Burnside Secondary School

Design and Access Statement

rivingtonstreetstudio

November 2024

Contents

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Rev	Date	Suitability	Status	Initials
C06	13.11.24	S4	Issued for Planning	TO

This document has been prepared to be printed and read at A3.

The Site:

Burnside Secondary School

2 Burnside Avenue

Chingford

London E4 8YJ

The Client and Applicant:

Morgan Sindall

This statement has been prepared on behalf of the client by:

Rivington Street Studio - Architects

With Specialist input from the following consultants:

Smith Jenkins Planning & Heritage	Planning Consultants
Glanville Group	Structural and Civil Engineering
Silcock Dawson	Mechanical and Electrical Engineers
Wynne Williams	Landscape Architects
Anderson Acoustics	Acoustic consultant

Contents

1.0 Introduction

1.1 Executive Summary

Rivington Street Studio (RSS) was appointed by Morgan Sindall and the Department for Education (DfE) to develop a design for the new Burnside Secondary School for planning application purposes. This report provides an overview of the design development of the Concept Control Option which was established at feasibility stage by the DfE's Technical Advisors. This Design & Access Statement provides information which relates to the existing site, the brief, consultation, design options and the final scheme for assessment by the local authority for planning approval.

The design development has taken place with Contractor Morgan Sindall in collaboration with the specialist consultant team, during a process of seven client engagement meetings between the beginning of June to the end of July 2023. This process has involved weekly presentations and feedback sessions with the client, the DfE and the end users, Burnside Secondary School and Waltham Forest.

The project team have liaised with the local planning authority through a series of pre-application meetings and design review workshops through 2024.

Rivington Street Studio is an award-winning RIBA Chartered Architectural Practice based in East London. The company has a high-quality portfolio of built projects within the education sector and recent successful experience of securing planning approvals on challenging sites within several of the London boroughs

1.2 Introduction

The existing Burnside Secondary School is located within a predominantly residential area within the London Borough of Waltham Forest. The proposed new build school will replace the existing school buildings on site, and provide accommodation for 48 pupils aged 11-16. The Alternative Provision (AP) school is for pupils from across Waltham Forest who have behavioural, emotional and social difficulties and who are in short or long term exclusion from mainstream education.

1.3 The Design Team

The Morgan Sindall Design Team includes collaborators who have extensive experience in the delivery of DfE secondary schools and includes the following:

Smith Jenkins Planning & Heritage	Planning Consultants
Glanville Group	Structural and Civil Engineering
Silcock Dawson	Mechanical and Electrical Engineers
Wynne Williams	Landscape Architects
Pinnacle	FF&E consultant
Shine	Catering Design
Anderson Acoustics	Acoustic consultant
SCP Transport	Transport consultant
MSC ITS	IT consultant
Salus Fire	Fire Consultant
Safescope	Principal Designer

Burnside Students taking part in an ideas workshop for the new building

2.0 Brief and Context

2.1 Background

Burnside Secondary School and the Hawkswood group

The Hawkswood Group are a federation of three diverse school provisions:

- Hawkswood Primary PRU and SEMH provision
- Hawkswood Secondary Therapeutic and SEMH provision
- Burnside Secondary School PRU

Their ethos is to create an environment to enable young people to lead an enriched, successful and happy life. They focus on developing the skills, attitudes and qualities for each individual to move successfully along to the next stage of their life journey.

Burnside Secondary School is an Alternative Provision (AP) and currently provides education to around 30 students aged 11-16 who have experienced difficulties and have been excluded from mainstream education. The school's cohort will also sometimes include students with EHCPs, who will be assessed at Burnside with a view to securing a place in a specialist provision school that meets the student's needs.

Burnside's key educational aims are:

- To successfully reintegrate pupils back into mainstream education by developing core life skills such as resilience and team-working, and
- To place as much importance on student well-being and safeguarding, as well as continued progress in their student's academic learning

The school is commitment to accelerating academic outcomes that reflect the best of each student's ability but with the holistic focus on enabling sustained healthy relationships. They encourage and value healthy attitudes and emphasis that the wellbeing of everyone is an equal priority. The School is modelled on their three highest principles to: Empower – Aspire – Achieve.

Burnside works in partnership with Waltham Forest Local Education Authority and with schools and colleges to make sure that all children, regardless of their background, have access to a great education and real choices in life.

They are now recognised as one of the highest achieving transformational group of PRUs in the country and support others nationally to create the learning enriched environment for them to achieve our aspirational outcomes.

2.2 Feasibility Study

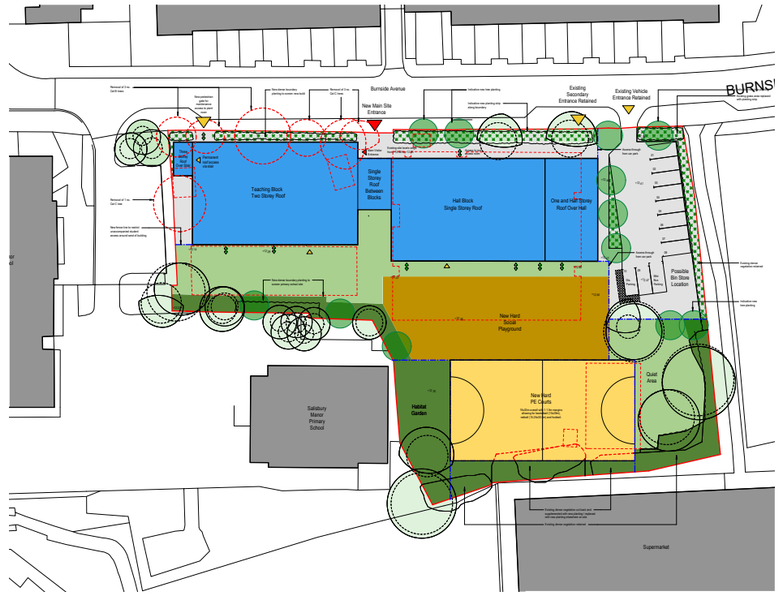
The existing school buildings located on Burnside Avenue are no longer fit for purpose due to the deteriorating condition as detailed in Section 3 of this report, and therefore a feasibility study was prepared by the DfE's Technical Advisors. The Concept Control Option selected at feasibility stage offered the following key benefits:

The option selected at feasibility stage offered the following key benefits:

- Avoided the need to provide temporary accommodation on site during construction so minimising disruption to student learning
- Contained the new build footprint along the north boundary to maximise the outdoor area for pupils on the south, and the potential to improve the Burnside Avenue street scape
- Improved passive supervision of the students, with the consolidation of the outdoor social areas into one zone
- Greatly improve sustainability credentials by taking a site wide approach to Net Zero Carbon in operation

The Concept Control Option subsequently developed by the DfE's team, comprises two separate blocks; the teaching, and hall block with a separate entrance link between, enabling the phased demolition and phased construction of the new school. The key constraint of this approach is that the new building has to be delivered in several phases in order to retain the school on site during the construction process.

The Concept Control Option has now been developed to a planning application stage by RSS and Morgan Sindall together with the wider consultant team. The submitted proposals and the design development are described in detail within this report.



Feasibility Concept Control Option

2.0 Brief and Context

2.3 Client Brief and Vision

Burnside Secondary School will accommodate up to 48 students with a typical class size of 8 and up to 35 FTE staff. The school's vision is for the design of the new buildings to enhance and support the pupils educational, therapeutic and medical needs. The main key requirements of the design brief also include:

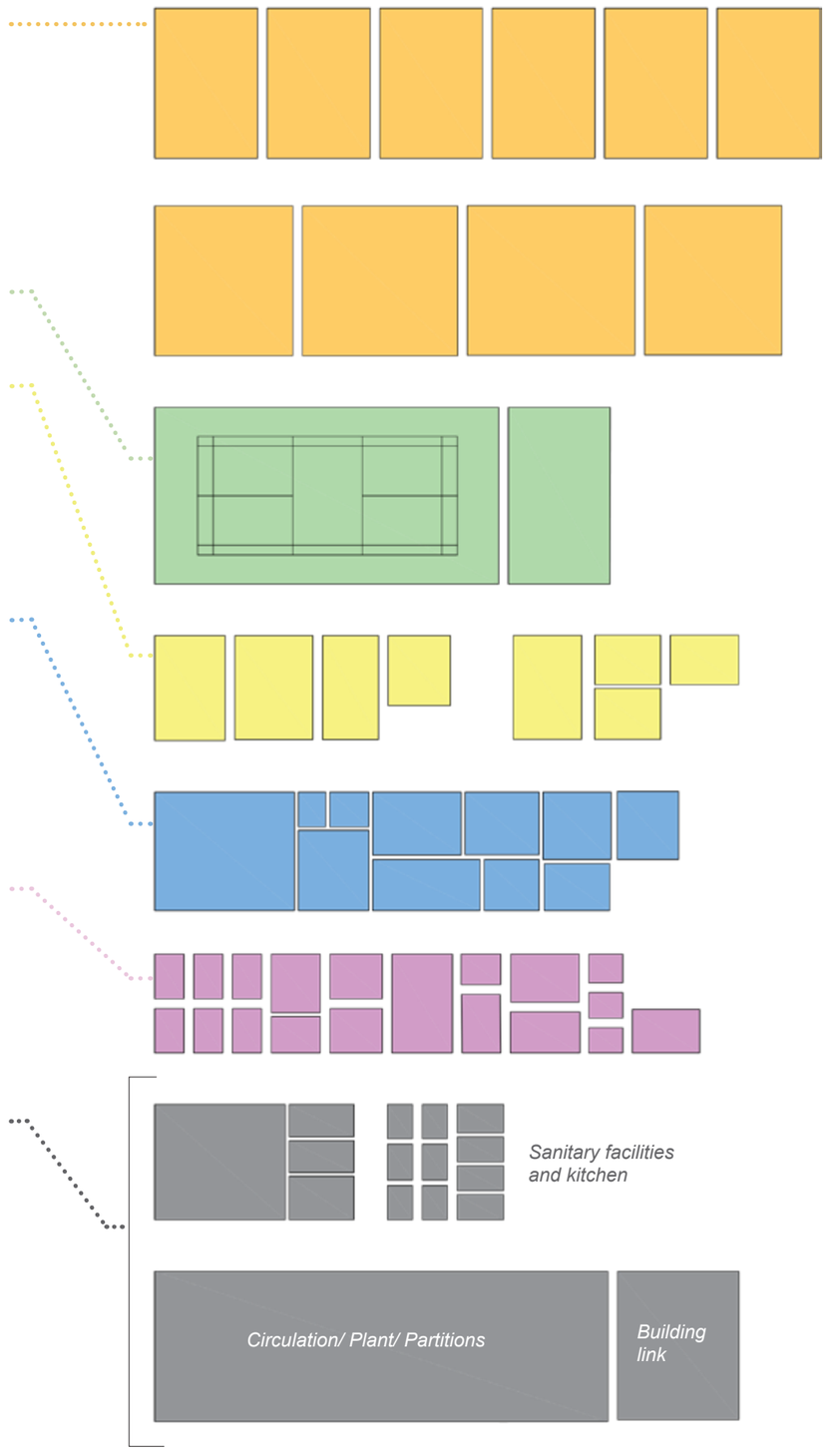
- Creation of a visibly welcoming and inclusive school that ensures students feel valued and the potential astigmatism of being outside of mainstream education is removed.
- The provision of a secure student arrival and entrance sequence, that ensures staff have space for the wanding of students and control of student ingress/egress.
- Maximising opportunities for the students external learning, such as providing space for horticultural lessons and outdoor mural painting.
- Flexibility in the building layout that will enable staff to adapt teaching patterns to suit changing pupil needs.
- Improved links with the community by enabling the hiring out of facilities out-of-hours and during school holidays, such as the main hall, dining hall, fitness suite, and outdoor sports facilities.

The resultant building area requirements for the school established at feasibility stage comprise a total target gross internal area (GIA) of 1,772m^2 which includes the following accommodation:

- General teaching classrooms
- Specialist teaching classrooms for science, art & design and food tech
- A fitness suite
- Sports hall and dining hall
- Learning Spaces; Library, SEN therapy, Transition room, Reflection room and smaller group rooms
- Staff and Admin spaces
- Kitchen, Storage, Plant, WCs, Circulation

Following the PPA meetings with LBWF there has been further update in terms of the kitchen layout to ensure there is sufficient space.

General Teaching			
Basic Teaching	Classroom 1	1001	8
	Classroom 2	1002	8
	Classroom 3	1003	8
	Classroom 4	1004	8
	Classroom 5	1005	8
	Classroom 6	1006	8
Specialist	Science Studio 1	1101	
	Art & Design Studio 1	1102	
	Food Tech Room 1	1103	
	Fitness Suite	1104	
Subtotal General Teaching			48
Large Spaces			
Large Halls	Sports Hall	2001	1
	Dining Hall	2002	
Subtotal Large Spaces			
Learning Spaces			
Resources	Library/ Career's Room	3001	
	SEN Therapy/ MI Room	3002	
	Group 1	3003	
	Group 2	3004	
	Group 3	3005	
	Group 4	3006	
	Transition Room	3008	
	Reflection Room	3009	
Subtotal Learning Spaces			
Staff & Admin			
Staff & Admin	Staff Room 1	4001	
	MFD Bay	4002	
	Head's Office	4003	
	General Office	4004	
	Parents' Room	4005	
	Entrance	4006	
	Sick Bay	4007	
	Office/ Meeting	4008	
	DSL Office	4009	
	Premises Office/ Workroom	4010	
	Laundry	4011	
Subtotal Staff & Admin			
Storage			
Storage	Classroom Store 1	5001	
	Classroom Store 2	5002	
	Classroom Store 3	5003	
	Classroom Store 4	5004	
	Classroom Store 5	5005	
	Classroom Store 6	5006	
	Science Store	5007	
	Art & Design Store	5008	
	Food Store	5009	
	PE Store	5010	
	External PE Store	5011	
	Chair Store	5012	
	Central Stock	5013	
	Exam Store	5014	
	Servery/ Furniture Store	5015	
	Lockers	5016	
	Cleaner 01	5017	
	Cleaner 02	5018	
	Cleaner 03	5019	
	Maintenance Store	5020	
Subtotal Storage			



3.0 The Site

3.1 Site Location and Description

Site Address: 2 Burnside Avenue, Chingford, London, E4 8YJ

Burnside Secondary School is located in the north east of the London Borough of Waltham Forest which is bound by the Lee Valley on the east, Epping Forest on the west, and by a green edged corridor to the north that forms London's green belt. The North Circular Road (A406) divides the borough into two main areas. The southern parts of the borough; Leyton, Leytonstone and Walthamstow comprise higher density housing which developed in the late Victorian era. The northern parts of Chingford and Highams Park where Burnside is situated, is more open in character with lower density housing some of which was constructed in the inter-war years.

The Burnside Secondary School lies just north of the A406 on the west side of the borough in Chingford. The school site is bound on the north by Burnside Avenue and its residential properties, to the east by the Chingford storm tank of Thames Water, to the south by Morrisons supermarket and a small woodland area, and to the west by Salisbury Manor Primary School.

There is a pedestrian alleyway which runs from Burnside Avenue to Morrisons on the east of the site.

The school currently occupies three separate single storey buildings that will be demolished in phases to enable the construction of a new purpose built facility for Burnside School. The existing buildings include the Main School Building of 1,011sqm which was originally built as a primary school, a smaller modular building of 184sqm and the Burwood Centre of 233sqm which was previously a family centre and used by Burnside in recent years.

