# Eleanor Palmer Primary School
# Science & Technology Lab

## Design & Access Statement
1505_DAS
April 2016

AY Architects

# Contents



Document Control

| Revision | Date | Description | Author | Status |
|---|---|---|---|---|
| - | 21.04.16 | - | AB | Planning |

# 1.0 Design Team

| | |
|---|---|
| Client | Eleanor Palmer Primary School<br>Lupton Street<br>London NW5 2DB |
| Architect | AY Architects<br>Studio 23<br>25-27 Bickerton Road<br>London N19 5JT |
| Environmental / Building Services | Ritchie + Daffin<br>Studio D, Holborn Studios<br>49/50 Eagle Wharf Road<br>London N1 7ED |
| Cost Consultant | Stockdale Chartered QS<br>58 Streatham High Road<br>London<br>SW16 1DA |
| Structural Engineer | Price & Myers<br>37 Alfred Place<br>London<br>WC1E 7DP |

a"curiosity" cupboard of science

# 2.0 Introduction

Introduction

AY Architects have been working with Eleanor Palmer Primary School located on Lupton Street in Kentish Town to develop the design of a small Science & Technology classroom building on the school grounds.

The new facility will provide opportunities for pupils to engage with science in a stimulating high quality and innovative purpose-built environment that promotes the learning of science within the school and with other schools and the local community.

The project is funded by London Borough of Camden Section 106 fund for science and technology facilities. An outline feasibility assessment was carried out on behalf of LB Camden by Curl la Tourelle Architects [CLTA] in December 2014 as part of the project selection stage.

The proposal for the science lab building has developed with the involvement of the school's "Lab RATS" (Radical Architecture Technology & Science) made up of teachers, staff, governors, parents in the field and pupils.

Pre-planning advice was sought for a concept design proposal and revisions have been included in the design now seeking planning approval.

Gillespie Primary School Lab 13 - display of pupil work and equipment

Gillespie Primary School Lab 13 - testing experiments

# 3.0 Vision / Brief

Vision

The vision for the project is to create a high quality and inspiring place that fosters curiosity and wonder of the world that is engaging for school children both inside and outside. This should involve an understanding of the building, not as a conventional classroom, but as 'living' tool box of science and technology.

The building should be a place of discovery and stimulating experimentation with a spatial quality that engages with the physical environment; nature, light, sky, structure, materials and mechanical systems. The building should be an instrument that supports the school curriculum, which one can read and analyse its parts.

Brief

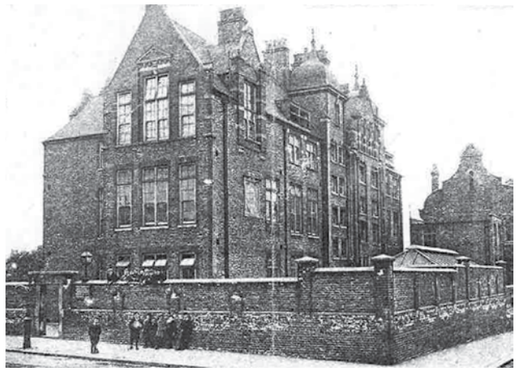
The brief is to create a single flexible classroom space for 31 children aged 3-11 years and a maximum of 4 adults for teaching science and technology. In addition to supporting the school curriculum the science lab will be used for after school clubs and cooking groups and be made available for use by other schools and the neighbouring community.

The science lab is to be equipped with fittings for cooking (ovens and hobs) and sinks for teacher-led learning and experiments and working in small groups of 5-6. Moveable tables will allow flexible arrangements to suit different types of teaching and an interactive whiteboard should be included for traditional teaching in front of children sitting on a carpet. It is important that the facility includes sufficient storage and different types of display for equipment and materials to present a variety of pupils work.

AY Architects worked with the school in researching the brief by examining the national science curriculum in England, particularly the statutory guidance for 'Science Programmes of Study: Key Stages 1 and 2'. They sought ways in which the building could respond creatively to the major topics of the curriculum. This included attending science lessons in the school itself and examining successful examples of science teaching in other primary schools in London. Together with a group of Eleanor Palmer staff and pupils, they visited Gillespie Primary School Lab 13: an outstanding science and technology classroom managed by pupils with the guidance of a scientist in Residence.

The science lab should engage with an outdoor "science garden" to further support outdoor activities / experiments such dealing with weather/sky, light, nature, energy etc. The design of the science garden is being developed with the involvement of inspirational artists engaged in interactive scientific equipment and devices for learning.

Aerial View from South-East



The original Victorian Acland School Building, 1898

# 4.0 Site & Context

Eleanor Palmer Primary School is located in Kentish Town between Lupton Street to the east, Fortess Road to the west and Raveley Street to the north. The main school entrance is from Lupton Street, with secondary (maintenance) access from Raveley Street.

Site Development History

Acland School was the first school building on the site, opening in 1898. The original 3 story Victorian school building was situated at the centre of the original site, understood to be the current playground and ball court adjacent to Fortess Road, surrounded by a high brick boundary wall. The original school building was demolished when nearby Acland Burghley School was built in the late 1960's. Eleanor Palmer Primary School was built soon after when the site was enlarged towards Lupton Street.

The existing school buildings are one and two storey brick with shallow tiled gable roofs. The main entrance of the school is charcaterised by a painted steel and glass canopy connecting the admin office, hall and classroom buildings. The open canopy structure located along the boundary with Fortess Road is a remnant from the Victorian school but the roof has been altered and refinished.

