

04.05 Proposed Second Floor Layout

Accommodation Overview

This level accommodates several teaching classrooms, lockers for the students using the workshops and specialist labs plus an office for faculty members.

Key spaces:

- 5 x ICT/ General Classrooms
- Staff Room/ Office

Design Inspiration images



Classroom



Staff room/ office



04.06 Proposed Third Floor Layout

Accommodation Overview

This level accommodates several teaching facilities with technical/ staff support.

Key spaces

- 2 x Specialist Engineering and Technology labs
- 2 x ICT/ General Classrooms
- Project Based Learning space

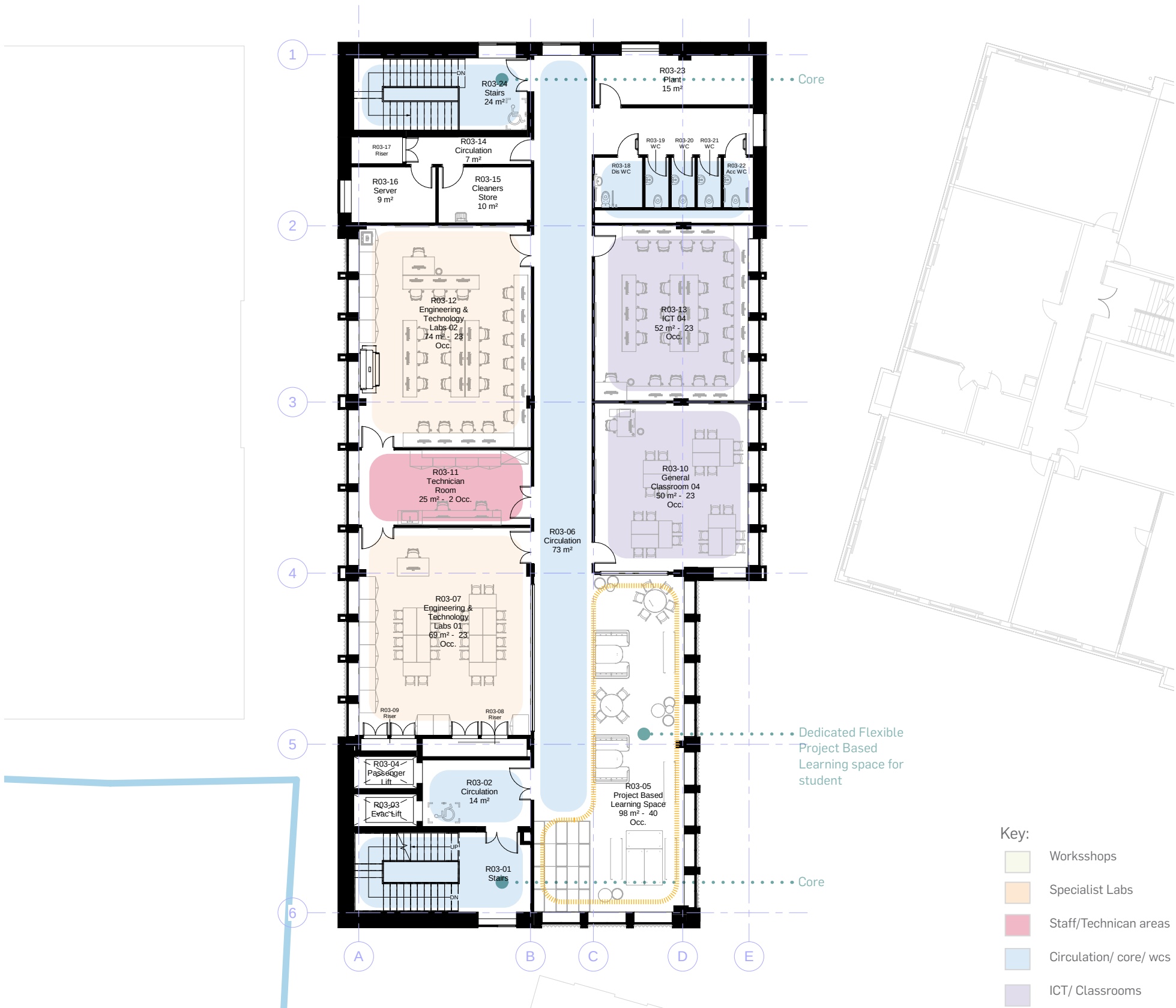
Design Inspiration images



Electronic Labs



Open plan flexible study space



04.07 Proposed Plant Level Layout

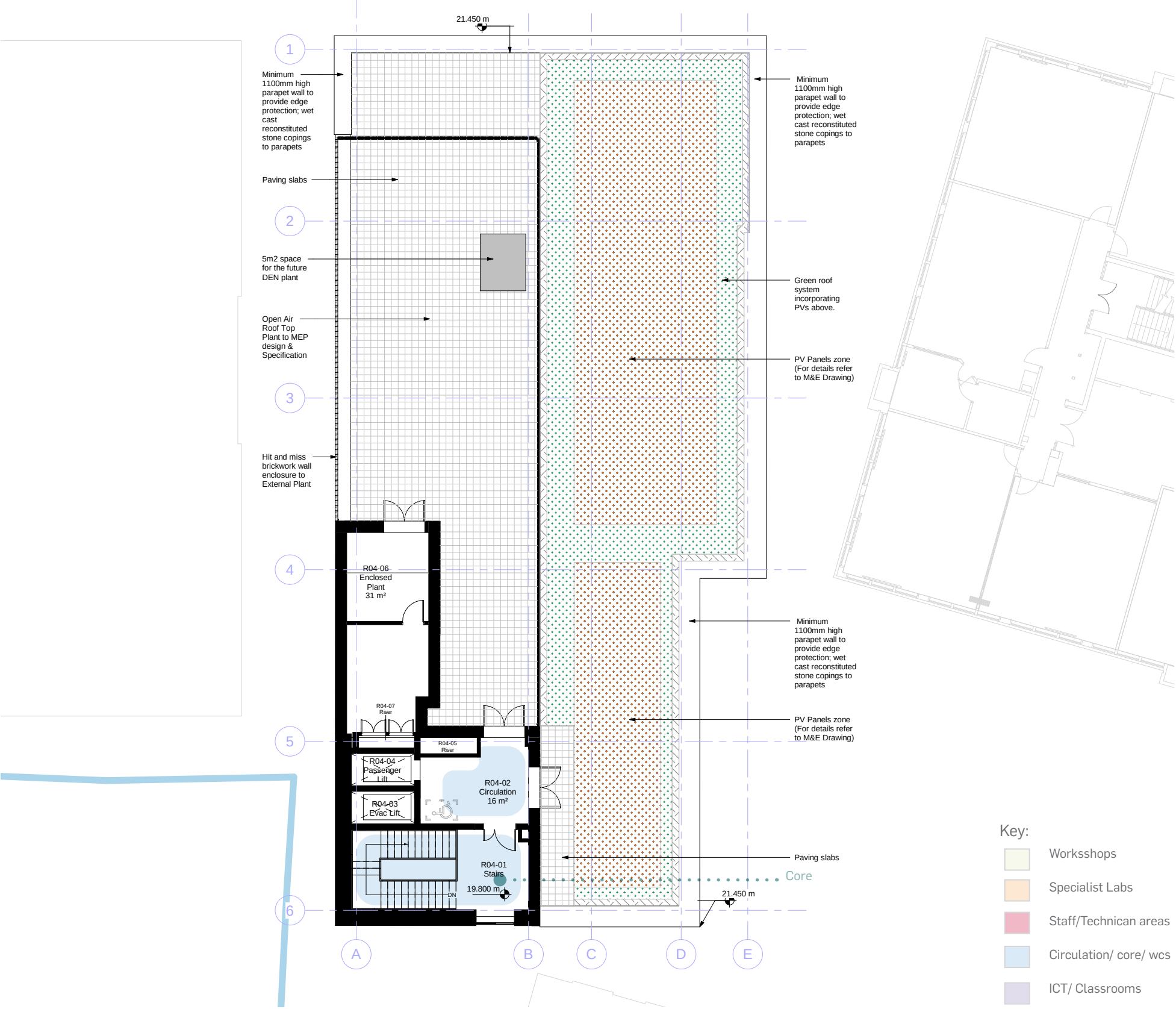
Accommodation Overview

This level is allocated to internal and external plant space. The lower flat roof has a sedum system with Photovoltaic Panels incorporated on top.

