

SCIENCE MUSEUM GROUP

Building ONE
The Science Museum Group at Wroughton
December 2017



Design and Access



Science Museum Group - Building ONE

Collection Storage Facility Design & Access Statement

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Science Museum Group

feasibility

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MUSEUM
GROUP**

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Section 1.0

Introduction

1.1 CLIENT & DESIGN TEAM

CLIENT



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1.2 INTRODUCTION

This document is submitted in support of a full planning application for a new collections management facility to house objects for the Science Museum Group (SMG), at their site in Wroughton (SMGW).

SMGW is the large object and library & archives store for the SMG. The site is not open for public access, though research visits can be arranged to use the library & archive facilities, or to view the stored collection, by appointment.

The new building will be a fit-for-purpose facility that will house and manage the SMG collection and accommodate managed public visits, support object conservation work and provide staff facilities. The building will utilise the existing vehicular access to the site and its functions will also be supported by the existing SMG operational buildings on the wider site.

The information in this statement includes a description of the proposed facility and development site, an analysis of the design approach and application drawing extracts showing the location of the facility and it's layout.

Supporting documentation will be included with this application comprising -

- Sustainability Statement
- Planning Statement
- Statement of Community Engagement
- Environmental Statement
- Environmental Statement Non-Technical Summary
- Ecological Impact Assessment
- Transport Statement
- Flood Risk Assessment
- Desk Top Land Contamination Assessment
- Earthworks Strategy
- Infrastructure Statement
- Drainage Strategy
- External Lighting Assessment





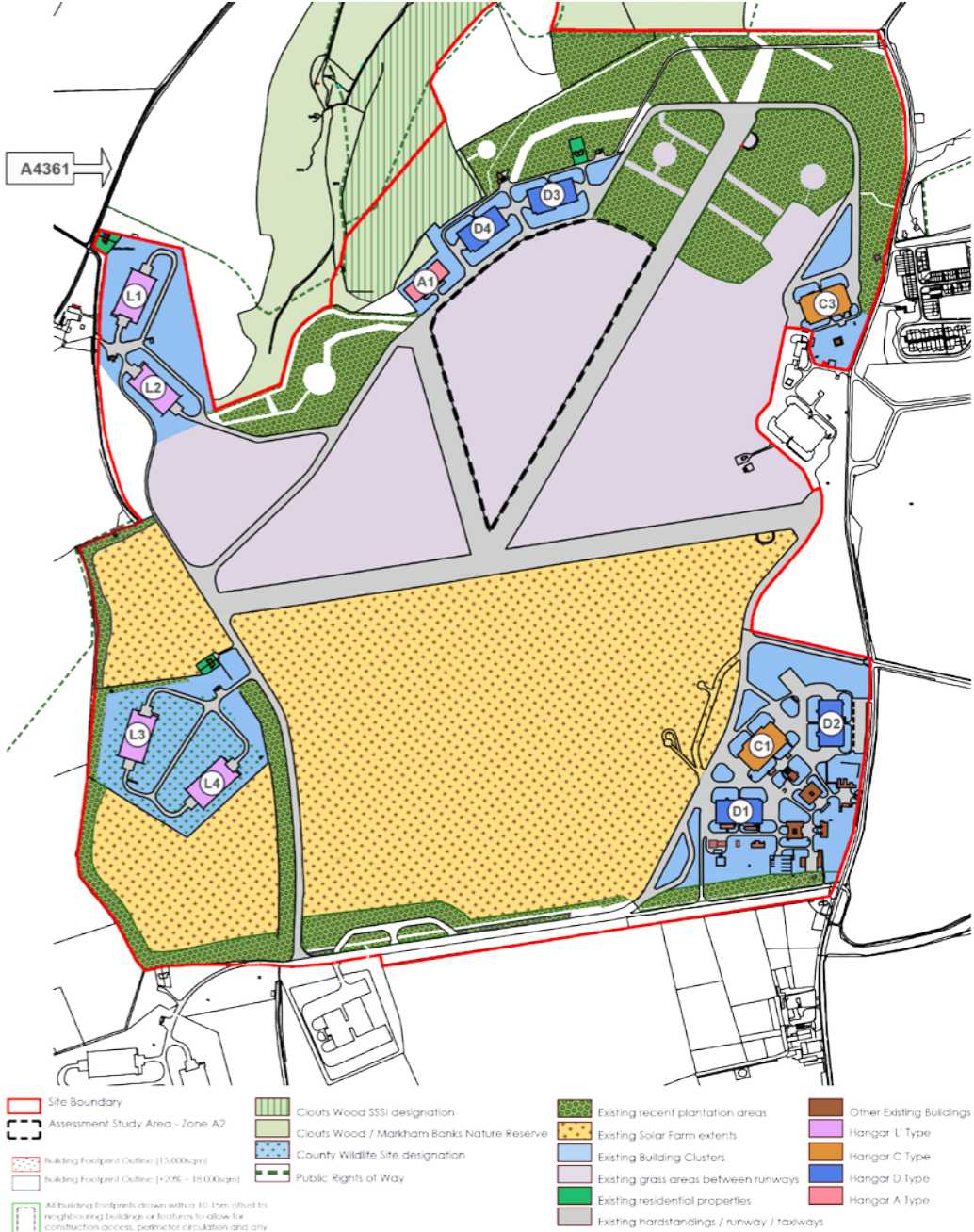
Section 2.0

The Site

2.1 SITE LOCATION



Aerial View



Extract from Science Museum Group One Collection Facility Client Technical Brief - Dated August 2017



Aerial view of solar farm



View of buildings A1, D4, D3



Building A1



Building D4



Motor Vehicle collection in Building D3

2.2 SITE LOCATION PLAN

PROJECT LOCATION

The facility will be located in the northern section of SMGW. A feasibility study has determined that this location takes best advantage of level ground, proximity to services and existing road network.

LOCAL CONTEXT

SMGW is located approximately 6.5 kilometres south of the centre of Swindon and 1.4 kilometres south of the intervening village of Wroughton.

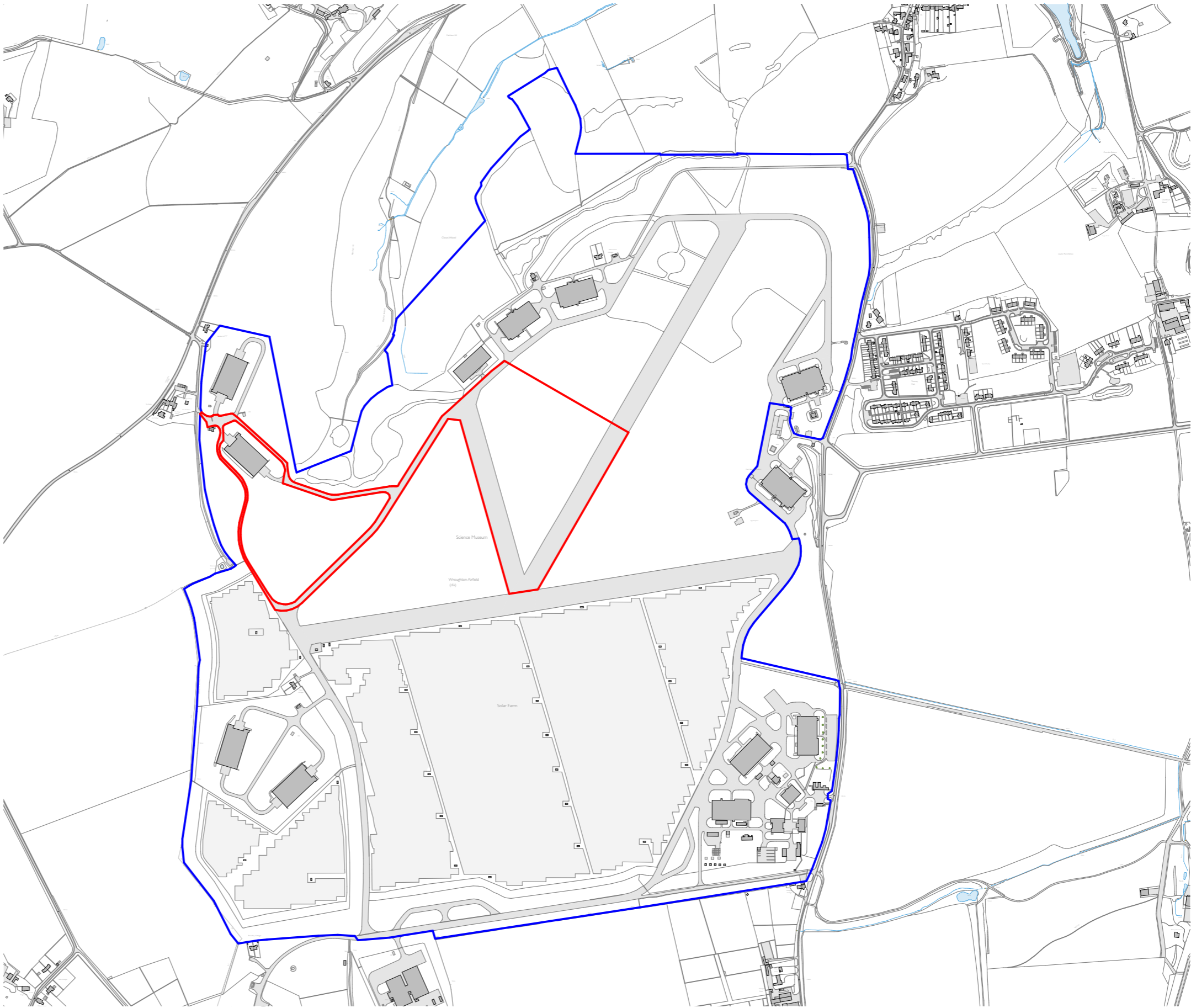
The site falls within the North Wessex Downs Area of Outstanding Natural Beauty.

The single access point to the site is from the north-west via the A4361 (Avebury-Wroughton) road, which, in turn, is within close proximity and well connected to both Junction 15 and 16 of the M4 motorway.

SITE CONTEXT

The main site is secured with a perimeter fence. The site is manned 24 hours a day, 7 days a week from Red Barn Gatehouse, in the north west of the site.

The development plot is predominantly flat improved grassland, bordered by disused concrete runways. The tarmac and concrete runways stretch to the edges of the plot and are connected by smaller perimeter roadways. The recent development of 73 hectares of solar panels now covers the western and southern parts of the main site.



2.3 SITE PHOTOGRAPHS



1.



2.



3.



4.



5.



2.4 HISTORICAL CONTEXT

WROUGHTON AIRFIELD

The site was established in 1940 as an RAF airfield and consists of a number of runways and aircraft hangars. The hangars vary in construction: there are four of the 'L' type 'Blister' hangars (a steel framework with a concrete skin), four of the 'D' type hangars (steel reinforced concrete with an arching roof), and two 'C' type hangar (steel framework with an external cladding), within the land owned by SMG.

The Ministry of Defence commenced disposal of this site in 1979.

SMG AT WROUGHTON

The Science Museum Group took ownership of the 545-acre site in 1979, and has used it since this time as the storage facility for the largest objects of the Science Museum Group collections.

Over 35,000 3D and 500,000 2D objects from the national collection are currently stored on site, within nine former aircraft hangars and a purpose-built store. The collection ranges from the first hovercraft to MRI scanners, and science publications to (de-activated) nuclear missiles. The collections here are particularly notable for the extensive collection of very large aircraft, road transport vehicles, agricultural machinery and industrial collections.

In 1994 the Museum opened a new purpose-built facility at Wroughton, providing an environmentally controlled building for the storage of objects.

Since 2000 the freehold of the majority of the site has been owned by Board of Trustees of the Science Museum.

Latterly SMG has undertaken a number of projects on site to refurbish hangars, construct award-winning innovative storage, work with universities and industry in research and development, and develop a large scale solar farm for electricity supply into the national grid. These projects along with extensive biodiversity enhancements have helped define the vision for SMGs long term use of the site.

The site is currently not open to the public due to the increased risks presented by the failing 1940s infrastructure and the lack of circulation space due to compression of the stores to enable additional collections to be accommodated.



Aerial photograph taken by the US Army Air Force in 1944



Boeing B17 at Wroughton Air Show - 1993



SMG large object storage within Aircraft Hangars



No 15 Maintenance Unit RAF Wroughton - 1968/69



Wroughton Air Show - 1992



Environmentally controlled purpose built storage facility

The background of the slide is a photograph of a large industrial facility, possibly a shipyard or a large manufacturing plant. The image is heavily overlaid with a semi-transparent blue color. In the background, there are large structures, possibly ship hulls, and various pieces of industrial equipment. The lighting is somewhat dim, and the overall tone is industrial and technical.

Section 3.0

Design Principles – Building Location

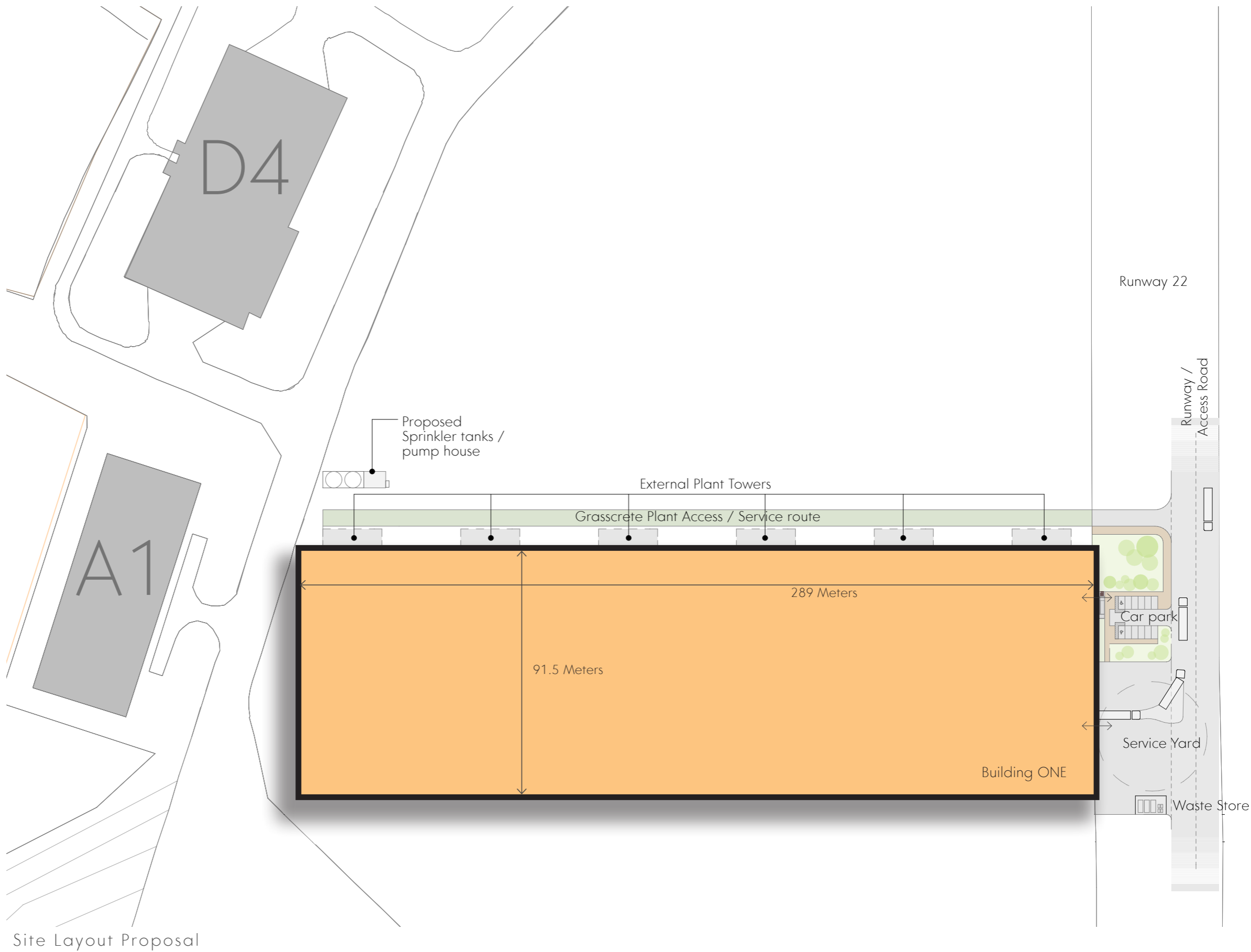
3.1 BUILDING LOCATION & DEVELOPMENT

The location for the new collections management facility has been identified through assessment of access requirements for the building - both from the main entrance to site (utilising existing roadways and former runways) and in the context of the SMG operational facilities on the wider site.