The only development to take place on the site following the 1970's is a single storey extension built in 2004 to the east elevation fronting Lupton Street providing a staff meeting room and the erection of a timber clad classroom outbuilding at the north of the site in 2013.

The school is not situated within a conservation area. The Kentish Town Conservation Area is located to the south of the site but does not boarder onto the school.

Transport & Access

There is no envisaged increase in pupil numbers as a result of the development although the use of the facility will be open to the community and local schools.

The school is well served by public transport, situated only 5 mins walk from Tufnell Park Underground Station (Northern Line) and within 10 mins from a number of bus routes. Bus No.134 stops on Fortess Road outside the school, Bus Nos. 4 and 390 stop at Tufnell Park Station and additional routes serve Kentish Town within 10 mins walking distance. Kentish Town Thameslink Railway Station is also located within 10 mins walking distance. Currently there is a small provision for cycle parking in front of the school on Lupton Street. There is currently no provision for car parking on the site.

The original boundary wall as seen from Fortess Road looking north
(with proposed tree for removal in background)

The classroom outbuilding built in 2013

Existing School Entrance on Lupton Street

# 4.0 Site & Context *(con't)*

Topography

The school sits at the top of a hill and the natural topography slopes away from the school to the south and west. The ball court sits about 1.2m lower then the school buildings. The original brick boundary wall retains a change in level between the ball court and Fortess Road. The difference in level here at the centre of school grounds is approximately 1.5m.

Landscape & Trees

The school external areas are made up of a mix of planted and paved areas, with the majority of paved areas located in the playgrounds and ball courts on the western half of the site.

There are some trees on the site, the majority which are clustered at the southern boundary. A few trees are located in the infants playground at the northwest corner of the site. Here, a mature tree is being proposed for removal along the boundary wall due to it's detrimental effect on the structural integrity of wall. The school has been liaising with Camden arboricultural department regarding its removal.

There are no Tree Protection Orders [TPO's] on the site.

Acland Burghley School Main Entrance (1969)

The Junction Tavern Public House - Fortess Road

Acland Burghley School Hall Building (1969)


Two-storey painted timber shopfronts Fortess Road - West Side

The Junction Housing Development Fortess Road (2014)

Otis Yard accessed from Southcote Road (2014)

# 4.0 Site & Context *(con't)*

Surrounding Context

The surrounding context of Eleanor Palmer Primary is made up of a mix of residential, commercial/retail, light industrial and educational uses.

The residential stock is predominantly made up of 3-4 storey Victorian townhouses. There are rows of shops located along Fortess Road with a concentration of small independent retailers located directly to the north of the school on both the east and west sides of the road. Acland Burghley Secondary School is located at the junction of Fortess Road with Dartmouth Park Hill.

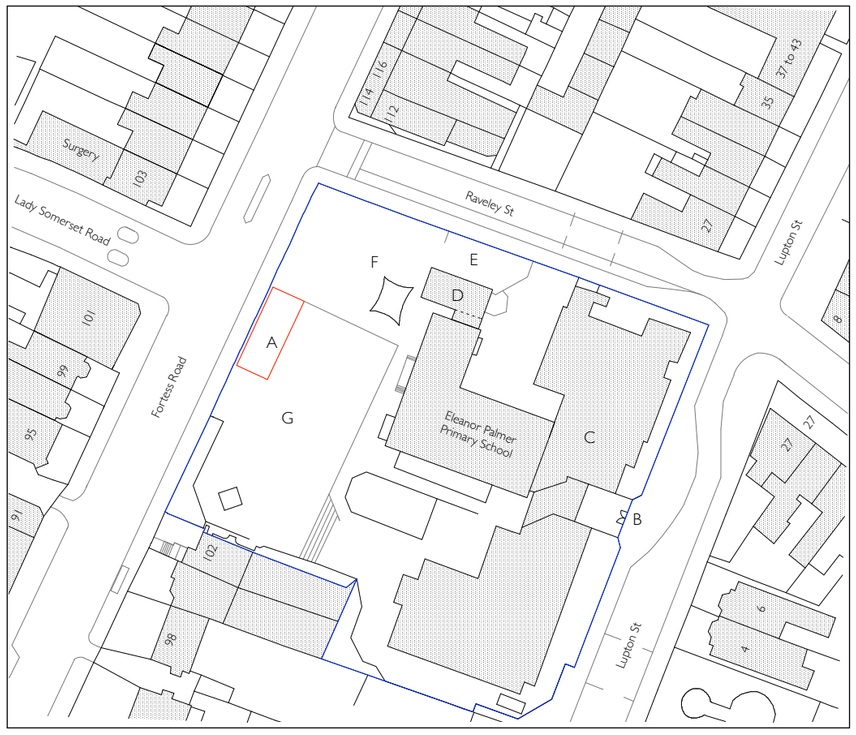
Architectural Character

The architectural character of surrounding buildings is varied. This ranges from mid to late 19th century stock brick terraced and semi-detached houses and warehouses of the same era, to contemporary developments built in the post-war era and in recent years.

The Victorian Junction Tavern public house sits opposite the school on Fortess road, while the character of Fortess Road is made up of both traditional and contemporary painted shop fronts, many of which have been altered and extended over the years.