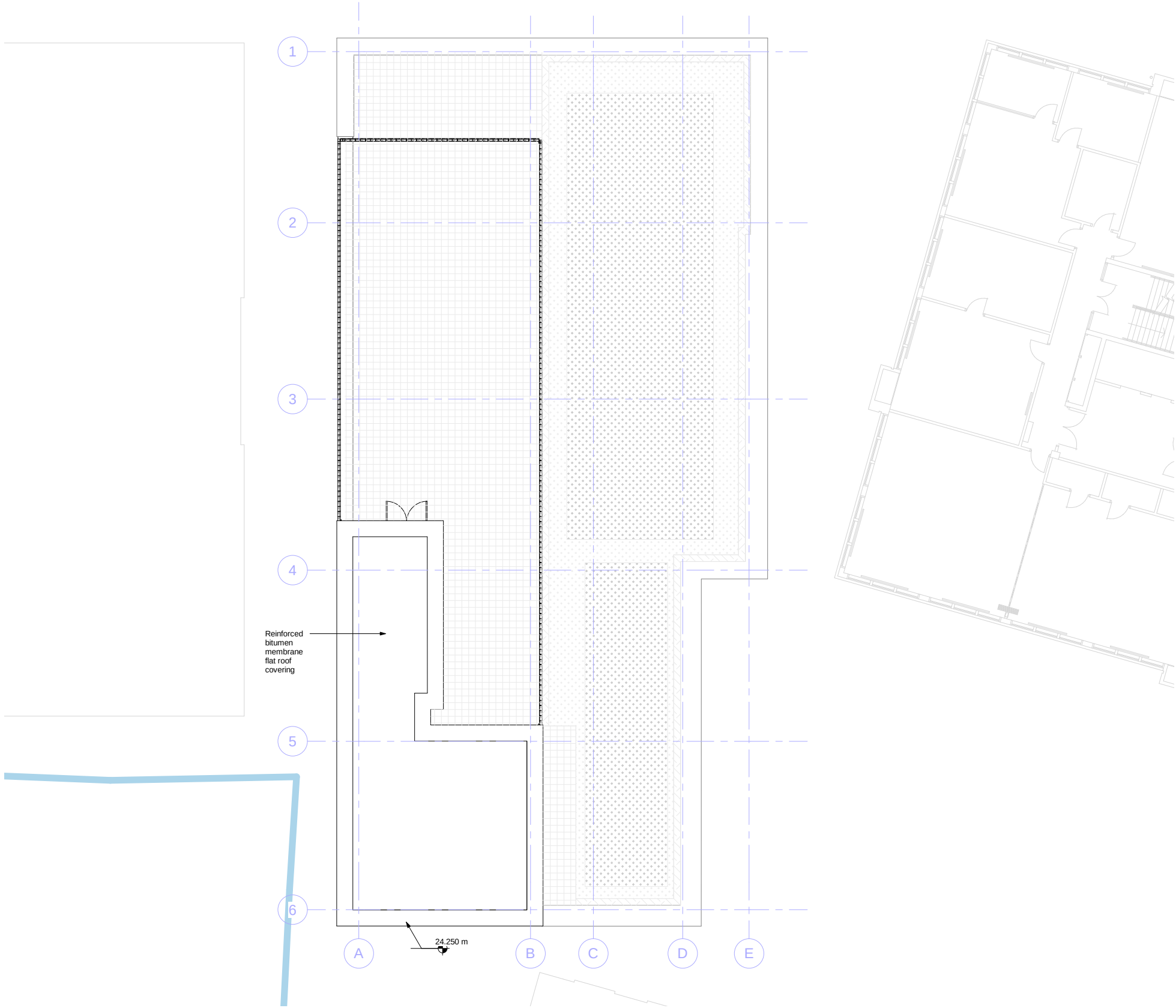
Design Inspiration images



Photovoltaic Panels incorporated into a green roof



04.08 Proposed Roof Plan



04.09 Proposed External Plan

Diagram below illustrates the proposed external finishes in this application which forms Phase 1 of the campus masterplan. Hard landscaping paving is proposed immediately around the Construction and Engineering Centre with an asphalt finish on the service yard to match the existing finish.

A secure line in the form of security gates and fob/card entry system will be introduced between the existing service yard

and internal courtyard to ensure that separate vehicle and pedestrian areas are retained.

Some of the existing recycle and waste compactors will be removed as part of this scheme and replaced with a new compactor in the location illustrated below. The college already have a waste management strategy in place which will include this new building.

