

John Lyon School

Oldfield House



Design & Access Statement

Team

Architect + Lead Consultant:

Curl la Tourelle Head Architecture

Client Appointed Principal Designer:

PFB Construction Management Services Ltd

Planning and Heritage Consultant:

JTS Partnership

Landscape Architect:

Planit-ie

Mechanical and Electrical Engineer:

Boom Collective

Structural + Civil Engineer:

Elliot Wood Partnership

Fire Engineer:

Fire Ingenuity

Cost Consultant:

RLB

PR Consultant:

Camargue

Project Manager:

RLB

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1 Introduction

1.0 Introduction

John Lyon School is an independent Boys’ day school for aged 11-18. The current school building stock is at its maximum capacity. The existing buildings were developed iteratively, over a long period of time. It is recognised that facilities at the existing Oldfield House are not fit for purpose. It has been determined that the existing building is reaching the end of its life as it is starting to develop issues, such as structures with significant cracking and bowing. The building is dated, in a poor state of repair and not suitable for modern teaching and learning.

John Lyon School is proposing to deliver a state-of-the-art STEAM (Science, Technology, Engineering, Arts and Mathematics) centre of excellence. The new building would provide specialist teaching areas for STEAM subjects and create additional classroom space to enable the reconfiguration of the rest of the School so each department can function as dedicated hubs. This will improve the quality of the teaching environment and enable the introduction of new curriculum options.

The New Oldfield House will replace the existing dated Oldfield House building, to become a flagship building to reflect JLS’ identity, to meet the school’s current and future needs. Increasing pupil numbers is not part of the plans.

John Lyon School Wide Reconfiguration

John Lyon School’s Senior Management Team has undertaken a detailed analysis of the educational drivers for improvement, which include ongoing high standards of learning, attainment and alignment with the school’s educational values.

As the New Oldfield House is part of the school-wide development the notes below are considered:

- 1. Decrease the classroom occupancy rate from 85-95% to approximately 75-80%, to enable greater timetabling flexibility
- 2. To ensure that specialist subjects are taught in appropriate spaces and specialist areas to enhance teaching and learning experience.
- 3. To enable classrooms capacity that allows the school’s potential future expansion to be suitably accommodated.
- 4. To house classrooms as flexible learning spaces, including a space that can be used for conference style meetings which would be useful for both school and external use

1.1 Summary of Brief

New Oldfield House Brief

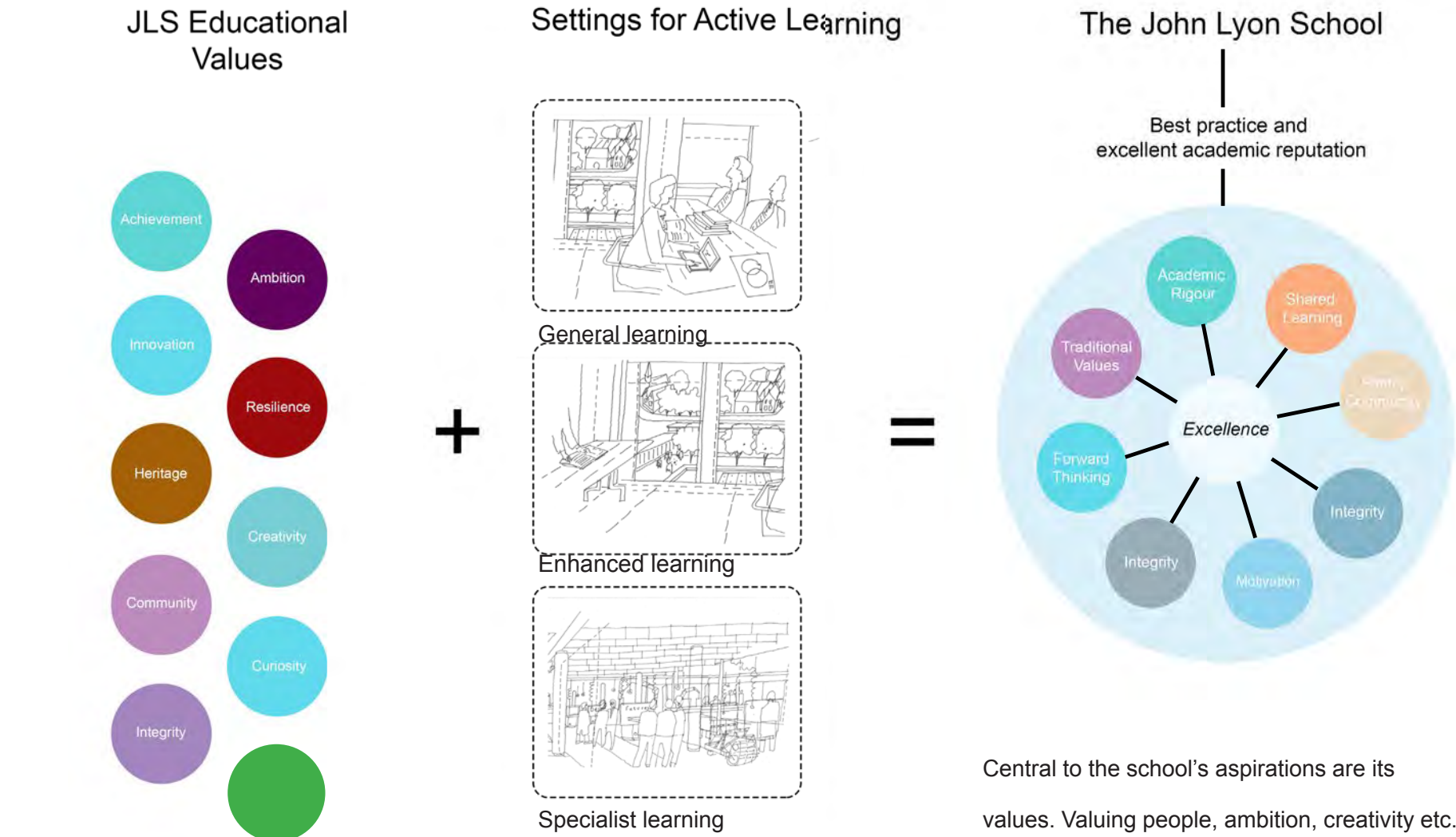
The Oldfield building proposal will set the new tone of the school for its remodelled identity. It is part of a site wide plan to facilitate improvements to the teaching and learning experiences for all pupils and staffs. The new building must provide a state of the art learning environments including a STEAM centre (to be sited on the ground concourse). STEAM is an acronym for ‘Science, Technology, Economics, Art and Mathematics’ and involves an integrated approach to learning. Inquiry, collaboration and process-based learning across disciplines is at the heart of STEAM. A comprehension of how this unique approach to learning is manifested in buildings can be observed in a few project examples in the page overleaf.