Modernist concrete and brick buildings from the 1960's and 1970's, including that of the school, contribute largely to the character of the area. Acland Burghley School is a predominately concrete "brutalist" architecture.

Recent developments in the area include more contemporary render, timber and aluminium clad flat roof buildings, such as the 5 storey Junction Housing development on Junction Road close to Tufnell Park Station.




Key

A. Proposed Science Lab Building Site
B. School entrance
C. Main building
D. Classroom out building
E. New play area - replacing previous car parking area
F Infants playground
G. Ball court

Location Plan 1:1000 (@ A3)

# 5.0 Site Location

Proposed Site Location

The proposed location for the Science Lab Building is the site of the existing canopy structure located along the western boundary fronting Fortess Road.

The preferred site for the building was initially identified in the feasibility assessment by CLT Architects involving the replacement of the canopy structure. This included a provision for access to the facility for community use directly from Fortess Road.

AY Architects has assisted the school in investigating the feasibility of alternative locations for the proposed building and have concluded that the site of the existing canopy structure to be most suitable. The structure, although providing outdoor covered space, is dark and largely under-used for school activities, contributing very little to the outdoor amenity of the school.

Community access to the facility has been concluded to be most viable via the main school entrance, as this best satisfies security and operational requirements.

Proposed Site :
Existing Canopy Structure

# 6.0 Site Photographs of Existing

view from ball court looking north

view from ball court looking southwest

view from ball court looking south

view from infants playground looking southeast

view from Fortess Road looking south


view from Fortess Road looking northeast

# 7.0 Outdoor Amenity

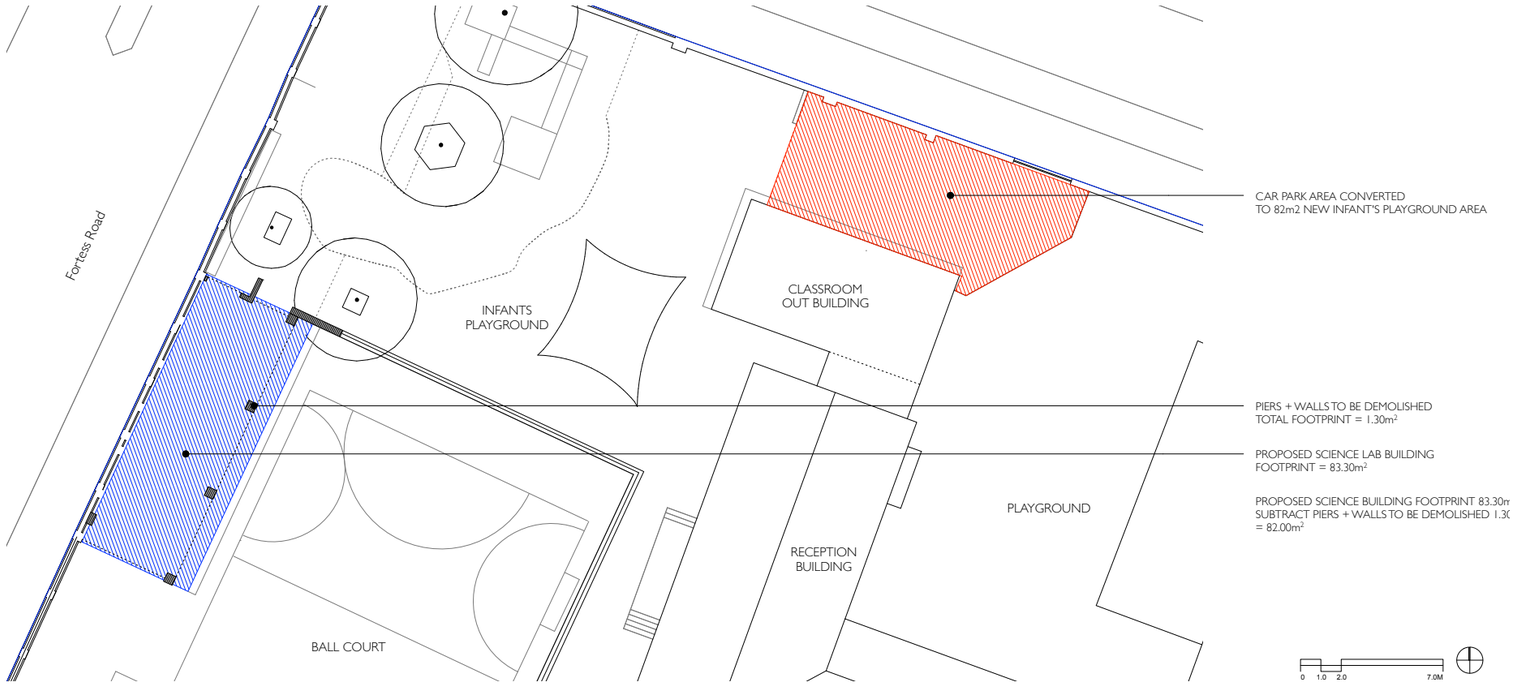
photograph of new playground area (former carpark)
looking west

photograph of new playground area (former carpark)
looking east

Outdoor Amenity / Play Space

The maximum footprint of the proposed development has been assessed to be 82m2. This is equal to the area of new outdoor play space created by the school in the location of the pre-existing car park area along the north boundary and accessible from Raveley Street. This new playground space is located directly to the east of the existing infants playground with step-free access. It is asphalt and used as a football pitch for the infants school.

