

ST MARY'S C.E. PRIMARY SCHOOL

RECTORY GARDENS, HORNSEY
LONDON, N8 7PJ

**DESIGN AND ACCESS STATEMENT
FOR FACADE WORKS PLANNING APPLICATION**

OPENSTUDIO ARCHITECTS

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PROJECT TEAM



CLIENT:
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Rectory Gardens
Hornsey
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1.0 SUMMARY

Design proposal summary

Openstudio Architects have produced this Design and Access Statement on behalf of their client St Mary’s Church of England Primary School located at Rectory Gardens, Hornsey, N8 7PJ to support a planning submission for proposed facade works to the existing main school building.

Currently the school is housed across two sites (Nursery-Year 2 at Church Lane, with Years 3-6 at Rectory Gardens). The junior school building at Rectory Gardens is currently underutilised. Alongside a Local Authority need for a SEND facility, this has resulted in a decision to consolidate both schools onto the Rectory Gardens site, allowing the Church Lane school to become a LA-run SEND facility.

Minor alterations to the existing school are required as part of this consolidation, and historic issues with overheating on the south facade are being addressed through the proposed works.

There are two parts to the proposals found in this application:

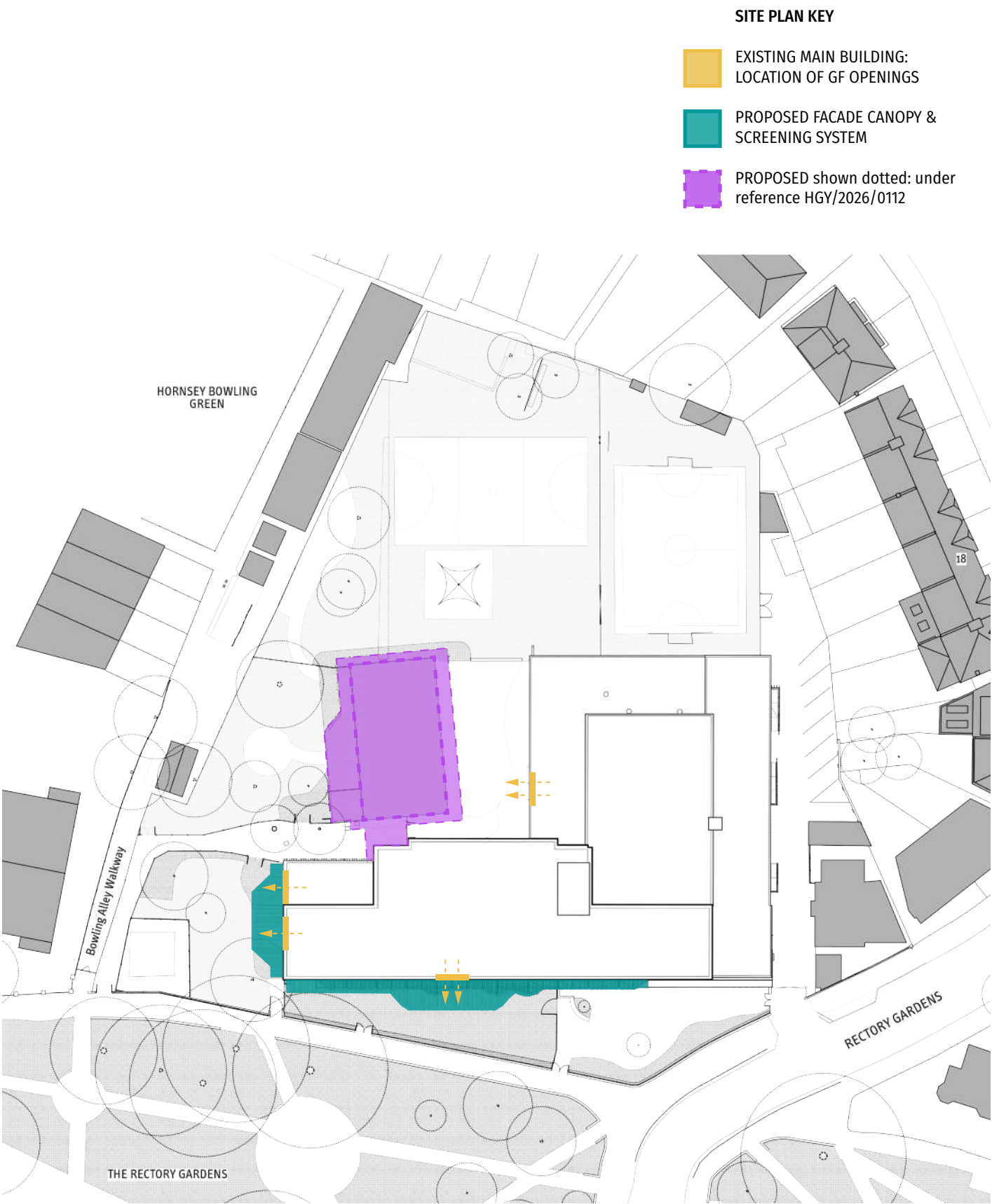
1. EXISTING MAIN BUILDING

Minor ground-floor alterations to the existing main building include the installation of new doors within the west, south, and courtyard-facing west façades, providing direct access to the entrances and adjacent outdoor play areas for the relocated EYFS provision.

2. CANOPY AND FAÇADE SCREENING SYSTEM

A new canopy and south façade screening system are proposed to serve multiple purposes:

- Screening of the south-facing facade, which is subject to overheating
- Provision of a canopy to provide covered outdoor play spaces for the new classrooms
- Provide a new cohesive identity for the school

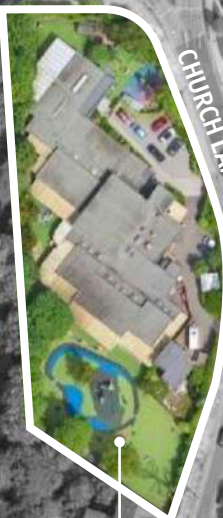




2.1 THE CURRENT TWO SITES OF ST MARY'S C.O.E PRIMARY SCHOOL



RECTORY GARDENS



THE CURRENT STRUCTURE

The current school is divided into three phases and based over two sites:
 Church Lane Site: Lower Phase (Nursery, Reception and Years 1 and 2)
 Rectory Gardens Site: Middle Phase (Years 3 and 4) and Upper Phase (Years 5 and 6)

The school is actively involved in the local community and the local churches.



Direction to HORNSEY PARISH CHURCH (not shown on map)



ST MARY'S CHURCH TOWER



CHURCH LANE

2.2 RECTORY GARDENS SITE AND CONSERVATION AREAS

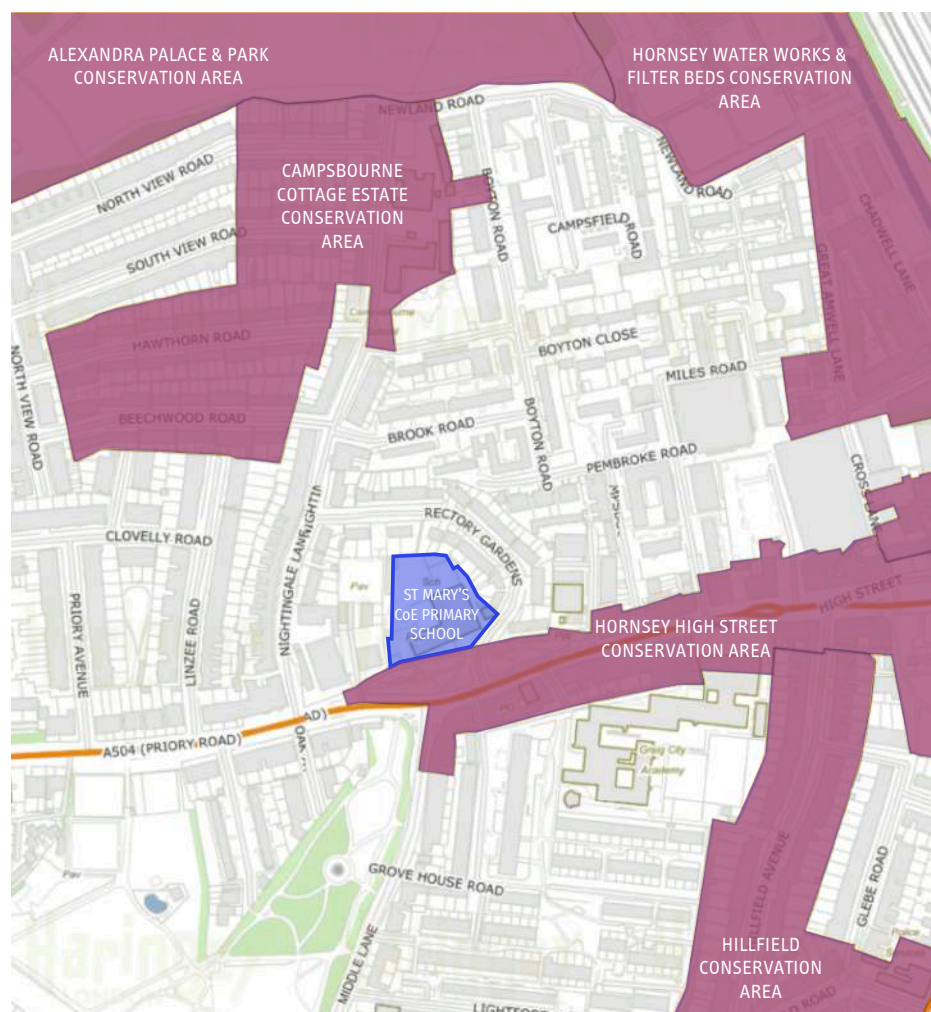
St Mary's Church of England Primary School is unlisted and is not located in a conservation area.

The school borders and overlooks the Hornsey High Street Conservation Area which is located directly to the south and south-east of the site.