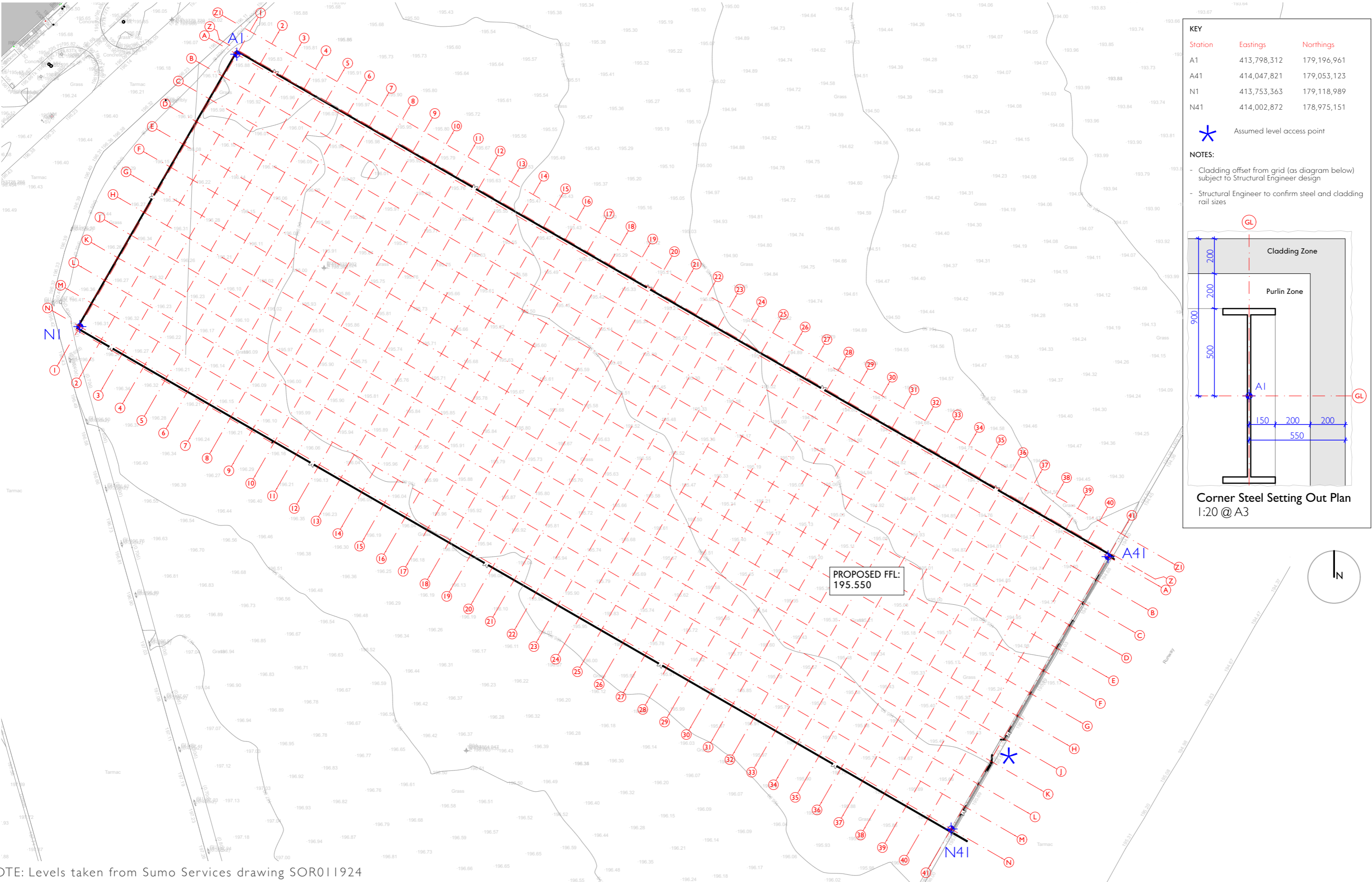
Consideration has also been given to the orientation of the building, its proximity to existing services and the topography of the site.

Evaluation of the building location has also considered the positioning of plant areas external to the building envelope and accessing for servicing, as well as locations of external refuse store and sprinkler tanks / pump house. Car park access and transit vehicle access for deliveries/ collections has also been considered alongside development of the car park and service yard layouts.

This evaluation has led to the development site running perpendicular to the former runway as shown.

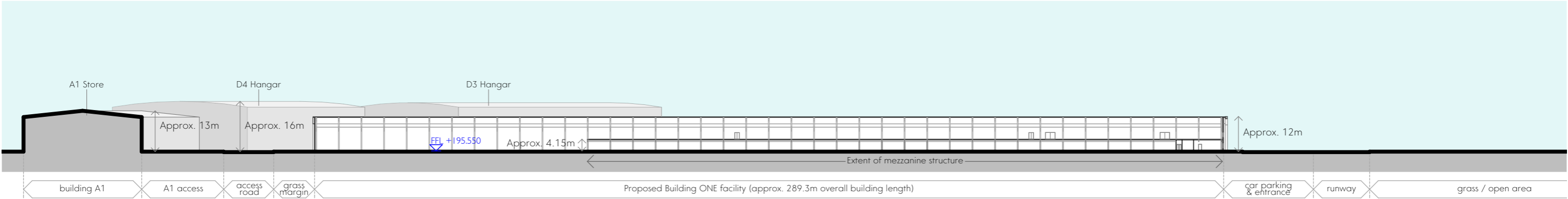
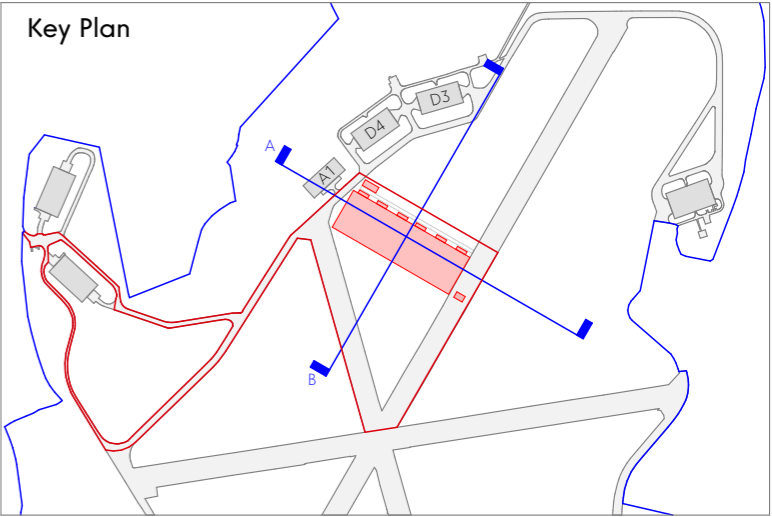