The proposed development would therefore not result in any loss of the school's outdoor play area.

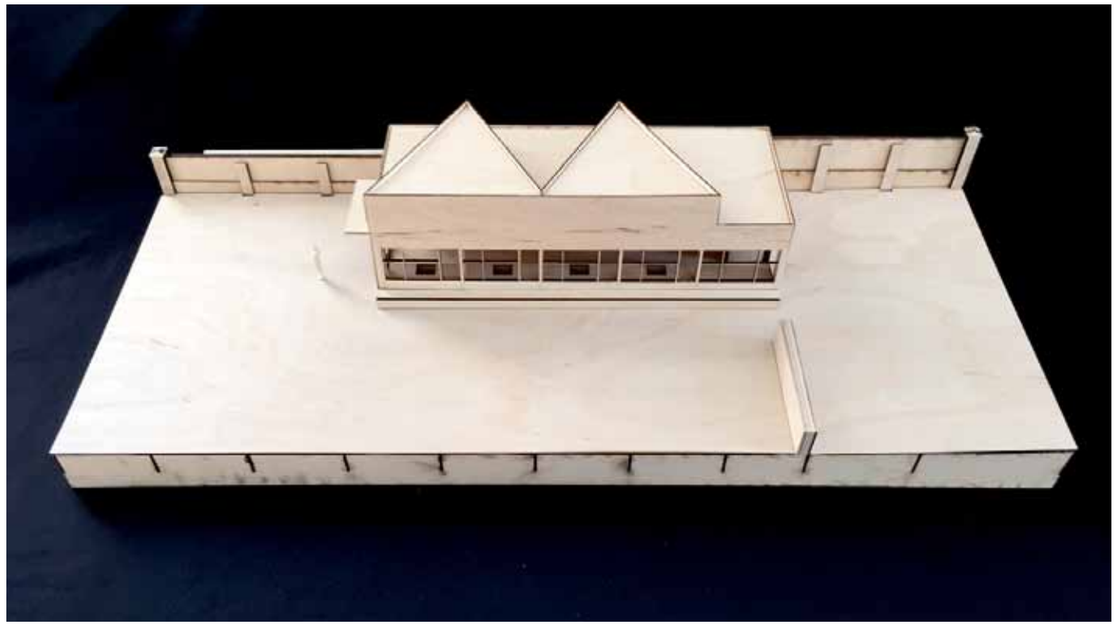



Measurements and calculations of carpark area converted into playground in comparison with the proposed building footprint

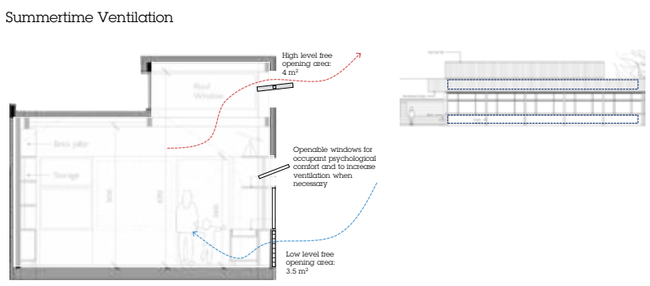
# 8.0 Planning Drawings

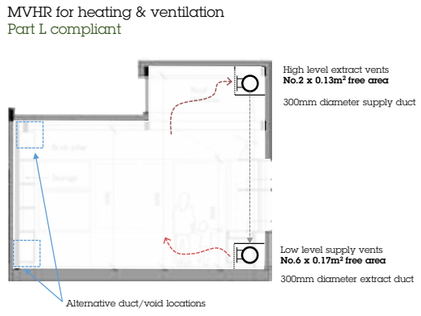
## List of Planning Drawings

EXISTING & PROPOSED DRAWINGS
1505-P001 - Location Plan - Scale 1:1000 @A4
1505-P002 - Existing & Proposed Site Plan - Scale 1:200@A3
1505-P003 - Existing & Proposed Street Elevation (West) - Scale 1:200@A3
1505-P004 - Existing & Proposed Ground Floor Plan - Scale 1:100@A3
1505-P005 - Existing & Proposed Roof Plan - Scale 1:100@A3
1505-P006 - Existing & Proposed East Elevation - Scale 1:100@A3
1505-P007 - Existing & Proposed West Elevation - Scale 1:100@A3
1505-P008 - Existing & Proposed South Elevation - Scale 1:100@A3
1505-P009 - Existing & Proposed North Elevation - Scale 1:100@A3
1505-P010 - Existing & Proposed Cross Section A-A - Scale 1:100@A3
1505-P011 - Existing & Proposed Long Section B-B - Scale 1:100@A3
1505-P012 - Construction Management Strategy - Scale 1:500@A3
1505-P013 - Outdoor Play Area Calculations - Scale 1:200@A3
1505-P014 - Illustrative View From Fortess Road Looking South - NTS
1505-P015 - Illustrative View From Fortess Road Looking Northeast - NTS
1505-P016 - Illustrative View From Ballcourt Looking North - NTS



Model view looking east to west




Proposed heating and ventilation strategy.
Air intake at low level and extract at high level via concealed louvres within the rainscreen

# 9.0 Design Description

The proposal is for a high quality and environmentally friendly stand-alone classroom building in the location of the existing canopy structure.

