Existing view of site from road

College Location

Welcome

Thank you for attending the Cornwall College public consultation event.

This public consultation presents the evolving planning proposals for the redevelopment of the College campus with the introduction of two new teaching blocks and significant landscaping improvement.

Proposal

This project forms part of the wider Further Education Capital Transformation (FECT) programme funded by the DfE to improve the condition of the existing college estate across the UK. Cornwall College is one of sixteen Colleges that have been targeted within Phase 2 of the FECT programme where the condition of buildings is most critical.

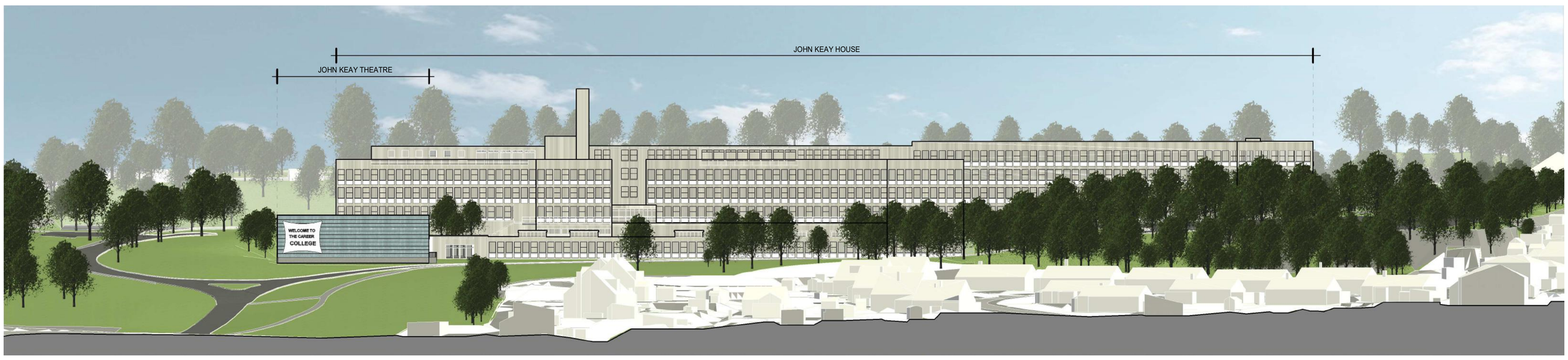
This is a condition led programme to improve the quality and performance of learning spaces.

A detailed assessment of the condition of the College's John Keay House building concluded that the block is at the end of its useful life and is inefficient, with the exception of the adjoining John Keay Theatre. The proposal will demolish and replace these facilities whilst retaining and partially re-purposing the theatre block.

The redevelopment of the site will involve a multi-phased programme to ensure a smooth transition whilst the college remains in operation. The proposed works introduce two new teaching blocks featuring a variety of modern, naturally lit and comfortable learning environments for pupils to learn. The designs will provide the campus with a modern look with great focus on sustainable design, whilst also using elements of copper to compliment the existing theatre.

Existing parking on site will be enhanced to better suit the layout of the campus and will also introduce additional parking bays and EV charging facilities. Cycle storage will also be provided to encourage eco-friendly travel to and from the site.

Existing Site Aerial View



Existing South-East Elevation

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Proposed Campus Masterplan

Over 8,000m² of new facilities for learning and the community are proposed in 2 new blocks.

In addition to the replacement buildings, the project provides an opportunity to enhance the existing site with improvements proposed to external social spaces, accessibility and safety. In addition, site wide biodiversity and ecology will be improved.

1 Main College Campus Entrance
2 Landscaped pedestrian arrival space with level entry to ground floor Building 01 & The Keay Theatre
3 Realigned access roadway with landscaping
4 Delivery/refuse/site access vehicle location
5 Staff car park
6 Building 02 : Foundation entrance
7 Visitor vehicle parking
8 The Quad
9 Access route to higher campus levels
10 Accessible route to Building 02 courtyard
11 Foundation external space & garden
12 Building 02 entrance : Healthcare & Engineering
13 Raised table to existing vehicle access route
14 Covered walkway & stairs to higher campus levels
15 Ground mounted PV array
16 Existing car parking
17 Existing access route to car park