In addition to the STEAM Centre, the following major accommodation is planned:

- 6 x General Classrooms (including Maths)
- 2 x ICT/STEAM Classrooms
- 2 x Art Studios

The proposal also considered an outdoor play provision for year 7 and landscape improvement.

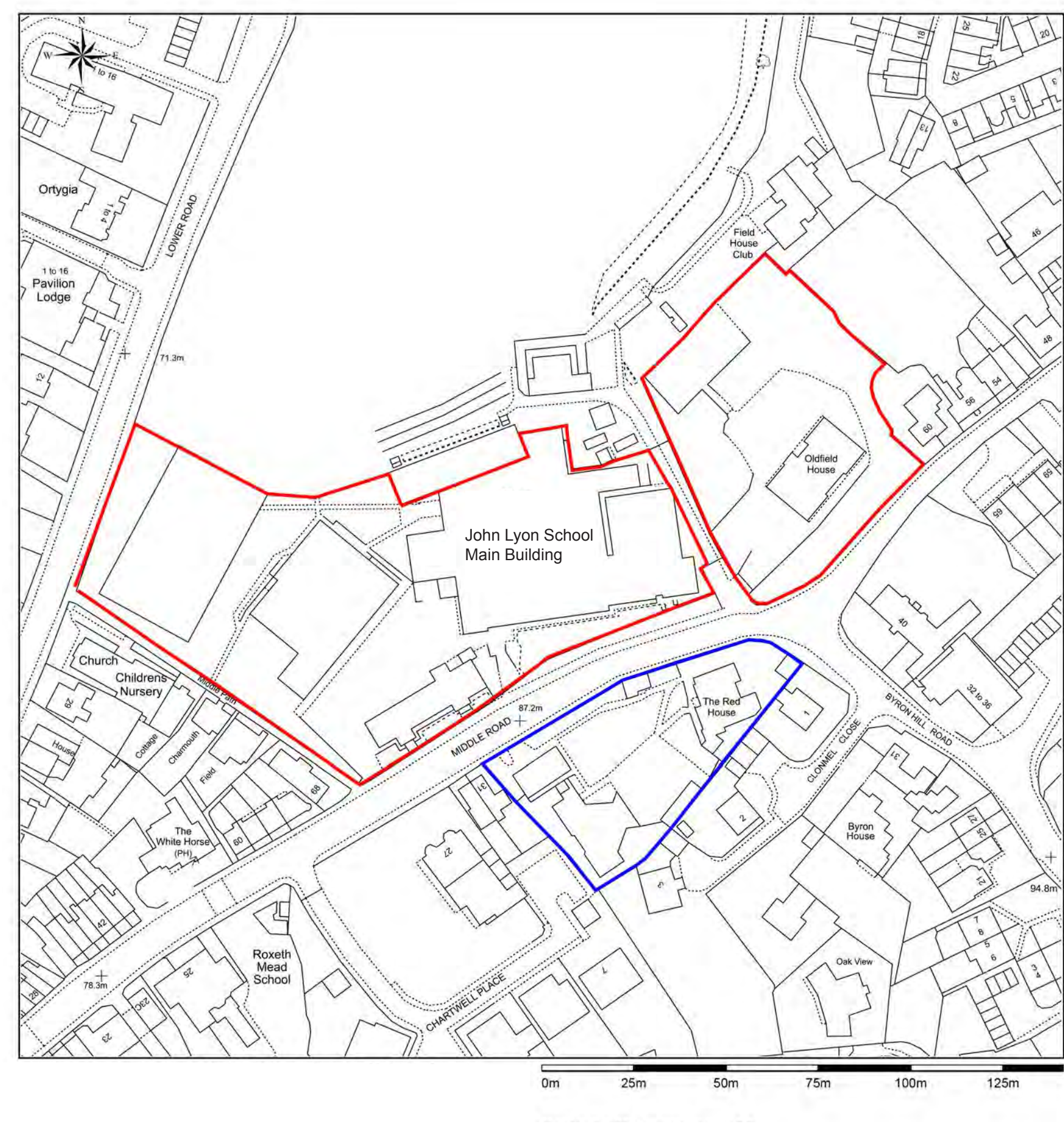
Core Room Schedule



2 Site Analysis

2.0 Site Location

Address:
Oldfield House
John Lyon School
Middle Rd
Harrow HA2 0HN



A **Section 106** was agreed in 1995, and varied in 2007 and 2011 to enable additions to the school outside of the agreed Building Envelope. This application will be accompanied by one to vary the S.106 Agreement to allow for building outside of the Building Envelope and the removal of Oldfield House.



The Oldfield House site is in the Harrow on the Hill Village conservation area, on the edge of areas that have been identified as of particular interest in Harrow's Character Appraisal of the area. Relevant building neighbours that are Grade 2 Listed are Red House and 40 Crown St and Field House is Locally Listed. Habitation of Harrow on the Hill Village goes back to Saxon times. The site borders but is not included in the area of Metropolitan Open Land to the North.

2.1 Harrow-on-the-Hill Context

John Lyon School has a prominent presence within Harrow-on-the-Hill. The schools surrounding village and neighbourhood characteristics are important influences on the proposed new building. The walk via Byron Hill up to the village presents several unique architectural precedents to contextualise the new proposal. From painted building facades to a variety of brickwork patterns, the locale provides many exemplar opportunities for the new Oldfield House to draw upon.



From Byron Hill road a view to the schools



Traditional Village signpost marks the middle of the town



Lower road looking towards Harrow School Cricket pavilion and the Oldfield site to the left.



North end of Harrow on the Hill High Street, looking leftwards out accross north london.



Elaborate stone detailing on the High street



Nearby complex with large netted basketball court and array of window shapes.



Traditional stone church conversion on Byron Hill road



High street view with heterogeneous frontage.



Expressive brick patterns and arches make an exciting High Street shop

Existing John Lyon School Site Buildings and Environment

The Middle Road site has the architectural built heritage of the Red House, a Grade II Listed building. It is set in its own garden and juxtaposed to the John Lyon School music block, a 1970s building. Any development in the vicinity of the Red House should seek to preserve or enhance its setting.