The single storey building will be a flexible space containing lab stations, science equipment, display areas and storage for science and technology. The building is conceived as a large display cabinet and "tool box" for the sciences.

Planning Policy

The following local planning guidance has been referred to in developing the concept design proposal:

- Camden Local Development Framework (Core Strategy and Development Policy documents) Supplementary Planning Documents relevant to the proposals:
- Camden Planning Guidance 1 - Design (2013),
- Camden Planning Guidance 3 - Sustainability (2013)
- Camden Planning Guidance 6 - Amenity

Site Location & Footprint

The proposal involves the demolition of the existing canopy structure to be replaced by the new building on the same location. The width of the building is slightly larger then the footprint of the canopy structure. The additional width is necessary to maximise the internal classroom area for suitable and flexible teaching activities.

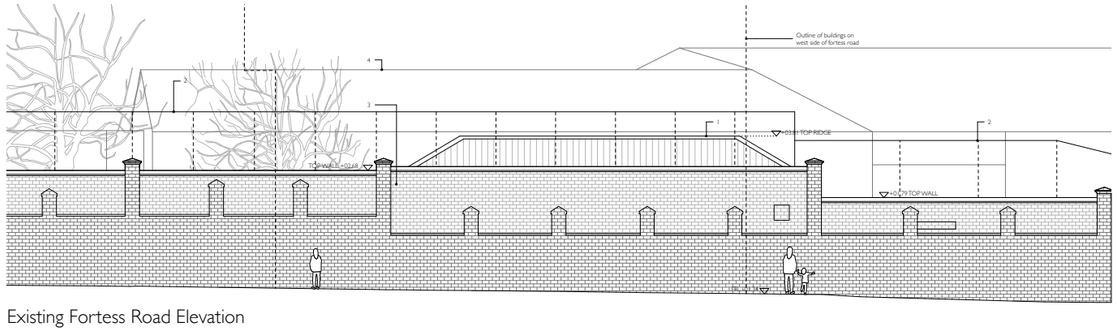
The total footprint of the proposal is 82m2, equal to the additional playground space, already in use, gained by converting the existing carpark. See Section 7.0 for calculations and further details.

The Plan & Access

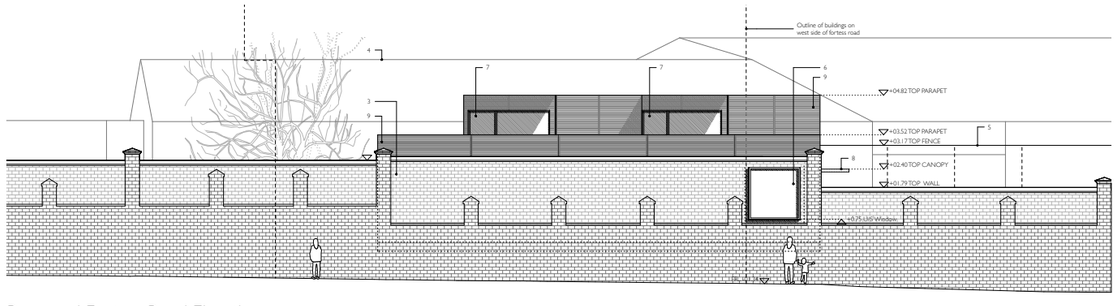
The proposal has a simple rectangular plan with the main entrance located on the south end. The building will be accessed through the main school entrance via the existing playground and ball court. Disabled access will be through the infants playground from the north and through a new opening in the existing retaining wall in front of the building.

A secondary entrance is planned to the north of the lab for access to the science garden.

Model view looking west to east




Existing Fortess Road Elevation




Proposed Fortess Road Elevation

# 9.0 Design Description *(con't)*

Daylight and Environmental Design

The environmental design strategy is integral to the design of the science lab proposal. A day lighting strategy based on bringing in good levels of indirect northern light from high level into the space was an important development of the design brief and was developed with environmental design consultants Ritchie + Daffin. This presents the best day lighting conditions for teaching spaces and school laboratories. Minimal west facing glazing and (internal and external) solar shading on the east and south facades mitigate glare and over heating.

Noise

Background noise levels from Fortess Road have an impact of the treatment of openable glazing and ventilation areas in the design. North facing roof windows are proposed to be fixed and natural ventilation is proposed via low level (intake) and high level (extract) integrated into the east facade facing the school. Openable windows at lab counter height are proposed as part of the east facade glazing to provide purge ventilation in the summer.

Relationship to the Boundary Wall

The west elevation of the proposed science lab forms a sensitive and carefully considered relationship with the Victorian brick boundary wall along Fortess Road. The design approach considers the wall as an important west elevation integral to the small building; one that respects the existing qualities and proportions of the original wall construction, while subtly integrating the proposed roof form and the 'display' window within the wall.

The west elevation of the building itself is set behind the existing boundary wall. It has a visible elevation 0.5m higher then the top of the boundary wall and is 0.5m set back from the street face of the wall. The wall cladding of this visible area and the rest of the building is proposed as timber. The result is felt to be subordinate and respectful to the character, proportions and materiality of the historic wall.

The display window is designed as an opening within the boundary wall set out centrally between two piers. The window provides a subtle and elegant connection between the science lab, Fortess Road and the surrounding community for which the lab will cater. The window heightens the relationship of classroom and the school with local area. The single fixed pane of glass is framed by a dark aluminium clad frame and designed to Secure by Design standards. An internal shutter will allow the window to be closed when desirable.