3.2 SITE LEVELS

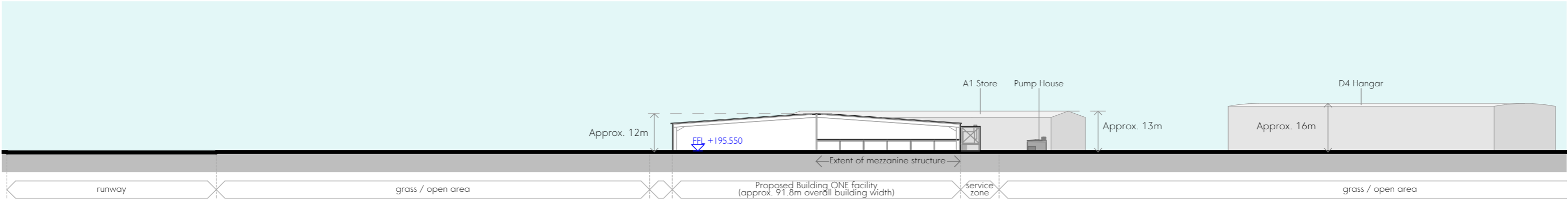


NOTE: Levels taken from Sumo Services drawing SOR011924

3.3 PROPOSED SITE SECTIONS



Site Section A



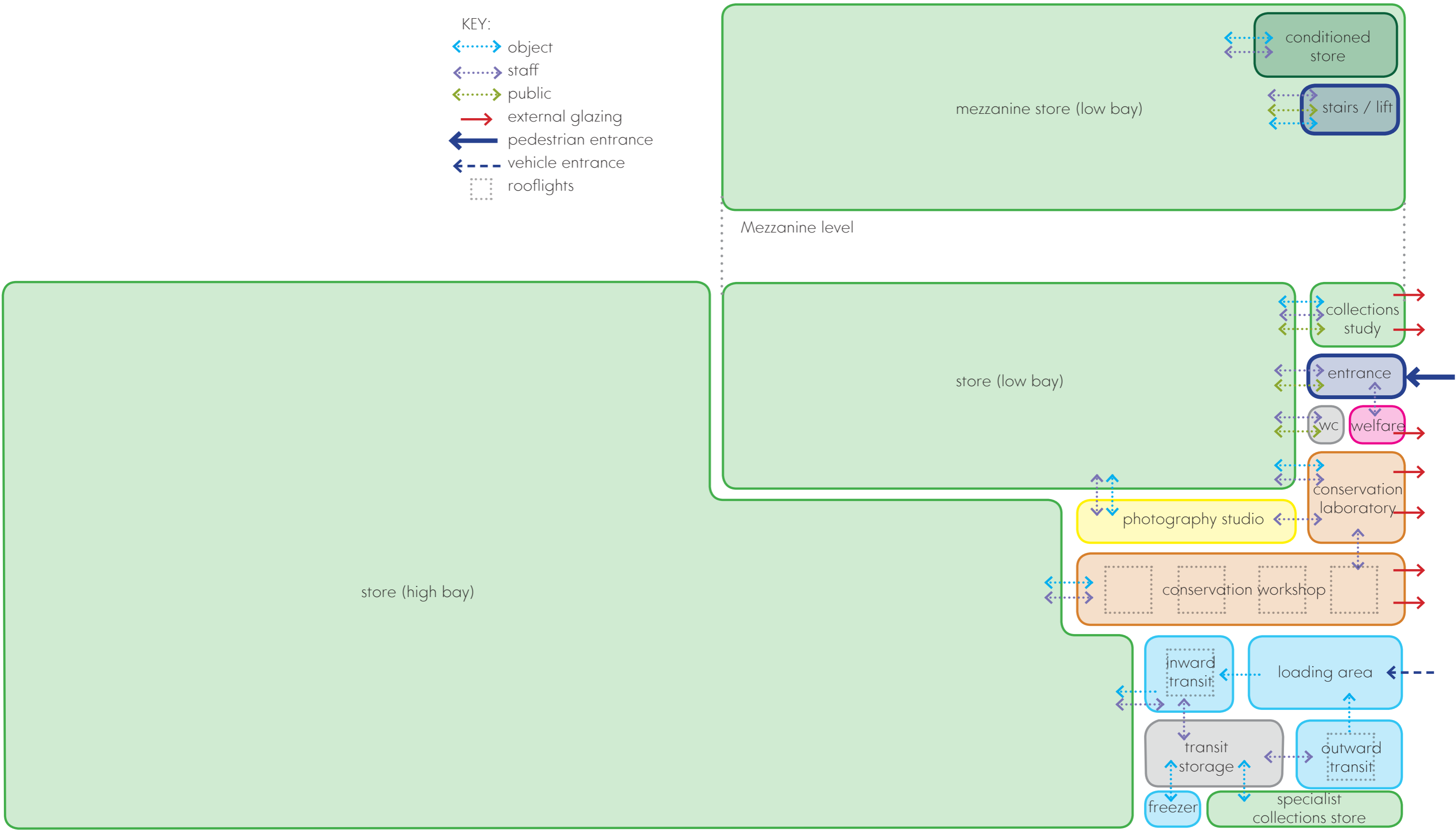
Site Section B



Section 4.0

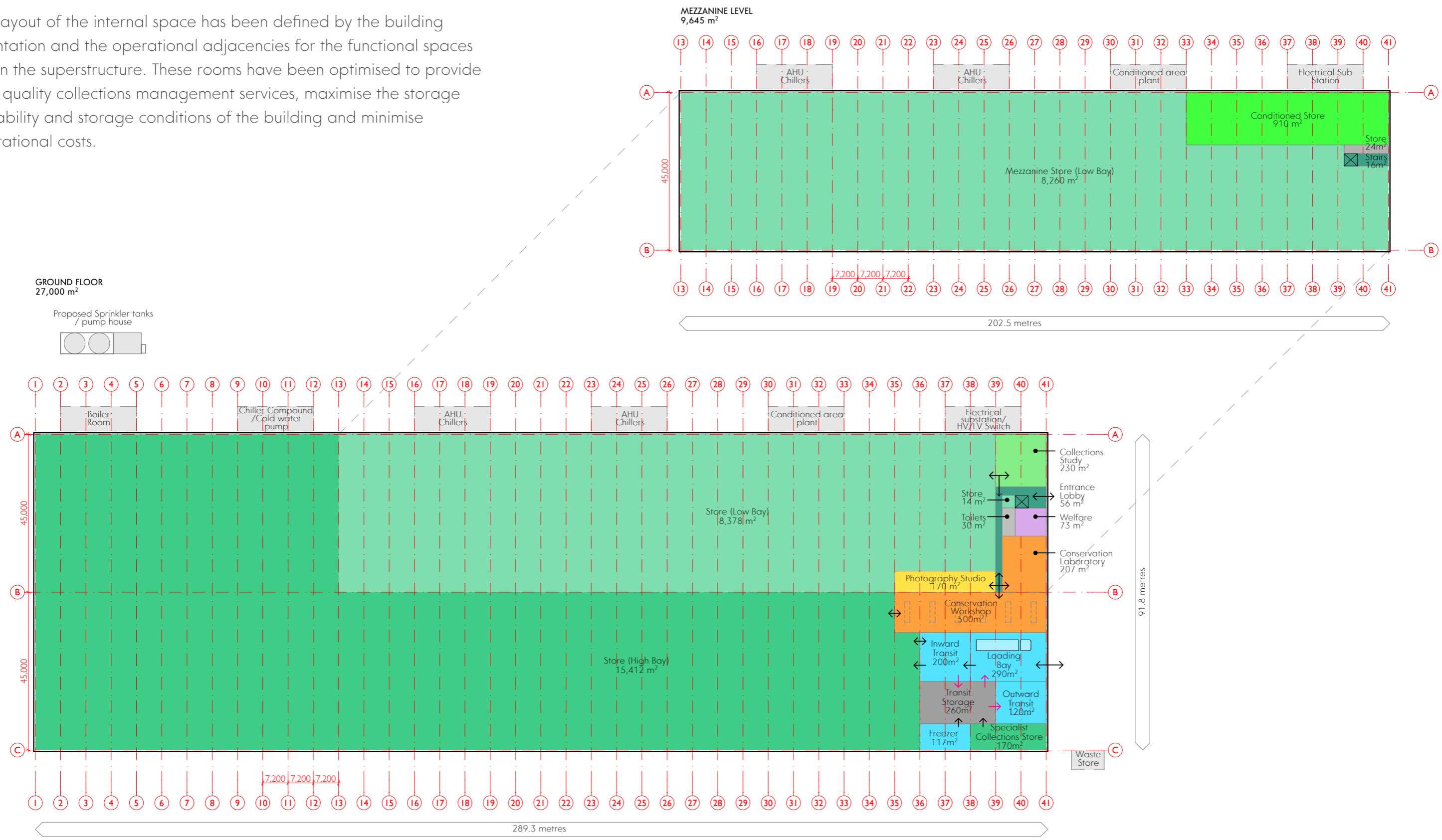
Design Principles – Building Layout

4.1 FUNCTIONAL ADJACENCIES

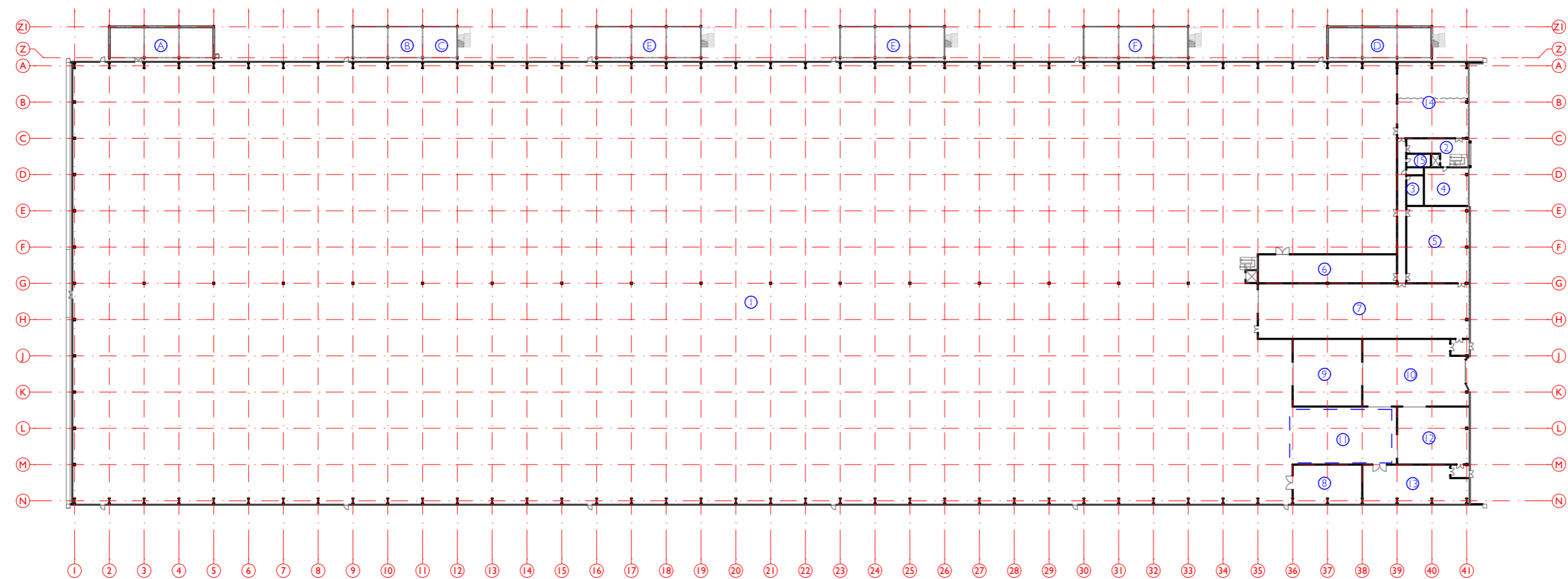


4.2 INTERNAL ACCOMMODATION LAYOUT

The layout of the internal space has been defined by the building orientation and the operational adjacencies for the functional spaces within the superstructure. These rooms have been optimised to provide high quality collections management services, maximise the storage capability and storage conditions of the building and minimise operational costs.



4.3 GROUND FLOOR PLAN



Ground Floor GA Plan
1:1000 @ A3

NOTES

Room Types:

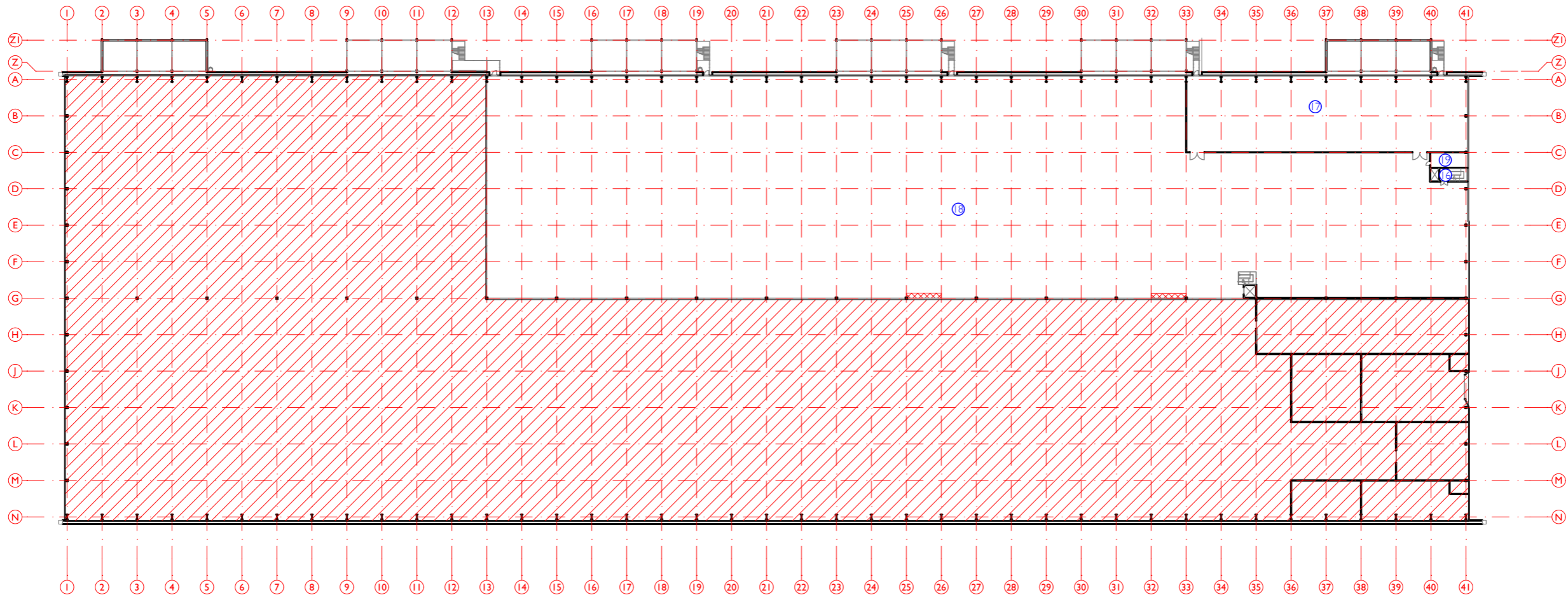
- | | |
|---|--|
| 1. Object Store (23,790m ²) | 8. Freezer (117m ²) |
| 2. Entrance Lobby (56m ²) | 9. Inward transit (200m ²) |
| 3. Unisex & DDA toilets (30m ²) | 10. Loading bay (290m ²) |
| 4. Staff Welfare Suite (73m ²) | 11. Transit storage (260m ²) |
| 5. Conservation Laboratory (207m ²) | 12. Outward transit (120m ²) |
| 6. Photography Studio (170m ²) | 13. Special Collections Store (170m ²) |
| 7. Conservation Workshop (500m ²) | 14. Collections Study (230m ²) |
| | 15. Store (14m ²) |

External Plant Allocation:

- A. Boiler house
B. Chiller compound
C. Chilled Water Pump
D. Electrical Sub Station/HV/LV Switch rooms
E. Air Handling Units
F. Plant for Conditioned areas



4.4 MEZZANINE PLAN



Mezzanine Floor GA Plan

NOTES


Room Types:

16. Mezzanine lobby (16m²)


17. Conditioned Store (910m²)

18. Mezzanine Store (Low Bay) (8,260m²)


19. Mezzanine Store (24m²)



Void space

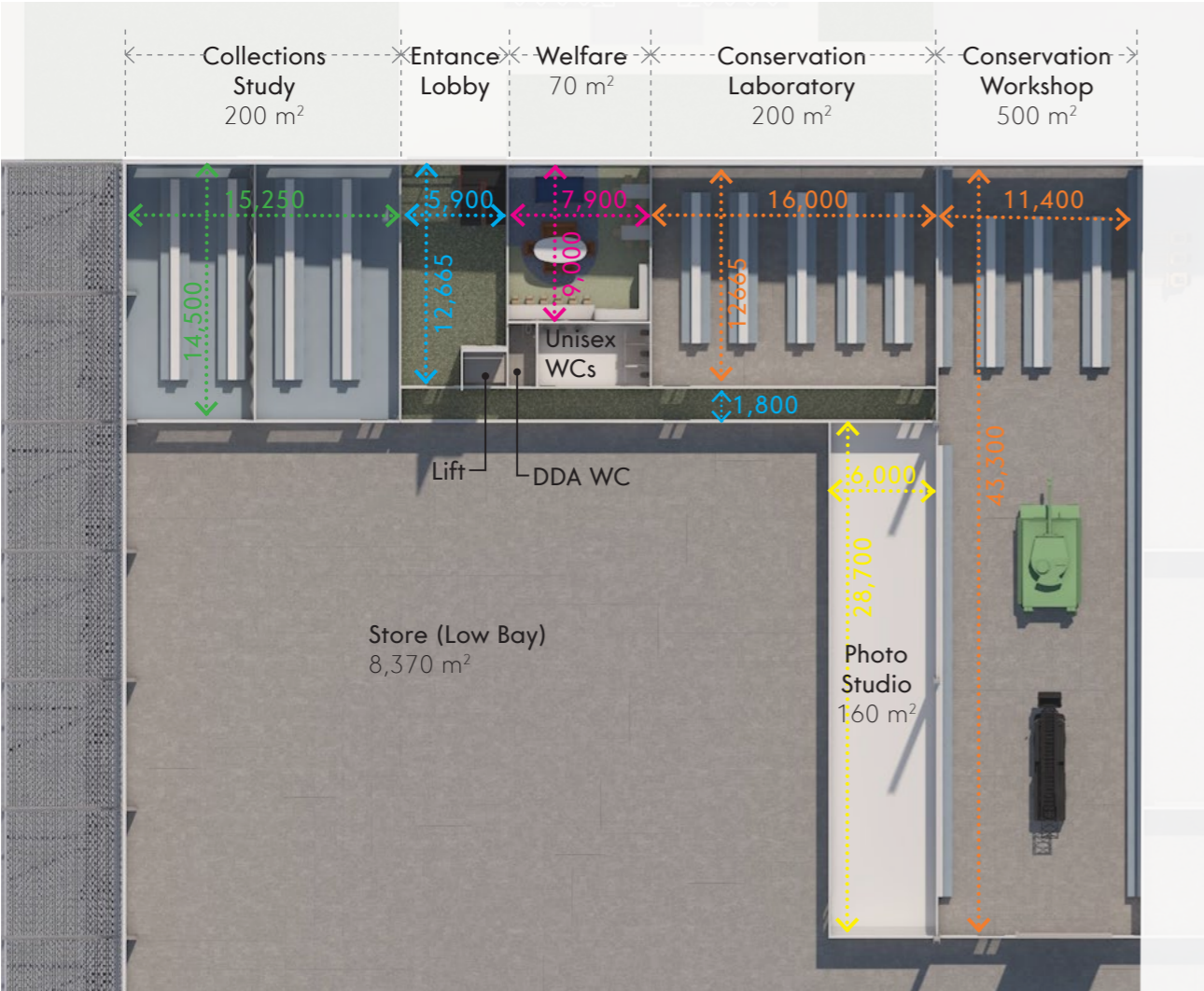


External Plant/Roof
Escape Stair



Pallet gates

4.5 SUPPORT SPACE LAYOUT



Ground Floor



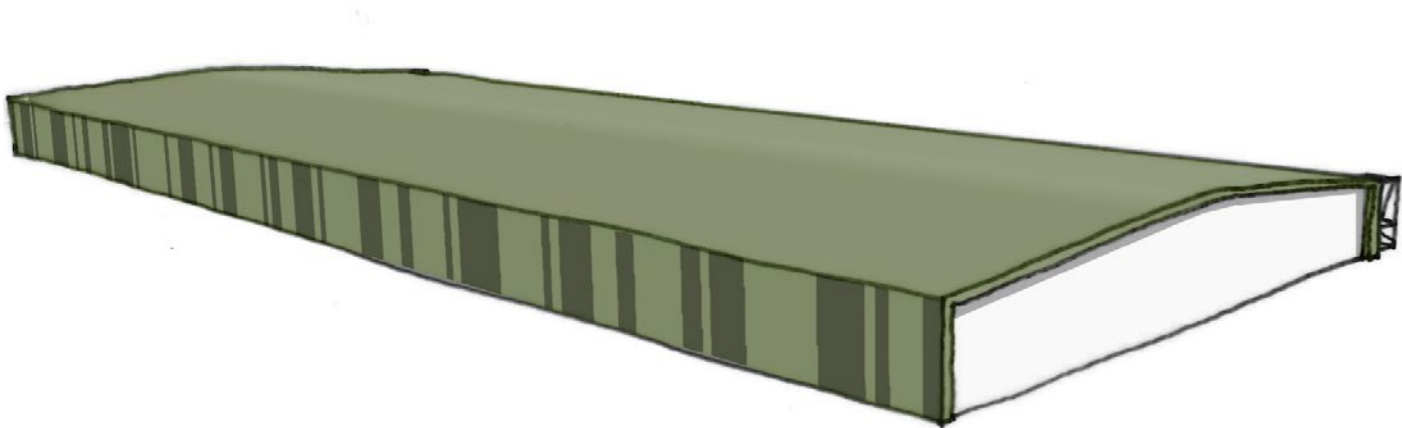
Mezzanine Level



Section 5.0

Design Principles – Building Form

5.1 BUILDING ROOF & FORM DEVELOPMENT



ROOF & CLADDING

- Industry standard approaches to design of this building are essential to produce a cost effective structure for SMG.
- Constructed around a portal frame, a shallow sloping roof will fall from a ridge height of approximately 12m to an external eaves of approximately 8m.
- Longitudinal walls will be clad in the same fabric as the roof and wrap over the south-west and north-east elevations, Gable walls will be similar in colour and nature.
- The roof and external walls will likely be sinusoidal cladding in muted colours. Designed to blend in with the ground from the elevated viewpoints surrounding the site and minimise its visual impact.
- Highly focused proprietary warehouse materials are being used to create construction efficiencies, drive sustainability and maximise storage capacity.



