

March 2024

**+BOWMER
+KIRKLAND**

**University Academy
Long Sutton**

Design & Access Statement



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UNIVERSITY ACADEMY LONG SUTTON
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University Academy Long Sutton | 1.00 Introduction

1.00 Introduction

1.01 The Report

This document encapsulates proposals for the provision of replacement secondary school facilities for University Academy Long Sutton, on its existing campus off Little London in Long Sutton, Spalding.

This report has been prepared to accompany a detailed planning application and should be read in conjunction with the completed forms, certificates, and supporting documents.

1.02 The Design Team

The design team has prepared this statement in conjunction with the senior management at University Academy Long Sutton, and at the University of Lincoln Academy Trust. The principal contributors are as listed below:

Client	- Department for Education
DfE Technical Advisors	- Mott MacDonald
Main Contractor	- Bowmer + Kirkland
Architect	- CPMG Architects
Landscape Architects	- ONE Environments
Civil & Structural Engineer	- Morgan Structural
Building Services Engineer	- Chord Consult
Planning Consultant	- Dobson Grey
Highways Consultant	- GHD



1.00 Introduction

1.03 The Brief

The proposals for the new University Long Sutton Academy comprise the construction of a new five-form of entry (5FE) secondary school for pupils aged 11-16 years (GIFA 5,838m2).

The project is being procured by the Department for Education under the UK government’s SRP delivery programme, dedicated to rebuilding schools assessed to require replacement based on building conditions. In addition, there are some areas of retained buildings, with consequential works proposed (7,624m2 total). The project is being developed via the DfE’s innovative Modern Methods of Construction (MMC) Framework, championing off-site construction and targeting a Net Zero Carbon in Operation strategy.

The University of Lincoln Academy Trust

The school is part of The University of Lincoln Academy Trust, currently sponsoring seven academies, all within the South Holland District Council area of Lincolnshire, which is an area of above-national average deprivation. Despite this, their secondary schools compete with local grammar schools, working collectively and cooperatively across academies to achieve synergies whilst allowing independence.

Their non-selective schools focus on improving life chances of all young people, with a high proportion of pupils with additional needs, fully integrated within the cohort.

The Trust’s ethos is of mutual respect and support, with curriculum enrichment - not least through partnership with University of Lincoln and the wider community.



To inspire our young people to be **confident** that they can make a **positive contribution** to the **world** in which they live, by establishing **high aspirations**, promoting educational **excellence** and providing a **caring and safe** environment.

to improve the life chances of
all our young people

- UoLAT MISSION & ETHOS



UNIVERSITY ACADEMY LONG SUTTON
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1.00 Introduction

1.04 Pupil & Staff Numbers

Given the school is a replacement, the required pupil roll will match the current capacity of 720ppls. However, as the DfE’s School Rebuilding Programme (SRP) builds to the nearest complete Form of Entry, the new secondary school has been designed for 750 pupil places – this represents a full five Forms of Entry, with 150 pupils per year.

There is no anticipated increase in staff number to support the new cohort of pupils. Therefore the numbers of staff on site will remain at their current levels, of 78pp.

1.05 School Operational Hours

Core Educational Hours

The Trust’s anticipated school site opening times, and core education hours are below:

- **School site opening (Mon-Fri):** 6.30 am to 07.00 pm
- **School day (Mon-Fri):** 8.30 am to 4.30 pm
- **Core educational hours (Mon-Fri):** 8.50 am to 3.20 pm
- **Extra Curricular activities (Mon-Fri):** 4.30 pm to 7.00 pm
- **Year 11 Revision Sessions (Sat):** 9am to midday (term-time only)

The Trust will offer before and after-school club sessions outside the core school day, but within the anticipated school site opening hours. In addition, special events which fall outside of these times are to be expected, for example: evening performances, open evenings, and parents’ evenings, weekend sports fixtures, as is usual for school facilities of this nature.



EXISTING CAMPUS

1.00 Introduction

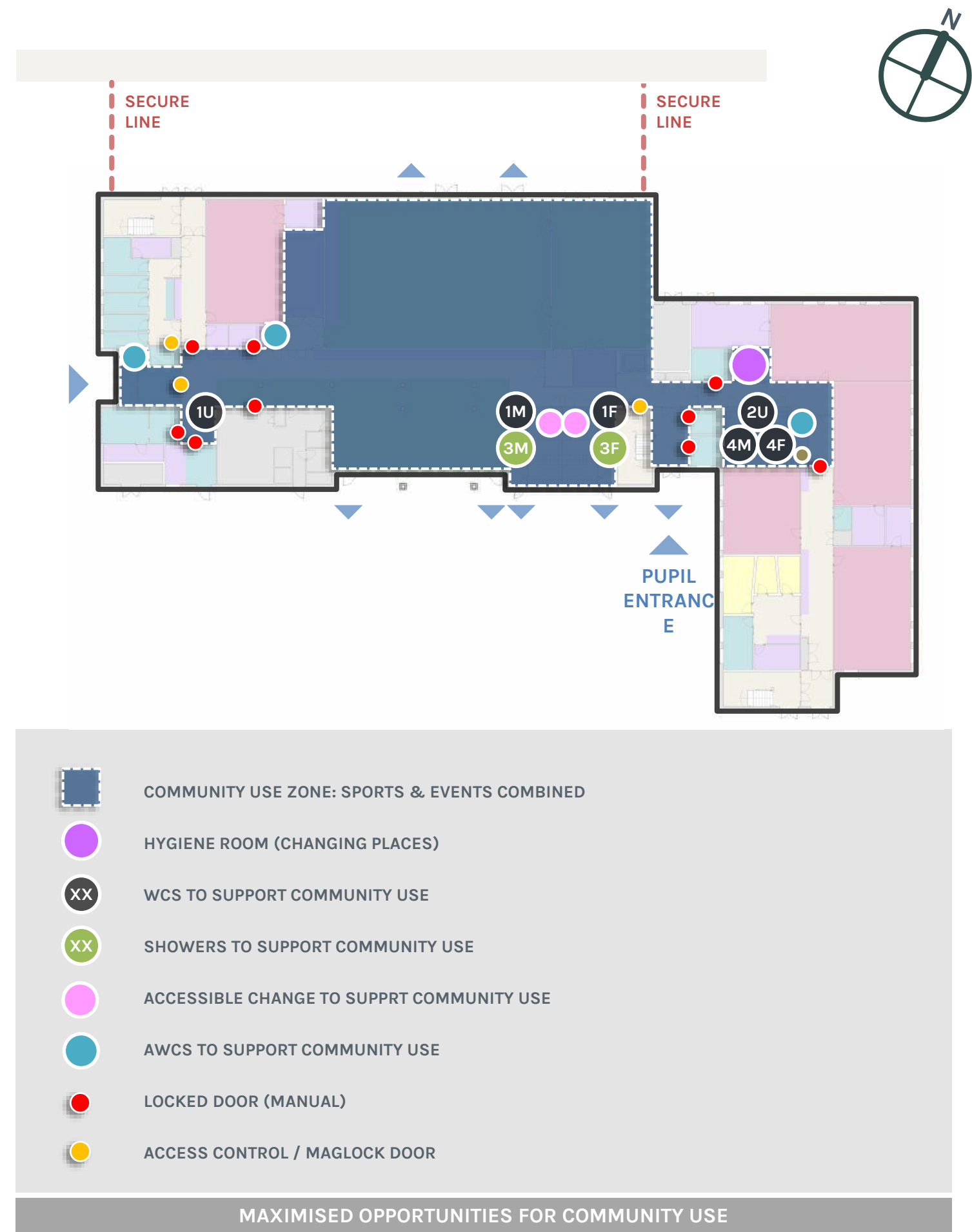
1.06 Community Use Operational Hours

The Peele Leisure Centre and its associated external sports facilities, which shares the school’s campus, is open to the community during the full school day, evenings, weekends, and holidays. No changes are proposed to the operation or offer available from this facility as part of these proposals for the University Academy Long Sutton. Current opening hours are as below:

LEISURE CENTRE	
PEELE LEISURE CENTRE	
Home Gym Classes Sports & Activities Timetable & Booking Memberships Facilities & Details More	
OPENING TIMES	
LEISURE CENTRE	
Monday	07:00 - 21:00
Tuesday	07:00 - 21:00
Wednesday	07:00 - 21:00
Thursday	07:00 - 21:00
Friday	07:00 - 21:00
Saturday	08:00 - 16:00
Sunday	08:00 - 14:00

In addition to the leisure centre facilities, the Trust endeavours to support the local community, and is keen to maximise the potential of the new school facilities to increase availability available for out-of-hours use. The new indoor sports facilities, including the main hall and separate activity studio, will provide additional provision to complement the Peele Leisure Centre facilities, offering more flexible accommodation for events and performances.

The design allows simple zoning for out-of-hours use for these key spaces, alongside Changing, Drama Studio and the open plan Dining Space, offering meaningful opportunities for community use.



1.00 Introduction

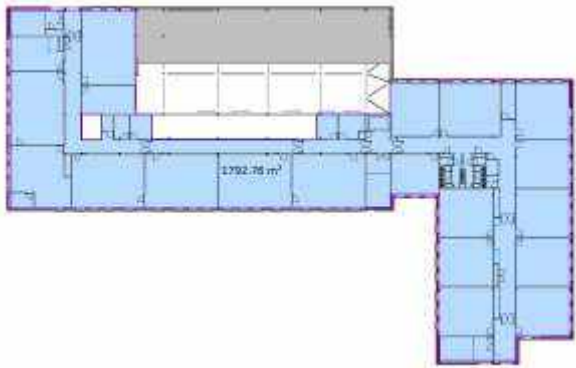
1.07 Proposed Floor Areas

The proposed gross internal (GIFA) and gross external floor areas (GEFA) are as follows:

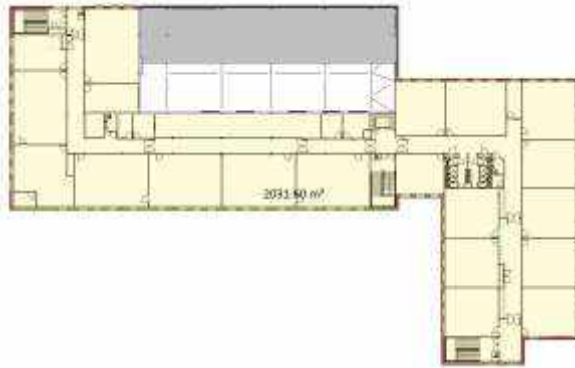
	GIFA	GEFA
New School Building - Level 00	2,425 m2	2,574m2
New School Building - Level 01	1,702 m2	1,936m2
New School Building - Level 02	1,793 m2	2032m2
Roof Access Stair		41 m2
TOTAL SCHOOL AREAS	5,920 m2	6,582m2

TOTAL NEW GIFA 5,920 m2

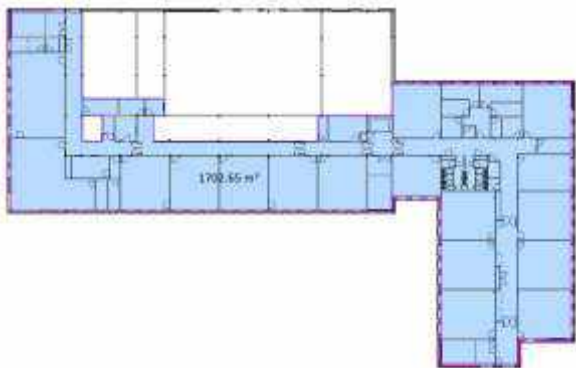
TOTAL NEW GEFA 6,426m2



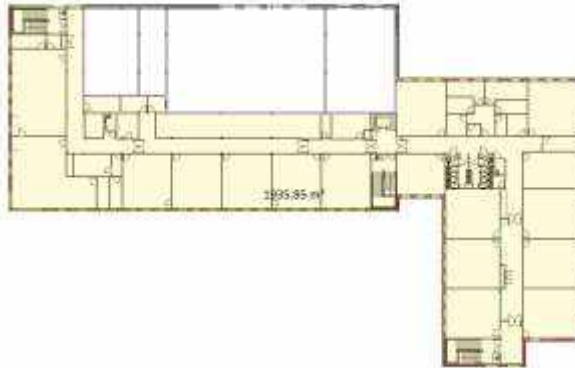
LEVEL 02



LEVEL 02



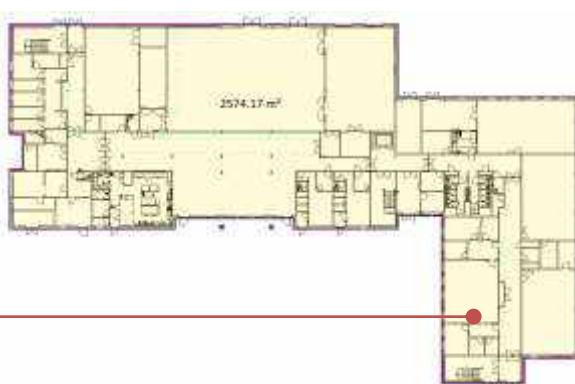
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LEVEL 01



LEVEL 00



LEVEL 00

GROSS INTERNAL AREA PLANS

GROSS EXTERNAL AREA PLANS

1.00 Introduction

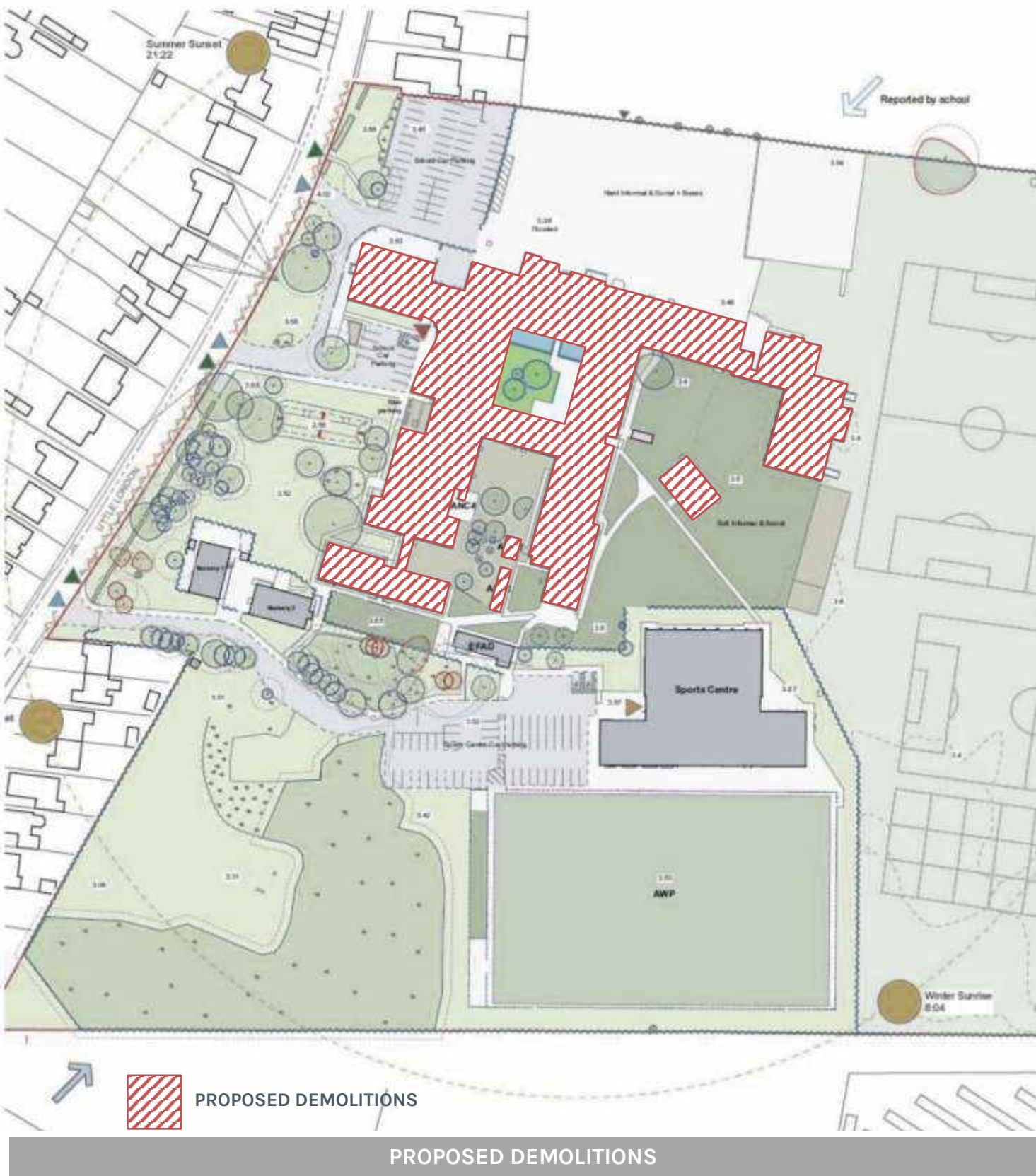
1.08 Demolitions

The majority of the existing school buildings on the campus are to be replaced by the new proposals. This existing accommodation is no longer fit for purpose and is to be demolished following the construction and occupation of the new school building. They have been identified by Department for Education condition appraisal to be unable to properly support secondary education, and also to be beyond any economically viable refurbishment. The extent of the proposed demolition and replacement is illustrated opposite.

Notably, the Peele Leisure Centre, Rainbow Nursery buildings, and the ancillary building referred to as EFA D are to be retained. Minor upgrade works are proposed to improve energy efficiency of EFA D, to continue its use as the school’s IEC exclusion centre. This latter single-storey facility contributes a GIFA of 72m2 and a GEFA/building footprint of 86m2.

The gross internal floor area (GIFA) of the existing school buildings to be demolished equates to approximately 6292m2, and the gross external floor area (GEFA) is 6626m2, over three floors. Therefore the new building, due to its spatial efficiency, is able to offer replacement contemporary teaching and learning facilities within a slightly reduced floorplate area.

The total building footprint of the proposed demolitions is 5,902m2. In comparison, the proposed new footprint area (as shown in 1.07 above) is to be 2,574 m2; the three-storey massing and efficient clustering of the new building therefore offers a significant amount of the site – over 3,300 m2 - as additional external space to support the school’s outdoor learning and social activities.



University Academy Long Sutton | 2.00 Planning Context

2.00 Planning Context

2.01 Planning Policy Context & Appraisal

National Planning Policy Framework ('the NPPF')

The NPPF sets out the Government’s planning policies for England and how these should be applied. It was updated most recently in December 2023. The Local Plan map extract for Long Sutton defines part of the school grounds as Recreational Open Space, as shown in deeper green shading on the map opposite. At the heart of the NPPF is the presumption in favour of sustainable development, with economic, social and environmental objectives identified as interdependent goals needing to be pursued in mutually supportive ways. Schools are specifically considered within Section 8.

The following sections are relevant to the proposed development:

- Section 2 Achieving Sustainable Development
- Section 8 Promoting Healthy and Safe Communities
- Section 9 Promoting Sustainable Transport
- Section 11 Making Effective Use of Land
- Section 12 Achieving Well-designed Places
- Section 14 Meeting the Challenge of Climate Change, Flooding and Coastal Change
- Section 15 Conserving and enhancing the natural environment
- Section 16 Conserving and enhancing the historic environment

Local Policy

The Development Plan for the site comprises the adopted South East Lincolnshire Local Plan 2011-2036. The site lies within the settlement boundary of Long Sutton and is not subject to any statutory landscape or heritage designations. The playground to the north of the existing buildings, playing fields to the east and the all weather pitch to the south east are designated on the map forming part of the South East Lincolnshire Local Plan as areas of Recreational Open Space as shown in dark green shading on the map below. The settlement boundary is defined in red with open countryside coloured light green beyond.



EXTRACT FROM ADOPTED SOUTH EAST LINCOLNSHIRE LOCAL PLAN 2011-2036.

2.00 Planning Context

2.01 Planning Policy Context & Appraisal (cont.)

The following policies of the South East Lincolnshire Local Plan are relevant to the proposals for the redevelopment of University College Long Sutton and are assessed in more detail within the Planning Statement prepared by Dobson-Grey.

- Policy 1 (Spatial Strategy)
- Policy 2 (Development Management)
- Policy 3 (Design of New Development)
- Policy 4 (Approach to Flood Risk)
- Policy 5 (Meeting Physical Infrastructure and Service Needs)
- Policy 28 (The Natural Environment)
- Policy 29 (The Historic Environment)
- Policy 30 (Pollution)
- Policy 31 (Climate Change and Renewable and Low Carbon Energy)
- Policy 32 (Community, Health and Well-being)
- Policy 36 (Vehicle and Cycle Parking)
- Appendix 6 (Parking Standards)

2.02 Planning Pre-Application Consultation

An initial pre-application advice inquiry was submitted to the District Council in April 2023 by the Planning Agent acting for the DfE. An initial written response from the Council was sent on 24 April 2023 with a meeting subsequently held with a Planning Officer on 23 May 2023. A further written response was provided by the Council on 31 May 2023, confirming a number of points discussed at the meeting. These discussions were based upon a site layout showing a new building located north of the existing school complex, just inside the northern site boundary.

A further written pre-application advice request was submitted to the Council on 15 December 2023. This included updated site layout plans, with the siting of the proposed new school building refined, though still in broadly the same area as previously discussed with the Council. The updated layout showed the building positioned close to the northern boundary of the site as had been the case with the earlier pre-application advice submission.

The existing school was shown as being retained for the duration of the main construction phase for the new building, with a separate construction working area in between. The public leisure centre and nursery buildings towards the southern end of the site would be unaffected, though a temporary car parking area would be formed on open land behind the properties fronting onto Little London at this southern end of the site. Additional information regarding access, parking, flooding, levels, the relationship between the new school building and nearby residential dwellings to the north of the site, landscaping and changes to sports provision within the school site were also included.

A written response from the Council was drafted on 17 January 2024 and is summarised in the Planning Statement. This covered validation requirements, planning policies that were considered to be relevant, development scale/principle, the design approach, residential amenity and neighbour impacts, highways and parking matters, flood risk and site drainage, environmental sustainability and application fees. The Planning Officer was subsequently provided with details of the public consultation event held on 4 March 2024, including details of a dedicated website containing key details of the redevelopment proposals.

Separate pre-application approaches to Sport England were made in June 2023, with further contact seeking clarification on a number of specific queries made in November 2023 and December 2023. This included the size of cricket pitches for this pupil age cohort.



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UNIVERSITY ACADEMY LONG SUTTON
DESIGN & ACCESS STATEMENT | MARCH 2024



2.00 Planning Context

2.01 Community Consultation

The applicants sought to actively engage with stakeholders and the local community as part of the process to design the proposed replacement school. Representatives from both the school and the Academy Trust were present at meetings with the applicant's wider design team to ensure that the layout and appearance of the new building would meet necessary day-to-day teaching requirements. On 14 February 2024, a letter was sent to 742 properties within approximately 0.5 miles of the school site, making local residents aware of the proposals and advising that a public consultation event was to be held on 4 March 2024.

Details of a dedicated website, where information relating to the redevelopment proposals could be viewed and which also contained details of how residents could submit comments on the proposals or seek additional information, were provided to residents within this letter. A similar letter and/or email was also sent to the Parish Council, the tenants within the site (the Peele Leisure Centre, Long Sutton Hockey Club, Rainbow Nursery), three local Ward Members for Long Sutton, the local County Councillor and the local MP. The school website also contained a dedicated section where details of the redevelopment were provided.

Additional publicity for the consultation event was carried out via local press release, emails sent to County Councillors, the local MP and the Planning Officer who had previously been contacted at the Borough Council. Parents of current pupils were also notified via the school website and via posters/flyers that were displayed in the school, the Peele Leisure Centre, Long Sutton Hockey Club and Rainbow Nursery.

The public consultation event was held at the school between 4pm and 7pm on Monday 4 March 2024. Details of the proposed site layout and building design were displayed on 10 separate display boards and a video 'fly through' presentation with members of the applicants' project team on hand to explain the detailed proposals and answer any questions posed by members of the public. The Headteacher and Deputy Head Teacher of UALS, a School Governor and the CEO of the Academy Trust were also present.

A total of 37 people (residents, teachers, pupils and site leaseholders) attended the event.

A total of 32 paper forms were completed by individuals attending the consultation event, with 1 additional comment received later via email. Of the written responses received, 29 specifically indicated their support for the proposals with the remaining 3 responses neither supporting nor objecting to the development.

Face-to-face engagement with the local MP subsequently took place on 5 and 15 March and included a tour of the school. The design and layout of the proposals were discussed and amendments to the elevational treatments of the proposed new building were subsequently made.