A The Keay Theatre
B Building 01
C Building 02
D Trowel Trades
E Skills Centre

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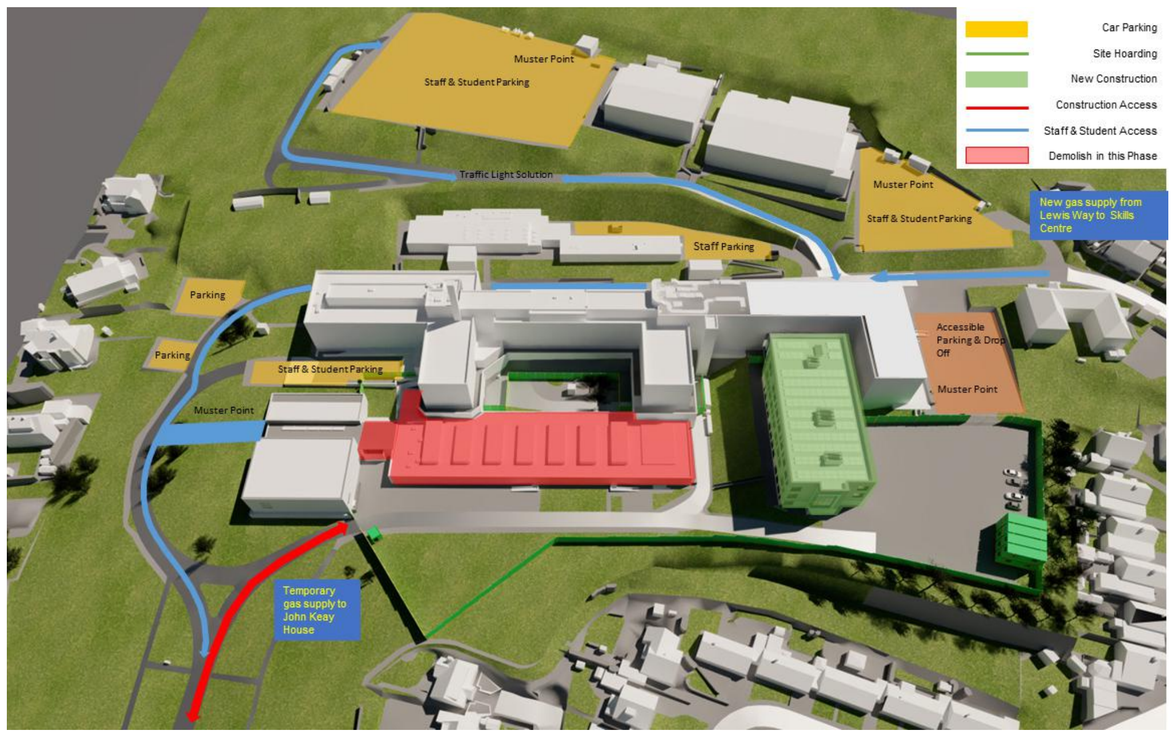
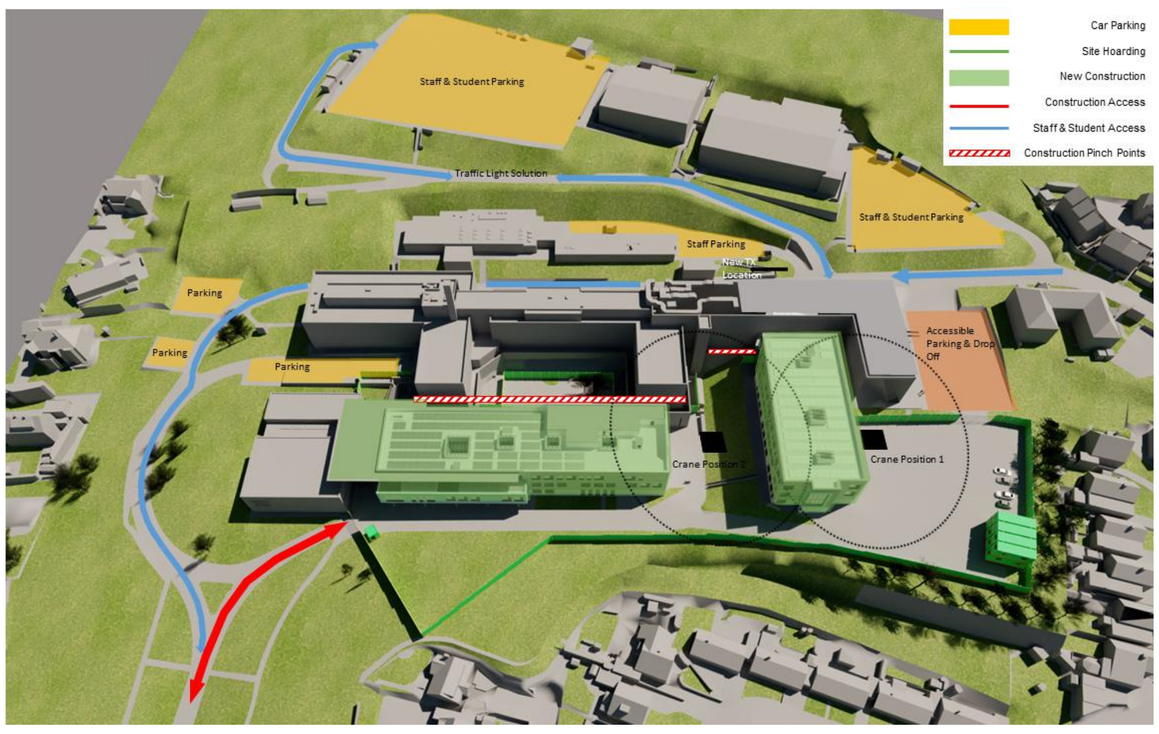
Public Consultation