Main Building from the Oldfield House Site



Thomas Blackwell Building



Music School dark brick building



Red House



Contemporary additions to the Thomas Blackwell Building



Main Building fronting onto Middle Road



Contemporary Refectory and Sixth Form Centre

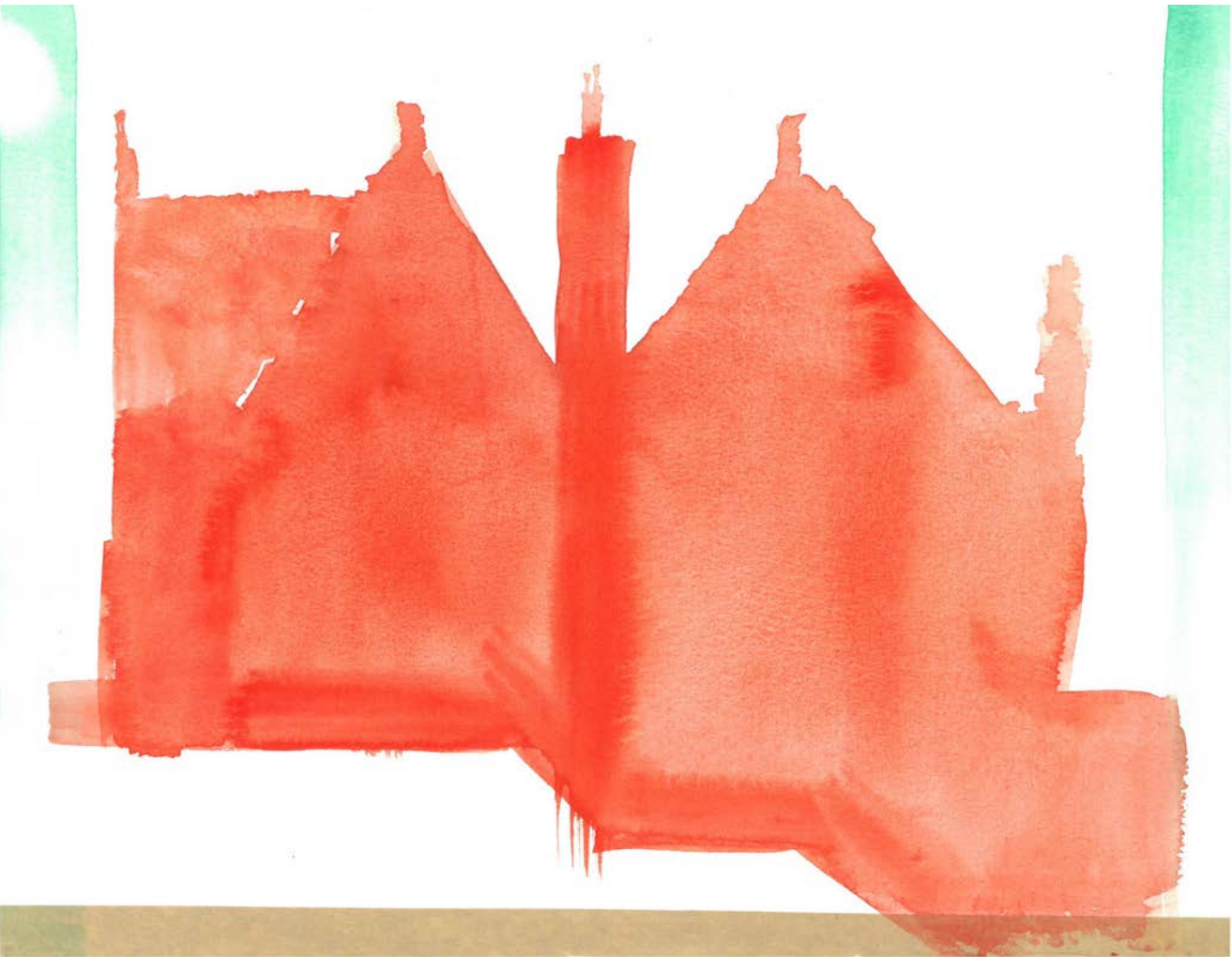
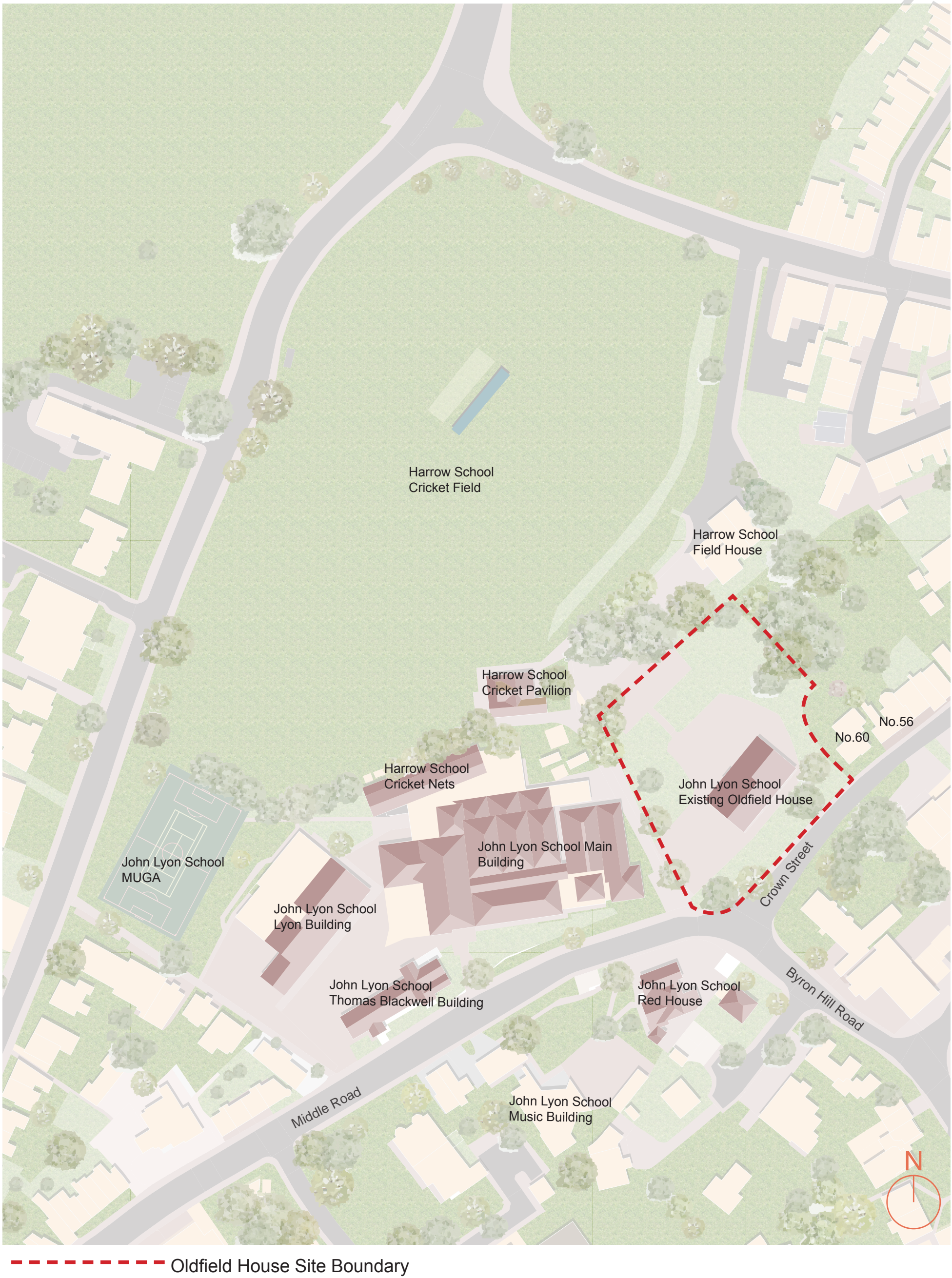