PUBLIC CONSULTATION EVENT | MARCH 2024

2.00 Planning Context

2.01 Community Consultation (cont.)

Comments made during the consultation indicated strong support from respondents for the principle of replacing the existing buildings, with the poor condition of the existing school also recognised. There was general support for the proposed siting and design of the new building (including the incorporation of sustainable construction technologies) and for improvements to parking/drop off arrangements for buses and parents arriving by car. Of the other comments relating to matters of detail, most related to the construction phase of the development and the practicalities of managing the building project within an existing residential area and with the existing school continuing to operate alongside the active building site.

The need to minimise the impact of construction work on nearby residents (through traffic management (especially lorry traffic), working hours, dust generation during demolition and provision of adequate temporary parking provision for the school, nursery and leisure centre) were all cited as specific areas where sensitive site management would be required. Further details relating to the public consultation, the comments received from local residents and the changes made to the final plans to take account of those representations are discussed in more detail within the Planning Statement.

UNIVERSITY ACADEMY LONG SUTTON
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Welcome

PROPOSED MAIN ENTRANCE AND APPROACH

Welcome to our exhibition on plans to regenerate University Academy Long Sutton. Bowmer+Kirkland has been selected by the Department for Education as the main contractor. They are here today with other members of the project team to talk to you about the proposals.

As part of the DfE's school rebuilding programme, B+K has been tasked with planning for the future of University Academy Long Sutton; to better accommodate pupils and staff, reduce costs, improve useable external and internal space and provide improved facilities. The project team has been working closely with the senior leadership team at The University of Lincoln Academy Trust and the school, in preparation of the plans you can see today.

Before we submit our planning application we welcome feedback from the community. Members of the project team are here to chat about the plans. Please share your views with them, and by filling in one of the feedback forms available here today.

More information, and further opportunities to feed back to us, is available on the website <https://www.universityacademylongsutton.co.uk>

- A modern, welcoming, energy efficient school
- Careful consideration of campus layout
- Fossil-fuel-free and net zero carbon in operation
- Enhanced landscape and useable outside space
- Design to increase opportunities for community use of facilities
- Enabling University Academy Long Sutton to make savings on running costs
- High quality design reflecting The UoLAT aims and ethos
- Careful construction management to minimise disruption to neighbours

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Department for Education

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PUBLIC CONSULTATION DISPLAY PANELS

2.00 Planning Context

UNIVERSITY ACADEMY LONG SUTTON

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A modern, welcoming, energy efficient school

Careful consideration of campus layout

Fossil-fuel-free and net zero carbon in operation

Enhanced landscape and usable outside space

Design to increase opportunities for community use of facilities

Enabling University Academy Long Sutton to make savings on running costs

High quality design reflecting the UoL's aims and ethos

Careful construction management to minimise disruption to neighbours

UNIVERSITY ACADEMY LONG SUTTON

Project Team

AERIAL VIEW OF PROPOSED NEW CAMPUS

UNIVERSITY ACADEMY LONG SUTTON

UNIVERSITY OF LINCOLN ACADEMY TRUST

BOWMER KIRKLAND

CP MG

chord consult

Morgan Structural

DOBSON GREY

JO SPACE ZERO

BOWMER KIRKLAND

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Site Layout

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BOWMER KIRKLAND

CP MG

chord consult

Morgan Structural

DOBSON GREY

JO SPACE ZERO

BOWMER KIRKLAND

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Safe Access

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UNIVERSITY OF LINCOLN ACADEMY TRUST

BOWMER KIRKLAND

CP MG

chord consult

Morgan Structural

DOBSON GREY

JO SPACE ZERO

BOWMER KIRKLAND

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Building Design

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BOWMER KIRKLAND

CP MG

chord consult

Morgan Structural

DOBSON GREY

JO SPACE ZERO

BOWMER KIRKLAND

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Internal Environment

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UNIVERSITY OF LINCOLN ACADEMY TRUST

BOWMER KIRKLAND

CP MG

chord consult

Morgan Structural

DOBSON GREY

JO SPACE ZERO

BOWMER KIRKLAND

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Sustainable Design

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BOWMER KIRKLAND

CP MG

chord consult

Morgan Structural

DOBSON GREY

JO SPACE ZERO

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Site Phasing & Logistics

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UNIVERSITY OF LINCOLN ACADEMY TRUST

BOWMER KIRKLAND

CP MG

chord consult

Morgan Structural

DOBSON GREY

JO SPACE ZERO

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Next Steps

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BOWMER KIRKLAND

CP MG

chord consult

Morgan Structural

DOBSON GREY

JO SPACE ZERO

BOWMER KIRKLAND

University Academy Long Sutton | 3.00 Highways Context

3.00 Highways Context

3.01 Highways Policy Context

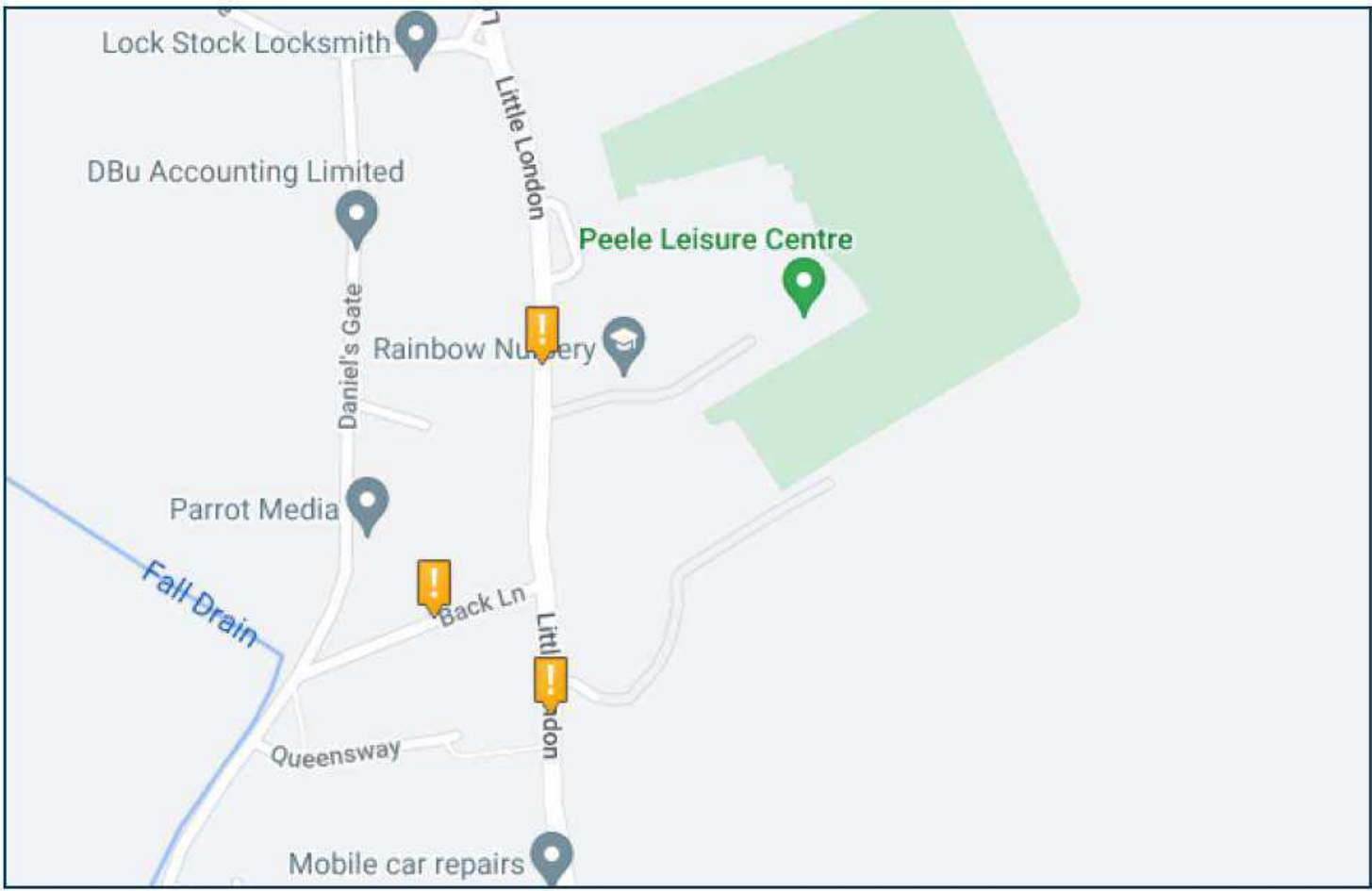
A Transport Assessment has been prepared, and is submitted in support of the planning application. This reviews the existing transport and highway conditions in the vicinity of the site and the surrounding area, identifies the transport and highway impacts, determines whether the proposal would have a material impact on the local highway network and outlines any mitigation measures necessary to address the impacts identified. This TA has been prepared in accordance with a scope of work agreed with Lincolnshire County Council Highways. A School Travel Plan and a Construction Management Plan have also been prepared to support the application submission.

The following Highways policies have been identified as relevant to the proposals for the redevelopment of University College Long Sutton, and are assessed in more detail within the Transport Assessment prepared by GHD.

- Lincolnshire Local Transport Plan 5: is designed to cover the short term (2022 to 2026), medium term (up to 2034) and long term (up to 2050) times for transport and highways for the entire county.
- South East Lincolnshire Local Plan 2011-2036 (adopted March 2019): The adopted Local Plan has been produced in partnership with Boston Borough, South Holland District and Lincolnshire County Councils who have worked together to create a single Local Plan for South East Lincolnshire. The Local Plan sets out the development of South East Lincolnshire ensuring key spatial issues are addressed.
- Lincolnshire Local Plan (2011-2036) Parking and Accessibility Standards: The adopted Local Plan provides the minimum vehicle and cycle parking standards that should be used in accordance with guidance

The transport policy requirements outlined in the NPPF and the Local Plan are acknowledged. The car parking will be expanded and rationalised to provide accessible and EV spaces. A separate bus drop-off area and parents drop off lane/area will be provided to improve the efficiency and safety during drop-offs and pick-ups. In accordance with the NPPF and Local Plan, there is an opportunity to increase cycle usage for both staff and students living at cycle distance to the school. Cycling is currently one of the least used modes of travel to and from University Academy and given the rural location it can be challenging to increase cycle usage. However, the school will introduce travel plan measures to encourage cycling among other sustainable modes of transport.

Personal Injury Accident (PIA) data was obtained from the Crashmap website for the most recent five-year period available on the highway network surrounding the site. Over this period, three accidents with a 'slight' severity level occurred in close proximity to the site. Based on the date and location of these accidents, it is determined that each incident is isolated and does not suggest a recurring pattern. Consequently, it is concluded that the area surrounding the site does not exhibit an accident problem consistent with potential safety issue with the geometric layout of the highway.



CRASHMAP PERSONAL INJURY MAPPING

3.00 Highways Context

3.02 Access and Parking

Pedestrians: The site is accessible on foot via Little London with pedestrian footways available both north and south of the site. Improved pedestrian access segregated from vehicular traffic will be provided. There are no Public Rights of Way (PRoW) paths passing through the site.

Vehicles: Vehicular access to the site is provided via a one-way loop off Little London. The section of road along the site frontage is a designated School Safety Zone with vehicle speeds restricted to 20mph. Both Peele Leisure Centre and Rainbow Nursery are located within the site boundary, however, are accessed via a separate access road off Little London.

The vehicular access to the site is provided off Little London via a one-way loop with separate access and egress. The site currently provides 48 staff and 10 visitors car parking spaces. The existing vehicular access arrangement will be retained. The school currently provides 58 on-site parking spaces for staff/visitors at two locations: ten spaces, including one accessible space, directly outside the main school entrance and 48 spaces in an area adjacent to the school playground. Both areas are accessed off the loop road. There are no EV charging spaces on the site. The school has no dedicated motorcycle parking spaces. On a typical day both staff and visitor’s car park normally become full and staff/visitors use Peele Leisure Centre Car park and its over flow car park area for parking. The Peele Leisure Centre car park is accessed off Little London to the south of the loop road egress.

South East Lincolnshire parking standards recommend minimum staff car parking provision of 1 space for every 2 staff. There is no recommendation for visitors’ parking spaces. As per the standard the minimum car parking required at the site for 103 staff is 52 spaces. In response to the parking demand, the proposals increase the total on-site parking provision to 64 car parking spaces for staff/visitors. This level of provision exceeds the South East Lincolnshire minimum standard and represents the maximum number of spaces that can be provided on-site in the context of the constraints imposed by the other infrastructure requirements of the new school.

The proposed 64 car parking spaces have been rationalised to provide accessible and EV car parking spaces. The DfT guidance for inclusive mobility requires 5% of all parking spaces to be accessible for disabled drivers/passengers. The eight accessible spaces (six for cars/taxis and two for minibuses) proposed is over and above the DfT recommendation and reflects the level requested by the school to meet demand considering the high proportion of SEND students at the school.

Electric Vehicle Charging Points (EVCPs) are proposed. South East Lincolnshire parking standards requires least one double EVCP (2 spaces) where more than 50 parking spaces are provided. For each additional 50 parking spaces, one double Charging Point is required up to a maximum of 3 (6 spaces). Therefore, two EV charging spaces will be provided which meets the standard.

Cycles: There is no formal cycling infrastructure in the immediate vicinity of the school, therefore cyclists are expected to share the main carriageway with motorised vehicles. However, the rural location and low trafficked roads provide a convenient and safe environment to encourage cycling to and from the school. Large residential areas of Long Sutton, Lutton, Sutton Bridge and Fleet Hargate are within easy cycling distance from the school. South East Lincolnshire parking standards requires a minimum of 1 cycle parking space to be provided for every 3 staff and that student cycle parking provision is assessed on a site-by-site basis. Based on the staff numbers, a total 34 cycle parking spaces would be required to meet the standard for staff. A total of 13 spaces would meet the current demand for student cycle parking. Proposals currently include 40 cycle parking spaces in the form of Sheffield stands adjacent to the MUGA courts. This is in excess of the current demand and is therefore considered a robust level of initial provision. Space is allocated to allow for the future expansion of provision if demand requires it.

Public Transport: Public transport services to the site are limited. As a result, students are bused to the school using eight dedicated school buses, two minibuses and two car taxis. Two of eight buses are directly contracted by the school and paid by the parents for use of service. The remaining services are contracted by the local authority. Two minibuses and two car taxis are also used for transporting students with special needs. However, it should be noted that there are no designated bus bays nor accessible bays on the site currently, and buses have to share the hard play areas for pick-up – this brings a safety and safeguarding conflict with pupil social areas within the secure school site..

There are no rail services within the vicinity of the site.

A new, dedicated and separate bus drop-off/pick-up area is to be provided on the loop road, alongside a small parent drop-off/pick-up provision. As the majority of the students travel by bus, eight bus parking bays will be provided on the loop for bus drop offs and pickups. The drop off area can also be used for coach parking during the annual sporting events and during school trips.

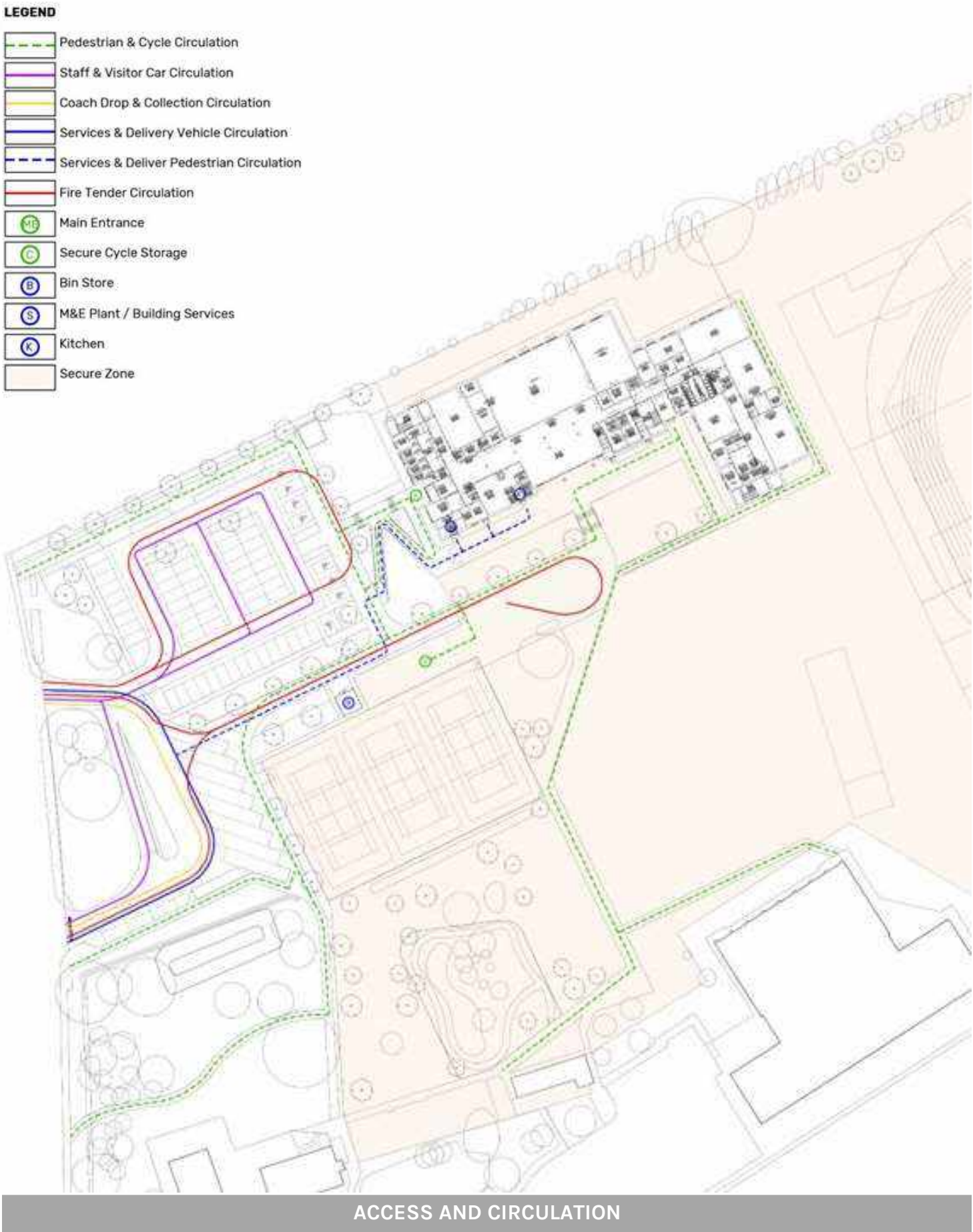
3.00 Highways Context

3.03 Conclusions

The proposed redevelopment of the school is anticipated to result in a small number of additional car and bus trips, with pedestrian and cycling trips being impacted to a lesser extent. Trips related to parent drop-off and collection activities are expected to be managed within the loop road. A dedicated bus drop-off area provides essential additional capacity to reduce the congestion on Little London.

Regarding pedestrian trips, on-site observations suggest that these can be accommodated within the existing footway. The proposed redevelopment is not expected to significantly affect existing desire lines. Given the rural location, low-traffic routes create a safe and convenient environment for local cyclists. Nevertheless, it is recognized that certain barriers exist, and it is recommended to implement mitigation measures, particularly addressing attitudes toward cycling through the School Transport Plan.

The additional number of students that could attend the school following the implementation of the development proposals is expected to have a negligible adverse impact on the transport networks compared to the existing situation. The mitigation measures proposed in the design of the site proposals along with the measures proposed in the School Travel Plan is expected to reduce the impact of the existing site operations. The proposals therefore considered to represent an overall benefit to the school and the local community.



University Academy Long Sutton | 4.00 Site & Context

4.00 Site & Context

4.01 Site Context

University Academy Long Sutton is a mixed secondary modern school for pupils aged 11 to 16 and is part of the Lincolnshire Education trust (LET), sponsored and supported by the University of Lincoln. The school has a strong vision which is supported throughout the curriculum with an emphasis on core subjects alongside a broad range of additional subjects and opportunities to develop the cultural and sporting interests of pupils.

The site is located to the northern edge of Long Sutton and is accessed from Little London, which defines much of the western boundary. This road provides access into the car park and drop off area, with a separate visitor’s parking area close to the school building. A pedestrian route provides access to the main school entrance. The Peele Leisure Centre and associated all-weather hockey pitch and Rainbow Nursery are located within the redline boundary of the site but are not part of the scope of works.

The site is identified as being located in Flood Zone 3 and is considered to be at high risk of flooding. To address this the floor levels of the new building are to be set above the existing levels with suitable means of inclusive access to be provided.

The school is located in a residential area with housing to Little London located opposite the main teaching building, this comprises a mix of mainly post war 1-2 storey dwellings in a range of styles and materials. Beyond Little London the area is predominantly rural in character with extensive arable fields adjoining the school playing fields. To the south of the playing fields is a solar farm and land associated with the former Butterfly & Wildlife Park which has now closed, but which has extensive tree cover and is well vegetated.



AERIAL IMAGE OF EXISTING SITE LAYOUT

4.00 Site & Context

4.02 Existing Site

The site is approximately 8.81 hectares in area. The topography is relatively flat, with minimal level difference across the site, although there are a number of retaining walls present to address localised level changes. The existing site is broadly rectangular in plan; stepping in along the southwestern edge where it borders the back gardens of existing residential properties along Little London.

The main school building is a large, irregularly shaped block and varies in height with a three-storey element close to the site frontage; several other, ancillary buildings are also set within the school grounds. The Rainbow Nursery and Peele Leisure Centre are situated to the south of the main school building and are located within the overall site boundary.

The school is located on the northern edge of Long Sutton with housing set opposite the entrance into the site; with land to the north, east and south of the school ground being predominantly rural in character.

The school playing field is located to the east of the main building with an artificial grass pitch to the south of the leisure centre. A small courtyard garden space with a series of ponds is set within the main school building with a further area of hard standing extending between the two wings of the existing building. A tarmac playground area is located to the north of the main school building, extending to the site boundary, which is also used as a pick-up location for pupil buses.

The school is accessed from Little London with parking spaces and drop-off areas located to the front of the school adjacent to the highway and split into two areas, with a separate car park associated with the sports centre.

Trees within the red line boundary are not protected by a Tree Preservation Order or growing within a Conservation Area. The site frontage adjacent to Little London includes several large, established trees, although there is little understorey planting. The southern, western and part of the northern boundaries are defined by trees and vegetation, including a number of native tree species.

The main site boundaries are formed by Little London to the east, back gardens to properties fronting onto Little London at the south-east and adjoining boundaries to fields to the north, west and south.