5.2 EXTERNAL PLANT STRATEGY

REQUIREMENTS

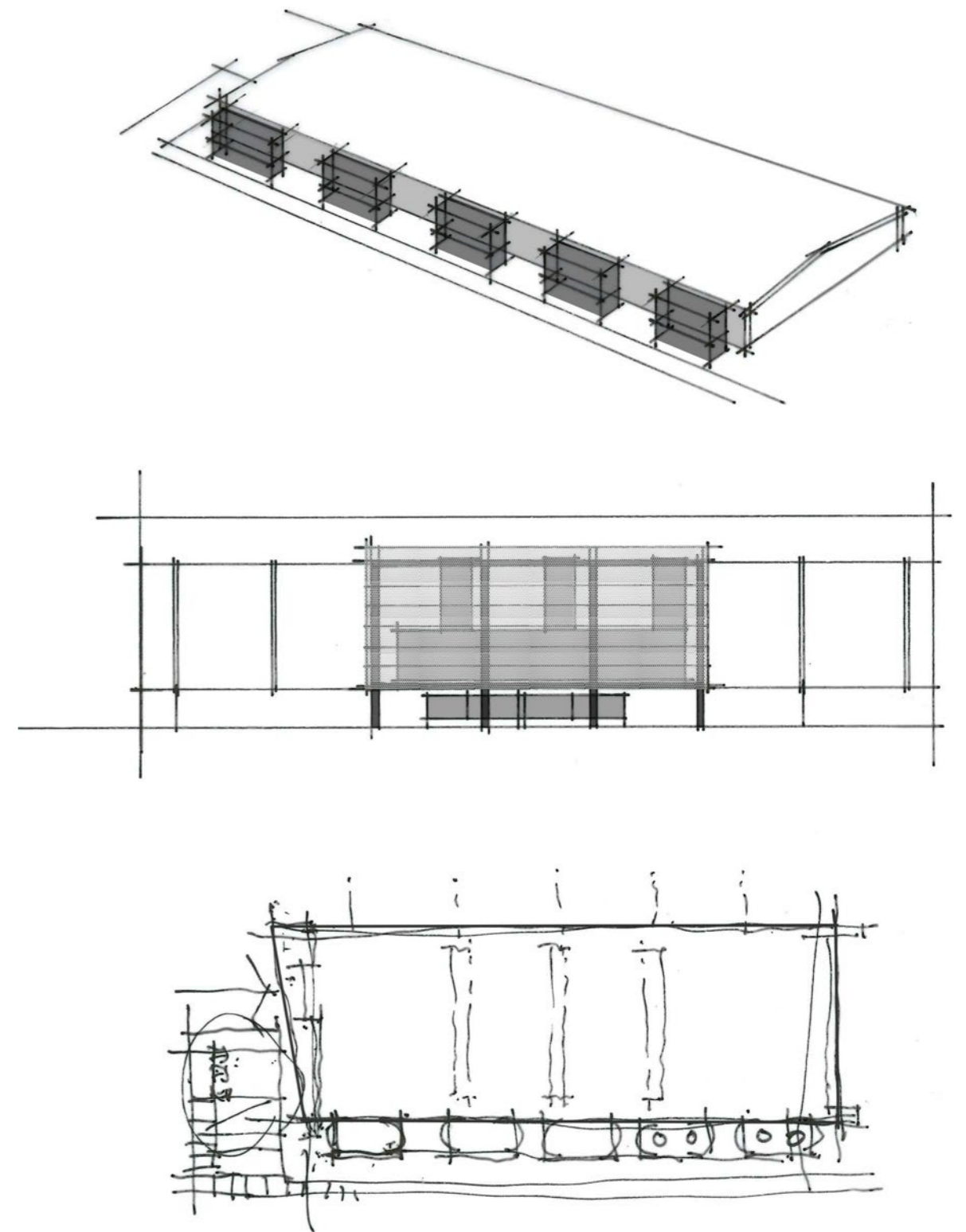
This building is being designed for the storage of collections protected under the National Heritage Act (1983). SMG has specific requirements to meet the needs of the collection. These include (amongst other elements): humidity control and an air-tight structure to provide an internal condition meeting the brief specifications; good levels of security; fire detection and minimised risk of leaks/water ingress. By installing the plant externally to the main structure of the building the following benefits are derived:

ACCESS TO PLANT

- Externally mounted plant and services can be easily installed, accessed, maintained and replaced from the perimeter of the building.
- This reduces the need for maintenance staff to enter the main building to maintain & service plant.
- Improves security of the collection by reducing the number of personnel who access the building for maintenance.

EQUIPMENT, PERFORMANCE & SAFETY

- Air handling units mounted externally have a ready supply of fresh air for intake, reducing the quantity of ducting and improving their performance.
- Minimises the number of penetrations to the building envelope, which improves the performance of the building envelope.
- Maximises the internal space for the storage of the collections.
- Reduces risk of damage to the collection caused by potential leaks & faults of the equipment, minimises fluctuations in humidity and helps to manage vermin and pest control.
- External plant is naturally ventilated – protecting against unwanted heat gain within the building and reducing the need for additional ventilation.
- Limits the risk of a fire inside the main store should a problem with the plant arise, improving safety for the objects and people. Removes the requirement for fire rated internal plant spaces / compartmentation of plant spaces.
- Fire escape from the internal collection stores and plant areas are kept separate. Direct fire escape for maintenance personnel from external plant areas.





Section 6.0

Design Principles – Elevation Treatment / Materials

6.1 PRECEDENT STUDIES - CLADDING CONCEPTS

A range of precedent studies have been examined during the development of the building design to assist the development of the building form and appearance. A range of precedents were examined including similar storage facilities, as well as buildings with similar massing concepts and facade treatments as those developed through the massing and building form studies. This process assisted the development of design solutions considered in this document.



Logistics, Sales and Shelter of Expedition Building, Renca, Chile
Diffuse lighting / Perforated sheets



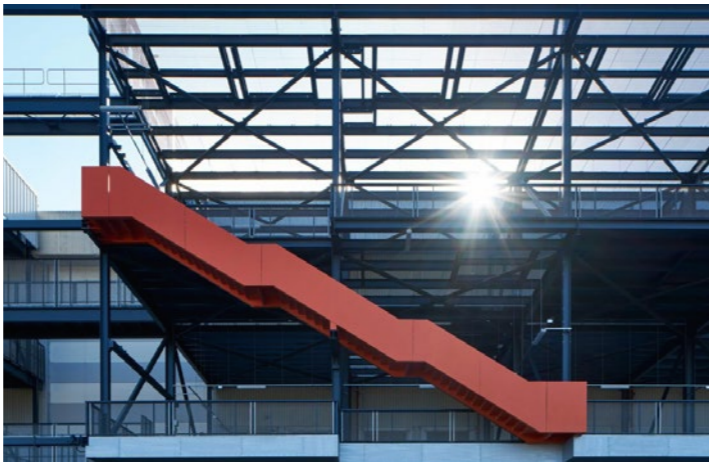
London Olympic Media Centre, London, UK
External plant gantry / Escape stairs



RS+Yellow Distribution Centre Münster, Germany
Vertical cladding



Magna Park, Lutterworth
Horizontal cladding



Centro de Recepcion de Visitantes, Atapuerca (left) and Learnmark Horsens, Denmark (right)
Perforated / expanded metal screens

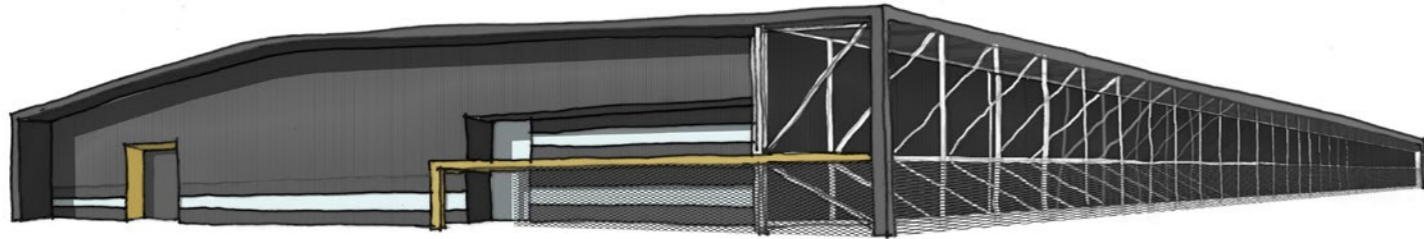


Surrey Operations Centre & Works Yard / Taylor Kurtz + RDH, Surrey, Canada
Verge overhang



Surrey Operations Centre & Works Yard, Surrey, Canada
Expressed entrance

6.2 ENTRANCE ELEVATION TREATMENT CONCEPT STUDIES

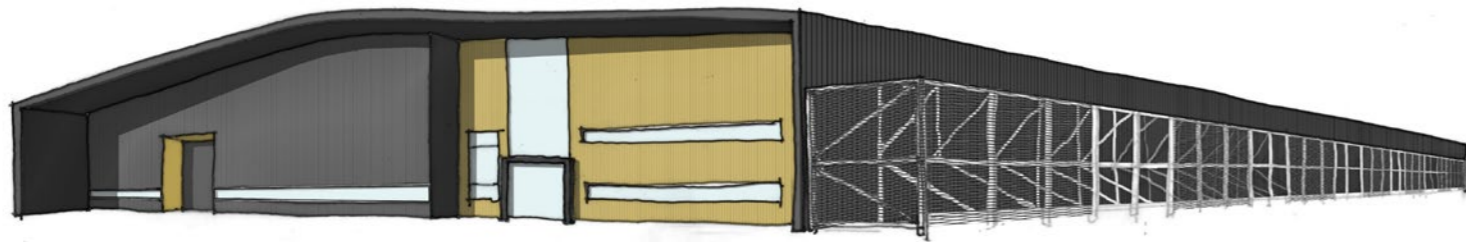


Expressed Loading Bay Entrance

The focal point of the entrance facade is the loading door for delivery of the collection. Use contrasting cladding to articulate this entrance.

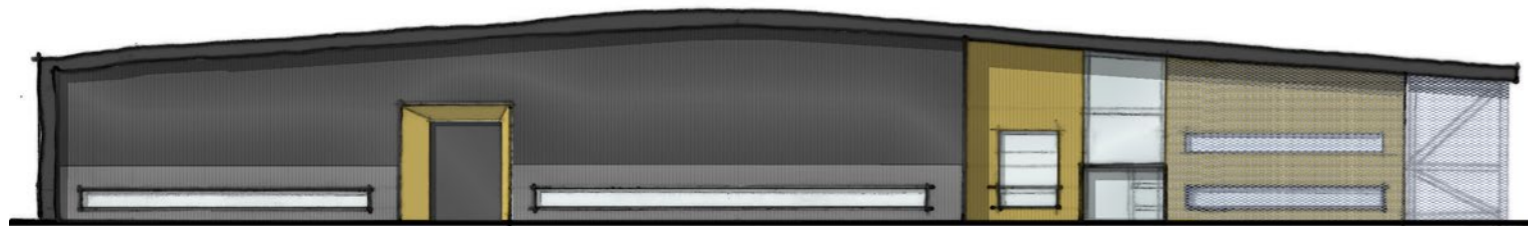
Pedestrian Entrance Canopy

A canopy for the pedestrian entrance to the building provides a focal point for building users, as well as a human scale to the entrance area. The canopy also provides some solar shading to the entrance glazing, as well as shelter from wind and rain on the exposed site.



Perforated Metal Screens

Screens used to provide shelter and security for external plant. Extended onto entrance facade to create depth and diffuse daylight from the south-east facing elevation. Alternative screening options (perforated metal, mesh, etc) could be considered if screening considered necessary / cost effective when considered against the cost of weathering plant equipment.



Articulated Pedestrian Entrance

Create a visual focal point of the pedestrian entrance. Create a more human scale for pedestrian area, which draws users into the building

Overhanging Verge

Roof overhang provides shelter for pedestrian and loading areas, reducing potential for water ingress at loading doors. Creates depth in the facade.

Horizontal Strip Glazing

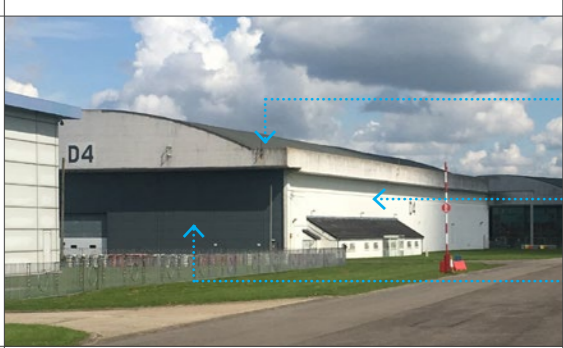
Strip glazing to the south-east facade will provide natural daylighting to support spaces such as the conservation laboratory. Perforated / expanded metal screening could help to provide diffuse daylighting and prevent glare.



Facade Relief


Stepping the facade to create a visual separation between pedestrian areas and vehicle service yard / loading areas. Creates areas of shelter.

6.3 SITE MATERIALS STUDY




Building D4

- Dark grey roof covering
- Concrete - painted white
- Dark green wall cladding



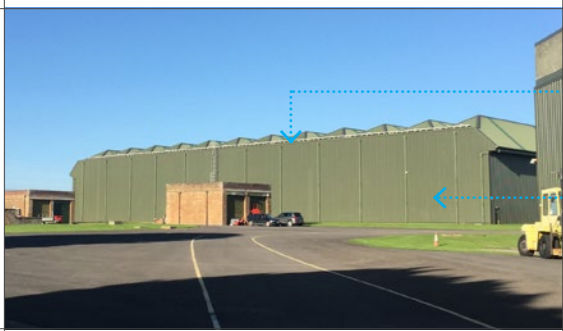
Building L1

- Concrete walls - natural/grey
- Dark green doors / side panels



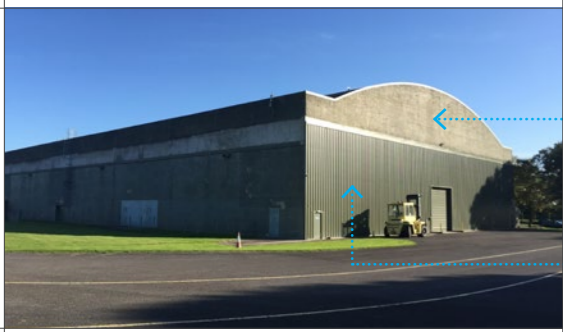
Building C3

- Concrete walls - natural/grey
- Ribbon windows




Building C1

- Dark green profiled metal roof cladding
- Dark green profiled metal wall cladding




Building D2

- Concrete upper wall - natural/grey
- Dark green profiled metal wall cladding



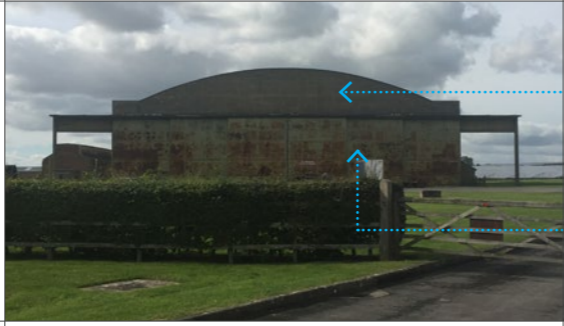
Building A1

- Light grey / beige composite cladding panels
- External metal access structures - painted



Building L2

- Concrete roof / walls - natural/grey
- Dark green doors



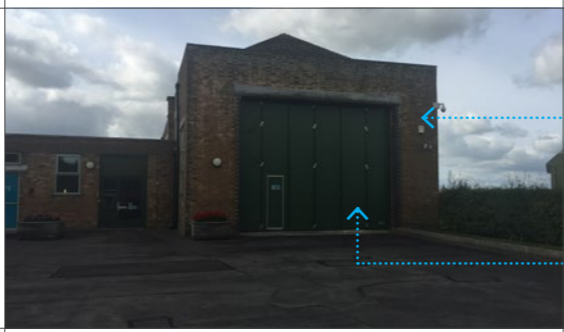
Building D1

- Concrete upper wall - natural/grey
- Dark green painted / weathered metal wall panels



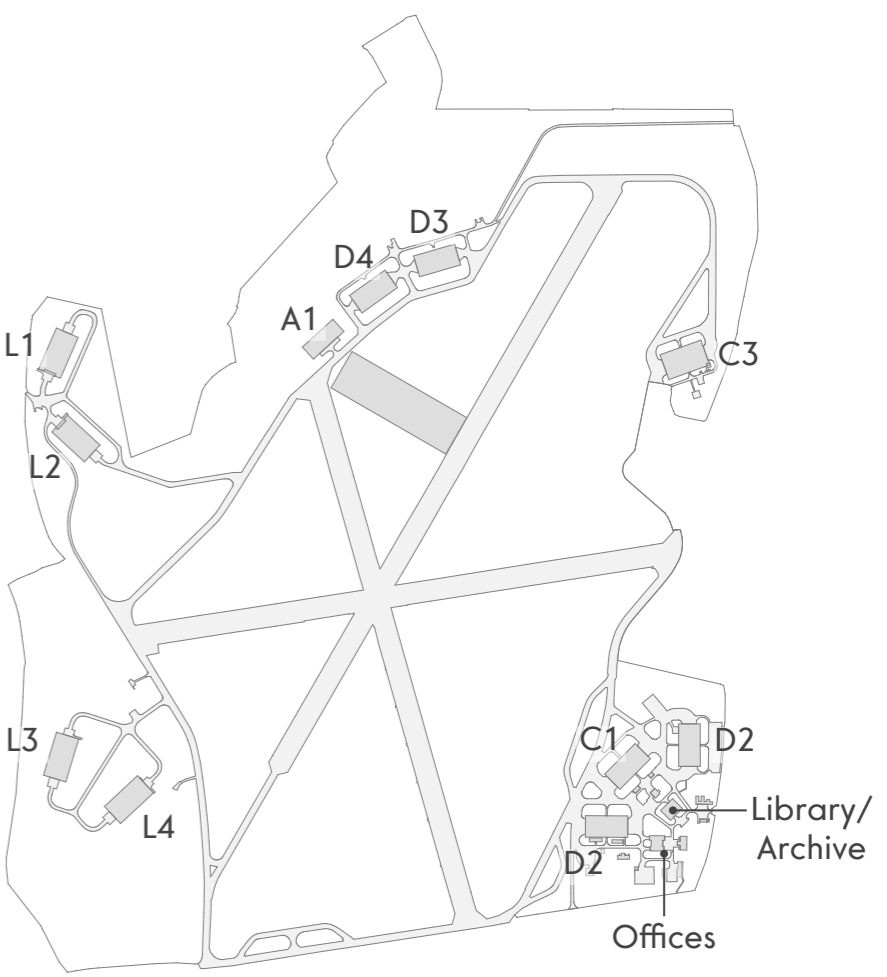
Library & Archives

- Brick walls
- Dark grey door / window frames

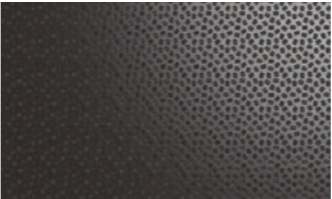



Office Buildings

- Brick walls
- Dark green doors / side panels



Potential Cladding Colour Palette - based on Tata Colorcoat HPS200 Ultra standard range

