

DESIGN AND ACCESS STATEMENT

AUGUST 2021

ST ANDREW THE APOSTLE GREEK ORTHODOX SECONDARY SCHOOL

BARNET, LONDON





Aerial Overview of Site

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1 EXECUTIVE SUMMARY

Aerial View of the building from the South-east



1 EXECUTIVE SUMMARY

1.1 Executive Summary

Bowmer & Kirkland (B&K) have been commissioned by the Department of Education (DfE) to develop a scheme for a new secondary school in the London Borough of Barnet. This Design and Access Statement supports the formal planning application submission and has been prepared by Stride Treglown Architects with input from other members of the project team, including Ares Landscape Architects, Structural & Civil Engineers Curtins and Service Engineers Couch Perry Wilkes. DPP Planning are the Planning Consultants and are leading the Planning process.

The site for the proposed St Andrew the Apostle Greek Orthodox Secondary School is part of the redevelopment of the North London Business Park site, which already has outline planning consent. The school is currently operating within converted office buildings in the business park, and has been doing so for the last 8 years. The new building will provide much needed, state of the art facilities for students aged 11-18 years, and will provide a total of 1050 places (750 places for years 7-11 and 300 places for Sixth Form). There will be 150 students per year group, with class sizes of 30 students.

The works associated with this application include:

- Construction of a Teaching Block, containing general and specialist teaching, performance and catering facilities, with a Multi Use Games Court on the roof.
- Construction of a Sports Block to contain sports facilities, planned to support Community Use.
- The provision of new trees and high quality soft landscaping, hard standing, games court areas, and external dining.
- Bicycle, visitor and staff car parking, servicing zone, and bin store.
- Basement car park for staff and community use
- New secure boundary fencing.
- Associated highways and access works.

St Andrew the Apostle School is a DfE approved free school by the Russell Education Trust (RET). RET is a Multi-Academy free school Trust established in 2010, establishing five free schools since. St Andrew the Apostle Greek Orthodox School is a co-educational Secondary Academy. The school is the first state-funded Greek Orthodox secondary school in Britain to be supported by the Greek Orthodox Church and the Russell Education Trust.

The school opened on the North London Business Park in converted office accommodation in September 2013 with their first cohort of year 7 students. The school was submitted as part of a wider hybrid planning application by the Comer Homes Group for the phased comprehensive redevelopment of the North London Business Park. This was to deliver a residential-led mixed use development comprising 360 units in five blocks reaching eight storeys, the school, and associated improvements to open space and transport infrastructure.

The proposed building will be a gateway building to the development. The building itself has a clear layout that is legible and easy to use, and maximises the quality and variety of external spaces. It builds on the development masterplan and neighbouring context; following the design guide for the development while creating a strong modern identity for itself that can be shared by all.

The proposals in this document have been guided by consultation with local residents, planning officers and the client's advisors. The design presented is intended to represent the sympathetic development of the site into a cohesive, modern school that enhances and celebrates its unique character, and provides facilities the local community can utilise.

Subject to planning permission, the school will open in its permanent site for the September 2023 intake.



Proposed main entrance



Proposed View of Pupil Entrance

PROJECT TEAM

1.2 Project Team



Department
for Education

The Department for Education (DfE) is responsible for children's services and education, including early years, schools, higher and further education policy, apprenticeships and wider skills in England. One of their roles is to provide the capital funding for the development of schools to offset identified shortfalls in pupil places. Through the DfE, Central Government funding has been secured to deliver St Andrew the Apostle Greek Orthodox Secondary School, a 1050 place secondary school for pupils aged 11-18, with approximately 100 staff (full time equivalent). As part of their school development programme, the DfE also set out a rigorous set of criteria for the performance of new schools, safeguarding optimal environmental standards, spatial criteria and material specifications.



RUSSELL EDUCATION TRUST

The Russell Education Trust RET has worked in close partnership with parents, communities, and diocesan authorities to set up secondary schools. These schools are inclusive comprehensives with high academic standards, serving their locality and working as part of their local family of schools. Both RET, and the founding groups with whom they work, were firmly resolved that their schools would all be judged to be good or outstanding by OfSTED within two years of opening. This has been the case with all five schools inspected.



Bowmer & Kirkland are appointed to the DfE's Offsite construction Framework and are the contractor selected under this Framework to construct St Andrew the Apostle Secondary School. Bowmer + Kirkland are one of the UK's largest privately owned construction contractors and are active in most market sectors, including education. As main contractor for the scheme Bowmer + Kirkland will manage all aspects of the project to ensure the works are carried out safely, on time, to the right quality and with the least disruption possible to neighbours.

STRIDE TREGLOWN ARCHITECTURE

Stride Treglown are a national, multi-disciplinary, architect lead practice with headquarters located in Bristol and other offices in London, Birmingham, Manchester, Plymouth and Truro. The practice is employee owned and consists of over 300 people across a variety of disciplines. Since 1953 Stride Treglown has achieved an unparalleled track record for delivering innovative, creative and sustainable architectural design solutions.

Stride Treglown has a breadth and depth of experience in education design, having delivered primary and secondary schools across the UK since the practice's inception. Over this time we have established an excellent reputation for delivering great design solutions supported by our reliable and pro-active team of designers and technicians. Stride Treglown believe in delivering school environments that support optimal teaching and learning whilst also providing uplifting pupil experiences and maximising pupil potential.

PROJECT TEAM



Client/Applicant
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 Unit 3.25 East London Works
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 E1 1DU



Manufacturer & Structural Engineer
Innovaré Systems Ltd.
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 Middlemarch Business Park
 Coventry
 CV3 4PW

Mathematics

7 General Classrooms 1 Seminar Room



Staff & Storage



1 General Art, 1 3D Art Room



2 ICT / Business Studies Room



Staff & Storage



English

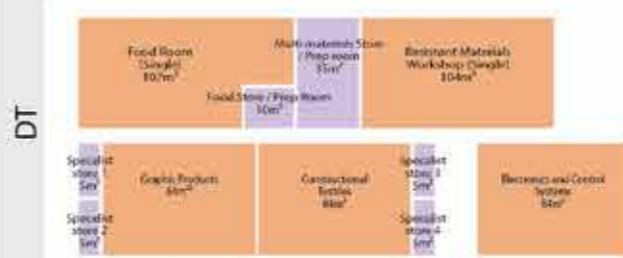
7 General Classrooms 1 Seminar Room



Staff & Storage



1 Food Room, 1 RM Workshop, 1 Graphic Products, 1 Constructional Textiles, 1 Electronics

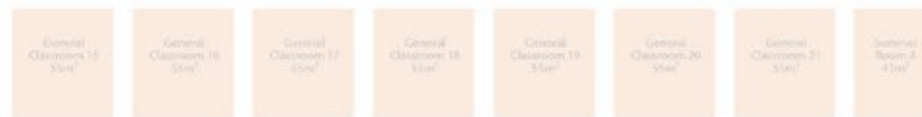


2 Music Classrooms, 4 Music Practice Rooms, 1 Extensive Music Practice Room



2 THE BRIEF

Classrooms 1 Seminar Room



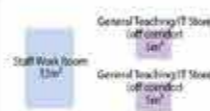
Staff & Storage



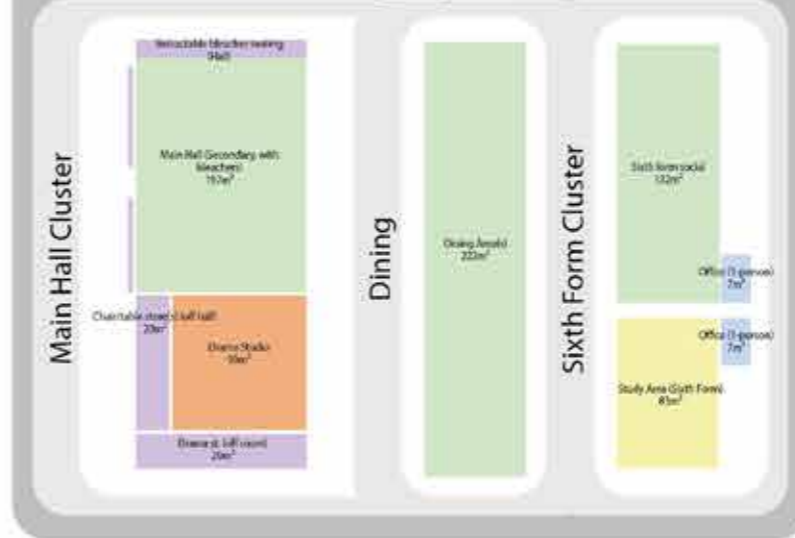
7 General Classrooms



Staff & Storage



Large Spaces



Non-Net



Initial Drawn Schedule of Accommodation

2 THE BRIEF

2.1 Core Brief and Vision (Overview)

The intention of the design is to establish a new permanent building and grounds for St Andrew the Apostle Secondary School within purpose-built accommodation, and to provide a modern teaching environment that accommodates and respects the specific attributes of the school and site. The school specific brief (SSB) was developed as part of a consultation and engagement process, which began in 2017, and evolved during the design period. This was considered alongside the outline consented scheme prepared by Plus Architects as part of Comer Group's Master plan, as well as the DfE's Schedule of Accommodation and Area Data Sheets, the Control Option, Building Regulations and Building Bulletins where relevant.

The briefing documents given to contractors and their Architects within the design development process comprise a suite of documents, the most significant of which is the Output Specification (OS), which sets out the DfE's requirements for new school buildings. The OS places a strong emphasis on the quality of the internal learning environment, particularly in terms of daylighting and ventilation in order to provide the best possible environment for learning.

2.2 St Andrew the Apostle Greek Orthodox School Educational Design Brief

The Russell Education Trust is partnership of five schools across the south of England. Multi-Academy Trusts (MAT) are regulated by the Secretary of State for Education. The main documents that set out how they operate is through the Articles of Association, which define their internal structure, and the Master Funding Agreement (MFA), which is the legal contract with the Secretary of State under which MATs run their schools. In addition, there are separate Supplemental Funding Agreements (SFAs) for each individual school.

The educational vision, curriculum and values for St Andrew the Apostle Secondary School are defined in the School Specific Brief to:

'Provide all students with the opportunity not just to achieve but to excel. Be broad and balanced, with a focus on the core subjects of English, mathematics and science, while ensuring that all students are encouraged to achieve in all National Curriculum subjects. The large majority of students take RE to GCSE level. A key part of our provision is an entitlement for all to develop their skills and interests in the arts and sport.

As well as the common curriculum there will be personalised curriculum pathways. All pathways will develop our students' critical thinking skills and empower them as citizens, future employees and individuals.

Social, moral, spiritual and cultural development will be embedded throughout the curriculum.

Engaging enrichment opportunities for all that are embedded in the classroom as well as beyond it.

Relevance to the wider world and application to the world of work.'

Key requirements identified by the School included (but not limited to):

- The Main Reception area should be light, welcoming and exude the ethos of the school.
- The main hall should be located close to the school entrance and near performance areas and dining, however the kitchen and dining area would not be visible from the main entrance.
- Location of the 6th Form should reflect the pupils' status in school
- The spread of offices on each floor should be linked to subject areas and the Senior Leadership Team should be distributed throughout the building.

The school will ultimately house 1050 students, together with all necessary associated car parking, access routes and hard and soft play areas. The school will expect to employ around 150 full-time equivalent teaching staff.

2.3 The Trust's Vision and Top 5 priorities for the design of the School

Throughout the Client Engagement Meeting process we established the Trust's vision and top 5 priorities for the design team to respond to when designing the School. These are set out below:

Vision

- Welcoming, warmth and character
- Desire for visitors and parents to know it is a faith school
- Space for contemplation
- Unique ethos, importance of robust curriculum and faith element
- Integral part of the community

Top 5 priorities

1. Openness and light, with classroom visibility.
2. Ability for spaces to be used by the community.
3. Reflect the robust curriculum and faith element within the entrance/as you come in.
4. Ability for external space to flow as the site is very constrained.
5. Support well rounded students, including sports and creative subjects to be equal.

3

3 DESIGN PROCESS



View of the new school from across the roundabout

3 DESIGN PROCESS

3.1 Site Location and Context

The proposed site for St Andrew the Apostle School is part of the redevelopment of the North London Business Park in Barnet, London. Surrounding the Business Park there is predominantly residential properties. The Business Park itself is to be redeveloped as a residential-led mixed use scheme. There is a railway line running north-west to south-east towards the rear of the redevelopment site, however this is some distance from the school site. Southgate Cemetery entrance is opposite the school site, with a fairly busy, narrow road running between the two.



Wider context aerial with site highlighted

3 DESIGN PROCESS



Local context aerial view with boundary line

3 DESIGN PROCESS



1 / View from the entrance looking south along Brunswick Park Road



2 / View from the site entrance looking North on Brunswick Park Road



3 / View of the site from Brunswick Park Road



4 / Residential property on Brunswick Park Road adjacent to south boundary of the site



5 / Southern boundary of site showing change in level.



6 / Existing lake



7 / Existing car park at south end of site showing level change

3 DESIGN PROCESS



Site Constraints and Opportunities Plan

3 DESIGN PROCESS

3.2 Site Analysis

Due to the redevelopment of the site, we have existing site features and proposed site features to take into consideration when undertaking the analysis. Extensive analysis of the site through research and technical surveys has been undertaken as part of the design process. This process has investigated issues relating to ecology, daylight, noise, air quality, and protected species present on site. Any relevant conditions or constraints that were put in place following these investigations have been considered in the design and where necessary will be secured by condition.

Levels

The topographic survey indicates that the existing site generally falls towards its most easterly extents, from a high point of approximately 72m above ordnance datum (AOD) at its north-western corner, to a low point of approximately 48m AOD near the south-east corner. The school site itself will be left level and remediated as part of the redevelopment works by Comer.

Access

The current pedestrian and vehicular site access is from Brunswick Park Road. The proposals include additional pedestrian access to the site. The vehicular access road off Brunswick Park Road will be altered as part of the redevelopment masterplan works, but will still provide access to the school site.

Ecology

An ecology report has been prepared for the masterplan development as part of the outline planning application. The conclusions of this are that the site was of poor conservation value due to the context of the development in a highly urban area and the dominance of buildings. The report recommends bat and bird boxes, as well as native planting and wildflower grassland mixes. Canadian Geese use the lake as a resting place on their migration, the relocation of the lake is not expected to cause issues with this.

Flooding

The site is within in 'Flood Zone 1 – Low Risk' from fluvial flooding. This means that the site located is not at risk of flooding from fluvial sources in up to the 1 in 100year return period flood (<0.1%). The site is located within 'Flood Zone 1 – Low Risk' and would therefore pass the Sequential Test, as there are no competing sites with a lower flood risk classification.

Lake and retention basin

The site has an existing lake, which is to be reconfigured as part of the scheme. The outline consented flood risk assessment shows that an area of freeboard drainage is required in order to contain water from the lake in the event of flooding. This area is within the school red line boundary and is a key consideration for the proposed site layout.

Existing buildings

The school is operating in converted office buildings on the site. These will be demolished, along with the other existing buildings as part of the overall site masterplan works.

Noise

Traffic noise from Brunswick Park Road is the most significant source of noise for the site. A Background Noise Assessment has been prepared by BuroHappold and has confirmed there to be no noise-related issues which cannot be readily mitigated, however, natural ventilation is not recommended due to the background noise on the site. It is recommended that the building will have mechanical ventilation to control noise break-in to within the internal ambient noise level criteria, although windows will be openable to allow occupants to control their own comfort and environment should they wish to.

Transport

There are two bus stops adjacent to the site; on Brunswick Park Road and Oakleigh Road South. Both are within 400m of the site along the road network. These bus stops provide access to the 34, 125, 251 and 382 bus services. These bus routes provide a comprehensive service to the surrounding areas of Barnet, Enfield and Haringey, whilst also connecting to other services providing routes to the rest of London. The bus services also provide access to the surrounding Underground and Train stations at Southgate, Arnos Grove and Totteridge and Whetstone.

Neighbouring Properties

Properties facing the school site along Brunswick Park Road will need to be considered in terms of the visual impact the school site will have on them. The closest property to the site is on the south-eastern corner on Brunswick Park Road. The rear gardens of the properties on Brunswick Crescent back onto the site.

3 DESIGN PROCESS

3.3 Review of Outline Consented Scheme

As part of the development masterplan, a design for the school was submitted and gained outline planning approval. The scheme included the main teaching block, with Multi-Use Games Area on the roof (due to the constrained site area), a 4G All Weather Pitch, a Sports block and separate changing block.

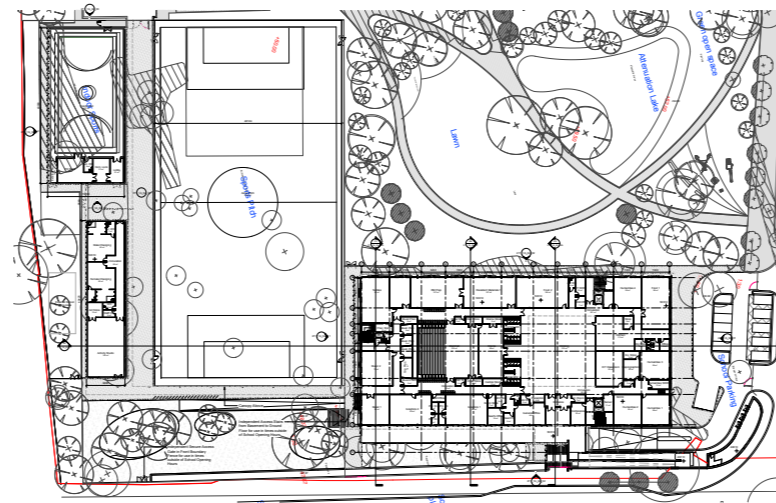
This scheme was approved in 2017, however it had been reviewed by the DfE and their Technical Advisors against the up to date DfE space standards and guidance. The scheme was found to be larger than required, and as such the plans were reviewed to create a "Control Scheme" which will be analysed in the next section.

The elevations from the Outline Consented Scheme were to be used as a starting point for the developed scheme.

The DfE have strict requirements that must be complied with which relate largely to the internal teaching environments, ensuring the optimum learning spaces for the students. These requirements relate to daylighting, ventilation and acoustics, as well as ensuring the correct fixed furniture and equipment can be provided in the classrooms.

We reviewed the consented elevations against these requirements and made the following observations.

- Full height glazing provides little flexibility for FFE around perimeter of rooms (science/DT/Food etc).
- Horizontal banding reduces the head height of windows and limits daylight reaching the back of the classrooms. Our experience is that window head heights need to be 3.23m AFFL, the head height of the consented scheme is 2.7m AFFL.
- The windows to either side of classroom are not likely to pass daylight requirements. Our experience is that approx. 8.7m² is needed to ensure compliance with DfE daylighting requirements. 7.5m² of glazing is shown in outline scheme, with the additional glazing behind brick screen unlikely to provide enough to make up the shortfall.
- Ventilation strategy behind brick screen unlikely to work with acoustic requirements from road, or comply with the DfE requirements for incoming air to be no more than 5 degrees lower than the internal air temperature
- The setting out of the 7.2m bays works well for standard classrooms, however it will be difficult to ensure larger teaching spaces stack vertically in order to align the glazing as shown.



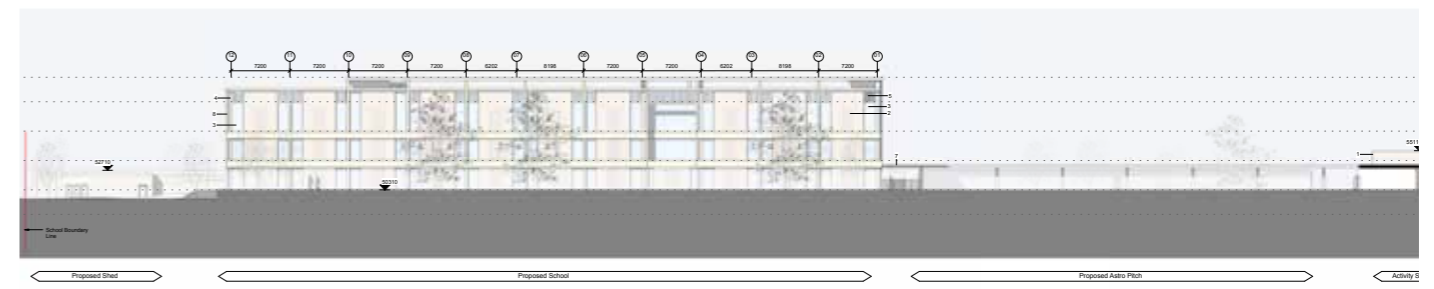
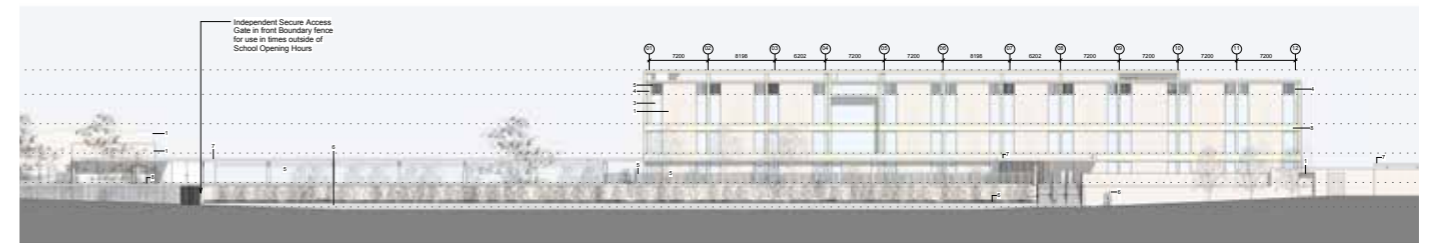
Site plan - Outline Consented Scheme



Comparison between Outline Consented Scheme and Control Option



Extract of elevation - Outline Consented Scheme



East and West Elevations - Outline Consented Scheme

3 DESIGN PROCESS

- The DAS for the outline scheme indicates windows that open inwards to the classrooms, behind brick screens. In our experience, these have caused health and safety concerns in the past due to students colliding with the open windows. In addition, these impact on what usable FFE can be installed around the perimeter of the classrooms.
- Another observation is that there appears to be no consideration to roof top PV panels or green roofs in order to comply with the London Plan, or the need for Air handling units or science lab fume cupboard extracts on the roof.