General waste will be disposed into the on-site compactors. Collection for waste will continue on the designated days already established with Haringey council.

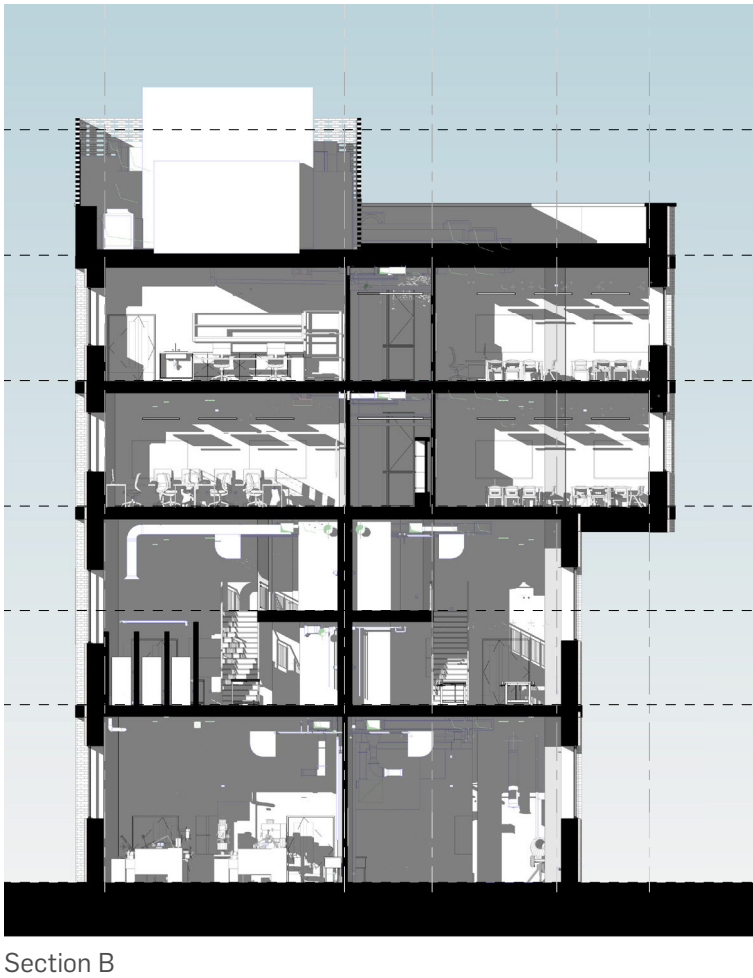
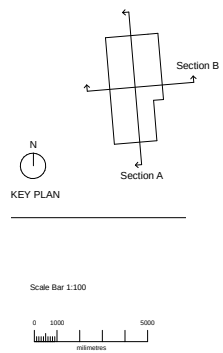
As part of this application additional cycle hoops have been proposed at the front of the building and a 2-tiered sheltered stands to replace the existing 1 tier stand.



04.10 Proposed Sections

Key elements of the sections:

- Double height spaces for the ground and first floor workshops
- Mezzanine level to first floor workshops
- Accessibility to all levels via lifts
- Accessible plant space
- Significant servicing with exposed structure



04.11 Facade Approach

Elevation Principles

Several key principles were established at the start of the design process to inform the development of the elevations, in addition to providing enough areas of glazing for daylighting and areas of cladding for thermal efficiency. The building elevations have been designed in line with the following principles;

- Simplicity – The building form is simple, avoiding fussy details. The elevations are ordered with a fixed and flexible arrangements.
- Low Embodied Carbon – Selecting materials lower in embodied carbon. Materials should be sustainable, natural and locally sourced where possible.
- Sustainability - The design of the façade has been heavily influenced by Passivhaus principles. The elevations play an important role in balancing heat gain, heat loss and daylight, through window design and size, solar shading and natural ventilation.
- Identity – The elevations have a strong vertical rhythm, which helps to create a harmonious façade, uniting all the many different functions of the building.
- Defined entrance – The entrance into the building is clearly defined.

Sustainable Design Strategies for the Building

The building employs several low energy design strategies, which include:

- Optimisation of building fabric
- Design to Passivhaus principles
- Solar shading integrated as part of the fabric
- Renewables (PV's and ground source heat pumps)
- Energy reduction and production
- Airtight building envelope (minimise heat loss)
- High levels of insulation and triple glazed windows
- Low energy systems for lights, controls, hot water etc.
- Selection of materials with low embedded carbon.