 Anthracite (RAL 7016)	 Olive Green (RAL 100 30 20)	 Ardenne (RAL 7022)
 Ivy (RAL 170 20 10)	 Juniper Green (RAL 140 20 20)	 Goosewing Grey (RAL 7038)
 Anthracite (RAL 7016) Matt	 Green Grey (RAL 150 40 10) Matt	 Moorland Green (RAL 100 60 20)

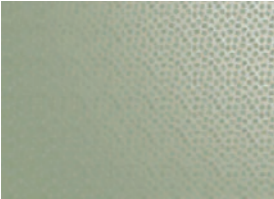
6.4 PRIMARY CLADDING COLOUR - CONTEXT STUDY



Olive Green (RAL 100 30 20)



Green Grey (RAL 150 40 10)



Moorland Green (RAL 100 60 20)

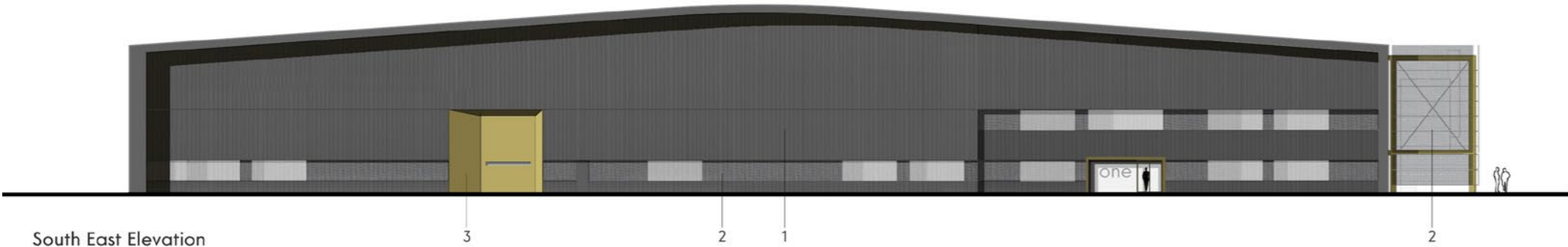
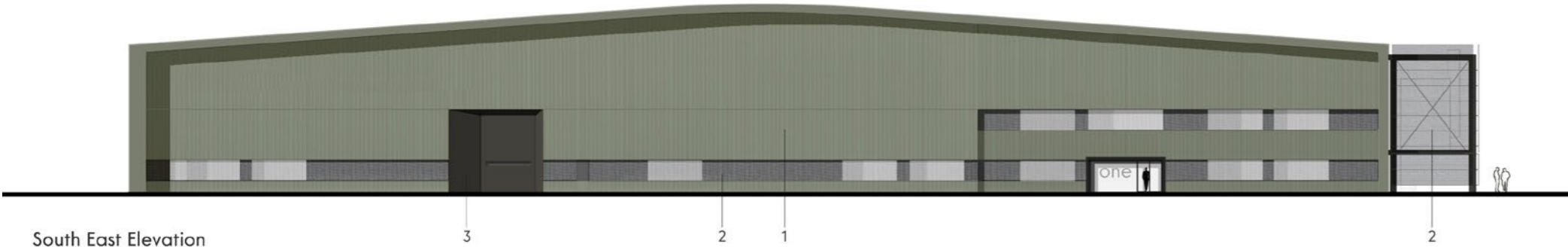
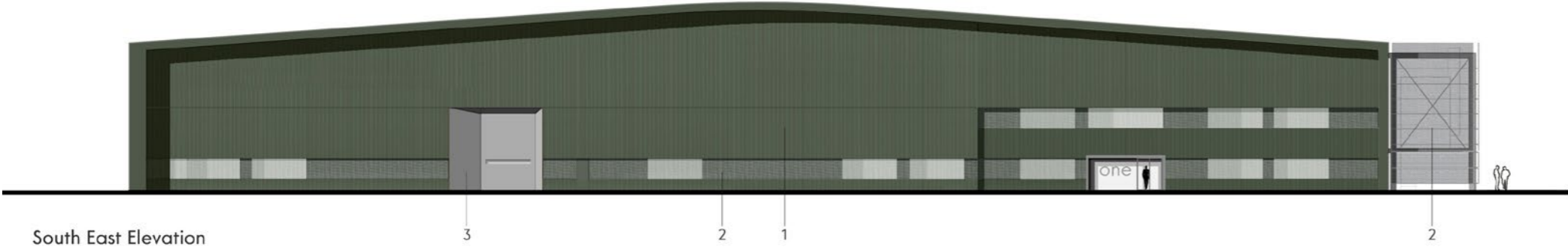
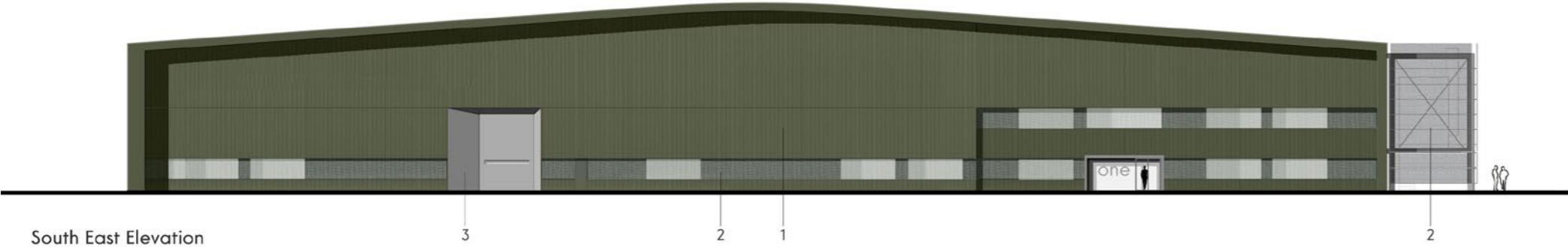


Anthracite (RAL 7016)


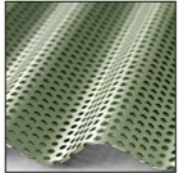
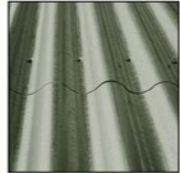


6.5 CLADDING DEVELOPMENT - COLOUR STUDIES

Responding to the colour and material palette of the surrounding buildings within the SMG site, and the site setting, a range of cladding/colour studies have been explored to develop the most appropriate design for this building on this site. The Olive Green primary colour (illustrated below) is considered the most appropriate and has been developed further for this planning application.




Materials



1
2
3

Primary Colour



Olive Green (RAL 100 30 20)

1 Steel sinusoidal cladding - Olive Green (RAL 100 30 20)

2 Steel sinusoidal punched mesh

3 Coloured flat metal cladding - Goosewing Grey (RAL 7038)

4 Galvanised / Painted Steelwork frame

Materials



1
2
3

Primary Colour



Green Grey (RAL 150 40 10)


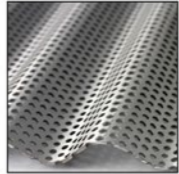
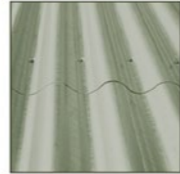
1 Steel sinusoidal cladding - Green Grey (RAL 150 40 10)

2 Steel sinusoidal punched mesh

3 Coloured flat metal cladding - Goosewing Grey (RAL 7038)


4 Galvanised / Painted Steelwork frame

Materials



1
2
3

Primary Colour



Moorland Green (RAL 100 60 20)

1 Steel sinusoidal cladding - Moorland (RAL 100 60 20)

2 Steel sinusoidal punched mesh

3 Coloured flat metal cladding - Anthracite (RAL 7016)

4 Galvanised / Painted Steelwork frame

Materials



1
2
3

Primary Colour



Anthracite (RAL 7016)

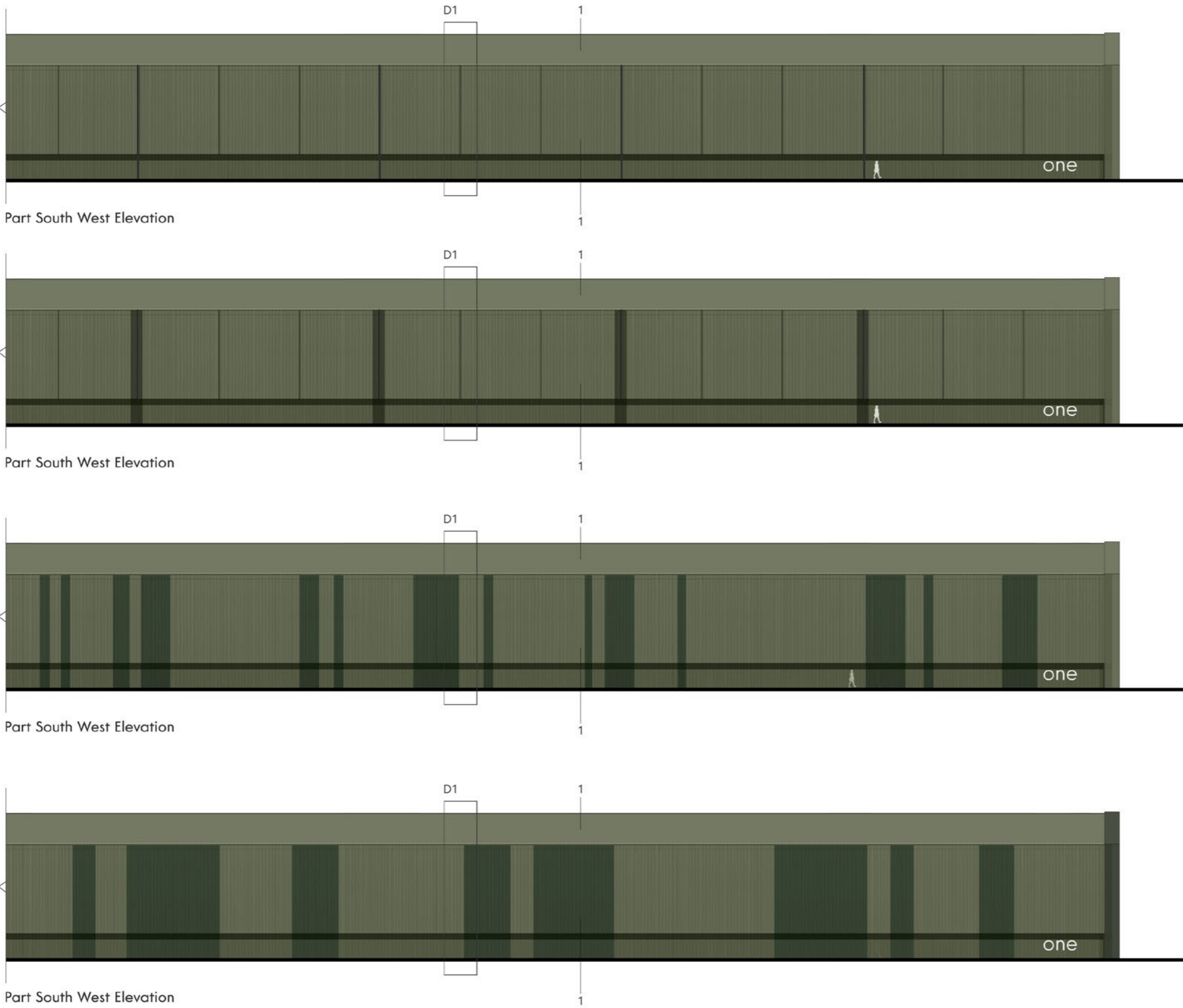
1 Steel sinusoidal cladding - Anthracite (RAL 7016)

2 Steel sinusoidal punched mesh

3 Naturally weathering coloured flat metal cladding

4 Galvanised / Painted Steelwork frame

6.6 SOUTH WEST ELEVATION TREATMENT DEVELOPMENT



A range of options have been considered for the treatment of the south-west facade of the building.

The south-west facade is approximately 289m long. This facade is visible from the nearby elevated viewpoints of Hackpen Hill and Barbury Castle. These viewpoints are considered as important views by Natural England and North Wessex Downs AONB. During discussions held during design development, the introduction of vertical bands were suggested to break up the mass of the facade.

The adjacent options show the design assessments undertaken for utilising vertical bands to break up the mass of this elevation.

The first option shows articulated cladding joints to break up the mass of the facade.

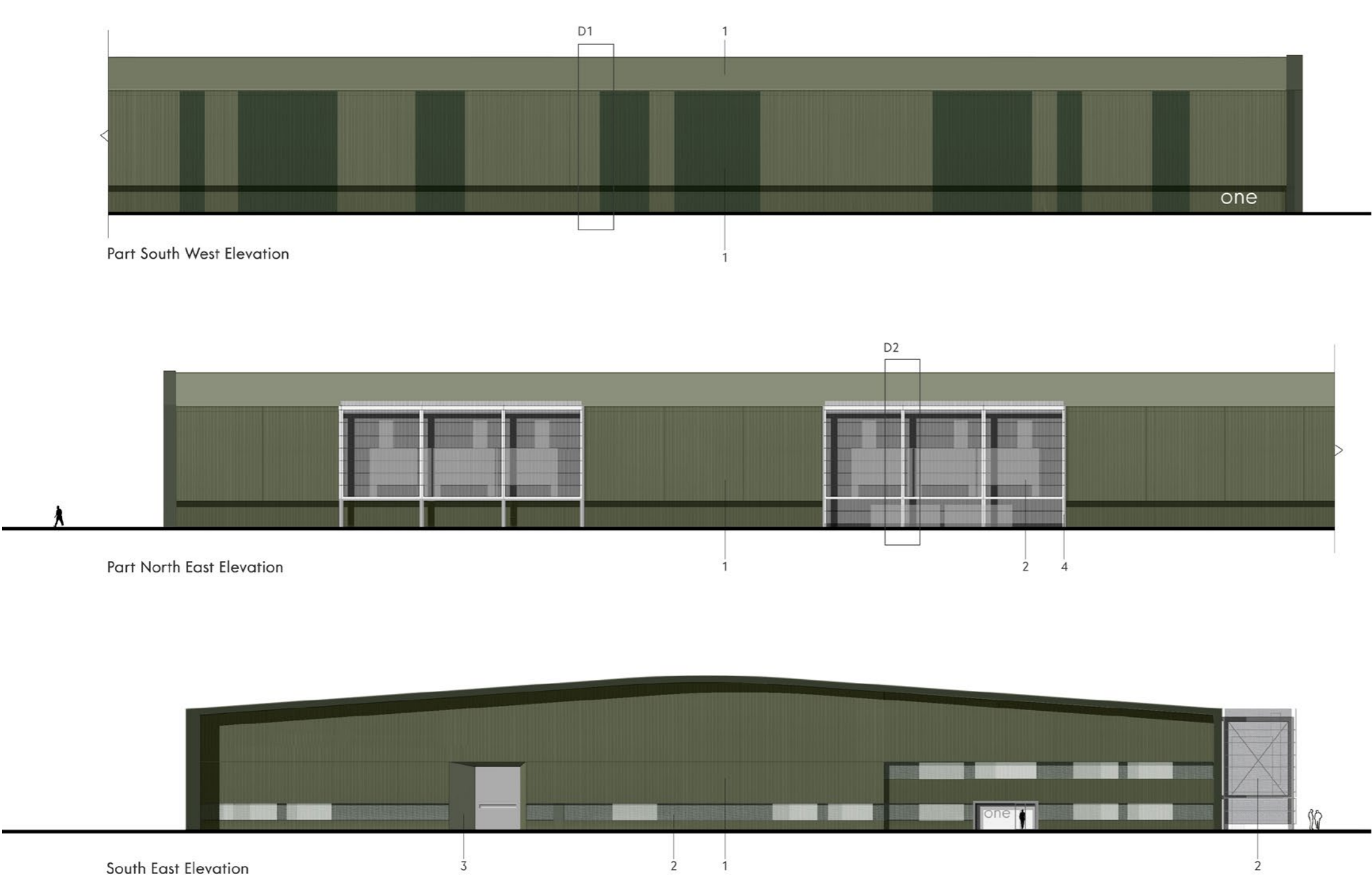
The second options considers the use of a darker/ contrasting colour to further articulate primary panel joints and reflect the scale of the plant areas situated on the north-east facade of the building.