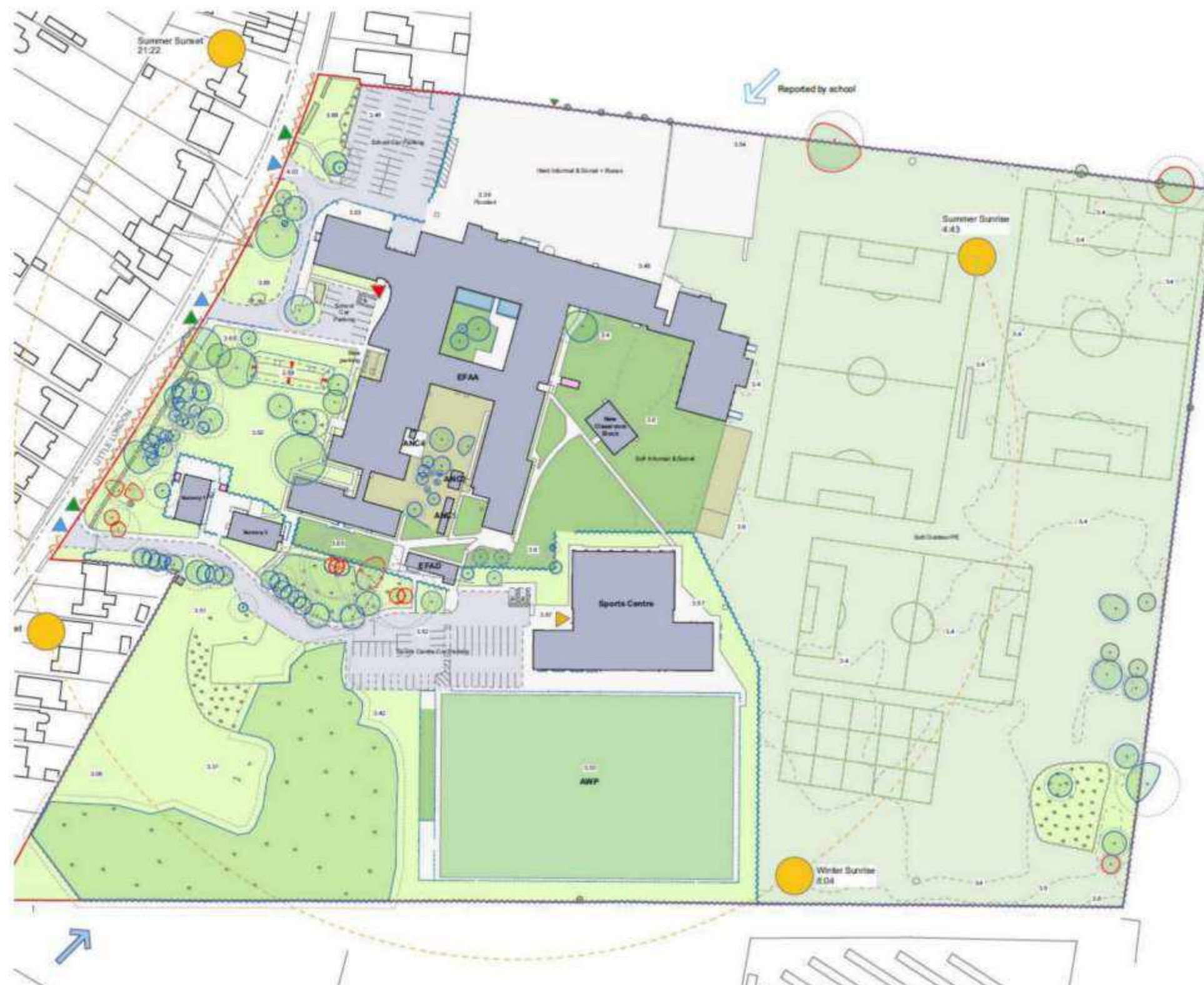
EXISTING SITE VIEWS

4.00 Site & Context

4.02 Constraints & Opportunities

KEY POINTS:

- Rural location largely surrounded by agricultural land
- Pupils heavily dependent on buses and parent vehicles for arrivals & departures
- Little London residential street offers only site access
- Flood Zone 3 to whole of site, from tidal flooding
- Community access to Peele Leisure Centre throughout school day
- Access to independent Nursery throughout school day
- Retention of Leisure Centre and EFA D (inclusion/exclusion unit)
- Retention of AWP owned by local hockey club
- Potential overlooking of adjacent housing to north-west
- Road noise from Little London; also regular RAF jets overhead



CONSTRAINTS PLAN

4.00 Site & Context



4.00 Site & Context



4.00 Site & Context



University Academy Long Sutton | 5.00 Site Masterplan

5.00 Site Masterplan

5.01 Landscape Masterplan

The proposals and investment in University Academy Long Sutton will create a safe, welcoming and attractive environment for pupils to learn and enjoy their educational journey. The scheme that has been developed is the result of careful consideration of the existing site and context while responding to the future needs and aspirations of the school. This has resulted in a design that stitches the new built form into the existing landscape elements while providing opportunities for a sequence of engaging and diverse external spaces to be created. The approach to the site and the location of the new school building reduces the disruption to the operation of the school, retaining the existing teaching spaces until completion of the new building.

A number of options and layouts have been tested by the project team during the design development process, considering alternative spatial arrangements, building form and position on the site. The agreed design is the result of an assessment of each option and through an extensive engagement process with the school and DfE.

The proposals allow for current issues relating to school buses accessing the site to be effectively managed to improve safety and create a clear separation between vehicles and pedestrians. Parking has also been rationalised with the layout and location of this relating to the new school building.

The demolition of the existing school building frees up considerable space on the site and allows for the creation of a large MUGA which will offer improved sports facilities to the school for year-round use; adding to the existing pitches and sports provision.

A more diverse range of external spaces are to be created through the new layout with a large habitat area including a pond to be provided on the site of the old school building. This area will increase biodiversity on the site and give access to enhanced green spaces for pupils offering the proven benefits to health and wellbeing of contact with nature. Improved social spaces are to be provided to the south of the new building, including a new dining terrace, forming a space for pupils to meet and socialise with the design also helping to integrate the required level changes into the overall design to create a fully inclusive external environment. Existing planting is to be enhanced through additional soft landscape to strengthen the current ‘green’ character of the school grounds with a palette selected to create an attractive setting to the new building and facilities while also improving biodiversity and habitat provision.



LANDSCAPE ELEMENTS

- | | |
|--|-------------------------|
| 1. Reconfigured car park
(56no spaces inc. 2 minibus and 8 accessible bays) | 7. Secure cycle storage |
| 2. Separated parent and coach drop-off/pick-up zones | 8. Bin store |
| 3. Main pedestrian arrival | 9. Habitat garden |
| 4. External dining terrace | 10. Soft social space |
| 5. Hard social space | 11. Sports pitches |
| 6. Games courts | |

5.00 Site Masterplan



LANDSCAPE VIEWS | AERIAL VIEW OF PROPOSED CAMPUS

5.00 Site Masterplan

5.01 Landscape Views



LANDSCAPE VIEWS | AERIAL VIEW OF PROPOSED CAMPUS

5.00 Site Masterplan

5.01 Landscape Views



LANDSCAPE VIEWS | AERIAL VIEW & TERRACE

5.00 Site Masterplan

5.01 Landscape Sections



LANDSCAPE SECTIONS

5.00 Site Masterplan

5.02 Vehicle, Cycle & Pedestrian Movement

LEGEND

Pedestrian & Cycle Circulation

Staff & Visitor Car Circulation

Coach Drop & Collection Circulation

Services & Delivery Vehicle Circulation

Services & Deliver Pedestrian Circulation

Fire Tender Circulation

Main Entrance

Secure Cycle Storage

Bin Store

M&E Plant / Building Services

Kitchen

Secure Zone

A comprehensive parking strategy has been developed for the school to provide provision for a range of different modes of transport, this is to comprise the following

Parking provision:

- 40no. Covered and secure cycle parking spaces;
- 56no. Staff and visitor car parking spaces;
- 8no. Dedicated school bus parking;
- Separate visitor / parent drop-off bay;
- Ev car charging parking bays;
- Accessible parking bays to be located close to school entrance.



MOVEMENT STRATEGY

5.00 Site Masterplan

5.03 Site Security & Boundary Treatment

LEGEND

Existing Fence & Gates Retained

2.4m High Weldmesh Security Fencing [matching lockable gates where necessary]

3.0m High Games Court Fencing [matching lockable gates where necessary]

1.8m High Closeboard Timber Fence [matching lockable gates where necessary]

1.2m High Closeboard Timber Fence [matching lockable gates where necessary]

1.2m High Balustrade

1.0m High Vehicle Guardrail

2.0m High Hedgerow planting

Open Access for Staff, Visitor, Community, Servicing

Secure Outdoor Learning & PE Areas

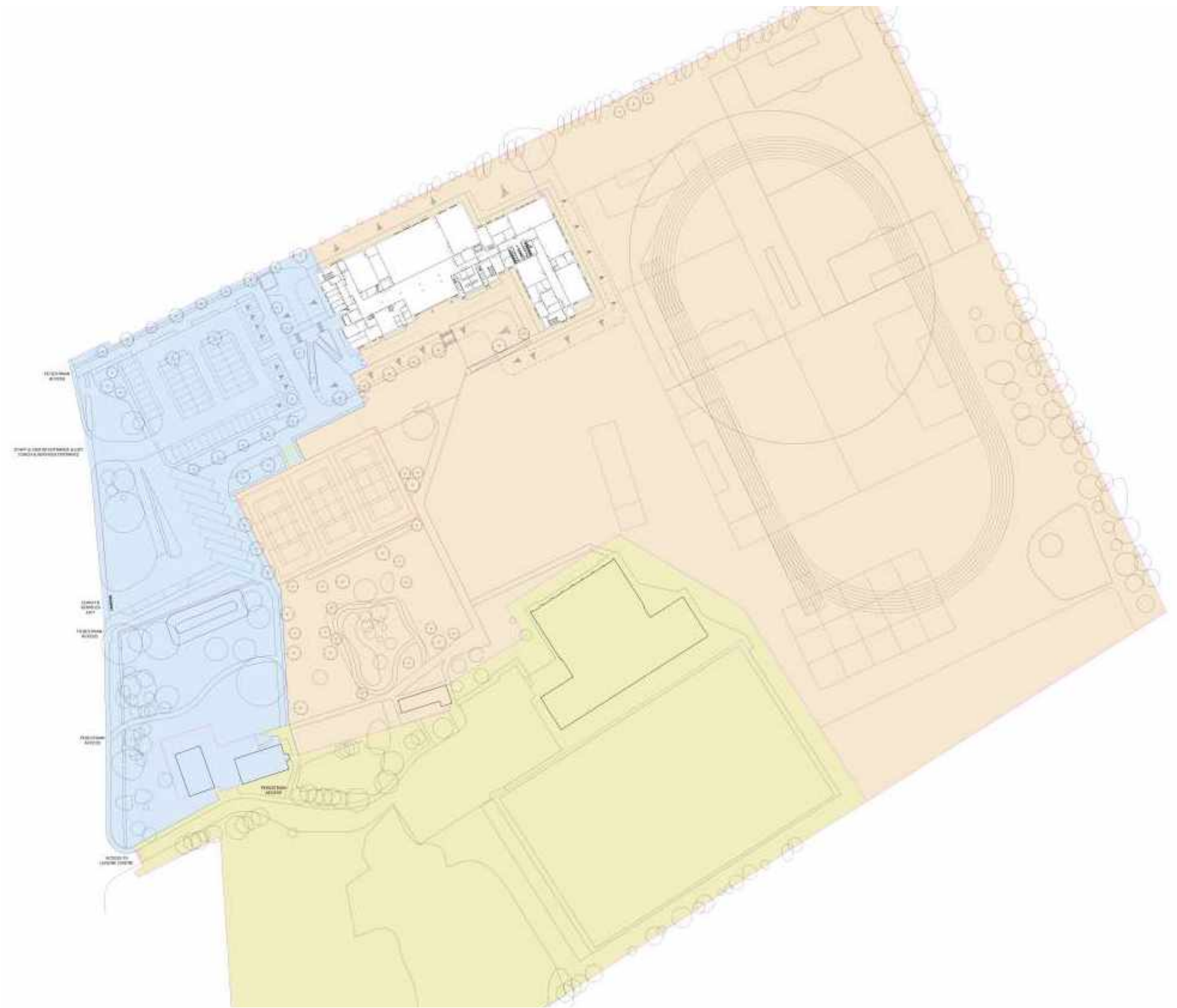
Open Access to Leisure Centre

The school is accessed from Little London with vehicle entrances and exits separated from pedestrian routes, with a dedicated access route to the Leisure centre.

Existing boundary fencing is to be retained to much of the school, with new fencing to maintain the secure line in relation to the new buildings and site layout.

The MUGA is to have a 3.0m high fence surround to contain ball games and sports activities; with bin stores to have a timber fence surround provide screening.

Elsewhere balustrades and guard railing is to be provided to protect against changes in level or to provide separation between vehicles and pedestrians.



5.00 Site Masterplan

5.04 External Sports Provision

A new sports court will replace the existing tarmac area to the north of the current school building. The Multi Use Games Area (MUGA) will be a fenced area with capacity for 3nr courts to be surfaced in an open textured porous macadam surface with markings provided for variety of sports such as mini-tennis, netball, football training and basketball. The area is suitable for wheelchair sports. The court won't be floodlit. This space will also be used by pupils while waiting to board buses when travelling home. Overall the new court will be a qualitative improvement on the existing tarmac area.

Sports played on natural turf will continue to be played on the existing playing fields to the east of the school grounds, with new markings to be provided to define the various pitch provision.

Existing elements such as the cricket wicket, long jump pit and grid markings will be retained with the sports field allowing for a 400m running track to be marked out. The existing all-weather pitch associated with the Sports Centre is to be retained as part of the proposals.

- Soft Outdoor PE
- Hard Outdoor PE
- Soft Informal and Social Area
- Hard Informal and Social Area
- Habitat
- Non-net External Area
- Non-net Proposed Building
- Non-net Existing Building



5.00 Site Masterplan

5.05 Planting, Tree Retention and Removal

The planting strategy is key to realising the vision of a school environment set within extensive green infrastructure and has been designed with a high percentage of native species to give a focus on biodiversity.

Throughout the site, planting is to be used to help delineate the external spaces and provide screening and a sense of enclosure to more functional elements, such as the car park area. New tree planting is to be used to reinforce the main axial route to the building and to help strengthen existing boundary vegetation. New trees are also to be incorporated into the layout of a new habitat area providing a space with greater contact to nature and to create a key wildlife resource.

Planting around the new building and on approaches to this comprise a range of shrub and herbaceous species to create a sense of arrival and to provide seasonal interest and effects through foliage, colour and flowers.

Elsewhere wildflower mixes and blocks of native species thicket planting will give a focus on biodiversity enhancement creating spaces and features for wildlife while still contributing to the character of the school grounds.

Existing vegetation, including trees will be retained where possible and in particular where this is associated with the site boundaries, with the new planting adding to this to create an extensive network of green infrastructure elements running across the site.

A new habitat area is to be created incorporating a pond, this will allow for wetland and marginal species to be included in the planting scheme and add an important wildlife feature to the site.

A tree survey and arboricultural constraints report was undertaken by Apex Environmental. There is a total of 218 trees (including groups) on site and include specimens representing a range of different ages. Most of the trees will be retained and protected as part of the proposals.

There are 14nr trees which are Category U and require removal due to poor condition or health with a further 6nr trees to be removed, to facilitate the new development.



PLANTING PRECEDENTS

5.00 Site Masterplan

5.06 Site Ecology

A preliminary Ecological Appraisal with undertaken by Middlemarch in November 2022 and included a ecological desk study and walkover survey.

This identified a number of ecological features as being material considerations:

- Mature scattered trees;
- Lines of trees;
- Hedgerows and broadleaved semi-natural woodland.

These habitats were identified as having the potential to provide opportunities to the following protected/notable species:

- Roosting, commuting and foraging bats;
- Common amphibians;
- Nesting birds;
- Terrestrial mammals.

The report recommended that further surveys be carried out to determine the presence or otherwise of potential species in order that suitable protection and mitigation strategies can be put in place.

It was also noted that Cotoneaster, a non-native and invasive plant was recorded as being present on site. This is a species which has been commonly used as part of shrub planting mixes but should be removed as part of the proposed landscape works.

The proposals seek to retain key landscape features and add to these through the planting strategy and the provision of a new habitat area. This will help reduce the potential impacts on wildlife with suitable measures to be put in place by the contractor to reduce the potential impacts through construction operations.



5.00 Site Masterplan

5.07 Urban Greening and Biodiversity Net Gain

The proposals have been developed in dialogue with the Surrey Wildlife Trust Planning Advice Services to meet BNG requirements in terms of the planting approach and features to be included in the landscape. The conclusion of this exercise has been to confirm that the required net gain can be achieved through the landscape proposals and site strategy.



Urban Greening Factor Calculator				
Surface Cover Type	Factor	Area (m²)	Contribution	Notes
Semi-natural vegetation (e.g. trees, woodland, species-rich grassland) maintained or established on site.	1	12,944	12,944	Flower rich grassland, woodland planting
Wetland or open water (semi-natural; not chlorinated) maintained or established on site.	1	127	127	
Intensive green roof or vegetation over structure. Substrate minimum settled depth of 150mm.	0.8	-	-	main roof area
Standard trees planted in connected tree pits with a minimum soil volume equivalent to at least two thirds of the projected canopy area of the mature tree.	0.8	966	773	to be calculated at forecast canopy area of 20m2 (same as control scheme) and 13m2 for smaller trees
Extensive green roof with substrate of minimum settled depth of 80mm (or 60mm beneath vegetation blanket) – meets the requirements of GRO Code 2014.	0.7	-	-	
Flower-rich perennial planting.	0.7	327	229	Native Planting
Groundcover planting.	0.7	409	286	
Rain gardens and other vegetated sustainable drainage elements.	0.7	3342	2,339	
Hedges (line of mature shrubs one or two shrubs wide).	0.6	292	175	
Standard trees planted in pits with soil volumes less than two thirds of the projected canopy area of the mature tree.	0.6	-	-	
Green wall – modular system or climbers rooted in soil.	0.6	-	-	
Amenity grassland (species-poor, regularly mown lawn).	0.4	63,903	25,561	playing fields and all other general grass seeded areas
Extensive green roof of sedum mat or other lightweight systems that do not meet GRO Code 2014.	0.3	-	-	
Water features (chlorinated) or unplanted detention basins.	0.2	-	-	
Permeable paving.	0.1	780	78	
Sealed surfaces (e.g. concrete, asphalt, waterproofing, stone).	0	-	-	building / hard standing (incl. games court)
Total contribution			42512.8	
Total site area (m²)			88,432	
Urban Greening Factor			0.48	

- LEGEND**
- Native Hedge Planting
 - Flower Rich Perennial Planting
 - Ground Cover Planting
 - Amenity Grassland
 - Species Rich Grassland
 - Native Structure Planting
 - Proposed Tree Planting
 - Existing Trees
 - Rain Gardens
 - Wetland/Open Water
 - Permeable Paving
 - Sealed Surfaces

PLANTING STRATEGY

University Academy Long Sutton | 6.00 Design Proposals

6.00 Design Proposals

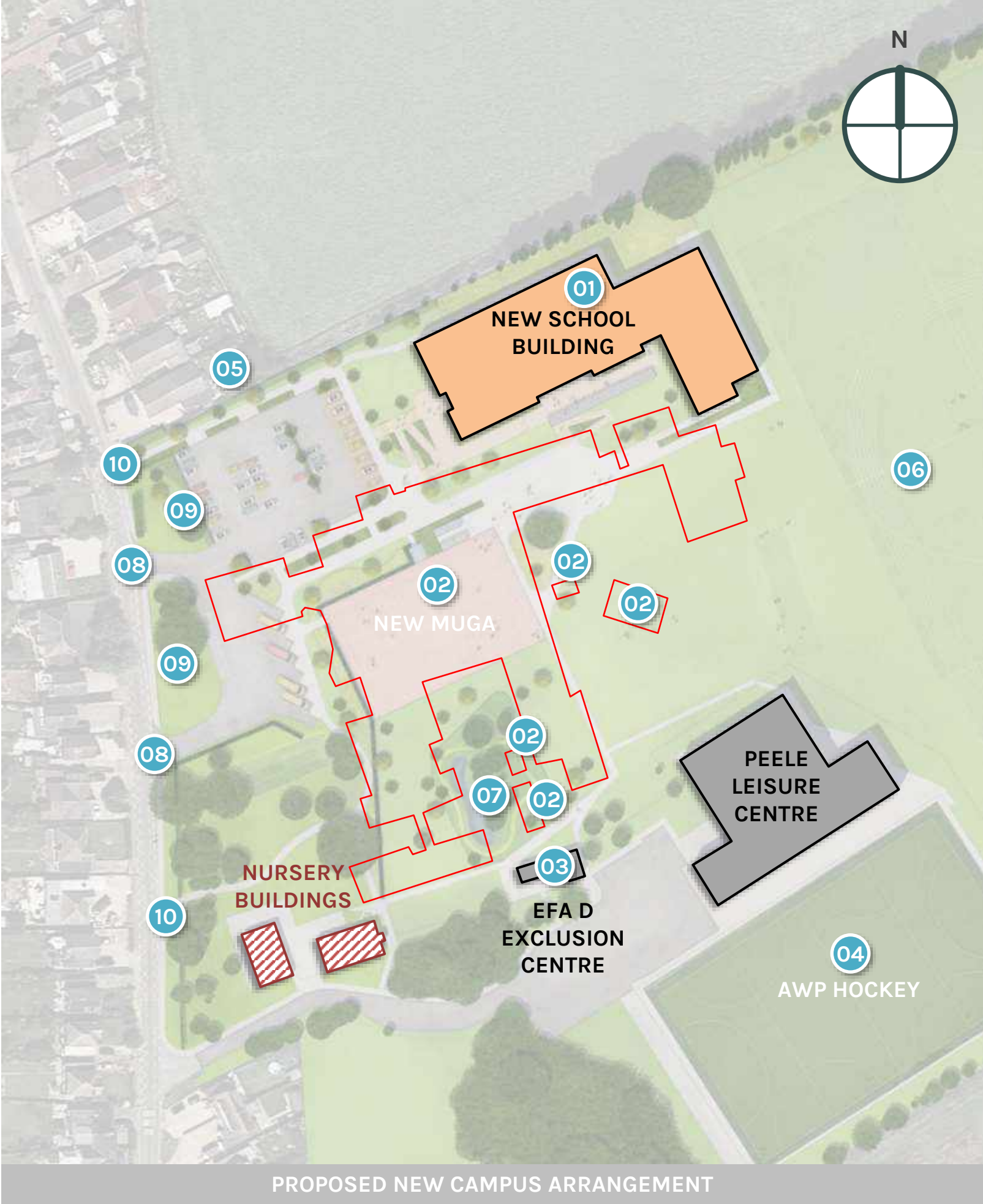
6.01 Building Concepts

An initial feasibility study was undertaken by the DfE in 2023, including an indicative site masterplan and outline building layouts, termed the ‘Control Option’. The proposals submitted here develop the concepts set out with these Control Option proposals, in order to build upon the School’s input encapsulated in these, and upon the general support received in pre-application liaison.

The arrangement provides a single linear teaching wing, connecting to a deeper plan element accommodating the main entrance, hall and dining facilities. Together, this arrangement lies to the north of the existing school’s footprint, towards the northern boundary of the site, allowing the existing teaching spaces to be retained during construction, and therefore reducing disruption and the need for temporary accommodation.

KEY PRINCIPLES:

- 01 New school on footprint
- 02 Demolition of existing buildings to minimise temps
- 03 Buildings to be retained and improved
- 04 Retention of shared public MUGA facility
- 05 Sensitivity to existing adjacent residential properties
- 06 Reconfigured external soft outdoor PE
- 07 New habitat area
- 08 Improved vehicular access for drop-off and pick-up
- 09 Emblem tree and associated landscaping to be retained
- 10 Improvement of safe and separate pedestrian access routes

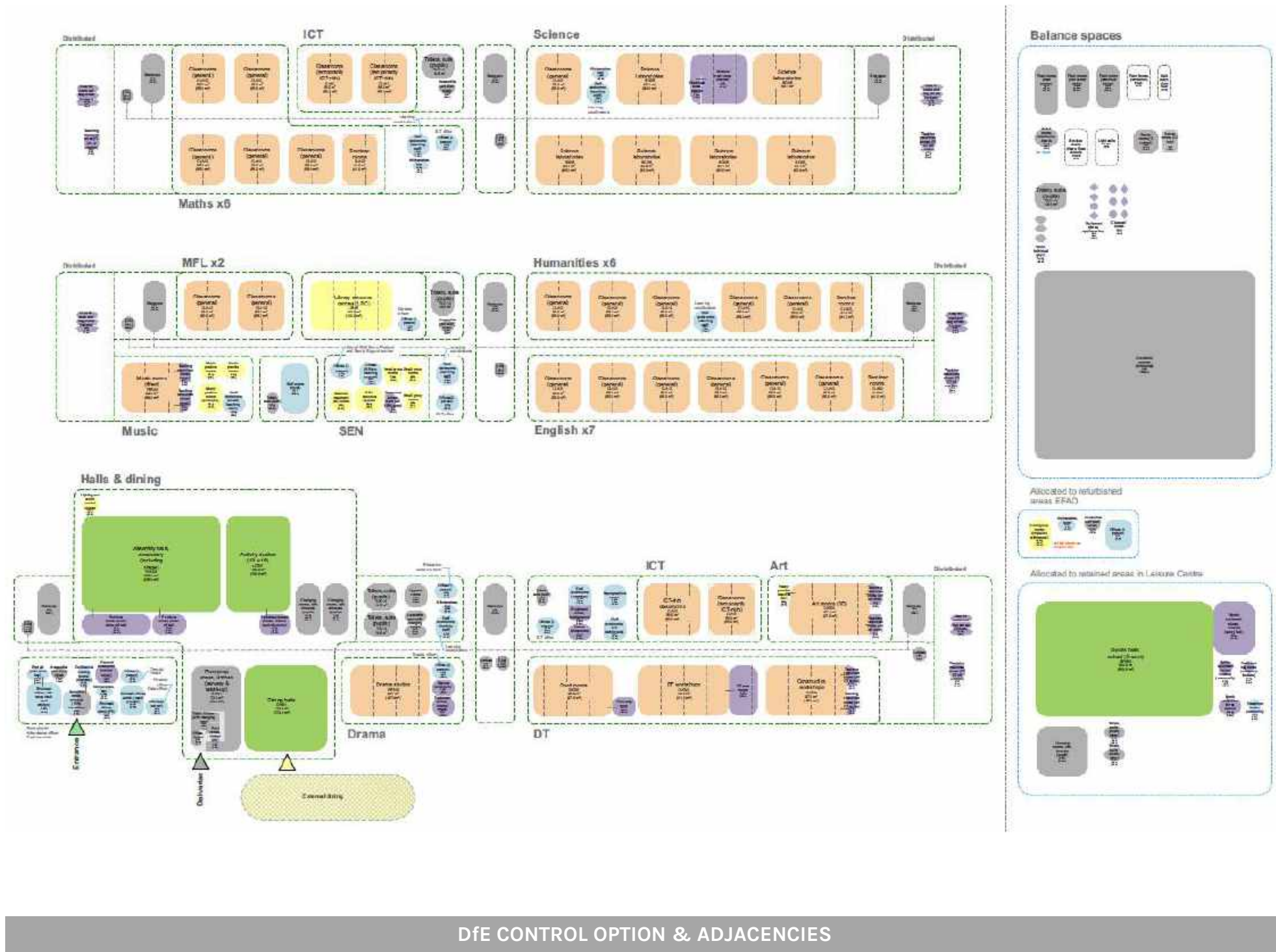


6.00 Design Proposals

6.02 Internal Building Organisation

KEY POINTS:

The briefing information developed by the DfE with the school included an adjacency diagram, identifying relationships between all key spaces. The developed design proposals follow the key principles established in this diagram.