3.4 Review of Control Option

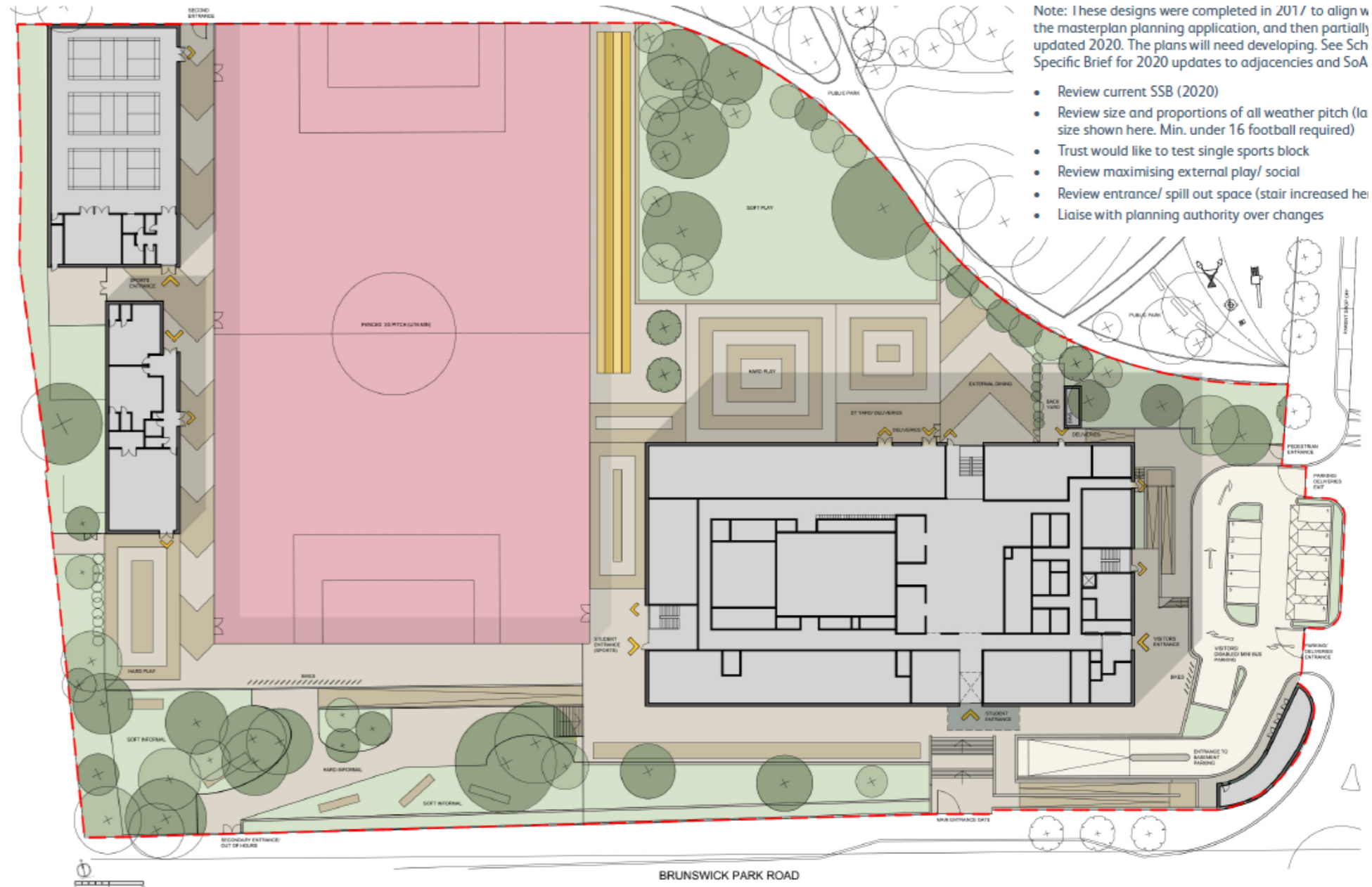
The control option was developed following the outline planning consent, which revised the overall size of the building and the internal schedule of accommodation. No elevations are produced for the control option. This plan provides a starting point for the design. During the first CEM meeting we undertook a review of the Control Option and identified the following Strengths and Weakness to the Trust:

Site Plan Strengths

- Main building in prominent location on the site
- Positioning of informal outdoor space adjacent to lake and trees – natural aspect
- Sports block could provide “buffer” to residential properties on the boundary
- View to lake from the main building
- Hard social space close to main block

Site Plan Weaknesses

- Community access - sports block and changing distance from car parking underground – how is access controlled.
- Ramp to underground car park to be reviewed – is it big enough?
- 4G and sports block very close to northern boundary
- 4G pitch drawn without run-offs
- Distance to walk to changing rooms and sports block from main building in bad weather.
- Exams in sports hall – queuing/limited WC provision
- Vehicular access and delivery area looks small
- Pupil entrance/exit directly onto bus stop
- Separate sports hall and changing rooms
- Not coordinated with required detention basin
- Long, narrow social spaces – disjointed and inflexible
- Convoluted pupil access



Note: These designs were completed in 2017 to align with the masterplan planning application, and then partially updated 2020. The plans will need developing. See School Specific Brief for 2020 updates to agencies and SoA

- Review current SSB (2020)
- Review size and proportions of all weather pitch (a size shown here. Min. under 16 football required)
- Trust would like to test single sports block
- Review maximising external play/ social
- Review entrance/ spill out space (stair increased here)
- Liaise with planning authority over changes

Control Option Site Plan

3 DESIGN PROCESS

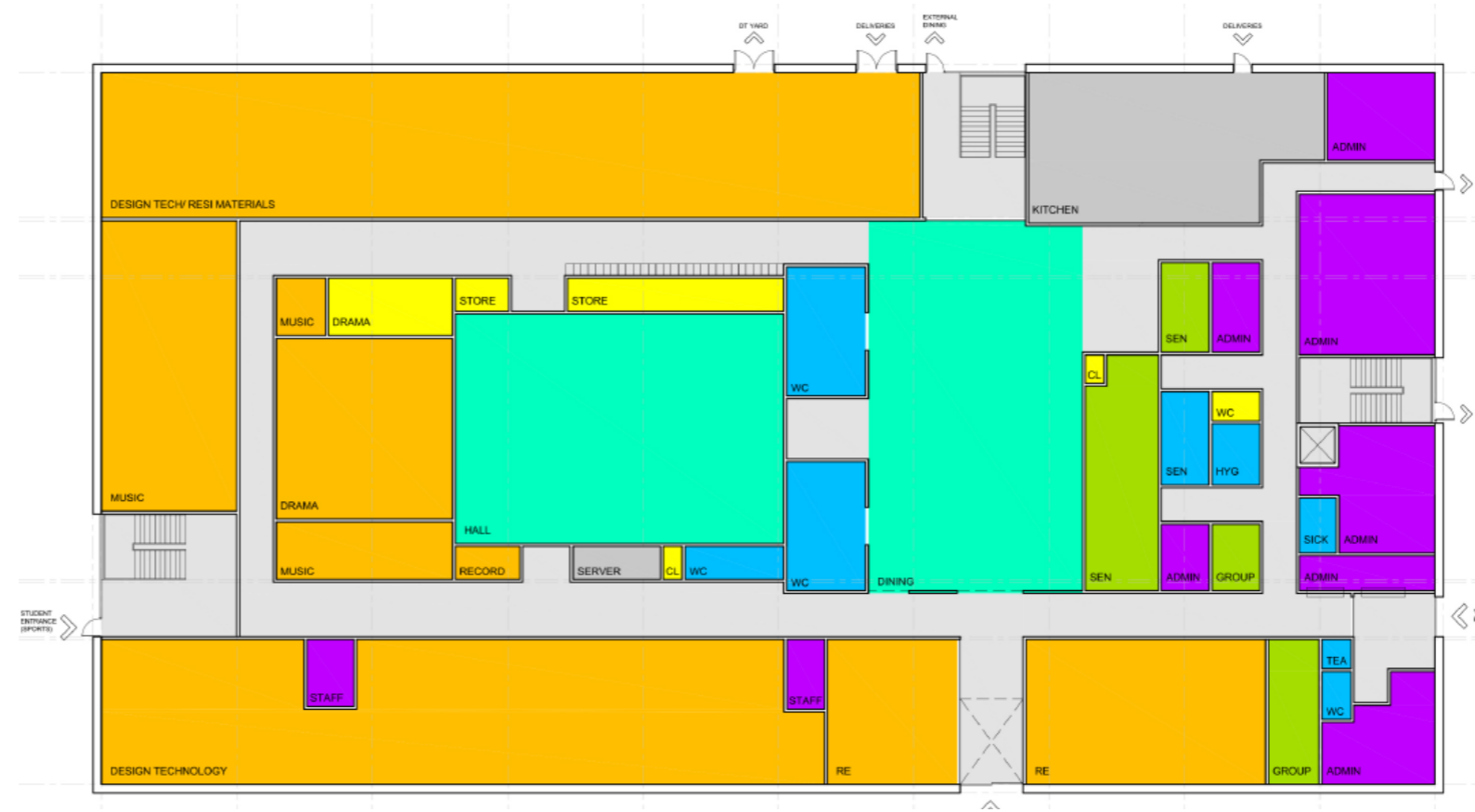
Building Plan Strengths

- Department zones seem to work in principle.
- RE/Classics showcase near entrance
- Access: Visitor and pupil entrance close to vehicular entrance. Pupil entrance into dining area.

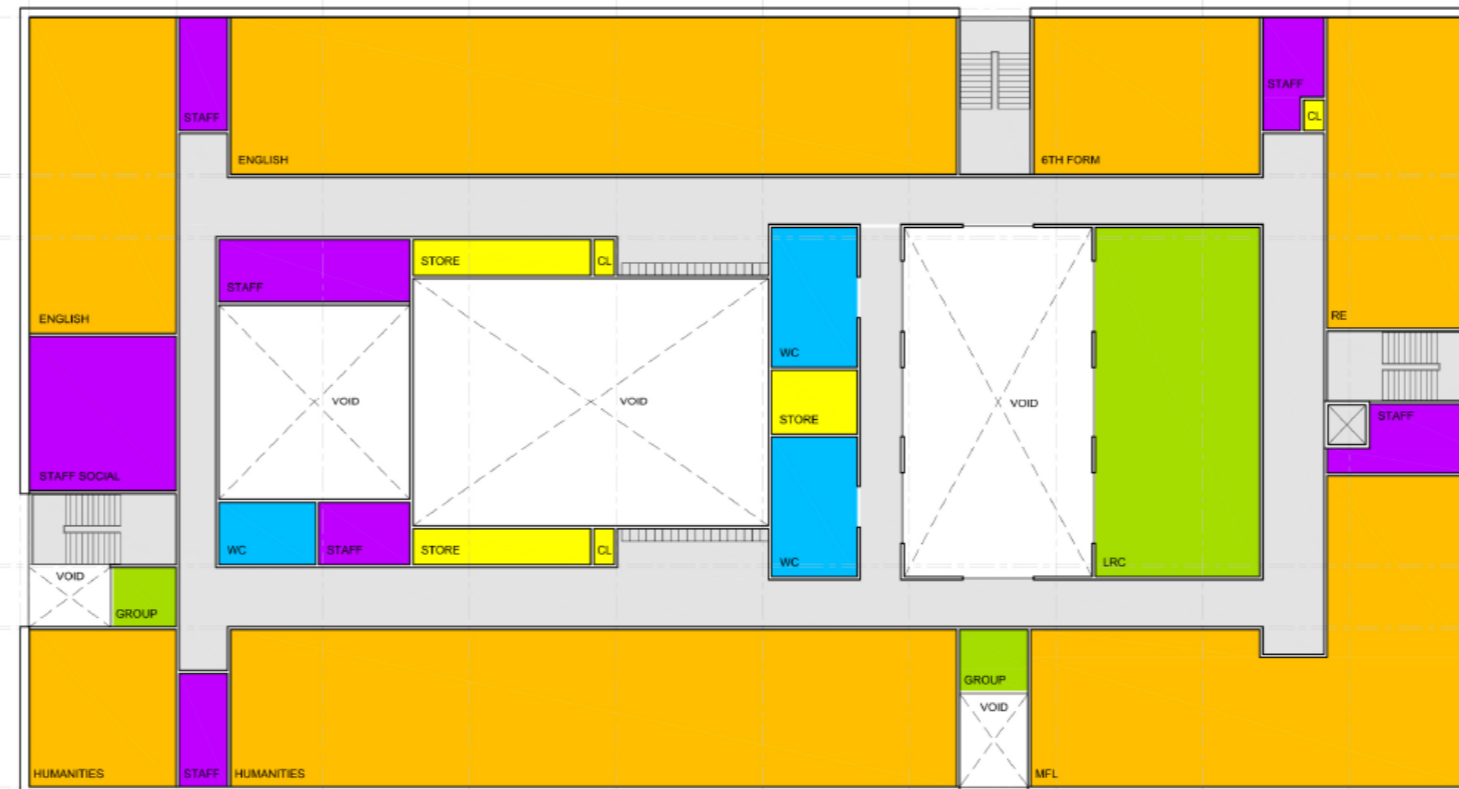
Building Plan Weaknesses

- Pupil Entrance: No offices located adjacent for passive supervision.
- Plant room: in basement – no direct external access – would have to drive into car park
- Lift waiting area not allowed for, also corridor missing adjacent to stair on eastern boundary.
- SEN next to dining – may be noisy and no daylight
- Teaching spaces with borrowed or no daylight: LRC on First floor, IT/Business and Art on second floor
- 6th form area shown doesn't look big enough for study and social
- Art not easily linked to DT as per School Specific Brief (1 floor between them)
- MUGA changing on external wall – takes up valuable light/window opportunity
- MUGA in centre of roof – better to one side for access and freeing up roof space

Following on from the assessment of the control option, the school specific brief was appraised and a series of preliminary options were developed.

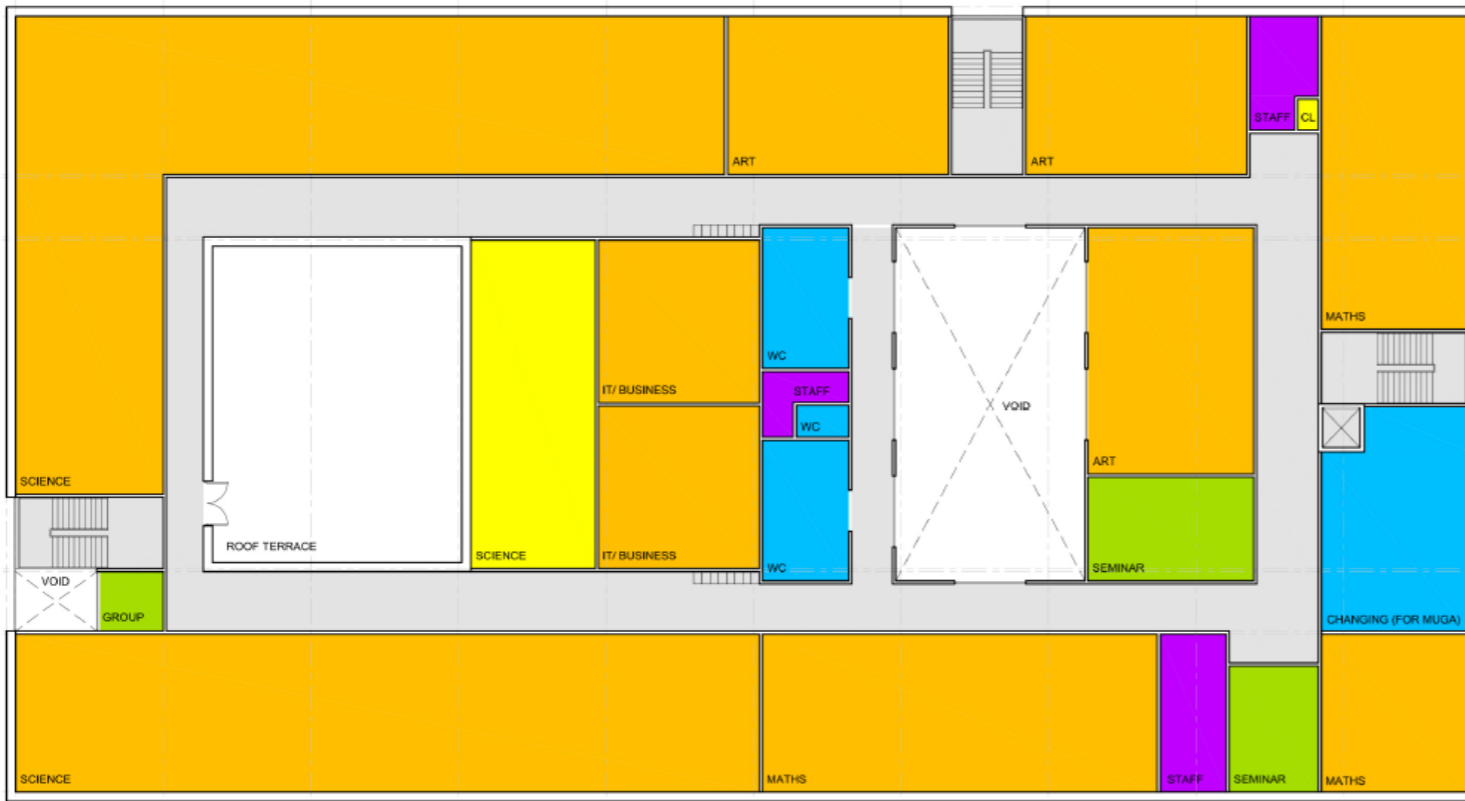


Ground Floor Plan - Control Option



First Floor Plan - Control Option

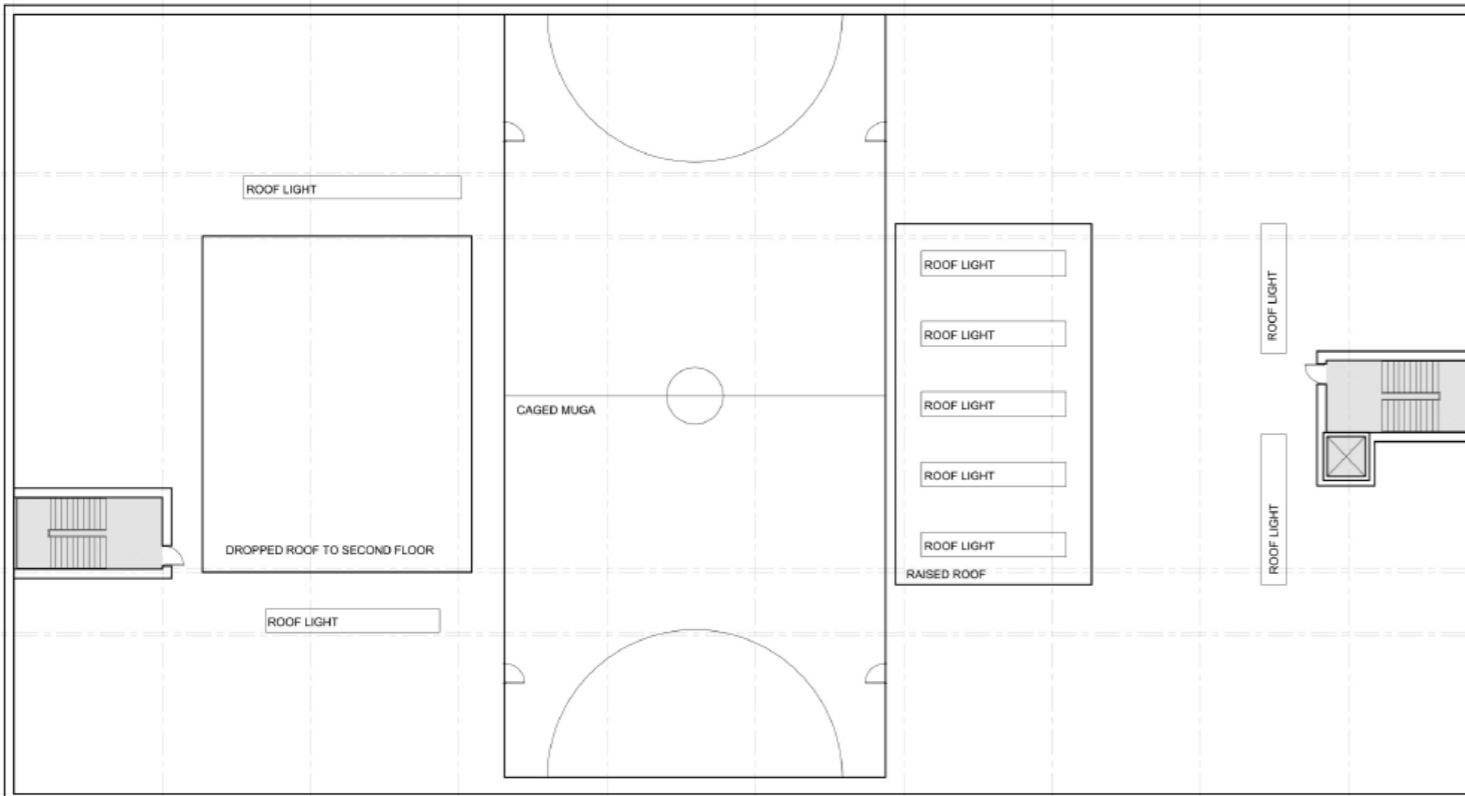
3 DESIGN PROCESS



Second Floor Plan - Control Option



Sports block and changing block - Control Option



Roof Plan - Control Option

3 DESIGN PROCESS

3.5 Design Approach and Philosophy

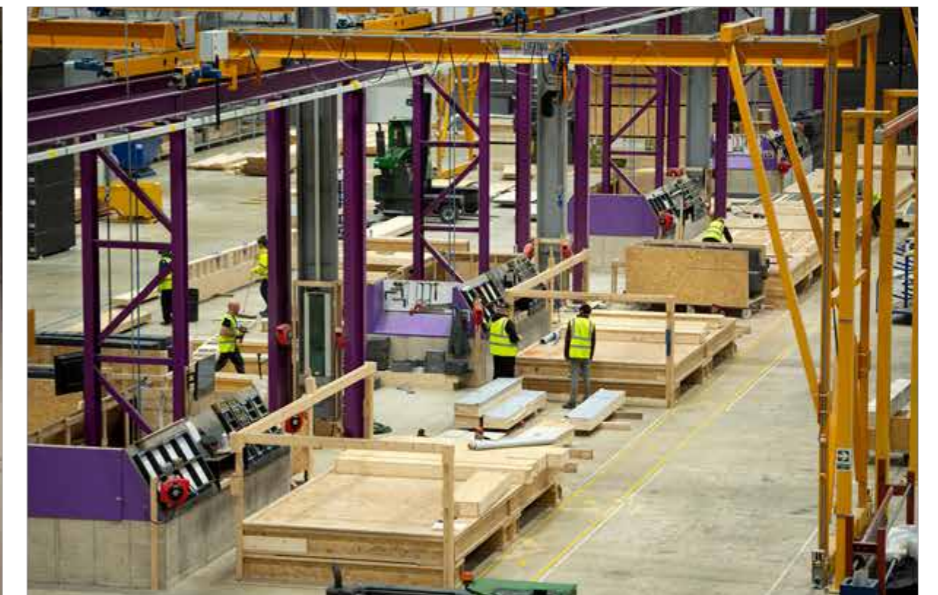
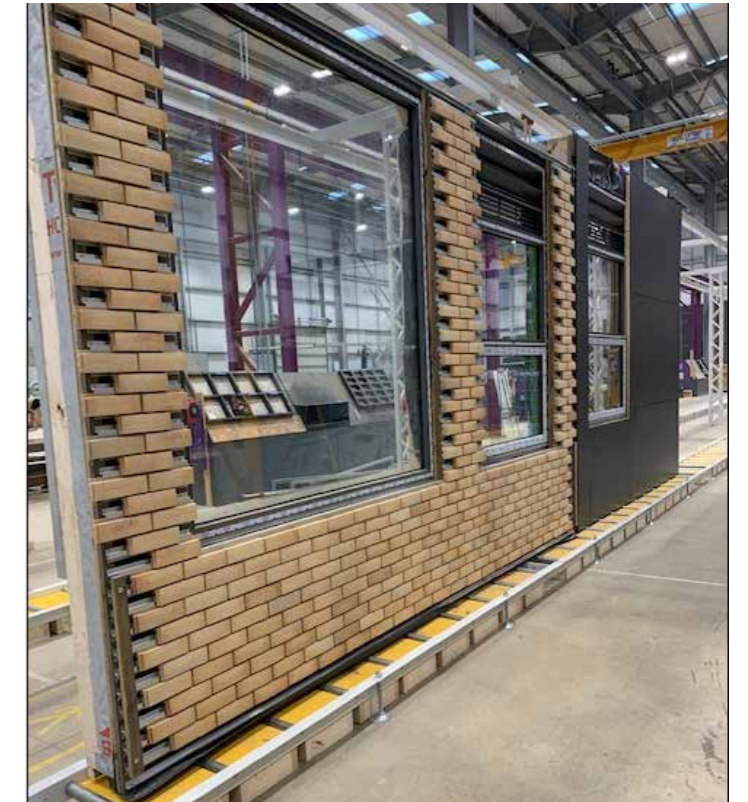
MMC Framework and Configure Offsite 3.0

The aim of the Modern Methods of Construction (MMC) Framework is to drive greater efficiency, innovation and cost savings within DfE capital building programmes, improving ability to successfully procure and deliver new buildings within budget and at pace. The Framework objectives are to partner with a group of Framework Contractors to deliver right first time, predominantly Offsite manufactured schools, based upon flexible template designs that are efficient to produce and are value for money, making every pound spent count.

