hours and high traffic ▪ Developing a program to efficiently manage waste from the demolished plant ▪ Construction materials sourced from local suppliers
Social engagement	▪ Active engagement with local community to manage externalities and promote digital skills ▪ Expected job creation of 15 FTEs plus suppliers

Extract from Client’s Key ESG Opportunities and Risks for the project