Site Phasing



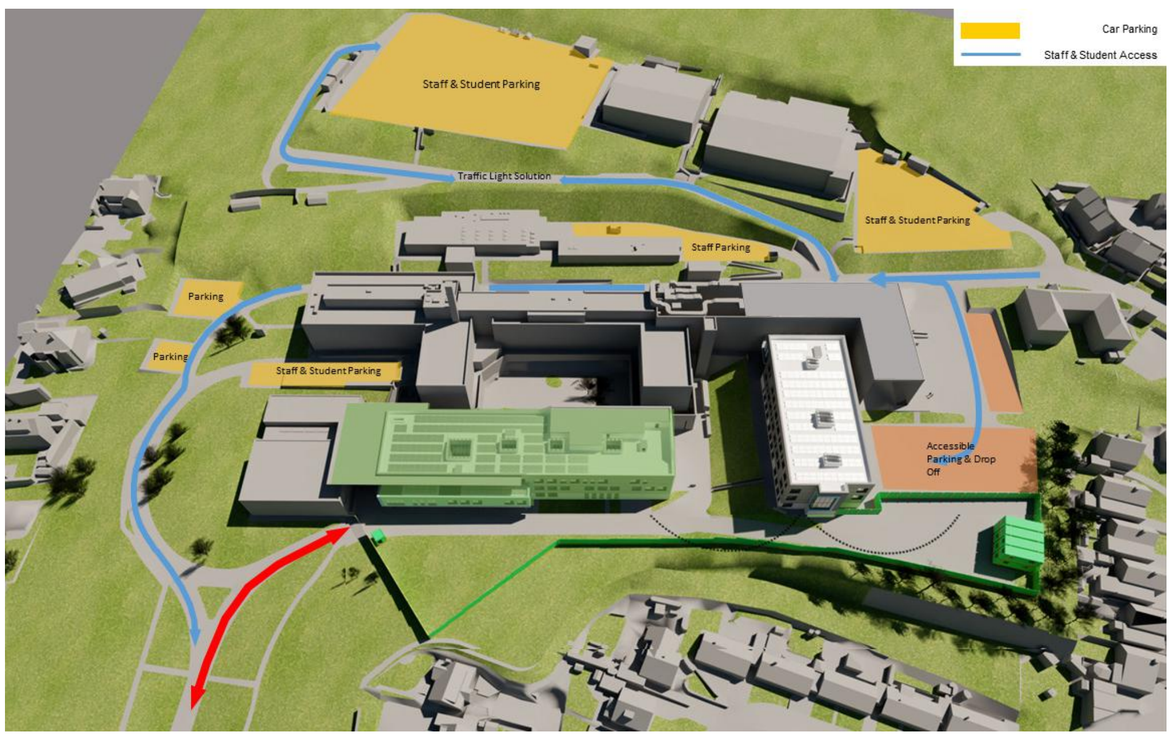
1 Phase 1 - Demolition (October 2023)

- Decant FEAC to John Keay House
- Relocate parking and consolidate accessible parking
- Services Disconnections and diversion
- Asbestos & Demolish FEAC
- Commence Construction of Building 2
- Keay Theatre – new permanent plant room and temporary access



2 Phase 2 - New Build (October 2023 - Janurary 2024)

- Complete & Handover of Building 2
- Construct Building 1
- New Gas & Fibre installation
- New Electrical TX & LV Feeder Pillar