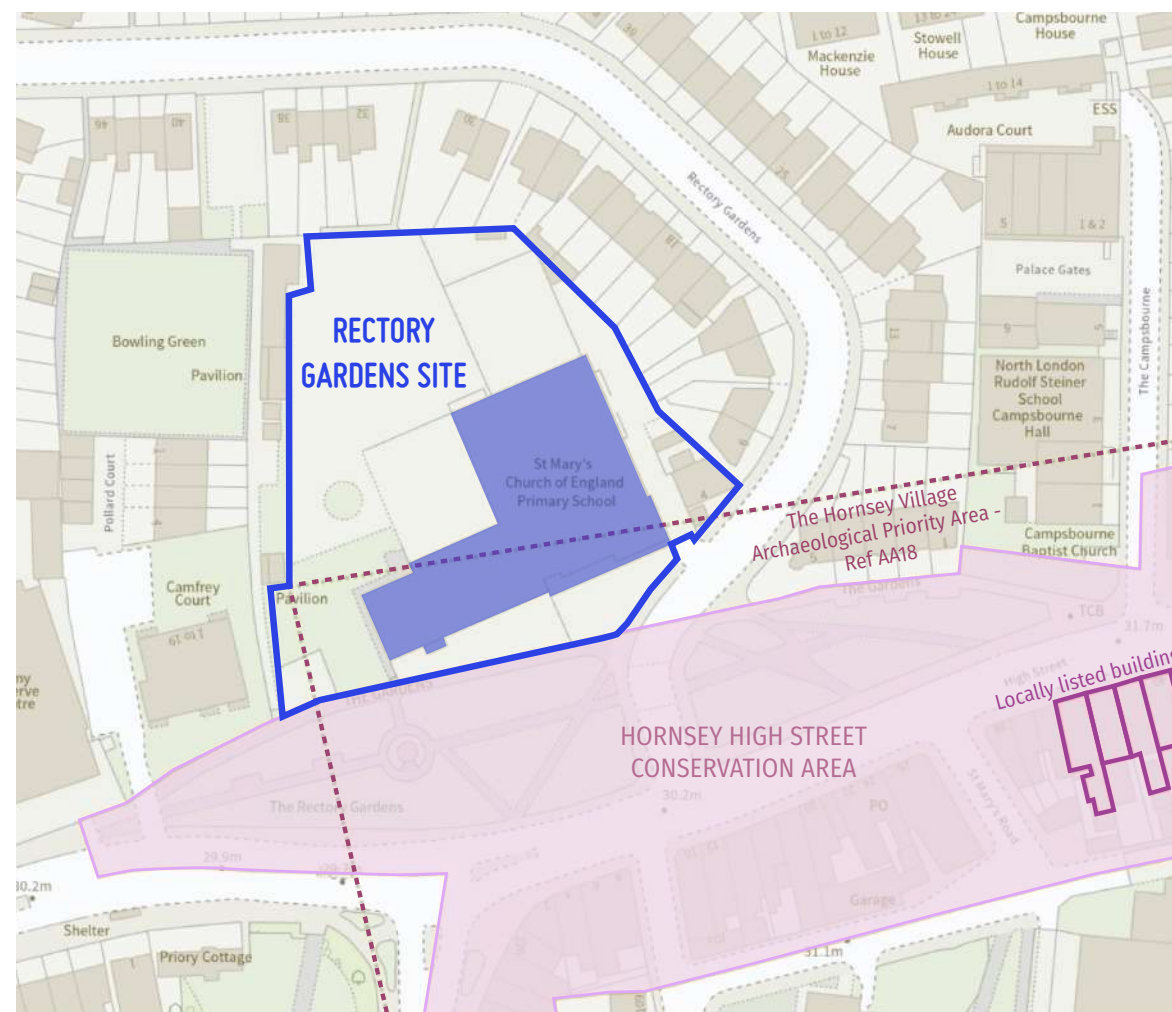
The Hornsey Village Archaeological Priority Area – Ref. AA18 overlaps onto the southern most part of the site.



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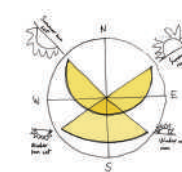


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- 1 View of the south facade overlooking the Rectory Gardens and the High Street
- 2 Context map showing conservation areas
- 3 Haringey plan showing conservation areas



3.0 EXISTING BUILDING AND CONTEXT

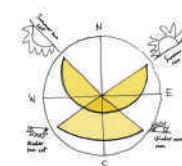
3.1 Site location

The Rectory Gardens school is located in a large, utilitarian 1960s building very much of it's time in terms of design and thermal performance. It is a large uniform concrete-framed structure built in a repetitive grid, over ground, first and second floors with low insulation values and large areas of metal-framed south-facing glazing, which means that the classrooms are subject to overheating on sunny days.

Originally designed as a secondary school, the building retains a large-scale form, particularly along its southern elevation. This scale could be modified to create a more child-appropriate environment in line with its current use as a primary school.

To the south of the site are the Rectory Gardens and the High Street which are both located within the Hornsey High Street Conservation area. To the east and north of the site are located 2-3 storey terraced houses with rear gardens that border onto the school property. To the west of the site two apartment buildings of 4 stories are located: Camfrey Court which overlooks Rectory Gardens and Priory Road to the south and the newer Pollard Court located adjacent to the bowling green with rear gardens backing onto the bowling green alley.

The Hornsey Bowling Club is located to the north west of the site with a pedestrian access path to the south onto Rectory Gardens that runs parallel to the school's west boundary.



- 1 Aerial photograph of the site & surrounding area
- 2 Aerial view from south
- 3 Aerial view from west
- 4 Aerial view from north
- 5 Aerial view from east



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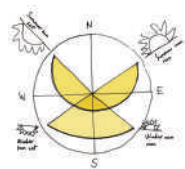
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- 1 Street view of south facade from Hornsey High Street
- 2 View of south facade from Rectory Gardens

ST MARY'S C.E. PRIMARY SCHOOL SOUTH FACADE

VIEW OF ALEXANDRA PALACE BEYOND



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4.0 DESIGN ISSUES AT RECTORY GARDENS

4.1. EXISTING SOUTH FACADE

APPROACH & VISIBILITY

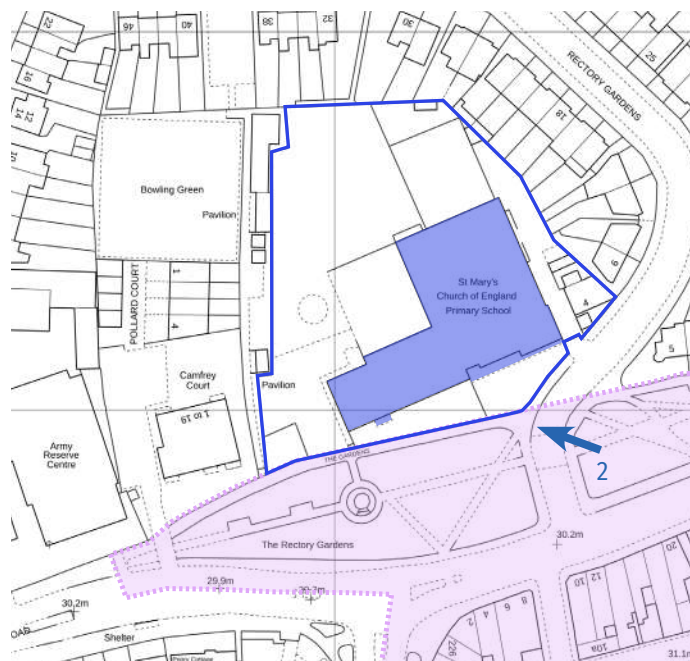
The main south-facing facade of the school looks on to Rectory Gardens and the High Street which are both located within the Hornsey High Street Conservation area. This entrance facade is visible from the street and gardens, through the local trees.

OVERHEATING

The extensive glazing on the south-facing façade results in significant overheating in many of the classrooms. This creates an uncomfortable internal environment that is not conducive to effective teaching and learning. The school has formally identified this as a key issue that must be addressed as part of the proposed merger.

LACK OF IDENTITY

The long and low rectilinear form of the existing facade is a comprised of three levels with extensive glazing and a flat roof. There is a lack of identity associated with the repetitive rhythm of glazing spanning the full extent of the facade and low obscure entrances at ground floor level with unclear signage. While prominent, due to its scale, the building does not currently immediately communicate its use as a primary school.



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4.2 EXISTING ENTRANCE AREAS

ACCESS

The school has four main public access points:

1. Main Entrance Area

Primarily used by visitors and staff. This hard-landscaped area includes planting and is enclosed by a metal fence. Main gated access is from the Rectory Gardens public path, with a secondary gate leading from the driveway to the staff parking area.

2. Secondary Entrance Area

Currently underutilized for pupil access. Floodworks carried out in 2024 included a metal mesh fence along the boundary with an adjacent planted swale, drainage layer to the play area and artificial grass. It includes a gate connecting to the main entrance area.

3. Pupils' Main Side Entrance

Accessed via a public path along the north edge of Rectory Gardens. This entrance leads to a gated side walkway, which connects to the rear entrances of the school.

4. Vehicular Side Entrance Area

The only vehicular access to the site, located off Rectory Gardens. The driveway leads to staff parking and service areas along the building's east facade, with ramp access to the rear reception.

TRANSFORMER AREA (indicated in yellow on plan)

In the south-west corner of the site is a fenced-off zone, within which a smaller, inner enclosure houses the transformer.

BOWLING ALLEY ENTRANCE & WALKWAY

(indicated in green on plan)

To the west of the substation area lies the entrance to the Bowling Alley. A walkway leading to the bowling green runs parallel to the site's western boundary.



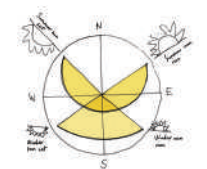
2. SECONDARY ENTRANCE AREA

1. MAIN ENTRANCE AREA

4. VEHICULAR SIDE ENTRANCE AREA



- 1 Pupil's main side entrance from Rectory Gardens
- 2 Secondary entrance area
- 3 Main school entrance area
- 4 Entrance to Bowling Club viewed from The Rectory Gardens
- 5 View of Bowling Club walkway
- 6 View of substation area
- 7 Walkway from pupil's main side entrance



5.0 DESIGN PROPOSALS

5.1. DESCRIPTION OF WORKS

Currently the school is housed across two sites (Nursery-Year 2 at Church Lane, with Years 3-6 at Rectory Gardens). The junior school building at Rectory Gardens is currently underutilised. Alongside a Local Authority need for a SEND facility, this has resulted in a decision to consolidate both schools onto the Rectory Gardens site, allowing the Church Lane school to become a LA-run SEND facility.

Modifications to the 1960s block at Rectory Gardens will enhance its identity as a primary school and address longstanding overheating issues on the south façade. The design preserves the generous indoor and outdoor facilities currently available across both sites and introduces age-appropriate, dedicated outdoor play areas for early years.

The works outlined in this application comprise two key elements:

1. EXISTING MAIN BUILDING WORKS

GROUND FLOOR - NEW OPENINGS

The proposed works comprise the formation of new openings within the ground floor of the existing main building. The openings are to the south, west, and courtyard west façades and will provide direct access from the relocated EYFS classrooms to the external play areas, supporting the school's approach to integrated indoor-outdoor learning.