3.0 The Site

3.2 Site Photos

View 1- looking west on Burnside Avenue towards the school

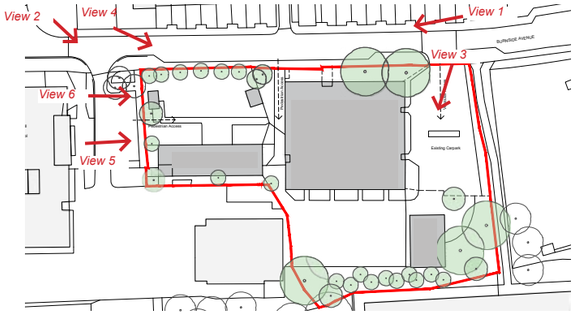
View 2 - car park entrance of adjacent primary school

View 3 - Burnside secondary school car park

View 4 - looking south and east on Burnside Avenue towards the school

View 5 - looking east from the primary school car park towards the secondary school

View 6 - looking east from the primary school car park towards the secondary school



3.0 The Site

3.2 Site Photos

View 7 - looking west towards the adjacent primary school building

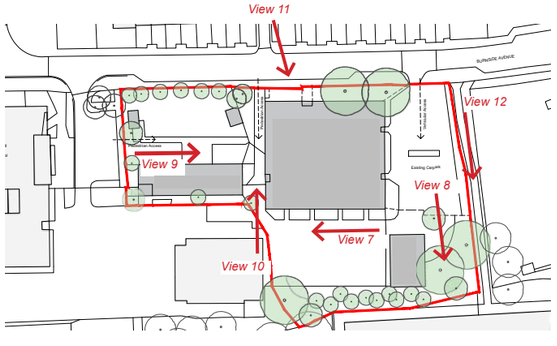
View 8 - the south school boundary and existing temporary cabin

View 9 - looking east in front of Burwood play centre building

View 10 - looking north between the Burwood play centre and main school building

View 11 - View of the school from Burnside Avenue

View 12 - view looking south of the public footpath adjacent to the site



The Site

3.3 Existing Building Condition

EFAA Main building

- Constructed between 1960-1970
- Beyond design life
- M&E installation is past its life expectancy
- Irregularly spaced steel SHS columns and bracing
- Constructed from a mixture of solid, cavity and panelised wall construction
- No evidence of DPC and as a consequence rising damp evident
- Perimeter infill cladding panels show signs of deterioration with exposed and corroding reinforcement bars at bottom of panels
- Rotten timber board cladding
- Irregular steel frame and mix of construction not appropriate for expansion/ not suitable for additional floor

EFAB Modular Outbuilding

- Beyond design life. Assumed to be over 30 years old (1981 – 1990)
- Suffering from water penetration to its timber frame
- Bitumen roof failing and needs replacement
- Not considered appropriate for refurbishment

EFAC Burwood Centre

- Constructed between 1981 – 1990 and structurally sound
- Steel framed at 4.2m centres, 8m span
- Non-load bearing infill masonry panels with cavity and brick facing
- Some corrosion to cantilever steelwork at perimeter
- Could be refurbished but is in the wrong place on the site. Difficult to significantly modify

Tetra Tech Condition Survey 22 Mar 22

EFAA - Main Building

EFAA Main Building on the right, EFAC Burwood Centre to the left

EFAB - Modular Outbuilding

EFAC Burwood Centre

3.0 The Site

3.4 Site Analysis

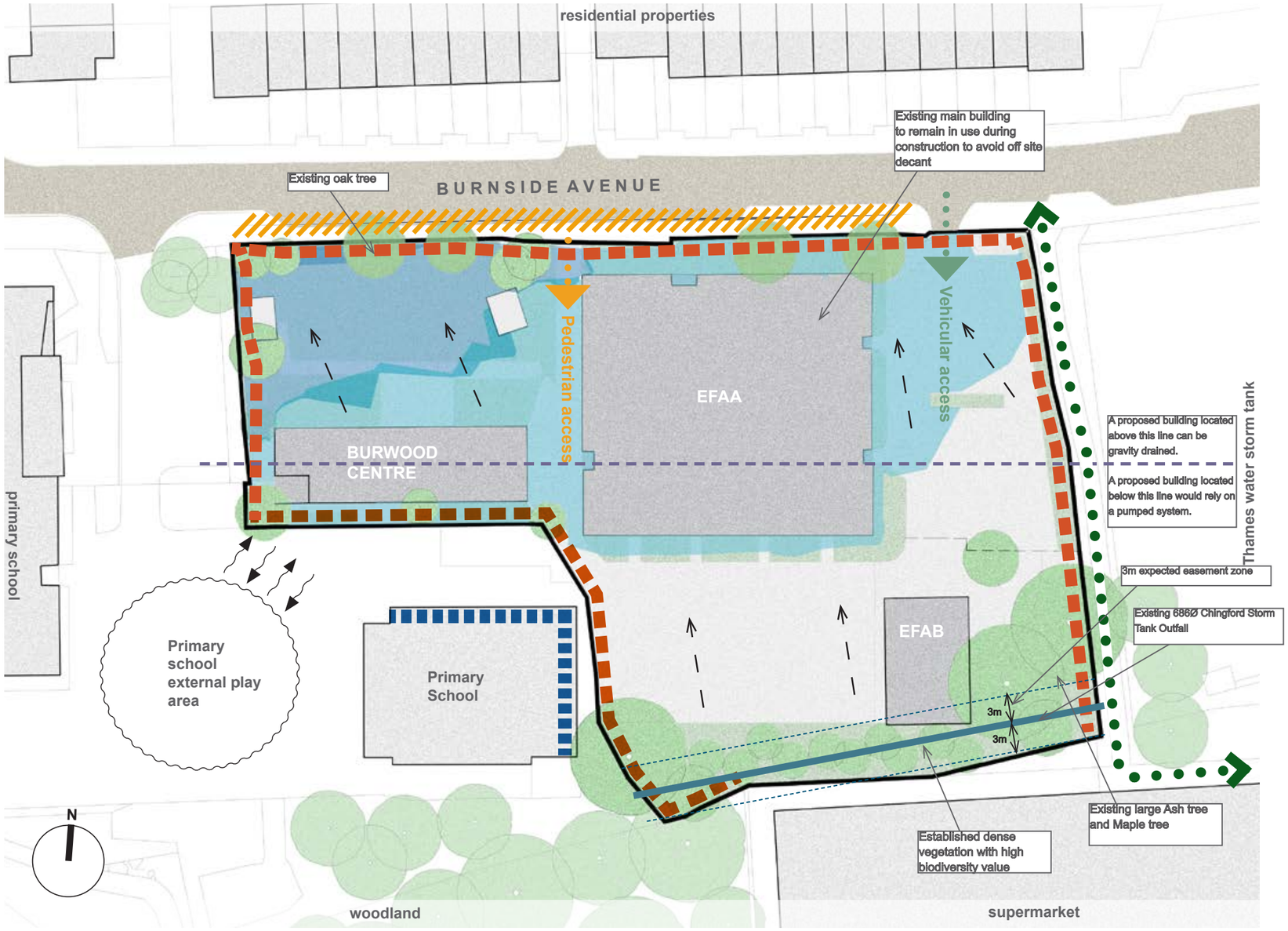
Burnside Secondary School is located in a constrained site within a predominantly residential area. The school occupies two buildings: EFAA and EFAB and also makes use of the adjacent Burwood Centre.

The key constraints of the site include:

- Construction of new school should enable the existing school buildings to remain in use which will avoid a costly and disruptive off site decant which would involve sending some students out of borough.
- School's boundaries be secured and screened to avoid interaction with the public particularly the alleyway along the eastern boundary. This is to prevent vulnerable students being seen by members of the public who pose a threat and to prevent dangerous items being passed through to students.
- There is a potential of overlooking to and from, the adjacent two storey primary school.
- Consideration to be given to security and screening required to boundary between primary school and secondary school.
- The existing 686Ø Chingford storm tank outfall is located within the southern area of the site as shown on the attached utilities survey. Any new building should be located outside of any easement (usually 3m from the outside of the sewer).
- The FFL of the building should be no lower than 12.51m AOD to ensure it is at least 300mm above the flood Zone 3 (plus Climate Change) flood level as per the Environment Agency "standing advice".

The key opportunities include:

- The significant street frontage offers an opportunity for the proposed building contribute positively to the Burnside Avenue streetscape.
- The site benefits from a wealth of trees, greenery and wildlife, particularly to the southern boundary where it provides natural screening.
- There are a number of existing access points around the site which could be reused.



3.0 The Site

3.5 Site Context - History

Burnside Secondary School lies within the South Chingford area of the London Borough of Waltham Forest. Chingford Mount and South Chingford originally grew from a small community that served the local Manor houses.

Until the end of the 19th century, South Chingford had a small population and consisted of farms and small holdings, due to improved transport links that occurred between 1873 and 1905 (train and trams) the population significantly increased. It was a period where the lands and farms of the old manors were sold off for housing and shops, leaving pockets of green spaces, such as the nearby Ridgeway Park and Larkswood park.

By the 1930s, and due to the construction of Albert Crescent, the cinema and shopping parades (located approx 20 mins walk from the school), Chingford Mount was developing into a shopping area. The Art Deco Cinema built in 1935 and designed by Andrew Mather had been a key landmark for the town centre but was demolished in 1972 to make way for a supermarket.

Historical map 1842-1952

Historical map 1945-1971

Approx location of Burnside Secondary School

Albert Crescent / Odeon Cinema

Albert Crescent c.1950

Odeon Cinema constructed 1935

3.0 The Site

3.6 Site Context - Townscape Assessment

An analysis of the surrounding building typologies and their architectural language was carried out to inform the design and material choices for the new Burnside School.

The wider area is characterised by low density housing whilst the immediate area surrounding the site is characterised by mid-high density terraced housing in a traditional grid pattern of streets lined with mainly Edwardian, Victorian and some more modern housing.

The buildings have similar design elements which create a harmonious relationship with each other. They are consistent in that there is always a presence of brick, predominantly red brick. Some of the more contemporary buildings experiment with lighter tones of brick and different textures/ patterns such as Everall court sheltered housing on May Road (completed circa 2015).

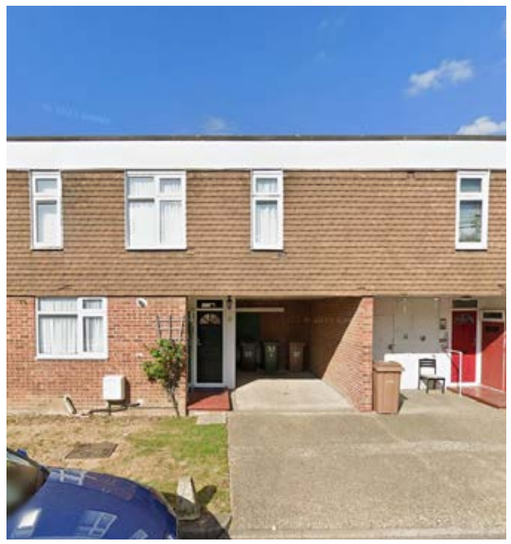
To the west of the site the area is characterised mainly by post-war housing in a less traditional street pattern and with less cohesive character. A mixed material palette can be observed including buff brick

Aerial view

6. May Road Sheltered Housing

5. Leonard Road Houses

1. Burnside Avenue Houses



2. Rowen Avenue Houses

3. Burnside Avenue Houses

4. Salisbury Manor Primary School

3.0 The Site

3.7 Planning Context

LBWF Policies Map shown adjacent, illustrates that Burnside Secondary school straddles flood zones 2 and 3a, the site does not fall within any other specialist designations.

Key Policy Considerations:

National Planning Policy Framework (2023)

- Section 2: Achieving sustainable development
- Section 4: Decision-making
- Section 8: Promoting healthy and safe communities
- Section 9: Promoting sustainable transport
- Section 12: Achieving well-designed places
- Section 14: Meeting the challenge of climate change, flooding and coastal change
- Section 15: Conserving and enhancing the natural environment

The National Planning Policy Framework (2023) was revised in December 2023 and sets out the Government's planning policies for England and how they are expected to be applied. Section 2 of the Framework recognises that there are three overarching objectives to achieving sustainable development, namely economic, social and environmental.

Local Development Plan

The local development plan comprises the London Plan and the Waltham Forest Local Plan. The Waltham Forest Local Plan is made up of two parts:

Local Plan Part 1 (LP1) 2020-2035 - adopted 29 February 2024

Local Plan Part 2 (Site Allocations)

London Plan (adopted 2021)

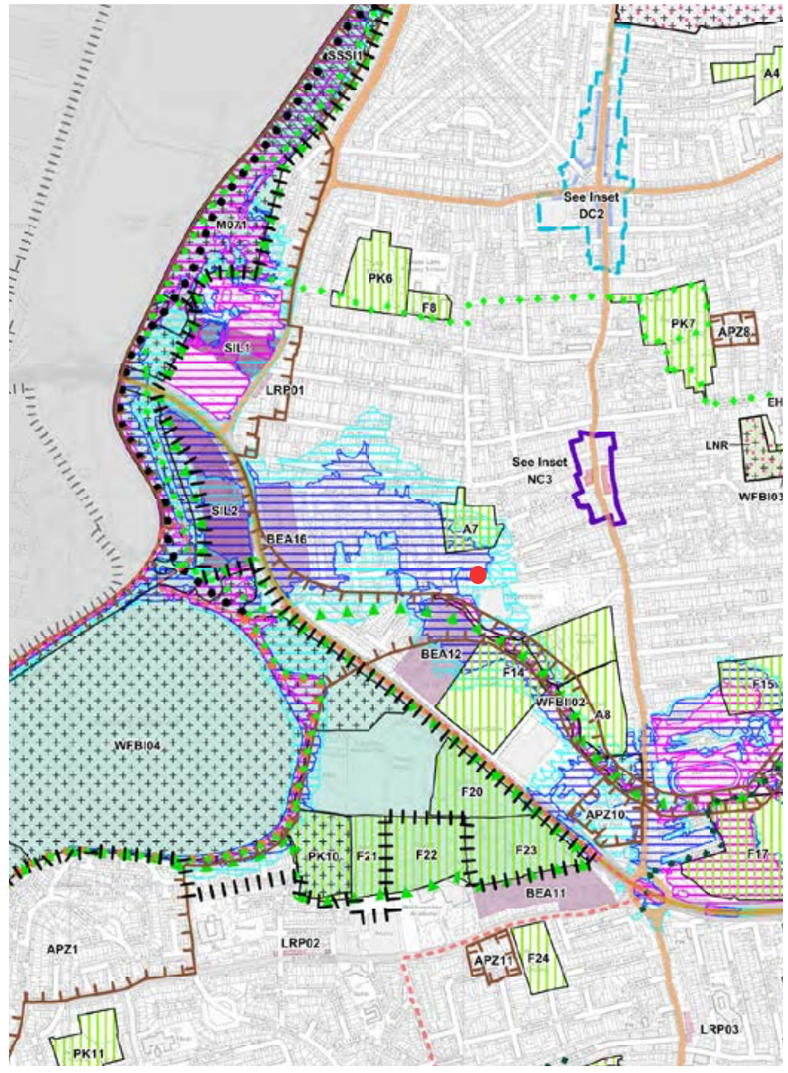
- Policy S1: Developing London's social infrastructure
- Policy S3: Education and childcare facilities
- Policy S4: Play and informal recreation
- Policy S5: Sports and recreation facilities
- Policy G5: Urban greening

Local Plan (adopted 2024)

- Policy 3: Infrastructure for Growth
- Policy 46: Social and Community Infrastructure
- Policy 47: Education and Childcare Facilities
- Policy 53: Delivering High-Quality Design
- Policy 58: Making Places Safer and Designing Out Crime
- Policy 61: Active Travel
- Policy 77: Green Infrastructure and the Natural Environment
- Policy 79: Biodiversity and Geodiversity
- Policy 80: Trees
- Policy 87: Sustainable Design and Construction
- Policy 91: Managing Flood Risk

Policy Statement – Planning for Schools Development (2011)

The Policy Statement Planning for Schools Development, which is to be read alongside the Framework, confirms the Government's policy on new school development. It states that Local Authorities should give full and thorough consideration to the importance of enabling development at state funded schools in their planning decisions and that Local Planning Authorities should attach significant weight to the need to establish and develop schools.



Map extract

	Flood Zone 3b		CS4, CS5, DM34
	Flood Zone 3a		CS4, CS5, DM34
	Flood Zone 2		CS4, CS5, DM34
APZ	Archaeological Priority Zone	23	CS12, DM28
NC	Neighbourhood Centre	7	CS14, DM25, DM26, DM27
PK	Park	17	CS5, DM12
F	Playing Field	20	CS5, DM12
A	Allotment Site	19	CS5, DM12

3.0 The Site

3.7 Planning Context

Policy 47 (Education and Childcare Facilities) of the Waltham Forest Local Plan, sets out the council's aspiration to ensure all young people in the area have access to high quality education. The council continues to place weight on *The Design Charter for Schools which* was adopted in July 2018, and sets out the London Borough of Waltham Forest's ambitions for the quality of design in its schools. The Charter relates to the NPPF and London Plan which support good design.

The Charter provides 10 key principles that should be applied to the design of new and existing schools within the borough (as outlined opposite).

Recently completed Schools in LB Newham

1. **Right School, Right Place:** Locate schools in the heart of the community
   The new school will be located on the current school site.

2. **A School To Be Proud Of:** Create a school with a strong identity
   We aim to open up and strengthen the street frontage with a new welcoming main entrance.

3. **Site Plan:** Make the best use of the site
   The proposed position of the building will maximise external amenity space

4. **School Grounds:** make an asset of outdoor spaces
   A variety of external spaces will be created to suit all student and community needs

5. **Organisation:** Make a place that is thoughtfully planned
   Adjacencies of teaching spaces have been carefully considered and discussed in great detail with the end users

6. **Buildings:** make form, massing and appearance work together
   The massing, form and appearance will be sensitive to the context whilst also standing out as a building for the community

7. **Interiors:** Create excellent spaces for learning and teaching
   Internal spaces will be warm, welcoming and stimulating

8. **Feeling Safe:** Create a secure and welcoming place
   Safeguarding has been a key consideration throughout the early design process

9. **Long Life, Loose Fit:** Create a school that can adapt and evolve
   Robustness and flexibility are key considerations in the selection of materials and fittings

10. **Environmental Resources:** Promote sustainable construction and use
    The building is targeting Net Zero Carbon in operation

4.0 Consultation and Engagement

4.1 Consultation Timeline

School Engagement

Prior to the commencement of Stage 3 early engagement took place between the DfE, the School, Waltham Forest, and the Design Team to establish the brief and develop a concept design. The current team was appointed to undertake a Stage 3 design in May 2023 and have continued the engagement process to ensure a seamless design development journey.

A thorough and successful engagement process has been undertaken between Rivington Street Studio, Morgan Sindall the DFE and Burnside Secondary School. This took the form of weekly Client Engagement Meetings (CEMS) from June – July 2023 to discuss updates and work through design challenges. The feedback received was constructive and has formed the basis of the Stage 3 design. Each CEM covered a pre-agreed set of specialisms to ensure we had the relevant people and disciplines in each meeting which facilitated fruitful discussions between the design team and client.

Further engagement took place with the school governors, students and teachers in November 23.

Public Consultation

To ensure the consultation would be as wide-reaching as possible, Smith Jenkins Planning consultants set up a consultation website which went live in August 23, this includes include a feedback form and contact details.