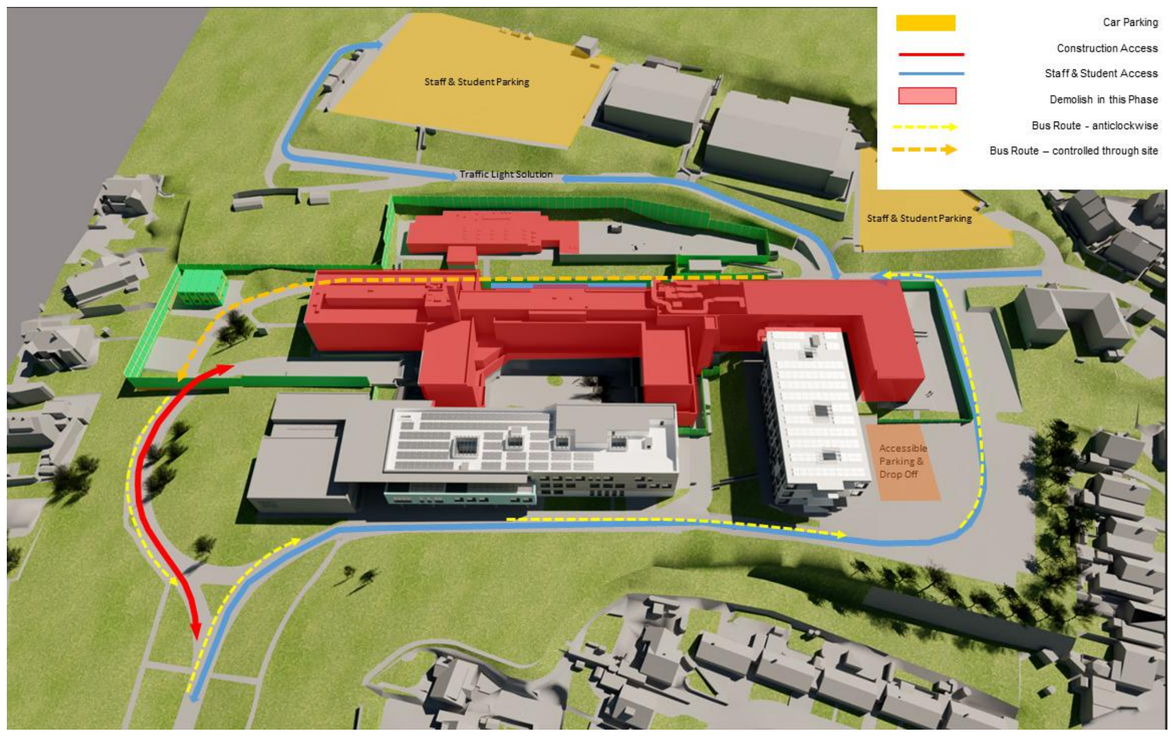


3 Phase 2 - New College Buildings (January 2024 - August 2025)

- Handover Building 2
- Decant from FEAA & FEAF
- Isolate MEP services to FEAA & FEAF

4 Phase 2 - New College Buildings (September 2025)

- Handover Building 2
- Decant from FEAA & FEAF
- Isolate MEP services to FEAA & FEAF



5 Phase 3 - Demolition (September 2025 - August 2026)

- Hoarding to FEAA & FEAF – Asbestos survey and removal
- Demolish John Keay House

6 Phase 3 - Landscaping (August 2026)

- Hard & Soft Landscaping completed progressively
- Building 1 Carparking and pedestrian link installed
- Building 2 Canopy Installed

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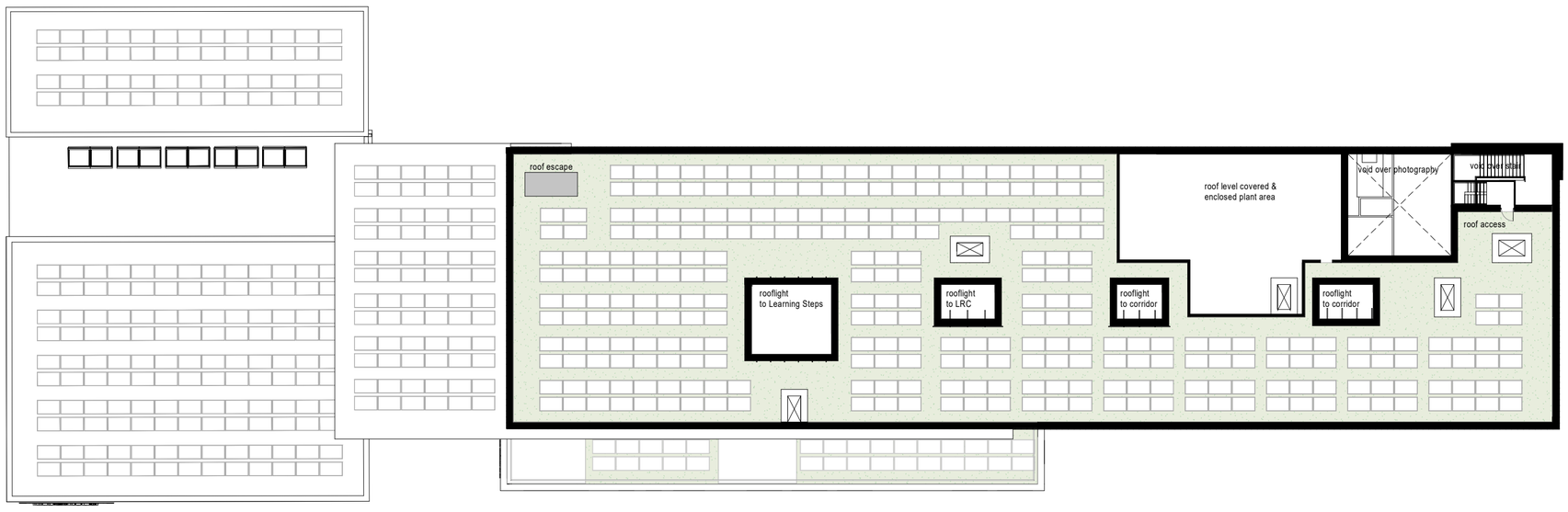
Building 1
Layouts

Building 01 is a new addition to the College, situated at the forefront of the site. It replaces the lower elements of the existing John Keay House and acts as the main gateway for site visitors, who pass through or by this building. The building's location next to the striking Keay Theatre creates a new facade for the College, visible from Tregonissey Road. The shared blue-green copper material and large dramatic canopy connect the two buildings and pull the College to the front of the site. This composition ensures that the dynamic new elevations are as prominent as the original John Keay House.