The Lyon Building, low rise teaching and drama building



Interior View towards the Thomas Blackwell 6th Form Centre

2.2 John Lyon School Existing Plan



Watercolour impression - John Lyon School Thomas Blackwell Building

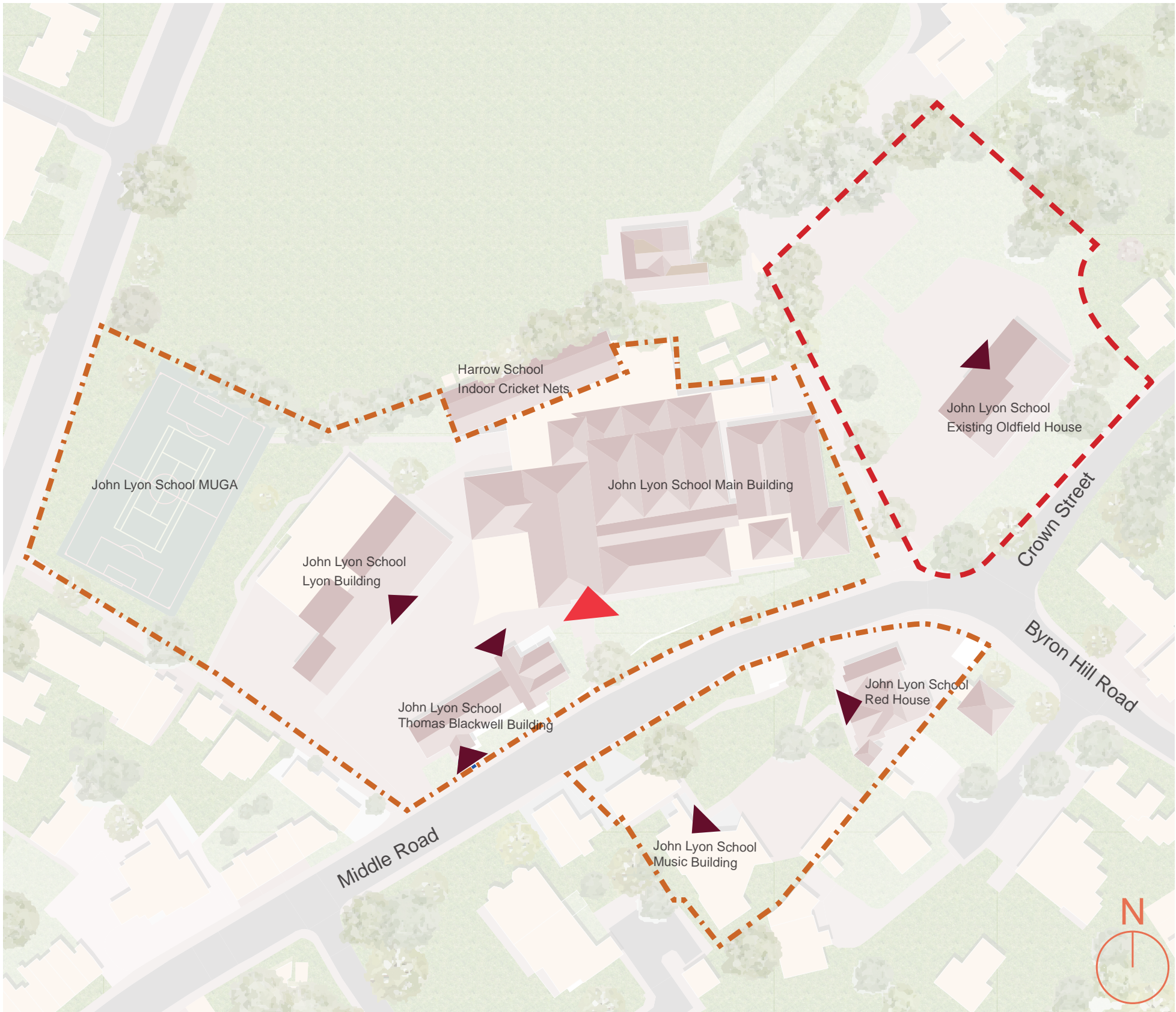
‘JLS pupils and staff are in favour to maintain the heritage on the hill, but with a modern ‘twist’, like the existing Thomas Blackwell Building interior and extension.’