Model view looking south to north

Model view looking northeast to southeast

# 9.0 Design Description *(con't)*

Massing and Roof Form

The massing of the building is a rectangular volume with the main roof line on the north, south, west and part of the east elevation established at 3.5m above playground level and 0.5m above the top of the existing boundary wall.

Integrated within the roof volume are two triangular volumes that extend 1.5m higher then the main roof level and form part of the east elevation facing the school where the two triangular volumes meet to create the elevation facing the school.

The two raised triangular areas are key to the design of the science lab to:

- create ideal natural day lighting conditions for teaching fundamental to the environmental design strategy of the building - see description above.
- provide high level air extraction zone integrated into the east elevation as part of the environmental design strategy for heating and ventilation.
- create a location for a modestly higher space within the classroom for hanging objects/devices that support science and technology experiments and the teaching curriculum.

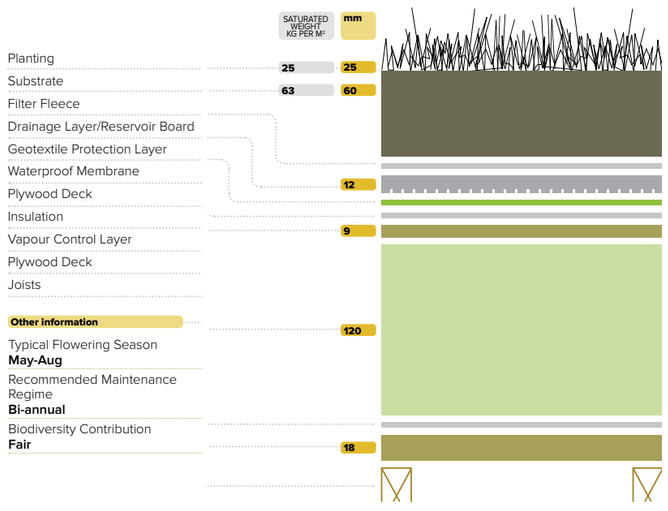
Along the west elevation the building line is set back from the existing boundary wall along Fortess Road as single storey volume with a height 0.5m higher then the top of the boundary wall. The two 1.5m high triangular sitting above the single storey roof line narrow towards the boundary, meeting 0.5m back from the building face. The design and geometry of the two tapering flat roof volumes have a relationship to the street that break up the upper roof line as experienced along Fortess Road, reducing the massing and visible impact of the building.

A screw piled foundation is proposed for the substructure of the building, to avoid any impact on the structure of the existing boundary wall and its underpinning recently installed.

The superstructure of the building is proposed as a simple timber frame made up of standard sized softwood members. The structure is internally visible giving the lab workshop feel on the inside. The exterior is made up of horizontal timber cladding and aluminium framed glazing that will sit elegantly behind the Victorian brick boundary wall and enhance the playground area as seen from the school.

example of weathered larch cladding

proposed horizontal timber cladding - Siberian larch




proposed sedum roof build-up


example of anodised aluminium framed windows and flashings - camden arts centre

# 10.0 Proposed Materials

External Rain Screen

The external cladding of the science lab is proposed as a horizontal timber rainscreen made from FSC Certified Siberian Larch. The character of cladding is to have pronounced gaps that pick up on the horizontal banding found in the brick boundary wall. The cladding will sit in front of concealed louvres for air extraction located at high level in the east elevation.

The timber will weather over time to a become brown/grey in colour. The cladding material and format will sit comfortably within its context and behind the brick boundary wall along Fortess Road.

Anodised Aluminium Windows & Doors

The external windows, roof windows and doors are proposed as an anodised aluminium framed system in a brushed bronze finish. The robust and well insulated glazing system will sit comfortably amongst the Victorian brick wall and the timber rainscreen cladding as it weathers over time.

Aluminium Flashings

Parapet flashings are proposed to be concealed behind the timber rainscreen. Where visible, such as to the frame of the display window onto Fortess Road, these are proposed as anodised in a brushed bronze finish to match the proposed windows.

Sedum Roof

The roof finish to all flat roof areas is proposed as pre-grown sedum on a growing substrate with a reservoir board. A Sedum roof with a growing medium will help increase local biodiversity, retain rainwater from entering the public sewage system and are attractive to look down upon from surrounding buildings / residences.