Building 01 contains specialised teaching environments, student services, and administrative roles, as well as a new commercial hospitality offering. The College Restaurant and Hair and Beauty Studios offer stunning views across St Austell. When entering the building from the directly accessed car park, visitors will experience a series of spaces on different levels connected by a 'learning stair' that journeys and provides connection through all the building departments. The open, light, and bright three-dimensional space intertwines social space and dining spaces, creating an ideal learning environment of the highest standards.



Roof Layout

Second Floor Layout

First Floor Layout

Ground Floor Layout

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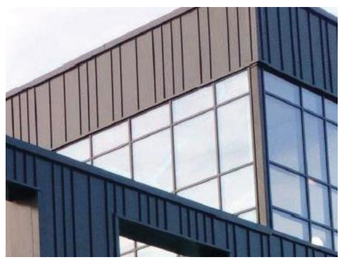
Building 1
Elevations, Materials & Section

South-East Elevation

North-West Elevation

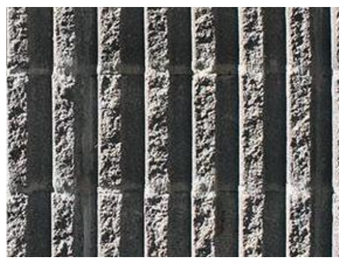
South-West Elevation

North-East Elevation



Aluminium Standing Seam Cladding System - PPC finish in a range of greys

Aluminium Standing Seam Cladding System - Copper patina effect finish



Facing concrete split face blockwork - Grey

Window and Curtain walling - PPC Aluminium Frames - Dark Grey

The materials of the Buildings are inspired by elements of Cornish heritage, with the solid robust base of the buildings being derived from strong use of stone and rock throughout the county as a building material.

The engineered metal cladding is a modern material with the vertical and horizontal seams, forming a modern abstraction of the strong facade rhythms found in John Keay House.

Section A-A

Category Legend

- Basic teaching
- Halls and dining
- Learning resources
- Non-net
- Non-net Circulation
- Staff and admin
- Storage (non-teaching)
- Storage (teaching)

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Building 1
Artist Impressions

View of College from South road

View of College from South road

First Floor College entrance from footbridge

View of building from rear quad area

View of building from quad area

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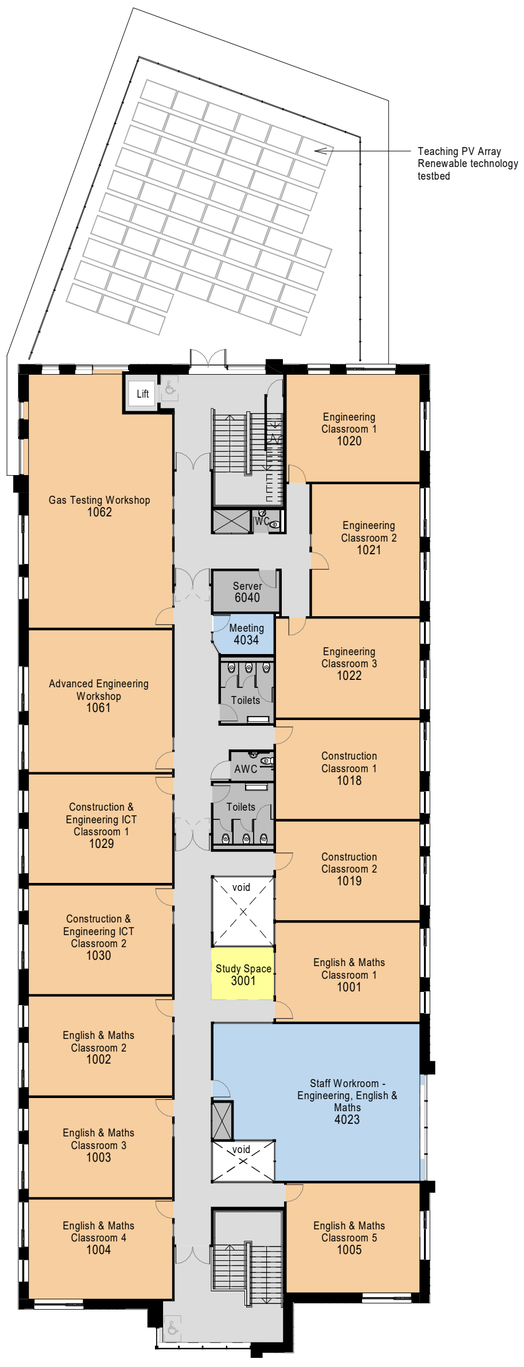
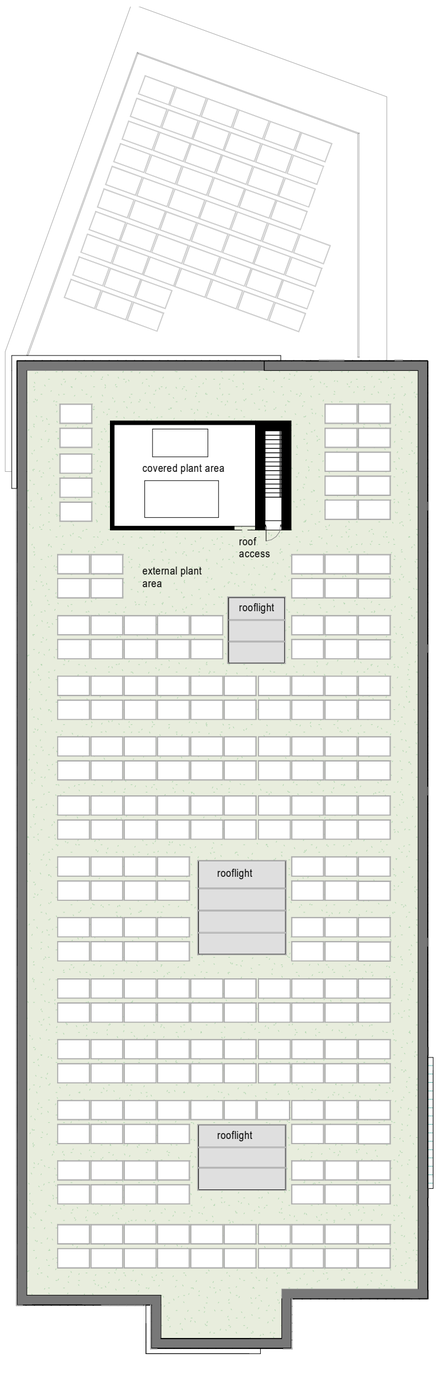
Building 2 Layouts