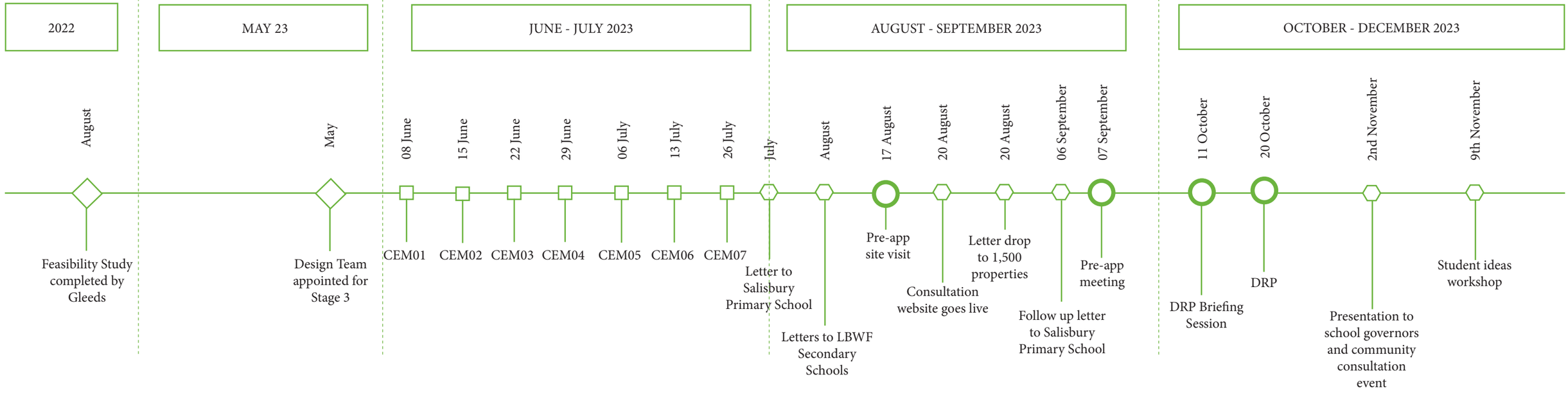
A leaflet drop was carried out to circa 1,500 properties, letters were also sent to secondary schools within the borough and the neighbouring primary school. Smith Jenkins have prepared a Statement of Community Involvement to accompany this application.

London Borough of Waltham Forest

The pre-planning application process began in July 23. A site visit with the Case Officer took place on 3rd August and a pre-app meeting took place on 7th September. Overall feedback was positive, some specific guidance was provided on tree retention and materiality.

Design Review Panel

The project team presented to the Design Review Panel (DRP) on 20th October 2023 where we received some valuable feedback from the panel members. This is detailed later in the report.



4.0 Consultation and Engagement

Following the DRP feedback, there was an extended period where justification for not building higher was provided from various sources. The applicant's team consider two stories as being the maximum for a building of this type and many precedents for PRUs demonstrated how unusual it would be to build higher. This was subsequently accepted by LBWF planning.

Oak Tree T4
Further justification was also provided for not retaining the oak tree T4 on the Burnside Avenue frontage. The position of the new building at the narrower western side of the site has been deliberately pushed up to the street in order to provide as much social space on the south side.

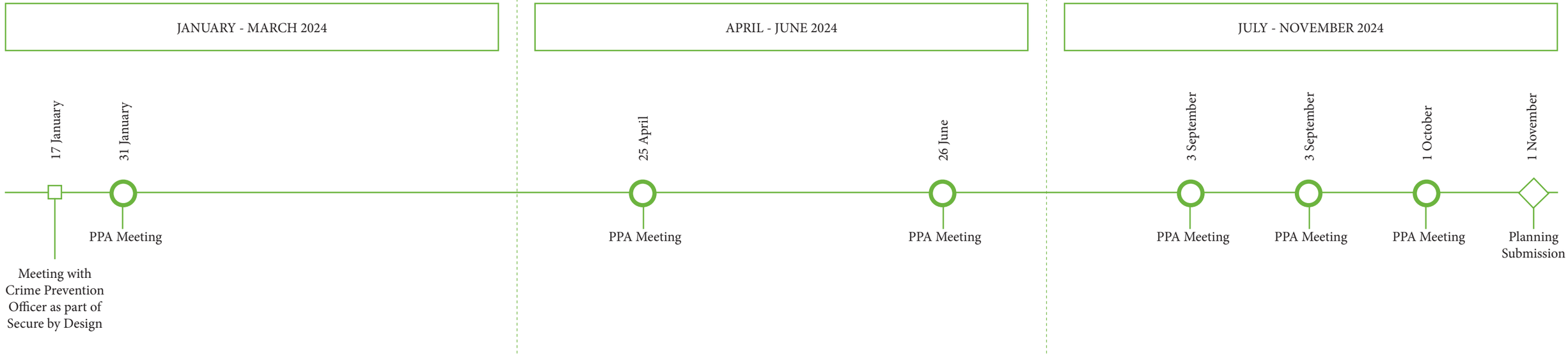
Initially reflected by LBWF planning, an alternative scheme was drawn to step the building round the tree root zone in order to retain it. However, this created all sorts of inefficiencies and had a massive impact on the viability of gravity drainage as well as reducing the amount of valuable external social space on the southern elevation. This was accepted by LBWF.

LBWF requested that the elevational treatment be enhanced to add more interest, particularly to the Burnside Avenue frontage. A series of options showing enhancements were tabled and discussed which included additional windows to the hall, adding brickwork recesses to create further depth and shadow and including glazed brickwork in strategic locations.

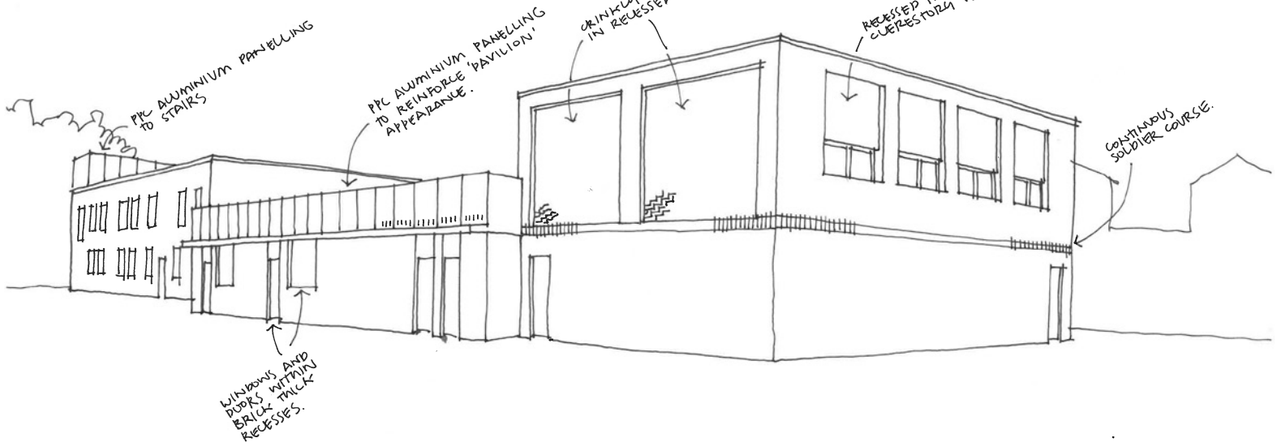
Detailed drawings were provided to demonstrate scheme quality. This included the depth of the window reveals, intensiveness of the green roof, pv panel location below the roof parapet and details of the entrance canopy.

The submitted scheme represents the culmination of over 12 months of extended pre-app dialogue and consultation, has explored all concerns and successfully responded to all comments.

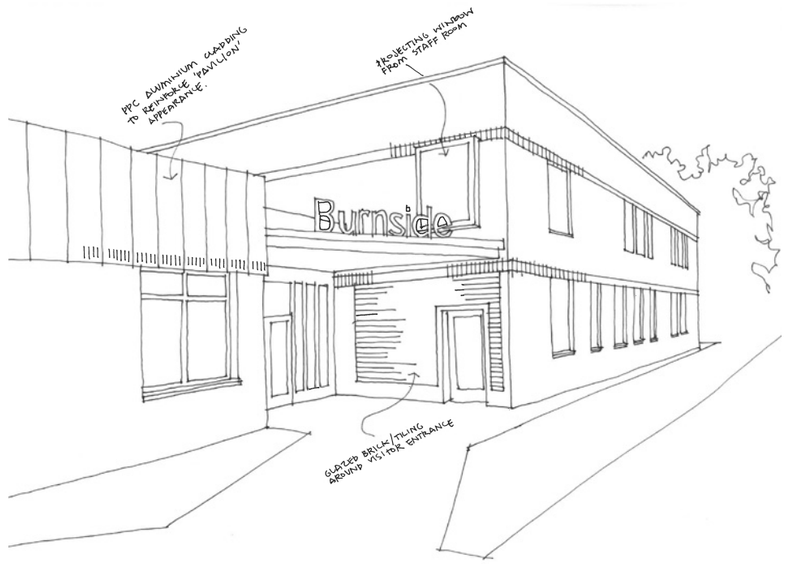
Refer to drawings overleaf.



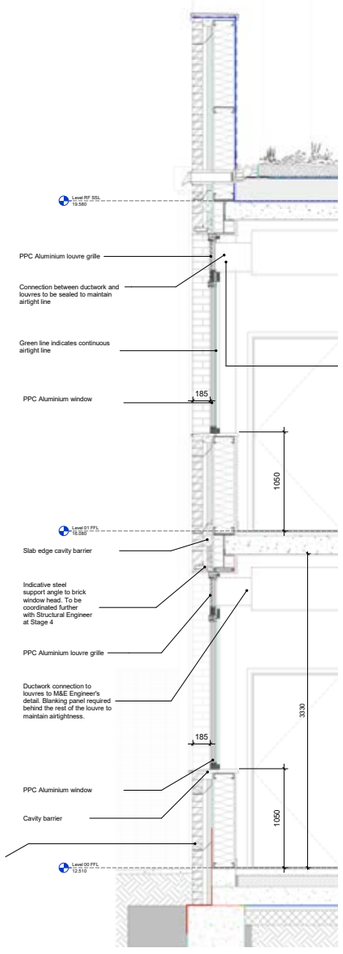
4.0 Consultation and Engagement



Sketch perspective presented to LBWF showing amendments to the Sports Hall and introduction of coloured metal cladding to cap first floor block



Sketch perspective presented to LBWF showing introduction of glazed brickwork around entrance, projecting oriel window and coloured metal cladding to cap first floor block



Section produced to demonstrate brick reveal detail and green roof build-up

Option 6b presented to LBWF which formed the basis of the progressed design option

4.0 Consultation and Engagement

4.2 Pre-Application Meeting

A pre-application meeting took place with LBWF planning officers following a visit to site with the case officer. The proposals were supported in principle and the design has been developed further as a result of feedback received. The comments received are summarised below:

- The proposal to bring the school to the front of the site and strengthen the street frontage was considered to be the right approach for the site
- However, this involved removal of the existing trees along the north boundary which were deemed to be in poor condition. We were advised at Pre-app that an emergency TPO had been applied for and that our proposals should seek to retain them.
- The scale and massing of the proposed scheme was supported, and it as agreed this was in keeping with the context.
- It was agreed that the main point of access was at the right point in the street.
- The proposal to use render on the two-storey block was not supported, the Design Officer suggested replacing render with brickwork.
- It was suggested that we looked at breaking up the large blank façades of the sports hall by introducing feature panels.
- We were asked to look at the feasibility of opening up corridors and providing breakout/ breathing spaces at key circulation junctions.
- It was suggested that we try and bring more daylight into circulation spaces by introducing rooflights.
- We were advised to investigate the reinforcement the ecology of the wooded area to the south boundary.
- We were asked to provide the MUGA with lighting or passive infrastructure for future provision of lighting to allow community use outside of school hours.

Proposed Site Plan presented at pre-app

Proposed visual from Burnside Avenue presented at pre-app

4.0 Consultation and Engagement

4.3 Design Review Panel

The project team presented to the DRP on 20th October 2023. This involved a virtual site visit and an in-depth presentation of the proposals followed by discussion and feedback from the panel members. The Panel recognised the work undertaken in identifying and responding to the constraints but felt these considerations were overly driving the design. The asked us to revisit the proposals with three key strategies in mind:

- **Engagement**

  Whilst the panel acknowledged the thorough engagement that had been undertaken with the school's headteacher and senior leadership team, they urged us to engage with the students.

  The team explained that this was something we were very keen to do and the reason it hadn't taken place to date was that the school has a transient community of students and there hadn't been appropriate time for this to date. Following the DRP, we have now met with the students in what was a very engaging session which is detailed further in section. 4.5.

- **Green infrastructure and landscape strategy**

  The panel felt that the green infrastructure strategy was underdeveloped and did not respond to the environment of needs of the students.

  Following the DRP, the landscape strategy has been revisited. We have discussed the strategy with the school staff and students and are incorporating some of their suggestions.

- **Sustainability strategy**

  The panel felt that the sustainability strategy was underdeveloped and that more work was required to ensure that meaningful sustainable goals were met or exceeded.

  The project team explained that the building would be Net Zero Carbon in operation and that we were working with energy consultants to carry out overheating and daylighting analysis and develop an energy strategy.

  The panel recommended that a BREEAM pre-assessment should be carried out.

Specific points raised on the proposals and responses

Comments	Response
Landscape Provide a range of external spaces for students to retreat to including quiet seating. Horticulture area needs to be further developed.	The school would like a wildlife sensory garden area with some informal seating. This will be incorporated into the scheme. This will also increase the Biodiversity Net Gain (BNG). Further softening of the landscape around the front of the building will also be incorporated.
MUGA The inclusion of a multi-use games court (MUGA) was questioned, and it was suggested that this should be removed from the scheme in lieu of more quiet areas for the students.	Teachers and students have stressed that having this MUGA in addition to the smaller quiet areas is a fundamental requirement of the school. Active spaces are important for these students and are very well used. In addition, the MUGA will provide a positive contribution to the community use strategy.
Retention of existing oak tree The scheme presented at DRP involved the removal of four existing trees along the Burnside Avenue boundary including an existing oak tree. The panel did not support the removal of this tree and were very concerned about the impact of this on the site and the students.	Retention of the tree would involve moving the building footprint back from the street and greatly reducing the amount of usable external space for the students. Further narrative is provided in section 4.1.
Architecture It was suggested that the design team look at more local precedents to ensure that the design of the new school has a strong architectural relationship to surrounding buildings and schools. The also recommended we look at how the building addresses its peripheries, in particular how the building addresses the alleyway to the east of the site. The panel agreed with the design team's aim to create an open and welcoming entrance for the students but felt this could be more successful by opening the entrance further and introducing biophilic design to the link area. The panel also suggested increasing the height of the building to reduce the footprint and respond to the taller housing on Burnside Avenue.	The design team have carried out further studies into the history of Chingford and have looked at local precedents to inform the proposals. The school have had historical instances of unwanted interaction between pupils and the public along these boundary with the alleyway including the passing of items across the secure line. It is a specific requirement of the brief that, the design of the new school provides a degree of separation along this boundary. The design response minimises opportunities for pupil-public interaction. Measures include increased surveillance from the teaching areas of the school (particularly during break times in the school day) as well as upgrades to wire mesh fence which minimises the opportunity for prohibited items to be passed across or through the secure lines of the school. Building higher, this would create inefficiencies in the plan by adding additional circulation, it would also present management difficulties for the school. It is important that stairwells are minimised due to restricted passive supervision in these areas. Each floor would require a staff presence which would result in additional accommodation being included.
Internal Spaces It is important to strike a balance between safeguarding and calming spaces. Consideration to be given to spaces and finishes which meet the needs of neurodivergent students. Relaxed and informal seating could be provided internally. Wayfinding strategy should be more than just signage.	The internal finishes proposals will be developed further following planning. We have already engaged with the school on colour coding toilet doors for ease of wayfinding and will work with them to develop internal classroom and circulation directories which will also be used to introduce colour and break up corridor spaces.
Reuse of materials from demolition of existing buildings The panel suggested a demolition audit was carried our to ascertain the viability of reusing the materials from the demolished buildings in the new proposals	See section 11 - Circular Economy

4.0 Consultation and Engagement

4.4 Governor and Community Consultation

On 2nd November a consultation event took place from 3pm to 6:30pm at Burnside School, this involved a presentation, Q&A session, and open evening for people to drop in and view the proposals. The local community were notified of the event by letter drop. Numerous governors and members of staff attended but there was no attendance from the local community were present. The key comments and questions are summarised below:

- Feedback was positive overall; governors and staff alike welcome the proposals for the new building.
- The teachers suggested the inclusion of a wildlife/ sensory area in the landscaping. Specifically, winter blooming low maintenance shrubbery, bird and bat boxes. It was suggested that this could be in the area next to the MUGA. This would also act as a quiet social area during break times.
- They did not want planters due to the maintenance associated with them.
- An outdoor area with fixed seating to the right of MUGA, covered with a canopy if possible.
- The teachers were not concerned about the removal of the Oak tree but did emphasise the importance of retaining a large tree towards the south-west of the site – the project team confirmed this would be retained.
- There is a fundamental need for a MUGA. The students need lots of active space to run around and burn off energy. This should be well resourced for other sports than just football e.g., include netball hoops.
- Some concerns regarding disruption during the construction were raised. The project team suggested workshops and managed site visits to make the experience a positive one for students.

The feedback from this group was incredibly valuable as they work and teach in these facilities year-round and have a deep understanding of their students' requirements. We will continue to engage with the Head teacher and staff members as the project progresses.

Photos from the Burnside Consultation Event

4.0 Consultation and Engagement

4.5 Student Ideas Workshop

On 9th November 2023 RSS visited Burnside to meet with some of the Year 9 and Year 11 students currently attending the school. The session was constructive and engaging, we appreciated the time taken by the students and teachers to meet with us and share their thoughts on the proposals and offer suggestions on how to make their experience of the new school a positive one. While the students acknowledged they would not be at the school by the time the new building is delivered, they strongly supported the project and talked about how this would benefit many future students for years to come.

After short presentation and Q&A session, we handed out blank site plans and asked the students to populate them with ideas for their outside space. Some of the ideas are summarised below:

- Astroturf pitch or MUGA with high fences to keep a ball in
- Informal seating areas
- Outdoor learning/ classroom area
- A sensory/ wildlife garden (bird feeders insect hotels etc.)
- Drinking fountains
- An area for practical skills teaching (fixing a bike or building a wall)
- Outdoor gym, pull up bars, table tennis tables
- Canopies for shelter

They also reacted very positively to the design of the entrance area and the glazed link and suggested it could have some plants and greenery so it would feel like a ‘conservatory’ type space.

Photos from the Student Workshop

Some of the mood boards produced by the Students

4.0 Consultation and Engagement

4.6 Crime Prevention Consultation

A meeting was held on 17th of January 2024 with Matt Fletcher from Secure by Design to discuss the proposals for Burnside Secondary School.