# 11.0 Illustrative Views

View from Fortess Road looking north

# 11.0 Illustrative Views *(con't)*

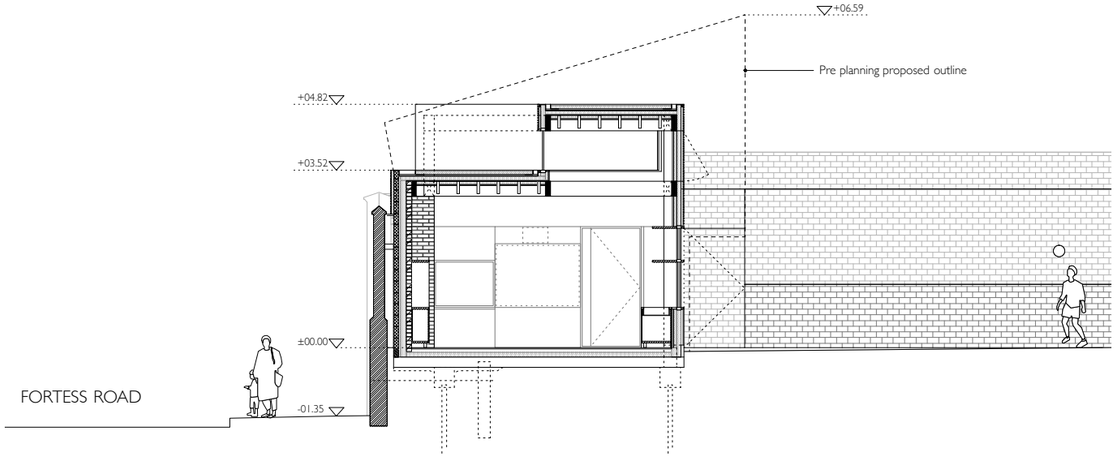

View from Fortess Road looking southeast

# 11.0 Illustrative Views *(con't)*

View from ball court looking northwest

# 11.0 Illustrative Views *(con't)*

Internal view looking northeast




PROPOSED CROSS SECTION AA

Cross-section of proposed building showing reduction in volume following pre-planning advice from Camden Planning. Section outline of pre-planning proposal dashed

Exhibition at the school April 2016

AY Architects Presentation to pupils April 2016

# 12.0 Consultation

London Borough of Camden Pre-planning Consultation

The design proposal follows pre-planning advice with Camden Planning Authority, Pre-application Reference 2015/6712/PRE dated 08/02/16.

Feedback was provided by planning officer Tania Skelli-Yaoz following a meeting at the school and site visit for the Stage 2 proposal. The design proposal consisted of a single storey building along the boundary fronting Fortess Road with a sloping roof rising to a two storey building along the east elevation facing the school. The overall volume was proposed to accommodate the provision for a raised storage area within the building.

The main advice from planning was a recommendation to reduce the overall height of the building and consider a reduction of the two-storey volume. The proposal was considered to be overly visible and appear isolated from Fortess Road.

The current proposal has been developed to omit the raised storage area within the building, resulting in a substantially reduced volume with reduced building height along Fortess Road and elsewhere. See comparative section of pre-planning and current proposals. The two 1.5m high volume extensions are triangular in plan and taper towards the street. The design retains the day lighting strategy of the scheme but substantially reduces the visible impact of the building from the surrounding context.

The School and Local Community

The school has been widely engaged in the process of developing the brief and building proposal. Participation by teachers, staff, local parents, governors and pupils making up the "Lab RATs" advisory group have met regularly since the conception of the project, providing import input in developing all aspects of the design.

An exhibition was set up in the school entrance from 13th-15th April, inviting parents and local residents to drop in to view the proposal and leave any comments. Several comments and questions were received and the feedback was overwhelmingly positive.

AY Architects presented the proposal and process of design to all Year 3-6 pupils on 13th April. Children are very excited about the proposal and made several suggestions for how the building could be used.

The consultation process has had a very positive influence on the development of the current proposal.

Proposed construction access via secondary entrance on Raveley Street

Proposed construction access via secondary entrance on Raveley Street

# 13.0 Construction Management Strategy

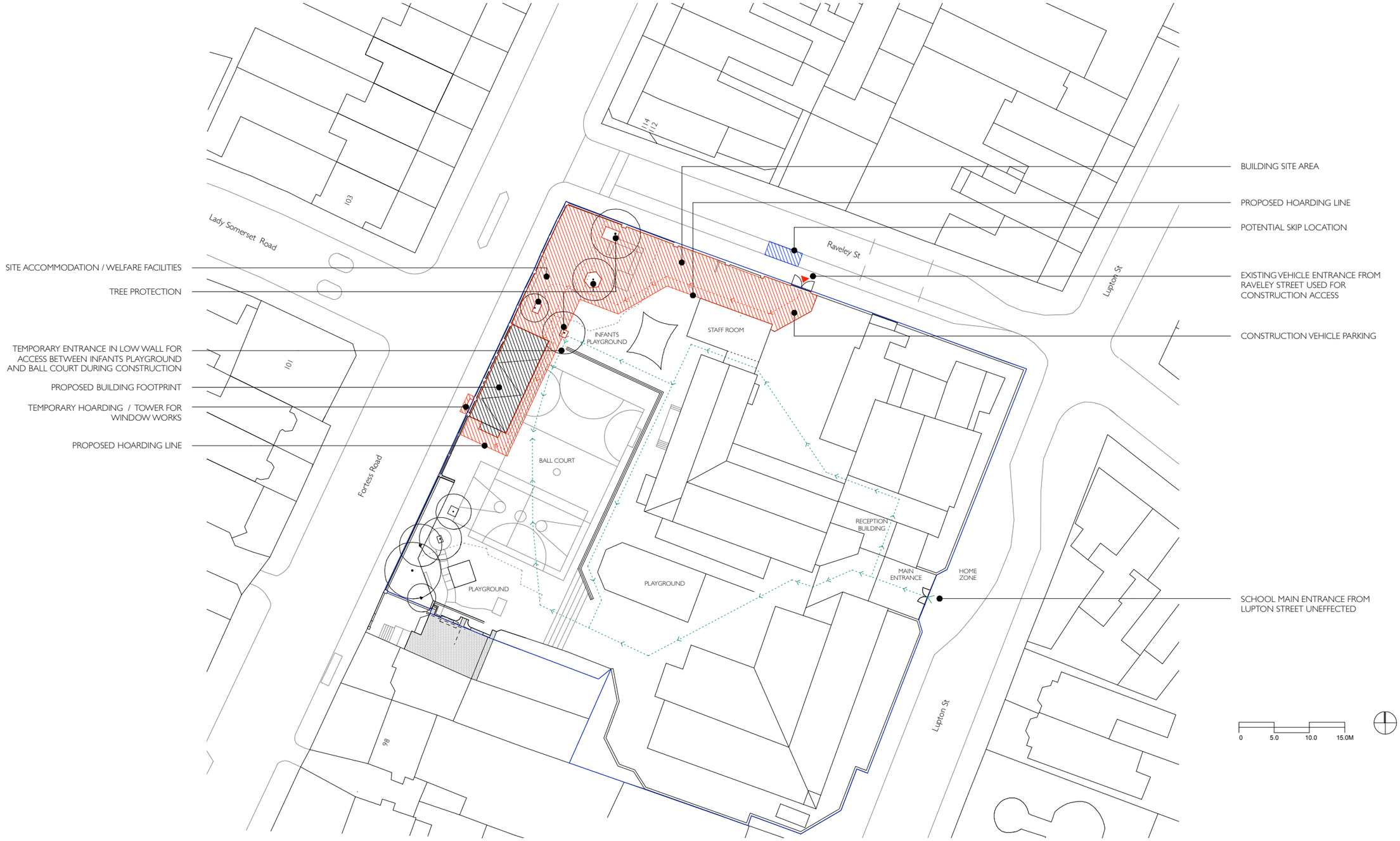
An initial Construction Management Strategy (as outlined on the following page) has been developed forming the basis for further coordination with the design team, the principal designer, the local authority and the appointed main contractor in order to plan, manage and monitor the health & safety of pupils and staff during all phases of the construction and to minimise impact of construction on the surrounding area.