Second Floor Layout



Roof Layout

Complimenting Building 01 and located slightly deeper into the site, Building 02 continues the theme of housing highly technical and specialised teaching environments whilst using its location in the topography to help build connection across the site. Building 02 is designed with a dining space and associated covered external social space specifically located on the journey route from Building 01 to the highest departmental buildings at the top of the site. This connection point not only establishes a community of buildings across the site but creates locations for interaction and as such encourages students to make journeys between all the College buildings.

Building 02 also provides a welcome opportunity for the College's Foundation and Higher Needs students to enjoy a full education away from the noise and business of the main College building. This sit-a-lone level access department allows a strong connection to all of the College facilities while offering the specialised and private facilities needed by these students.

Ground Floor Layout

First Floor Layout

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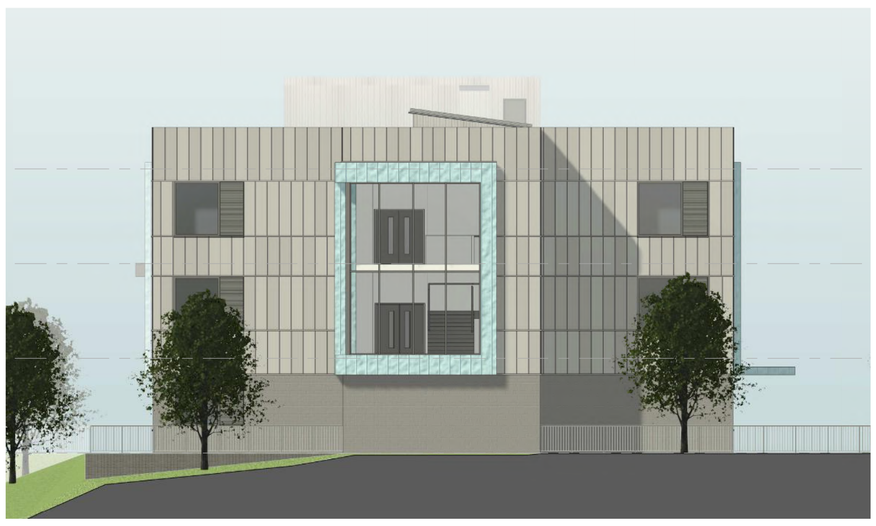
Public Consultation

Building 2
Elevations, Materials & Section

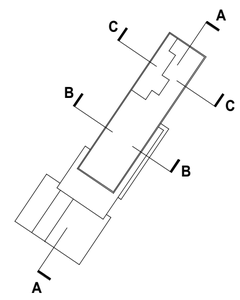
North-East Elevation

South-West Elevation

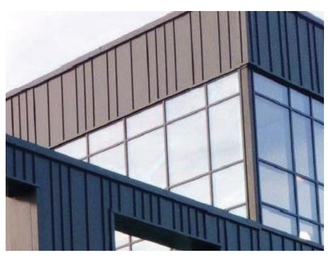


South-East Elevation

North-West Elevation



South-West Elevation



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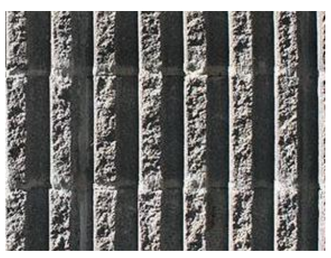