- JLS Senior Management

Team

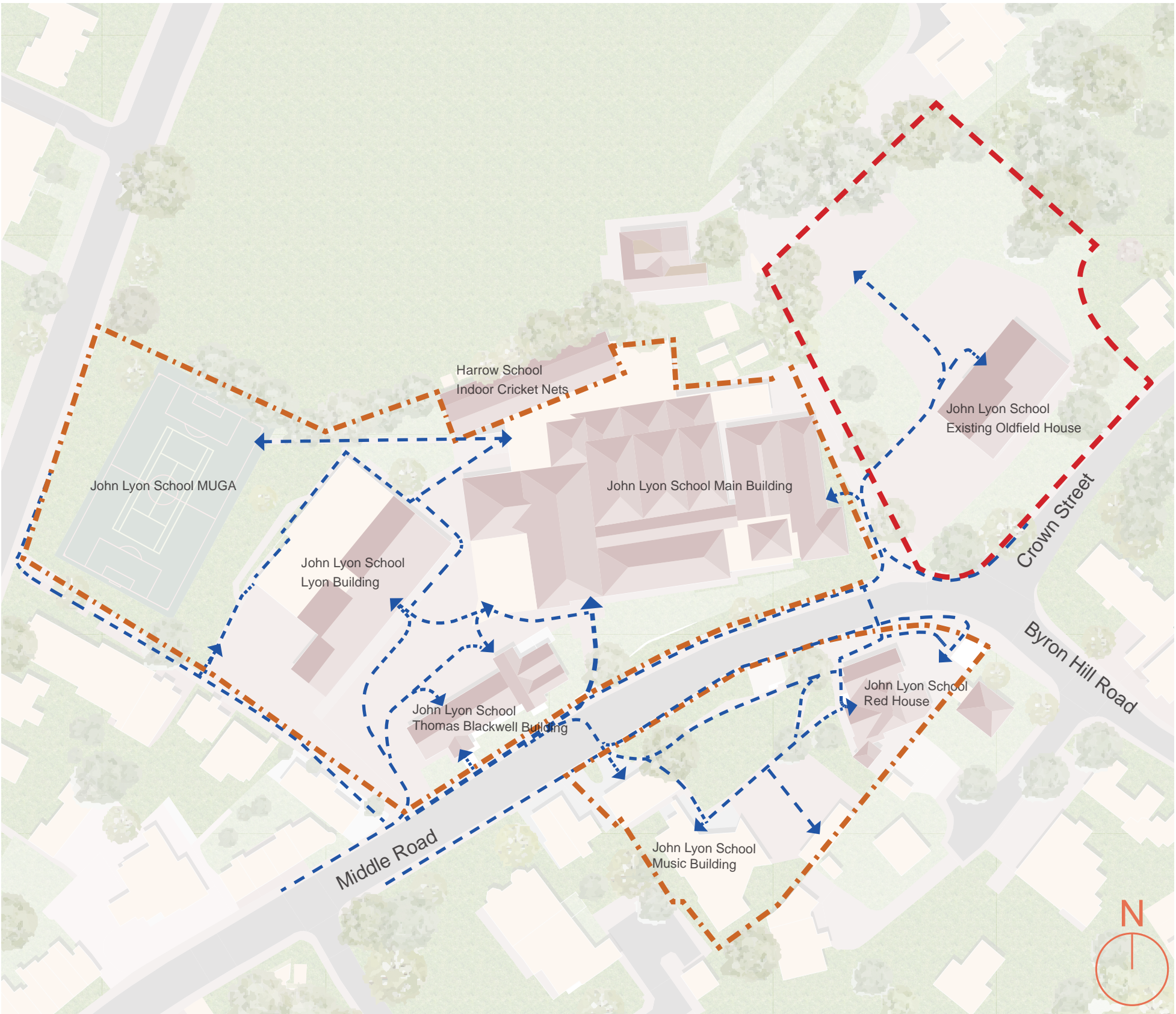
2.3 Existing School Wide Access and Circulation

Current School Access



- John Lyon School Oldfield House Site Boundary
- . - John Lyon School Site Boundary
- ▲ Main School Entrance/ Reception
- ▲ Building Main Entrance