Lot 1 covers secondary schools and secondary blocks across England with an internal area of more than 6,000m². It consists of five contractors and is worth £2 bn. B&K are one of the contractors appointed to this Framework and St Andrew the Apostle school is to be delivered on this Framework. This new Framework builds upon the work already undertaken in Component Primary and Secondary Frameworks and is designed to enable the industry to develop and innovate Offsite techniques as the industry moves towards DfMA (Design for Manufacture and Assembly) in the future. Core to this is the ongoing development of design standardisation.

Configure Offsite 3.0 is B&K's MMC solution that was born seven years ago and has continually evolved through their commitment to R&D and their established supply chain relationships. Configure Offsite is not constrained by the limitations of volumetric construction, taking the approach of 'one system fits all, not one size fits all'. Configure Offsite 3.0 is a development of B&K's seven year review of 20 offsite systems.

The structural solution developed by Innovare is a timber panelised SIP system made up of two products – I-FAST and I-SIP, developed by Innovare. The majority of the building elements will be made up of I-FAST panels. I-FAST stands for Fire safety, Acoustic performance, Structure and Thermal insulation, and is new generation of SIPs technology that delivers performance in all the above areas without any additional treatment or coating. Due to the requirements to include a rooftop MUGA and a basement car park, the structure of the building will be a steel frame with a SIPs I-FAST wrap to the external walls.



Photographs from Innovare's factory showing I-FAST panel construction

3 DESIGN PROCESS

3.6 Initial Site Layout Options

The options appraisal study for St Andrew the Apostle began with reviewing possible alternative site layout options. The constrained site meant that the main building position on site was fixed, but there could be alternative options for the siting of the sports block, MUGA pitch and All Weather Pitch.

Following the site and control option analysis, and through discussions with the Trust and School, a preference was identified to combine the separate sports hall block and changing block into one building. A desire to locate the sports facilities as close to the main building as possible was also identified.

Options were produced that considered relocating the MUGA from the roof of the main building to the ground level, as well as relocating the sports buildings.

The site options presented on this page all feature the MUGA pitch on the roof of the teaching block. These were presented to the school during the first Client Engagement Meeting, along with the control option (which was option 1). Options for locating the MUGA on the ground were also presented and are on the next page.



Option 2 - Long Sports Block South



Option 3 - Long Sports Block North



Option 4 - Long Sports Block East



Option 5 - Square Sports Block



Option 6 - Square Sports Block Rotated

3 DESIGN PROCESS

All of the site layout options we presented included coordination with the freeboard retention basin.

Option 2 for both MUGA locations addresses the pupil access issues and avoids the entrance directly adjacent to the bus stop, but it was rejected due to the irregular informal hard play the layout offered, which provides little flexibility and low quality external areas for the students to use, and the sports block was felt to be too far from the main building

Option 3 for both MUGA locations also addresses the pupil entrance issue, and brings the sports block closer to the main building. However, the mass of the sports block splits the site, and while this could be positive as it creates courtyards which could be used for separate functions, the external space is then split which limits flexibility of use.

Option 4 for both MUGA locations improves the proximity of the sports block to the main building as well as providing a gathering space between the two buildings for pupils as they enter the site. The two buildings create buffer between the road and the play areas, improving security as well as providing a street frontage to the site.

Option 5 relies on the changing rooms for the MUGA pitch to be within the main building, This allows the sports block to have a more compact footprint on the site.



Option 2 - Long Sports Block South



Option 3 - Long Sports Block North



Option 4 - Long Sports Block East



Option 5 - Square Sports Block



Option 6 - Square Sports Block Rotated

3 DESIGN PROCESS

After review and discussion with the school and design team, the preferred site layout option was Option 4, retaining the MUGA on the roof of the main building.

This site layout was chosen because:

- Proximity of sports building to changing block reduces time spent outside for pupils in wet weather.
- Ease of use for lettings and community use due to proximity to car park and pedestrian access from the street.
- Access for pupils is away from the bus stop and away from the new roundabout and junction, improving safety.
- Gathering space between the two buildings that leads to the main informal play areas for pupil arrival.
- Improved street frontage and civic presence, allowing the sports block to be visible from the street.
- Allowed flexible outdoor spaces that flowed (one of the Trust’s main priorities for the external areas).

3.7 Developed Building Design Options

The building form was restricted to a superblock in order to keep the footprint as compact as possible.

We tried and tested numerous internal layouts over the course of the Client Engagement Meetings to achieve the desired adjacencies for the Trust as well as create a welcoming and inspiring environment.



Examples of early stage plan layout options

3 DESIGN PROCESS

3.8 Building Design Principles

As part of the development masterplan, a design code was produced so that the separate phases of development would have a high quality, unified appearance. We referred to the principles within this document to develop the aesthetic for the scheme.

The initial building form and the preliminary elevation designs were developed through Client Engagement Meetings with the DfE and Trust. New schools delivered through the DfE focus on providing practical, robust and sensible designs within a reasonably constrained budget.

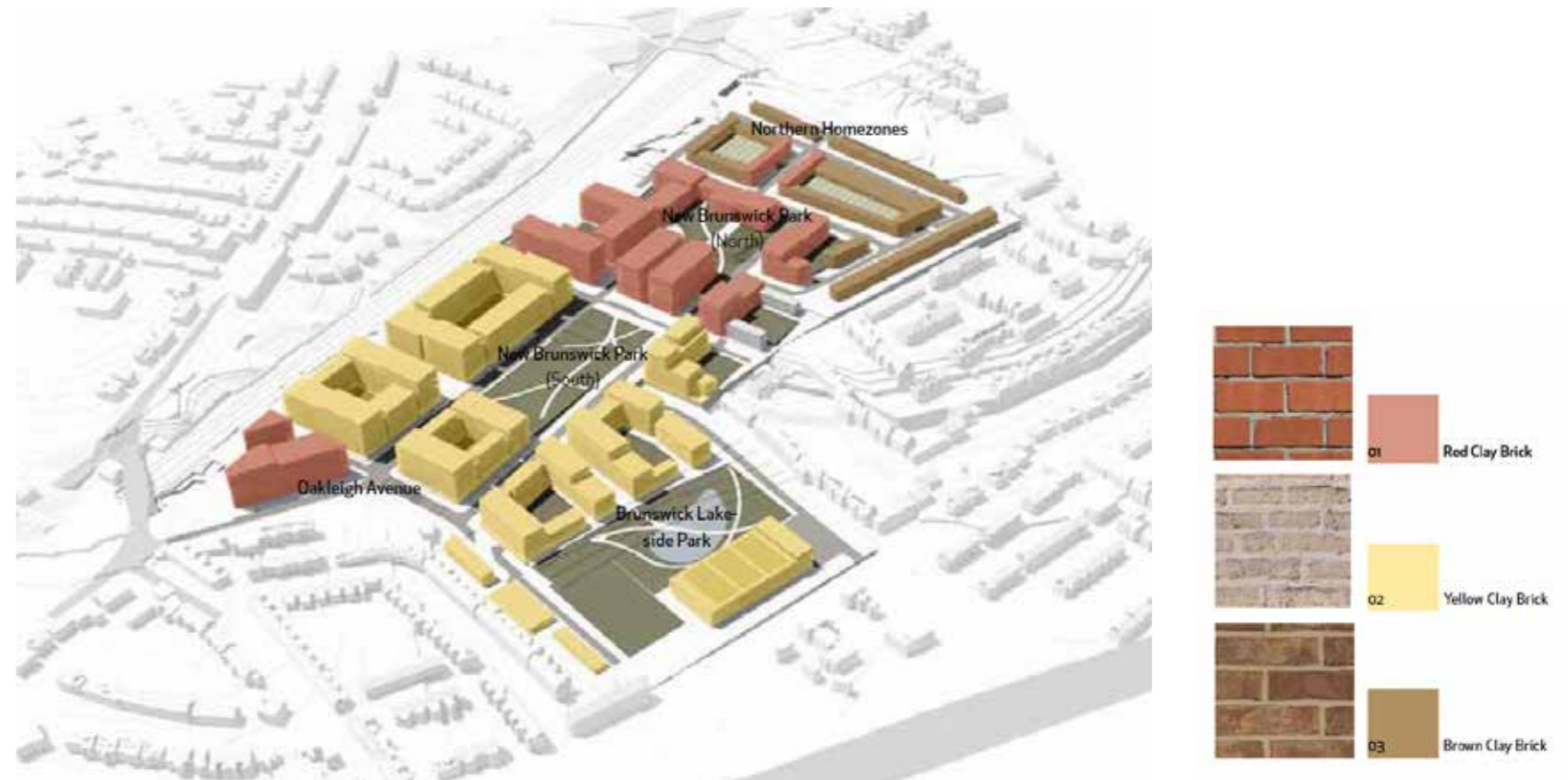
Elevation Design Principles

The starting point for the design of the elevations was to look at the design code principles for the masterplan development.

- Character Areas are identified in the masterplan, each with a different colour brick. Our site is within Brunswick Lakeside Park, which is to be Yellow clay brick
- Building Form - the document sets out that new buildings in the development are to be "Rectilinear and straight, laid out in a formal manner".
- "6.2.2 The plan form and elevational expression of buildings within the masterplan should seek to avoid long expanses of horizontal planes. Building forms that are vertically articulated are encouraged."
- Elevational treatments are to be simple, ordered and repetitive
- There is to be an expression of the roofscape.
- Materials are to be brick with no more than 2 additional materials for contrast/accents. The "primary facing material should be brick".
- "Accented bricks to provide relief across surfaces" with a "Variation in bonding"
- "Expression of structure"
- Windows are to be simple with a vertical aspect.

Identity

The development masterplan highlights St Andrew the Apostle School as being a gateway building into the site from Brunswick Park Road. The Trust wanted to building to reflect the school's ethos and faith element, as well as being a welcoming building.

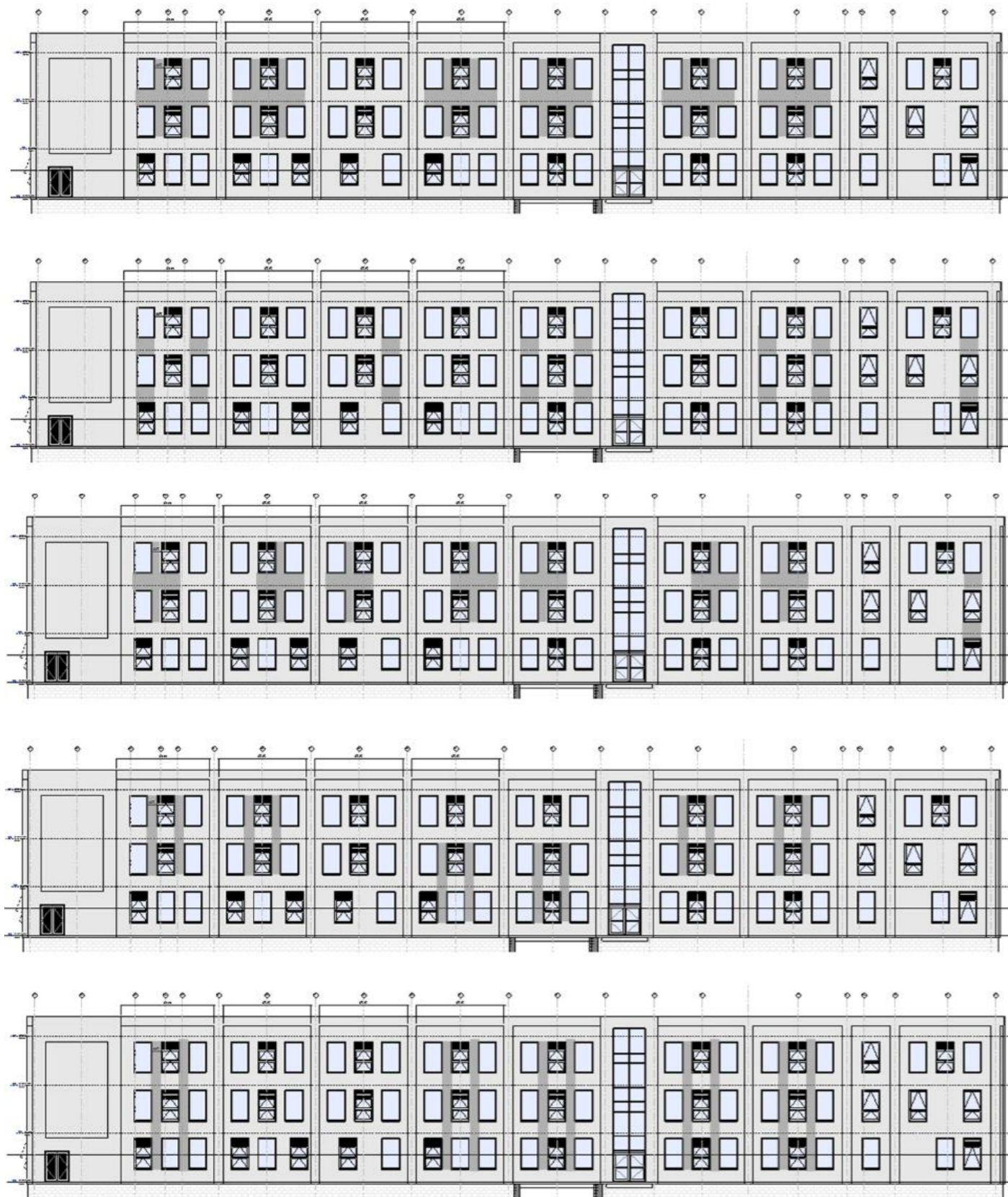


Character Areas from the Design Principles Document



Extracts from the design principles document as examples of regular ordered windows

3 DESIGN PROCESS



Elevation studies looking at grouping of windows



Examples of brick bonding and expressed structure



Example of variation in brick bonding

3 DESIGN PROCESS

Consultation & Meeting Timeline

Pre-Application Meeting	January 2021
Public Consultation Event	March 2021

3.9 Public Consultation

The project team have engaged with the local community on detailed proposals for St Andrew the Apostle permanent accommodation plans. The scope of the engagement exercise was to inform local residents and stakeholders about the plans and to seek their feedback.

The exercise complemented the consultations undertaken by other members of the project team who continue to liaise with statutory consultees through the planning application process. The Statement of Community Involvement will be submitted in support of the planning application and provides details of the engagement undertaken, analysis of community feedback and responses from the project team.

Our engagement activity included;

- Private webinar for school staff and governors
- Public webinar with opportunity to ask live questions
- A project website with flythrough animation
- Over 3000 flyers distributed
- Over 200 letters distributed to near neighbours
- Invitation emails to councillors, community stakeholders and local businesses
- Invitation emails to school parents/carers
- Project email address and telephone number
- An online feedback form and webinar poll

The key themes raised at the consultation webinar were:

Congestion - weekends; drop off and pick up; School travel plan

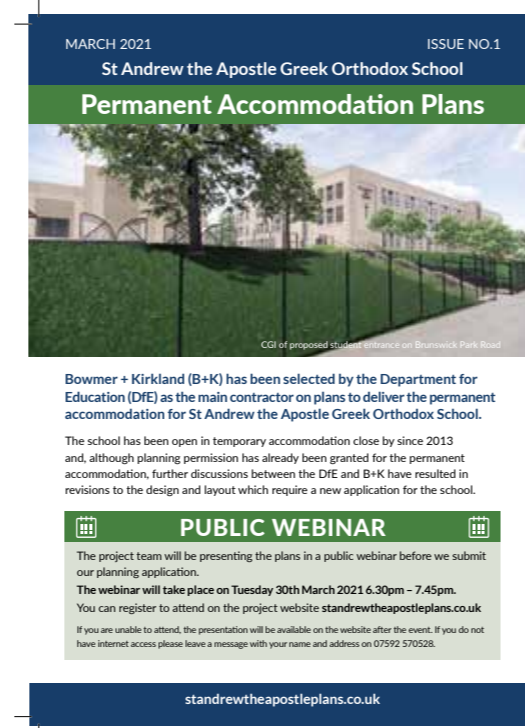
Access - School access routes (vehicles and pedestrian); onsite parking facilities; wider NLBP masterplan

Construction - construction hours, access and noise; offsite manufacturing process; project program.

Building - Windows and ventilation; sustainability, fabric first approach; Layout of fencing and roof top MUGA.

70 people attended the webinars

65% support the plans and 35% said they were not sure.



Public Consultation Flyer



Map of flyer distribution



Public Consultation Webinar Slides



Public Consultation Website Home Page

3 DESIGN PROCESS

Summary of the General Q&A session from the webinar

Do you have to be an Orthodox Greek to attend this school?

Information on the admissions policy is available on the school website here. Up to 50% of the places available will be based on a 'faith' criterion.

How is the school build being funded?

The school is being funded by the DfE with land provided as part of the Comer Homes Group development.

Why is a new school needed?

The school opened in temporary accommodation in 2013 within the North London Business Park (NLBP) and has limited access to adequate facilities occupying former office accommodation. The school will remain in its temporary location until completion of the new buildings.

Will there be opportunities for students to get involved in the project?

B+K will work with the school to use the rebuilding project as a learning tool for students, encouraging students to look at the many different career opportunities in construction.

When do you envisage works to start and foresee the works finishing?

B+K hope to start on site this summer, finishing in spring 2023.

Transport/Highways

What parking facilities are included?

Parking will be provided in a basement facility with 70 parking spaces (19 size restricted), 3 accessible spaces, 8 motorcycle spaces and 28 bike spaces. Visitor, minibus and disabled parking bays will be provided above ground, as will additional cycle storage for students. The school will update their Travel Plan to encourage sustainable travel to and from school.

The school has been in operation since 2013 so the impact that the school generates is already accommodated on the road network. The small proportion of students arriving by car will be dropped off along the new access road where 23 drop off/pick up spaces are proposed, preventing impact on local streets. There is a secondary pedestrian access gate to the school on this boundary for students.

What about congestion on Brunswick Park Road?

There is a proposal to upgrade the access junction to a mini-roundabout as part of the approved hybrid planning application for the North London Brunswick Park. Modelling work was produced and submitted to justify that the proposed junction arrangement can operate without queues and delays. This modelling work took into consideration the school operation.

What public transport options will students and staff have?

The school can be reached via London Underground at Arnos Grove station (Piccadilly Line) and via Overground services at New Southgate. Both stations are within a mile and buses 34, 251, 184, 125 and 382 stop 12-15 minutes' walk from main site entrance

Layout

What are the key changes to the plans from the earlier application?

The new plans include;

- A 4G pitch rather than a 3G one.
- The reorientation of the sports facilities

Does the new school overlook our homes?

The school has been designed to consider privacy of the Edwardian terraced properties on Brunswick Park Road and is set back from the street.

What is being done to minimise the noise from the school?

A Noise Impact Assessment will be undertaken to ensure all proposals meet requirements. The buildings and vegetation will act as a buffer to noise from the 4G sports pitch and outside areas.

What will happen to the pond on the site?

The school is set back from Brunswick Park Road, covering the area of the existing pond. The pond like much of the landscaped area on the Business Park was built in 1981. Recent biodiversity surveys indicate the site's ecology value to be limited. The school site will include an area of soft landscaping and trees, in addition the Comer Homes wider masterplan will create landscape corridors and mini-parks across the site.

Will there be landscaping to reduce visibility of the school buildings from our properties?

The mature vegetation buffer will be maintained with additional planting and landscaping throughout the site.

Will surface drainage be considered?

A Surface Water Assessment will be carried out and the buildings will have SuDS (Sustainable Drainage Systems) designed to both manage the flood and pollution risks resulting from urban runoff and to contribute to environmental enhancement.

Design

Do the plans involve an increase in student numbers?

St Andrew the Apostle is a 5-form entry school from years 7-11 with a sixth form. The plans are for the same student capacity.

What height are the new school buildings?

The main school building is 3-storeys with the addition of a service parapet and a securely fenced Multi Use Games Area (MUGA), lift shaft and roof lights located on the roof. The sports centre is 2-storeys with a service parapet for maintenance access only.

What measures are you taking to ensure the building is sustainable through its lifecycle?

The new buildings will be constructed to meet government specifications, B+K use a 'Modern Methods of Construction' principle' which ensures the fabric, heating, ventilation, water and lighting systems are designed to be energy efficient. The London Plan emphasises that development proposals should make a contribution to minimising carbon dioxide emissions in conjunction with the energy hierarchy. Development should demonstrate how it is Lean, Clean and Green through an Energy Statement.

Are there lifts in the main building?

Yes, there is a lift in the central area.

What are the toilet and staff room arrangements?

The webinar slides showing each floor layout of the new buildings are provided on the website and show where the toilets and staff facilities are situated.

Sports facilities

What will the opening and closing times be for the new facilities?

The school will set out a community use agreement for use of their facilities. These would typically be until 9.30pm Mon-Fri and 9am-6pm on Saturdays and Sundays, but will vary depending on the facility e.g. 4G pitch may have different hours of use to the internal sports centre. In addition a Noise Impact Assessment will be undertaken.

Will the Sports facilities be managed by the school?

Yes, the school will set out a community use agreement for their facilities.

Construction

How will this effect the pupils while work is being undertaken on site?

B+K has extensive experience of managing sites with near neighbours. A complex phased programme of construction will carefully consider the local community and the nearby school. Traffic and construction management plans will be in place. Deliveries and vehicle movements will be programmed to minimise disruption to the neighbouring area. Progress updates will be shared with neighbours and the school community.

Where will construction traffic access?

Construction traffic will access the site via secure gates on East Drive, off Brunswick Park Avenue with a secondary exit connecting to Oakleigh Road South. Traffic and construction management plans will be in place. Deliveries and vehicle movements will be programmed to minimise disruption to the neighbouring area.

Will construction works take place at the weekend?

Construction will take place in accordance with all regulations and as determined by conditions agreed with the Council most likely including some Saturday mornings.

What measures are being taken to minimise construction noise for local residents?

B+K will work with the Council to ensure noise mitigation measures are established and to ensure that air quality (dust management) plans are put in place. The offsite manufacturing process will reduce the noise created by construction activities.

Design development after the Public Consultation

In response to the comments received during the public consultation, a review of the scheme was undertaken and amendments made improve the design. This included:

Access Consideration

Access around the school was reviewed, resulting in the building moving over by 1 metre to allow improvements to the vehicular and pedestrian access to the site, and ensuring coordination with the wider masterplan scheme.

Congestion

Residents made comments regarding potential congestion at peak times around the site entrance and junction with Brunswick Park Road. The strategy was reviewed with the wider masterplan design team and drop off bays agreed for school use during the start and end of the school day, resulting in updates to the Transport Assessment and Travel Plan with further clarification on the strategy.

4

4 DESIGN PROPOSALS



3D view of South Elevation

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View of the Dining Space

4 DESIGN PROPOSALS

4.1 Use and Amount

The proposal is for the construction of a new Teaching Block, Sports Block and associated hard & soft landscaping, car parking and infrastructure on the site to function as the complete St Andrew the Apostle Secondary School - a Secondary, School managed by the Russell Education Trust, designed to accommodate 1050 students aged 11-18. There will be 150 students per year group, with class sizes of 30 students, and approximately 150 full-time equivalent staff. The total site area of approximately 2.8 hectares will accommodate the entire school; buildings, parking, All Weather Pitch and informal external play areas.

The whole of the Sports Block as well as some areas within the school, including the dining space, main hall and ancillary spaces, will be accessible to the local community, offering excellent opportunities to gain improved access to sports facilities and performance spaces. The All Weather Pitch and the rooftop MUGA pitch will also be available for the community to use. The Use Class of the development is F1 (a) Provision of Education

4.2 Massing

The proposed massing works with the site opportunities and constraints, as well as providing all the accommodation required of a 1050-place secondary school. The shape and size of the site resulted in the building being positioned on the northern end of the site, parallel to the road on the eastern boundary. The proposed main teaching block will be 3 storey, which is in line with the development masterplan guidance. The sports block has a maximum height of 10.4m, which houses the main sports hall. This is connected to the activity studio which has a overall height of 6.9m by a lower single storey element of changing rooms. The varying roof heights create a pavilion feel and reduce the mass of the building when viewed from the street.

The form of the building has been developed to reflect the need to achieve an efficient footprint, maximise the space available for external play areas and create a civic street presence.