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Building 2
Artist Impressions

View of Building 2 from North-East

View of Building 2 Canopy

View of steps up to Building 2 from quad

View of Building 2 from rear road

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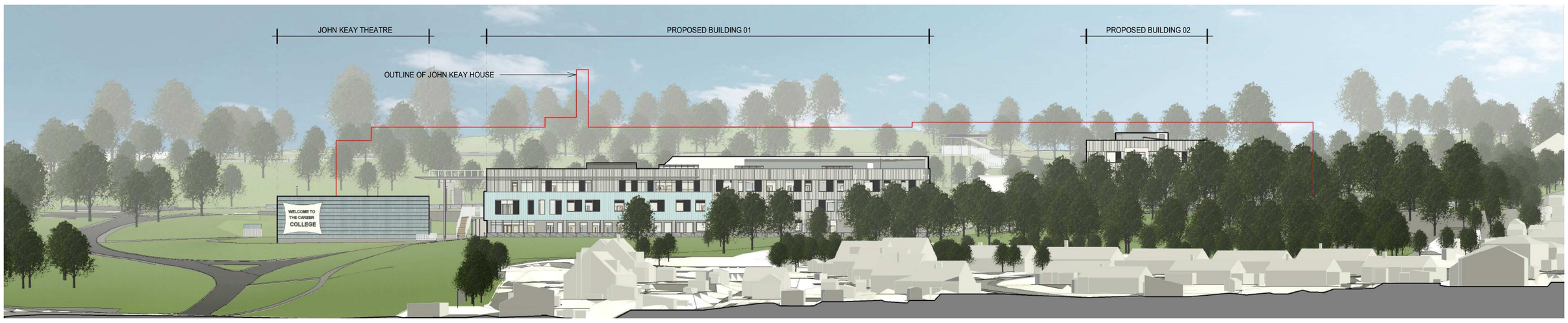
Rear of Site Aerial Perspective View

West of Site Aerial Perspective View



Proposed South-East Elevation

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South-East of Site Aerial Perspective View

Rear of Site Aerial Perspective View

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Lighting

Artificial lighting to supplement the available daylight has been designed to be **energy efficient and simple to operate.**

- Daylight linking will be included in all teaching spaces to **automatically dim artificial lighting in response to availability of natural light**
- Manual dimming and switch is provided to give f**lexibility in teaching spaces**
- **High efficiency LED fittings** are proposed to minimise energy consumption from artificial lighting, when required.
- LED lights have long life expectancy so significantly **reduce maintenance and replacement costs**

Water Efficiency

We have designed the water systems to operate as efficiently as possible

- Dual flush WCs **reduce water consumption**
- Water saving devices will be installed on showers and taps
- Water storage has been sized to balance storage volumes with a good level of water turn over to eliminate the risk of stagnation

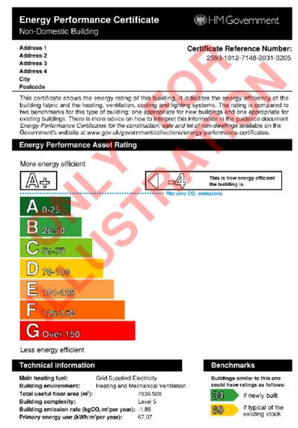
Energy Performance

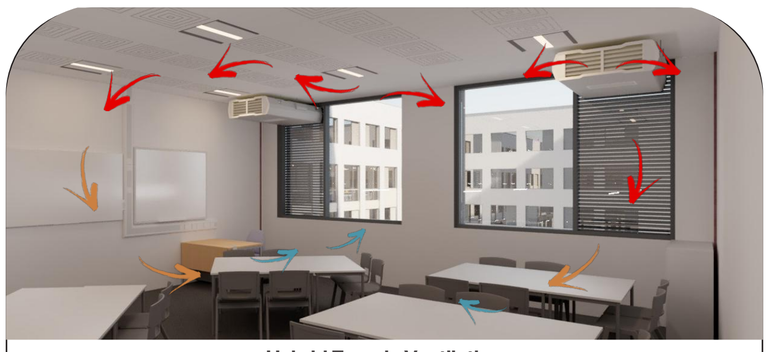
We have carried out detailed thermal modelling using IES Virtual Environment to determine the performance of the building with respect to **compliance with Part L** of the Building Regulations. The following design considerations have been made;

We have followed the well established **Lean, Clean, Green** approach to design, first considering good passive design, followed by energy efficient technology, **then considering renewable/green energy**
High performing thermal constructions will be targeted, exceeding the minimum requirements of Part L.
Solar control glazing will be used on the south, east and west façades to limit solar gains and maintain occupant comfort.
High air tightness of 3m³/h/m² @ 50Pa will be targeted to **minimise heat losses in winter.**

An **A+ EPC rating is achievable** due to the inclusion of heat pump technology, low energy consumption and photovoltaic panels on the roof.