The third option considers the use of irregular width bands of contrasting/darker cladding to break up the mass of the facade. The bands aim to reflect the verticality of adjacent buildings and trees.

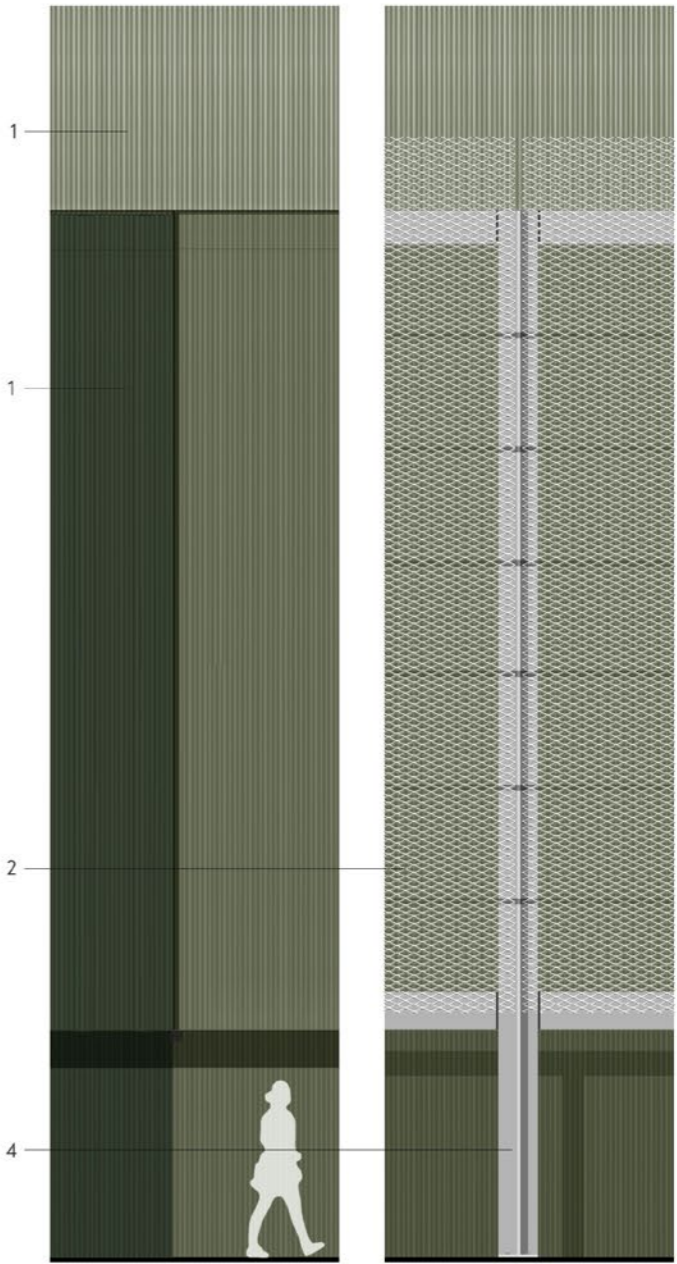
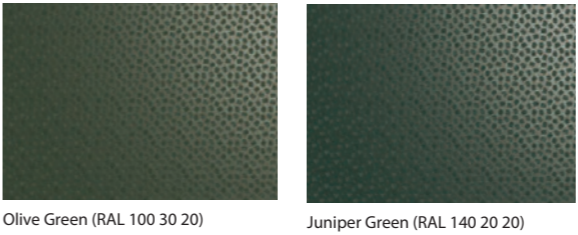
The fourth option provides a variation on the third option, with the irregular bands made wider to further reflect the massing of adjacent buildings.

It is considered that option four most successfully breaks up the mass of the south-west elevation and is most appropriate in relation to the scale of the surrounding buildings. This option has been developed for this planning application.

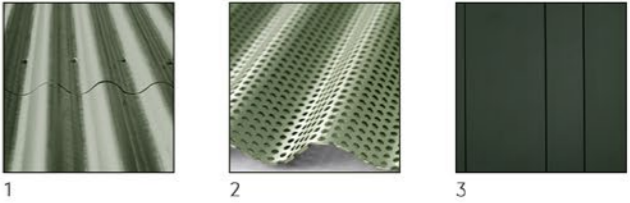
6.7 CLADDING DEVELOPMENT - FACADE STUDY



Olive Green with Juniper Green
This natural shade of green and the low nature of the building echo the linear hedgerows and woodland blocks within the surrounding landscape. The irregularly spaced thick bands of colour help to break up its visual mass.

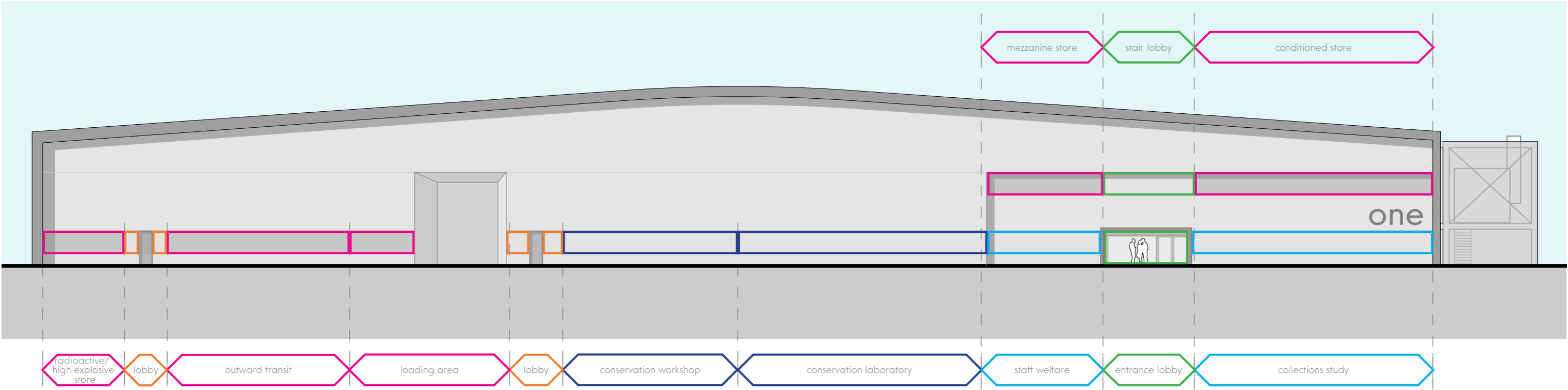


D1
Facade Detail
Materials








- 1 Steel sinusoidal cladding - Olive Green (RAL 100 30 20)
- 2 Steel sinusoidal punched mesh
- 3 Coloured flat metal cladding - Juniper Green RAL 140 20 20
- 4 Galvanised / Painted Steelwork frame

6.8 ENTRANCE FACADE WINDOW STUDY





KEY

-  Natural lighting (UV Filtered) to this space a requirement of SMG technical brief
-  Diffuse Natural lighting (UV Filtered) to this space a requirement of SMG technical brief
-  Natural light (UV Filtered) / visibility proposed to lobbies
-  Natural lighting (UV Filtered) / visibility proposed to entrance lobby / stair circulation space
-  Storage spaces - no natural light to these spaces


Window Treatment Options

Natural light (UV Filtered)





ribbon windows punched window openings

Diffuse Natural light (UV Filtered)




perforated panels solar shading

Entrance Glazing - Natural light (UV Filtered)



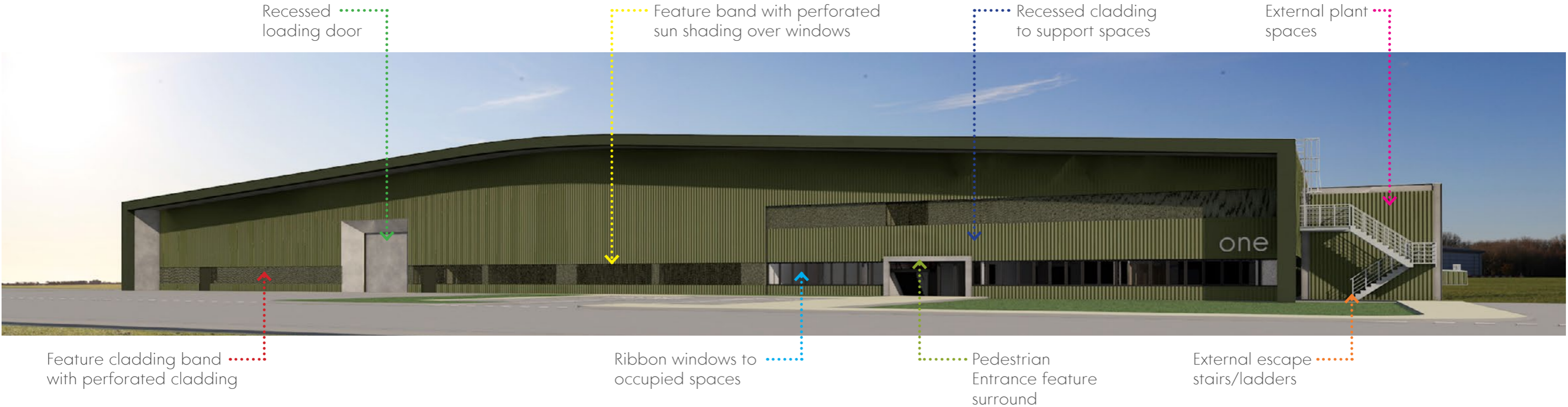
entrance feature glazing curtain walling to entrance

Storage Spaces - no Natural Light



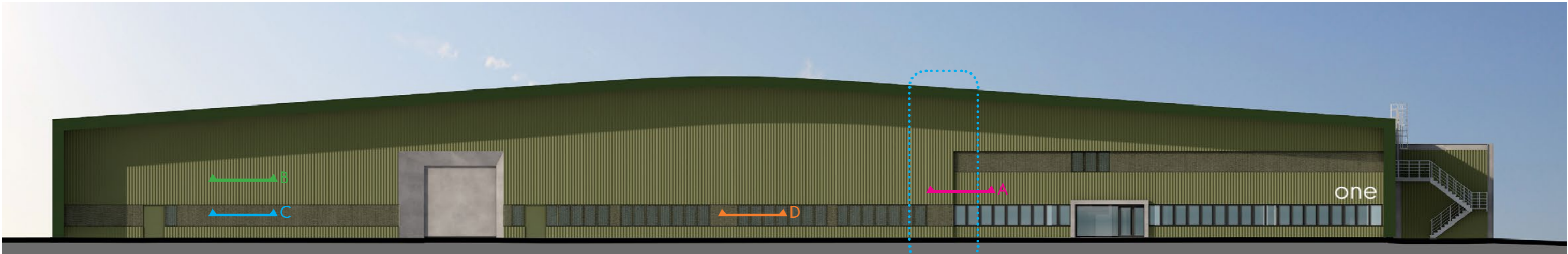
look-a-like panels contrasting cladding

6.9 FACADE TREATMENT DEVELOPMENT

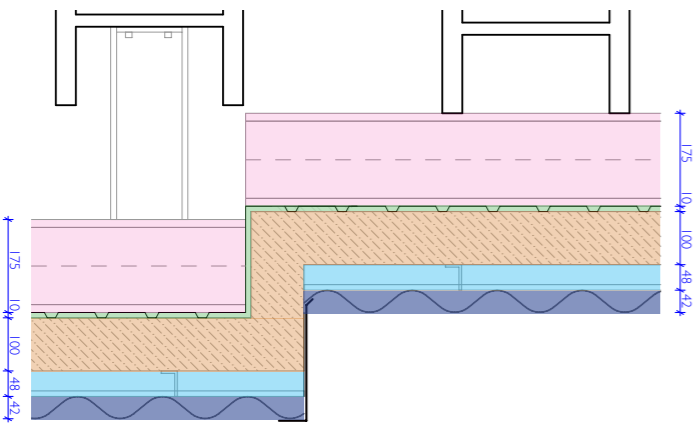


Option 1 - Perspective view from Runway

6.10 ENTRANCE FACADE CLADDING DEVELOPMENT



South-east elevation

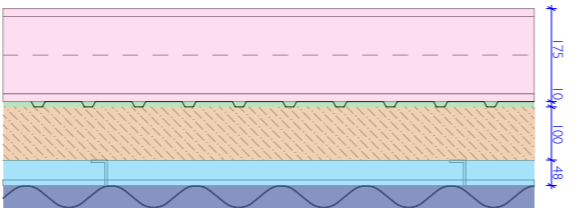


Detail A
Through step in facade cladding

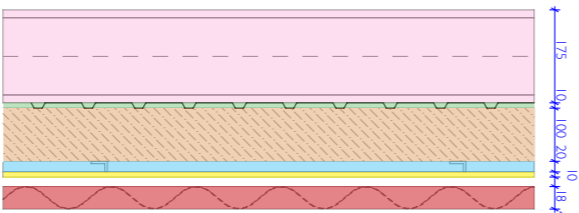
KEY

- Cladding Rail
- Liner tray
- Insulation
- CA Spacer bar
- Flat panel feature band cladding (behind perforated panel)
- Sinusoidal profiled cladding
- Perforated sinusoidal feature panel

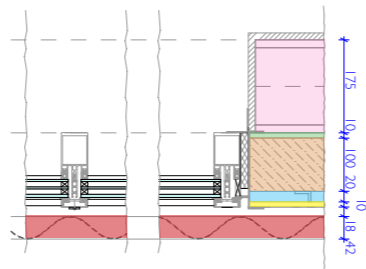
Concept details based on CA Twin-Therm Cladding system