6.00 Design Proposals

6.02 Internal Building Organisation (cont.)

Internally, this solution offers several advantages, including a celebrated entrance and animated circulation flooded with natural light, flexible departmental teaching layouts, and easily supervised circulation. In addition, these building concepts offer the following:

- **Efficient Form & Envelope:** The plan works with the site constraints imposed by the existing building, avoiding the requirement for early demolitions or the expense of temporary classrooms
- **Central Heart Space:** The open-plan, outward-facing dining space provides an animated and well-connected heart space at the centre of the school.
- **Flexible Horizontal Connections:** Movement around the school and grounds is generous and legible, enhanced significantly by lightwell voids, contributing to the passive stack ventilation strategy, and bringing daylight into the heart of the plan.
- **Logical Vertical Connections:** Three formal enclosed stairs equally spaced to optimize travel distances
- **Benchmarked teaching ‘ribbon’:** that complies with the Output Specification developed by the DfE, maximising views and daylight
- **Strong curriculum and pastoral support clusters per floor;** DT & Performance, Languages & Humanities, and Science with Maths
- **Pastoral presence in the heart of the school:** The Head’s Office is located centrally, providing a presence for both pupils.
- **Prioritised Passive Supervision:** Carefully distributed staff accommodation, enhanced by internal glazing offers simple passive supervision of circulation spaces, minimising disruption and maintaining an environment for growth and support.
- **Internal Service Core:** Ancillary and sanitary facilities efficiently stacked within the central knuckle area.
- **Welcoming and secure entrances:** Clearly defined main and student entrances
- **Optimised event and exam space;** the flexible use of the Hall, Activity studio and associated storage spaces allows flexible uses.



SCHOOL ENGAGEMENT | DESIGN DEVELOPMENT SUMMARY

6.00 Design Proposals

6.02 Internal Building Organisation (cont.)

TAILORED TO THE SCHOOL'S NEEDS:

A clear and logical arrangement of spaces has been informed by the Adjacencies Diagram and Control option layouts. Our strategy has been refined through design development dialogue with the school to ensure that it fully supports their academic and pastoral approach.

- The main entrance faces the principal public approach from Little London, set back from the streetscape, protecting and further enhancing the existing green frontage.
- The Sick Bay is closely associated with the main Office to ensure that unwell pupils awaiting collection are supervised, and have access to a dedicated pupil toilet, should they require it
- Cellular staff offices line the primary elevation, providing a sense of enclosure and privacy, with adjacent welfare facilities and access to the interview room for parent/visitor meetings
- A dedicated pupil entrance creates a framework for structured arrival experiences, leading pupils from various routes to be greeted on arrival, further promoting a sense of support and belonging.
- The Main Hall overlooks the quiet northern landscape, with lobbied internal access, perfect for establishing a calming environment both visually and acoustically separated from the dynamic and open 'heart-space'.
- The hall and activity studio's flexible arrangement creates the opportunity for 'theatre mode', incorporating bleacher seating, and supporting events at a variety of different scales and natures.
- Open-plan dining spills out into the southern landscape for external dining and events. Together with atria, light wells and a generous circulation space; this creates a bright, outward-facing internal environment.
- The practical Design and Technology / Music & Drama Spaces are clustered at the Ground Floor, optimising access for deliveries, and generating a sense of productivity, dynamism and creativity.
- Pupil Changing opens to external sports, clustered together with WCs and Hygiene room for efficiencies.
- Stair egress discharges within the secure landscape



6.00 Design Proposals



CUATWAY PLAN VIEW | LEVEL 00

6.00 Design Proposals



6.02 Internal Building Organisation (cont.)

- The Library space is celebrated at the primary corner of the school, with larger feature windows looking out over the public landscape, with superb views over the principal approach from Little London, and the secure external landscaping to the south.
- Adjacent are pastoral staff offices, including the head’s office in the centre of the plan’s knuckle, with its feature windows providing a student-facing presence and passive supervision.
- The first-floor arrangement aims to generate a studious and focused atmosphere, with Humanities, English and ICT clustered together.
- A specialist, self-contained SEN cluster has calming views over the rural landscape to the north.
- Art room has views over the dynamic landscape and the primary approach
- Distributed learning mentor spaces, offices and curriculum stores



LEVEL 01

6.00 Design Proposals



CUATWAY PLAN VIEW | LEVEL 02

6.00 Design Proposals



6.02 Internal Building Organisation (cont.)

- The Staff social and workrooms are separate, to provide a clear subdivision of social and departmental work environments; Staff Social is located at Level 03 to offer good views over the external approach, while Staff Workrooms are distributed throughout the building situated in key departmental locations to offer passive supervision and convenience.
- Specialist science classrooms, MFL and maths classrooms.
- Distributed learning mentor spaces, offices and curriculum stores



LEVEL 02

6.00 Design Proposals



CUATWAY PLAN VIEW | LEVEL 03

6.00 Design Proposals



SECTIONAL MODEL | MAIN HALL & DINING

6.00 Design Proposals



SECTIONAL MODEL | TEACHING WING

6.00 Design Proposals

6.03 Interior Spaces (cont.)



SECTIONAL MODEL | ATRIA, VENTILATION TURRETS, CIRCULATION, MAIN ENTRANCE

6.00 Design Proposals

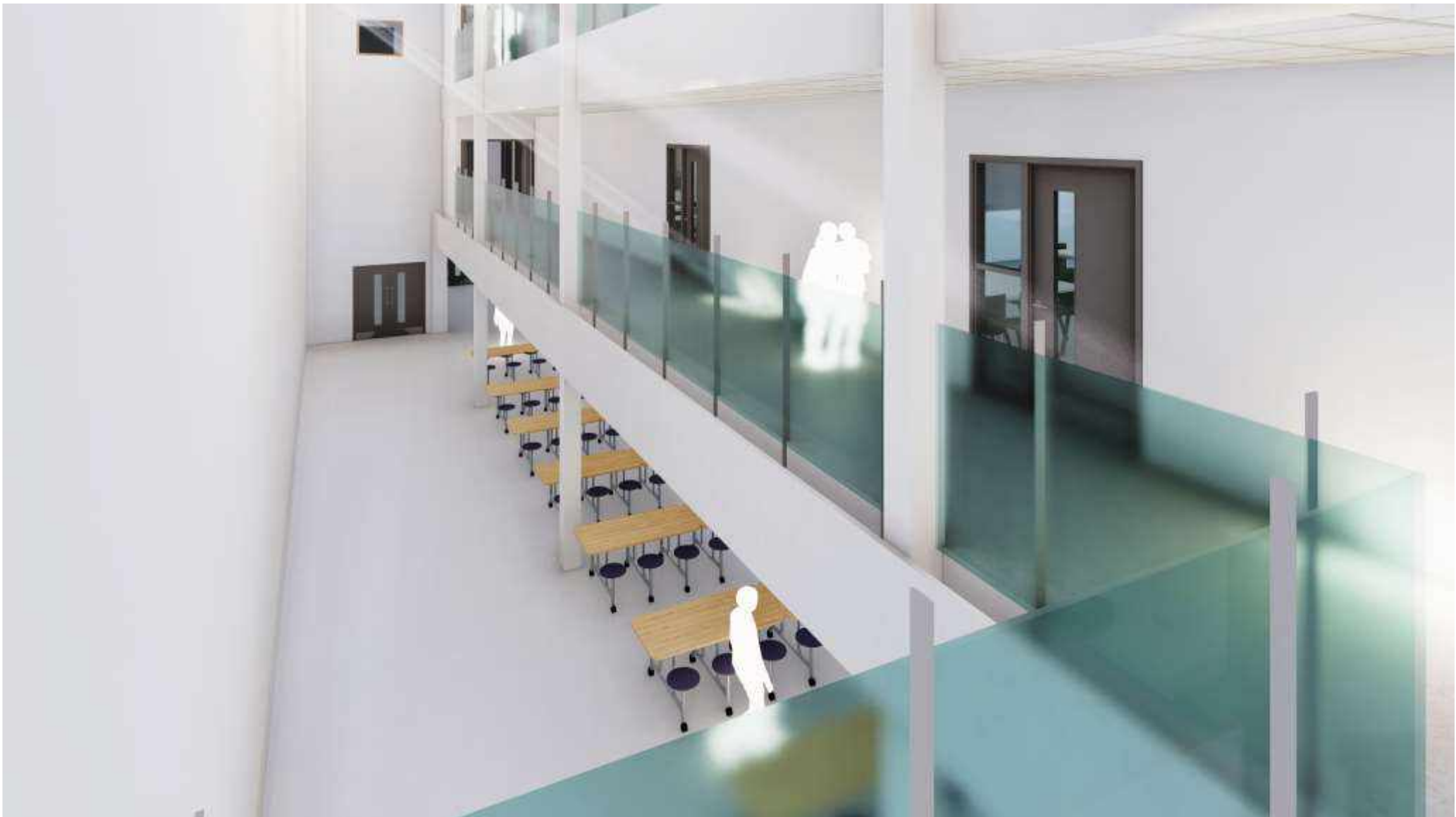
6.03 Interior Spaces (cont.)



VISITOR RECEPTION



NEW BUILDING | DEDICATED PUPIL ENTRANCE



ANIMATED CIRCULATION | HEART SPACE LEVEL 01

6.00 Design Proposals



NEW TEACHING FACILITIES | GENERAL CLASSROOM

6.00 Design Proposals

6.03 Interior Spaces (cont.)



NEW TEACHING FACILITIES | SCIENCE LABORATORY



NEW TEACHING FACILITIES | RM WORKSHOP



NEW TEACHING FACILITIES | ART ROOM

6.00 Design Proposals

6.03 Interior Spaces (cont.)



6.00 Design Proposals

6.03 Interior Spaces (cont.)



LIBRARY LRC | INTERNAL VIEW



LIBRARY LRC | INTERNAL VIEW



LIBRARY LRC | INTERNAL VIEW

6.00 Design Proposals

6.03 Interior Spaces (cont.)



MAIN HALL | PERFORMANCE VENUE



6.00 Design Proposals

6.04 Scale & Massing

The design strategy establishes a confident, considered form for the new school building, capitalising on its previously undeveloped northerly position on UA Long Sutton's campus site. Fenestration has been carefully positioned both to generate a comfortable internal environment, but also to provide framed views out over the quiet rural landscape or the school's vibrant new external social / sports spaces.

The scheme responds directly to the school's specific brief, as well as offering an appropriate response to the unique site and context. In particular, our approach to footprint, massing and orientation has been developed to offer the following:

- The presentation of an expressive, high-quality and safe new frontage, considerate of the streetscape and rural village setting surrounding Little London
- Use and improvement of the existing school's landscape, with clarified lines of sight and increased definition of the boundary between public and private zones, with legible secure lines.
- Provision of an efficient footprint which optimises distances from the various existing/final site boundaries and neighbouring properties, as well as optimising available external site areas for outdoor social and sports activities
- The maximum height of 3-storeys is in keeping with the existing building, however, this has been set back and carefully planned to minimise the impact on the nearby residential properties.
- Proportion, scale and relief are introduced to the façade to break the mass down and ground the building.
- The location of the Sports Hall adjacent to the northern boundary ensures the building massing steps down significantly to an equivalent 2.5 and then 2-storey height, towards the rural and residential neighbouring properties.



AERIAL VIEW | NEW BUILDING

6.00 Design Proposals

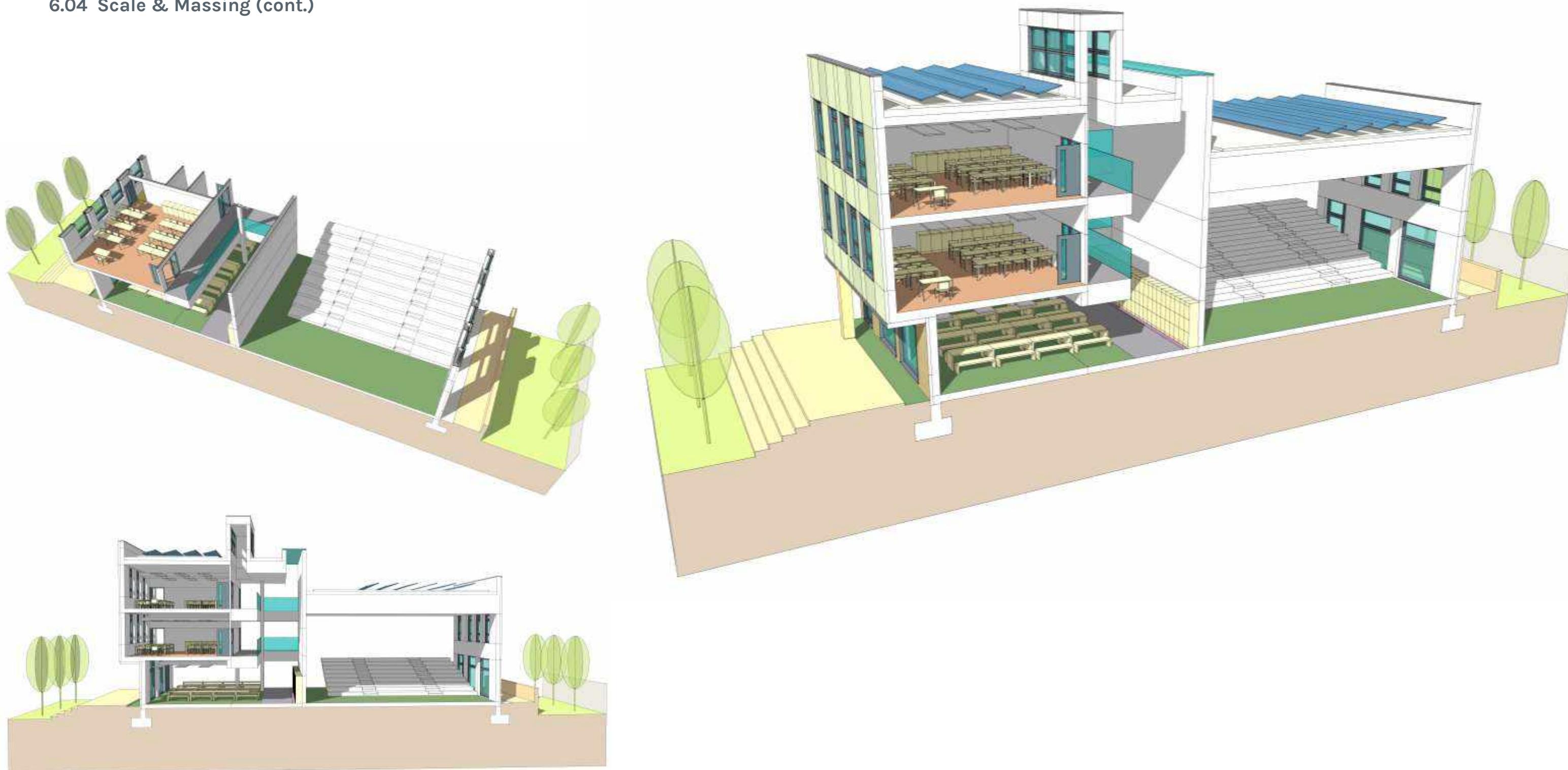
6.04 Scale & Massing (cont.)



INITIAL MASSING STUDIES | AERIAL VIEWS

6.00 Design Proposals

6.04 Scale & Massing (cont.)



SECTIONAL BUILDING STUDIES | AERIAL VIEWS

6.00 Design Proposals

6.05 Building Materials & Construction

Our proposals for the external appearance of the new school building are built upon a detailed understanding of the Academy’s aspirations in terms of external identity. The proposals adopt a confident aesthetic. Significant contrast is incorporated between the two key elements of the design, to establish different identities relevant to their separate functions. The western halls wing is light and bright, forming a beacon in the principal public approach from Little London. The eastern teaching wing adopts darker colour palette, sitting more sensitively in the landscape in distant views of the site across the fens.

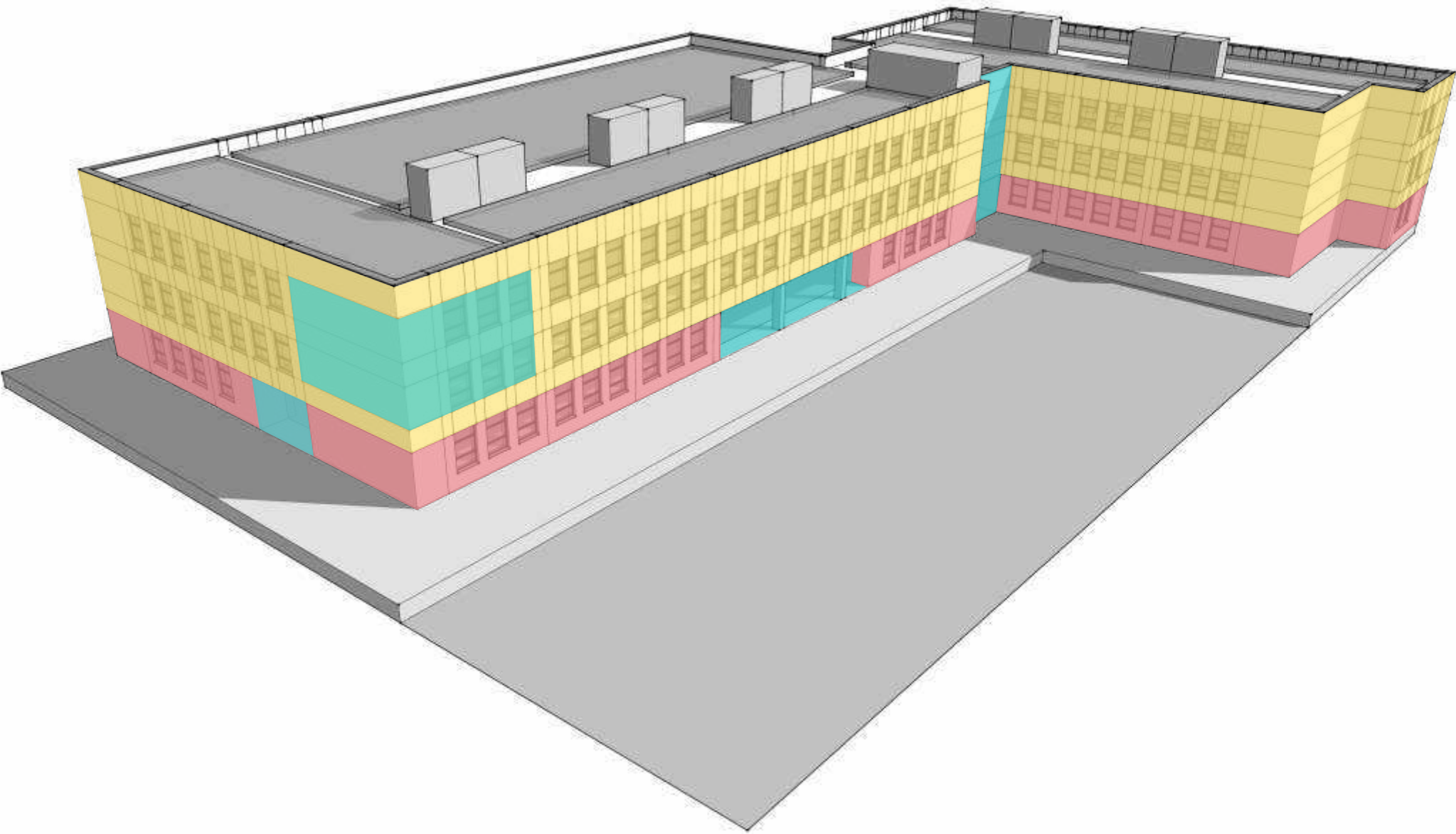
A rainbow ribbon of coloured panels at upper floor levels, providing a sense of playfulness entirely appropriate to a building for children. Running across the facades of the whole building, this motif serves to visually link the two wings.



INITIAL MATERIALS STUDIES

6.00 Design Proposals

6.05 Building Materials & Construction (cont.)



EXTERNAL EXPRESSION:

-  Key elevations; key views over landscape
-  Robust masonry plinth: warmth & familiarity
-  High-level cladding with opportunities for colour identity
-  Roof with photovoltaics

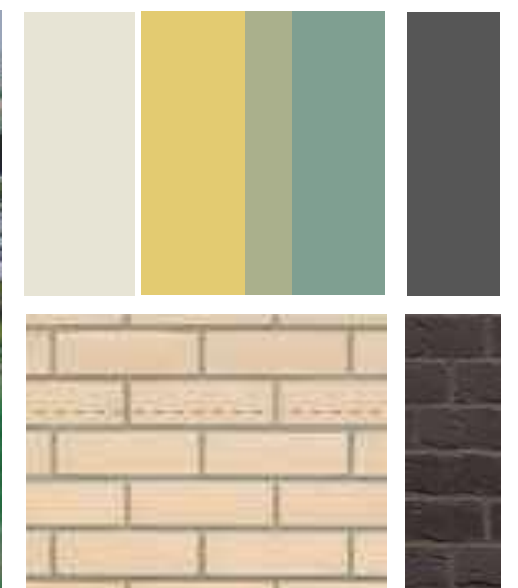
PRELIMINARY MASSING & CLADDING STRATEGY

6.00 Design Proposals

6.05 Building Materials & Construction (cont.)

Our proposals are characterised by the use of traditional brickwork and high-quality rainscreen cladding, in a confident and contemporary manner. A minimalist and contrasting palette is used as a canvas, providing a backdrop for ‘pops of colour’ to feature in ribbons of rainbow colours. Our use of this palette of materials achieves a number of benefits:

- The masonry provides a robust base to the new building, adopting a reference to the surrounding traditional residential buildings constructed from masonry. This creates a familiar and attractive backdrop to learning which will provide a sense of continuity for pupils and staff.
- The lighter-tone colours were selected for the principal elevations, to provide a bright and welcoming building, acting as a beacon of learning in the rural landscape, and reflecting the light-coloured brickwork and render which characterises the existing school buildings.
- The darker-tone colours to the ‘teaching wing’ at the west of the site, were selected to create a clean and modern contrast, breaking up the mass of the building into two monochromatic elements. This serves as sophisticated a backdrop for the vibrant and energy-filled sports and social areas within the school’s new landscape.
- Within this, flashes of colour in the rain-screen cladding offer a sense of fun, using natural greens and yellows to reflect the rural setting. This detailing provides visual interest, highlighting the main entrance, and coordinated with the landscape surrounding the campus
- The specification ensures robust and minimal maintenance requirements, with brickwork to all walls up to 3.2m above ground level.