With high efficiency heat pumps, hybrid ventilation, and high efficiency LED lighting **a net zero carbon building** is achieved





Hybrid Façade Ventilation

The teaching areas within the building will be ventilated via hybrid façade ventilation units integrated into the window module, and cross ventilation encased within a ceiling bulkhead.

- The units are designed to provide an **enhanced level of ventilation** and achieve **superior levels of thermal comfort,** both in summer and winter.
- Each unit will contain a heater to provide space heating to the space, and as units are located at high level, floor **flexibility is maximised**.
- The diffusers promote **good mixing** with air velocities to give **high levels of occupant comfort** removing the perception of draughty environments.
- Boost mode for warmer summer periods the unit will increase the fresh air rate based on the internal CO2 and temperature
- Night cooling mode to **securely pre-cool areas overnight**
- **Acoustically treated** to meet the requirements of BB93

Heat Recovery

Heat recovery will be provided on all ventilation systems where possible providing;

- **High efficiency** heat recovery from exhaust air to pre-heat fresh air for occupants
- Thermal wheels or counterflow heat exchangers **provide up to 80% efficiency to minimise heating requirements** from the main heating plant.
- Ventilation plant will include bypass systems to take benefit from **'free cooling' when available**

Heating Systems

We have selected heating systems for ease of use and requirements of each space;

- Radiators provide a **high level of thermal comfort** in the classrooms. This gives a **dependable, flexible** and **easy to use** solution for teachers.
- Offices also utilise radiators and can be controlled to **user requirements.**

Controls

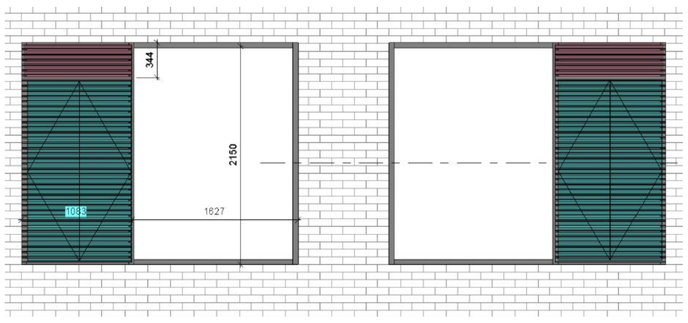
We have included a central Building Management System (BMS) to control and operate all the HVAC plant. The BMS will provide the following;

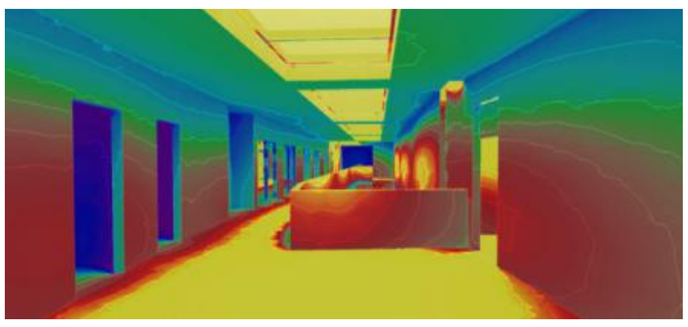
- **Optimisation of all systems** to **maximise efficient operation** and running
- **Night time cooling** of occupied areas to **reduce risk of overheating** in summer
- Variable speed controls to **reduce energy consumption** during low occupancy or out of hours
- Classroom controls are **simple and intuitive**. User controls are provided to ensure the **systems are easy to operate**, and generally run autonomously.

Daylighting

We have carried out detailed assessments on both natural and artificial lighting for the project. A detailed **climate based daylight model** has been produced to determine the availability of natural light to the teaching and learning spaces.

- Climate based modelling gives a more **robust indication of quality daylight** availability vs older, more traditional methodologies such as daylight factors
- Daylight linking will be included in all teaching spaces to **automatically dim artificial lighting in response to availability of natural light**
- Integrated window design to incorporate opening elements to supplement and enhance hybrid ventilation, **maximise penetration of natural light,** and to give **great views** out of the building.





Sustainable Urban Drainage

Our strategy for drainage is to provide a sustainable solution that maximises the use of SUDs features to regulate water run-off from the site whilst enhancing the biodiversity and ecology of the external spaces. SUDs features include;

Permeable paving/**Porous** surfacing to **provide water attenuation**

Underground attenuation tanks used to r**egulate water discharge** from site

Low Carbon Technology

The new College Buildings will have;

- high efficiency **air source heat pumps**
- **LED lighting**
- Heat pumps to heat hot water
- **Photovoltaic panels**
- **Low energy fans** providing great indoor air quality

The proposals will provide the College with new buildings that are net zero carbon in operation. Passive design and low energy systems are proposed to reduce energy use. Extensive use of photovoltaic panels will then offset the new building carbon emissions. The graph opposite shows the energy use for the College both currently, and with the proposed new buildings.

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