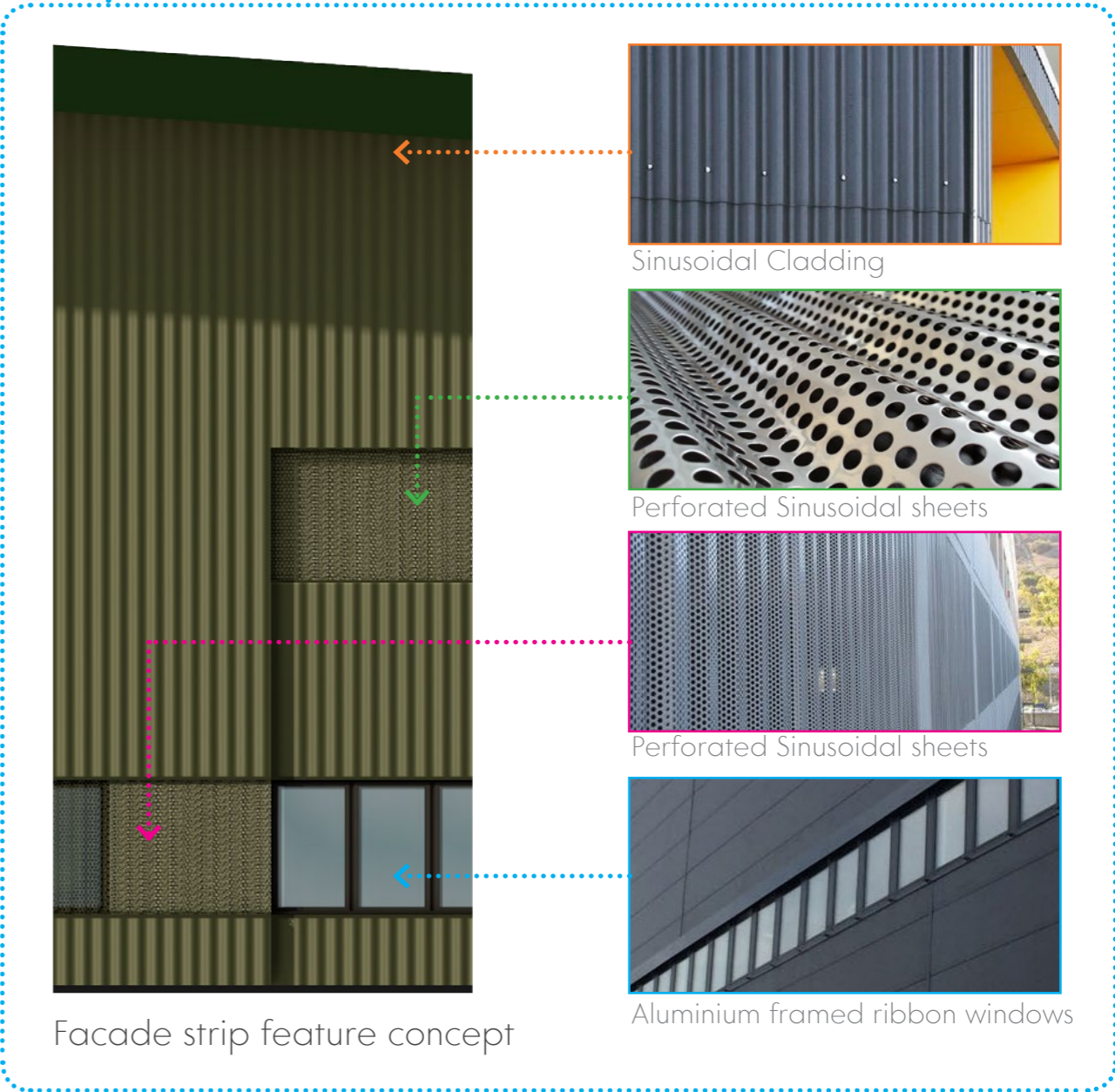
Detail B
Detail through standard facade cladding



Detail C
Detail though feature strip



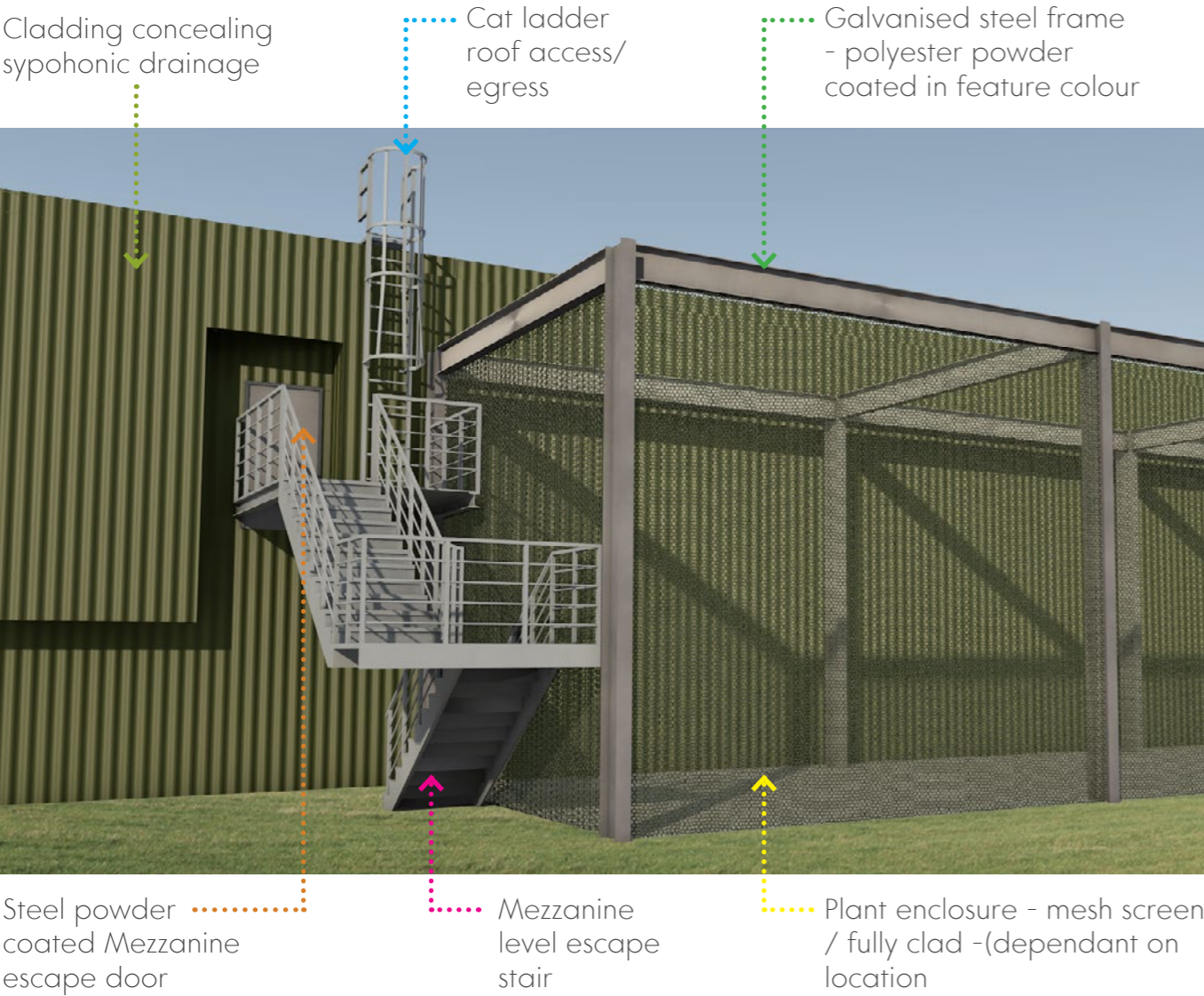
Detail D
Detail through feuture strip glazing with perforated panel shading



6.11 EXTERNAL PLANT FACADE DEVELOPMENT



North-east elevation



Plant Gantry / Access Stair - Perspective View



Plant Gantry / Access Stair concept



Exposed galvanised stairs/structure



Expanded Metal Screens

6.12 ELEVATIONS



South-West Elevation



North-East Elevation



South-East Elevation



North-West Elevation

- KEY**
- 1 Roof Covering
 - 2 Metal Cladding
 - 3 Loading Door
 - 4 Personnel Door
 - 5 Windows
 - 6 Pedestrian Entrance
 - 7 Plant Gantry
 - 8 Feature panel recessed cladding band
 - 9 External Access Stair/Cat Ladder
 - 10 Fire Escape Door
 - 11 RWP positions
 - 12 Sprinkler Tanks
 - 13 Sprinkler Pump House
 - 14 Refuse Store

6.13 3D PERSPECTIVE VIEW



Section 7.0

Proposed Building - Contextual Views

7.1 PROPOSED VIEW FROM BARBURY CASTLE



View from Barbury Castle



7.2 PROPOSED VIEW FROM HACKPEN HILL



View from Hackpen Hill



7.3 PROPOSED VIEW FROM GO-KART ARENA



View from Swindon Go-Kart Arena Car Park



7.4 PROPOSED VIEW FROM RED GATE



View from Red Gate

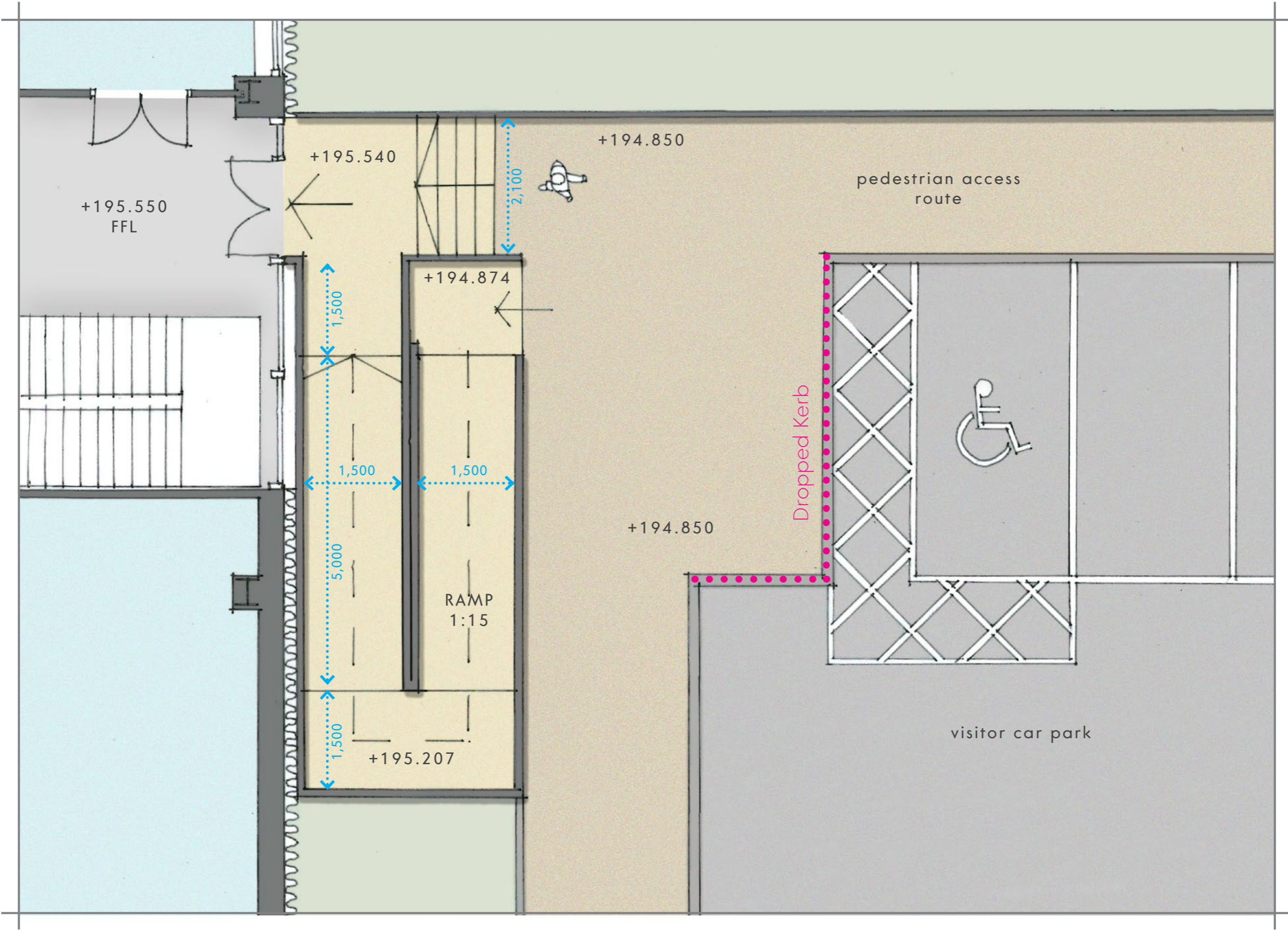


The background of the slide is a photograph of a large industrial facility, possibly a shipyard or a large-scale manufacturing plant. The image is heavily overlaid with a semi-transparent blue color. In the background, the structure of a large ship or industrial vessel is visible, with various components and equipment. The lighting is somewhat dim, and the overall tone is industrial and technical.