Recommendations were made around:

- Height and rating of boundary fence
- Introduction of defensive planting to boundary
- Locking and management of gates required for fire access
- CCTV coverage
- Management of community use (strategy is defined later in the document)
- Management of internal doors and avoidance of blind-spots
- Balance of creating a welcoming environment but protecting staff and safeguarding children
- Security rating of perimeter doors
- Refuse store enclosure
- Introduction of intruder alarm
- PIRs to be unobstructed

5.0 Design Proposal

5.1 Response to Site Context

Burnside Secondary School is located on a constrained site within a predominantly residential area. The overall school site area is 4795 sqm, the proposed new building footprint is approx 1295sqm. The external space is approx 3500sqm, comprising new hard and soft landscape zones for informal social and formal play. The external space also comprises, bike storage, refuse storage and a car park alongside existing vegetation zones.

To retain the school on site during construction and with minimum disruption to the students, the new build design facilitates a phased demolition and construction strategy that responds positively to its context.

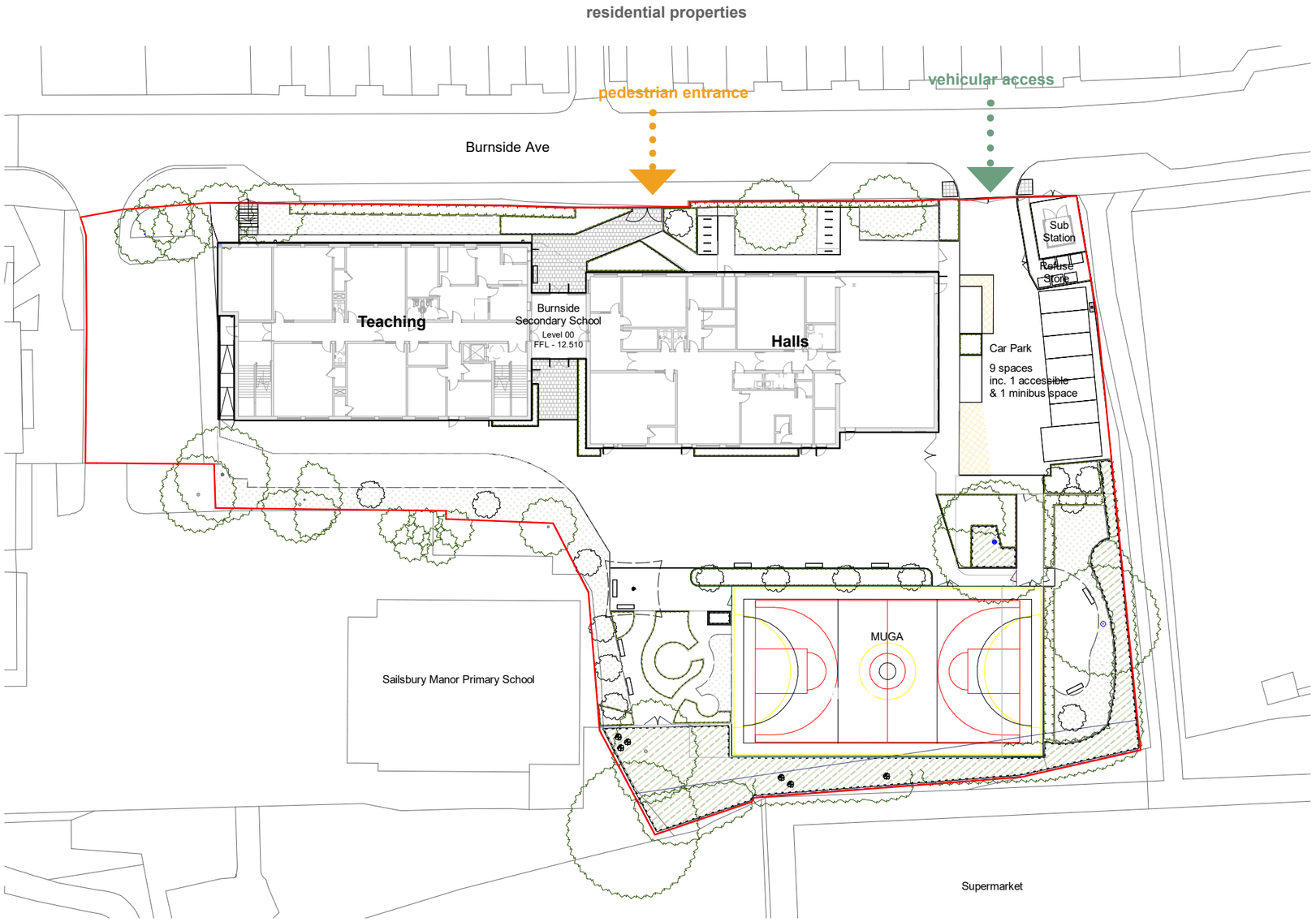
A new, two storey rectilinear teaching block is proposed on the north west boundary of the school site, responding in height to the two and half storey residential properties that sit opposite. On the north east boundary of the site, the combination of a single and two storey halls block offers a variance in height to the streetscape.

The location of the school accommodation on the street frontage re-enforces a streetscape typology that is prevalent throughout the Chingford area on the surrounding residential streets.

5.2 Design Concept

The design concept consists simply of two separate brick clad blocks of accommodation connected at ground floor by a single storey glazed link that forms the main school entrance. The glazed link building provides an open and inviting approach to the building that is clearly visible from the street, whilst still maintaining a secure entry point into the school.

The separation of accommodation into a teaching block on the west and halls block on the east linked by the glazed entrance, enables the teaching accommodation to be easily secured closed, whilst opening up the halls spaces for the out of hours community use. The sports hall, fitness suite and dining hall comprise some of the spaces that will be hired out by the community.



Proposed Site Plan

5.0 Design Proposal

5.3 Phasing Strategy

Another key driver behind the scheme is to avoid the disruption caused by moving students off site. It is key to their learning and social and emotional needs that they can remain on their site during construction, This, has led us to a proposing a building formed of two parts, one block being built before the other. This phased approach will allow students to remain in their existing main building while the new education block is built, they would then decant into the new block while the existing is demolished and the rest of the new building is built.

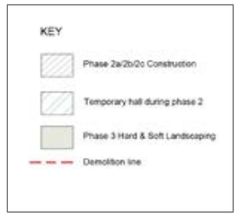
Contractor Duties

The contractor has prepared a strategy to set out how disruption will be minimised during construction and how safeguarding will be managed. Prior to construction they will also prepare a Construction Phase Plan which will detail their approach to specific Health an safety issues, such as maintaining free unobstructed flow between buildings where and when necessary, ensuring all fire exits are kept clear and where required new escape routes provided. They will also set out a timetable for potential noisy works to ensure this does not overlap with exams times.

It will also be important while working in this live environment that all operatives and site visitors have had a Disclosure and Barring Service (DBS) check or be accompanied by come who has.

Student Experience

Following our engagement with the students it became apparent that some students have a strong interest in construction with a view to potentially working towards a future career in construction. We have discussed the possibility of arranging managed site visits for the students to make their experience of the build a positive one, in addition, there will be opportunities for work experience for some students who are interested in a construction-based career.



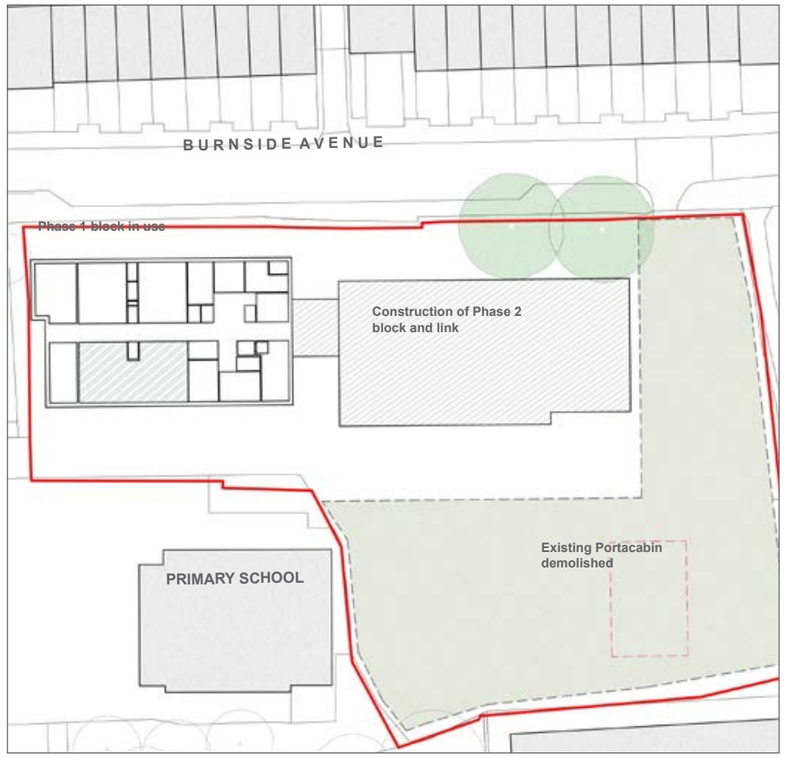
PHASE 1

New education block to be constructed March 24 - December 24 while the existing main building remains in use.

PHASE 2

The existing main building is demolished, students are decanted into the Phase 1 block. A temporary Hall will be provided which will be remodelled into two classrooms on completion of phase two. Building EFAB will remain in use.

PHASE 3



Once the existing main block is demolished, Phase 2 - the Hall block will be constructed followed by the lightweight glazed link which connects the two blocks. EFAB will then be demolished.

5.0 Design Proposal

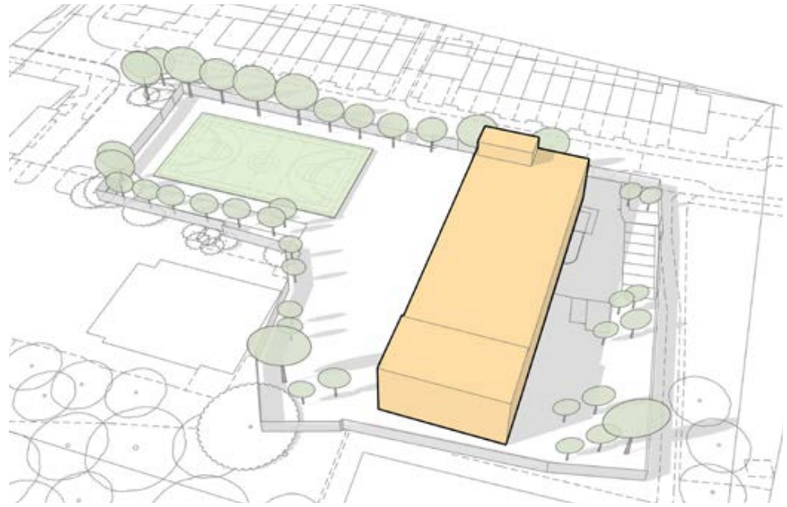
5.4 Design Development

Following RSS' appointment in May 23, we undertook an analysis of the feasibility option produced by others and investigated alternative options for site placement and massing. We tabled some of these options at the early client engagement meetings to help establish what was most important to the school and what the key design drivers should be. It was clear early on that the school had a clear aspiration for the new building to create a strong identity for the school and be open and welcoming to the street whilst also providing safe and private external space for the students.

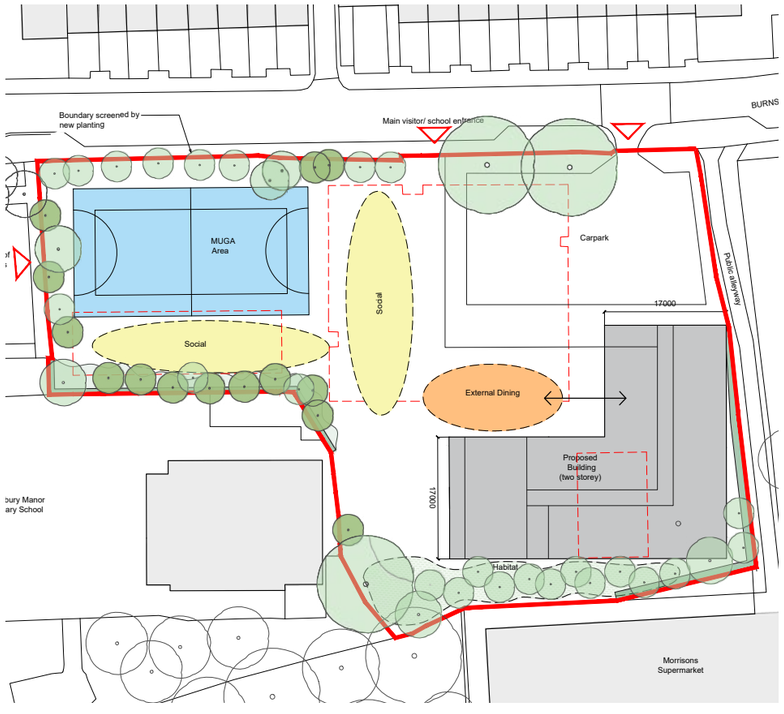
Other options we explored involved building higher with a smaller footprint, this was discarded early on due to the internal inefficiencies and management issues it presented. We also tested building towards the south of the site which was discarded as this did not present the opportunity to create a strong street presence and it also involved having large areas of external space exposed with little or no separation from the boundaries.

The options opposite illustrate two alternative options that were explored, Alternative Option 1 worked with a single phased approach however the disadvantage of the building location outweighed the advantage of being able to deliver in a single phase.

Alternative Option 1 - 3D massing



Alternative Option 2 - 3D massing



Alternative Option 1 - Site plan

This option involves a two storey L-shaped block, pushed toward the south-eastern corner of the site. This does not provide an opportunity to address the street frontage and strengthen the School's identity. It also results in an external amenity space which has very little screening from the street.

Alternative Option 2 - Site plan

Option two is a two-storey linear block running north-south. This option lacks street presence and results in a fragmented external amenity space. This provides minimal opportunity to address the street frontage. It also results in an external amenity space which has very little screening from the street.

5.0 Design Proposal

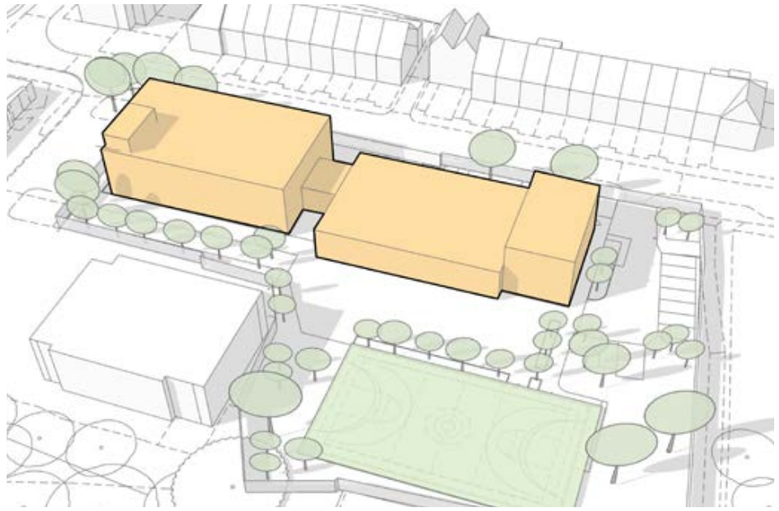
5.5 Key Design Principles

Through our client engagement process, we were able to establish three key drivers to inform a design which would meet the aspirations of the school. These drivers relate back to the Waltham Forest Design Charter for Schools.

Strong Building Frontage: our aim here to create a school building to be proud of, a building which addressed the street in a positive way and contributes to the school's identity.

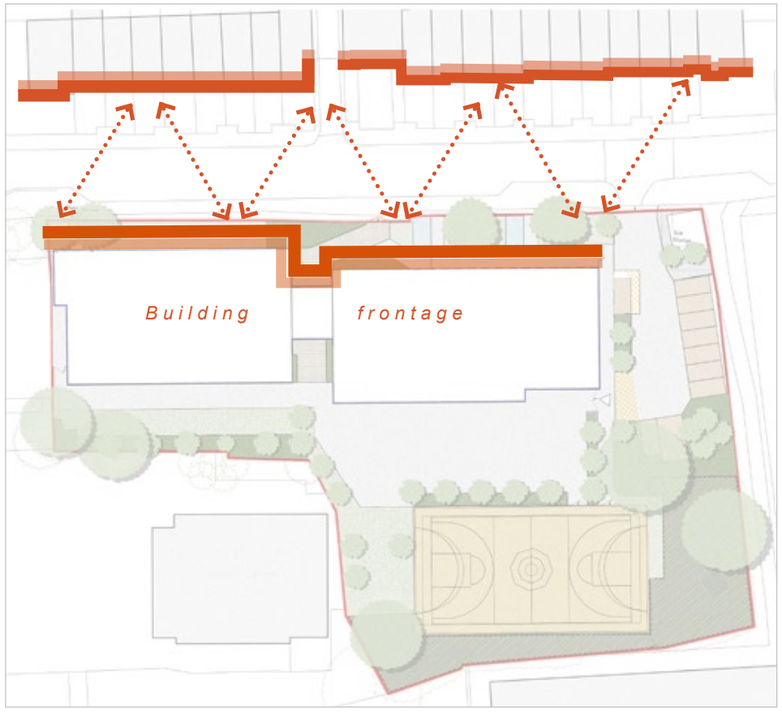
Clear Entrance Strategy: The existing entrance is difficult to see and is defensive. We are proposing to open this up and create a welcoming main entrance for Students and visitors alike.

Accommodation Organisation: We are proposed to make a place that is thoughtfully planned both inside and out and create a calm and inspiring environment where the students feel safe and secure.