Construction access is considered via the secondary entrance to the school grounds via Raveley Street with all construction access coming from Fortess Road. This strategy establishes a clear separation of school children and staff from the works. The main entrance to the school would operate as normal and be unaffected during the construction period.

The site area is proposed to occupy part of the infants playground at the northwest corner of the school with an undisturbed connection to the building site from the site entrance on Raveley Street for vehicle access, deliveries and removals.

A temporary hoarding is proposed on the pavement on Fortess Road for a short period of time for the works associated with the new display window.

The management strategy will be further developed to ensure an effective plan is agreed and in place prior to the start of construction.


SITE ACCOMMODATION / WELFARE FACILITIES
TREE PROTECTION
TEMPORARY ENTRANCE IN LOW WALL FOR ACCESS BETWEEN INFANTS PLAYGROUND AND BALL COURT DURING CONSTRUCTION
PROPOSED BUILDING FOOTPRINT
TEMPORARY HOARDING / TOWER FOR WINDOW WORKS
PROPOSED HOARDING LINE
BUILDING SITE AREA
PROPOSED HOARDING LINE
POTENTIAL SKIP LOCATION
EXISTING VEHICLE ENTRANCE FROM RAVELEY STREET USED FOR CONSTRUCTION ACCESS
CONSTRUCTION VEHICLE PARKING
SCHOOL MAIN ENTRANCE FROM LUPTON STREET UNEFFECTED
Lady Somerset Road
Fortess Road
Raveley St
Lupton St
103
101
98
114
112
INFANTS PLAYGROUND
STAFF ROOM
BALL COURT
PLAYGROUND
PLAYGROUND
RECEPTION BUILDING
MAIN ENTRANCE
HOME ZONE
0
5.0
10.0
15.0M

Montpelier Community Nursery, Kentish Town, 2012

Montpelier Community Nursery, Kentish Town, 2012

New entrance and extensions to Camden School for Girls, Kentish Town

# AY Architects Profile *(con't)*

AY Architects, founded by Partners Anthony Boulanger and Yeoryia Manolopoulou in 2005, has become recognised for ecologically-minded and community-based projects of exceptional quality.

Completed as our first public building, Montpelier Community Nursery in Kentish Town was mid-listed for the 2013 Stirling Prize, having won 2013 RIBA Regional and National Awards and the 2013 Stephen Lawrence Prize. Speaking about the nursery the judges said:

'The architects were key to the vision for the nursery which is why it was delivered without compromise and produces an all-encompassing educational experience….The building is designed to maximise sunlight, with a part-glazed saw tooth roof orientated north-south…. Internally the rooms are treated as giant furniture items working against the geometry of the structure. They are cleverly designed with and easily navigable by a small child. The selection of materials was a key part of the success. The black stained Siberian larch cladding allows the nursery to sit inconspicuously in amongst the treescape and contrasts with the white-washed internal timber against which the playful objects to come to life.'

The nursery was Highly Commended in the 2014 Camden Design Awards and the practice were a Building Design Magazine 'Small Project Architect of the Year' Award Finalist.

AY Architects has since worked with Torriano Primary School on a small new library building and are currently leading £1M extension and renovation works at Camden School for Girls.

The practice works closely and positively with communities and the local authority on public and private developments within the Borough of Camden.

AY Architects is a Limited Liability Partnership and a RIBA Chartered Practice.