The design team were mindful of the impact the sports block might have on the neighbouring properties. The diagrams show the distances the corner of the sports block is from the nearest property, and show a shadow study taken at different times during a spring day. The sports block sits to the north of the nearest property so the building will not cast a shadow onto the garden or house and the mature trees between the buildings will screen the sports block from view.



Illustrative view showing proposal in context



4 DESIGN PROPOSALS

4.3 Building Layout

The main block teaching accommodation is arranged as a 'Superblock' design, with teaching spaces around the perimeter, social 'heart' spaces in the centre. The Sports Block is a separate building to the south of the Teaching Block. The sport block contains a 3 court sports hall, activity studio and changing facilities.

The internal arrangements are detailed later in the document (page 34). As an overview, internal building layout responded to the initial adjacency requirements set out by the Trust in the School Specific Brief.

These were to have the ground floor comprising:

- A welcoming reception/admin area and conference/meeting room with visitors' toilets
- Main Hall and Dining Hall as separate spaces
- Drama / Music and DT related specialist facilities possibly with Art in the same area.
- Teaching classrooms for showcase RE & Humanities teaching.

First floor comprising:

- SEN and 6th Form centred around the Learning Resource Centre.
- 6th Form Social and Study Room to be separated by 6th Form office space and meeting space to enable passive supervision.
- Bulk of general classrooms with each subject grouped together.
- Staff room (social space and separate workspace) overlooking external play areas.
- LRC to contain full ICT teaching space

Second Floor:

- Maths, Science and Computer Science on same floor.
- Science labs with Prep Rooms in close- proximity to labs.

These initial adjacencies were reviewed and developed over the course of the Engagement Meetings in various iterations. The final plans resulted in the performing arts, music, DT and showcase humanities/RE classrooms, along with the admin and front of house facilities on the ground floor. The ground floor also features a worship and contemplation space to reflect the faith element of the school. The first floor comprises the LRC, SEN facilities, English, MFL, Art and staff room as well as the heads office suite and meeting rooms.

The second floor comprises the Maths, Science and ICT departments, as well as the 6th form area.



Aerial View from Northeast showing proposed massing

4 DESIGN PROPOSALS

4.4 Interiors

The Trusts aspirations for the internal environment were those of openness and light, and for the faith element to be communicated, as well as reflecting the robust curriculum.

The ability to passively supervise corridors and other spaces around the school using internal glazing was a high priority for the Trust, this helps with ensuring light gets into the internal spaces.

4.5 Circulation

The superblock design allows internal circulation to be a continuous loop around the school. This is optimum for reducing the potential for unsupervised anti-social behaviour, as there are no dead end corridors or isolated corners which are unsupervised.

The corridors are a simple circuit which is easy to navigate and assists in way finding. There are 3 main stair cores to provide access to upper floors, with a 4th more open stair leading to the upper floors, which is lit from above by a long rooflight and is visible from the main entrance.

The southern staircase provides access from the basement car park, and will also provide access to the sports block for the community if they are parking in the basement. The passenger lift is located in the south stair in order to provide vertical access for those who need it. The lift will be access controlled for security and the south stair core itself can be locked off from the rest of the school to allow for out of hours use without the risk of unauthorised access to the rest of the school. The south stair also has a door on the ground floor which will be access controlled to prevent pupils going down to the basement car park.

4.6 Adaptability

We recognise that like every educational establishment, the new St Andrew The Apostle School will have changing needs over time. There will be a requirement for the spaces to be adaptable within the longer term. The new school building has been designed to be simple, coherent and adaptable, both now and for future evolving education needs. In-built flexibility is provided in the building in a variety of ways:

- The steel frame internal structure allows for the internal partitions to be non-loadbearing so the majority of partitions can be reconfigured easily and quickly if required.



Proposed staircase with rooflights above



Dining hall view from staff office for supervision

4 DESIGN PROPOSALS

- Teaching areas are arranged in a standard width band on a grid around the main circulation “circuit”, which allows internal walls to move to create different sized teaching spaces in the future if required. This also allows a standard approach to daylighting and windows to be used.
- The use of acoustic rafts and hanging light fittings within teaching spaces means that wall areas are left clear for displays and acoustic wall panels which can become inefficient over time (due to dust or being painted) are avoided.
- The ventilation bulkhead/raft arrangements are positioned to allow them to be retained, even if the partition layout were to change. The local heat recovery unit modulates CO2 and temperature, allowing the unit to increase/decrease ventilation rates to ensure the internal environment is always pleasant without wasting energy, even if the occupancy level altered within that zone. The variable speed controls will also ensure that only the fresh air that is needed is provided to the space. If occupancy levels were to drop in a future arrangement, the automatic ventilation controls will adjust to suit without occupant input. Each heat recovery unit can be individually controlled and therefore could be easily enabled/disabled should it not be required under a certain configuration, or to suit the out-of-hours strategy which may also vary with time.
- The luminaires are perpendicular to the fenestration to allow partitions to be relocated without the need to move the suspended luminaires in the majority of arrangements. The artificial lighting control system utilises Lighting Distribution Units (plug-n-play) to allow the luminaires to be easily reconfigured with minimal alteration to switching circuits.
- Power and data shall be mounted on wall mounted DADO rails to allow easy removal and reconfiguration.
- Internal lock down has been considered to allow a limited part of the building to be opened up for easy security and control of out of hours community use. For example, toilet areas are still accessible from the main hall out of hours. Please see subsequent pages for Access Strategy drawings.
- Good use of the site, balancing the needs of pedestrians, cyclists and cars and enhancing the school’s presence in the community
- Buildings and grounds that are welcoming while providing adequate security
- Good organisation of spaces in plan and section, easily legible and fully accessible
- Internal spaces that are well proportioned, fit for purpose
- Flexible design to allow for short and long term change of use
- Good environmental conditions throughout including natural light and ventilation.
- Well-designed external spaces offering a variety of different settings.
- A simple palette of attractive materials, durable and easily maintained.



Proposed Learning Resource Centre



Main hall being used for an Evening Performance

4.7 Design Quality

In addition to the design responding to the Schools’ vision and the DfE requirements, the design also enshrines the principles identified in the CABA guidelines for a well designed school. We have reviewed and tested our proposals against the following:

ten CABA points:

- A high-quality design that inspires us to learn
- A sustainable approach to design, construction and environmental servicing

4 DESIGN PROPOSALS

4.8 Floor Plans

Ground Floor Plan

Visitors will approach the building from the north main entrance. The general office with its open, welcoming reception area includes a visitors WC and an interview room. This area is secure and only approved visitors will be permitted into main school accompanied by a staff member. Once within the secure line of the school the open staircase with its natural light flooding in from above allows access to the upper floors. The worship and contemplations space, or Chapel is located adjacent to the main entrance. This room has glazed screens either side of the internal door, with a large area of curtain wall to the external face, allowing views and light into the main circulation space after the reception.

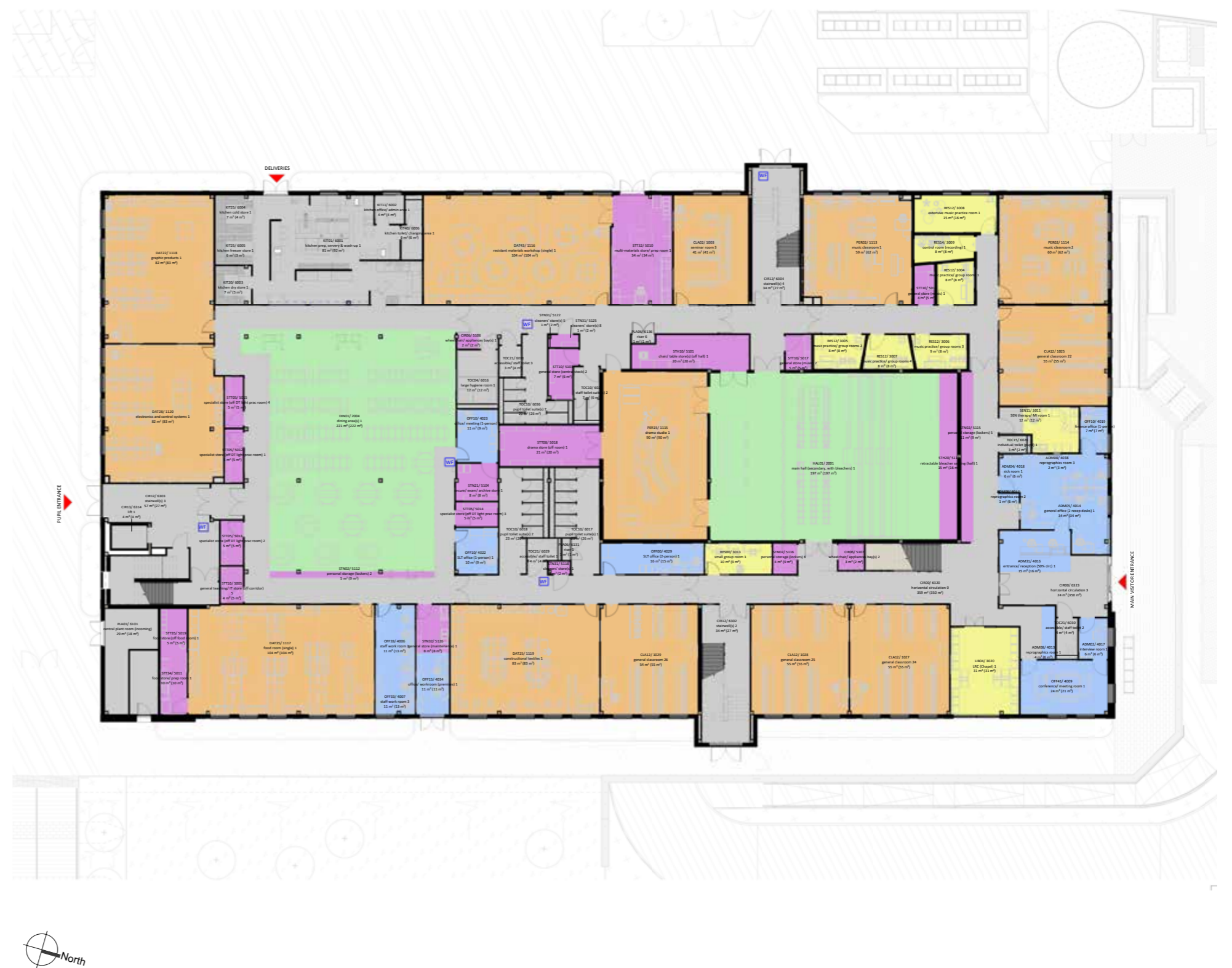
The desire for there to be showcase classrooms for RE and humanities on the ground floor has been realised by the location of 4 general classrooms immediately adjacent to the chapel and the general office.

The performing arts department is also on the ground floor, this includes the main hall, drama studio and music rooms. The main hall is conveniently located close to the main entrance for performances and community events. The dining hall has a double height atrium with rooflights above which allow daylight into the space. The kitchen is located on the western side of the building. Early discussions with the Trust were had regarding servicing the kitchen for deliveries. The vehicular access to this site is fairly restricted, so the natural place for the kitchen would have been in the north west corner of the building. However, the Trust's desire for the dining hall to be away from the main visitor entrance, and closer to the student entrance and external play spaces was a higher priority and it was felt that deliveries and refuse would be easily managed by kitchen staff.

The DT department is also located on the ground floor. The food tech room is opposite the dining and kitchen so that students could practice a service if needed. The Resistant Materials workshop is on the western side of the building adjacent to the kitchen. There is an external door to the materials store so that deliveries of large materials can be easily taken.

Pupils will predominantly enter the building from the south stair well. They immediately come into the dining area which is supervised by strategically places staff offices and work rooms.

The plant room is located on the south eastern corner of the building, this is to ensure that the service routes are as short as possible to minimise the need for long runs of pipework across the site. The toilet facilities are located centrally in the plan, so they are easily accessible from the large spaces. The toilets are stacked up vertically on the other floors for efficient servicing and ease of wayfinding.



4 DESIGN PROPOSALS

First Floor Plan

The first floor of the Teaching Block consists mostly of general teaching classrooms, located around the perimeter to achieve optimum natural daylighting. The English department, Modern Foreign Languages department, Art classrooms, and the remaining humanities classrooms are on this floor. The head teachers office suite including meeting room are located in the north east corner, allowing good visibility to visitor and the main entrance, and easy access to the main entrance via the central staircase, while giving the head teacher privacy.

The staff social room is located in the south west corner, with windows facing out over the play areas to the west and south to aid in passive supervision of the external areas.

The LRC is centrally located with the English classrooms surrounding it. The SEN cluster of rooms is located next to the LRC in a quiet area of the school, but still occupying a central location.

Toilets are stacked across floors, with the main Toilet Block consistently located in this position to aid wayfinding.



4 DESIGN PROPOSALS

Second Floor Plan

The second floor of the main teaching block comprises science, maths and ICT departments. The location of science on the top floor is optimal due to the requirements for servicing and ventilation extract. The science rooms are served by one consolidated science prep space in the centre of the plan. The sixth form area is located in the south west corner of the building, this reflects the Trust desire to have the sixth form area separate from the rest of the school which helps to foster a sense of maturity and prepare them for moving on into further or higher education. The sixth form areas have views over the play areas to the south and west.

Dropped lightwells are provided in the centre of the plan above the hall and dining space to provide roof lighting, daylight into corridors and to allow a hidden area for the location of rooftop plant. The main plant room is also located in the centre of the plan and has access directly out onto this roof. Once again toilets are located in the same position.

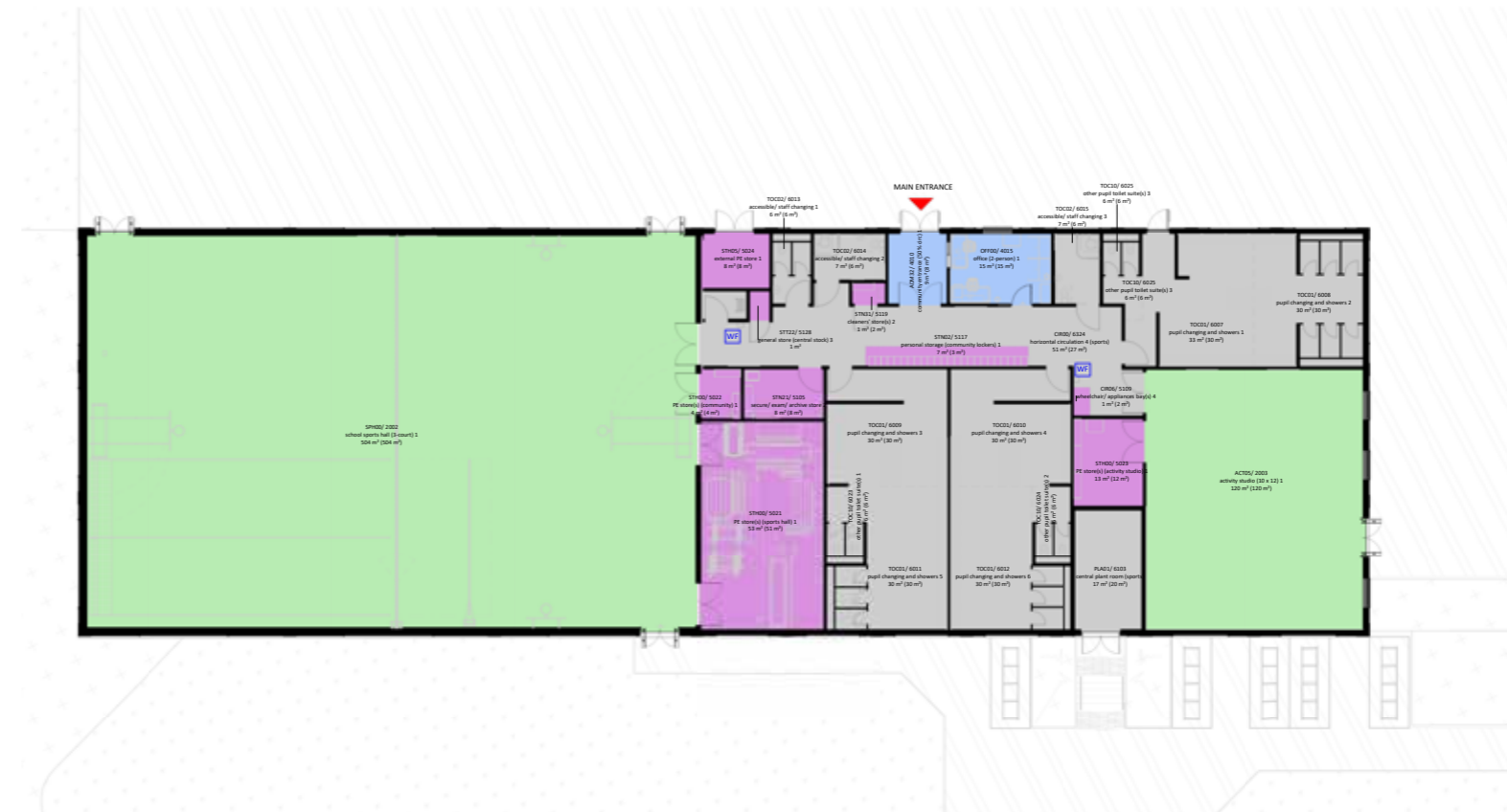
The south and west stairs provide access to the roof, to access the roof top MUGA and for maintenance access to the plant equipment and PV panels also on the roof. The route to the MUGA from the stairs is fenced in to prevent students accessing any plant equipment.



4 DESIGN PROPOSALS

Sports Block Plan

The Sport Block has a simple, single-storey plan to facilitate both pupil and community use of the facilities and aid wayfinding. The form of the building was to be as narrow as possible to maximise the external play spaces to the west. The main entrance to the Sport Block is via the west elevation there is an office for bookings as well as for PE staff to use. The changing rooms are located centrally in the plan. One of the changing rooms has an external door for ease of access from the pitch, and to assist with access if there are visiting teams. The activity studio looks back towards the main building with windows in the north elevation and roof lights above to get light into the back of the space. The sports hall itself has rooflights over to provide natural light into the space will reducing glare. This is a standard approach to light sports halls from above so glare from sunlight does not affect players within. Store rooms are located within the building, as well as staff and accessible changing rooms. There is a secure exam store located within the building for use when exams take place in the sports hall.



4 DESIGN PROPOSALS

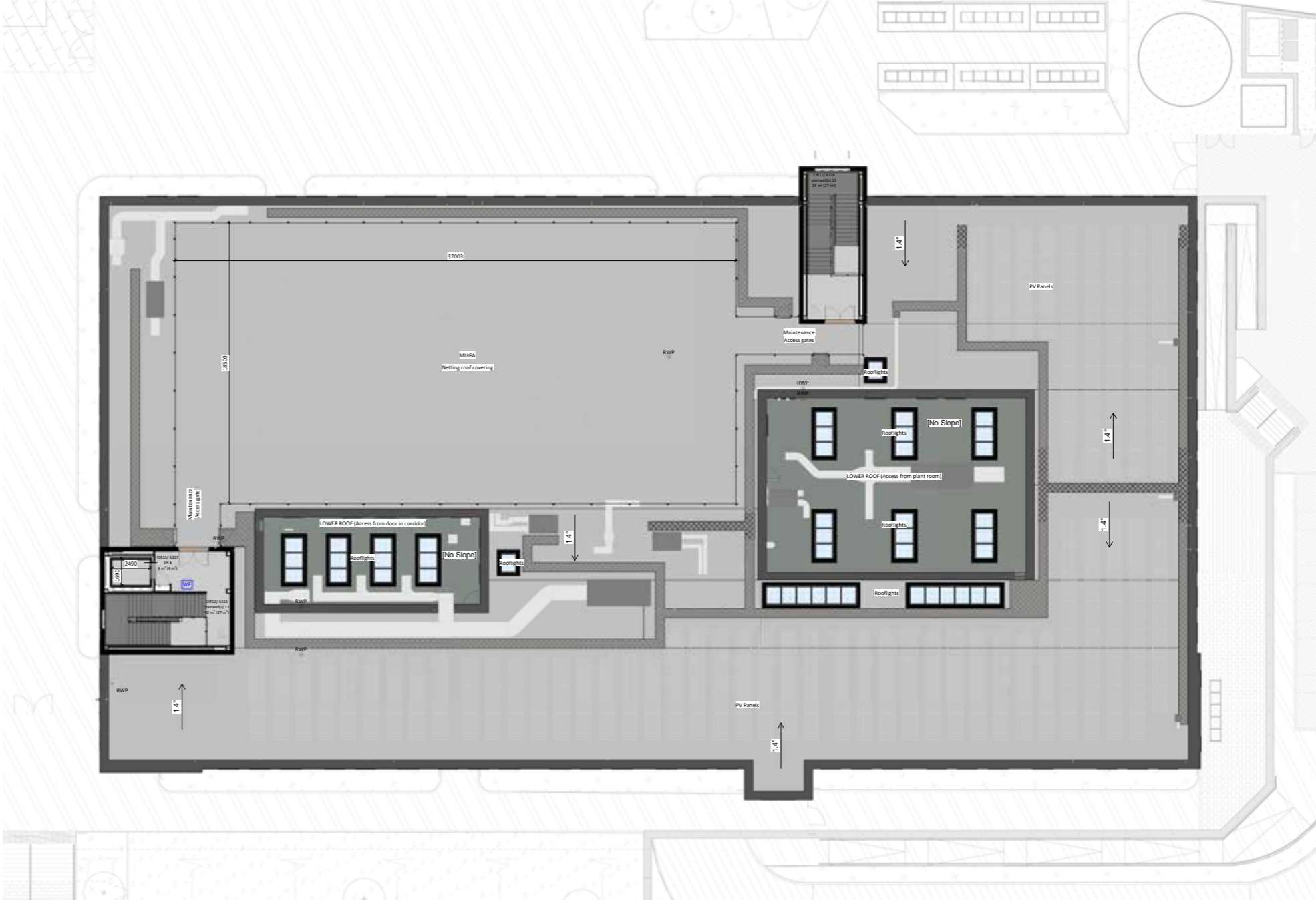
Teaching Block Roof Plan

The teaching block roof includes the Multi-Use Games Area, photo-voltaic panels and roof plant equipment such as ductwork and extract flues.

The MUGA pitch is located in the south west corner of the building. On the outline planning consent, the MUGA is located in the centre of the plan on the roof. Positioning the pitch on the south west corner, pulls it back from the main road, so less visible from the street and provides more opportunity for roof lights over the key central spaces in the superblock, like the main hall and dining area. The MUGA position had to be carefully considered due to the structural requirements and to ensure that heavily serviced rooms, such as the plant room and certain science labs had ways in which to extract from the roof or via light wells.

In order to comply with the London Plan, a number of PV panels are required to the roof. These cover a large area so access for pupils to the MUGA pitch is via fenced paths to prevent access to the PVs.