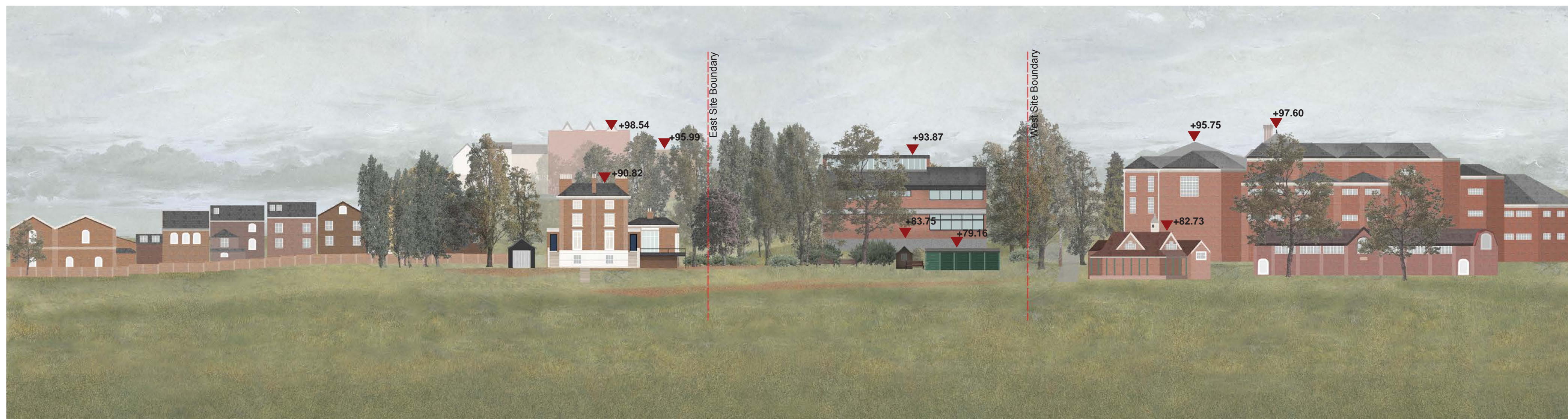
Current Pupil's Circulation



- John Lyon School Oldfield House Site Boundary
- . - John Lyon School Site Boundary
- - -> Pupil Circulation

2.4 Adjacent Building Heights

Drawing based on a Topographical Survey by Matrix Surveys conducted in November 2018. Please refer to the Appendix 1 for the Topographical Survey.



2.5 Existing Oldfield House Site Photos

The site is approximately north-west facing and borders Middle Road and Byron Hill to the south, the John Lyon School Main Building to the west, Harrow School cricket field to the north and residential properties to the east. The topography slopes significantly from south to north and east to west. The existing Oldfield House building is a 1970s construction consisting of a ground and first floor. The building accommodating the schools Languages, History and Classics departments.



Harrow School Cricket Ground and Field House to north of Oldfield House Site



Oldfield House to the left of the image with the Main School to the centre



Ornate gated entrance to the site



View of the building from Byron Hill



Willow tree on the site



Brick wall and bushes buffering Middle Road and Byron Hill



View of Oldfield House from the Harrow Cricket Field



Close up view of the bowing concrete slab to Oldfield House



Exposed Concrete Slab with cold bridge



High level dated skylight, difficult to maintain.



Exposed services fitted for modern facilities.



ICT room located on the south side, blinds are always down to prevent over-heating.



Existing Doors are not Fire Regulations compliant



Cracked existing wall does not take the load of radiators.



Compact space for staff.



Lockers located within classrooms



Brick upstand exposed, causing a cold bridge.

2.6 Existing Building Visual Survey

CLTH carried out a visual assessment following the approach used by the ‘Holistic Evidence and Design’ project, funded by the UK Engineering and Physical Sciences Research Council. Together with the Physical Condition Survey (Appendix 2) conducted by Oakleaf Surveying LTD, a commentary on the fitness of purpose of the existing Oldfield House was made.

Commentary

It is not a question of good or bad classroom design when we come to assess Oldfield House. Oldfield House was a purpose-built, constructed in 1981 to meet educational needs at that time. It is very clearly less effective as a learning environment when compared to the wider school provision and modern educational requirements. The school’s Senior Management Team wishes to optimise the performance of learning spaces utilising good design to lead to optimal learning outcomes.

CLTH’s assessment begins with 3 headings, three aspects of indoor environmental quality (IEQ) which constitute optimal classroom environment impact on pupils’ attainment.

1 Physical Comfort or Naturalness

Physical comfort means overall environment that can benefit a pupil’s learning process. Aspects of environmental conditions such as daylight, sound, temperature, ceiling height and general flexibility can all impact physical comfort, and lead to sub-optimal learning outcome where designed poorly- incorrectly.

2 Individualisation and Flexibility

Displays of academic concepts and construction to promote greater participation and involvement in the learning process. Building Bulletin 103 (2015) specify that flexibility must be a key design requirement with the brief for new and existing classrooms. Flexibility is needed to allow different activities within the classroom/ and or the needs of different aged learning users.



3 Stimulation

Stimulation related to how exciting and vibrant the classroom is. Elements of the room should combine to make a visually coherent and structured environment.

Please refer to the Appendix 3 for the full commentary.