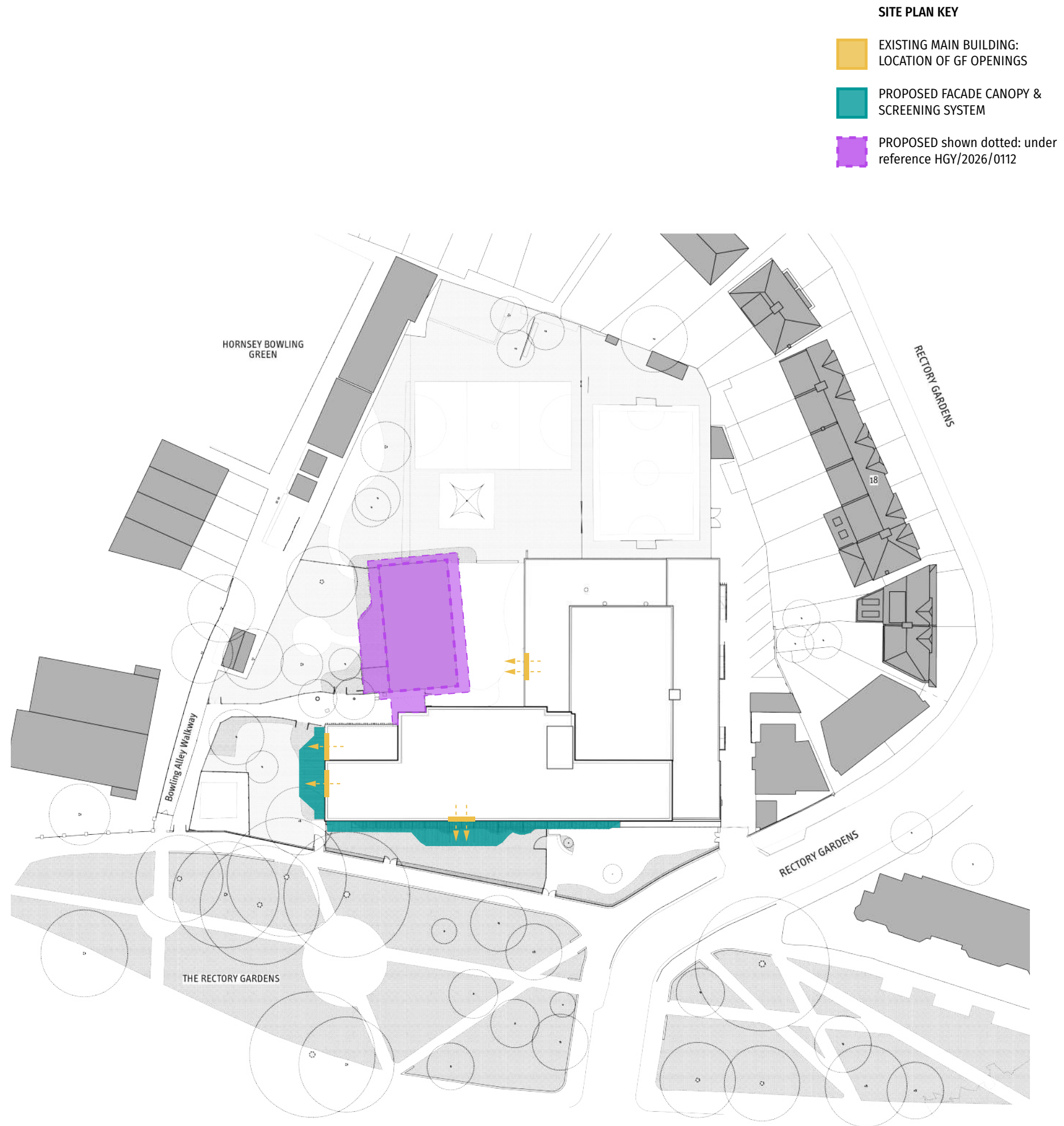
The proposals include:

- Replace existing windows with two new external door openings to the south façade, designed to align with and reflect the scale and appearance of the adjacent glazing
- Two new external door openings to the blank brick flank wall of the west façade
- Replace existing windows with two new external door openings to the courtyard west facing façade, designed to align with and reflect the scale and appearance of the adjacent glazing

2. CANOPY AND FAÇADE SCREENING SYSTEM

A new canopy and south façade screening system are proposed to serve multiple purposes:

- The canopy provides sheltered outdoor play areas for the relocated Early Years Foundation Stage (EYFS).
- The facade screening addresses existing overheating issues in classrooms along the south-facing façade. Please refer to sustainability engineers OR Consult report.
- The screening system also supports the school's aspiration to communicate it's core value of nurturing students by softening the current linear and utilitarian appearance of the building through the introduction of a tree-inspired shading system.



5.2. EXISTING MAIN BUILDING WORKS

To minimise disruption to the school's day-to-day operations, alterations to the existing building are limited to the south-west corner and a single ground-floor classroom at the rear overlooking the courtyard.

The proposals introduce new openings within the south, west, and courtyard-facing west façades, providing direct access from the relocated EYFS classrooms to adjoining outdoor play areas. This arrangement supports the school's emphasis on integrated indoor-outdoor learning environments.

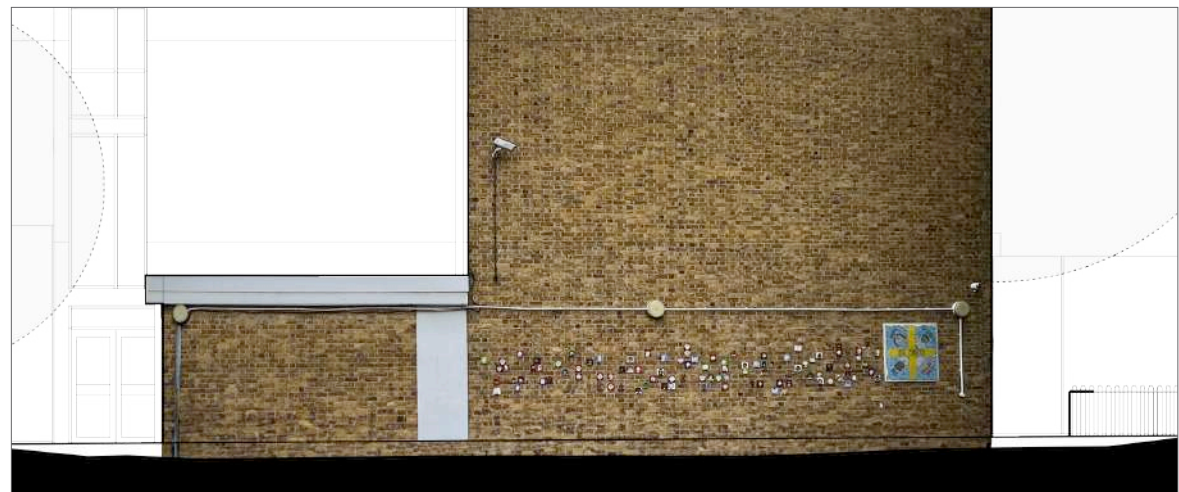
The existing sheer brick façade to the west will be modified to include two large openings, providing a direct link to the covered outdoor play area and the larger western play space.

The north façade remains unchanged.

On the south-facing façade, existing windows will be replaced with doors to finished floor level, matching the style of the existing glazing. This will create direct access to a covered outdoor play area and the larger, currently underutilised, uncovered play space.

The ground floor canopy is addressed separately in the façade screening section.

On the courtyard west-facing façade, existing windows will be replaced with doors to finished floor level, matching the style of the existing glazing. This will provide direct access from the relocated EYFS classroom to the rear courtyard play area.



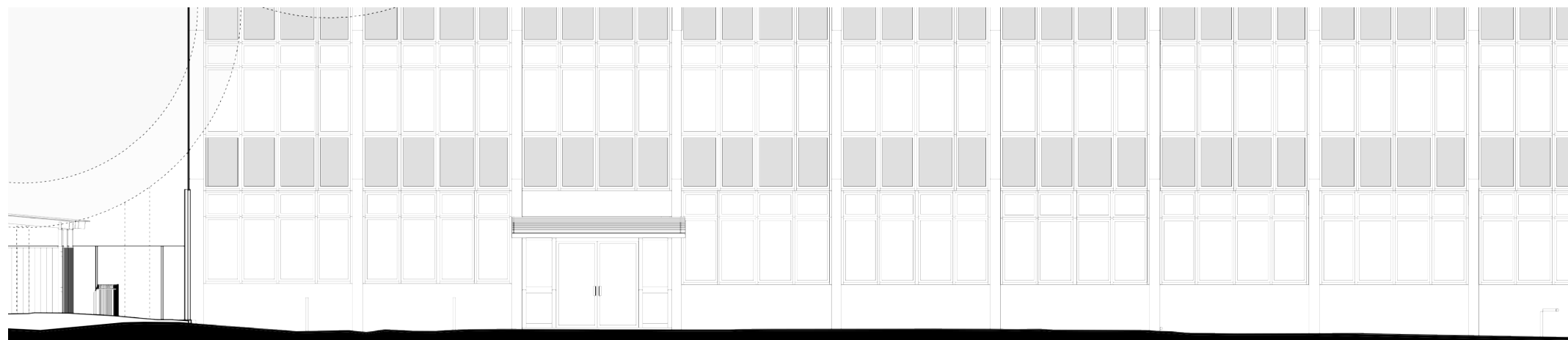
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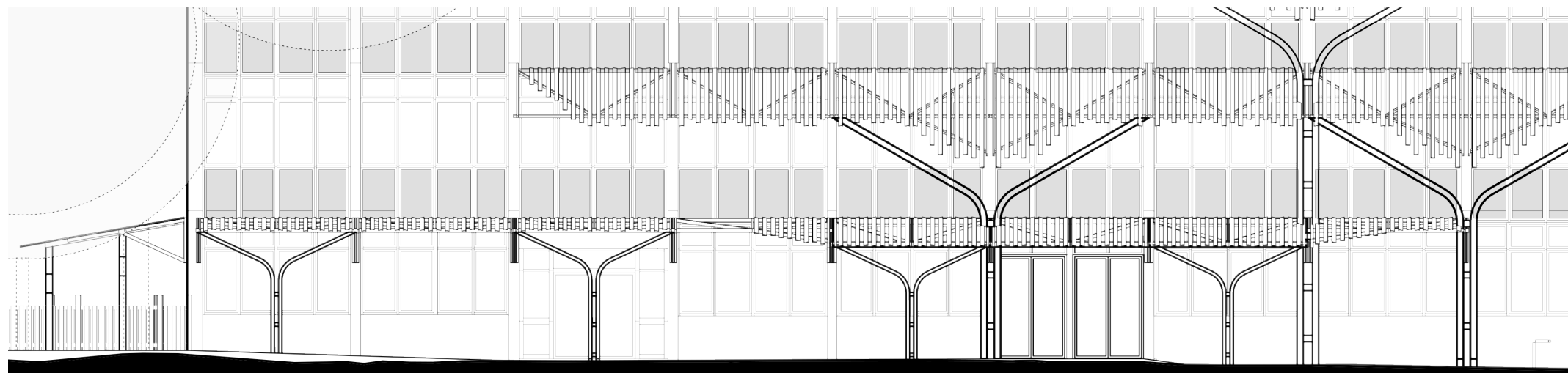
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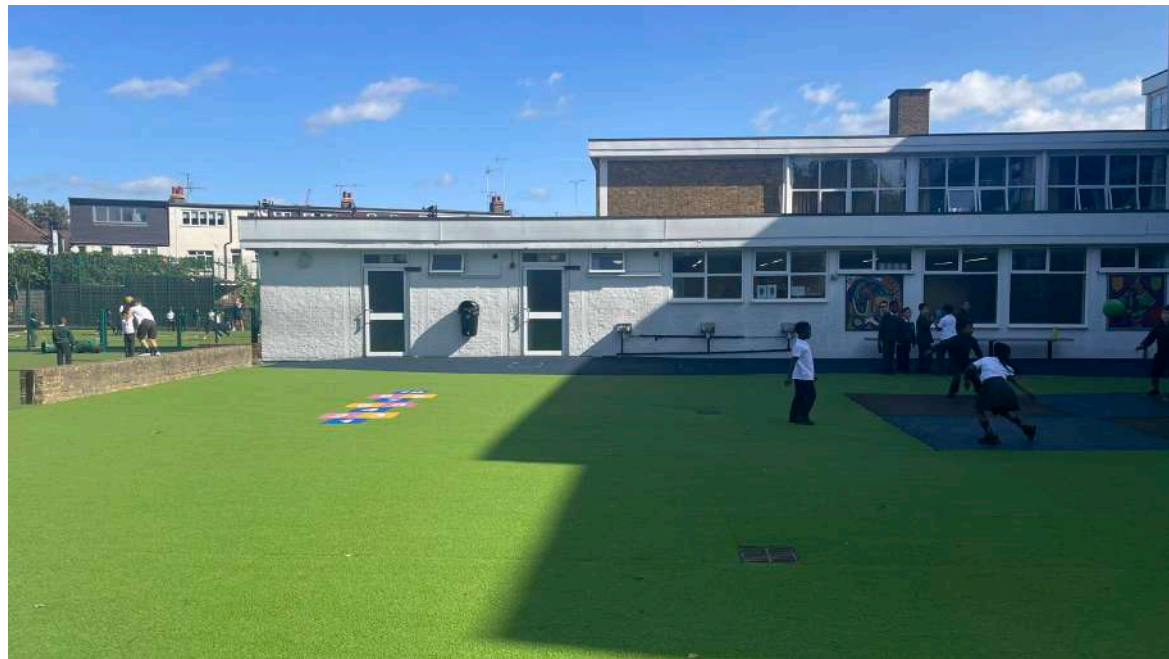
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- 1 Existing west elevation of existing building
- 2 Proposed west elevation of existing building
- 3 Existing south elevation of existing building
- 4 Proposed south elevation of existing building
- 5 View of proposed ground floor canopy & openings on west facade