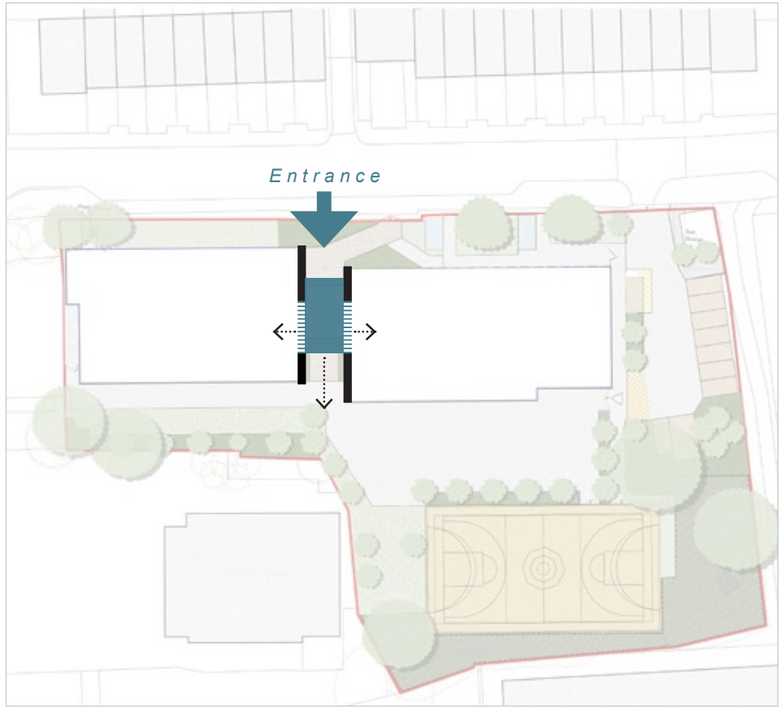
Proposed Option - 3D massing

STRONG BUILDING FRONTAGE



Massing on street frontage enhances streetscape and creates a contextual, positive and visible presence for the secondary school on Burnside Avenue.

CLEAR ENTRANCE STRATEGY



Clear and secure one point of entry into school.

ACCOMMODATION ORGANISATION

Organisation of internal accommodation into core teaching space and specialist halls spaces, enables clear security strategy for out of hours community use.

5.0 Design Proposal

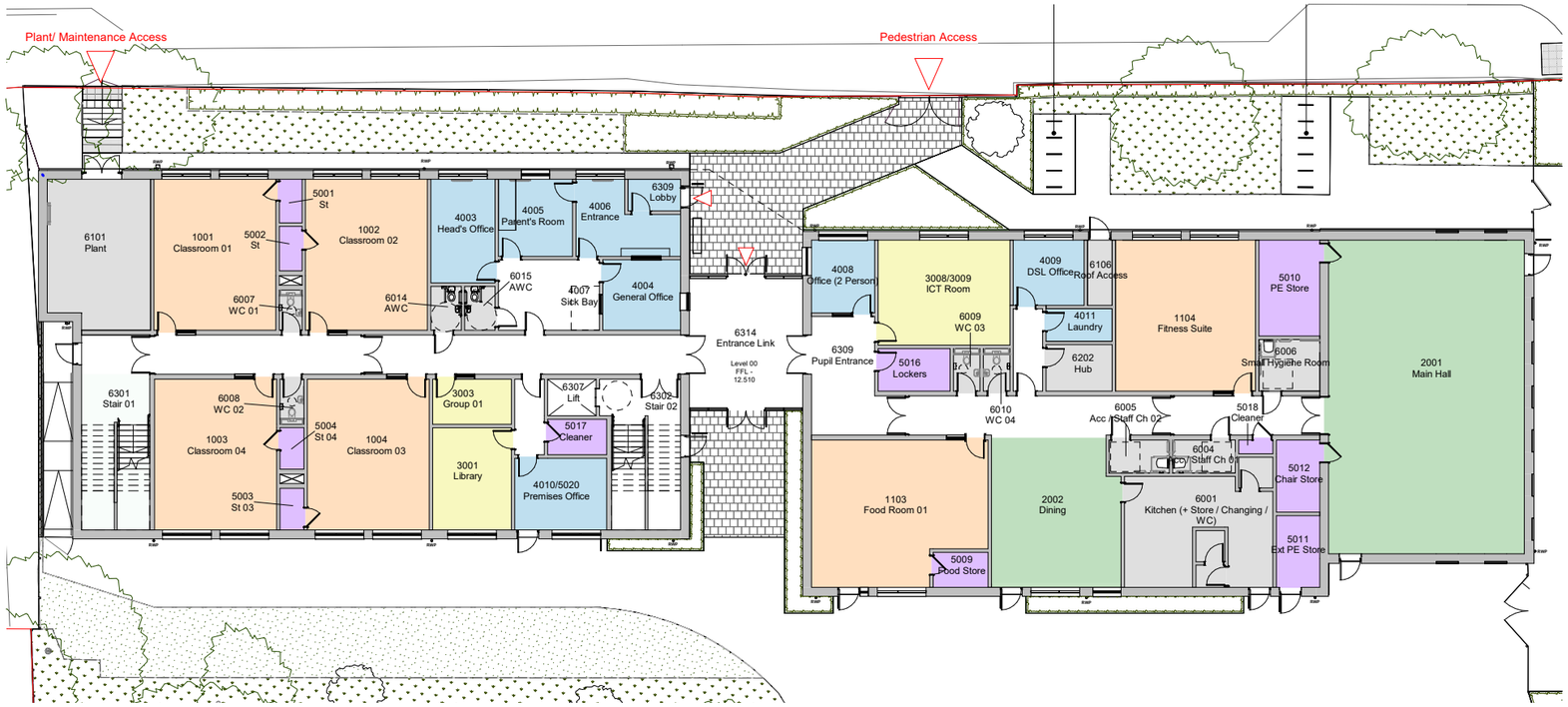
5.6 Design Layout / Uses

The proposed plan is formed of two accommodation blocks with a glazed link between them.

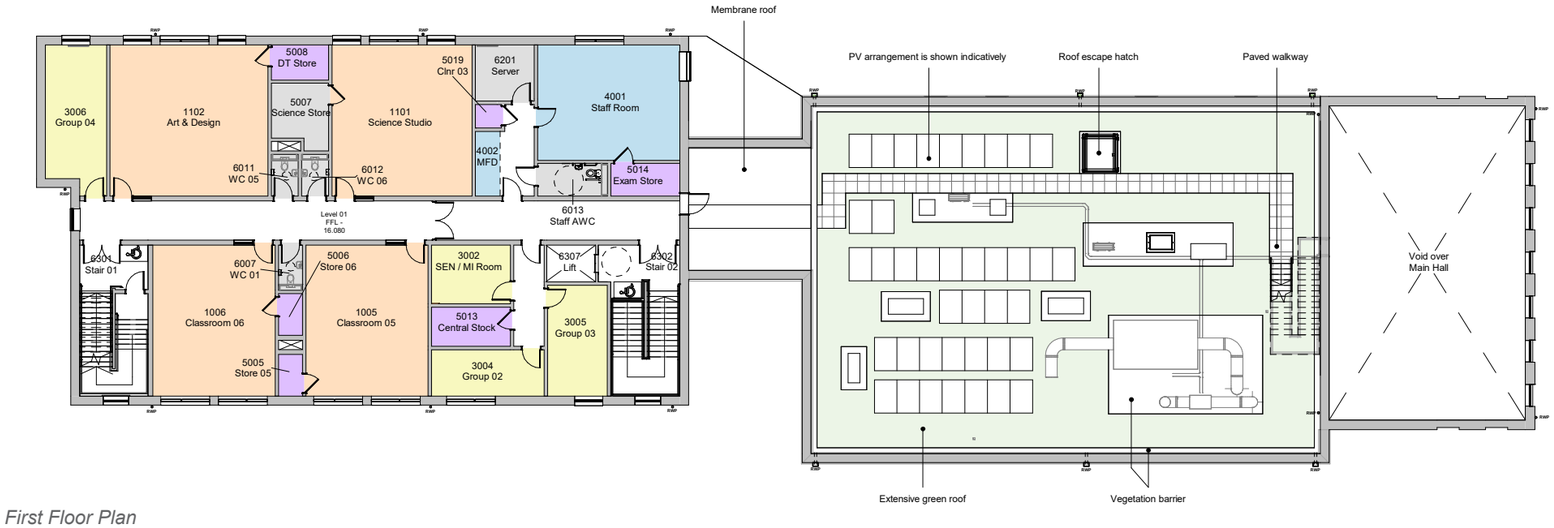
The block on the left is a two storey ‘classroom block’. This block will be the first part of the building completed during Phase 1 and will include the six general teaching classrooms along with two specialist rooms – Art and Science. There are multiple group rooms on each level which will provide spaces for small groups and one to one teaching, but also breakout space for over-stimulated or dysregulated students.

There is a strong staff presence in this block with offices on each level and a Staff Room. The location of the staff room is intentionally situated to the north side of the building at first floor. The staff here provide one to one teaching and are often working within demanding situations, it was important that they had a quiet place to retreat to.

The block on the right is the single storey ‘Hall’ block which comprises the larger gathering spaces such as the Dining Hall and double height Main Hall. This block also includes a Fitness Suite and Food Room. The Food Room and Dining Hall are located on the ground floor south side of this block so that they have direct access to the outside. Going forward the School are keen to encourage an interest in food and food preparation, as part of this they hope to introduce outdoor dining in the future.



Ground Floor Plan



First Floor Plan

5.0 Design Proposal

5.7 Entrance Link

The character of the link between the two blocks has been a key discussion point throughout the Client Engagement process. The proposal is for this space to be an enclosed lobby between the two blocks which will be glazed, seemingly lightweight and create a bright open welcome point which engenders a positive student experience.

The continuation of external wall and ground finishes through this lobby will strengthen a connection to the external spaces whilst providing a warm sheltered space. During the school day the lobby will be secured so that it forms part of the main circulation route and create internal ‘breathing space’ between the two blocks.

The Diagrams on the right below illustrate the proposed entry sequence for students and visitors during both Phase 1 and when the building is complete.

Building complete

When the students arrive in the morning, they will follow the red sequence. The entrance link will be open and will provide a central arrival point at the heart of the school. They will then individually move through to the next area highlighted in red on the left, where they are met by a security officer who will carry out checks in a discrete space separate from the main entrance, this allows the experience to be as dignified as possible. The students will then hand over personal belongings to be kept in a secure locker area before filtering through to the Dining Hall – the first gathering point of the day.

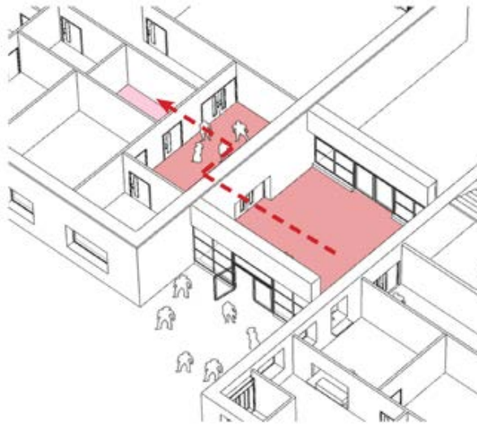
Throughout the school day, this link will be closed and will form part of the central circulation route.

When visitors arrive, they will follow the yellow sequence, entering through the secure visitor lobby on the right where they are met by a member of staff. Students arriving late will also enter this way.

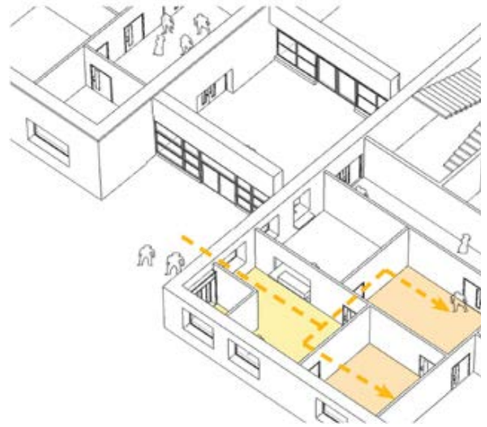
Phase 1

During Phase 1 the link will not be available to use as an entrance. Both students and visitors will enter via the secure entrance lobby. This will be at separate times to avoid crossover.

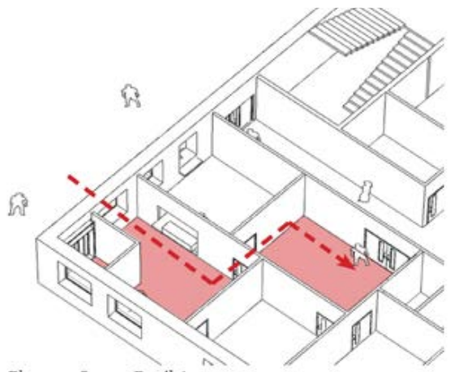
When the students enter they will wait for a brief period in the entrance lobby before individually passing through to the next space highlighted in red for security checks to be carried out.



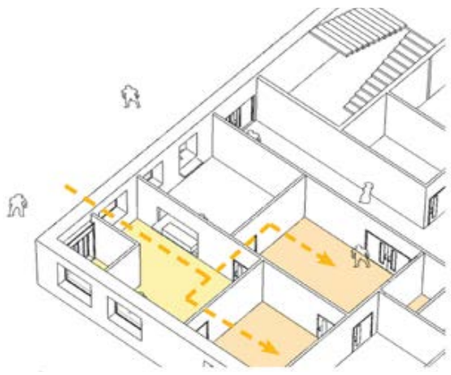
Phase 2 (project complete) - Secure Pupil Access



Phase 2 (project complete) - Secure Visitor Access



Phase 1 (temporary) - Secure Pupil Access



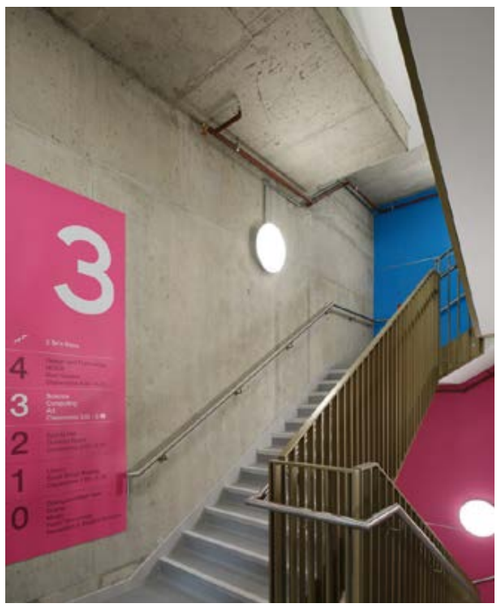
Phase 1 (temporary) - Secure Visitor Access

5.0 Design Proposal

5.8 Internal finishes and Wayfinding

The design of internal spaces is incredibly important in school environments, particularly where the students may be experiencing social or emotional issues, and where students are likely to be neuroatypical or have high levels of anxiety. The proposed internal finishes for Burnside must strike a balance between robustness, safeguarding and stimulating spaces. We must ensure that wayfinding around the school is clear and removes any chance of confusion.

During the next design stage, we will be engaging with the school further to finalise the internal finishes and wayfinding strategy. Through our earlier engagement, the principles we have established include, a warm neutral, calming palette with timber finishes for internal doors and screens. Colour will be used to identify toilet areas and break up circulation. Opposite are some examples of where colour has been used in other school projects as part of wayfinding strategies.



Precedents - Use of colour in wayfinding strategies for Schools

5.0 Design Proposal

5.9 Material Precedent Studies

Brick is a well-used and established material in Chingford, evident in both historical and new build settings.

The adjacent images illustrate an external material palette similar to that proposed for Burnside Secondary School which have been used successfully on education buildings and other building types throughout London. These examples show a contemporary and contextual response to the existing buildings they sit adjacent to.

The proposed materials for Burnside Secondary School will provide a contemporary interpretation of the materials already used in the area. The proposals comprise a buff toned brick along with PPC aluminium windows and detailing in a muted colour.

In addition to the buff brick and the muted green coating used for the windows and the agate grey colour for the rainwater goods. The proposal look to introduce glazed green bricks which will serve to highlight key aesthetic elements of the proposed development. This vibrant, reflective material will be strategically used to accentuate specific architectural features, creating a striking contrast against the tones of the primary brickwork.