VISUALS AND MATERIAL IMAGES

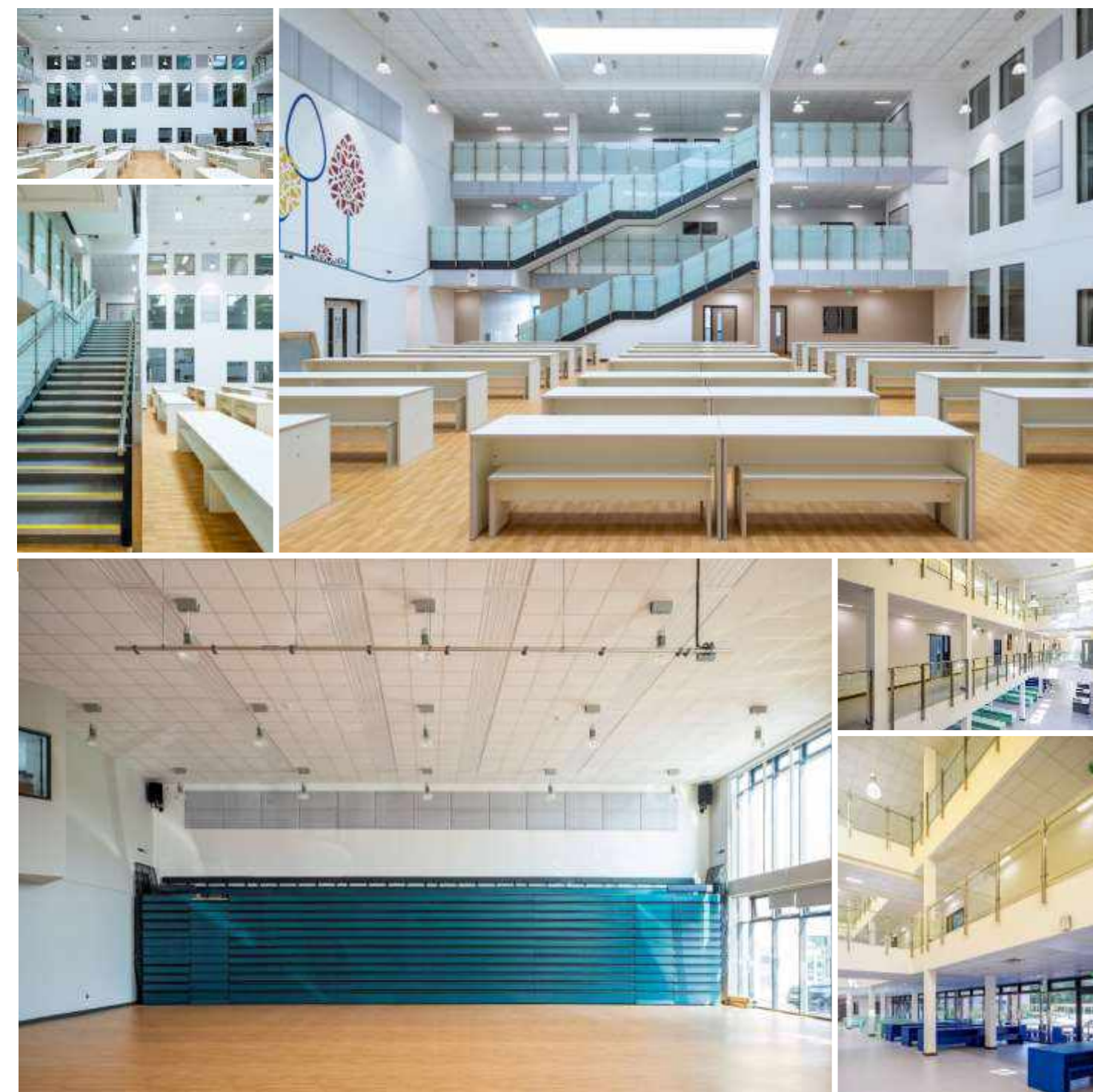
6.00 Design Proposals

6.05 Building Materials & Construction (cont.)

The proposals are underpinned by the latest evolution of B+K’s benchmark Configure Hybrid solution. This standardised approach to the construction of schools has been developed in direct response to the DfE’s rigorous Output Specification, and therefore offers a fully-compliant, pre-engineered solution, which is optimised for off-site manufacture and streamlined construction processes. Our net zero in operation strategy is fully integrated with MEP, architectural and structural solutions, with efficient MVHR units coordinating with the window solution, high levels of natural cross-flow ventilation, and exposed soffits delivering high thermal mass.

Specifications have been tailored to comply with the full suite of Technical Annex documents, and meet or exceed to durability and longevity requirements. At the same time, embodied carbon is an increasing focus: the elevational system uses highly-insulated timber cassette panels sandwiched between non-combustible sheathing, to reduce reliance on high-energy-intensity construction materials and increase carbon sequestered in the construction.

Adopting B+K’s Configure standardised school delivery specification ensures that our proposals offer a tried-and-tested solution; and one which has successfully underpinned the delivery of more than £1 billion on DfE education frameworks.



B+K CONFIGURE PRECEDENTS | LEIGH ACADEMY, RAINHAM & EDEN PARK, BECKENHAM

6.00 Design Proposals



NEW PEDESTRIAN APPROACH

6.00 Design Proposals

6.06 Aerial Views & Visualisations



NEW PEDESTRIAN APPROACH | FROM SOUTH



NEW PEDESTRIAN APPROACH | FROM NORTH

6.00 Design Proposals

6.06 Aerial Views & Visualisations



VISITOR ENTRANCE | FROM PUBLIC APPROACH



PUPIL ENTRANCES | FROM DINING TERRACE

6.00 Design Proposals

6.06 Aerial Views & Visualisations



NEW DROP-OFF AREA | FROM LITTLE LONDON



NEW DROP-OFF AREA | FROM SOUTH

6.00 Design Proposals



STAFF SUPERVISION | COACH & PARENTAL DROP-OFF

6.00 Design Proposals



NEW BUILDING | CELEBRATED PUPIL ENTRANCE

6.00 Design Proposals



DINING | EXTERNAL TERRACE AREAS

6.00 Design Proposals

6.06 Aerial Views & Visualisations



EXTERNAL DINING | VW CAMPER KIOSK



EXTERNAL SOCIAL | VIEWS OVER SPORTS FIELDS



EXTERNAL SOCIAL | VW CAMPER KIOSK

6.00 Design Proposals



QUIET SOCIAL AREAS

6.00 Design Proposals

6.06 Aerial Views & Visualisations



SPORTS FIELDS | PEDESTRIAN LINK TO PEELE LEISURE CENTRE



PLAYING FIELDS



NEW MUGA

6.00 Design Proposals



PLAYING FIELDS | RELATIONSHIP WITH PEELE LEISURE CENTRE

University Academy Long Sutton | 7.00 Structural & Civil Engineering

7.00 Structural & Civil Engineering

7.01 Ground Conditions & Contamination

Groundwater

Groundwater was encountered in Made Ground and the Tidal Flat Deposits during the sinking of the exploratory holes. A groundwater strike was encountered in the relatively deep Made Ground in BH04 at 1.4m bgl and at the base of shallower Made Ground in DS01 at 0.48m bgl.

Foundations

It is recommended the adoption of piled foundations to carry all structural loads down to greater depths in the Tidal Flat Deposits and into the Glacial Till. This will extend the foundations past upper lower-strength soils in the Tidal flat Deposits. The preferred solution for the floor slab typically depends on the type of foundation adopted with a suspended floor slab being used where the structural loads are carried on piled foundations. Buried concrete class should have due consideration to the chemical testing results summarised opposite.

Pavement Design

The conditions prevailing at the time of construction will affect the CBR of the subgrade soil and its strength. Research has shown the importance of the equilibrium moisture content of the subgrade. The relationship between soil suction and the moisture content shows that a soil that becomes wet during construction will retain water and will therefore be weaker under the pavement in the equilibrium condition than a foundation that has remained dry, particularly for soils of low to medium plasticity. the design CBR could vary between 1 and 20%.

Contamination

There was a minor exceedance of the human health GAC for naphthalene for future site users in one soil sample. One shallow soil sample composed of suspected sub-base installed prior to laying asphalt showed the presence of asbestos. Therefore, there may be anticipated abnormal costs relating to the Asbestos encountered, at 0.002% in one Made Ground sample, and appropriate asbestos legislation and regulations will require implementation, including a risk assessment by the ground works / construction contractors.

For more information, please refer to the Ground Investigation Report reference PC228532, which accompanies the planning application.

Strata		Thickness (m)	Comments
Top soil		0.15 – 0.3	N/A
Made ground		0.16 – 1.70	Variable material and thickness
Tidal Flat Deposits	Upper Silt Layers	2.50 – 4.30	Variable SPT values, a typical value of 26 being consistent with silt layers
	Lower Sand Layers	6.90 – 9.90	Variable SPT values
Glacial Till		0.5 – 8.3 (proved)	Not proved in all locations

SYUMMARY OF UNDERLYING STRATA

Stratum	Design Sulphate (DS) Class	Aggressive Chemical Environment for Concrete (ACEC) Class
Made Ground	DS-1	AC-1
Tidal Flat Deposits (Upper Silt)	DS-3	AC-3 *
Tidal Flat Deposits (Lower Sand)	DS-2	AC-2 *
Glacial Till (Clay Soil)	DS-4	AC-4 *

* Based on oxidisable sulphides being present

CLASS OF CONCRETE UNDERGROUND

7.00 Structural & Civil Engineering

7.02 Structural Design Philosophy

The site is bordered by the Peele Leisure Centre. The surrounding areas comprise farms land as well as residential dwellings opposite to the site. The proposed facility is envisioned to accommodate a total of 720 pupils. The site is low-lying with a significant thickness of made ground. The proposed site incorporates associated buildings, hard landscaping areas, car park, playing fields and MUGA pitch.

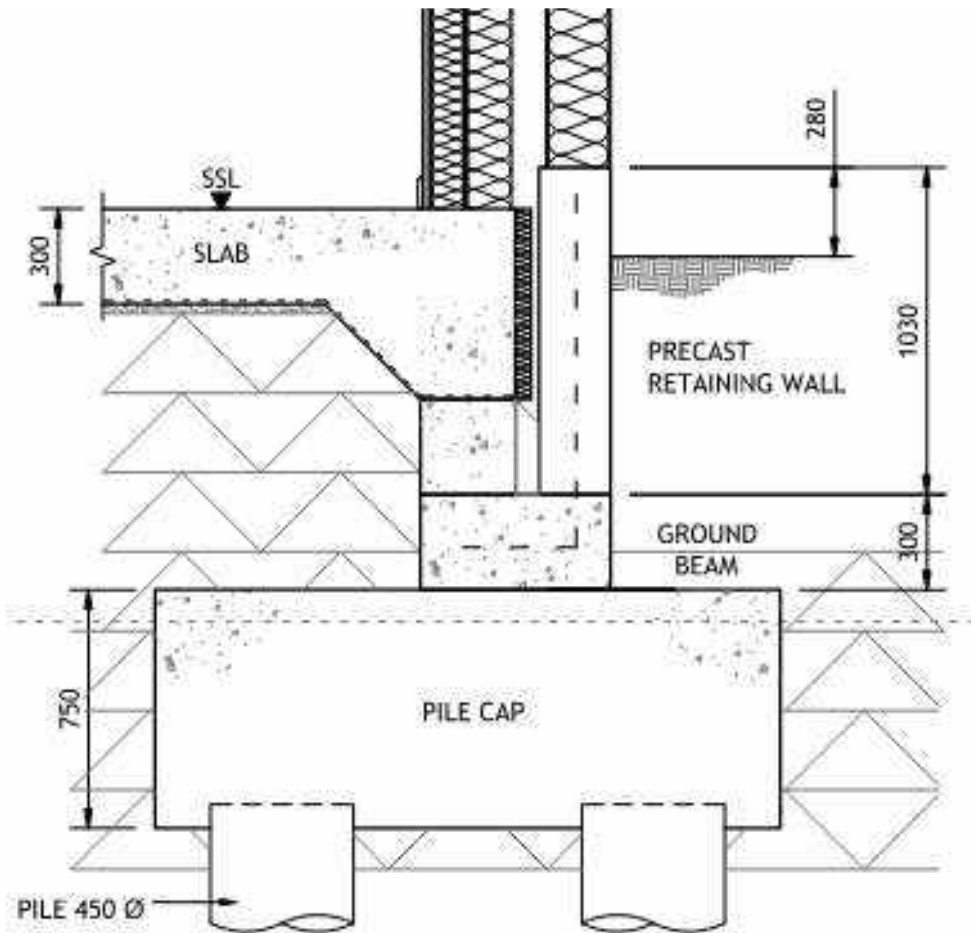
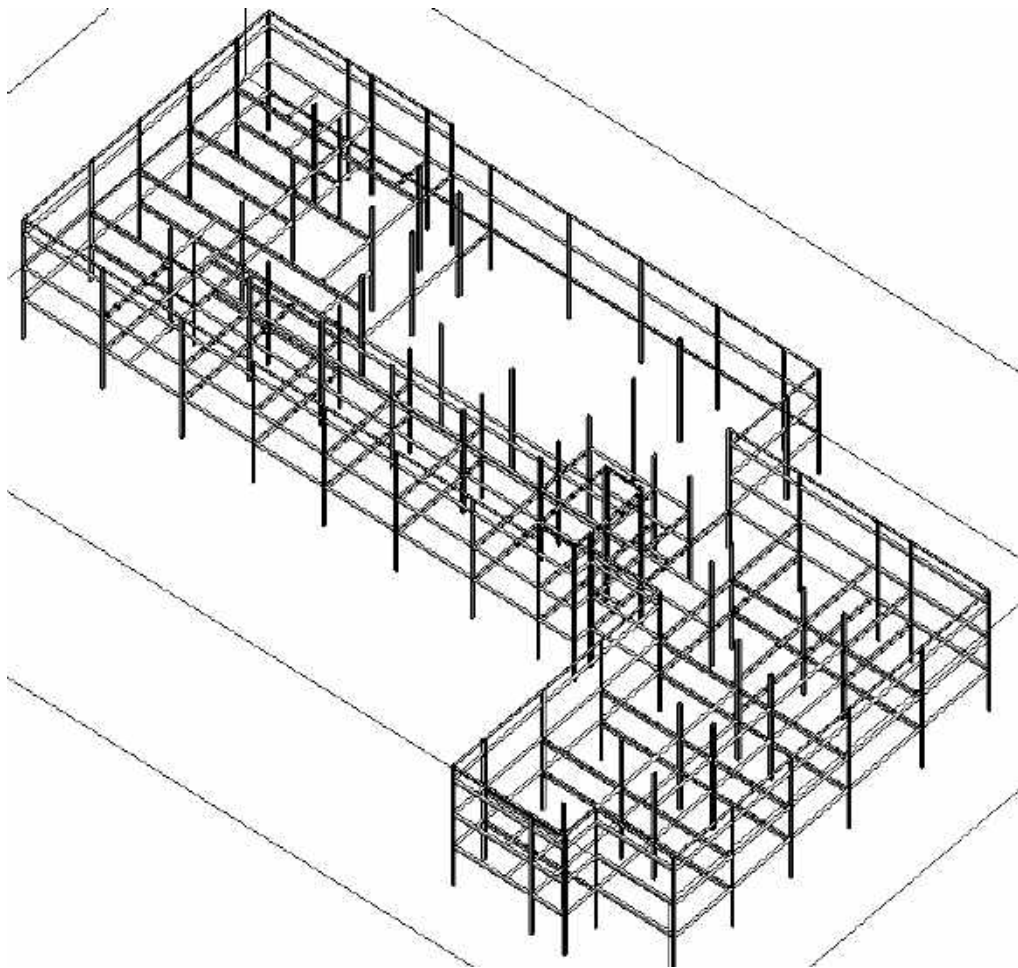
The current site ground conditions consists of up to 1.7 of made ground, then around 6 to 10m of tidal flat deposits, followed by up to 8m of Glacial Till.

The recommended solution is piling with piles of 450mm diameter of circa 20m length (length and diameter to be confirmed by specialist designer/ contractor). The foundations will be kept as high as possible to be above the high-water table.

The proposed structure will consist of a braced steel frame, supporting precast concrete hollow-core planks acting compositely with primary steel beams. The floor system will act as a diaphragm distributing lateral forces to vertical braced bays. This is achieved through the tying of the precast planks to the steel frame/ each other and infill the concrete. Gravity and Lateral forces will be distributed to the foundations via steel columns and the vertical braced bays.

The steel frame buildings will be constructed so that in the event of accidental damage, the building will not suffer collapse to an extent disproportionate to the cause. The structure is defined in Table 11 of “The Building Regulations 2010, Approved Document A3” as class 2B. The structural frame, foundations, floor slabs, roof and stairs will be designed to a minimum life expectancy of 50 years.

For more information, please refer to the Structural Design Philosophy, Document Name: SRP1155-MRG-ZZ-XX-T-S-0002, which accompanies the planning application.



INITIAL STRUCTURAL
MODEL

7.00 Structural & Civil Engineering

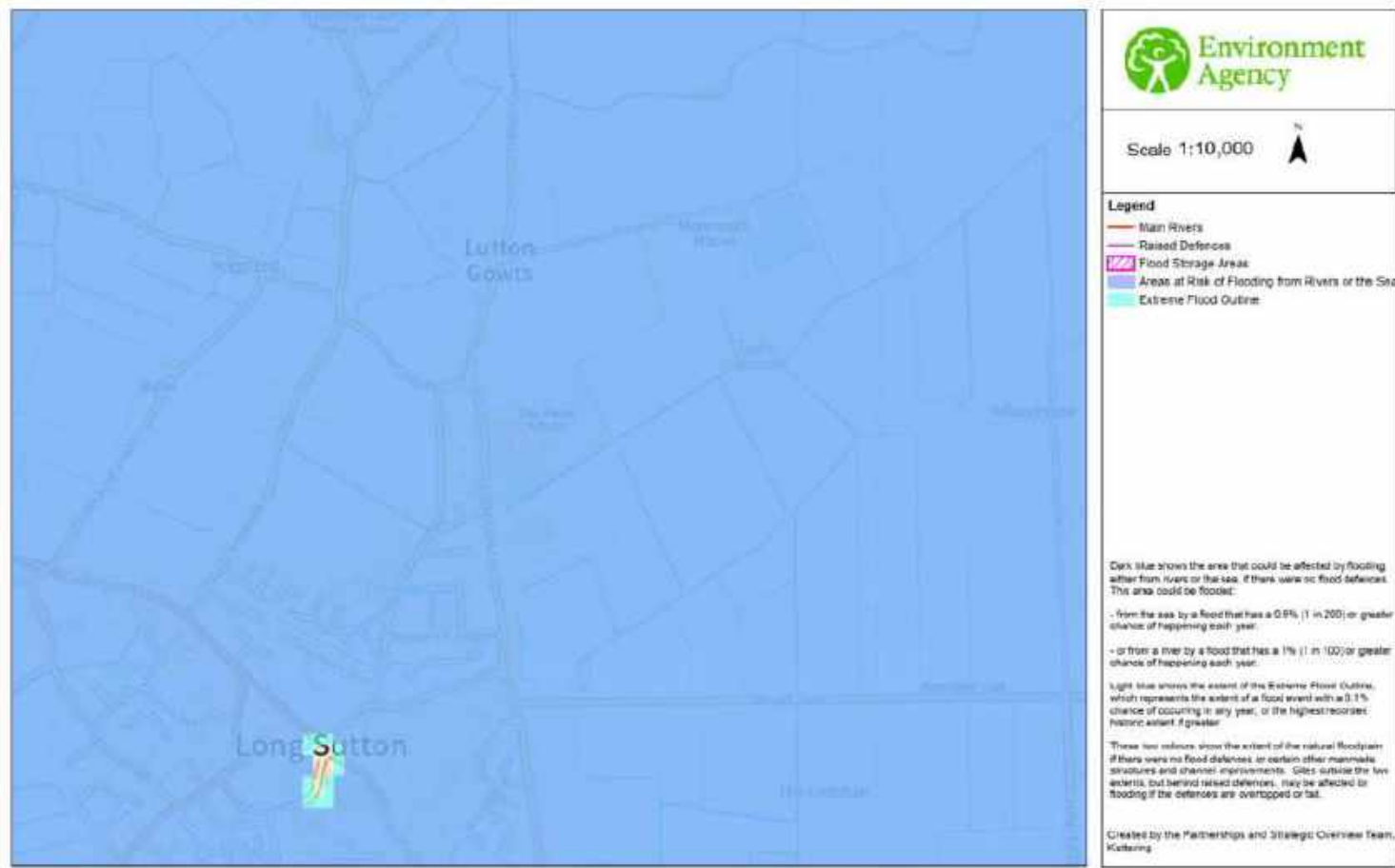
7.03 Flood Risk Assessment

The site is located at Little London, Long Sutton. The nearest postcode is PE12 9LF. The current use of the site is the University Academy Long Sutton. The current use vulnerability classification of the site is More vulnerable. The site is located in the River Flood Zone 3.

The proposed development includes the demolition of the current buildings and construction of new building centre and common areas. The vulnerability classification of the proposed development is More vulnerable with an estimated lifetime between 50 and 100 years. It is concluded that subject to the proposed mitigation measures, the site can be developed in accordance with the provisions of the NPPF and the requirements of the Environment Agency and the local planning authority.

The report demonstrates that the proposal will be safe, in terms of flood risk, for its design life and will not increase the flood risk elsewhere. It is proposed that a formal Flood Warning and Emergency Response Plan is developed for the proposed development to communicate flood emergency response procedures to all the occupants of the site.

For more information, please refer to the Flood Risk Assessment for the, University Academy Long Sutton, Reference: 445 FRA-v2, which accompanies the planning application.



ENVIRONMENT AGENCY FLOOD RISK MAPPING | FROM FRA

7.00 Structural & Civil Engineering

7.04 Surface Water Drainage Strategy

The site is located within the catchment area of the South Holland Drainage Board, and there is a main ditch along the boundary to the south of the site. It is assumed that parts of the site sheds of into the main ditch.

The hardstanding on the site is positively drained and discharged to the surrounding ditches. There are also multiple small soakaways as discharge points around the site, plus an infiltration basin feature located near the main entrance of the school.

It is proposed to build a new school in the northern part of the site with associated hardstanding areas (parking, bus/car drop-off, MUGA, external paths and open areas) before demolishing the existing school. In accordance with EA guidelines and CIRIA documents, surface water runoff should be managed as close to its source as possible. It is proposed to discharge surface water at a restricted rate to the main ditch along the site. An Ordinary Watercourse Consent will be needed to confirm connection proposal.

To achieve the 2l/s rates, rain gardens, swales, permeable pavement and open attenuation ponds are proposed to temporarily store surface water before discharging to the main ditch. Approximately 600m3 to 1000m3 of total storage is required. Full hydraulic modelling of the site will confirm exact storage needed.

For more information, please refer to the Drainage Strategy Report: SRP1155-MRG-ZZ-XX-T-C-0003 which accompanies the planning application.



SURFACE WATER DRAINAGE STRATEGY

7.00 Structural & Civil Engineering

7.05 Foul Drainage Strategy

The site has an existing foul drainage network serving the site which eventually outfalls to the public sewers in Little London Road. A new connection to the public sewer will be constructed in Little London Road.

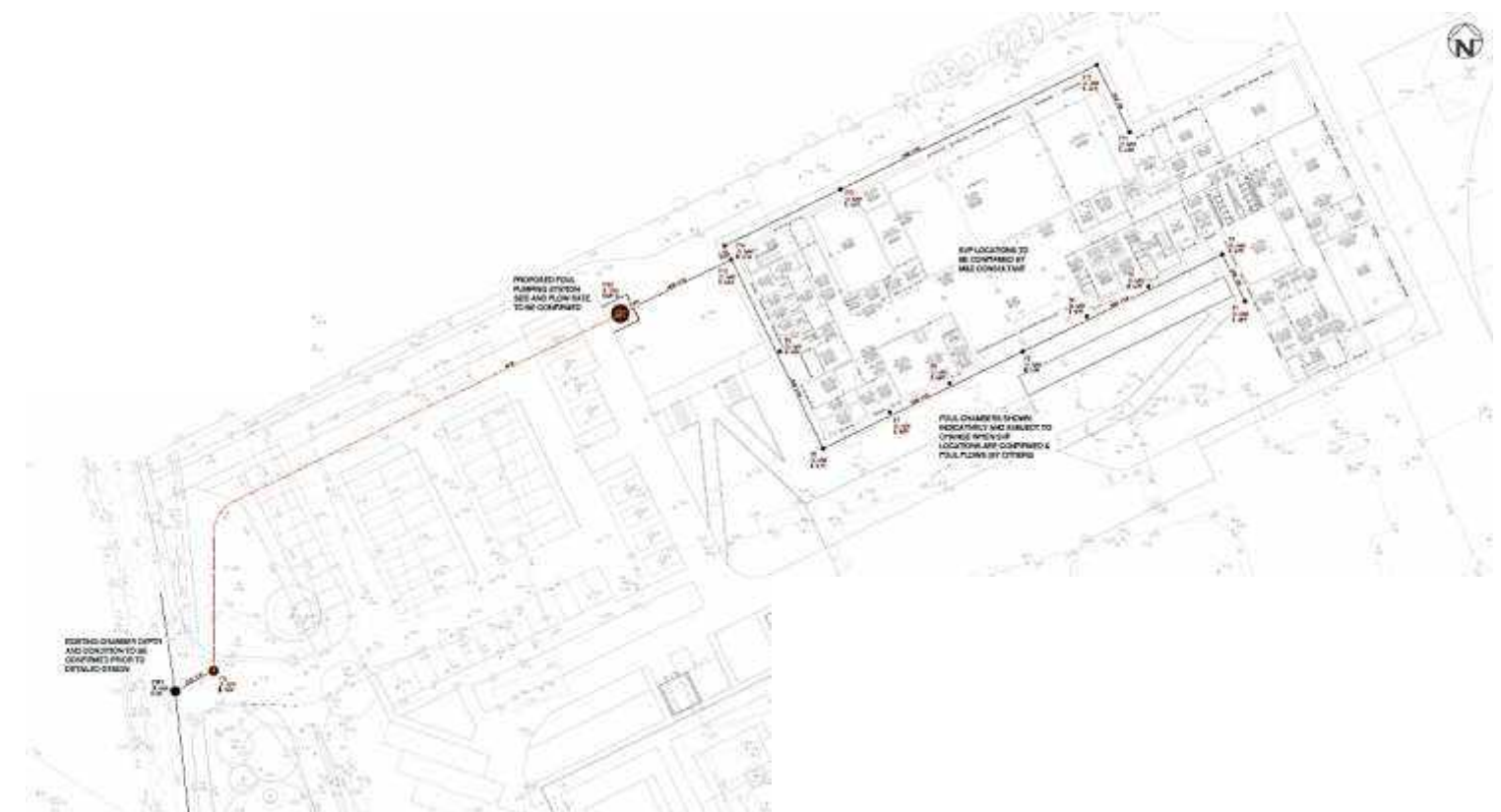
The development will also include a new foul water pump which is to be located in the North of the site. This foul water pump will serve the new school and outfall to the gravity foul water network at ground level. The pump will be sized to accommodate 24-hour emergency storage as required by Building Regulations Part H. The school will serve 750 pupils and 103 staff which, assuming total gravity connection, equates to a potential 24-hour emergency storage of:

$$853 \text{ persons} \times 50 \text{ l/d} = \mathbf{42,650L}$$

The pump is proposed to discharge to the sewer at a peak flow rate of 6l/s. Confirmation is to be provided by the Public Health Engineer.