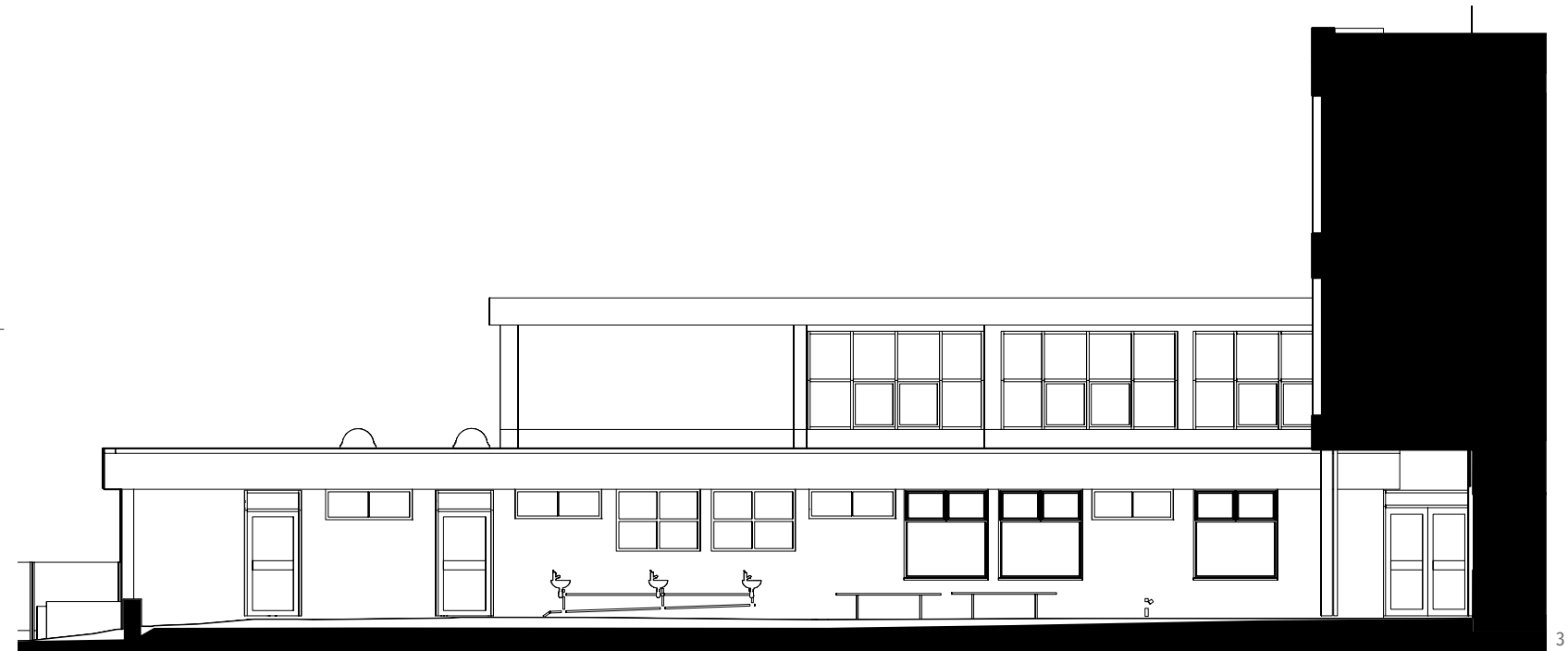
5.2. EXISTING MAIN BUILDING WORKS



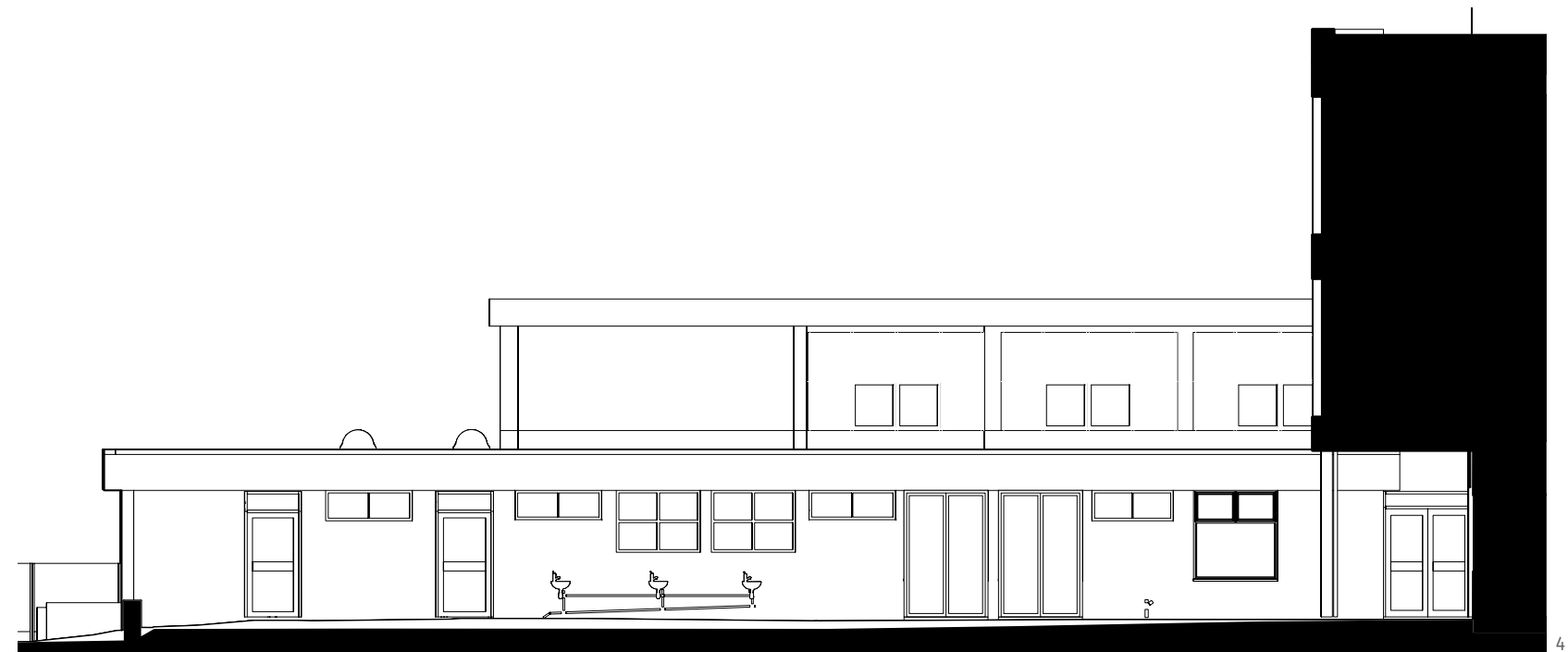
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- 1-2 Views of courtyard west-facing elevation of existing building
- 3 Existing courtyard west-facing elevation of existing building
- 4 Proposed courtyard west-facing elevation of existing building

Existing



Proposed



1 View of existing building
2 View showing canopy & facade screening system

5.3. PROPOSED CANOPY & FACADE SCREENING SYSTEM

A new ground floor canopy to the south and west facades and integrated solar screening system to the south facade are proposed to serve multiple functions:

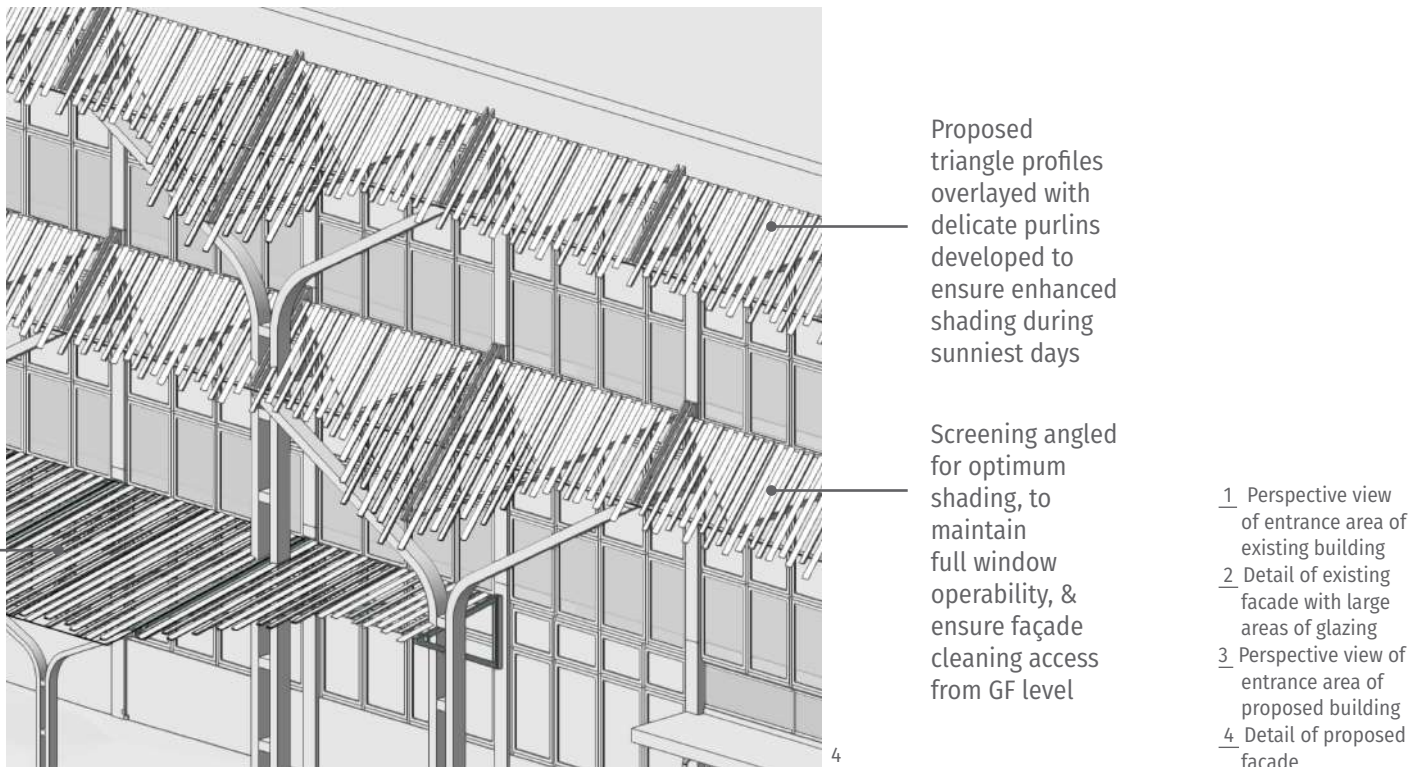
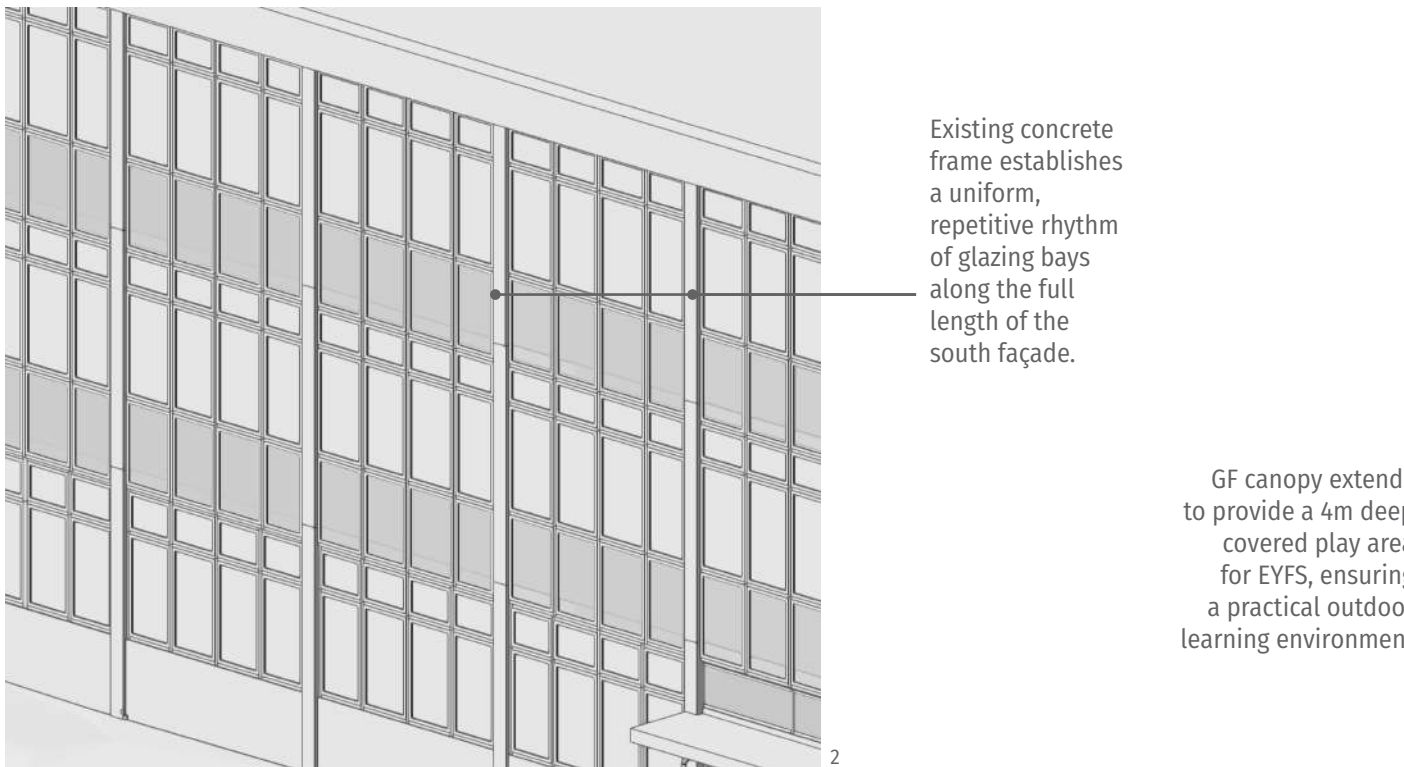
- Provide sheltered outdoor play areas for the relocated Early Years Foundation Stage (EYFS). The canopy is deepened in the appropriate locations in order to provide the spaces required for covered outdoor play. In these locations the screen will be covered with translucent polycarbonate
- Mitigate existing overheating in south-facing classrooms, by screening the glazing from the sun's rays
- The levels of the facade screening are related to the existing facade levels at each floor and are determined by them
- Enhance the school's visual identity by softening the building's current linear and utilitarian appearance and integrating the ethos and identity of the school
- The design has been developed to be as effective as possible, while limiting the loading on the existing facade through light, recyclable aluminium screening
- The screen has been angled not only to provide optimum screening, but also to allow all windows to open as existing, and to enable cleaning of the facade from ground level
- The screening will be powder coated in green in order to connect to the values of growth and flourishing children which are at the heart of the school.
- The design connects not only to the green play spaces to the north, but also to the trees of Rectory Gardens immediately adjacent to the school
- Currently the existing building provides a hard flat edge to the Conservation Area
- The proposals provide an enhancement to the utilitarian flat existing facade which softens it adjacent to the trees of Rectory Gardens and the smaller scale fabric of the Conservation area.
- The facade screening reduces the perception of bulk and introduces depth into the facade through the delicate screening elements.
- The strategy to include tree-like columns and a depth of screening that is variable and linked to the performance requirements of the existing facade also creates a more accessible building in terms of scale for young children
- The new screening does not touch or affect the adjacent trees as the deeper sections are located in the centre of the building away from large trees, so are no closer than the existing facade
- Additional studies have been carried out with the M&E consultant and structural engineer in order to confirm this approach is effective and feasible.
- The proposal makes a positive contribution to the setting of the adjacent Conservation Area, enhancing its character and context.

5.3. PROPOSED CANOPY & FACADE SCREENING SYSTEM

Existing



Proposed



- 1 Perspective view of entrance area of existing building
- 2 Detail of existing facade with large areas of glazing
- 3 Perspective view of entrance area of proposed building
- 4 Detail of proposed facade

5.4. PROPOSED FACADE CANOPY & SOLAR SCREENING SYSTEM: Pre-application Advice Notes & Design Responses

FACADE TREATMENT COMMENTS:

The site is not located within a conservation area; however, it is adjacent to one. Design elements are therefore required to be considered carefully for the project."

DESIGN RESPONSE:

The proposed façade treatment comprises three key elements:

1. Repainting of the existing south façade panels:

The current green panels are to be repainted, revitalizing the elevation and enhancing the building's overall appearance. This refresh strengthens the school's identity and visual cohesion while elevating the quality of the streetscape within the Conservation Area. The selected colour palette, detailed on the following page, ensures a harmonious and attractive presence.

2. Introduction of a new lightweight façade canopy and solar screening system:

A carefully designed canopy and screening system will provide effective solar shading and improve internal comfort. Its lightweight and elegant design adds visual interest to the façade in a subtle and sympathetic way, enhancing the character of the area without overwhelming the historic context.

3. Formation of new ground floor openings:

New openings are discreetly introduced at ground floor level, aligned with existing glazing, to provide direct access to outdoor amenities and improve connectivity between internal and external spaces. These openings are sensitively designed to maintain the rhythm and proportion of the façade, ensuring that the building remains harmonious with the surrounding

Conservation Area while supporting the functional requirements of the school.

FACADE CANOPY & SOLAR SCREENING SYSTEM COMMENTS:

"More detail would be needed on the materiality were an application to be made. The acceptability of such a design would be dependent on the use of high quality materials and needs to be elegant."

"Use of different tones of colour and greens are recommended, as well as the integration of other materials such as timber. It is also recommended to consider whether the structure could be used to support real growing climbing plants, overtime creating a softer form of shading for the school."

RESPONSE:

As part of the design development, a wide range of material options were carefully explored. Buildings of this period were constructed to structural standards that are lower than those required today. Consequently, the existing structure is unable to accommodate additional façade loading from heavier elements such as timber cladding or extensive planting systems.

The existing façade columns are limited in size and structural capacity and therefore cannot support significant additional loads. Full technical justification is provided within the accompanying Structural Engineer's Report.