The National Youth Theatre Redevelopment, DSDHA, LB Islington

Southbank Inclusive Learning PRU, Tim Ronalds Architects

Ivydale Primary School, Hawkins/ Brown, LB Southwark

Paxton Light Buff Brick

Agate grey PPC aluminium Rainwater goods

Muted green PPC aluminium windows

RAL-6011

Weinerberger Tahiti Green Glazed Brick

5.0 Design Proposal

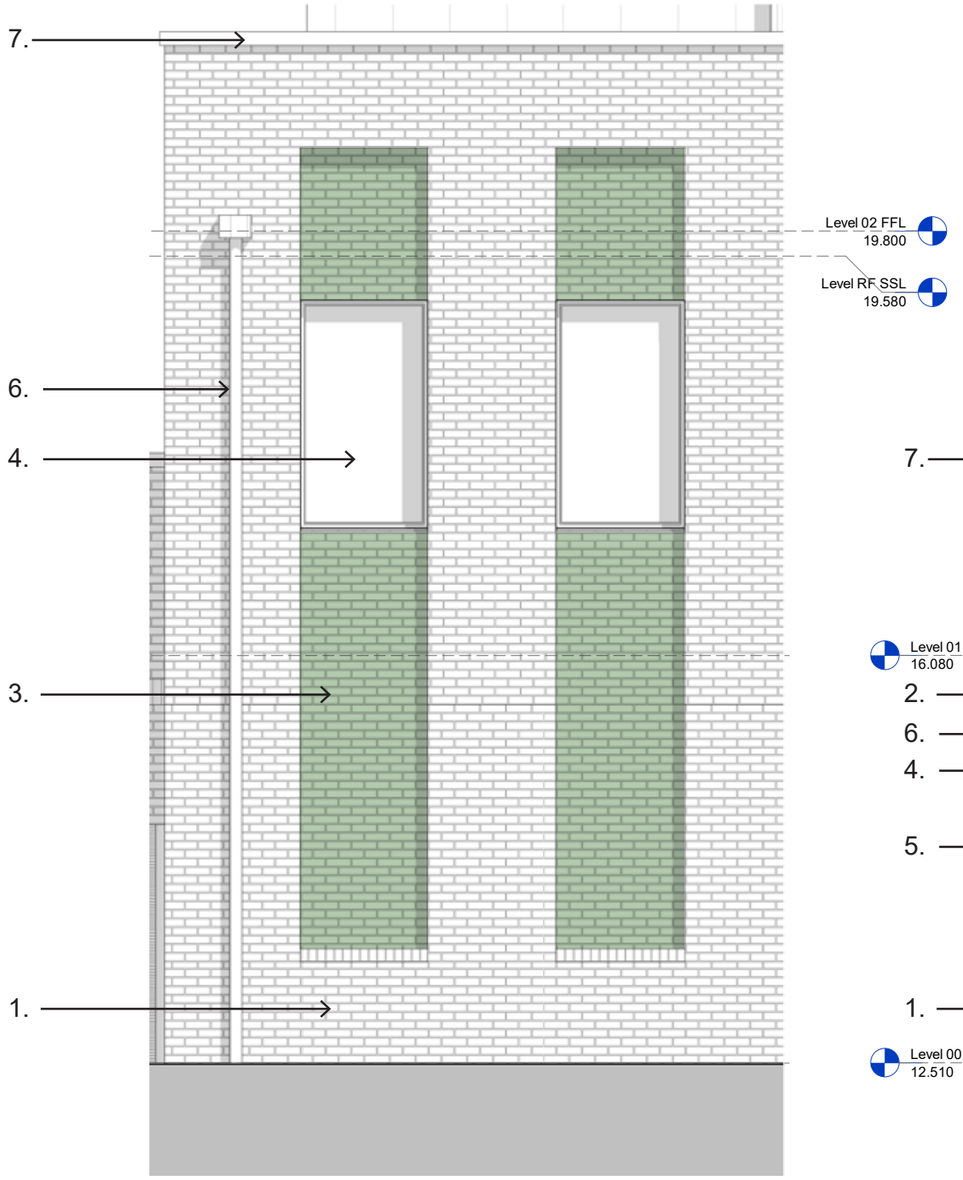
5.10 Material Board

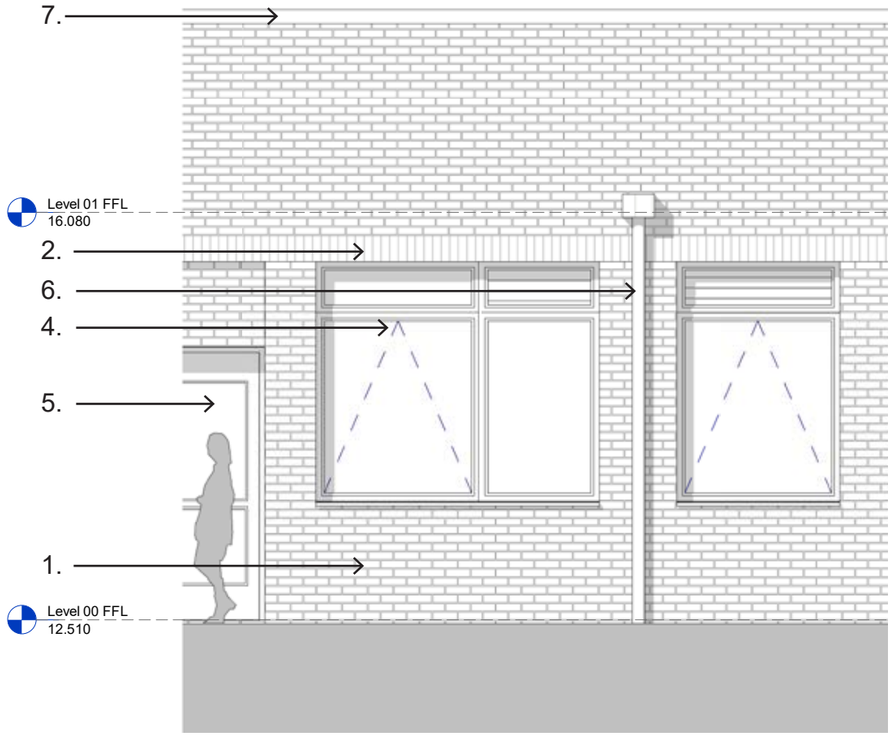
5.0 Design Proposal

5.11 Elevation Bay Studies

Key Features

1. Standard brickwork coursing in Paxton Light Buff brick
2. Soldier brick coursing in Paxton Light Buff brick
3. Recessed green glazed brick
4. Polyester powder coated aluminium windows in RAL6011
5. Polyester powder coated aluminium doors in RAL6011
6. Polyester powder coated RWP's in Agate Grey
7. Polyester powder coated aluminium coping in RAL6011





5.0 Design Proposal

5.12 Massing and Scale

The halls block in the foreground comprising the double height space of the sports hall bookends the scheme from the eastern approach. The change in scale of the halls block to a one storey element offers a variation to the streetscape and clearly demarcates the main building entrance.

View 1 of the new school building looking west from Burnside Avenue

5.0 Design Proposal

5.12 Massing and Scale

In response to Principle 2 of *The Design Charter for Schools - A School to be Proud of*, we are proposing that the entrance will be easily identifiable from the street, and be open and welcoming.

View 1 of the new school building looking west from Burnside Avenue

5.0 Design Proposal

5.12 Massing and Scale

The view below is from further along Burnside Avenue, in the context of the neighbouring properties, showing the main hall in the foreground and the education block in the background. The visual below illustrates how the new build secondary school positively responds to the context of the residential properties opposite in terms of scale, materiality and variation.

View 2 of the new school building looking west from Burnside Avenue

5.0 Design Proposal

5.12 Massing and Scale

The visual of the south side of the school building, with the residential properties of Burnside Avenue visible to the right.

View 3 of the new school building looking north west from the car park within the school site

6.0 Landscape Proposals

The site is currently occupied by the existing Burnside Secondary School and the Burnwood Centre, which is used by the school. The buildings will be demolished in phases allowing for the school to remain operational throughout the project.

6.1 Design Concept

The landscape design will provide the school with grounds which complement the building, provide a welcoming environment from the streetscape, whilst also assisting in their educational needs. The soft landscaping will enhance the school setting and improve biodiversity. A core aim of the design is to provide the schoolteachers with enhanced levels of visibility across the external spaces, limiting hiding places, and increasing passive supervision. The design also takes into consideration how the areas could be developed further in the future.

The landscape design has evolved following feedback from the Design Review Panel (DRP) and the London Borough of Waltham Forest (LBWF), leading to enhancements in both the green environment and educational spaces.

Their input emphasised the importance of integrating natural elements within the school grounds and the benefits this could bring to the pupil's education. The design has now been enhanced to show dedicated learning areas and interactive garden spaces, where children can engage with nature. These spaces are strategically placed within the landscape that suit the schools teaching needs, with safeguarding of pupils considered throughout.

This collaborative approach has led to the development of a well-balanced landscape that supports environmental education, offers practical benefits for biodiversity, and creates a sustainable green space that enhances the overall well-being of its users.

Landscape Master Plan - Refer enclosed drawings for further detail

6.0 Landscape Proposals

6.2 Design Proposals

All pupils and visitors will access the site via the centrally located gates from Burnside Ave. The surface material will change to be quality paving leading users towards the main reception and access into the building. The paving is proposed to extend through the link corridor and out to the southern external spaces unifying the internal and external spaces.

The hard informal play space is located centrally to the external areas and provides access into the building and all other facilities within the landscape. The school aspire to provide purpose to the external hard landscape, and although not part of this project the design team have shown potential opportunities in the form of table tennis tables and external gym equipment and are considering line markings to the hard areas. Finer details of the play markings will be agreed with the school at the next stage.

A focal point of the external space is a new 5 x 5m canopy which is accompanied by benches for socialising and situated on coloured tarmac to improve its presence and provide visual separation from the wider hard landscaping.

A multi-use games area is located in the southern part of the site, located between existing trees, and bounded by natural habitat to 3 facades. This location helps in blending the 3m high sports rebound fencing into the external space creating a less imposing space and helping the MUGA to blend into the wider landscaped boundary. Three points of access are provided. Two double leaf gates and a single-leaf gate. One double and the single access lead onto the hard play This provides several benefits. Having two entrance points was seen as key benefit for allowing pupils and staff an alternative point of exit if one became blocked or they felt threatened whilst remaining in the secure area of the school. The second double gate provides an additional way to manage access to the MUGA out of hours allowing the space to be accessed by the community via a management agreement without enabling wider access to the school grounds. The MUGA will be marked out for netball, basketball, and 5 a-side football.

There are 3 main soft informal spaces for pupils to use. A large area of amenity grass is located in the south-west of the site and is bounded by new and existing tree planting to the south.

Located centrally and west of the MUGA is small area of amenity grass that gives opportunity for a wildlife/ sensory garden. There is a raised bed suitable for growing produce or other horticultural activities, and 2 benches set within planting and wildflower meadow which provides the school with a setting to teach. It is a calm environment offering opportunity for 1 on 1 tuition. This area is quiet in terms of location whilst also having good visibility of the hard informal play and games court. To enhance its setting, the southern boundary of the garden space is bounded by a 2.4m high weldmesh fence for security however, the fence is clad in vertical timbers to soften its impact, and climbing plants will be proposed to grow up the fence.

Located east of the multi-games court is a further area of amenity grass located beneath a mature tree and bounded by existing vegetation. This tree was valued by the teaching staff in the workshops and the space has been allocated as a quiet area where staff can manage students access to suit their educational needs. It can only be accessed through an internal secure line which allows the school to manage its use as appropriate during the school day. Seating is proposed to the space to create a destination for pupils and staff.

A habitat area to the south of the site has been identified in our plans. This area is a calm space of the grounds and contains existing trees. The space will be enhanced with wildflower meadow and features such as wood piles, hibernacula, and bird / bat boxes, subject to the ecologist recommendations. It will provide a destination study area away from the main play spaces on the site.

Rain gardens are proposed throughout the site as part of the sustainable drainage strategy.

Where possible and when in a suitable condition, the existing secure line will be retained to boundaries. In other areas to the boundary a new 2.4m or 1.8m high weldmesh fence is proposed. A series of gates along the secure line to Burnside Avenue will provide access into the site.

All gates will be under manual lock and entry with exception of the car park vehicle gates which will have access control. A 1.8m high timber close board fence will house the bins and will be accessed via the car park for filling up by the school, and via Burnside Avenue for collection preventing the need for the refuse vehicle to enter the main site. A 3m high sports weldmesh fence will bound the multi-use games area. Small sections of a 1.8m high weldmesh fence will provide internal secure lines separating the car park to cycle parking, and the managed quiet zone to the hard informal space.

Visual looking towards the hard informal play/ MUGA/ & soft informal play

Visual of the main outdoor space and looking towards the garden

Visual within the multi-use games area, looking towards the new building

6.0 Landscape Proposals

6.3 Trees

17 existing trees have been surveyed on site, 6 of which are category C trees and all other are category B. There are no category A trees on site.

The landscape design has been developed alongside the architects with explorations for siting the building and how the external adjacencies respond to the building. The goal being to provide a masterplan which considers the existing trees and a practical solution for the school, which benefits education.

To facilitate the development 6 existing trees are being removed, 2 being Cat B and 4 being Cat C. The removal of these trees is mainly down to the location of the new building and access for construction. However, T19 is an Ash tree being removed on arboricultural ground. 15 new trees are proposed and have been positioned across the site to improve the setting of landscape, and in locations where the trees can mature to provide long-term benefits such as shade.

6.4 Accessibility

Generally, the site is level with gradual gradients across the site, this means that there is no requirement for ramps and steps to access the site or building for pupils and staff in everyday use. Level access will be provided into the main building from hard paved areas.

Step access will be provided to the plant room only. There is level access from within the school site however, access to the plant room from Burnside Avenue will be via the steps and only by maintenance staff.

The location of the access to the carpark from Burnside Avenue will be retained, although it will be widened to meet current standards for Fire Appliances and other large vehicles. The car park layout has been revised and parking numbers reduced to provide for 7 passive and 2 active EV charging which includes one disabled and one minibus space. The carpark is accessible with level access provided. To help manage surface water, the carpark will be resurfaced in permeable bock paving.

A secure line of fencing will allow the school to manage access from the car park and into the building and grounds. Direct access from the car park to the multi-use games area gives opportunity for the school to let the sports facility out to the community, without providing access to other areas of the school grounds.

Cycle parking is located along the school frontage with Burnside Avenue. Bikes will be stored within the secure line and in a secure storage unit. 10 spaces are provided for staff, and 12 spaces for pupils.

Visual of the car park looking towards the south-east corner of the new building

6.5 BB104 External Areas

The existing school hard games area is sized appropriately. The new MUGA will be sized to match and will provide markings for netball, basketball, and 5 a-side football. The new MUGA will also be fenced unlike the existing to contain the sports games to their area.

There is currently no existing hard informal play space. The proposals provide over the minimum area of BB104 for hard informal play. This space offers great opportunity for the school to use the space, and the project team will work with them to refine the details at the next stage. A canopy, benches, and range of soft landscaping are included in the proposals.

Soft informal has increased in area compared to the existing, which has been instrumental in achieving a high BNG score.

There is currently no existing area for soft outdoor PE, and no area is proposed.

All external areas meet the requirements for BB104, see below table.

SITE AREAS	BB104 Areas m2-minimum	Existing Areas m2	Proposed scheme m2	Proposed variance against existing m2
Soft Outdoor PE	3160	0	0	0
Hard outdoor PE	472	605	594	-11
Soft informal & social area	696	640	778	138
Hard informal & social area	696	0	726	726
Habitat	248	275	277	2
Float	2736	0	0	0
Minimum Net site area	8008	1520	2375	855
Non-net site area	5508	3230	2372	-858
Total site area	13516	4750	4746	-4

6.0 Landscape Proposals

6.6 Biodiversity Enhancements

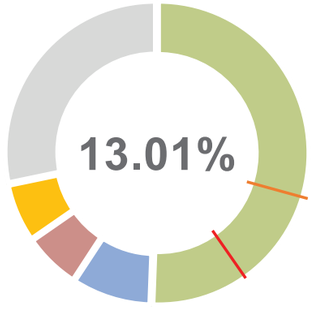
The new landscape proposals have resulted in a 10.31% enhancement to biodiversity which significantly benefits the site. This achievement highlights the vital role that soft landscaping and biodiversity play in creating sustainable and welcoming environments. The proposals have also achieved an Urban Greening Factor score of 0.498.

The soft landscape design, including native plants, shrubs, and trees, foster a rich habitat for local wildlife while improving air quality and reducing pollution. Biodiversity increases benefit to the ecosystem, encouraging a variety of species to thrive. The presence of diverse plant life helps support insects, birds, and small mammals, contributing to a healthy food chain and ecosystem stability.

As part of our commitment to enhancing biodiversity, we have incorporated essential features such as bird and bat boxes, which provide safe nesting and roosting sites for these species, promoting their presence in the area. Log piles have also been strategically placed to create shelter for insects and small animals.

These biodiversity-focused elements not only enrich the natural beauty of the space but also promote environmental well-being, fostering a harmonious relationship between nature and the built environment. This integrated approach ensures the long-term sustainability of the landscape while providing an enjoyable space for all.

A detailed planting plan has been produced as well as a Landscape & Ecological Maintenance Report.

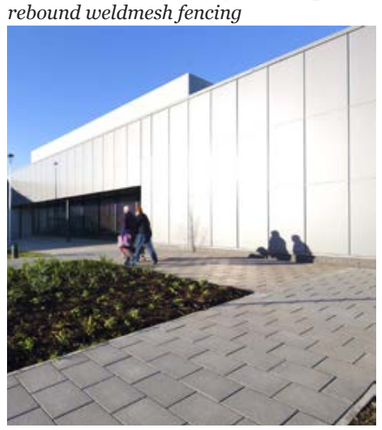


6.0 Landscape Proposals

6.7 Hard Landscape

Weldmesh Fencing - image shows sports rebound weldmesh fencing

Weldmesh Fencing - image shows secure line fencing with timber cladding



PCC Flag Paving - Tobermore textured flags or similar

Permeable Block Paving - Tobermore Hydropave 240 or similar

Coloured surfacing to MUGA

6.8 Biodiversity Enhancements

Bat boxes to mature trees

Log piles to habitat garden

Wildflower meadow

Bio-solar green roof

6.9 External Furniture

Example seating in social spaces (proposed)

Canopy to social space

6.10 Future Equipment by others

Example Table Tennis Table (as suggested by current pupils)- Not for determination

Example Gym Equipment (as suggested by current pupils)- Not for determination

7.0 Impact on Environment

7.1 Environmental Strategy

Energy Strategy

From the outset, the project's approach has been to design a low-energy building aiming to achieve Net Zero Carbon in Operation.

An energy hierarchy of Lean, Clean, and Green has been followed to reduce operational energy use and carbon emissions, with passive energy-saving measures as a fundamental element of the design. The fabric performance is detailed in the table below, with target values significantly surpassing the limiting values of the Building Regulations.

	Fabric Performance
Element	**Proposed Measures**
Air Tightness	3.0 m3/hr.m²
External Wall U-Value*	0.15 W/m²K
Exposed Floor	0.12 W/m²K
Roof	0.12 W/m²K
Window U-Value	1.10 W/m²K

The high standard of thermal insulation enables efficient heating through an air-source heat pump system. This system extracts heat from outdoor air, converting it into useful heat for building heating using electrical energy. Providing over 3 kW of heat for every 1 kW of electricity consumed, the system operates optimally at a low temperature of 45°C, ensuring efficiency throughout the year.

Due to the noise environment, the building primarily relies on mechanical ventilation through local units in each room, controlled to meet the thermal comfort and air quality requirements of the occupants. These units, equipped with high-efficiency fans and passive heat recovery, reduce the heat needed for fresh air provision. Each room is independently controlled to optimize operating time and airflow for occupant requirements.

Building lighting utilizes LED luminaires controlled by daylight sensors. Occupied spaces, including classrooms, receive a substantial amount of daylight, enabling natural daylighting for more than 50% of the occupied period.