A 'Pre-development Enquiry' was submitted to Anglian Water to confirm capacity exists within the receiving public sewers. We are awaiting a response from them.

For more information, please refer to the Drainage Strategy Report: SRP1155-MRG-ZZ-XX-T-C-0003 which accompanies the planning application.



FOUL WATER DRAINAGE STRATEGY

University Academy Long Sutton | 8.00 Sustainability & Building Services

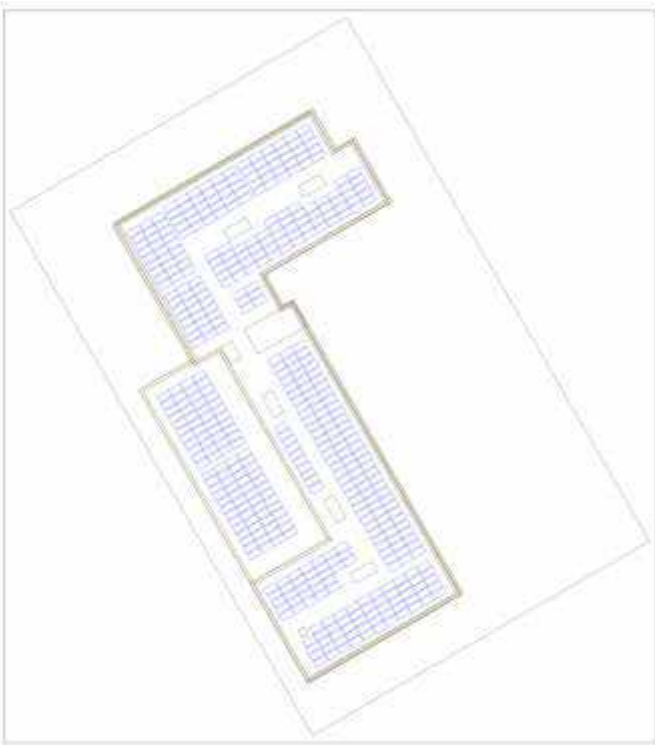
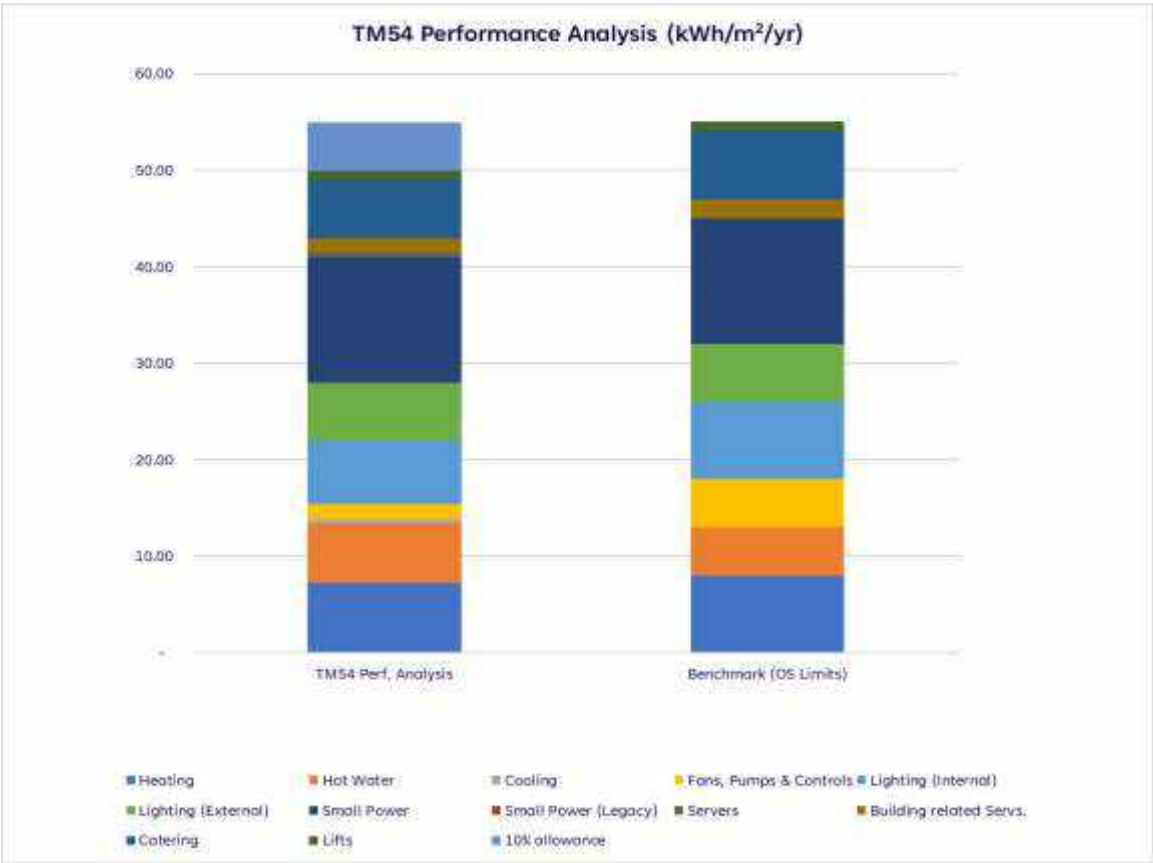
8.00 Sustainability & Building Services

8.01 Sustainability & Low Energy Strategy

The building design contains many features that help contribute to the exemplar performance level, a brief summary of these are provided below:

- Design of buildings on a fabric-first principle to ensure that in the first instance an optimised energy efficient building envelope is provided before more complex technologies that may not stand the test of time are introduced
- Design to optimise the benefits of natural light, making use of climate-based daylight modelling to ensure that buildings maximise the use of natural daylight, reducing energy costs and improving internal conditions
- Use of LED lighting throughout, which generates a 40% energy saving
- Design to eradicate mechanical cooling by mandating the use of adaptive thermal comfort modelling, whilst setting clear standards for natural ventilation, use of thermal mass within the building and CO₂ monitoring to ensure good internal environmental conditions. TM52 modelling is used to demonstrate compliant environments in terms of overheating
- Use of heat pumps for space heating and hot water to the catering kitchen ensure the building is all electric and fossil-fuel free (except for science curriculum use), in accordance with the Governments low-carbon roadmap
- Roof mounted PV array to achieve Net Zero Carbon in Operation in accordance with the DfE Output Specification

The buildings energy consumption has been estimated using the TM54 methodology to ensure that the estimate is accurate and avoids ‘the performance gap’. The top image to the right shows the estimated energy consumption and bottom image shows the roof mounted PV array that helps the building achieve Net Zero Carbon in Operation (NZCiO) in accordance with the DfE requirements.



ENERGY PERFORMANCE ANALYSIS & PHOTOVOLTAIC LAYOUT

8.00 Sustainability & Building Services

8.02 Incoming Services & Utilities

The proposed utility philosophy drawing (shown to right) indicates the proposed connections to the site boundary, external ductwork and building intake locations. Noting the existing school will remain live until the staff and students have transferred to the new building, services will need to be re-routed outside the development zone for this to happen. As well as providing new utility services to the new build, the project works requires the installation of new feeds to the retained Rainbow Nursery buildings.

Water: A new potable utility water connection shall be provided for the new building. This shall be taken from the nearby public main in Little London and a new primary meter shall be installed just within the boundary to the site. A separate supply has been taken to re-feed the nurseries at the south of the site. EFAD is sub-fed from the school.

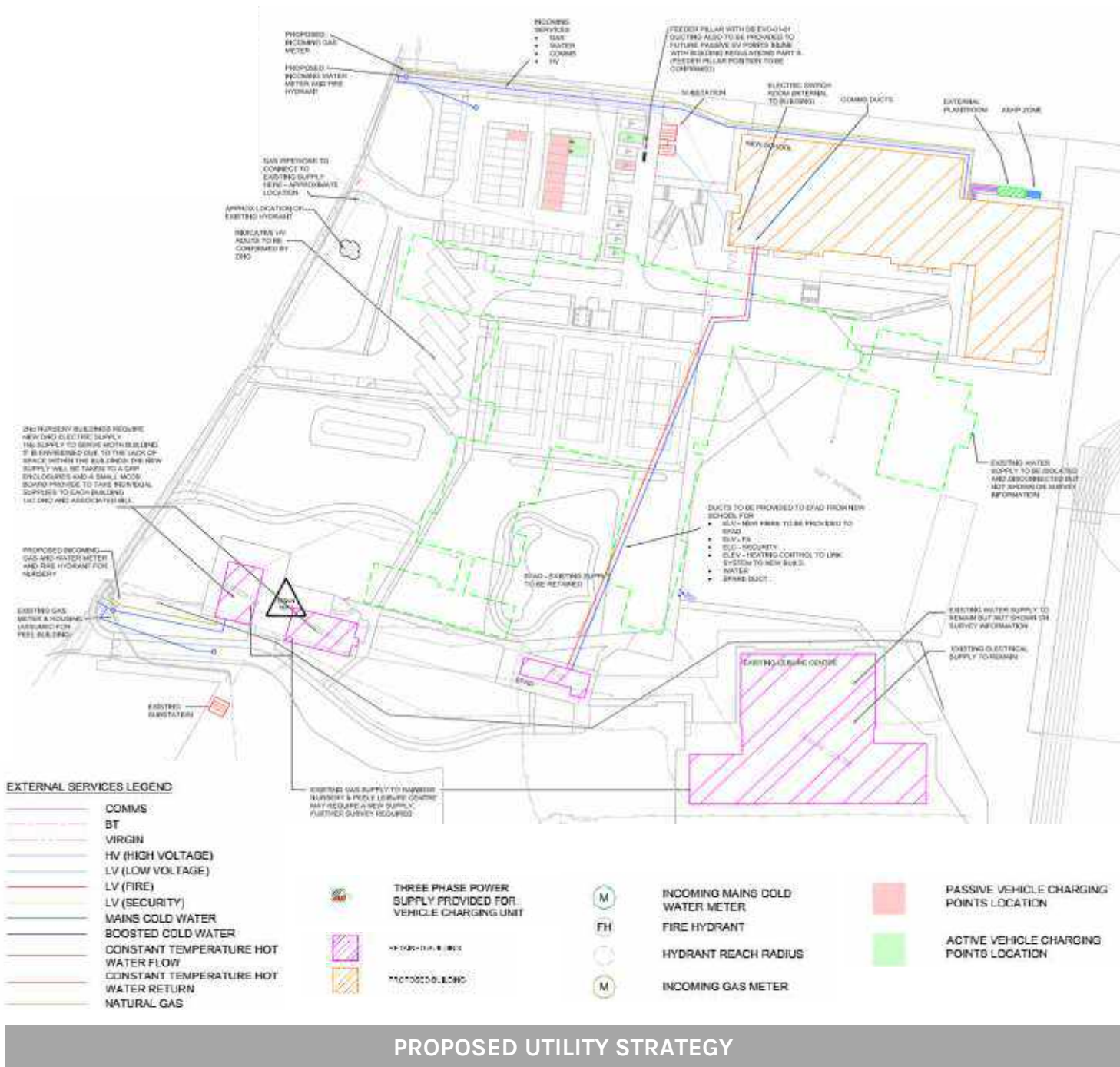
Gas: A new buried PE low pressure gas supply shall be taken from the local gas utility infrastructure within Little London to supply the new school bunsen-burners via a gas meter enclosure located in the soft landscape before the car park. From this point a new buried low pressure gas supply will be taken to the main building intake. A separate supply has been taken to re-feed the Rainbow Nursery.

Fire Hydrant: A new fire hydrant is proposed to be located within the site boundary to ensure the new build has the necessary fire hydrant coverage. This hydrant meets the requirements of Part B of the Building Regulations and BB100, falling within 100m of a means of entrance to the new build.

Electricity Supply: The new school building will have a single dedicated Low Voltage TPN power supply from a new DNO owned substation. The new substation has been integrated into the landscape architects proposed site layout. The substation shall be sited on a 4m x 4m (minimum) concrete plinth. An External switch room is needed adjacent the substation and LV cables will be installed from this position to the new building. The Nursery buildings will have a single electric supply serving both building, an intake position is to be agreed for the DNO cutout and meter. The supplies to EFAD, The leisure centre and the pitch lighting are to remain.

Telecommunications: The necessary external / internal ducts and draw-in pits shall be provided, as per utility company's requirements. External ducts shall be installed from the proposed main building to the site boundary in locations agreed with the utility company for the new telecommunications services. Ducts are to be provided from the new school to block EFAD and a new fibre will be installed to support this block.

Electric Vehicle Charging: EV Charging has been included within the new car park. 3 active spaces have been provided along with 10 passive spaces. The passive spaces provide the infrastructure to allow the spaces to be made active in the future.



8.00 Sustainability & Building Services

8.03 Building Services Strategy - Ventilation

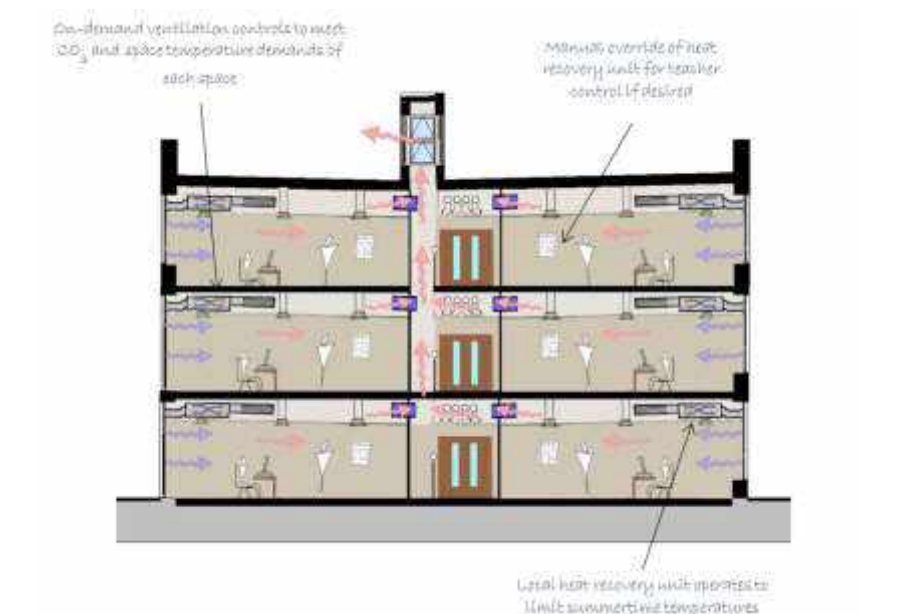
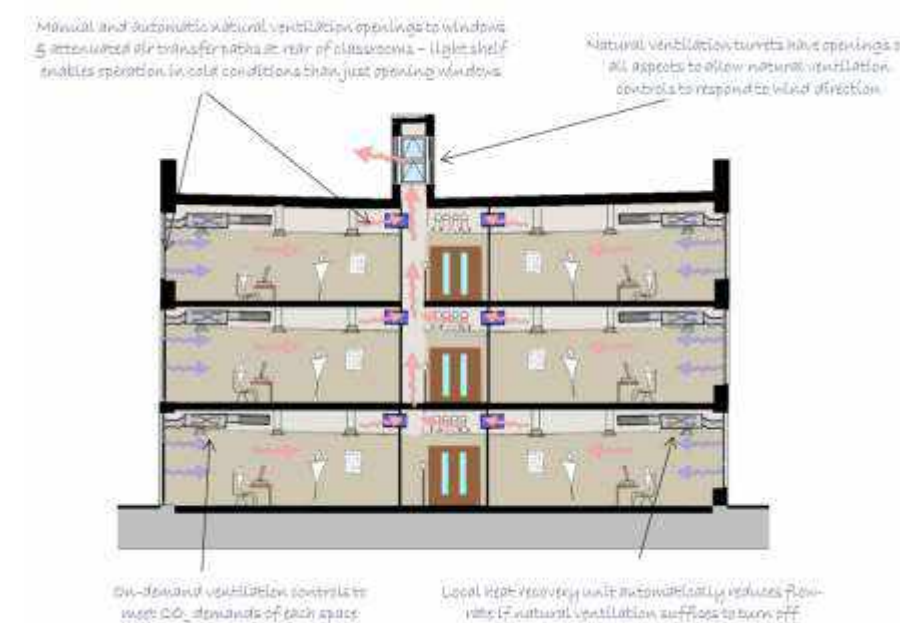
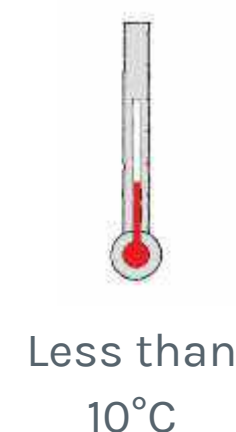
The majority of spaces shall be served by a mixed-mode ventilation strategy with local heat recovery units capable of providing 8 l/s/p. The ventilation systems shall incorporate heat recovery ventilation which is essential to reduce the energy demand of the building and to provide a means of maintaining the indoor air quality without causing discomfort from draughts associated with natural ventilation in cold temperature.

A secure night purge ventilation strategy will be operated utilising the local heat recovery ventilation units based upon the local air temperature stat located within each classroom. Cross ventilation is provided by using high level turrets to drive natural ventilation air flow. Generous amounts of openings windows are provided to ensure air can enter the occupied zone within the perimeter rooms. As the air warms from occupants, it will rise and flow through high level openings

Mixed-mode ventilation - Winter: The image to the right ('Less than 10°C') shows the operation of the ventilation strategy during the winter months. The windows remain closed and a local heat recovery unit can provide the full fresh air requirement (8l/s/p = 256 l/s total) in a very energy efficient way making use of the heat recovery element and satisfying the requirement to prevent cold draughts.

Mixed-mode ventilation – Shoulder Season: The image to the right ('10 to 25 °C') shows the mid-season scenario when outside conditions are mild, the occupants can utilise the natural ventilation at their own discretion where the wall mounted CO₂ indicator shall inform occupants of when additional ventilation is required. The heat recovery unit will detect the increased air supply from natural ventilation by detecting the reduction in CO₂ levels in the space. This strategy ensures that the heat recovery unit only runs when necessary to target energy efficiency.

Mixed-mode ventilation – Summer: The image to the right ('Greater than 25 °C') natural ventilation provision comprises of high and low level openings to promote good air flow. Please refer to typical classroom layout drawing for 3D view. This promotes a high level of natural ventilation in the majority of spaces. The strategy provides a temperature stat input that ensures that if temperatures rose significantly, there is a mechanism to increase air movement as depicted below.



8.00 Sustainability & Building Services

8.03 Building Services Strategy

Low Temperature Hot Water Heating: A new low temperature hot water heating (LTHW) installation shall be provided comprising an Air Source Heat Pump (ASHP) installed behind the new build. The heating system shall be designed to a maximum mean LTHW flow temperature of 43°C. This is to allow for connections to a low carbon heat source in the future.

The heating plant shall be sized to have a minimum of 66% of the peak building load as redundancy to provide standby coverage in the event of a minor failure. The quantity and rating of ASHPs shall be reviewed as the design progresses.

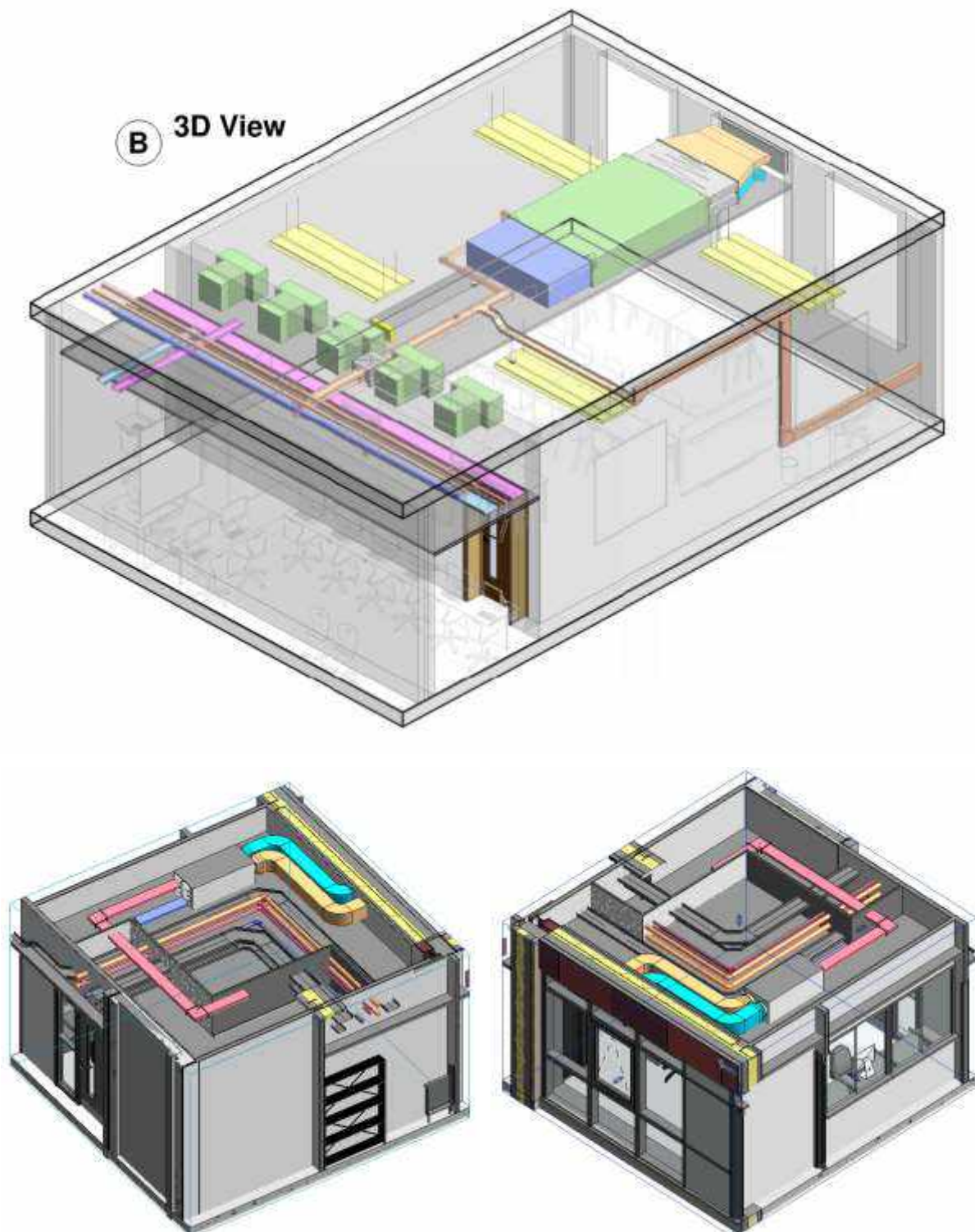
Cold Water: Potable cold water storage shall be provided in the form of a pre-insulated GRP twin compartment potable cold-water storage tank located within the water tank room at the top of the staircase. A Cat5 system shall also be provided if necessary to meet local water regulations.