In response to these constraints, the proposed design has been refined to achieve a lightweight, elegant and high-quality architectural solution. The canopy and solar screening system



Existing

is supported on slender, tree-like steel columns and formed from lightweight aluminium elements. All components are proposed in a durable, high-quality powder-coated finish to ensure longevity and visual refinement.

Following the pre-application meeting and subsequent solar studies, the solar screening system has been refined to incorporate triangular sections overlaid with aluminum angles, producing a subtle and dynamic interplay of light and shadow. This effect is especially pronounced in bright sunlight, where the system is optimized to provide effective shading for classrooms, enhancing internal comfort while adding visual richness and architectural interest to the façade.

Signage proposals will be addressed under an advertising consent application.

Proposed



5.5. PROPOSED FACADE CANOPY & SOLAR SCREENING SYSTEM

COLOUR

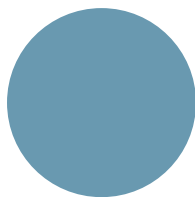
FACADE COLOUR PALETTE

In collaboration with a colour consultant, a carefully considered colour palette has been developed for the proposed façade canopy, solar screening, and repainting of the colour panels on the south façade. The palette reflects the ethos of the school and the identity it seeks to express through the proposed works.

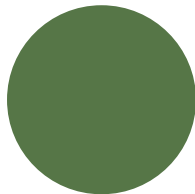
The façade canopy and solar screening, with their tree-like columns, are proposed in tones of green. This colour is closely associated with St Mary's School and reinforces the façade's themes of nature, growth, and trees, while also responding to its proximity to the leafy setting of Rectory Gardens.

The existing green colour panels on the south façade will be repainted with a graduated colour scheme, transitioning from a green band at the base to blue at the upper levels. The blue tones symbolise the sky and a sense of possibility, aligning with the school's values and aspirational ethos.

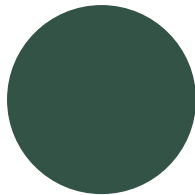
**RAL 5024
LIGHT BLUE**
Proposed for the upper band of colour panels on the south façade.



**RAL 6010
LIGHT GREEN**
Proposed for the lightweight elements of the façade canopy and solar screening, enhancing the delicacy of the tree-like shading elements. Proposed for the lower band of colour panels on the south façade.



**RAL 6005
DARK GREEN**
Proposed for the structural elements of the façade canopy and solar screening, providing visual weight and depth.



6.1 STRUCTURAL ENGINEER'S STATEMENT

engineersHRW

Summary report on proposed solar shading canopy to existing school

Planning Application January 2026
2541-P1

Prepared by: Angela Ung MEng CEng MStructE
Checked by: Simon Robinson BEng CEng MStructE

21st January 2026

1.0 Introduction

This cover report provides a brief summary of the proposed solar shading canopy to be install to existing three storey school building at the above site in support of the planning application, as noted above.

2.0 The Project

EngineersHRW have been appointed to provide structural engineering advice to the design team led by Open Studio Architects. The Project consists of adding new solar shading to the existing 1960s school on the south façade and ground floor west façade.

3.0 The Existing site

The existing school is a three storey concrete frame building with a single storey section to the rear, constructed in the 1960s. A two-storey classroom block rear extension was constructed in 2018, fixed back to existing concrete frame and supported on new steel columns. From a limited investigation carried out in 2014 for the classroom extension, the existing building is supported on concrete strip footings. The extension is supported on a piled foundation.

The site is located in a flood critical area. Flood resilience works were carried out in 2024 by Synergy and Metis, which included the installation of a swale gully at the front, flood gates, rain gardens at both ends of the site and an attenuation tank which discharges into the main sewer at a controlled rate.

Mature trees are located in close proximity to the proposed works, which will need to be considered, as the ground conditions consist of the high-shrinkage London Clay Formation.

4.0 Proposed structural work

The proposed works include the installation of a solar screening canopy over three levels on the front south elevation, and at ground floor level on the west elevation of the existing school.

The proposed canopy will be constructed using modular aluminium frames. Aluminium has been proposed due to its lightweight nature, which minimises any additional loads imposed on the existing concrete frame and foundations.

Aluminium is durable and corrosion resistance, ensuring long-term performance and reduce maintenance in exposed external weather conditions. The modular elements is prefabricated and finished with a painted surface. The use of prefabricated cassette allows for a high level of quality control, efficient installation on site and reduced construction time. This approach also minimises material waste during manufacture and limits disruption to the school during installation works. Furthermore, the aluminium frames are demountable, allowing for future repair, or replacement if required, and are recyclable at the end of their service life.

A timber structure with screen planting was considered as an alternative. However, this option was discounted due to several design constraints. Timber is generally less durable than aluminium in exposed conditions. Screen planting would be heavier, potentially requires strengthening works to the existing building structure and foundations. In addition, the planted screens would be positioned immediately adjacent to windows, increasing the risk of moisture retention and creating ongoing access requirements for general maintenance.

At ground floor level, columns will be introduced to support the outer edge of the canopy. These columns will be founded on concrete pad foundations, with depths in accordance with NHBC Chapter 4.2, Building Near Trees.



6.2 SUSTAINABILITY ENGINEER'S STATEMENT

St Mary’s CE Primary School • Façade Canopy Sustainability Statement

01 • Introduction

OR Consulting have prepared this Sustainability Statement on behalf of their clients St Mary’s CE Primary School to support a planning submission for the proposed facade works to the existing main school building located at rectory Gardens, Hornsey, N87PJ.

The proposal comprises the construction of a new canopy and solar screening system to the south façade of the existing 1960s school block. The works are intended to address the following objectives:

- A. Address the historical overheating issue experienced by several south facing classrooms by providing a solar screen.
- B. Provide a sheltered outdoor play area for the relocated Early Years Foundation Stage (EYFS)
- C. Support the School’s aspiration to soften the current linear and utilitarian appearance of the building

This Sustainability Statement outlines how the proposed solar screen represents a passive design measure that reduces overheating and avoids the need for mechanical cooling systems. This approach is in line with Harringay Council’s Supplementary Planning Document: Sustainable Design & Construction where it is stated;

“Buildings should avoid overheating during summer months without reliance on energy intensive mechanical cooling systems. Natural ventilation should be used where possible.”

02 • Overheating

Overview:

Several classrooms on the South façade on the main school building experience high temperatures in the summer months. This is primarily due to the large amount of south facing glazing introducing high solar gains into the space. This is exacerbated by the lack of cross ventilation and a natural ventilation system added in 2016 (windcatchers etc.) which has been observed to be ineffective on hot days. The client has advised that internal temperatures in the central classrooms on the first and second floors regularly reach uncomfortable levels, affecting pupil comfort and learning.

The Study:

The aim of the overheating study was to assess the extent to which the proposed solar screen would mitigate overheating in the south-facing classrooms, with the intention of avoiding the need for active cooling systems such as Variable Refrigerant Flow (VRF).

A dynamic thermal simulation model was developed in Design Builder to assess the level of overheating currently experienced during the summer months. Multiple scenarios were then simulated where passive cooling strategies were introduced. These scenarios were then compared against the existing condition to quantify their effectiveness in reducing overheating.

The assessment was based on the CIBSE TM52 Criteria; The percentage of summer hours during which the classroom is considered uncomfortably hot based on the Bedford Scale for Thermal Comfort.

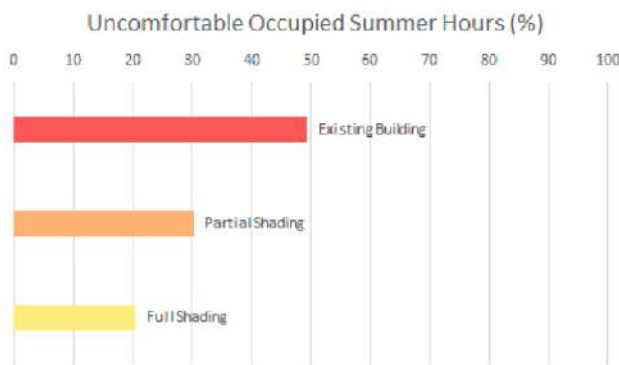
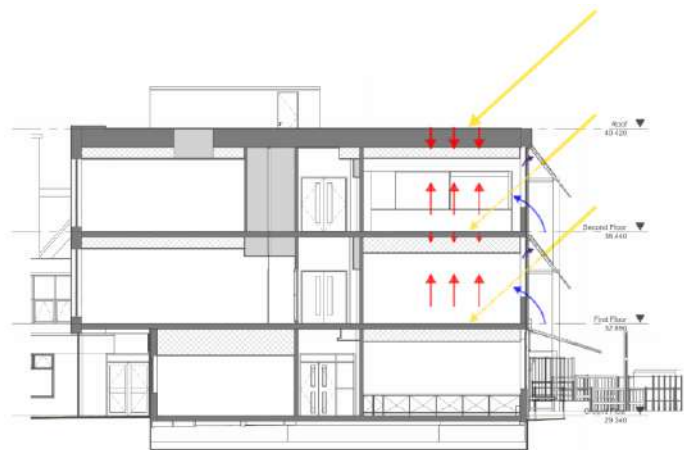


Figure 1.B

From initial simulations of the existing building, it was found that the second-floor classroom S4 was the worst-case overheating scenario This classroom has been used as the reference case for the investigation. The existing S4 Classroom showed a predicted peak temperature during term time occupied hours of 35.7°C. Based on CIBSE TM52 Criteria, the summer hours during which the classroom is uncomfortably hot are predicted to be 49.5% of all occupied hours.

A partial shading option was modelled, with louvre blades spaced so that approximately half of the solar gain will be blocked during the hours of strongest sunlight in summer. This results in 30.3% of occupied hours being uncomfortably hot, a reduction of 40% from the existing. A full shading option has also been modelled, the louvre blades more closely spaced so that almost all of the direct solar gain will be blocked during the hours of strongest sunlight. This results in 20.4% of occupied hours being uncomfortably hot, a reduction of 59% from the existing. The improvement in uncomfortably hot hours the classroom will experience from these two options is shown on figure 1.B.

Design Development:

The full shading approach was deemed unfeasible due to the impact on natural daylight and the affect this would have on the wellbeing on the children and staff. The school deemed the partial shading approach to bring the overheating risk within an acceptable level while minimising the impact on daylight. The Architect was then able to incorporate the findings from this study into the design of the solar screen, combining effectiveness, atheistic and efficient use of material.

03 • Materials

Two material options were explored for construction of the Façade solar screen; aluminium and timber. The design team weighed up the pros and cons of each material as seen below:

Factor	Aluminium	Timber
Weight	Aluminium is a lightweight and high strength metal, which minimises any additional loads imposed on the existing concrete frame.	Timber has a lower density than aluminium; however, a significantly larger material volume is required to achieve the same structural performance, increasing overall load.
Embodied Carbon	Very high due to energy-intensive extraction and manufacturing.	Timber is a renewable material with lower embodied carbon compared to other structural materials.
Durability	Highly durable, corrosion-resistant, and low maintenance, does not warp.	Less durable in exposed conditions. Requires more maintenance (e.g. coatings) and can warp over time.
Lifecycle Considerations	Long lifespan and high recyclability which can help offset the upfront carbon cost.	Short lifespan, requires careful end-of-life planning.