The building features an array of photovoltaic panels with a capacity exceeding 55 kW, surpassing GLA's requirement for net zero carbon. This design aims to achieve net zero carbon in operation by not only providing renewable energy for regulated energy uses but also covering electrical energy for all other purposes, including IT, catering, and ancillary energy use, meeting the standard for Net Zero Carbon in Operation.

Overheating

An overheating risk assessment, following CIBSE TM 52, has been conducted for the school. Using the weather file for the 2080 medium emissions climate change scenario, indicating a 2°C global heating temperature rise, the current design's overheating risk was evaluated. The assessment indicated good overall performance, with most spaces having a very low risk of overheating. The areas identified with a higher risk are the IT computer suite and server room; these rooms will be equipped with high-efficiency split system cooling.

A more rigorous test, using the 2080 high emissions climate change scenario with a 4°C temperature rise, assessed the building's response in the longer term. It aimed to identify effective mitigation measures without the need for structural changes. The assessment highlighted the necessity of improvements to reduce the overheating risk to an acceptable level through increased thermal mass by replacing plasterboard ceiling below the roof with 30mm Rigidur H high density board and removing the false ceiling from below the concrete structural slab in the two-storey part of the school.

In addition, a small number of rooms may require a further measure of providing temperature trimming by operating the heating system and ASHPs in "reverse", distributing water at around 20°C through the pipework and heat emitters. Compliance with the overheating criteria was achieved by providing heat extraction at the very low rate of 10 W/m². This approach has the advantage that it could be extended to all rooms to further improve thermal comfort throughout the building.

Ventilation

The building is designed to be predominantly mechanically ventilated owing to the ambient noise levels around the site combined with the client requirements for low noise levels in the building to minimise distraction.

Each classroom is equipped with hybrid ventilation units that offer attenuated natural or mechanical ventilation during occupied hours. Natural ventilation is facilitated through the hybrid ventilation unit, complemented by stack ventilation via outlets on the roof strategically positioned to ensure independent cross ventilation in each classroom.

The hybrid ventilation units are integrated with a control system that monitors air quality within each classroom, adjusting the airflow to meet specified air quality standards. During winter, the ventilation unit delivers fresh air in a manner that maintains a draft-free environment in the classroom, enhancing energy efficiency by preventing excess fresh air ventilation. In mechanical ventilation mode, the fan speed is configured to adhere to target acoustic criteria for noise-sensitive classrooms.

To eliminate the need for underfloor heating or radiators in the classrooms, the hybrid ventilation unit is equipped with a low-temperature heating coil. Additionally, the units feature a heat exchanger with an efficiency of around 40%, reducing the heating demand for fresh air.

Teachers have access to controls within the classroom, allowing them to override the ventilation system's operation as needed.

7.0 Impact on Environment

The Main Hall will be equipped with a roof-mounted hybrid ventilation system capable of providing either natural or mechanical ventilation. The system is designed to cater to a maximum occupancy of 92 people. During periods of low occupancy, it's anticipated that the units will operate in natural ventilation mode to meet air quality and thermal comfort requirements.

Where possible, staff and administration areas, along with group rooms, will utilize natural ventilation. Additionally, to reduce the heating load during winter, staff areas will be equipped with Mechanical Ventilation and Heat Recovery (MVHR) units. Larger spaces will have hybrid ventilation units similar to those in classrooms. These systems will automatically operate overnight during hot weather to dissipate heat from the building. Internal rooms will be mechanically ventilated year-round.

Toilet areas will be served by local mechanical extract systems enabled via dedicated PIR occupancy detectors. The use of presence detection will reduce fan energy demand and the space heating load.

The kitchen will feature a supply and extract canopy with grease filters. An independent variable-speed drive roof-mounted extract fan unit will serve the extract canopy. Kitchen staff will have user controls for adjusting ventilation rates.

Daylighting

Climate-based daylight modelling (CBDM) has been used to assess the quantity of daylight available within the occupied spaces in the building. CDM Is a computational technique that predicts and optimizes the distribution of natural light within buildings by considering climate factors, aiding in energy efficiency and occupant comfort. CBDM takes various factors into account, including the geographic location, sun position, sky conditions, and building design details. By simulating these elements, accurate predictions of daylighting conditions can be generated. Important aspects considered in the modelling process are window placements, shading devices, room surface reflectance, and external obstructions.

The results indicate the building enjoys a substantial level of natural daylight. Although retained trees and residential buildings on the opposite side of Burnside Avenue partially obstruct daylight, the impact is mitigated by increasing the amount of glazing to a practicable maximum. In addition, some spaces have roof lights to compensate for any daylight shortfall through windows. The classrooms and offices are predicted to have sufficient daylight for natural lighting for over 50% of the occupied year, with many spaces having enough daylight to reduce the need for any artificial lighting to less than one-third of the occupied year. Classrooms and offices are equipped with dimmable, controlled luminaires to minimize energy consumption and optimize available daylight.

7.2 BREEAM

A BREEAM Pre-assessment has been produced and is enclosed with the application. The project is targeting a 'Very Good' rating.

7.0 Impact on Environment

7.3 Acoustics and Noise Impact

A noise survey has been carried out to establish background sound levels at the site. Ambient sound levels, and the building envelope design and ventilation strategy have been considered to ensure that target overall indoor ambient noise levels are in accordance with Building Bulletin 93 and will be achieved within the school itself. The internal fabric of the building has been designed to achieve acoustic performance standards in Building Bulletin 93 taking into account the special needs of the students.

Target plant noise rating levels have been derived and a noise impact assessment is being carried out for fixed plant as part of the planning submission. This will be carried out in accordance with BS4142: 2014 and suitable noise mitigation measures will be provided to achieve target rating levels. All plant will be roof mounted. This will comprise: 3 no. ASHP, and an air con split unit condenser to the north west on the upper roof level, and 2 no. air con split unit condensers, 1 no. AHU and 1 no. extractor fan to the north east on the lower roof level. Plant screens will be in place to the northern side of all plant listed and as well as to the south of the AHU and extractor fan. Attenuation units have been allowed for to the ASHPs subject to 3D modelling results.

A noise impact assessment for the MUGA which replaces existing external play areas will be modelled with a 3D noise map model in accordance with Sport England Design Guidance Note (Artificial Grass Pitch (AGP) Acoustics). This will be submitted for the planning submission. Noise impact is expected to be low due to:

The primary school is already acclimatised to the existing external play area noise, and the MUGA will be moving slightly further to the east.

The adjacent supermarket and Thames Water Facility is not noise sensitive,

Even where out of hours community use is anticipated as per the SSB, the residential to the north will be well screened from the MUGA noise.

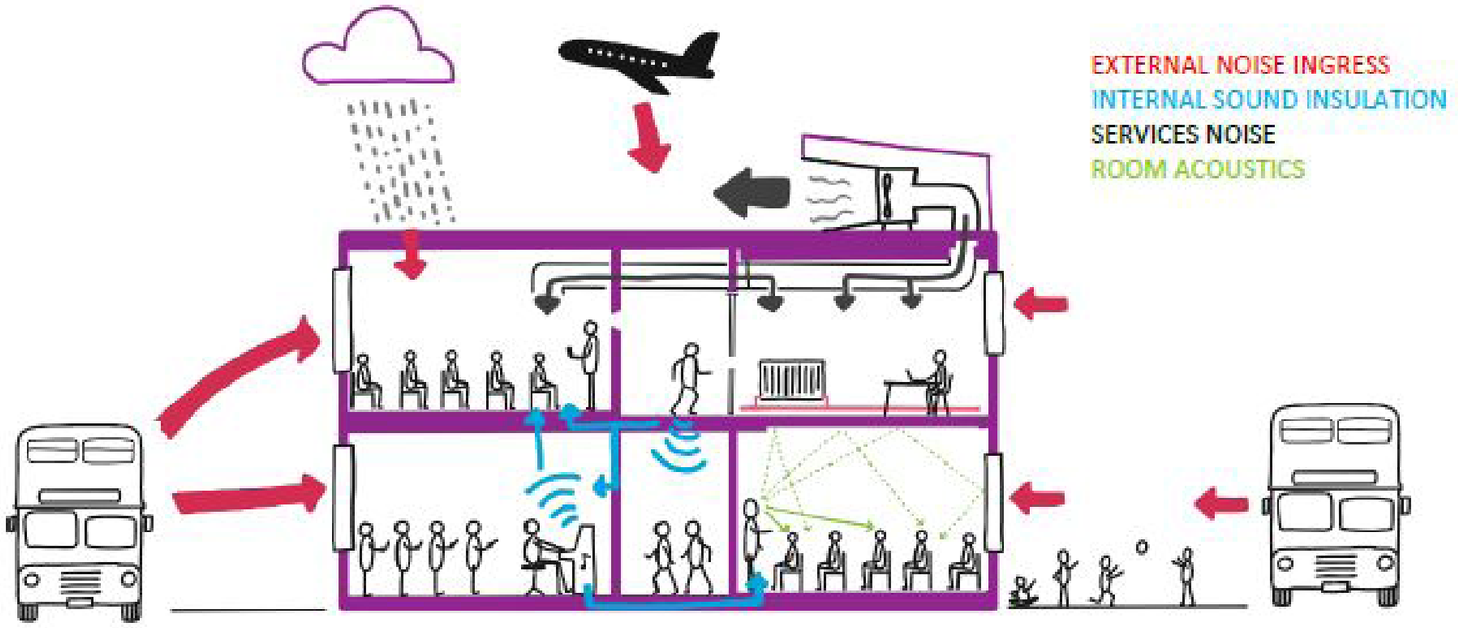


Diagram showing acoustic design issues for schools

7.0 Impact on Environment

7.4 External Lighting

7.4.1 Specific Design Criteria

External lighting is to be installed around the building perimeter and to complement the landscaping proposals as detailed below and shall be designed and installed to comply with the recommendations of all relevant British and European Standards, and industry guidelines:

- SLL Lighting Guide 6 – The Outdoor Environment
- SLL Lighting Guide 5 - Lighting for Education
- BS 12464-2 – Lighting of Outdoor Work Places
- ILP Guidance Note GN02/21 – The Reduction of Obtrusive Light

7.4.2 System Description

External lighting for the buildings will generally be limited to facade-mounted lighting and selectively located to provide safe access around the perimeter of the school building and to emphasize building access points. Lighting will also be provided to the car park and external pathways via 4-5m pole-mounted luminaires.

The ILP guidance notes on reduction of obtrusive light will be adopted to eliminate unacceptable levels of glare and light pollution to the external surroundings.

Building-mounted luminaires shall be provided with light pollution reducing hoods, and those located adjacent to all exit doors will incorporate 3-hour emergency battery packs to provide the required emergency lighting. Non-maintained 3-hour emergency bulkhead lighting shall be provided above externals doors not located adjacent to general building mounted luminaires.

External lighting levels and colour rendering ability shall be compatible with the CCTV installation.

All luminaires will use LED lamps to reduce energy consumption and increase life expectancy, thus reducing maintenance costs. All non-façade mounted light fittings will be fed via XLPE SWA cables and wired underground.

Building and Car Park external lighting is to be controlled by a combination of a time clock and external photocell, providing flexibility on the window of time at which the lights are to operate, and the threshold at which the lights are energised according to the availability of sufficient ambient daylight. However, in general the controls for the external lighting will comply with Table 2 (and its accompanying notes) of the ILP Guidance notes for the reduction of obtrusive light, 2011.

The external lighting will be automatically switched off between 22:00 and 06:00 during term time and between 22:00 and 07:00 during non-term time. If the external lighting is for safety or security lighting and will be used between 23:00 and 07:00, this part of the lighting system will comply with the lower levels of lighting recommended during these hours in Table 2 of the ILP's Guidance notes.

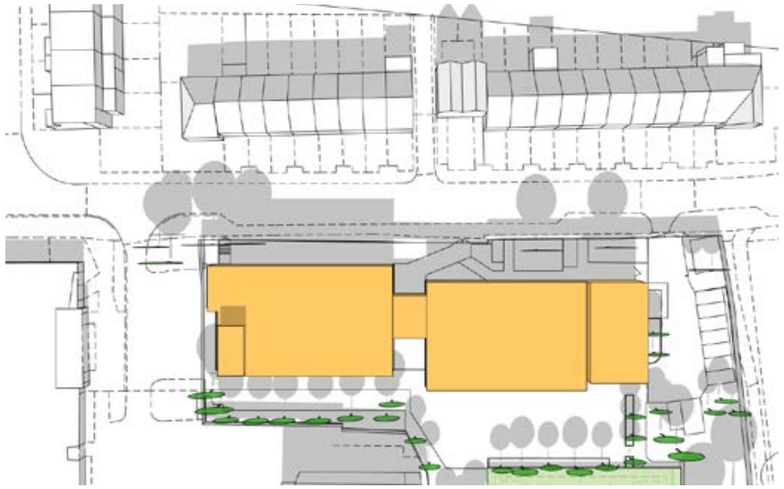
7.0 Impact on Environment

7.5 Daylight Sunlight Study

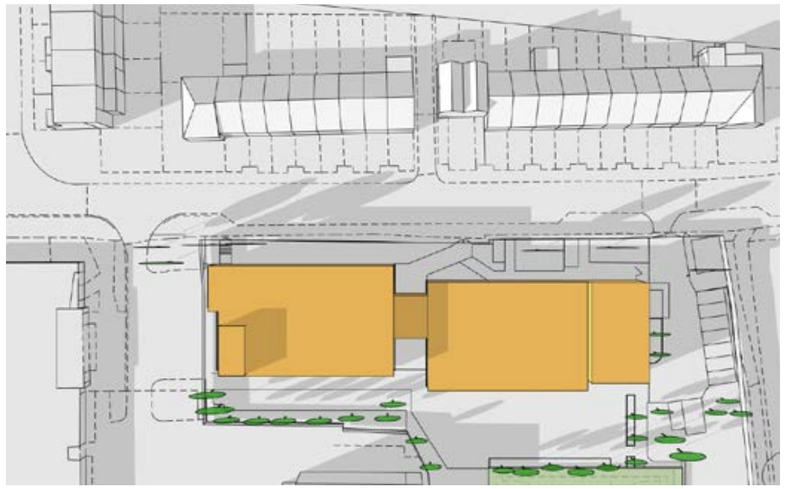
We have produced 3D diagrams of the proposed building as two different times of year to illustrate the likelihood of any overshadowing on any neighbouring properties. These diagrams indicate that there will be no impact of overshadowing on the houses on the opposite side of Burnside Avenue during the summer or spring equinox. As a result, it is not anticipated that a full Daylight Sunlight report is required.

These diagrams have been produced in SketchUp where a massing model of the proposal is placed in the real world. This allows the sun path to be accurately assessed. We used March 21st (Equinox) as a midpoint between the two summer and winter peaks in the year.

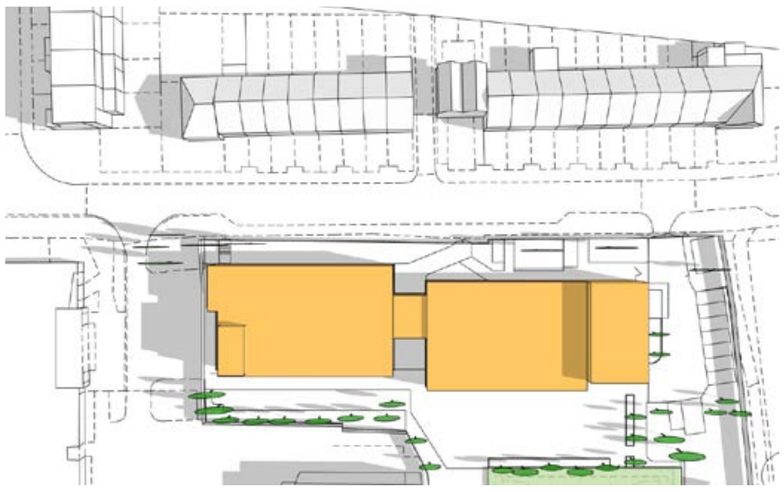
21st March 8am



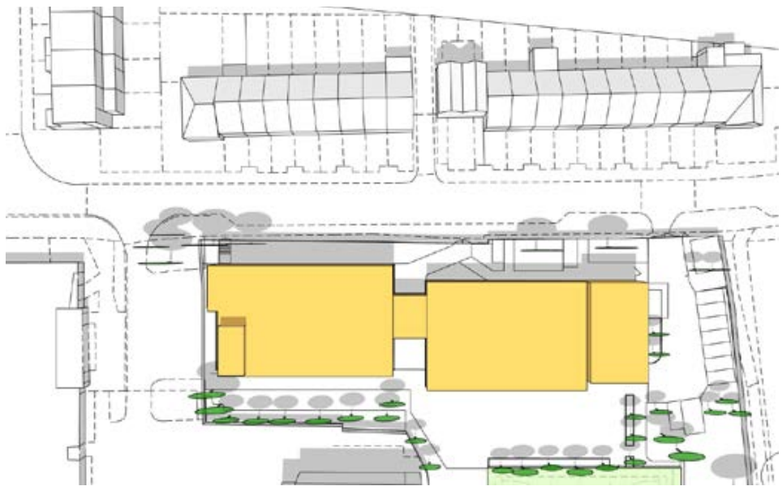
21st March 12pm



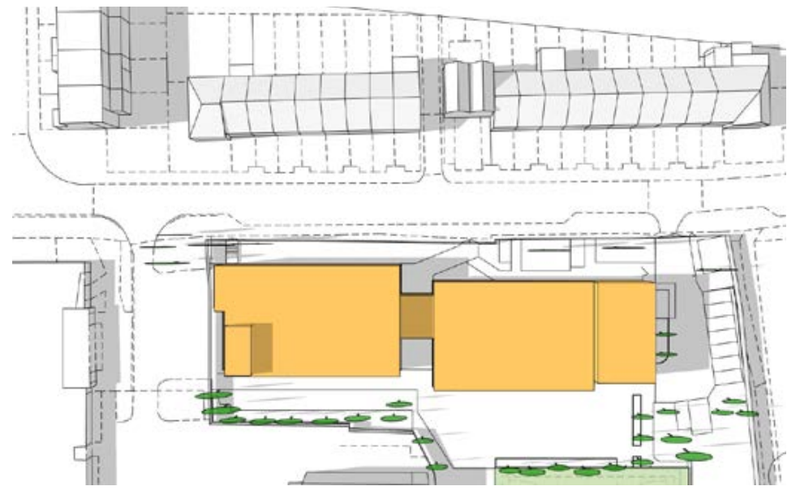
21st March 4pm



24th June 8am



24th June 12pm



24th June 4pm

8.0 Structure and Civils Design

8.1 Structure

8.1.1 Sub-Structure

Foundations

The soil investigation report undertaken by Tetra Tech recommends a piled foundation solution as the structural loads will need to be transmitted into the London Clay Formation. The London Clay Formation can be found 2.0-4.5m below the existing ground level hence, a shallow foundation solution is not feasible.