Hot Water: Domestic hot water shall generally be generated by local 'point of use' electrical water heaters or standalone packaged Air Source Heat Pump (ASHP) units with hot water calorifier's in areas such as WC's, Showers, Food tech. This ensures that hot water is generated independently of the space heating system and avoids the heat loss from circulation systems which can cause overheating.

The domestic hot water to serve the Main Kitchen shall be generated by a standalone packaged Air Source Heat Pump (ASHP) unit with hot water calorifier. Hot water serving the Kitchen will be generated at 60°C and re-circulated to ensure a minimum return temperature of 55°C..

Building Management System: The proposed new building shall contain a central Building Management System (BMS) to control the majority of the building services as described herewith. We have kept the controls as simple as possible whilst delivering functionality.

The central BMS system shall have a front-end computer or a touch screen tablet device most likely located in the facilities manager's office. The system shall include the required interlock to the Fire Alarm system. We have developed the BMS system to be user-friendly whilst delivering the functionality required.



BUILDING SERVICES FROM REVIT MODEL – TYPICAL CLASSROOM AND GENERAL OFFICE

8.00 Sustainability & Building Services

8.04 External Lighting Strategy

The proposed external lighting will be provided and installed in compliance with the OS Annex 2E, CIBSE Lighting Guide 5, BSEN 13201, BS 5489 and ILP GN01 (The Reduction of Obtrusive Light), all generally as indicated on the external lighting philosophy drawing.

We propose to provide external lighting to pedestrian routes, the new vehicular areas, vehicle turning and unloading points, the schools main entrance, bin stores, bike storage spaces and external plant areas and walkways. Exterior lighting positions will be co-ordinated with the final agreed plant layouts.

When selecting and locating the luminaries we will consider colour rendering, installation efficacies and maintenance issues as well as the light positioning relative to each building. The luminaires will have LED's as the light source and comply with the requirements of the OS Annex 2E table 11 in terms of performance.

The luminaries will be of the fixed type and selected to minimise light pollution and ensure light levels are kept within the limits as required by ILP GN01 and BS 5489-1 to avoid nuisance to the adjacent neighbourhood.

The external lighting will be monitored in terms of energy usage and controlled automatically by a photocell and time clock switch arrangement. A manual override switch will also be provided to allow testing and manual switching.

The external lighting system will be designed to achieve the following average lighting levels (as a minimum):

- | | |
|------------------------------------|--------------------------|
| • Vehicle Movement / parking areas | 10 Lux, 0.4 uniformity. |
| • Building Perimeter | 20 Lux, 0.25 uniformity. |
| • Pedestrian Walkways | 5 Lux, 0.25 uniformity. |
| • Bin Store Area | 40 Lux, 0.4 uniformity. |
| • Delivery Area | 50 Lux, 0.25 uniformity. |



LEGEND

- | | | |
|---|---|---|
| PROPOSED BUILDING FOOTPRINT | PEDESTRIAN WALKWAY AREAS
(5 LUX MINIMUM MAINTAINED ILLUMINANCE WITH 0.25 MINIMUM UNIFORMITY) | EXTERNAL AUDIO/VISUAL INTERCOM PANEL, LOCATED ADJACENT MAIN EXTERNAL GATES AND MAIN SCHOOL ENTRANCE |
| VEHICLE MOVEMENT / PARKING AREAS
(10 LUX MINIMUM MAINTAINED ILLUMINANCE WITH 0.4 MINIMUM UNIFORMITY) | BIN STORE AREA
(40 LUX MINIMUM MAINTAINED ILLUMINANCE WITH 0.4 MINIMUM UNIFORMITY) | INTERNAL MASTER AUDIO/VISUAL INTERCOM PANEL LOCATED AT SCHOOLS MAIN RECEPTION |
| BUILDING PERIMETER AREAS
(20 LUX MINIMUM MAINTAINED ILLUMINANCE WITH 0.25 MINIMUM UNIFORMITY) | | |

LIGHTING STRATEGY DRAWING

8.00 Sustainability & Building Services

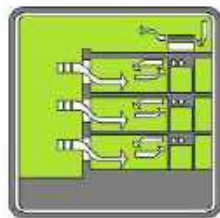


Design for
100%
Reduction
CO₂ in operation

- Designed for net-zero carbon in operation
- Fossil-fuel free
- Efficient building envelope with 'fabric-first' approach
- Inherently low-energy systems including heat recovery & LED lighting
- Passive cooling with thermally massive structure
- Integrated renewables with rooftop photovoltaic array
- Air source heat pump to provide for space and water heating



SOLAR
PHOTOVOLTAICS



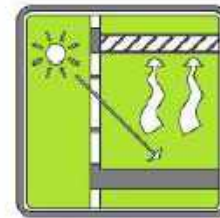
HYBRID CROSS VENT
WITH HEAT RECOVERY



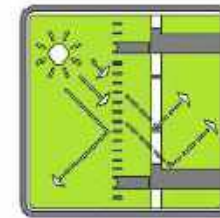
AIR SOURCE
HEAT PUMP



CYCLIST
FACILITIES



HIGH
THERMAL MASS



OPTIMISED
DAYLIGHT DESIGN



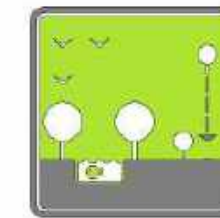
HIGH PERFORMANCE
ENVELOPE



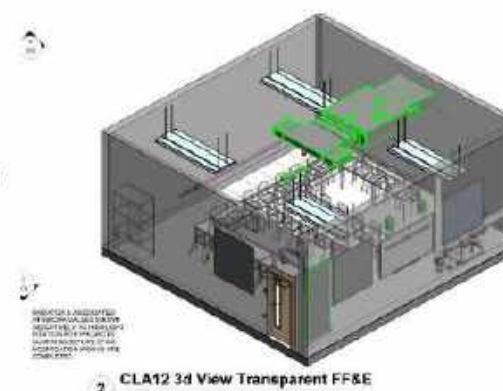
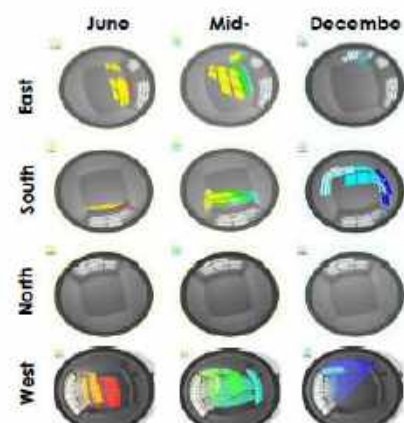
LED
LIGHTING



OUTDOOR
CURRICULUM



ENHANCED
ECOLOGY



INTEGRATED LOW ENERGY & SUSTAINABILITY TECHNOLOGIES

8.00 Sustainability & Building Services

8.05 Acoustic Strategy & Plant Noise Reduction

The proposed acoustics strategy (including building envelope, internal walls and finishes) will be provided in accordance with the performance requirements of Building Bulletin 93, 2015 (BB93).

An external noise survey done at the site determined that the dominant noise source affecting the proposed school is road traffic along Little London road.

Ventilation: External noise levels are such that natural ventilation via partially openable windows would be acceptable to all teaching and learning spaces and ancillary spaces to meet BB93 internal noise requirements.

Mechanical ventilation systems (including local heat recovery units) will be designed to meet the BB93 internal noise requirements with sound attenuation measures applied as appropriate.

Noise in outdoor areas: External noise levels are such that BB93 targets will be met in outdoor areas (i.e. MUGA, Hard / Soft Informal areas and outside dining area).

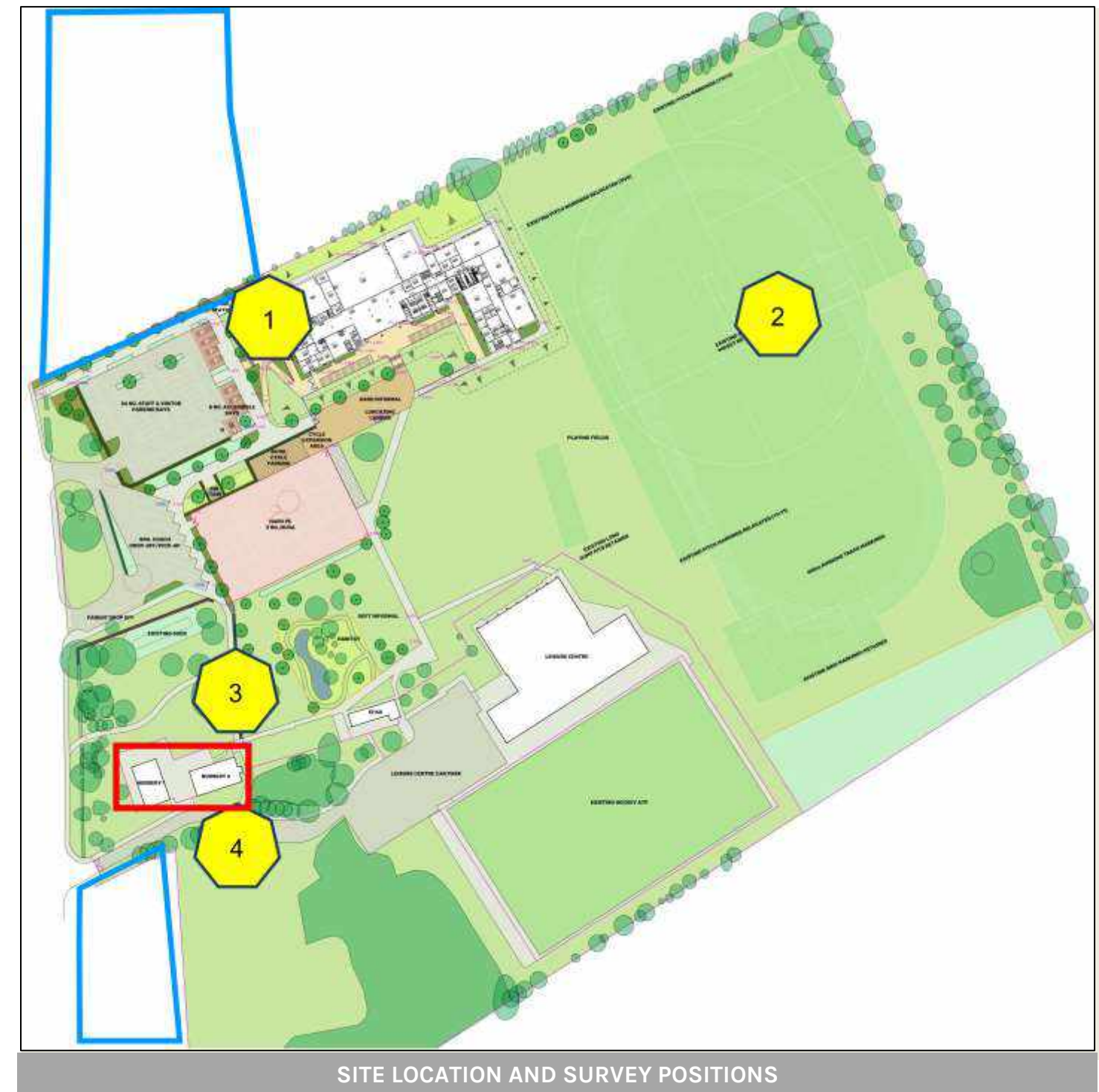
An assessment of noise from the proposed 3-court MUGA indicates that noise targets would be met at the nearest noise sensitive properties. Recommendations for mesh fence constructions and management have been provided so that noise levels generated are not unduly elevated.

An assessment of proposed car park and coach drop off / pick-up noise indicates that the level of impact would not be significant when considering noise from that currently generated by the existing car park that is to be replaced.

Plant Noise Emission: Noise from fixed building services plant will be designed to achieve the following Rating noise limits at 1m from the nearest noise sensitive receptors so is of 'low impact'; assessed in accordance with BS4142:2014+A1:2019:

<u>North Receptors</u>	<u>South Receptors</u>
- 44dB(A) daytime	- 40dB(A) daytime
- 35dB(A) night-time	- 32dB(A) night-time

Sound attenuation measures will be applied to the services plant to meet the targets as appropriate.



8.00 Sustainability & Building Services

8.06 The RIBA 2030 Challenge

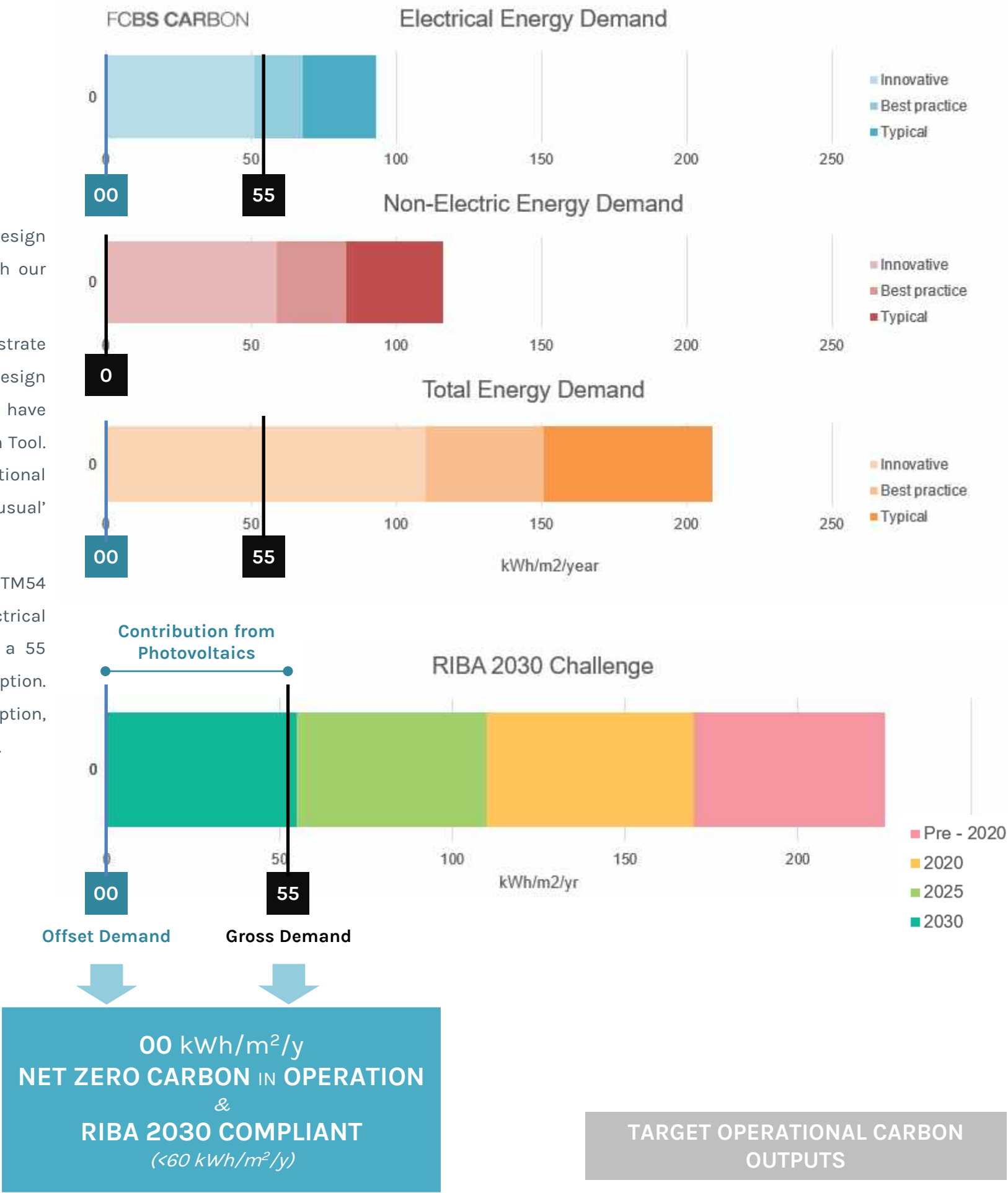
As signatories to the RIBA 2030 Challenge, CPMG Architects is committed to measuring our design proposals against the Challenge’s carbon reduction and wellbeing targets, and to working with our clients and engineering colleagues to achieve the best possible outcomes on all our projects.

We believe the University Academy Long Sutton project offers an excellent opportunity to illustrate progress against the 2030 targets for both embodied and operational energy. Our initial design proposals embed a set of carefully considered principles in order to support this ambition. We have undertaken an initial lifetime carbon assessment of the design proposals, using the FCBS Carbon Tool. This analysis confirms that the proposals are on target for delivering 2030 performance for operational energy, and show significant improvements in embodied carbon compared with the ‘business as usual’ benchmarks. Please see the initial outputs from the analysis opposite, and summarised below.

Operational Energy: The ratings for operational energy are taken from the design stage TM54 Performance Analysis. The design proposals currently designed to achieve a net operational electrical consumption of zero kWh/m2/y, as a net zero carbon in operation building. This includes a 55 kWh/m2/y contribution from on-site renewables to offset the anticipated gross energy consumption. This is well under the 2030 target threshold of 60 kWh/m2/y. In fact, the gross energy consumption, before the offsetting provided by renewables emissions, is already marginally under this threshold.

The principal design strategies adopted are as follows:

- Fossil-fuel free
- Efficient building envelope with ‘fabric-first’ approach and careful balance of glazed areas
- Hybrid stack-assisted ventilation with heat recovery in winter
- Inherently low-energy systems including heat recovery & LED lighting
- Passive cooling with thermally massive structure via night-time purge
- Careful balance of glazed areas & triple-glazed windows
- Climate-based daylight approach, with daylight-linked LED lighting
- Ground source heat pump to provide for space and water heating
- Integrated renewables with rooftop and canopy-mounted photovoltaic arrays



8.00 Sustainability & Building Services

8.06 The RIBA 2030 Challenge (cont.)

Embodied Carbon: The ‘business as usual’ benchmark for embodied carbon established by the RIBA 2030 Challenge is 1,400 kgCO₂e/m². The initial assessment undertaken on the proposals indicates an equivalent value of 765 kgCO₂e/m², including offsets from sequestered carbon in timber construction elements. This represents a 45% reduction in embodied carbon against the baseline.

The principal design strategies adopted to achieve this are as follows:

- Compact form factor & efficient building envelope
- Timber cassette external wall support system
- Incorporation of 25% GGBS cement replacement in in-situ concrete elements
- Reduction of waste by c. 80% off-site manufacture

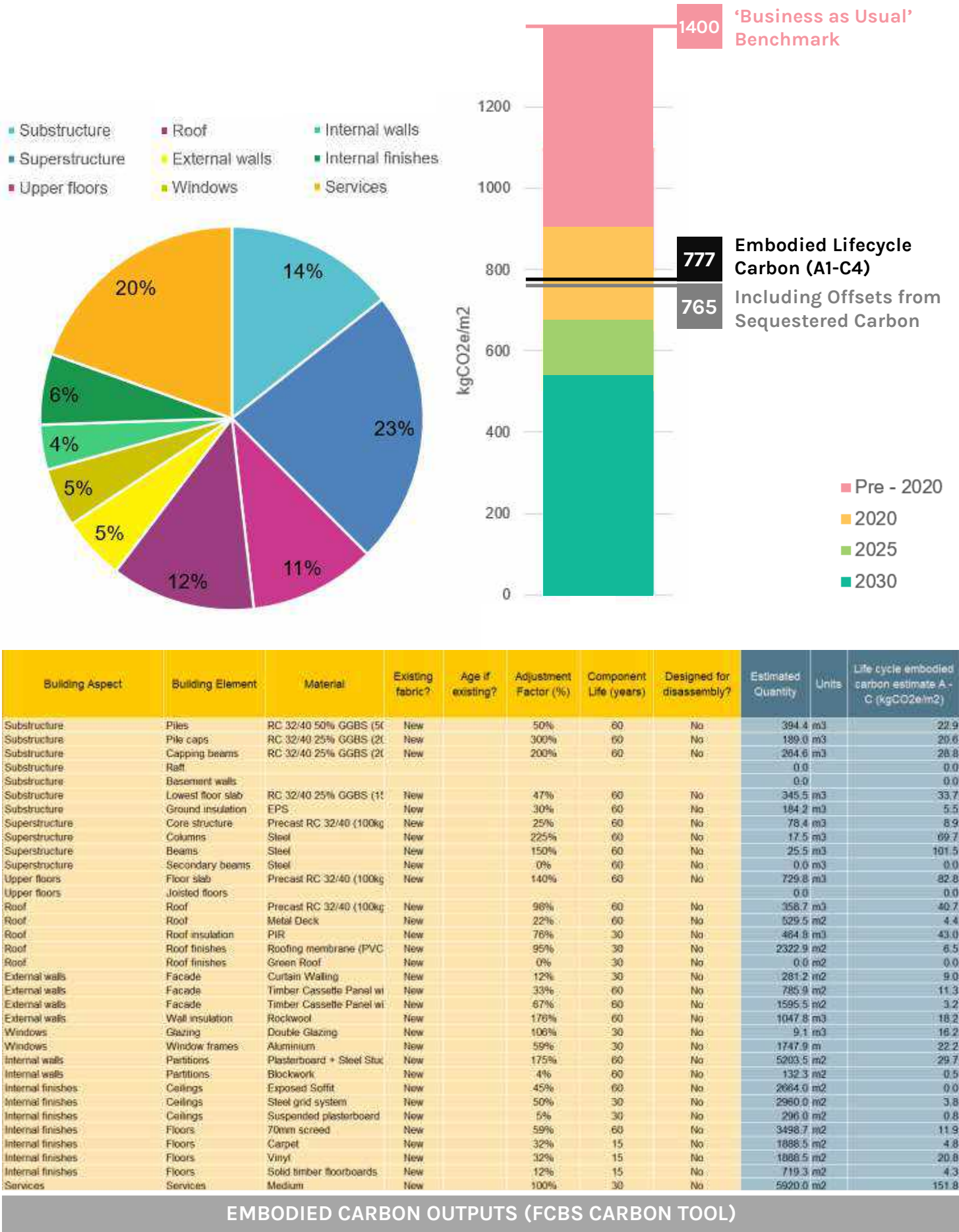
However, the RIBA’s 2030 target is for an embodied carbon rating of <540 kgCO₂e/m² for new school buildings; and the current proposals fall short of that target. The team will consider options for reducing the embodied carbon further, including the following:

- Increasing timber construction elements
- Increasing GGBS cement replacement in in-situ concrete elements
- Introducing limestone replacement in precast concrete planks

EMBODIED CARBON RATING
765 kgCO₂e/m²

45% REDUCTION
(<1,400 kgCO₂e/m²)

NOT YET RIBA 2030 COMPLIANT
(<540 kgCO₂e/m²)



University Academy Long Sutton | 9.00 Access Statement

9.00 Access Statement

9.01 Access for All

The building proposals present a fully accessible facility over three storeys, minimising barriers both to access and to learning. In particular, the proposals include full lift access serving the upper floor areas, with a fully compliant lift car, specified to support evacuation. The location on the site allows level access to the building from all approaches, and level thresholds at all entrances and exits will be incorporated as a matter of course.

The internal arrangement is simple and legible; the plan provides a straightforward principal continuous circulation arrangement. This legibility is strengthened further by direct visual and physical connections to the external landscape, and internally between the key teaching and learning spaces.

9.02 Waste Minimisation, Recycling and Storage

Recycling areas will be incorporated both internally and externally. Waste will be collected and segregated in the building, and daily collections will be made to transport waste to the external waste and recycling store. The waste and recycling compound is enclosed, and tucked away, though located on a principal enhanced width approach with easy access from the building and the main car parking area.