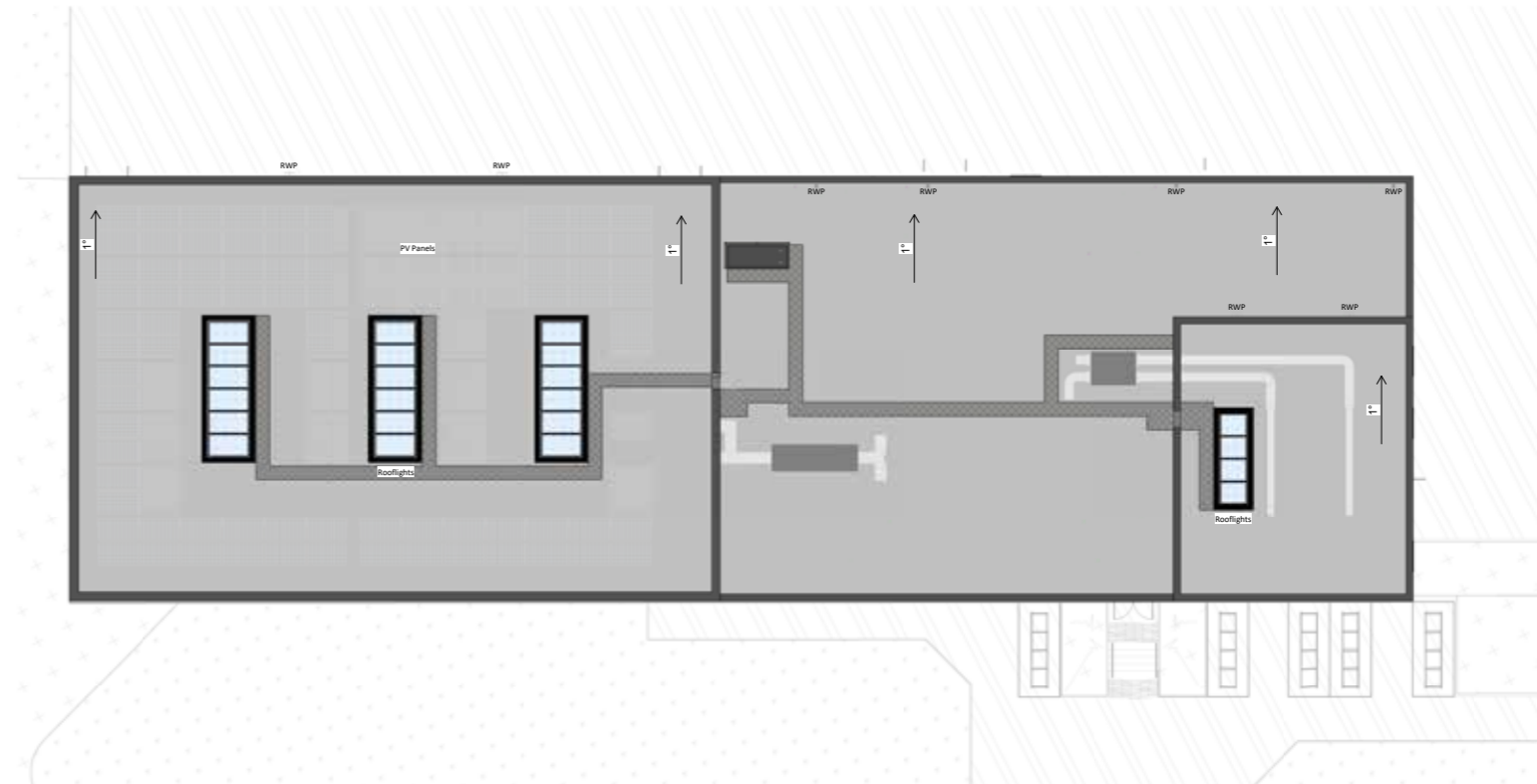
Considerations were made to the viability of providing green roofs on this scheme. The amount of PV panels that are required, along with the required access and maintenance routes, cover the majority of the remaining roof area which is not used for the MUGA pitch or used for rooflight, plant equipment, duct work and associated maintenance and access walkways. As demonstrated by the plans opposite, the roof is fully covered leaving no space for a green roof.



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Sports Block Roof Plan

The sport block roof will house more PV panels and plant equipment for extract. There will only be access for maintenance personnel, and this will be via the access hatch with permanent companionway step ladder, which is in a secure cupboard within the building.

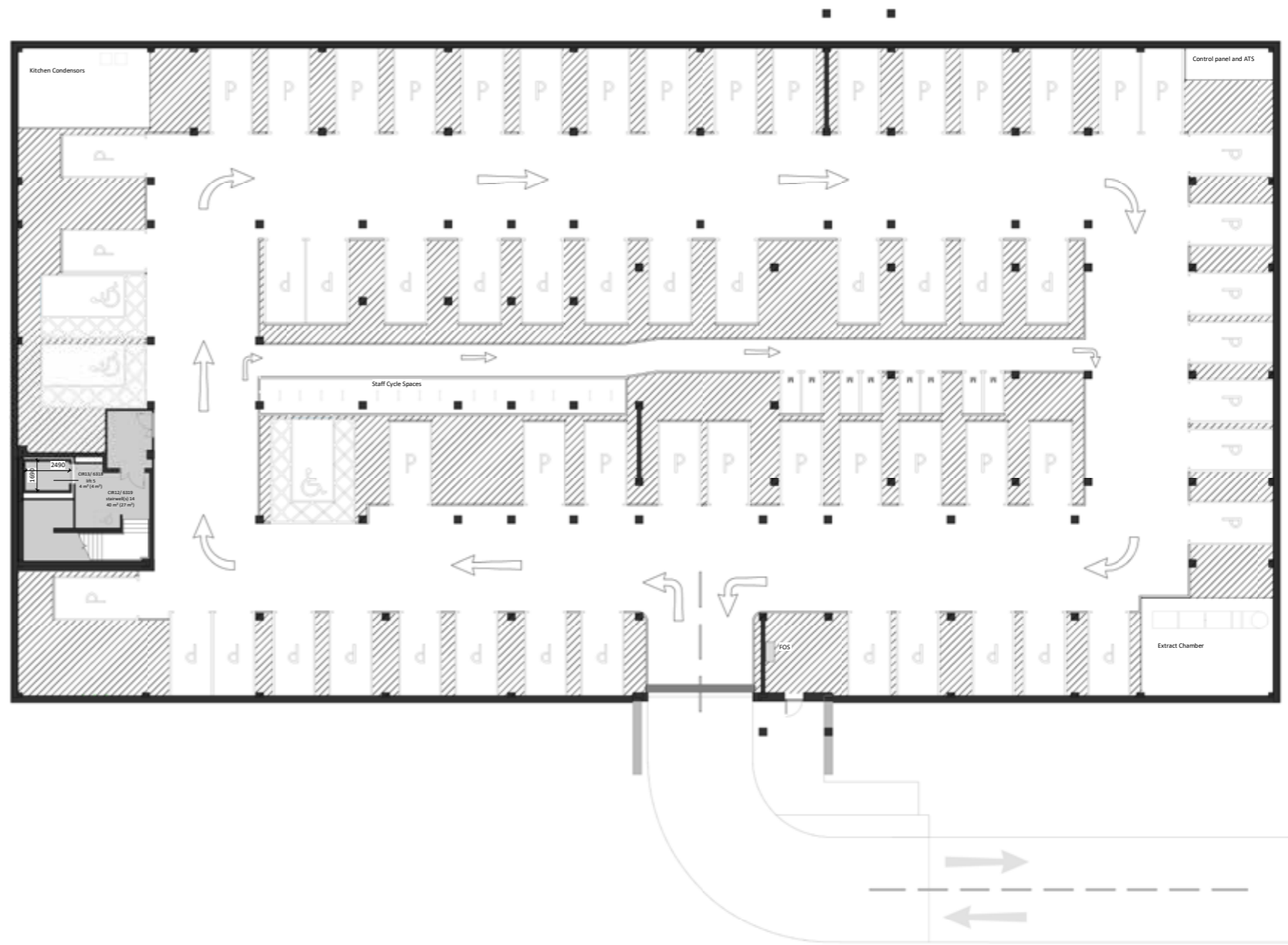


4 DESIGN PROPOSALS

Teaching Block Basement Car Park Plan

The basement car park will predominantly be for staff to park on site, with a few visitors able to use it, should the main visitor car park be full.

The structural columns from the building above have had an impact on the available layout of the parking. As such, there are 61 standard parking bays, 3 accessible spaces, 8 motorbike spaces, 28 bicycle spaces (14 hoops).



4 DESIGN PROPOSALS



View 01 | Visitor Entrance



View 02 | Student Entrance into Dining Hall

4 DESIGN PROPOSALS



View 03 | Learning Resource Centre



View 04 | Main Hall

4 DESIGN PROPOSALS



View 06 | Community Room



View 05 | Dining Hall from first floor corridor

4 DESIGN PROPOSALS



View 07 | Activity Studio



View 08 | Sports Hall

4 DESIGN PROPOSALS

4.9 Elevation Design

As set out in the previous sections, the starting point for the elevation design was to take guidance from the Masterplan Design Principles as well as the following considerations

- The outline planning approved elevations were predominantly brick, with accent materials for highlighting structural elements
- The school is to be a gateway building into the rest of the site
- The school have a civic presence on the street
- Materials should be high quality and robust, suitable for a school.

Materials

The design principles document requires the building to be predominantly brick with a maximum of two additional materials to add contrast. For the main teaching block, it is proposed to use mechanically fixed, buff brick slips, on our SIPs panels. We are proposing to use a darker buff brick to add contrast to certain features. On the sports block, we are proposing to use the same buff brick slips, with panels of painted fibre cement weather board to provide some variation to the mass of the building.

Appearance

The teaching block has a fairly long facade on the east and west elevations, due to the amount of accommodation that is required. Our intention was to break up this long facade vertically, by using brick piers to highlight the positions of the primary structure within.

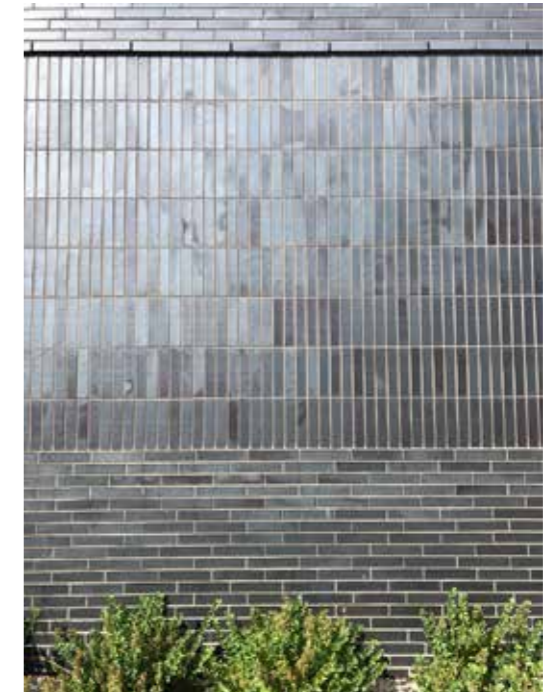
Windows

The Design Guide document requires windows to be simple and vertically emphasised. We have chosen simple punched windows, set out in a regular pattern, with a vertical aspect, as suggested in the design guide. As previously mentioned, our window configuration not only complies with the principles of the design guide, but also meets the DfE's strict requirements for natural daylighting and ventilation. Our windows also provide maximum flexibility for internal fixed furniture and equipment.



Successful Brick Environments

Successful Brick Environments



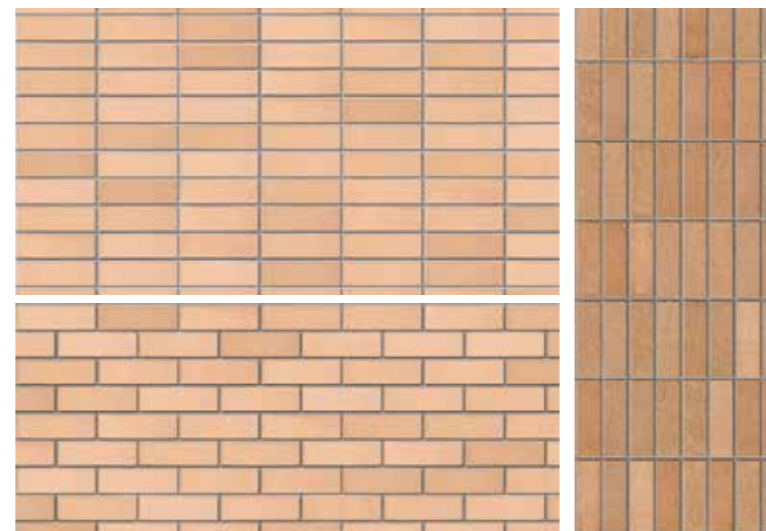
Variation of surface texture

Variation of surface texture

Ventilated screen

Intrigue in execution

Extracts from the design principles document showing successful brick facades.



Examples of stretcher bond and stacked bond(horizontal and vertical) and different shades of buff brick.



Precedent images of varying brick bond

4 DESIGN PROPOSALS

Detailing

The two prominent corners to the building, the north east corner and the south east corner, that both face the street, have feature bays of projecting brickwork with the school signage which are visible on approach from both directions on the main street frontage, announcing the school's presence.

The windows are grouped together by using panels of stacked bond bricks to add interest at the upper levels.

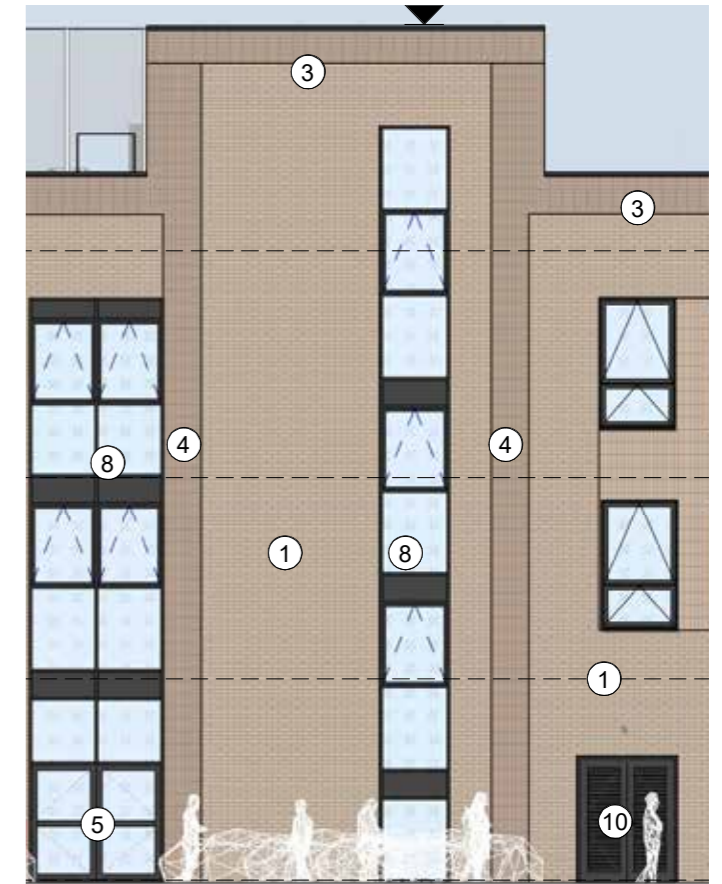
The brick piers that break up the elevations are to also be a stacked soldier stretcher bond and these project from the elevations to provide some relief along the length of the building. These, along with the banding at the top of the building, will be a darker buff brick.

The stairs feature strips of glazed curtain walling, which provide further vertical emphasis to the elevations and help to break up the line of the building, especially the south and west stair cores, which provide access to the roof.

The sports block features the same vertical brickwork piers as the main building in the darker buff brick. As the sports block has few windows, due to the nature of the activities inside, panels of weatherboard have been proposed, this will give texture and break up the elevations, and help the building sit well behind the trees and landscaping especially on the eastern elevation.



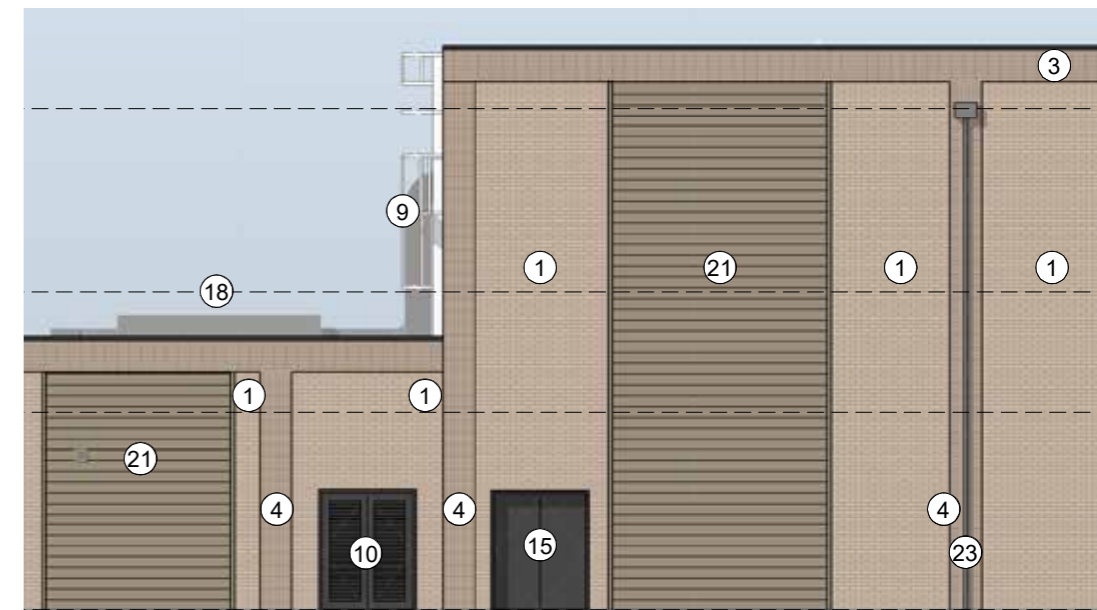
Detailed Elevation (North) - Main Entrance and feature bay



Detailed Elevation (South) - Curtain Walling and student entrance



Detailed Elevation (East) - Feature Bay and Typical Bay



Detailed Elevation (West) - Sports block entrance

4 DESIGN PROPOSALS



Teaching Block North Elevation (Main Entrance)



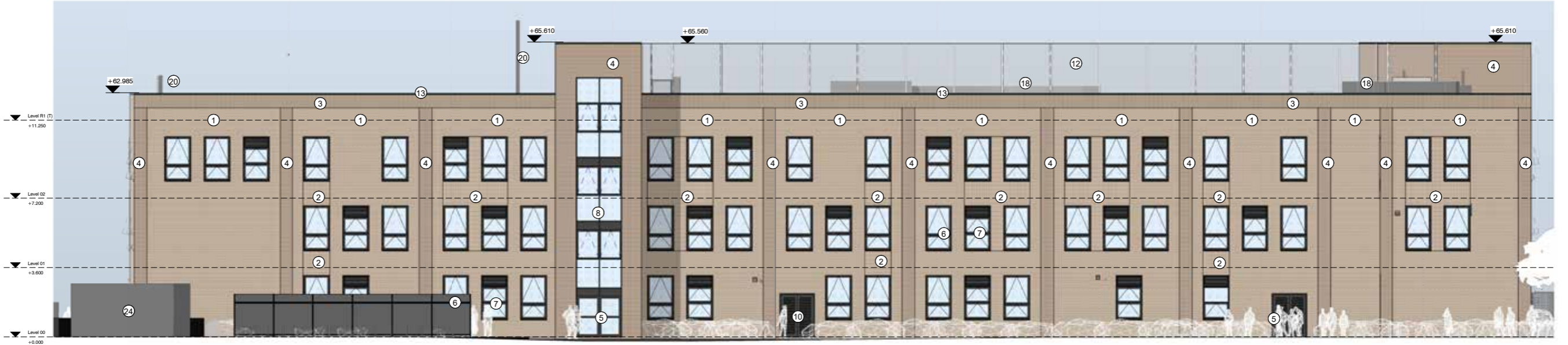
Teaching Block West Elevation

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> 1. Mechanically fixed, light Buff brick slips. Horizontal stretcher bond. 2. Mechanically fixed, dark Buff brick slips, projecting 20mm. Vertical soldier stacked bond. 3. Mechanically fixed, light Buff brick slips. Flush. Stacked bond. 4. Mechanically fixed, dark Buff brick slips projecting 20mm. Vertical soldier stacked bond. 5. PPC Dark grey framed fully glazed door 6. PPC Dark grey aluminium framed window 7. PPC Dark grey louvred aluminium framed window | <ul style="list-style-type: none"> 8. Dark grey aluminium glazed curtain walling 9. Galvanised access ladder 10. PPC Dark grey door with louvre over panel 11. Sliding entrance door. 12. Rooftop MUGA chainlink fencing 13. Dark Grey PPC Parapet capping 14. Signage - bespoke school lettering and cross symbol - aluminium lettering fixed to brickwork 15. Flush Solid Sports Hall Door 16. Photovoltaic Panels - required for planning and Part L compliance. | <ul style="list-style-type: none"> 17. Rooflights 18. Rooftop plant 19. Handrail 20. Extract flue 21. Lapped weatherboard - painted. |
|--|--|---|

4 DESIGN PROPOSALS



Teaching Block East Elevation



Teaching Block West Elevation

4 DESIGN PROPOSALS

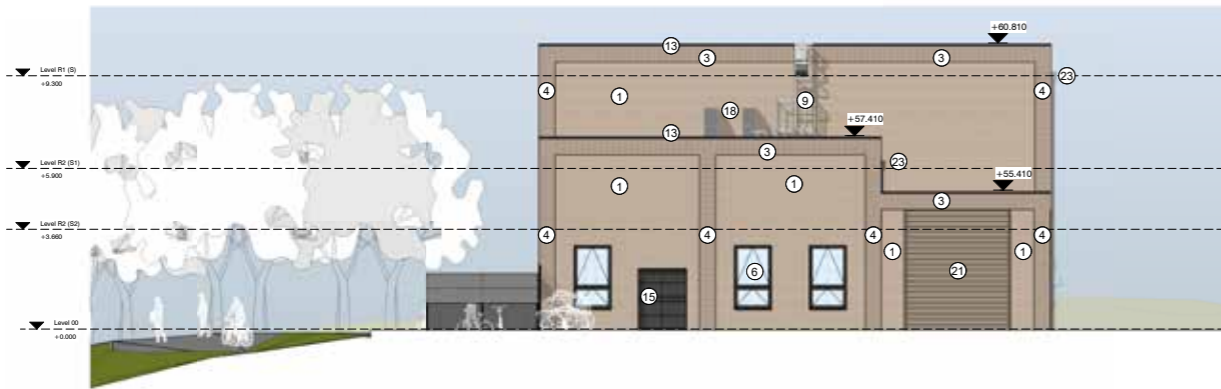


View of student entrance and south elevation of the teaching block

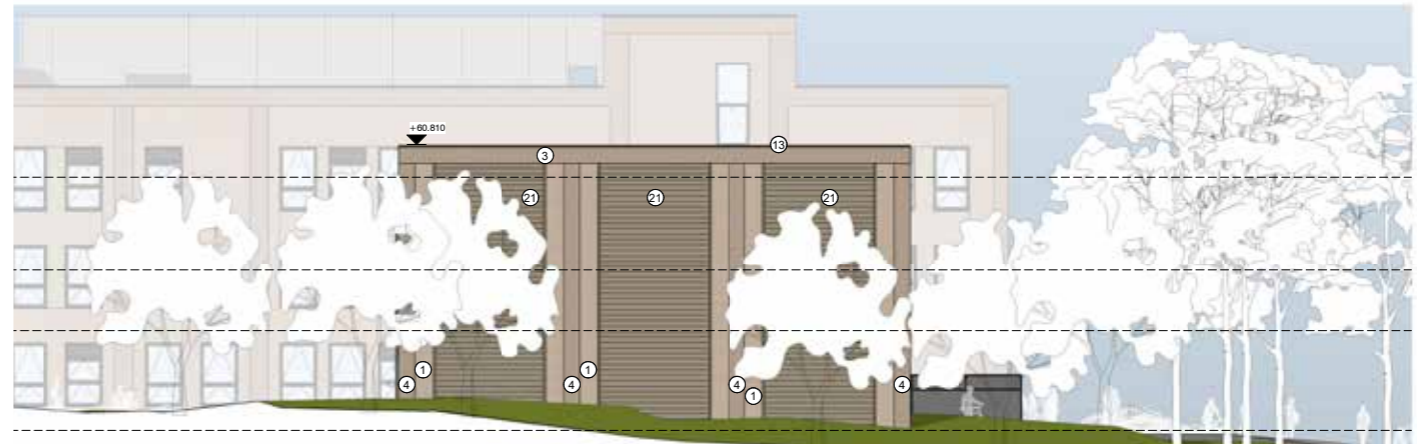
4 DESIGN PROPOSALS



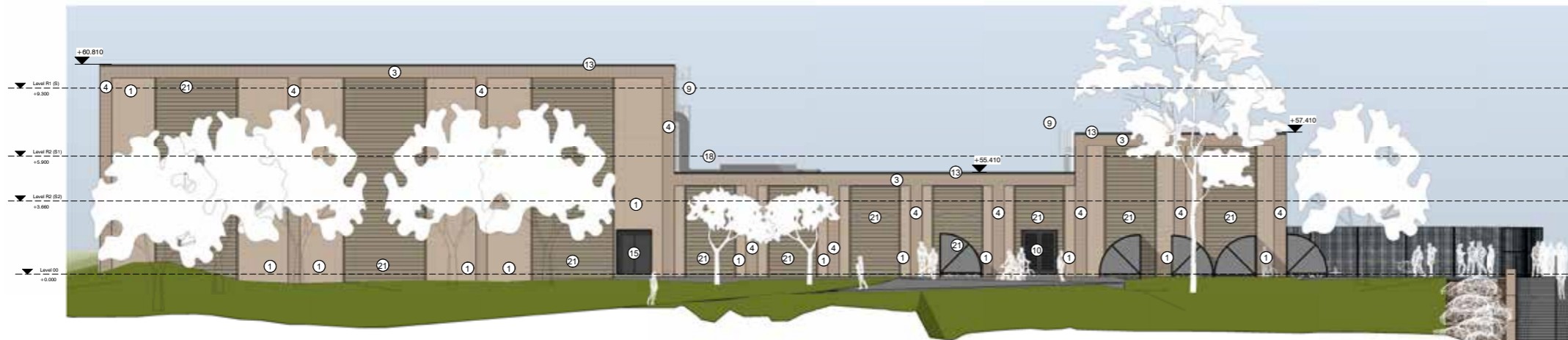
View of East Elevation with Pupil Entrance