The proposed substructure consists of a reinforced concrete piled foundation solution together with reinforced concrete pile caps and ground beams. The steel columns will be supported onto pile caps.

Heave protection measures will be required below the pile caps and ground beams due to the existing trees on site.

Ground Floor Slab

The structural team are currently exploring options for the ground floor slab, this will likely be a 300mm thick reinforced concrete suspended ground floor slab. The slab will be supported on to masonry sleeper walls. Cellcore ground beam protection will be required below the ground floor slab for heave protection. The soil below will need to be proof rolled and any soft spots filled and compacted with Type 1 granular fill.

8.1.2 Superstructure

Structural Form

The superstructure will consist of steel frame. Precast concrete plank decks are being explored for the first floor and roof slabs.

The stairs are anticipated as precast concrete stairs which will be supported onto the steel framed structure. At ground floor level, the base of the stairs will be supported onto a sleeper wall directly above a ground beam.

The external walls are anticipated to being cavity construction. The external leaf is a brickwork wall which will be supported directly above the perimeter ground beams. The internal leaf is a lightweight steel framing system.

8.2 Drainage Strategy

8.2.1 Proposed Surface Water Drainage Discharge Options

The site investigation report indicates the site is underlain with made ground and London Clay with perched groundwater at a minimum depth of 1.2m below ground level. The ground is therefore not suitable for infiltration techniques to be used.

There are no open watercourses located on site. The nearest watercourse is approximately 42m to the south west of the site.

There are private foul and surface water drainage networks on site that connect into the off site Thames Water sewers located to the north on the opposite side of Burnside Avenue.

It is concluded that the most suitable option is to discharge the site's surface water runoff into the private on site surface water drainage network.

8.2.2 Proposed Surface Water Drainage Strategy

The proposed surface water drainage strategy is described below:

- Rainfall will be collected by green roofs from the buildings and discharged to a network of below ground pipework via rainwater pipes before draining into the attenuation tanks.
- The car park will be of permeable paved construction and allow rainfall to filter through the permeable surface into a filter zone of sub base located beneath the bedding layer prior to draining into the attenuation tank.
- Excess surface water will be stored within the attenuation tanks before discharging into the existing Thames Water surface water sewer located to the north of the site at a restricted rate via a flow control device and an existing private connection.

8.2.3 Climate Change

Climate Change allowances were updated on the 10th May 2022. The design life for the proposed development is more than 50 years which places it within 2070's epoch and the upper end allowance. Advice is to design developments to cater for the 1% annual exceedance probability for events so there is no increase in flood risk elsewhere and the proposed development will be safe from surface water flooding

The development is therefore designed for no flooding in the 1:100 year plus 40% climate change event.

8.2.4 Hydraulic Analysis Flow Rates and Attenuation

The existing impermeable areas have been calculated at 3061m² while the proposed impermeable areas have been calculated at 3230m². The impermeable area has slightly increased as a result of the re-development of the site. These areas have been used to calculate the existing discharge rate, the greenfield discharge rate and the proposed discharge rate from site for a range of storm events.

The proposed discharge rate will be limited by a flow control device and this creates the need for surface water attenuation. This limited discharge will ensure the proposed discharge rate will be at or less than the greenfield rate and significantly less than the existing surface water discharge rate from site.

The design results confirm that the surface water drainage network would store and attenuate surface water flows for all analysed storm events with no surface water flooding identified.

8.2.5 Pollution Control

Pollution control measures are designed to minimise the transmittal of any pollutants, collected by runoff flowing over hard surfaced areas prior to draining into the existing Thames Water surface water Sewer. Pollution control measures for this site include:

- Permeable Paving
- Green roofs

8.2.6 Foul Drainage Strategy

The proposed development will discharge foul water flows into a new network of underground pipework before draining into the existing Thames Water foul water sewer via an existing private connection. As staff and student numbers are to remain the same, the foul flows from site will not increase.

9.0 Design Strategies

9.1 Inclusive Design

The new school building will comply with the Equality Act 2010.

Access provisions for the new building are reviewed against the relevant regulations and standards that apply, as identified below:

- The Building Regulations 2010, Approved Document M (Access to and use of buildings)
- The Building Regulations 2010, Approved Document K (Protection from falling, collision and impact)
- The Building Regulations 2010, Approved Document B (Fire Safety)
- British Standard 8300:2009: Design of buildings and their approaches to meet the needs of disabled people

Access to the school considers the requirements of all users; students, staff, and visitors and includes:

- People with mobility impairments
- People with visual impairments
- People with cognitive impairments
- Deaf people and older people

9.1.1 Building Approach

The main entrance approach to the building will be via hard landscaping, and entrances will have level thresholds with doors which meet the minimum width requirements. The main external entrance doors will be provided with a canopy for shelter.

There is one accessible parking bay provided that is designed to with a width, length and transfer zone as defined in Approved Document M. The accessible parking bay is located within the school site boundary, and close to the main entrance.

9.1.2 Internal Circulation

Horizontal circulation is logically laid out and runs east west through the building with rooms on either side ensuring easy orientation of the building.

The primary east west corridors are 2m wide with secondary corridors off the main circulation route at 1.9m wide.

Fire escape stairs are provided at each end of the two storey teaching block, with an evacuation lift provided within the east stairwell and close to the main entrance. The evacuation lift has been provided to comply with the London Plan Policy and will be designed to meet the dimensions of Approved Document M and the requirements of Approved Document B.

9.1.3 Sanitary Facilities

AWCs are provided at each floor level. There are three unisex AWCs provided and one hygiene facility. A choice of transfer layouts will be provided and the maximum travel distance to reach an AWC from any location will be 40m. There are two AWCs located close to the main entrance at ground floor; one which is located for sue by visitors and staff and one for wider use by the whole school. One further AWC is provided at first floor level within the teaching building. The hygiene facility is located with the halls building adjacent to the sports hall ensuring there is access to an AWC for out of hours community use.

Two separate accessible changing facilities are provided at ground floor within the halls building, for staff, visitors and students.

9.2 Access and Maintenance Strategy

The proposed new development is subject to the Construction (Design and Management Regulations, CDM 2015.

A cleaning and maintenance access strategy has been developed for the new build Stage 3 proposals for Burnside AP Secondary School. The cleaning and maintenance access strategy will continue to develop throughout the detailed Stages 4 and 5 by RSS as principal Designer and in co-ordination with Morgan Sindall and the wider design team.

The strategy is detailed within a separate report which describes the means of access for inspection, cleaning and maintenance of external façades, roof and roof plant and high level internal areas. The proposed strategies are detailed in the report *SRP1055-RSS-00-ZZ-T-A-9801* and described within the following drawings for clarity; *SRP1055-RSS-ZZ-ZZ-D-A-1902* and *SRP1055-RSS-ZZ-ZZ-D-A-1903.*

9.3 Fire Strategy

RSS have been liaising with specialist fire consultants, Salus Fire in order to establish the fire strategy for the building as briefly outlined below.

The secondary school is low rise comprising a one storey halls block with double height sports hall, and a two storey standard teaching block. The internal means of escape routes are provided in two directions for all rooms to maximum escape distances to meet Approved Document Part B. Stair widths and final escape door widths have been advised by Salus fire and based on the buildings maximum possible occupancy. Fires escape stairs will have 60min fire rated walls, and the main circulation routes will be 30min fire rated.

Fire vehicle access is easily achieved to more than 15% of the building perimeter and access to the south of the building is achieved via the car park and openable gates into the hard landscaped area of the informal play area. The muster point in event of fire is located within the school car park.

During the phased construction period, fire vehicle access from Burnside Avenue alone will enable access to a minimum of 15% of the building perimeter for both the existing EFAA building (approx 26% Burnside Avenue frontage) and for the new teaching block (approx 30% Burnside Avenue frontage).

The fire strategy is detailed on the site wide RSS fire strategy drawing and the enclosed fire strategy report.

10.0 Community Use Strategy

10.1 Community Use

As outlined in the client brief, the school wish to improve links with the community by enabling the hiring out of facilities out-of-hours and during school holidays, such as the main hall, fitness suite, and outdoor sports facilities. The adjacent diagram shows the external and internal areas that will be opened up and hired out for community use.

The community strategy will be in line with the school safeguarding policy, community use will likely be restricted to 6pm starts in order that the school day is complete and children are off-site.

The proposed community hire times have not yet been defined but are likely to be as outlined below or similar:

Times: (Term-Time)

Monday to Friday (except bank holidays) – 6pm – 9pm

Saturdays– 9am – 6pm

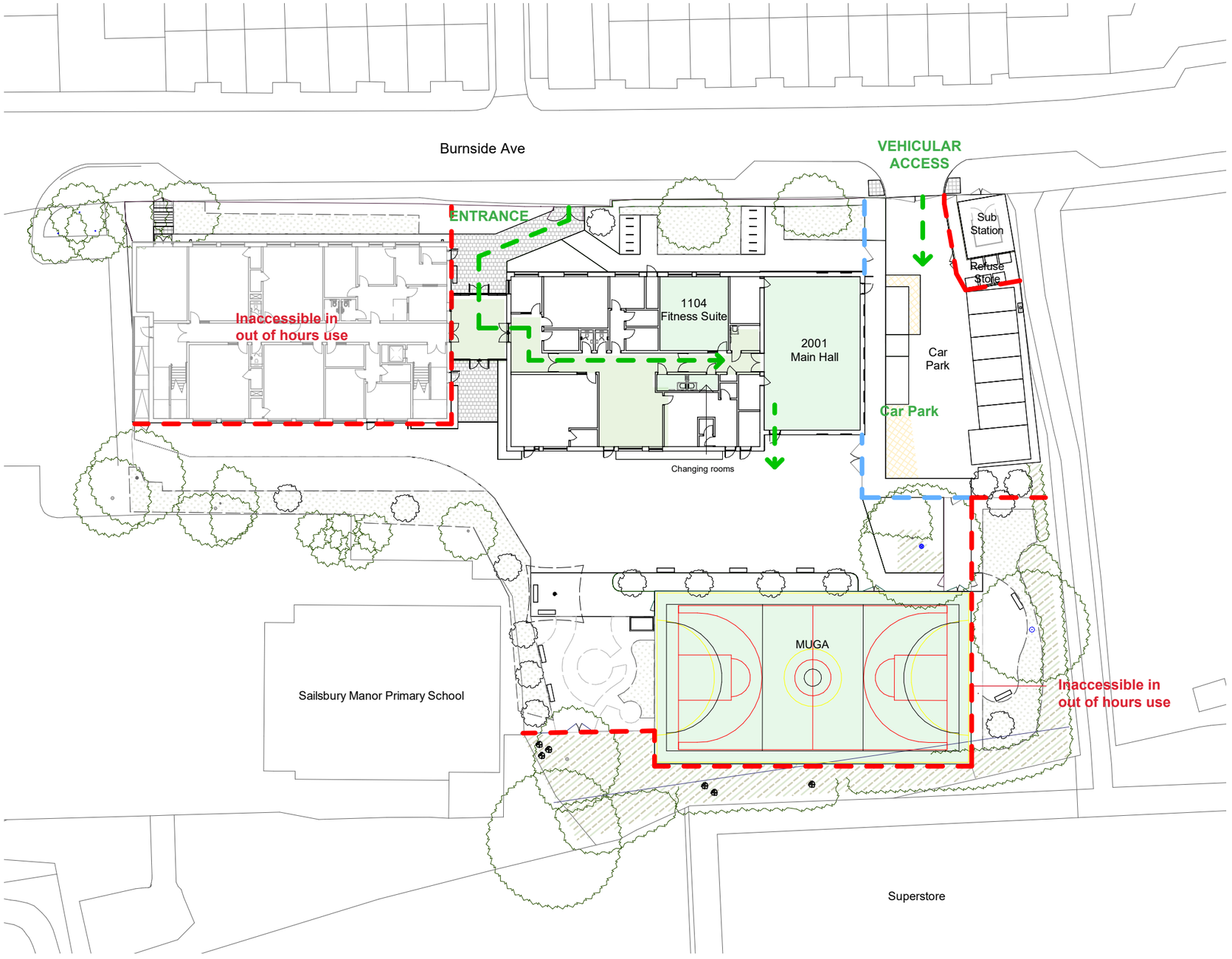
Sundays – 9am – 4pm

Times: (Holiday period)

Monday to Friday (except bank holidays) – 9am – 9pm

Saturdays– 9am – 6pm

Sundays – 9am – 4pm



11.0 Circular Economy

11.1 Circular Economy Statement

he London Plan Policy SI7 defines a Circular Economy as ‘on where materials are retained in use at their highest value for as long as possible and are then reused or recycled leaving a minimum of residual waste’. It is intended to move away from a culture of ‘single use’ where materials are mined, manufactured and thrown away. This aims to minimise damage to the environment whilst having wider benefits such as reducing the carbon required during production.

Through careful design and specification, materials and products can stay in circulation much longer, or even indefinitely.

The key drivers to sustaining the value of materials are as follows;

1. Recycle
2. Repurpose
3. Regenerate
4. Maintain and Prolong

The existing site has several buildings which are used by the school. In understanding the suitability of the school to form part of the ‘Rebuilding Schools’ programme, the refurbishment and reuse was thoroughly explored before complete redevelopment. Having undertaken a site survey there are no materials within the existing school buildings which could be re-used in construction of the school. The approach to materials is explained more fully in the Construction Management Plan.

As the school is being developed as a new building, the London Guidance on Circular Economy sets out size principles that can be applied to new building throughout the design process. The design of Burnside Secondary School follows these principles through the reduction of demolition, construction and operational waste.

These are:

1. Building in layers- ensuring that different parts of the building are accessible and can be maintained and replaced where necessary.

    All new elements of the building requiring maintenance access are easily accessible, ceiling voids have been minimised and a lot of the ventilation equipment left open.

2 Designing out waste ensuing that waste reduction is planned in from project inception to completion

    Waste has been designed out in the new construction by coordinating to standardised dimensions, using BIM to provide accurate scheduling and by promoting ‘dry’ construction techniques through Modern Methods of Construction (MMC) technology.

3. Designing for longevity

    The new building has been designed in accordance with the Department for Education’s minimum requirements of 50 years for sub and superstructure, 40 years for external envelope and 25 years for all other building elements.

4. Designing for adaptability or flexibility

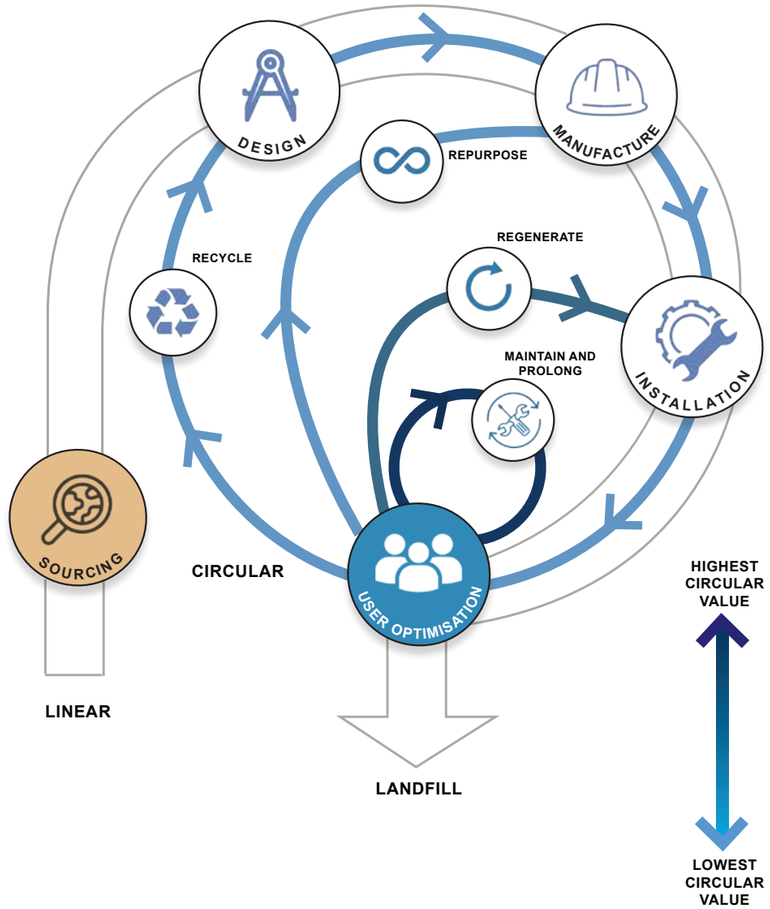
    The new building has been designed to be as adaptable as possible so that it could be changed in the future to a different use. Floor-to-ceiling heights, service zones, floorplates and spacing of the structural grid provide that adaptability.

5. Designing for disassembly

    The design facilitates disassembly with internal partitions that can be easily demounted alongside modular components that can be taken out and moved.

6. Using systems, elements or materials that can be reused or recycled.

    To encourage circularity, the aim has been to work to London Energy Transformation Initiative (LETI) recommendations where at least 30% of building materials used in a new project are from a recyclable source, and that there are at least 50% of the building materials which can be reused at the end of their life.



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