After careful review, the Design Team has proposed to construct the façade screen with modular aluminium frames due to its lightweight nature, durability and long-term performance. The modular elements will be prefabricated off-site, which will reduce on-site construction time, improve quality control, and minimise material waste. This approach supports the project’s sustainability objectives while ensuring compatibility with the existing school structure.

04 • Conclusions

The proposed façade canopy and solar screening system at St Mary’s CE Primary School provides a sustainable response to existing overheating issues within south-facing classrooms. The use of passive solar shading significantly improves internal thermal comfort and avoids the need for energy-intensive mechanical cooling, thereby preventing;

- A. Embodied carbon associated with mechanical plant
- B. Operational carbon associated with the running of the active cooling system
- C. Use of high global warming potential (GWP) Refrigerants

The selected modular aluminium system offers a lightweight, durable, and low-maintenance solution that is compatible with the existing structure, while off-site prefabrication minimises construction waste and disruption. Overall, the proposal supports pupil wellbeing, and long-term sustainability within the context of the existing school building.

7.0 RELEVANT PLANNING POLICIES & GUIDANCE

The site is not located in a conservation area and is not listed.

LONDON PLAN (2021) Policy SI 2 Minimising greenhouse gas emissions:

A. ...This means reducing greenhouse gas emissions in operation and minimising both annual and peak energy demand in accordance with the following energy hierarchy:

- 1) be lean: use less energy and manage demand during operation
 - 2) be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly
 - 3) be green: maximise opportunities for renewable energy by producing, storing and using renewable energy on-site
 - 4) be seen: monitor, verify and report on energy performance.
- 9.2.1 If London is to achieve its objective of becoming a zero-carbon city by 2050, new development needs to meet the requirements of this policy.
- 9.2.3 Boroughs should ensure that all developments maximise opportunities for...use innovative building materials and smart technologies. This approach will reduce carbon emissions, reduce energy costs to occupants, improve London's energy resilience and support the growth of green jobs.
- 9.2.12 b. proposals to reduce carbon emissions...through the energy efficient design of the site, buildings and services, whether it is categorised as a new build, a major refurbishment or a consequential improvement
- f. the results of dynamic overheating modelling which should be undertaken in line with relevant Chartered Institution of Building Services Engineers (CIBSE) guidance, along with any mitigating actions

LONDON PLAN (2021) Policy 5.2 Minimising Carbon Dioxide Emissions:

5.20 The highest level of carbon dioxide emissions reduction will be sought in every proposal, and the Mayor will actively encourage zero carbon development where appropriate. Overall carbon dioxide emissions reductions should reflect the context of each proposal, taking account of its size, nature, location, accessibility and expected operation.

LBH Local Plan DMD Policy DM21: Sustainable Design, Layout, and Construction:

A All new development, including building and landscape works, will be expected to consider and implement sustainable design, layout and construction techniques. Proposals should:

- a Apply the energy hierarchy to minimise energy use in order to meet, and if possible exceed, minimum carbon dioxide reduction requirements;
- b Apply the cooling hierarchy to reduce the potential for overheating and limit reliance on mechanical air conditioning systems;
- d Wherever possible, use building materials with high environmental performance ratings

Overheating and Cooling

4.31 Development proposals should seek to integrate the cooling hierarchy in accordance with sustainable design, layout and construction principles. This will help to ensure that buildings are better equipped to manage their cooling needs in energy efficient ways over their lifetime. This policy applies

the cooling hierarchy set out in the London Plan:

1. Minimise internal heat generation through energy efficient design
 2. Reduce the amount of heat entering a building in summer through orientation, shading, albedo, fenestration, insulation and green roofs and walls
 3. Manage the heat within the building through exposed internal thermal mass and high ceilings
 4. Passive ventilation
 5. Mechanical ventilation
 6. Active cooling systems (ensuring they are lowest carbon options)
- 4.32. Measures at the highest priority level of the cooling hierarchy should be applied to the fullest extent possible before relevant measures at the next level are considered.
- 4.33. Applicants will be expected to undertake dynamic thermal modelling to ensure that the development does not overheat. This is particularly important for south facing dwellings, top floor living accommodation and development proposed for users that are more susceptible from overheating risk (elderly, long term sick, young children). The GLA has developed with the Chartered Institute of Building Services Engineers (CIBSE) guidance for developers to address the risk of overheating in buildings. This document is titled 'TM49: Probabilistic design summer years for London'. This dynamic modelling should address future temperatures likely to be experienced over the lifetime of the development. Alongside this model applicants should submit evidence showing how the principles of the cooling hierarchy have influenced the design.

DESIGN RESPONSE TO PLANNING POLICIES

The extensive glazing on the south-facing façade causes significant overheating in several classrooms, resulting in poor internal conditions that are not conducive to effective teaching and learning. The school has identified this as a critical issue that must be addressed as part of the proposed merger.

The proposals incorporate a sustainable, passive shading and cooling strategy to the south façade, specifically designed to mitigate overheating, improve internal environmental quality, and enhance occupant comfort without reliance on mechanical ventilation or disruption to school operations. In addition, the proposed façade treatment will provide a positive and child-friendly architectural identity, contributing to the visual amenity of the school and its wider context.

Further details are provided in the Sustainability Statement, which explains how the design has been developed in collaboration with the project engineers and informed by detailed thermal modelling. This work demonstrates that the proposals will achieve a substantial reduction in solar heat gains and internal temperatures through passive design measures, in accordance with relevant planning and sustainability objectives.

8.0 CONCLUSION

This application supports the consolidation of the infant and junior schools onto the Rectory Gardens site, responding to an identified Local Authority requirement for a new SEND facility at Church Lane and addressing the current underutilisation of the existing junior school buildings at Rectory Gardens.

The proposals promote the efficient and sustainable reuse of existing educational assets, while delivering measurable improvements to the quality, performance and accessibility of both indoor and outdoor learning environments.

Key elements of the proposals include:

1. WORKS TO EXISTING GROUND FLOOR:

- New external doors are proposed on the south, west, and courtyard west-facing façades at ground floor level, providing safe, direct access to outdoor play areas for relocated EYFS.
- These interventions strengthen the relationship between internal teaching spaces and external learning environments, supporting the school's educational ethos and early years learning model.

2. PROPOSED FACADE CANOPY & SOLAR SCREENING SYSTEM:

- The introduction of a new canopy and south-facing façade screening system delivers significant environmental, functional and visual benefits.
- The façade screening is specifically designed to mitigate longstanding overheating issues affecting south-facing classrooms, improving internal comfort and learning conditions.
- The ground floor canopies provide dedicated high-quality, sheltered outdoor play space for EYFS pupils.
- Architecturally, the tree-inspired shading system softens the existing linear and utilitarian character of the building, enhancing its appearance and reinforcing the school's nurturing identity.

Overall, the proposals represent a sensitive and well-considered enhancement to the Rectory Gardens and broader Conservation area, improving environmental performance, appearance and usability at ground-floor level while retaining the generous indoor and outdoor facilities currently provided. The scheme has been carefully designed to be inline with local planning policy and to deliver an improved learning environment for pupils, alongside a positive enhancement to the setting of the site adjacent to the Conservation Area.

9.0. LIST OF
ARCHITECTURAL
DRAWINGS

SITE LOCATION PLAN: STM_PE_00: SITE LOCATION PLAN 1:1250

EXISTING DRAWINGS

- STM_PE_01: EXISTING SITE AND CONTEXT PLAN 1:200
- STM_PE_02: EXISTING GROUND FLOOR PLAN 1:100
- STM_PE_03: EXISTING ROOF PLAN 1:100
- STM_PE_04: EXISTING SOUTH AND WEST ELEVATIONS 1:100
- STM_PE_05: EXISTING COURTYARD WEST ELEVATION 1:100
- STM_PE_06: EXISTING SECTIONS 1:100

PROPOSED DRAWINGS

- STM_PP_01: PROPOSED SITE AND CONTEXT PLAN 1:200
- STM_PP_02: PROPOSED GROUND FLOOR PLAN 1:100
- STM_PP_03: PROPOSED ROOF PLAN 1:100
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- STM_PP_06: PROPOSED SECTIONS 1:100

10.0 WHO WE ARE

Openstudio Architects was founded by Jennifer Beningfield in 2006. We create a sense of place specific to the context and history of each project, balancing complex sites, contradictory demands and challenging problems to form apparently effortless spaces that give joy.

We create places which are inventive, tactile, spatially layered, functional and materially appropriate and fulfilling to use. Sustainability is at the heart of our practice. We retain a deep responsibility to our environment, and design for longevity, to conserve resources, and to create buildings that are flexible and enable change over time.

We bring the relationship between humans and the natural world to the fore in our work. It is an implicit part of our buildings to enhance a sense of presence, fostering an awareness of nature, place and landscape that unfolds with time and use. We use natural materials in unexpected ways to add texture and depth to our work and to connect our buildings to the external environment. We regard research as an implicit part of our practice and understand the constraints and opportunities inherent in our sites. We are able to deliver solutions to problems that seem insurmountable through strategic thinking and thoughtful responses.

Openstudio is a RIBA Chartered Architecture practice, who have won two open RIBA housing competitions: in 2017 the RIBA TW2020 competition to design prototype housing across the UK; and in 2020 the RIBA Home of 2030 housing competition, delivering flexible and sustainable housing suitable for all generations. Our work has also been internationally recognised, winning the housing category at The Plan Award in Milan in 2023. Openstudio has been short-listed for the NLA New Ideas for Housing competition, the WAN House of the Year award, the British Home Awards, the NLA awards in both Housing and Conservation and the RIBA Birmingham Centenary Square competition. We are currently shortlisted for two RIBA London Awards, for a new apartment building and the refurbishment of a Grade II Listed Westminster Fire Station, and a new-build house in Kensington. The awards will be announced in May.

The practice has exhibited a film installation as part of the 2018 Venice Biennale. The studio is engaged with research into low or zero carbon housing and is currently working on UK Government-funded prototype housing to be built for the 2026 Sunderland Housing expo.



WESTMINSTER FIRE STATION

Grade II Listed Building refurbishment and new-build apartments in a land-locked site in London, Victoria. Built in 1906, the Grade II Listed Edwardian fire station in London Victoria was decommissioned in 2014. The project has two parts: the refurbishment of the existing building to create a restaurant and housing, and a new residential building to the rear of the site, which together define a new garden courtyard.