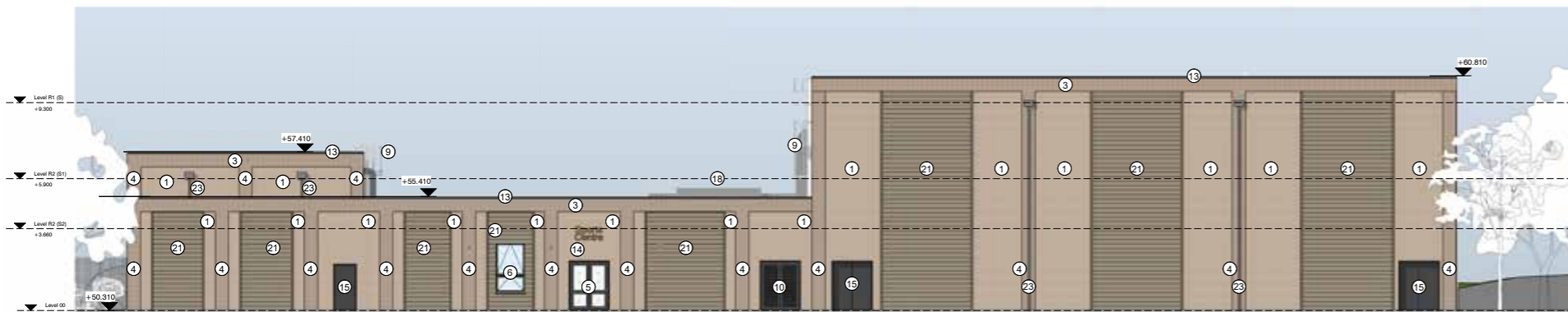
Sports Block North Elevation



Sports Block South Elevation



Sports Block East Elevation



Sports Block West Elevation

1. Mechanically fixed, light Buff brick slips. Horizontal stretcher bond.
2. Mechanically fixed, dark Buff brick slips, projecting 20mm. Vertical soldier stacked bond.
3. Mechanically fixed, light Buff brick slips. Flush. Stacked bond.
4. Mechanically fixed, dark Buff brick slips projecting 20mm. Vertical soldier stacked bond.
5. PPC Dark grey framed fully glazed door
6. PPC Dark grey aluminium framed window
7. PPC Dark grey louvred aluminium framed window
8. Dark grey aluminium glazed curtain walling
9. Galvanised access ladder
10. PPC Dark grey door with louvre over panel
11. Sliding entrance door.
12. Rooftop MUGA chainlink fencing
13. Dark Grey PPC Parapet capping
14. Signage - bespoke school lettering and cross symbol - aluminium lettering fixed to brickwork
15. Flush Solid Sports Hall Door
16. Photovoltaic Panels - required for planning and Part L compliance.
17. Rooflights
18. Rooftop plant
19. Handrail
20. Extract flue
21. Lapped weatherboard - painted.



View of Sports Block Entrance

4 DESIGN PROPOSALS

4.10 Crime Prevention & Safer Places

Site Safety and Security

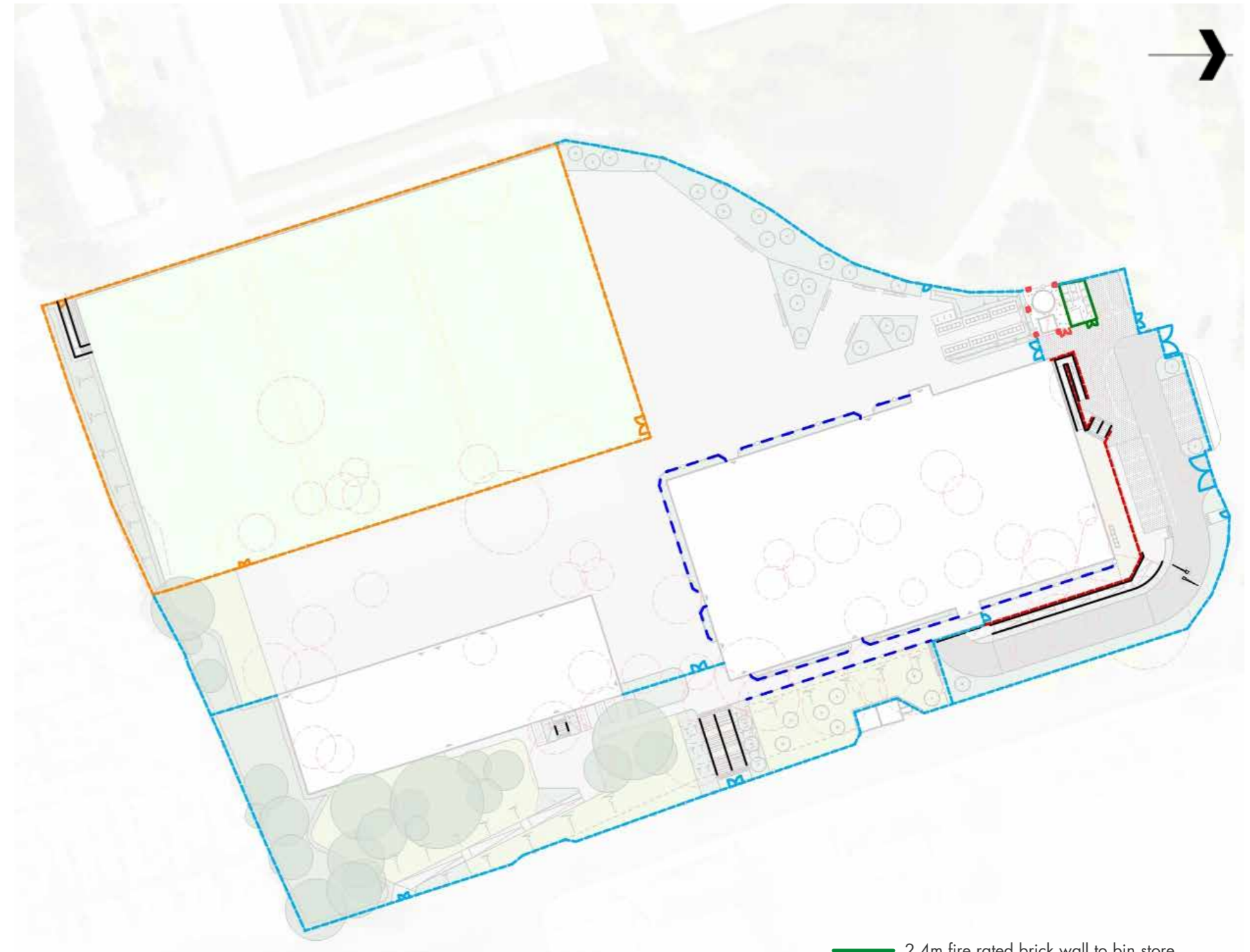
The development has been designed to create a clear distinction between publicly accessible and secure spaces. The car park and entrance area to the North of the school building is accessed via separated external pedestrian and vehicle gates and is securable outside of school hours. The site plan has been designed so that part of the building, the north elevation, provides the secure line giving a positive, welcoming appearance. The rest of the site is secured by fencing and gates. The area that is accessible to visitors prior to signing in at reception is small when compared with the rest of the site and is positioned so that it is easily surveilled. Cycle storage is within the secure line away from the reach of opportunist thieves.

We have maximised the site area available for safe and secure school use, segregating parking from cycle and pedestrian routes into the school. With all external play, sport and social areas behind secure lines, provided either by the building itself or by a fence line, pupils can both feel and be safe. Occupied spaces have been provided throughout the school to enable passive supervision of internal and external areas ensuring a safe environment without the sense of overt control. CCTV has been included to key spaces and the basement car park for added security.

The 4G All weather pitch has a 3m fence to prevent balls being lost over the boundary, and to deter trespassers. The whole site is protected by a 2.4m weldmesh fence to the perimeter.

Site Access

There is one vehicular entrance and one exit at the north part of the site. There are 2 additional pedestrian access gates which will be used by pupils at the beginning and end of the day. Passive supervision of the main access is provided via the general office and school reception, with the Headteacher's office overlooking the main pupil entrance from first floor level. The two additional pedestrian entrances will be managed and staffed by the school to ensure supervision and access only during the start and end of the school day.



Proposed Boundary Treatment Plan

- 2.4m fire rated brick wall to bin store
- - - 2.4m weldmesh fencing
- - - 3.0m sports rebound fencing
- - - 1.1m pedestrian guardrail railings
- - - 0.6m timber knee rail
- 0.9m handrails

4 DESIGN PROPOSALS

At the beginning of the day, pupils will enter from the North, East or West via monitored gated entrances and make their way into the Teaching Block via pupil entrances to the South and West. Visitors will enter the school via the school reception within the new Teaching Block. Access beyond the secure lobby is via reception control only.

Community and Out of Hours Use

The shared use of parts of the school site and buildings by the local community has been considered in the light of the security risks that this might present. Direct community access is available to the sports hall and does not require travel through educational areas or opening up of the rest of the school. Zoning of the accommodation has been carefully considered to maximise the potential for wider community use. The main hall and drama studio are accessible for performance, events and community groups without opening the rest of the school, as separate a reduced community zone. The strategy allows the school the flexibility to open up other areas of the school for community or out of hours use if required.



Circulation and Security Strategy

- School Building Community Access
- Visitor Lobby
- Restricted Access
- No Access
- Secure Line
- * Door can be locked to secure community use areas

5

5 LANDSCAPE PROPOSALS

5 LANDSCAPE PROPOSALS

5.1 Design Development

Analysis of approved scheme

Our first task for developing the proposals was to critique the planning approved school plan. There was a number of inefficiencies with this masterplan and some improvements could clearly be made

Masterplan Optioneering

To look to improve on the approved scheme we developed a number of site options where we tested the building locations, building forms and sports pitch orientation.

Following analysis of these options and close discussions with the school we determined that the option with both buildings to the east elevation and the narrow sports block was the preferred solution.

The benefits of this option are;

- improved connection and circulation between main block and sports block
- preferred orientation of sports pitch north - south
- increases usable school space and improved BB103 calculations
- regular shaped hard informal spaces offer greater flexibility
- simplified access arrangements
- improved wayfinding to reception and main entrance
- existing mature trees still retained



Selected Masterplan

5 LANDSCAPE PROPOSALS

5.2 Design Response

The role of landscape in the scheme has been to create a masterplan for the site which is responsive to the parameters of: the Comer masterplan, the MMC Framework, the school operational requirements and DFE guidelines, but most importantly its response to the site's unique opportunities and constraints.

The land parcel within the wider Comer residential masterplan is the most south eastern point of the site and acts as a gateway into the site from Brunswick Park Road. The school will therefore become a key focal feature along the road and accessing the new residential development.

A number of building orientations and layouts have been tried and tested, resulting in the chosen proposals that best maximise the opportunities of the site, minimise impact to sensitive areas and benefit greatest the school.

The site's topography has had a significant influence in the development of the site layout. From the placement of built form on the raised plateaux, to the arrangement of sports pitches to ensure free movement and accessibility for all across the site. The result has been a design that effectively frontages the key boundaries, provides easy access and wayfinding, whilst also maintaining the existing mature tree planting.

In terms of accommodation the proposals account for: a visitor and DDA car park, basement staff car park, pedestrian arrival plaza, a series of hard and soft informal external spaces, pupil and staff cycle parking spaces, a sprint track, roof top MUGA and a artificial turf football pitch.



Proposed Landscape Masterplan

5 LANDSCAPE PROPOSALS

5.3 Site Security

Site Perimeter

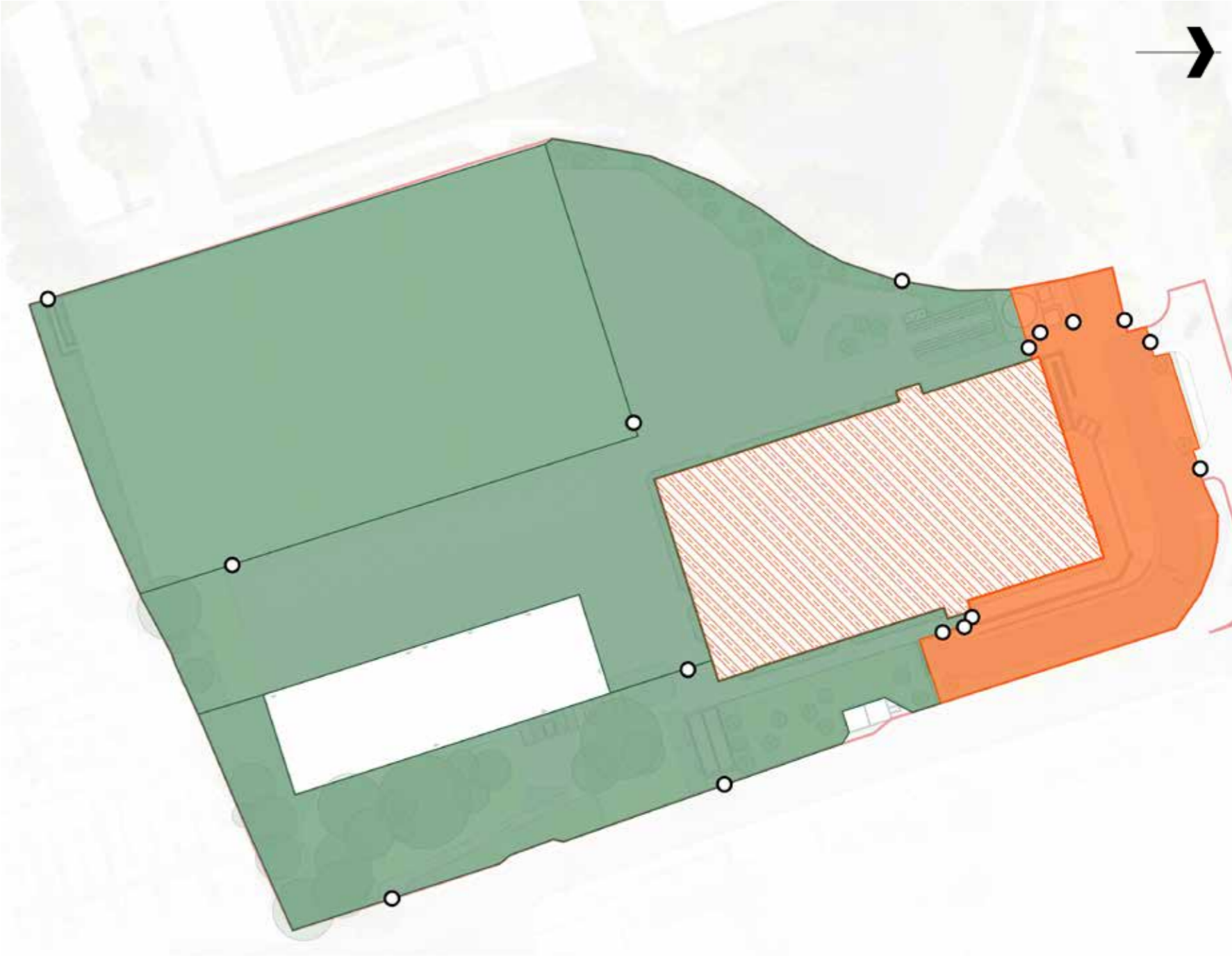
Secure fencing will be located to the perimeter of the site to secure the school. This bounds the whole site ensuring the school can control access at all times.

The secure line location maximises the usable space for the school ensuring the site is as efficient as possible and benefits the pupils.

There will also be internal lines of security that provide the school greater control of how they allow access for different uses into the site.

Secondary boundary gates to the north boundary will also provide alternative options for the school to allow access to the site.

- Gate location
- Publicly accessible area
- ▨ Controlled access area to basement
- Secure area



Proposed Secure Line Plan

5 LANDSCAPE PROPOSALS

5.4 Boundary Treatment

Site Perimeter

A 2.4m tall weldmesh fence will be used to the perimeter of the site. Internal fence lines will also be 2.4m to ensure the school can adequately control access to the different areas. This is especially important for community use and use of the school out of normal school hours.

Sports Facilities








The artificial turf pitch and MUGA will be bound by specialist rebound sports fencing. The roof top MUGA will also feature ball stop netting to form a roof to ensure balls stay within the enclosure.

Car Park

The car park will be controlled access at the boundary line with the use of double gates for entrance and exit. For the basement car park an automatic rising arm barrier and shutter will control access.

Service Facilities

A 2.4m close board timber fence is proposed to the sprinkler tank enclosure. A 2.4m fire rated brick wall encloses the bin store. Both of these boundary treatments prevent views into the enclosures. The sprinkler tank size has been determined by a requirement to provide a 60 minute water supply.

-  2.4m fire rated brick wall to bin store
-  2.4m timber closeboard fence to sprinkler tank enclosure
-  2.4m weldmesh fencing
-  3.0m sports rebound fencing
-  1.1m pedestrian guardrail railings
-  0.6m timber knee rail
-  0.9m handrails



Proposed Boundary Treatment Plan

5 LANDSCAPE PROPOSALS

5.5 Access and Circulation

Pedestrian Access











Main pupil access will be via the focal external stair access from Brunswick Park Road with alternative points of access the south eastern corner of the site for a level approach, and also from the north west boundary via the new park proposed as part of the wider Comer masterplan.

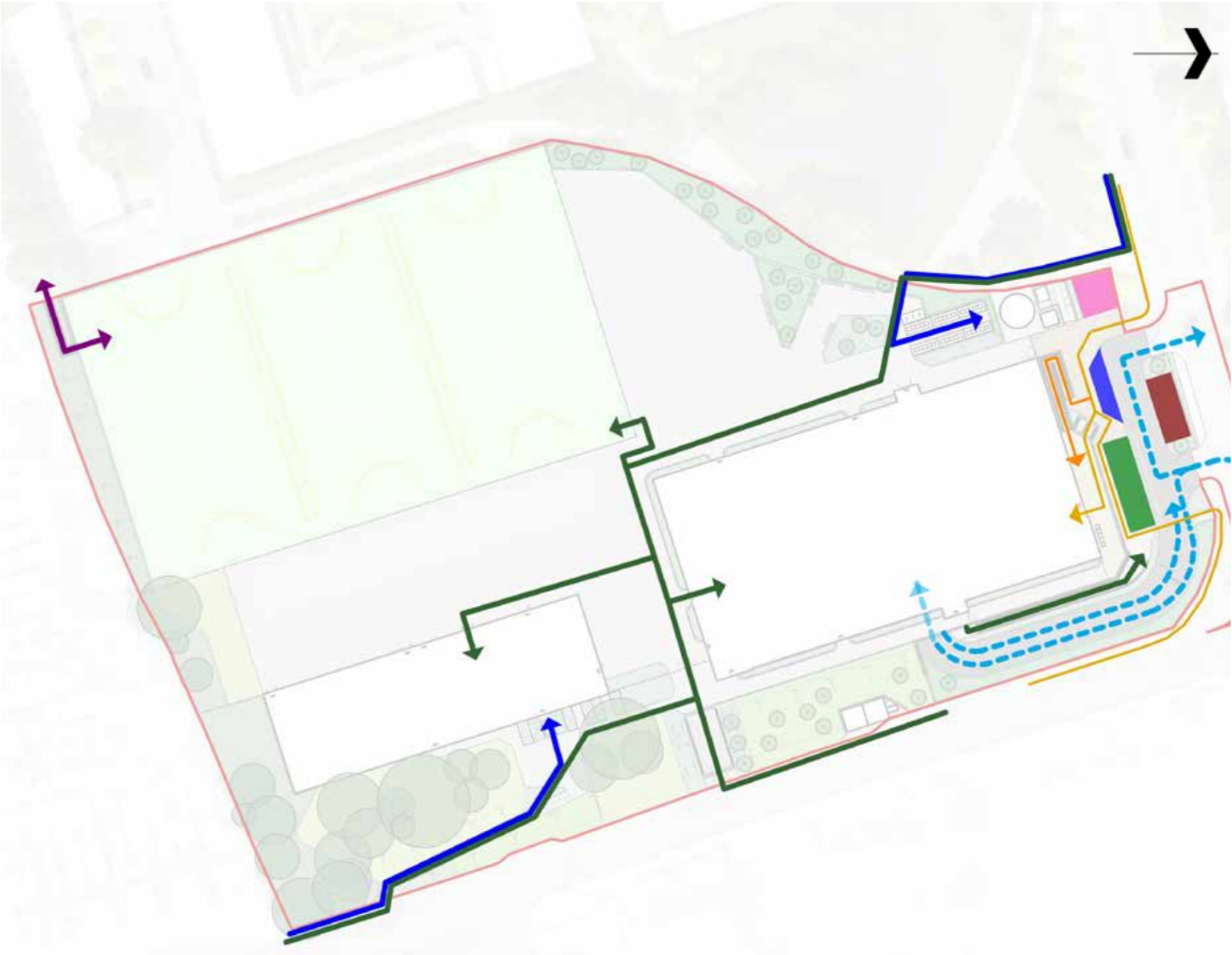
Visitors and late pupils will access via the main entrance to the north boundary, through the car park and be directed to the reception via the proposed pedestrian plaza and drop down space.

Vehicular Access

All vehicular access will enter the site via the one way access route to the north of the site. The initial car park will accommodate visitor and DDA circulation, as well as provision of a lay-by for service, deliveries and refuse collection.

Access to the basement car park will be adjacent the visitor car park entrance and be accessible via a controlled access point.

-  Pupil (on time) circulation
-  Visitor and late pupil circulation
-  Cyclist access
-  Accessible route to main entrance (also for visitor cyclist access)
-  Ball retrieval access (or community access)
-  Vehicle access to front and basement car parks
-  Visitor parking bays (5no.)
-  Minibus parking bays (2no.)
-  Accessible parking bays (5no.)
-  Delivery/ refuse pull in bay



Proposed Access and Circulation

5 LANDSCAPE PROPOSALS

5.6 External Sports Provision

Sports Provision

Masterplan of the site and orientation of the buildings has helped to maximise the available sports provision possible on site. The site includes the following facilities;

Artificial Turf 3G Pitch :
91x55m (85x49 pitch area with 3m run-off)
3m rebound weldmesh fencing
Markings to include; 11 aside football, 3 x 5aside football

50m Sprint Track:
50m + 10m run out and 2m starting grid
6 no lanes
Standard asphalt surface to maintain flexibility

Roof top MUGA :
18.5 x 37m Polymeric Multi-use playing surface

2no. Half basketball courts for informal sport/ recreation:
Markings to include; half basketball courts
Rebound weldmesh fencing and ball stop netting to roof
Access via roof top stair core



Proposed Sports Provision Plan

5 LANDSCAPE PROPOSALS

5.7 Hard Landscape Materials

A palette of robust materials has been chosen for the various external areas to ensure longevity and practicality; both for the users and the management team who will be maintaining the schools.