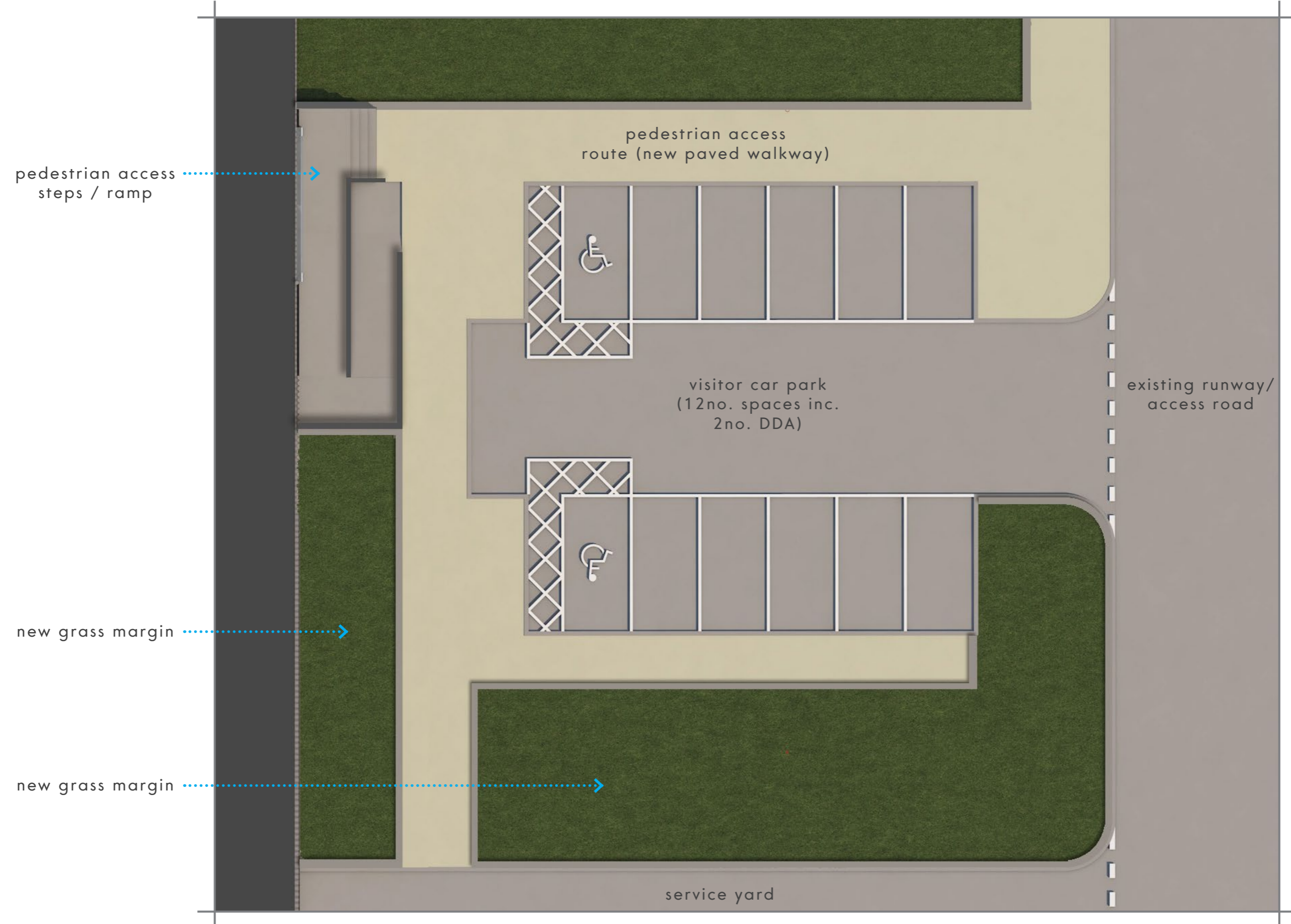
Section 8.0

External Spaces, Servicing & Access

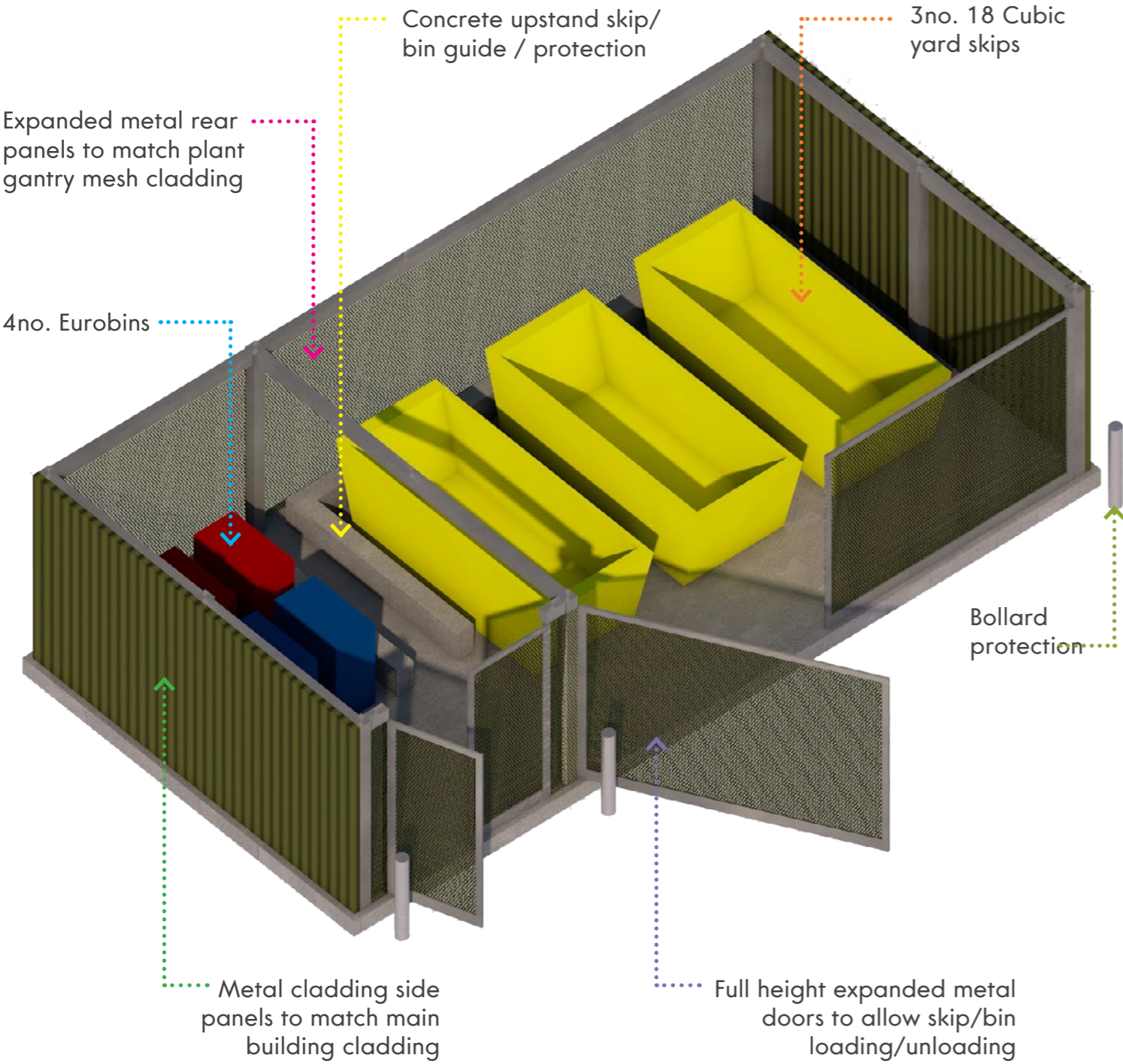
8.1 PEDESTRIAN ENTRANCE ACCESS



8.2 VISITOR / STAFF CAR PARKING

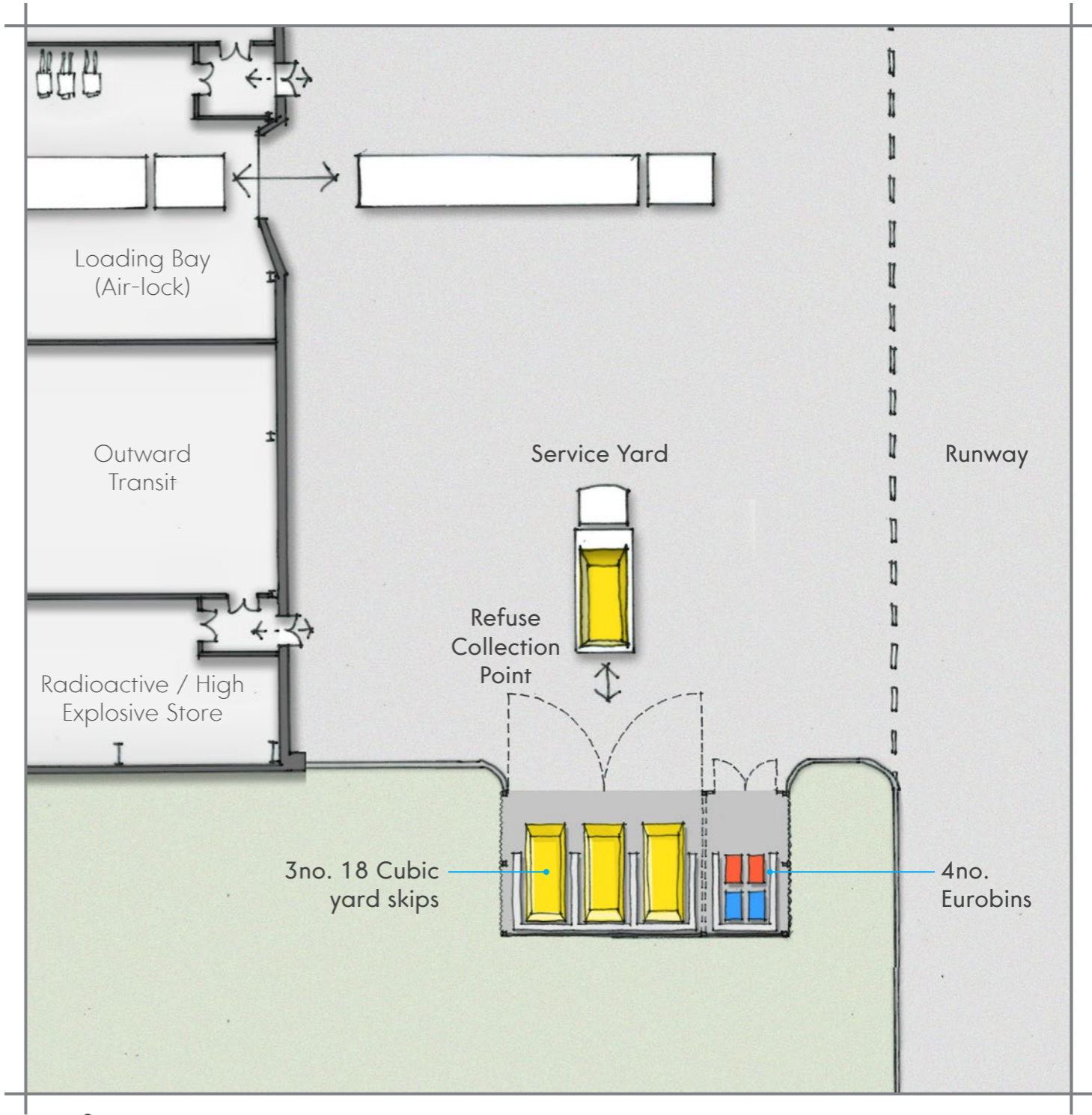
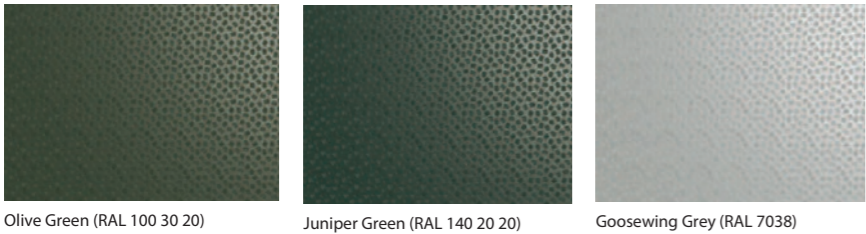


8.3 REFUSE STORE



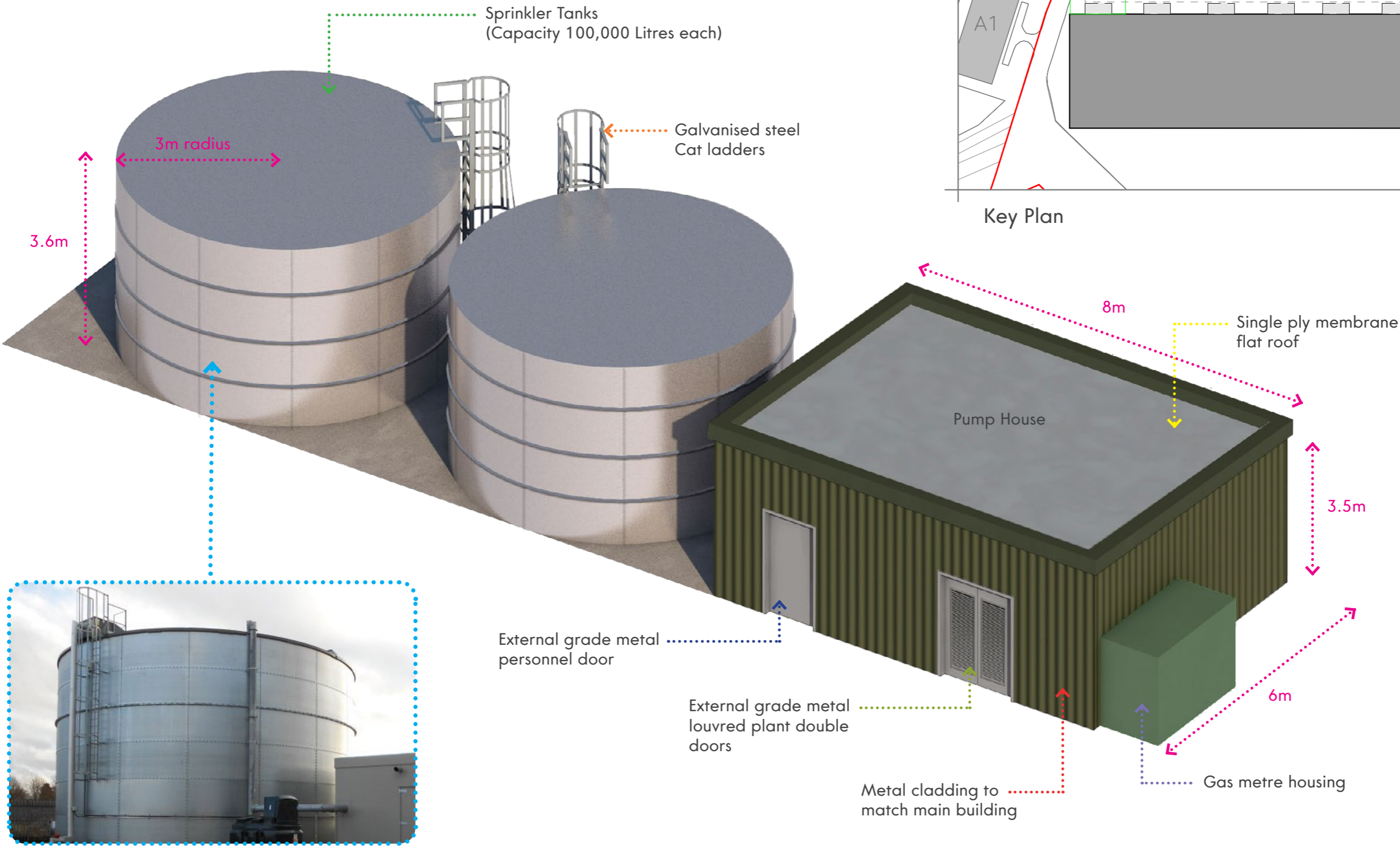
Refuse Store Axonometric View

Colour Palette



Refuse Store Location

8.4 SPRINKLER TANK & PUMP ROOM



Cylindrical Sprinkler Tanks

Colour Palette



Olive Green (RAL 100 30 20)



Juniper Green (RAL 140 20 20)



Goosewing Grey (RAL 7038)

8.5 EXTERNAL SPACES

The external spaces surrounding the facility will mainly be located in front of the South-East entrance elevation and consist of the following spaces:

- car parking facilities for staff and visitors
- service yard for object delivery vehicles and service vehicles
- pedestrian access routes
- limited external grassed areas

It is proposed that these spaces will be developed within the footprint of the existing runway to the South-East of the building.

8.6 SERVICE ACCESS

Service (including vehicles) access to the building will be via the existing site entrance at Red Barn Gate. People will be required to sign in at the main gate, before accessing the site through a secure barrier, in line with current site operations.

Service vehicle will be able to access the service yard at the front of the facility, with sufficient space for HGV turning and parking. A Grasscrete (or similar) service route will be provided parallel to the north-east facade of the building, providing access for service vehicles to plant gantries.

8.7 CAR PARKING & HIGHWAYS

Vehicle access to the site will be in line with current operations - signing in via the Red Barn Gate and along the existing vehicular routes. Car parking is proposed adjacent to the pedestrian entrance on the south-east side of the building. Car parking is provided predominantly for building staff. Visitors accessing the facility by appointment will park at the existing visitor area on site, before being escorted to the proposed building.

A total of 12no parking spaces are proposed, including 2no DDA spaces.

8.8 HGV LOADING

HGV access for the delivery and collection of objects to be stored in the facility will be in line with current site operations and as noted in the Service Access section (6.2).

HGVs will access the facility via the service yard. A large insulated sectional roller loading door is proposed on the south-east elevation, allowing delivery vehicle to drive into an air lock area located within the building. Within this airlock, the delivery vehicles will be loaded / unloaded via forklift, pallet truck or by hand (dependant on object size). Level access will be provided to allow the vehicles to drive into the airlock. Whilst deliveries are expected to be infrequent, the service yard allows sufficient space for HGV parking in the case that HGVs are queued / waiting for the air lock to be cleared to allow for vehicle access.

The existing access routes and proposed service yard are sufficiently sized for two 18-tonne HGVs. The proposed loading door and airlock space are also sufficiently sized for access for an 18-tonne HGV, with space for loading / unloading.

8.9 REFUSE STORAGE

A covered refuse storage area is proposed, adjacent to the Grasscrete service route and the existing runway access, for waste storage and collection. The storage area consists of space for four Euro bins, as well as space for loading and un-loading three 18 cubic yard skips

8.10 EXTERNAL LIGHTING

Generally the service illuminance for the external lighting installation will be in accordance with the Society of Light and Lighting (SLL) codes for lighting and with particular reference to the CIBSE lighting guide LG6: the outdoor environment.

Careful consideration will be given to the dark skies nature of the site, reducing light spill and the duration that lighting operates.

All luminaires will be of external quality, suitable for the installed environment and be of robust design and vandal resistant. Final selection of these luminaires will be in accordance with the architect's requirements.

Each escape door will be provided with emergency lighting externally above or adjacent to the door.

8.11 ACCESSIBILITY

The proposals will provide an inclusive environment for the widest range of users possible within the constraints of the project. The design includes the following key features which will facilitate and enhance disabled users experience of the building:

- Provision of accessible parking bay
- Level pedestrian access walkways to the building allow two way wheelchair use
- Pedestrian entrance with level thresholds to allow access for wheelchair users into the building.
- Fire escape exits with ramped access to current standards
- Provision of an accessible WC, in line with Approved Document M standards
- Provision of fixed induction loops to relevant spaces
- All access and egress routes will be step free, limiting the need for assisted evacuation
- Provision of a personnel lift, with sufficient space for wheelchair access (including assistance)
- Provision of disabled refuge and call point within the main stair lobby.

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