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04.12 Existing Colour Palette on Site

These diagrams below illustrate the materiality of the buildings on site and the surrounding.

There are a mixture of Terracotta, red brick, white concrete and stone tones on the immediate campus buildings and listed buildings in the Tottenham Green Conservation Area fronting the High Street.

The material palette changes to a red/ brown brick tone to the south of the site., with pockets of grey and buff tone buildings dotted across the surrounding areas.

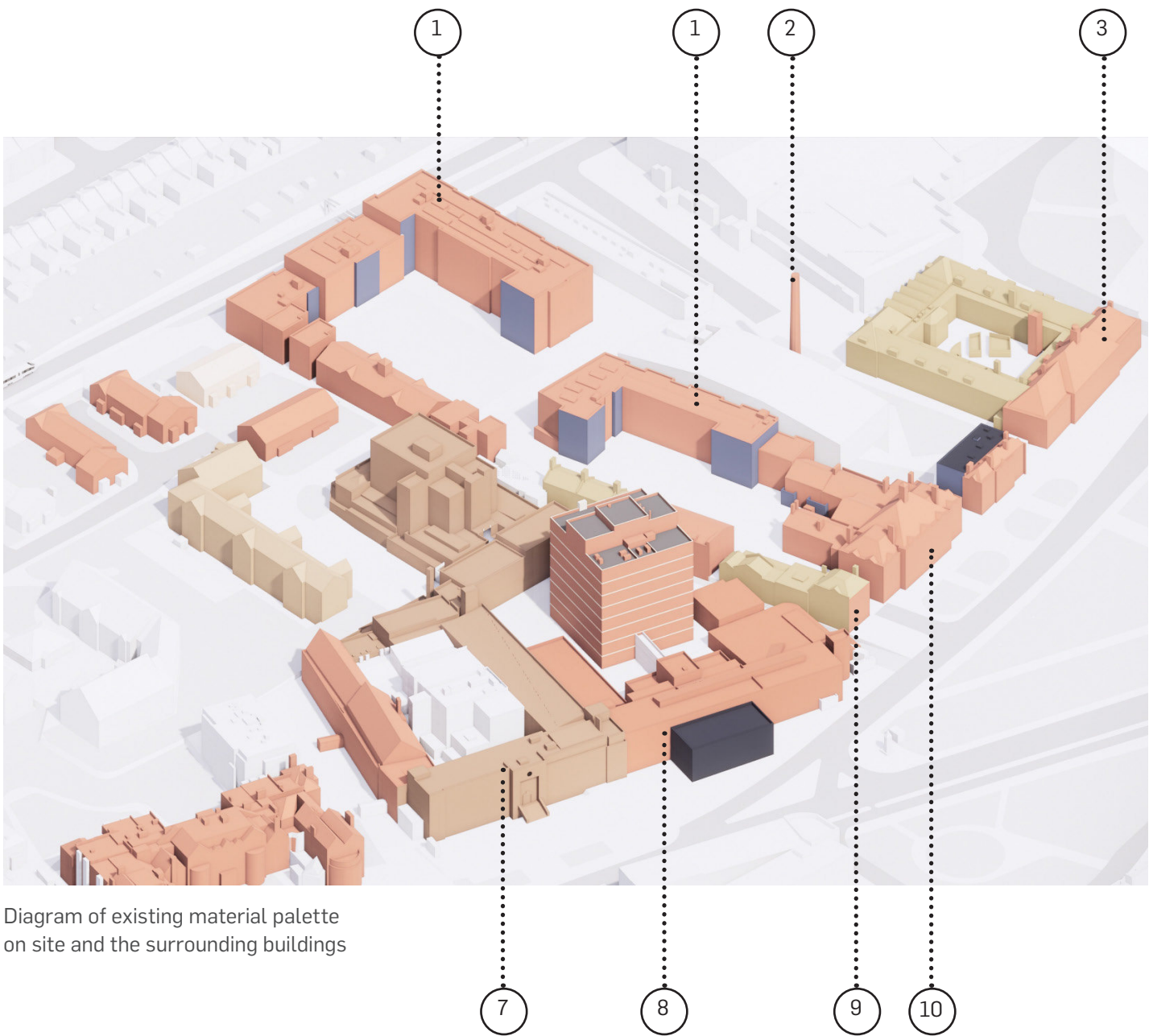


Diagram of existing material palette on site and the surrounding buildings



04.13 Existing Colour Palette on Site



1 - Large residential development on Isobel Place



2 - The chimney of previous public baths



3 - The College of North East London along Town Hall Approach road



4 - Bernie Grant Arts Centre along Town Hall Approach road



5 - CCCG Tower Building



6 - Street View along A10 road



7 - CCCG Main Building along A10 road

04.14 Existing Colour Palette on Site



8 - CCCG Centenary Building - Main Entrance for College.