Materials will be sustainably sourced, reducing the impact on the environment, and sourced locally where possible to reduce shipping costs.

Street Furniture will include external seating, cycle shelter, cycle hoops and litter bins. Furniture has been positioned strategically to define spatial use and to create functions around the site.



PAVING

Pedestrian approach to main entrance



Hard informal and social external areas



Parking bays



FENCING

School security fencing



All weather pitch fencing



Pedestrian guardrail railings



STREET FURNITURE

Covered cycle shelter



Cycle stands



Outdoor benches

5 LANDSCAPE PROPOSALS

5.8 Planting

Tree Planting

Trees have been used to accentuate prominent routes and spaces, specifically the main pupil approach with trees lining the formal stair. Additionally, trees have been used to reinforce existing boundary planting and provide a sense of definition or enclosure to the external spaces. This palette has been developed for: its robustness to site conditions, extended seasonal variety and its ability to quickly give a sense of presence and structure to the landscape.

Structural Planting & Amenity Grassland

The planting design aims to increase verdancy and improve ecological value across site. This will not only be achieved through the introduction of additional species but also through maintenance operations in the form of differential mowing regimes and the creation of additional habitat amenity. Planting across the site will also help delineate spaces for refuge, and seeks to encourage alternative outdoor environments for quiet, contemplative and/or social play.

Existing Vegetation

Mature tree planting to the south east corner of the site will be retained.



TREE PLANTING

Avenue planting to main entrance



Boundary Reinforcement Planting



Specimen tree



STRUCTURAL PLANTING

Hedge planting



Specimen ornamental grass



Specimen perennial forb



MEADOW & AMENITY GRASSLAND

Species rich grass seed



Grass sports pitch areas



Mown grassed areas



6 ACCESS

6 ACCESS

6.1 Transport and Travel

Travel Plan

A Travel Plan has been produced by Velocity Transport Planning and submitted as part of this application. The Travel Plan proposes short and long-term strategies for reducing dependence on travel by private car for essential and nonessential journeys made by pupils, parents and visitors to and from the school site.

Transport Assessment

A Transport Assessment has been produced by Velocity Transport Planning and submitted as part of this application. The purpose of the Transport Assessment is to consider the implications of development related travel on the operation of the surrounding highway and transport networks. In addition the Transport Assessment considers access arrangements, parking and application site connectivity by sustainable modes.

6 ACCESS

6.2 Access and Circulation

Pedestrian & Cyclist Access

Pedestrian and cyclist access is obtained from the east of Brunswick Park Road. This pedestrian access also available from the main entrance to the north, the pedestrian entrance and is segregated from vehicular traffic. Pedestrian and cycle access is available from the west boundary of the site, across the lakeside park. Covered cycle parking is provided adjacent to the sports block, and at the north west corner of the main block. There is also cycle parking in the basement.

Vehicular Access & Parking

Vehicular access is obtained via a large double leaf vehicular gate on the north of the site. There is a one way system so that delivery drivers can pull in to make their delivery and leave, without obstructing any visitors or staff. There is a vehicle barrier to prevent unauthorised access to the basement. There is an intercom to the main office to allow access. The vehicle shutter will be work on a weight sensor in the road which will open when a car approaches. The pedestrian access door to the basement will have a PIN access to prevent unauthorised access. There is a total of 70 spaces in the basement, 5 spaces in the drop off/visitor area. 5 accessible spaces above ground and 3 in the basement, 8 motorcycle spaces and 28 bicycle spaces (in the basement).

All kitchen deliveries, refuse and maintenance access will be granted through the main vehicular entrance. The car park/delivery bay has been tracked for refuse, coach and fire appliance vehicles.

Start/End of school day

In terms of pedestrian access, at drop off and pickup students and staff can gain entry into the site from either the main entrance to the north of the site, the pedestrian ramp and steps off Brunswick Park Road, and the pedestrian access from the lakeside path the north west. Visitors have access through reception only.



Proposed Pedestrian and Vehicular Access and Circulation diagram - Ares Landscape






6 ACCESS




During the School Day

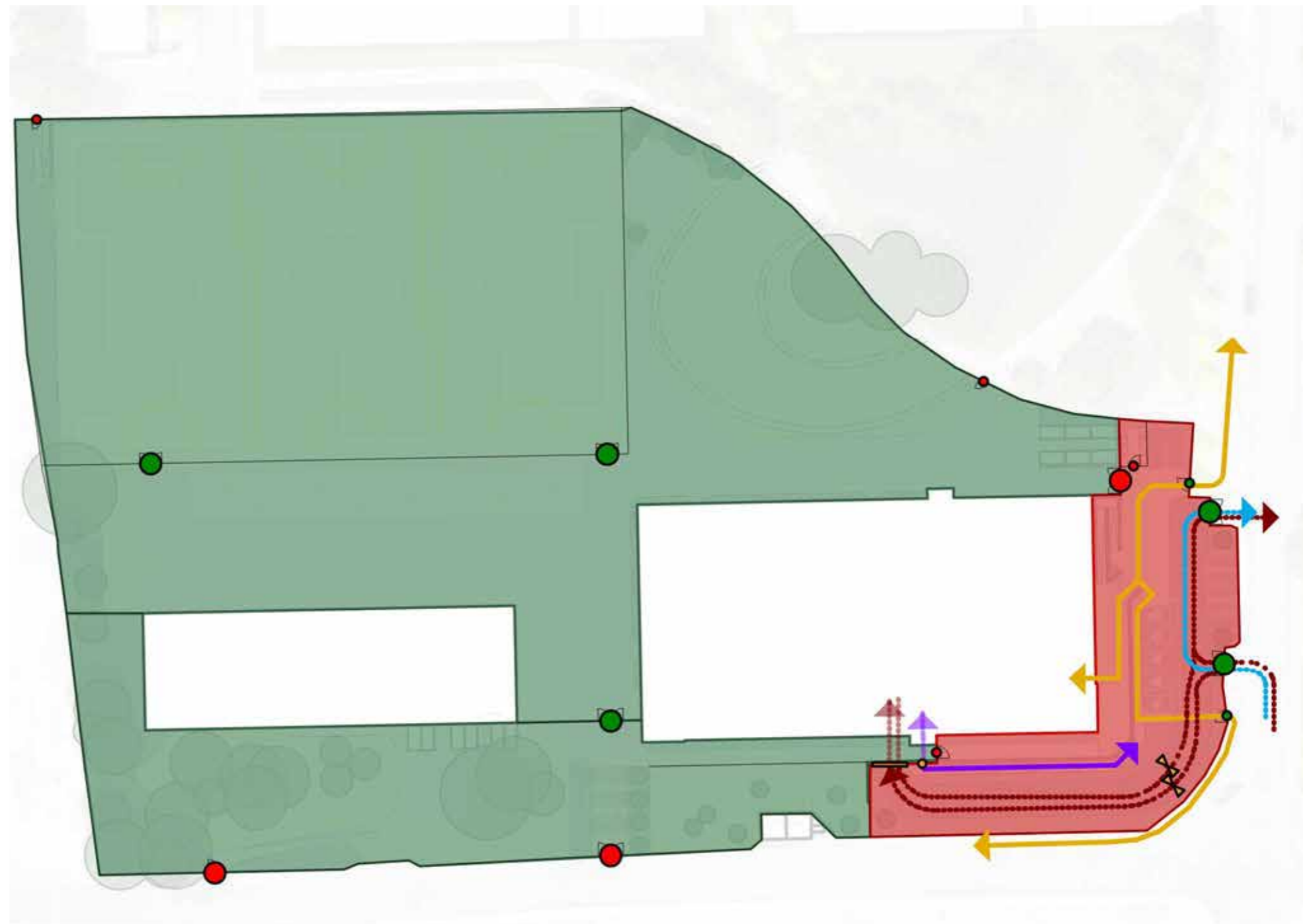
During the school day, all of the pedestrian entrances, apart from the main entrance, will be locked. Vehicles are able to use the visitor car park but pedestrian access within the school secure line can only be obtained through reception. Visitors may be able to use the underground basement car park, if the visitor car park is full. Access would be granted via the intercom. Visitors who park in the basement will have to walk up the visitors entrance to sign in to be let in to the main school beyond the secure line.

Servicing, deliveries and refuse collection can make use of the drop off bay adjacent the main entrance for pull ins/ delivery.

In the case of an emergency, ambulance access to the playground can be obtained via the ramp between the bin store and the building.

-  Visitor pedestrian circulation
-  Student and staff pedestrian circulation
-  Service access and delivery pull in
-  Pedestrian access to basement car park
-  Vehicle access to basement car park

-  Gate location - Open
-  Gate location - Managed
-  Gate location - Closed



Proposed Access and Circulation During School Hours - Ares Landscape

6 ACCESS

Out of Hours Access

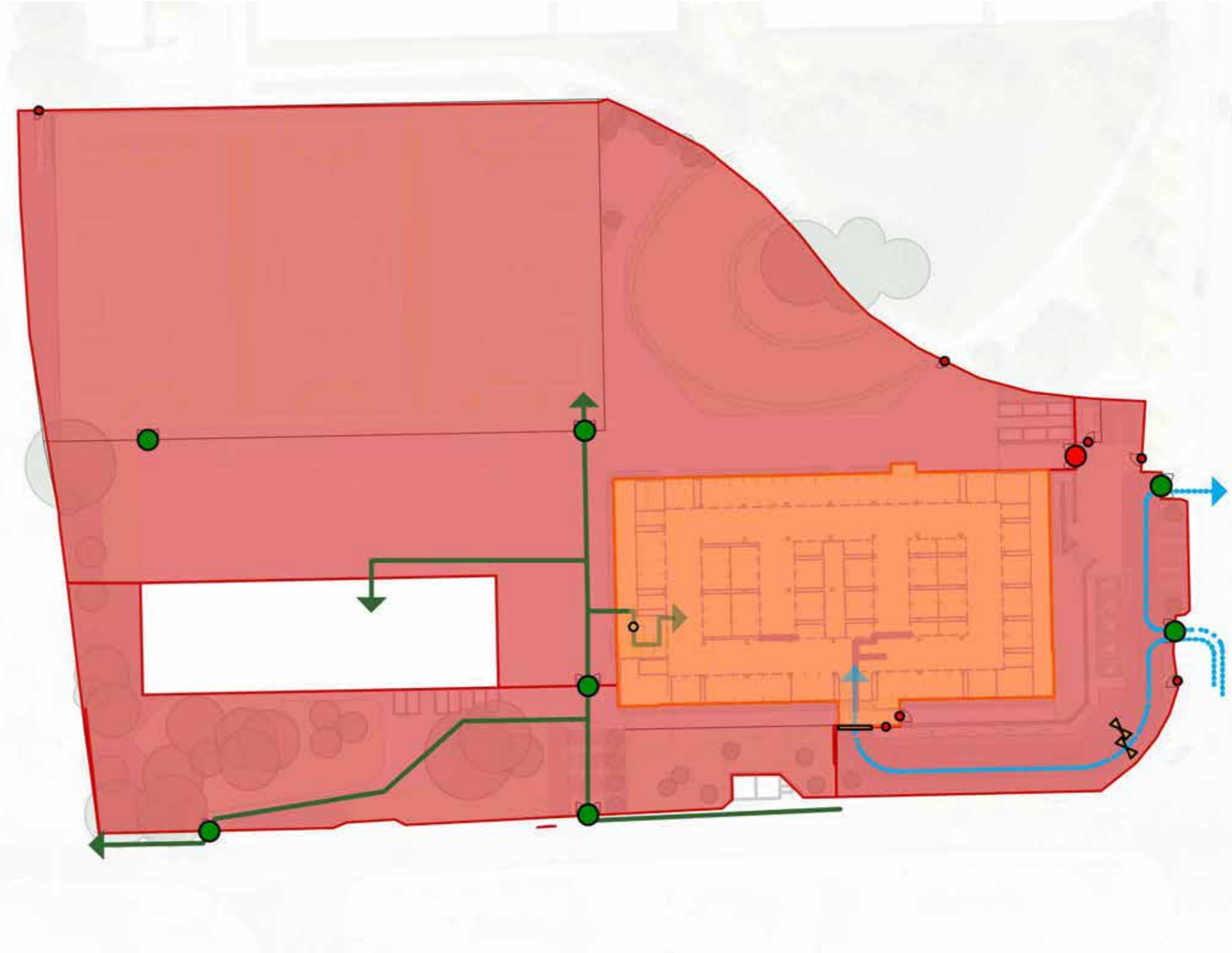
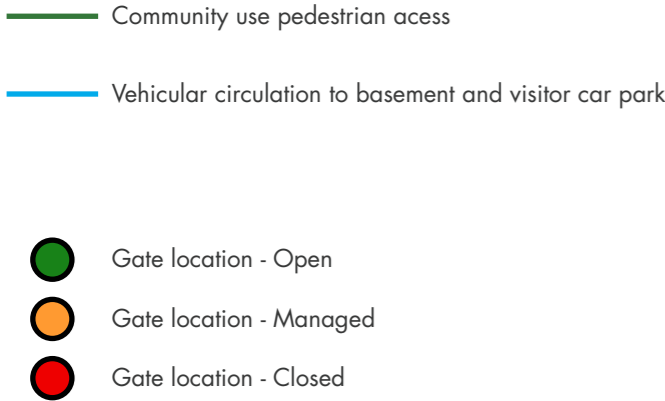
During out of hours, entry to the basement car park would be permitted via the intercom which will have a control in the sports building and a control in the main office depending on what function of the building was being used. Access to the sports block from the basement car park will be via doors and the lift. The doors will allow people to access the stairs up to ground level, with locked doors preventing access to the rest of the main school. The lift will be programmed to allow access to the ground floor and the MUGA only during out of hours.

6.3 Accessible and Inclusive Environments

Access & Parking

Due to the level differences between the existing roads and pavements, and the building, access for pedestrians is achieved by sets of steps and Part M compliant ramps. Access to the basement car park for pedestrians is via a Part M compliant ramp.

Once at ground floor level, access to the whole site is level.



Out of Hours Access Diagram - Ares Landscape

6 ACCESS



Proposed Main Entrance



Proposed Pupil Entrance into Dining Space



Pupil entrance on west elevation

Approach

The routes into each building are clear and will be signed, lit and demarcated appropriately via landscape treatments.

The design as proposed is fully Part M compliant. Accessible toilets will be located within the maximum travel distances recommended by the Building Regulations. Further details on accessibility will be developed during the next phase of the design with input from an Approved Inspector.

Entrances

All building entrances are clearly defined and marked on the external elevation. Powered entrance doors will be provided to the main entrance. The main entrance area will be staffed by a receptionist. Induction loops will be provided.

Staircases

Staircases in the proposed buildings are wide and designed to ambulant standards with handrails of appropriate type and position, closed risers and contrasting nosings.

Lifts

The proposed lift will be accessible to all students, staff and visitors who need to use it, for whatever reason. Access to the lift will be by way of key operated, biometric or swipe card controlled access. The lift will not be used for everyday circulation, but only for mobility impaired persons.

In the event of the lift being out-of-service, there are sufficient variety of spaces accessible on ground floor to enable the school to continue to deliver the curriculum to less mobile students by modifying room assignments on a short-term basis. There are also sufficient alternative accessible staff offices on ground floor to mitigate any issue

Learning Spaces

The learning spaces will be designed to accessible standards, be appropriately lit, incorporate height-adjustable furniture and have acoustic attenuation to meet or exceed BB93. Mobile induction loops will be provided for use in classrooms and shared activity spaces as required. Fixed induction loops are to be provided in the reception and main hall / assembly spaces.

Emergency Evacuation

The building is designed with appropriate emergency refuges within stair cores to allow for managed and assisted evacuation. All refuge areas will feature an alert and intercom link. The school will develop a Personal Emergency Evacuation Plan (PEEP) for any student or member of staff with mobility, sensory and/or cognitive impairments, and the procedures should be practised during fire drills.

7

7 ENVIRONMENTAL DESIGN

7 ENVIRONMENTAL DESIGN

7.1 Energy Efficient Design Approach

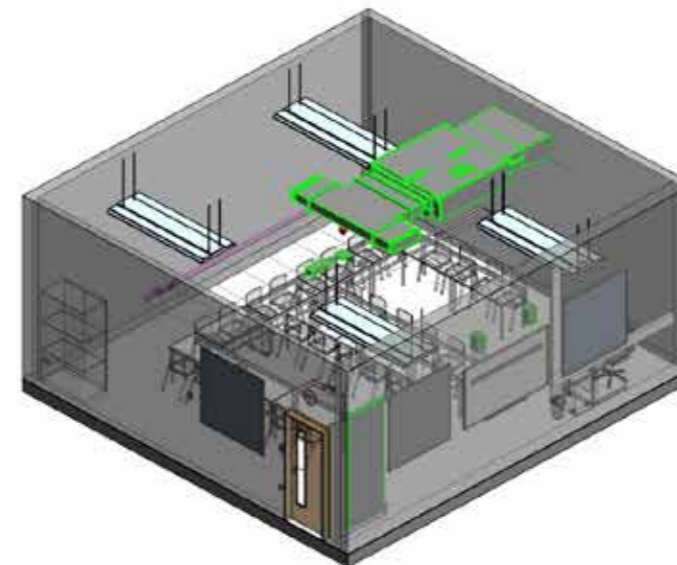
For further details please refer to the Energy Statement produced by Couch Perry Wilkes that forms part of this Planning Application. The project has been designed in line with the current London Plan Energy Hierarchy with a focus on a fabric-first energy approach.

- LED lighting reducing lighting energy consumption by 35 - 40%
- Hybrid ventilation with heat recovery removes heat from extract air to warm incoming air ensuring fresh air without cold draughts even in winter
- Overcome acoustic site constraints from traffic on Brunswick Park Road in most energy efficient way
- Reduced hot water demand by 40% by water efficient fittings
- Fabric - First strategy - Significant betterment of Part L insulation & airtightness avoids the need for renewable energy technologies.
- Exposed thermal mass & night time purge provides free cooling during warmer months
- Typically can achieve 28% betterment over DfE Energy Consumption Targets for similar sized scheme

7.2 Incoming Services and Utilities

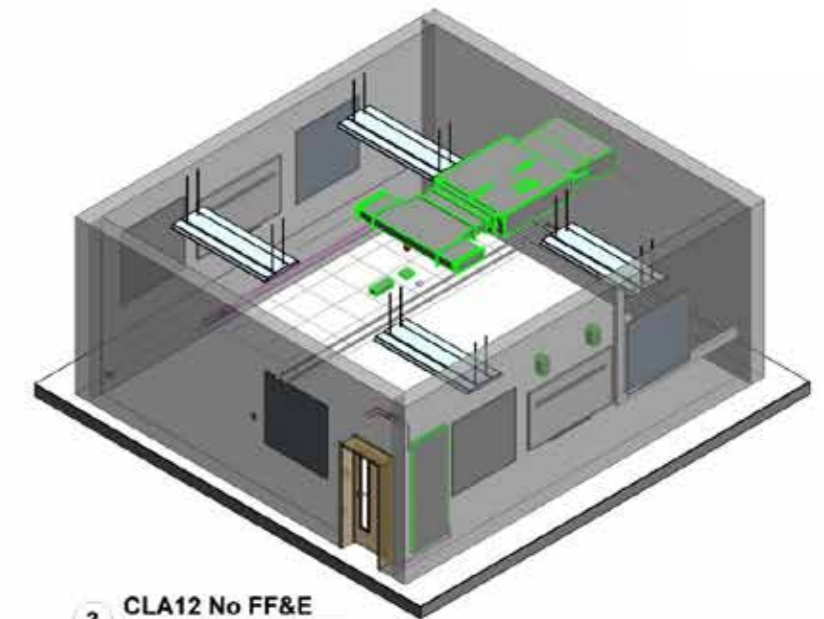
A new buried PE gas supply shall be taken from the local gas utility infrastructure to supply the proposed school. The new supply will go into a gas meter located at the site boundary to provide access to the meter. It is proposed that the supply will enter the main building via the ground floor incoming services plant space and serve the main boiler plant, the kitchen, the laboratories and appropriate technology spaces. Gas routes within the building shall be ventilated where gas main runs in a void. Incoming gas main entering plant room shall be provided with an emergency knock off button, which will cut off supply to all gas fired plant on activation.

A new potable water utility connection shall be provided for the building from the existing infrastructure. The incoming supply is to enter the building via the ground floor incoming services room and a new primary meter shall be installed just within the boundary to the site. A potable cold water storage tank shall be provided in the ground floor tank room. If required, an associated booster set shall be provided to ensure sufficient water pressure.