PROPOSED NEW
ENCLOSED
RECYCLING STORE



IMAGE TITLE

9.00 Access Statement

9.03 Maintenance Strategy

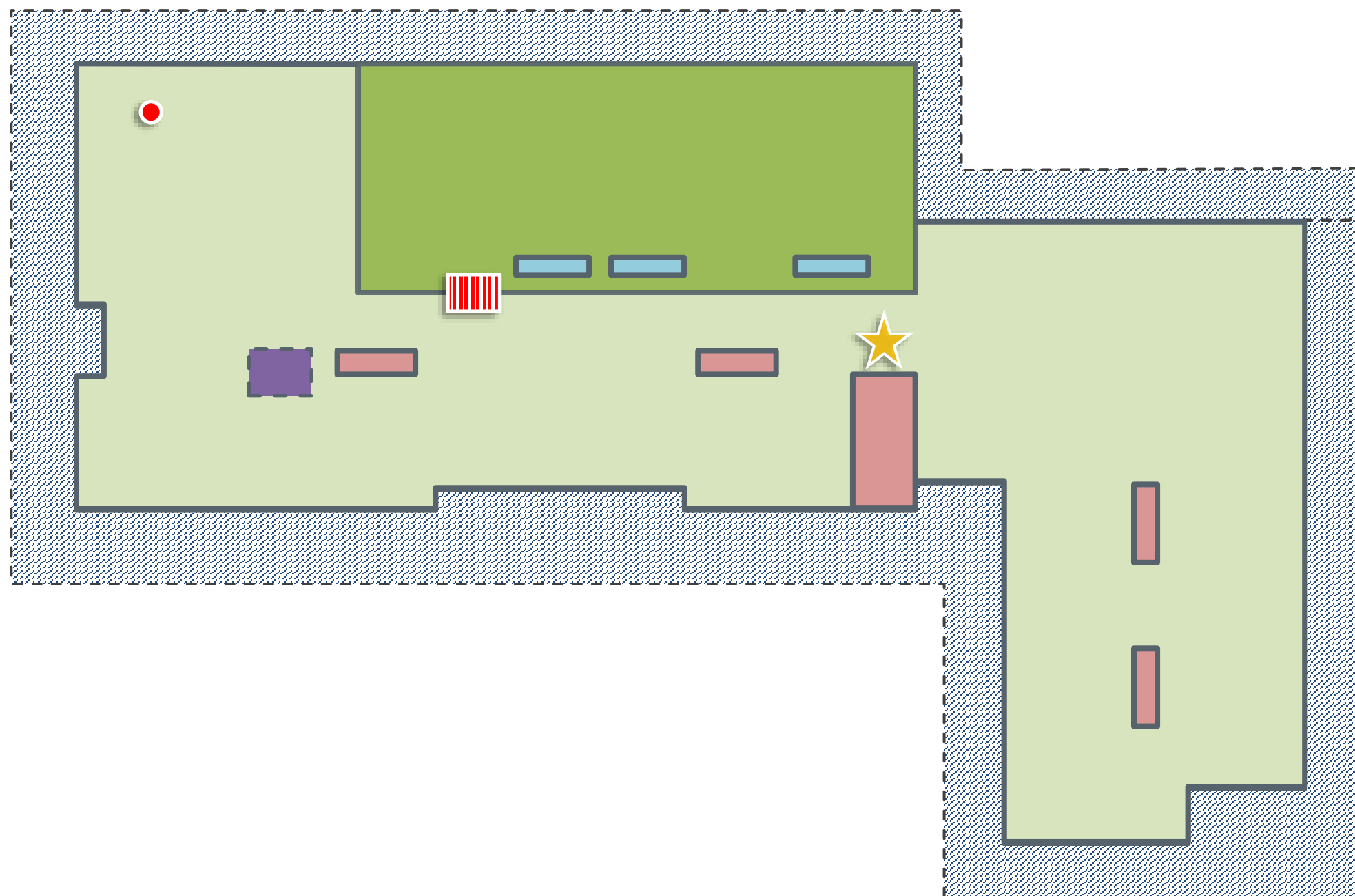
Our proposals establish a fundamentally low-maintenance solution, whilst also ensuring that safe and appropriate maintenance access is provided in a way which reflects best practice principles.

Plant is located at Level 00 with direct access from external areas; at L02 there is an Air Source Heat Pump Plant Room with direct access from circulation.

Rooftop areas are fully guarded with solid parapets, and a fixed step-over stair for horizontal access to lower roof levels. The main roof is accessed via an external door in the central second-floor stair core, and an escape-only hatch over the northern stairwell.

Window cleaning is generally to be by pole-and-reach apparatus from ground level. Periodic cleaning of the glazed canopies will be by pressure-washer from a mobile scaffold tower or MEWP.

-  FULLY GUARDED ROOF (HIGH LEVEL)
-  FULLY GUARDED ROOF (LOW LEVEL)
-  ROOFLIGHT – CLEANING FROM MAIN ROOF AREAS
-  VENT TURRET & ROOF ACCESS STAIR – UNGUARDED
-  ROOFTOP PLANT AREA – ACCESS FROM MAIN ROOF AREAS
-  GROUND-LEVEL MARGIN FOR WINDOW CLEANING ACCESS
-  ROOFTOP ACCESS DOOR FROM STAIR
-  SECONDARY ESCAPE - HATCH & TELESCOPIC LADDER (TBC)
-  STEP-OVER PROVISION



MAINTENANCE STRATEGY | ROOF LEVEL & PERIMETER

9.00 Access Statement



9.04 Sanitary Provision

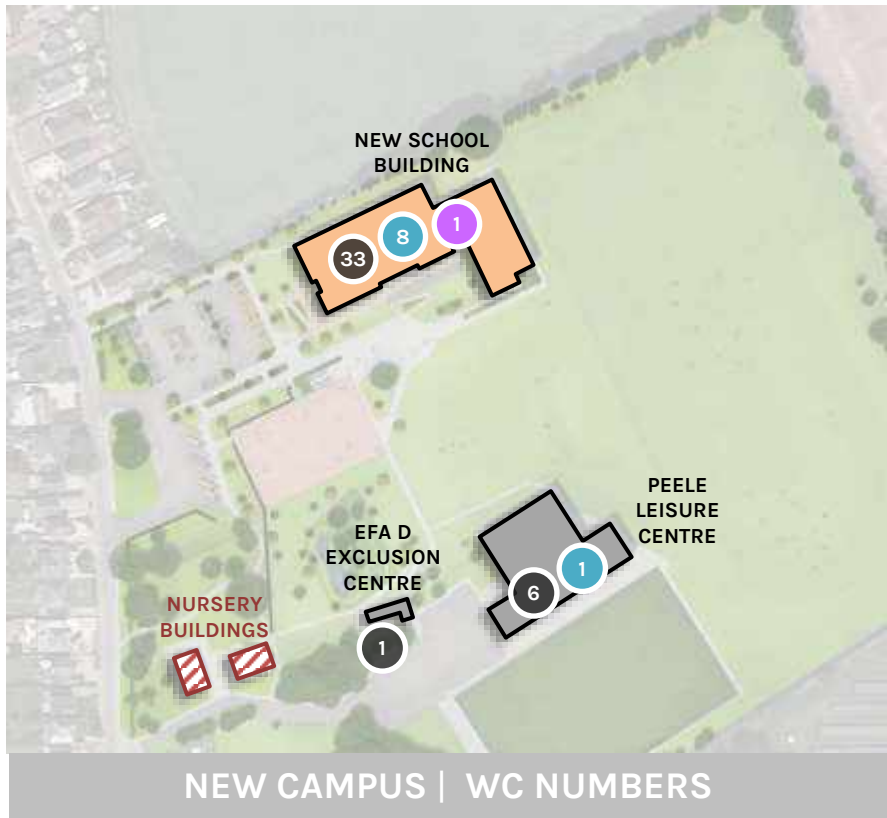
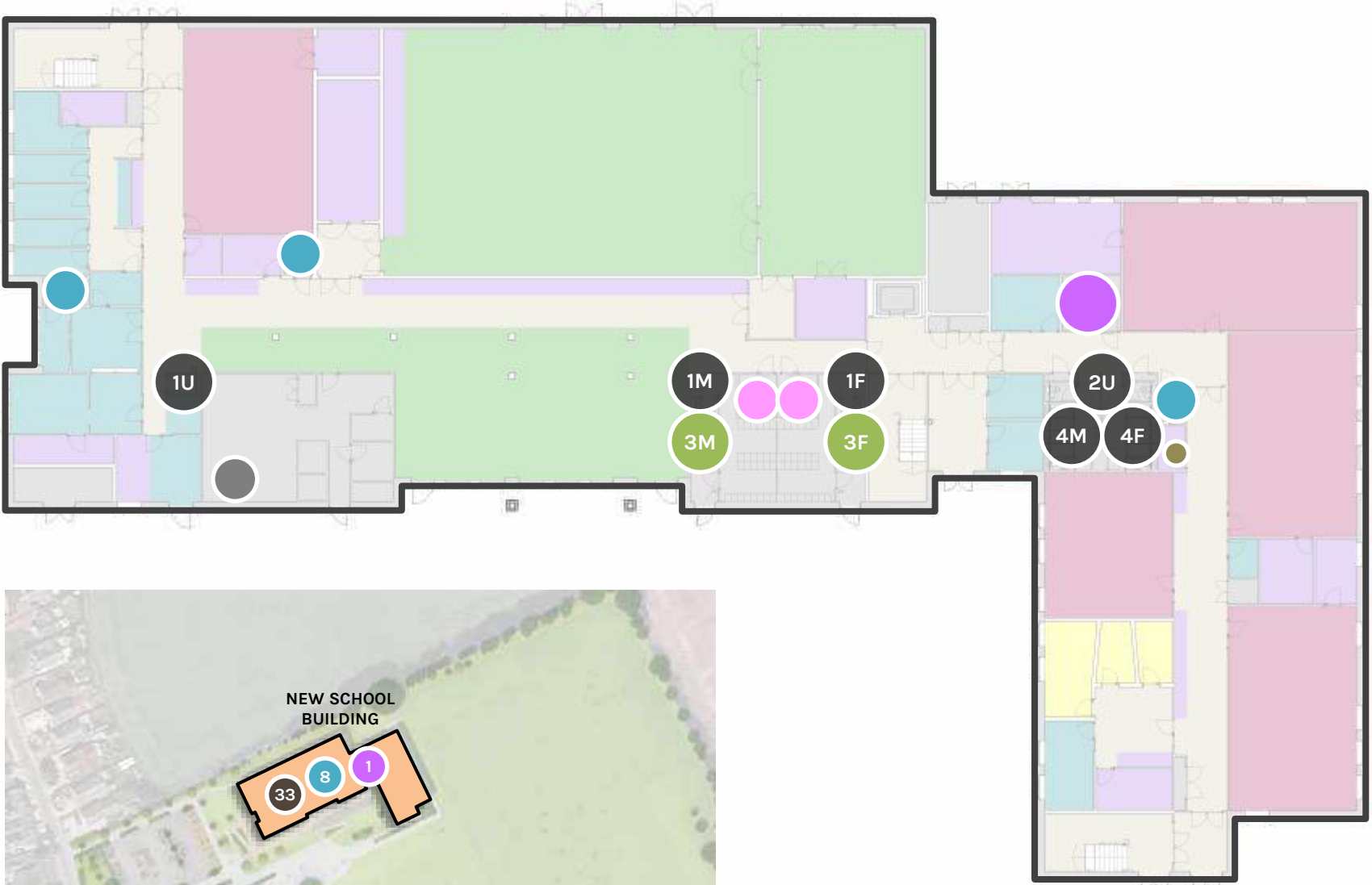
The pupil and staff WCs are carefully distributed across each floorplate to ensure that provision is available close to the point of need, to minimise unnecessary movement around the building. Central clustered arrangements of ‘superloos’ provide efficient stacks throughout the floors, close to the changing facilities for out-of-hours / community use.

Accessible WCs area provided on each floor, as well as a formal Hygiene Room located adjacent to the central WC cluster. A dedicated Visitor WC is provided within the main entrance lobby to avoid the need for visitors to have to enter the main body of the school. A dedicated unisex pupil WC is located adjacent to the sick bay for ease of access and supervision.

There are also existing retained sanitary provisions available on campus:

- 7no. Pupil WCs (6no. Peele LC + 1no. EFA D)
- 1no. Staff & Accessible WCs (1no. Peele + 0no. EFA D)

XX	PUPIL WC		HYGIENE ROOM
	ACCESSIBLE / STAFF WC	XX	PUPIL SHOWERS
	STAFF WC		ACC / STAFF SHOWER
	KITCHEN WC		CLEANERS STORE



LEVEL 00

9.00 Access Statement



9.05 Fire Strategy & Emergency Services Access

Ashton Fire Consultancy has developed a detailed fire strategy in accordance with the recommendations of BS 9999, which is the most suitable standard for this building type. A risk profile of B (Awake & Unfamiliar) has been assigned to the community use areas, with A (Awake & familiar) to the remaining accommodation. As the top floor is more than 7.5m above ground level, there are requirements for firefighting shafts in the building. A sprinkler system is not currently proposed.

DESIGN OCCUPANCIES: In line with the DfE’s objectives, the fire safety strategy has been developed for life safety. The building occupancies have been modelled using floor space factors provided by BS 9999 and the information provided in the Schedule of Accommodation.

FIRE DETECTION & ALARM: An automatic fire alarm detection system of Category L2 is proposed for the new building. The system will be designed and installed in accordance with the guidance in BS 5839-1. It will operate on a ‘single-knock’ system, where the activation of a single detector or manual call point activates a full alarm throughout the building. The system will also accommodate a ‘double-knock’ system if required by the school.

MEANS OF ESCAPE: The main school building is served by three main protected stairs, each with a minimum width of 1600mm, which provide direct external egress at ground floor level. The horizontal distance between these stairs is well within permitted travel distances. These are supplemented by a dedicated evacuation lift. The location of stairs minimises problematic ‘dead-end’ conditions in the building. Where there are ‘dead-end’ corridors less than 2m long, they are treated as protected with a 30-minute fire rating. Where this is exceeded, the dead-end discharges into a protected corridor with two means of escape. The building’s openness and the presence of internal glazed elements will also help in alerting occupants to the presence of a fire.

STRUCTURE: All elements of loadbearing structure will provide not less than 60 minutes fire resistance.

COMPARTMENTATION: The proposals are in compliance with the limitations on compartments in BS9999. There are no additional requirements for compartmentation in the building. All stores and servers are to contain 30 minutes fire resistant construction. Any areas that present a higher fire risk (A3) have- walls with 30min fire resistance.

UNPROTECTED AREA: There are no limits on unprotected areas due to the levels of separation from boundary situations.

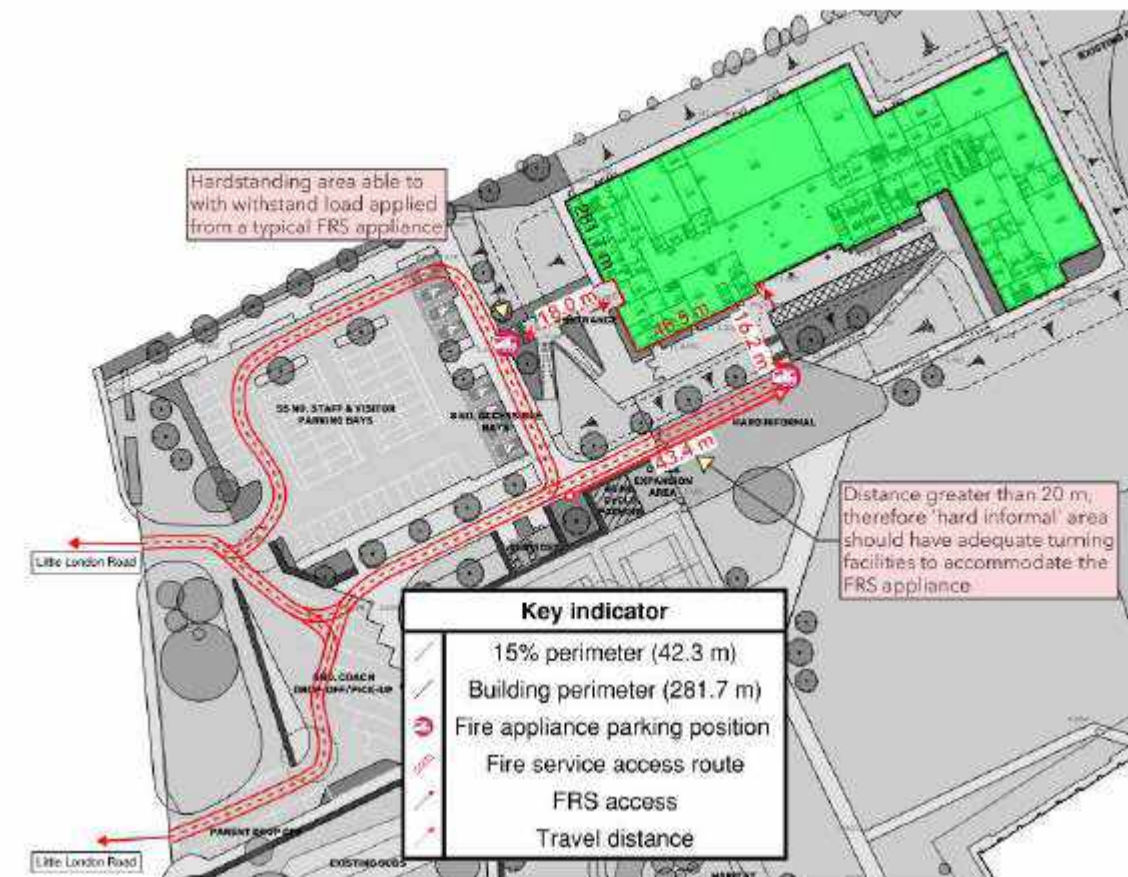


Figure 16 - Indicative FRS access route.



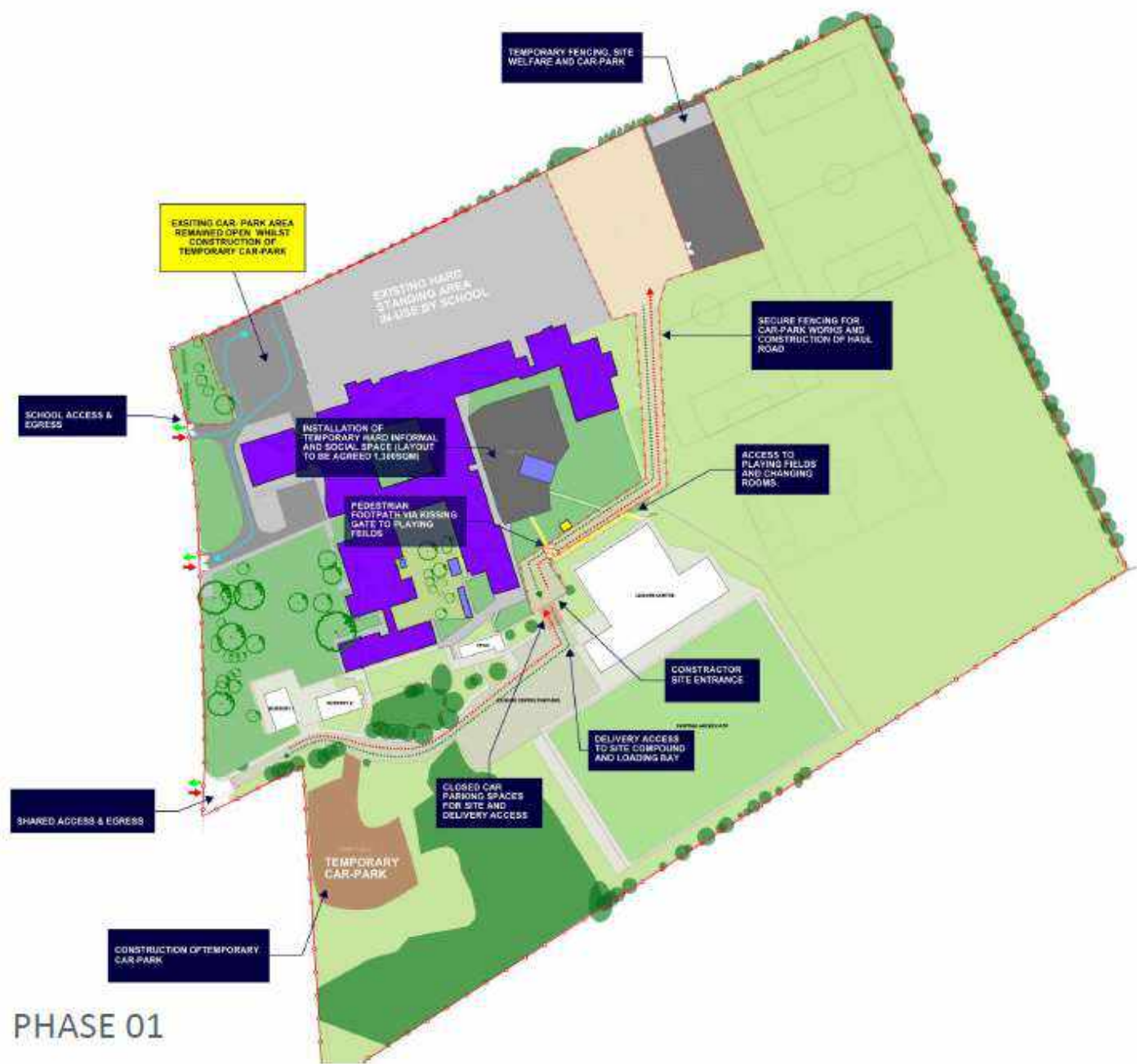
FIRE TENDER EXTERNAL ACCESS

University Academy Long Sutton | 10.00 Construction Phasing & Logistics

10.00 Construction Phasing & Logistics

10.01 Construction Phasing

A detailed assessment of construction phasing has been undertaken to ensure that the new buildings can be safely constructed on the live school campus. An extract from the comprehensive phasing analysis has been included here, illustrating the key stages of construction and demolition. More detail is available within the Construction Management Plan.



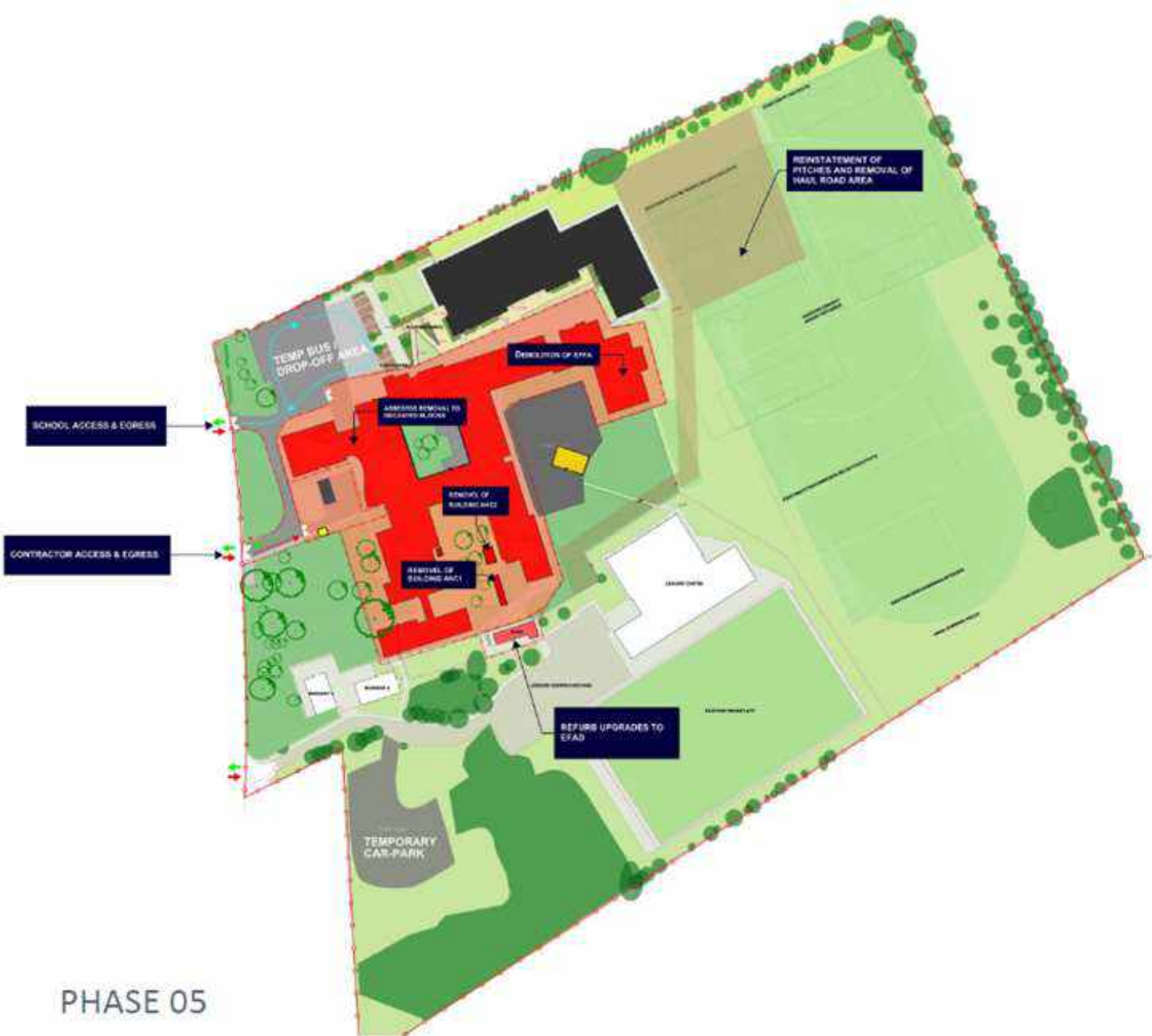
10.00 Construction Phasing & Logistics

10.01 Construction Phasing (cont)



10.00 Construction Phasing & Logistics

10.01 Construction Phasing (cont)



**+BOWMER
+KIRKLAND**



Thank You