The external volume of the new building is stepped, cut back and inflected to respond to the densely built-up context. The design integrates pale bricks and iridescent glazed bricks to form a light-reflective structure, which refers to the pale Portland stone of the base, the glazed bricks on the interior of the fire station and the history of brick buildings in Victoria.

The new building relates to the existing building but is resolutely contemporary. Horizontal brick courses of iridescent bricks, set at the floor levels of the adjacent fire station, trace the lines of the fire station walkways over the new brickwork, weaving old and new together. Vertical brickwork above these courses lines up with the railings of the old fire station. The courses of iridescent bricks increase in number with the height of the building, acting to catch rays of sunlight and allowing the building to shimmer.

The project involved a very complex series of negotiations and consents with Westminster City Council, and was completed in March 2022. It won the Housing category at the International Plan Awards in Milan in 2023, and has been shortlisted for several awards, including the Conservation and Housing categories in the New London architecture Awards 2022, the British Homes Awards 2023 and the International Brick Awards 2024.

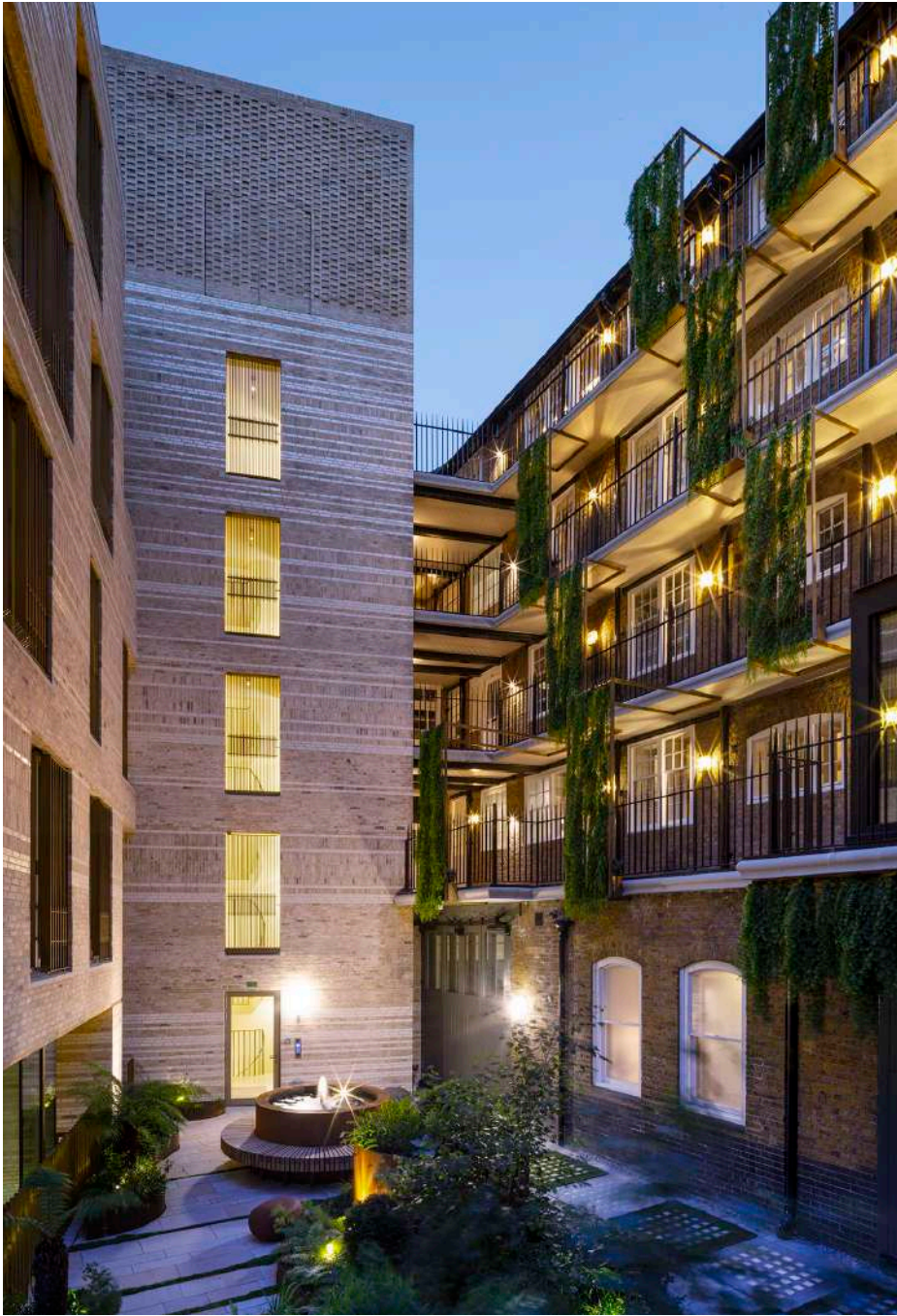
- 1 View through the courtyard towards the new residential building
- 2 Night view of both, the Firestation and the new residential building
- 3 View up through the light-well in the new building
- 4 View of the restored Fire Station



1



3



2



4



1



2



3



4

- 1 Section through the courtyard
- 2 & 3 Changing light patterns and use of glazed bricks
- 3 Corner and stair tower

CONNECTOR HOUSING

Riverside Sunderland, Vaux Site

Connector Housing is a flexible and adaptable system for age-friendly, multi-generational housing and neighbourhoods. Designed to accommodate the best of any available materials, construction systems and technology, Connector Housing is flexible enough to be implemented today and in the future.

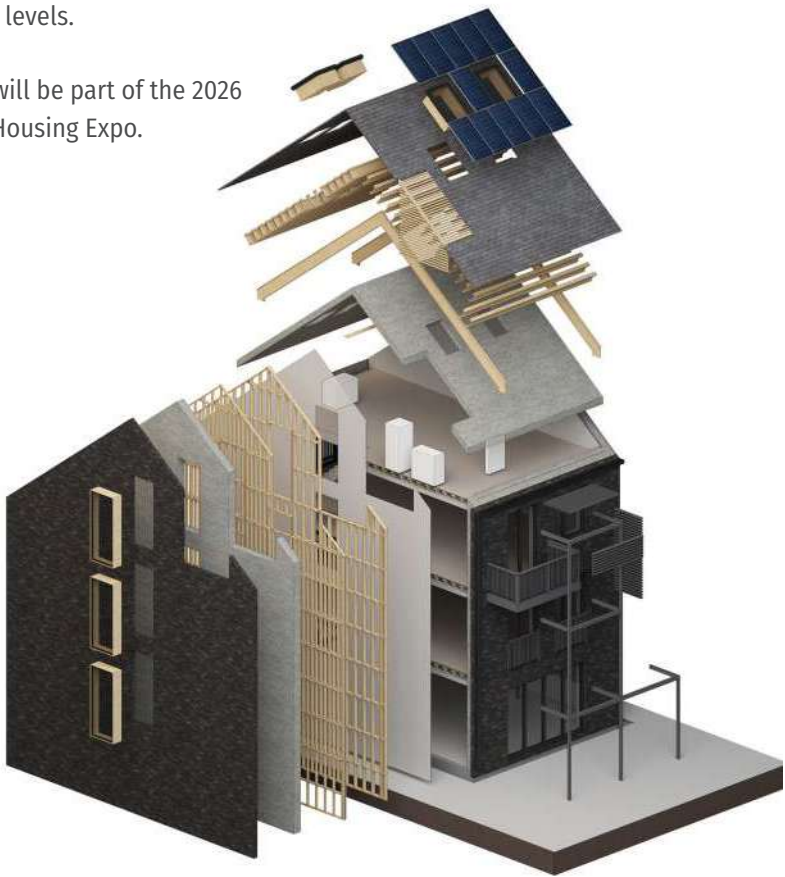
The Sunderland scheme is based on the Home of 2030 RIBA competition joint-winning entry. It seeks to deliver on the aspirational building performance objectives and become a marker for excellence in design. The building demonstrates how a modular design can be adapted to reflect the specific site and its surroundings. It looks to the future of building and respects both traditional and innovative values.

The building is generated and inspired by the site and its surroundings. Four different shades of green glazed terracotta are used, carefully selected with reference to the vegetation found in the area while the slate cladding of the roof and façade echo the cliffs in the adjacent riverside park.

The engineering services represent a totally integrated approach to design and a net zero building. Like the

housing, they are provided in a modular form to enable a plug and play solution suited to the full range of housing and apartments. The housing provides high daylight levels together with a net zero carbon footprint, without any carbon offsets, using technology available today. It has been assessed to be thermally comfortable for all targets to 2080. It has 20%+ better embodied carbon than the RIBA 2030 Climate Challenge target for residential without sequestration and its energy consumption is 55% lower than the current new-build average. The building materials have been selected to provide a healthy living environment, with excellent ventilation and acoustics. The smart home philosophy enables smart technology to be added seamlessly. It has an outstanding environmental performance without compromising internal light levels.

This project will be part of the 2026 Sunderland Housing Expo.

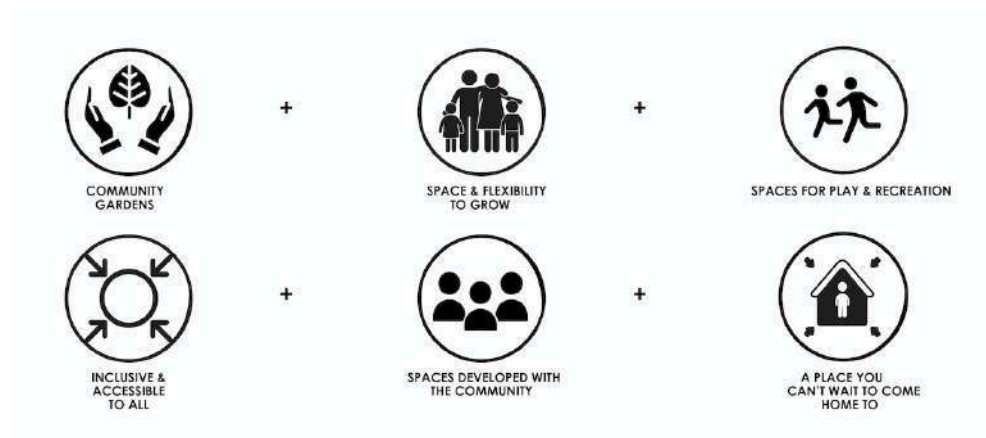


1 Street facing elevation of the Connector Housing, Sunderland scheme
2 Home of 2030 competition visual of Connector Housing
3 Home of 2030 competition exploded axonometric of Connector Housing





1 Axonometric of the Connector Housing, Sunderland scheme
2 Home of 2030 competition visual of Connector Housing
3 Core values of Connector Housing



3

2