2 CLA12 3d View Transparent FF&E

Typical Classroom Servicing Arrangement



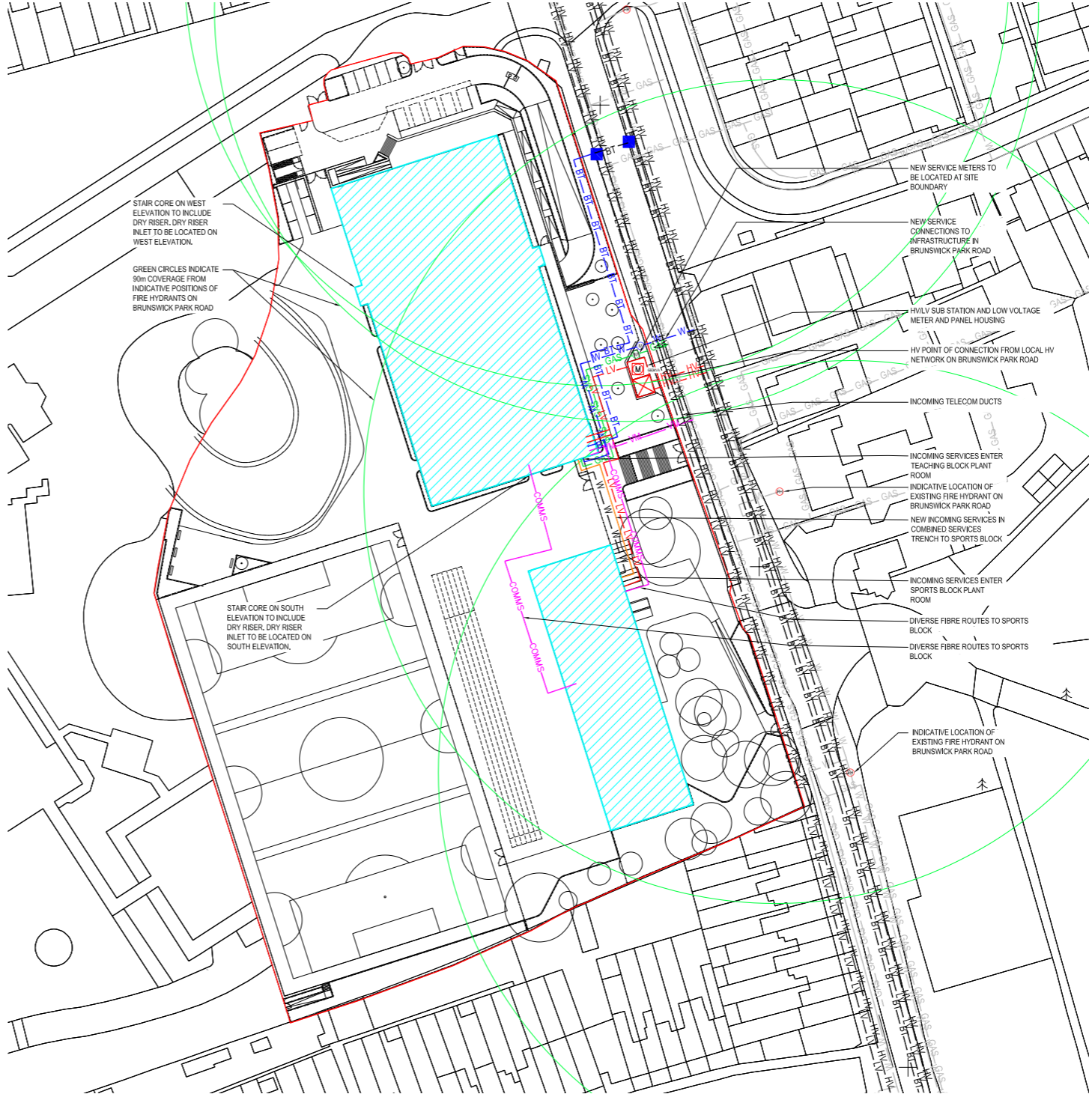
3 CLA12 No FF&E



Typical Classroom View

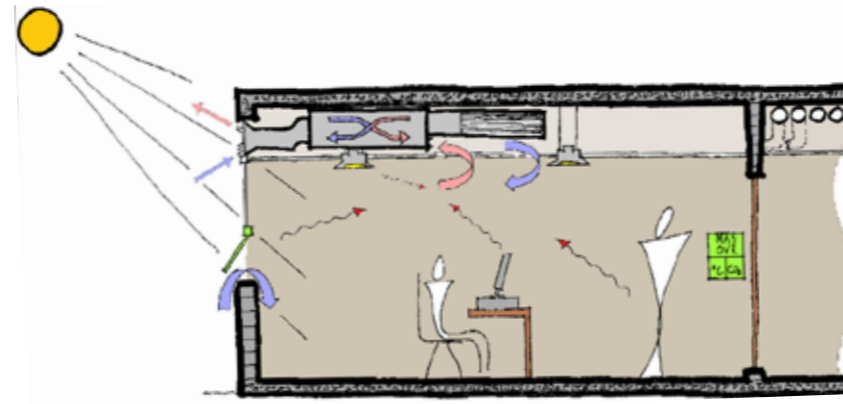
7 ENVIRONMENTAL DESIGN

- LEGEND**
- PLANNING LINE BOUNDARY
 - PROPOSED NEW BUILDING/DEVELOPMENT
 - HV — HV — EXISTING HV
 - HV — HV — PROPOSED HV
 - LV — LV — EXISTING LV
 - LV — LV — PROPOSED LV
 - BT — BT — EXISTING BT
 - BT — BT — PROPOSED BT
 - VM — VM — EXISTING VIRGIN MEDIA
 - VM — VM — PROPOSED VIRGIN MEDIA
 - COMMS — EXISTING COMMUNICATION CABLES
 - COMMS — PROPOSED COMMUNICATION CABLES
 - GAS — GAS — EX MAINS GAS SUPPLY INFRASTRUCTURE
 - GAS — GAS — NEW GAS SUPPLY INFRASTRUCTURE
 - W — W — EX MAINS COLD WATER SUPPLY INFRASTRUCTURE
 - W — W — NEW MAINS COLD WATER INFRASTRUCTURE
 - W — W — TANKED COLD WATER INFRASTRUCTURE
 - LTHW FLOW & RETURN PIPEWORK
 - EXISTING CABLES TO BE ISOLATED AND STRIPPED OUT
 - ▲ VIRGIN MEDIA CABINET
 - VIRGIN MEDIA CHAMBER
 - BT JOINT BOX
 - BT TELECOMS POLE
 - M ELECTRICITY METER
 - G GAS METER
 - W COMBINED WATER METER
 - H FIRE HYDRANT

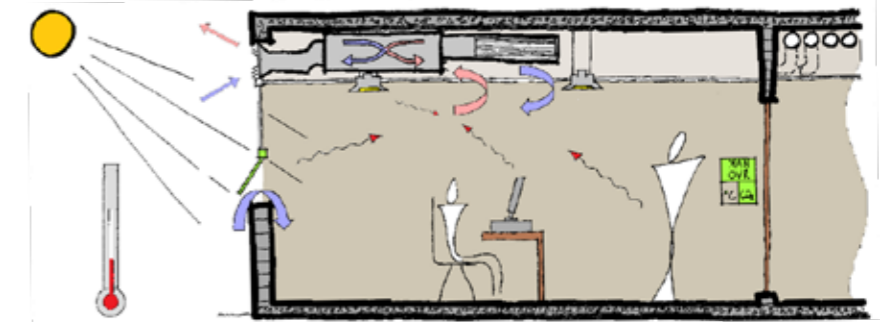


Extract from Proposed Incoming Services and Utilities Plan

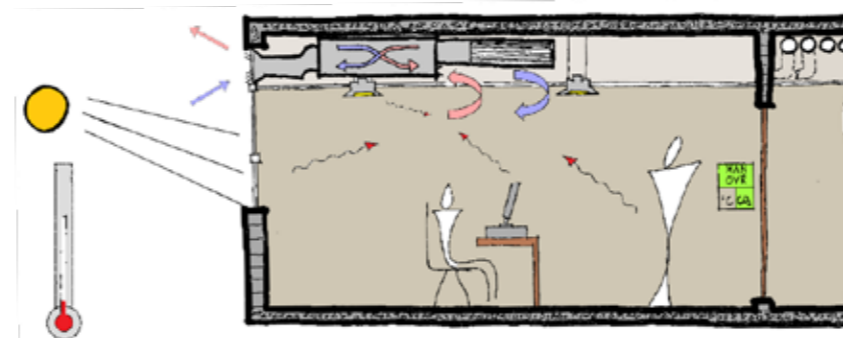
7 ENVIRONMENTAL DESIGN



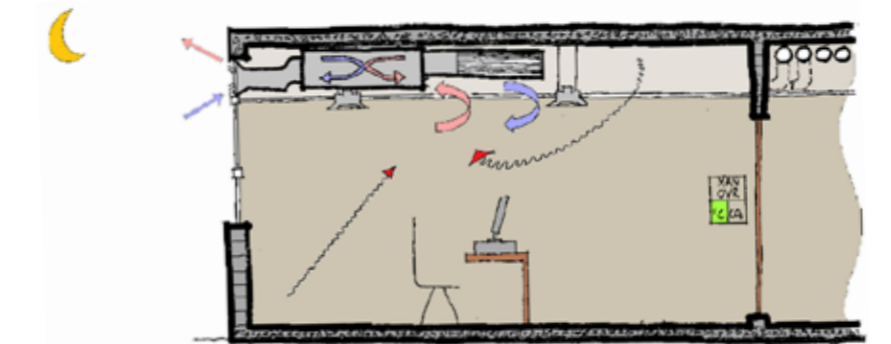
Summer



Mid Season



Winter



Secure Night time Purge

7 ENVIRONMENTAL DESIGN

7.3 Building Servicing Strategy

Heating Strategy

New LTHW (Low Temperature Hot Water) plant shall be provided to service the new building, via new efficient gas condensing boiler plant.

The LPHW (Low Pressure Hot Water) heating system shall comprise control facilities for optimum start and weather compensation. Pump sets shall be variable speed type and complete with integral speed controllers and pressure transducers located at suitable locations within the index leg. Pump-sets shall be twin-head type. Self-regulating differential pressure control valves shall be provided on all sub-circuits to avoid disparities in hydraulic pressure from the variable speed circuits. A packaged pressurisation unit shall be provided along with a combined dirt/air separator and other ancillary equipment necessary to make the system operates correctly.

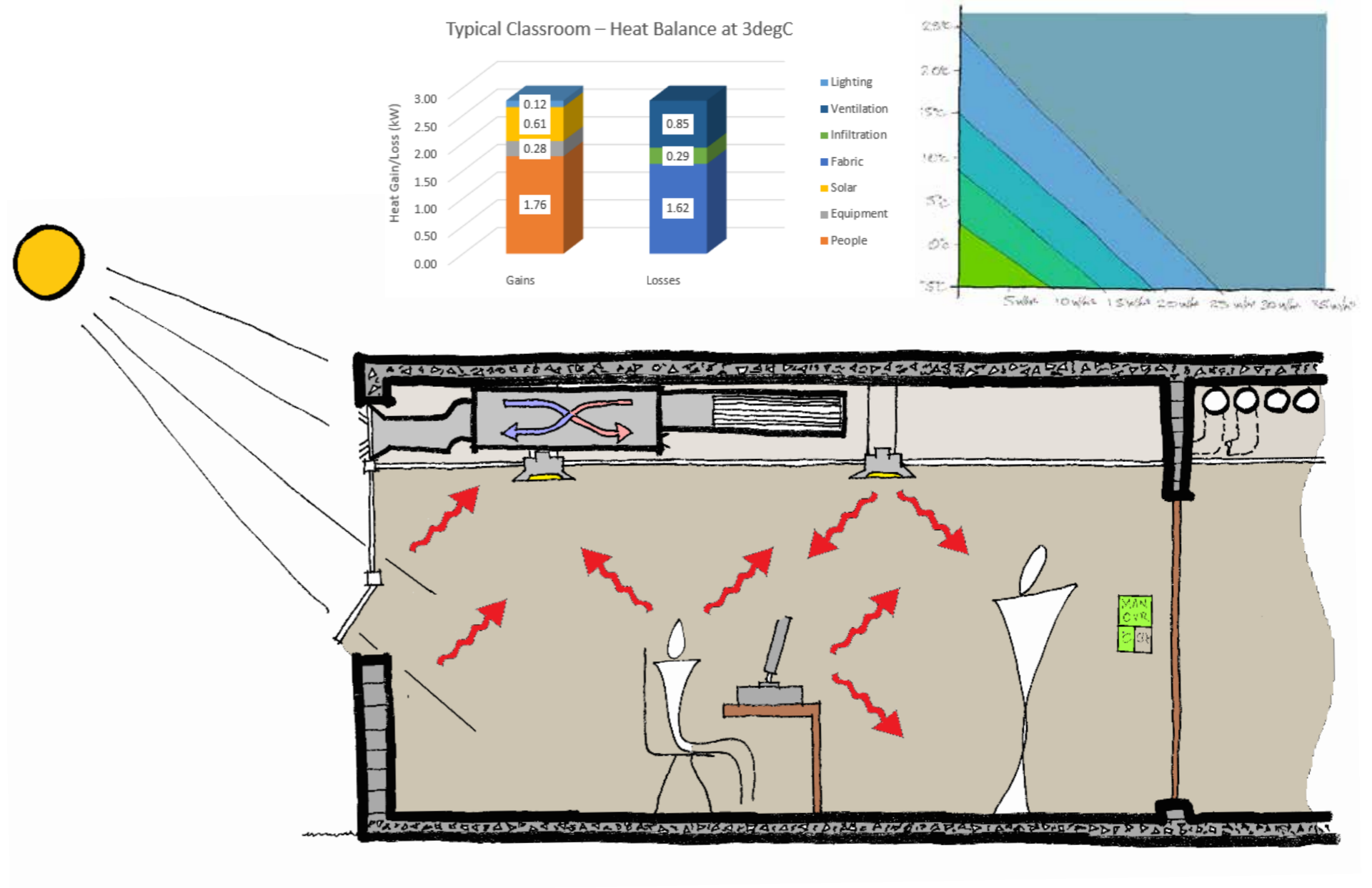
Radiators, LST (Low Surface Temperature) radiators and radiant panel installations shall comprise of heating circuits (zones) with separate weather compensation to radiator circuits and timed facilities to promote flexibility in out of hours use and operational energy efficiency. Final number of zones shall be dictated by the requirements of good thermal and comfort control of the LPHW system.

The heating system shall be designed for intermittent operation and shall be capable of maintaining the minimum internal design temperatures listed in the area data sheets for the project.

Domestics Strategy

Domestic hot water shall be generated centrally via LPHW un-vented calorifiers fed from the CT circuit and distributed to hot water outlets complete with all necessary control and safety devices, drain cocks and de-stratification pumps. Hot water will be generated at 60°C and re-circulated to ensure a minimum return temperature of 55°C for legionella purposes.

Domestic hot water for all sanitary ware items shall be distributed using a flow and return system to ensure hot water is readily available and to also satisfy guidelines regarding the risk of legionella growth. The temperature of hot water supplies to sanitary ware (with the exception of cleaner's sinks, etc.) shall not exceed 43°C whereby TMV3 valves shall be provided throughout. Hot and Cold water storage shall be reduced as much as possible to reduce maintenance. Potable cold water storage and associated booster set shall be located within the ground floor tank room and shall be a sectioned GRP tank split into two sections with dedicated service and bypass valve arrangement to enable safe maintenance on either section.



Typical Classroom Heating Balance

7 ENVIRONMENTAL DESIGN

7.4 External Lighting Strategy

All external lighting is to be controlled by a photocell, timeclock arrangement with manual override switch. The external time clock is to be set so all external lighting is off between 2300 & 0700Hrs.




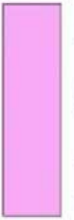

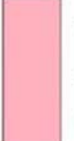
All lighting columns to be sited to suit location away from trees landscape and external furniture. The normal pedestrian escape routes shall be provided with emergency lighting to the same standard as escape routes within nonresidential public premises in accordance with BS 5266-1.

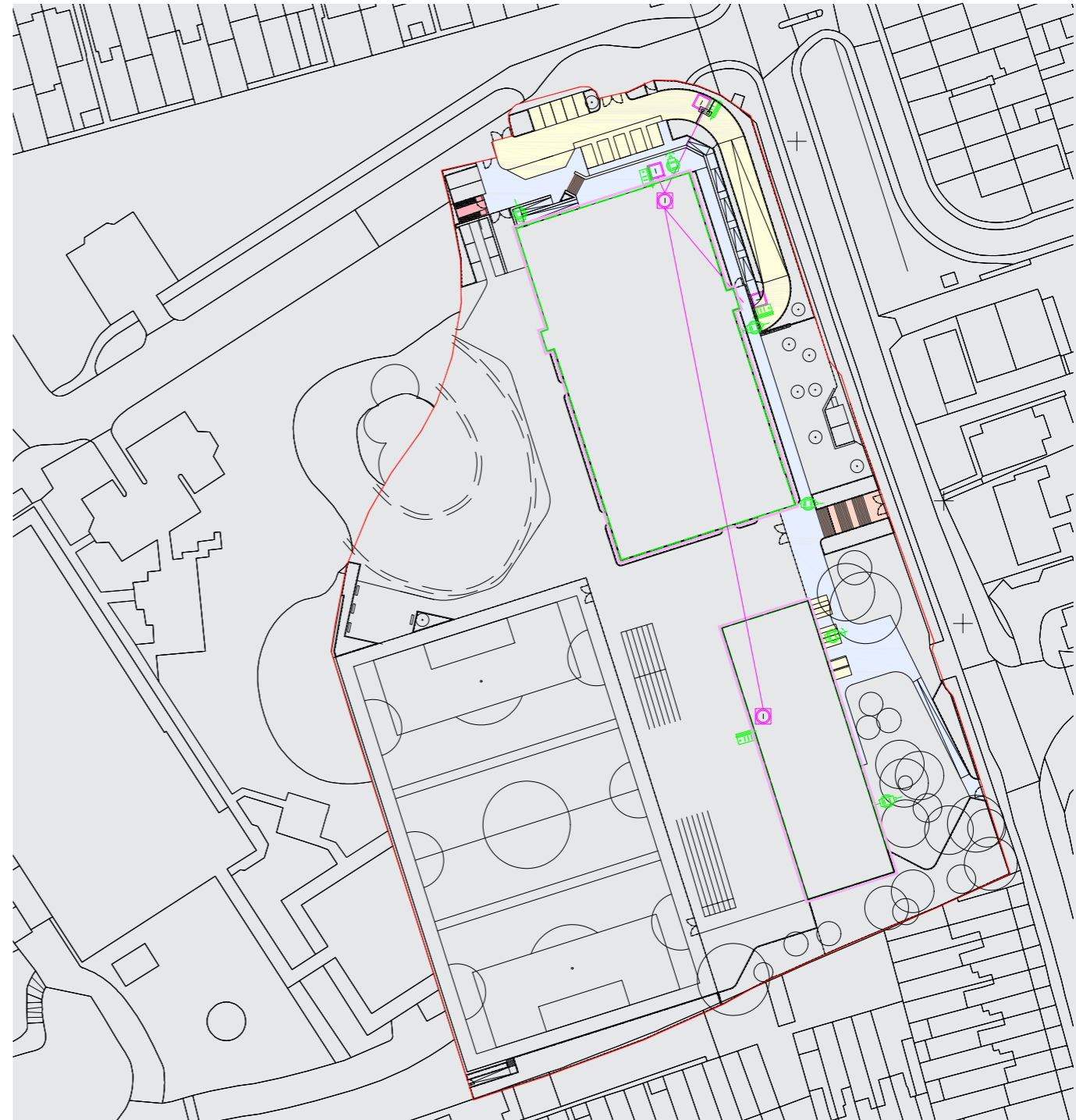
Ducts shall be provided to serve MUGA pitch lighting the ducts shall be routed back to external lighting and power distribution boards.

Lighting Standards

The external lighting design will be designed in line with the following design standards:

- ILP the institution of lighting engineers guidance notes for the reduction of obstructive light GN01:2011
- BS EN 1264-2 Lighting of work places - Outdoor workplaces Part 2

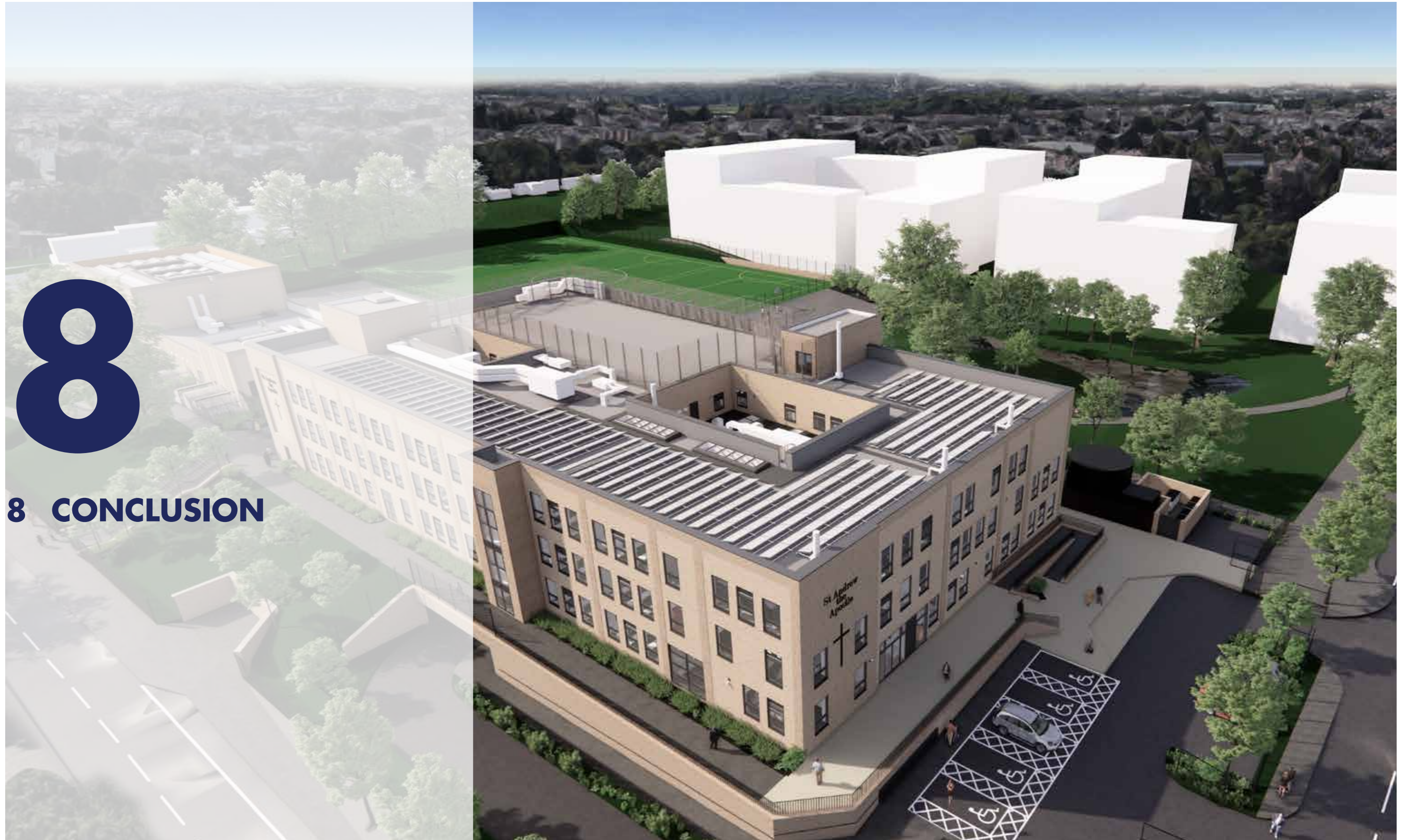
LEGEND	
	PROPOSED NEW BUILDING/DEVELOPMENT FOOTPRINT
	CAR PARK, CYCLE STORE AREAS SHALL BE DESIGNED IN ACCORDANCE WITH BS5489-1:2013 & LG5 (ILE) REDUCTION OF OBTRUSIVE LIGHT, ENVIRONMENTAL ZONES MEDIUM DISTRICT BRIGHTNESS AREA (E3). 10 LUX MAINTAINED AVERAGE LUMINANCE (Eav) 0.25 MINIMUM OVERALL UNIFORMITY RATIO (Uo)
	PEDESTRIAN WALKWAY AREAS, WILL BE DESIGNED IN ACCORDANCE WITH BS5489-1:2013 & LG5 (ILE) REDUCTION OF OBTRUSIVE LIGHT, ENVIRONMENTAL ZONES MEDIUM DISTRICT BRIGHTNESS AREA (E3). 5 LUX MAINTAINED AVERAGE LUMINANCE (Eav) 0.25 MINIMUM OVERALL UNIFORMITY RATIO (Uo)
	BUILDING PERIMETER SECURITY, WILL BE DESIGNED IN ACCORDANCE WITH BS5489 1:2003 (ILE) REDUCTION OF OBTRUSIVE LIGHT, ENVIRONMENTAL ZONES MEDIUM DISTRICT BRIGHTNESS AREA (E3). 20 LUX MAINTAINED AVERAGE LUMINANCE (Eav) 0.25 MINIMUM OVERALL UNIFORMITY RATIO (Uo)
	TRAFFIC AREA FOR SLOW MOVING VEHICLES. WILL BE DESIGNED IN ACCORDANCE WITH BS5489 1:2003 & LG5 REDUCTION OF OBTRUSIVE LIGHT, ENVIRONMENTAL ZONES MEDIUM DISTRICT BRIGHTNESS AREA (E3). 10 LUX MAINTAINED AVERAGE LUMINANCE (Eav) 0.4 MINIMUM OVERALL UNIFORMITY RATIO (Uo)
	BIN STORE DESIGNED IN ACCORDANCE WITH LG1 40 LUX MAINTAINED AVERAGE LUMINANCE (Eav) 0.25 MINIMUM OVERALL UNIFORMITY RATIO (Uo)



Extract from Proposed External Lighting Strategy

8

8 CONCLUSION



Aerial view of the site in context

08 CONCLUSION

8.1 Conclusion

The proposals are for the construction of a new build Teaching Block and Sports Block to form a new secondary school, to accommodate up to 1050 pupils. The new buildings will provide a much-needed purpose-built facility for the existing St Andrew the Apostle students and staff, after a long wait in temporary accommodation.

The design has been developed in close consultation with the Trust, DfE and wider consultant team to create a well thought out, attractive and functional school. The building's internal accommodation provides optimum teaching and learning environments, which are energy efficient and flexible, as well as meeting the DfE's strict requirements for daylighting, ventilation, acoustics and thermal comfort.

The constrained site presented a challenge, however, the team have developed the site masterplan to include external spaces that flow, are flexible and maximises the usable space for the benefit of the students.

The proposals include facilities that are would be available for community use, making the school and its sports facilities a valuable local community asset.



Exterior View of the School from the key Northeast corner



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FILE	
FS0200-STL-XX-XX-RP-A-RP001	
PROJECT	
St Andrew the Apostle Secondary School	
CLIENT	
Bowmer & Kirkland	
STRIDE TREGLOWN JOB No.	
154192	
PREPARED BY	CHECKED BY
RB	SH
DATE	REVISION No.
03.08.2021	PL06

REVISION	
1	PL01 - Draft Issue for Review
2	PL02 - Planning Issue
3	PL03 - Planning Issue
4	PL04 - Planning Issue
5	PL05 - Updates for BREEAM
6	PL06 - Planning Issue