9 - Former Fireman Station



10 - Former Town Hall along Town Hall Approach road



11 - Existing College buildings to rear and centre of campus



12 - Fireman's Cottage along Isobel Place

04.15 Material Matrix

Façade Options	Material	Aesthetics	Robustness of façade materials		Maintenance	Sustainability	Overall rating
			Advantage	Disadvantage			
1	Brickwork	Manufactured in a variety of different colors, textures and sizes.	1. Strong, hard, durable, resistant to abrasion 2. Can be arranged in different orientations, comes in different sizes and different surface textures. 3. Highly fire resistant	1. Time consuming to construction 2. Absorb water easily, therefore, it causes fluorescence when not exposed to air 3. Rough surfaces of bricks may cause mold growth if not properly cleaned	1. Very low maintenance	1. Brick produces less environmental pollution during manufacturing process than other façade materials 2. Can be reusable and recyclable	
	Metal cladding	Available in different finishes and styles to fit any architectural style.	1. Installation process is extremely easy as they are light and bendable. 2. Weather-tightness. 3. Long Lasting and Durable. 4. Depending on the type of metal cladding can have a high fire resistance.	1. Can rust. 2. The colour to the metal cladding can fade, this is caused by a number of factors including UV light, harsh weather, pollutants and moisture in the air. 3. Is prone to dents, therefore can be quite fragile in areas where it is near pedestrian and vehicle traffic.	1. Normal maintenance. Regular inspection is required to ensure any foreign matter such as leaves, dirt and other deposits are removed.	1. Steel, Aluminium, Copper and Zinc metals for cladding system are 100% recyclable and retain most of their qualities throughout the process. 2. There is a higher environmental impact associated with the production of aluminium, its CO2 footprint is much larger than Steel, Copper, Zinc and other building materials.	
2	Brickwork	Manufactured in a variety of different colors, textures and sizes.	1. Strong, hard, durable, resistant to abrasion 2. Can be arranged in different orientations, comes in different sizes and different surface textures. 3. Highly fire resistant	1. Time consuming to construction 2. Absorb water easily, therefore, it causes fluorescence when not exposed to air 3. Rough surfaces of bricks may cause mold growth if not properly cleaned	1. Very low maintenance	1. Brick produces less environmental pollution during manufacturing process than other façade materials 2. Can be reusable and recyclable	
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	Terracotta cladding	Comes in endless colours, styles and sizes and textures.	1. Non-combustible 2. Ability to be produced in different sizes, designs and colors 3. Strong, hard, durable, resistant to abrasion 4. It is frost-resistant	1. Is a spongy material so it needs to be glazed to ensure that it will not absorb water. This can result in a heavier facade. 2. It can be quite difficult to clean the seams between the terracotta panels. 3. Can be time consuming to install	1. Very low maintenance. Terracotta panels can be self-cleaned during rainfall, however regular cleaning is still required.	1. It is not biodegradable, however it can be crushed, recycled and reused to make new cladding.	
4	Metal cladding	Available in different finishes and styles to fit any architectural style.	1. Installation process is extremely easy as they are light and bendable. 2. Weather-tightness. 3. Long Lasting and Durable. 4. Depending on the type of metal cladding can have a high fire resistance.	1. Can rust. 2. The colour to the metal cladding can fade, this is caused by a number of factors including UV light, harsh weather, pollutants and moisture in the air. 3. Is prone to dents, therefore can be quite fragile in areas where it is near pedestrian and vehicle traffic.	1. Normal maintenance. Regular inspection is required to ensure any foreign matter such as leaves, dirt and other deposits are removed.	1. Steel, Aluminium, Copper and Zinc metals for cladding system are 100% recyclable and retain most of their qualities throughout the process. 2. There is a higher environmental impact associated with the production of aluminium, its CO2 footprint is much larger than Steel, Copper, Zinc and other building materials.	
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KEY

 Low

 Medium

 High