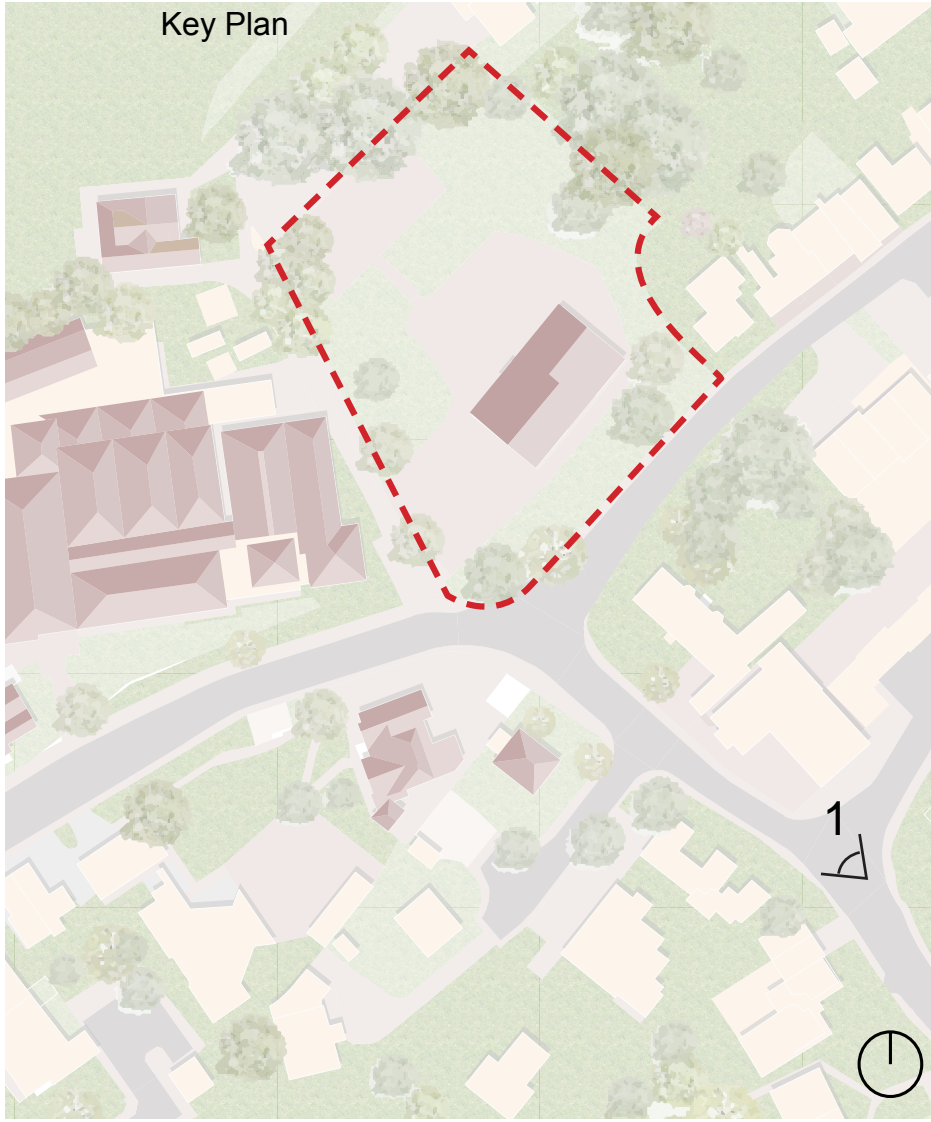
2.7 Site Constraints and Microclimatic Orientation Study



- Key:
- Vehicle Access
 - Pedestrian Access
 - Existing Walls
 - Trees (Cat B)
 - Site Boundary
 - Existing Oldfield House Footprint
 - Proposed Oldfield House Footprint
 - Existing Residential properties
 - Gate
 - Existing Oldfield House - to be demolished

3.8 Existing view from Crown Street

The view mid way down Byron Hill Road. View obscured by building and trees.



2.7 Flood Risk Assessment

Summary

Elliott Wood Partnership has been appointed by John Lyon School to undertake a Flood Risk Assessment for the proposed development at Oldfield House, Harrow-on-the-Hill.

GOV.UK and the Harrow council Strategic Flood Risk Assessment (SFRA) flood maps show that the site is considered to be in Flood Zone 1. Flood Zone 1 comprises land assessed as having a less than 1 in 1000 annual probability of river or tidal flooding in any year. All uses of land for development are considered appropriate in this zone.

The GOV.UK flood maps also highlighted areas of low and medium risk of surface water flooding within the site.

The proposed levels of the development will be designed to ensure the existing surface water flow paths across the site are maintained while also protecting the new building from surface water ingress. The proposed surface water drainage network for the development will be designed for the 1 in 100 year return period plus 40% climate change.

Refer to Elliottwood Partnership's Flood Risk Assessment for more details.

3 Design Development

3.1 Early Design Options

CLTH have developed a number of options during RIBA Stage 2 & 3. The key considerations were *form*, *massing* and *light*. These were explored in conjunction with the school’s educational and project brief.

The footprint of the later proposed option is identical to the existing Oldfield House footprint. The scale and volume of the further developed option ‘The Bow’ and ‘The Rig’ will be further discussed in the document.



The Bow



The Rig

Early Massing Models



Water colour impression of ‘The Bow’ on Site Elevation



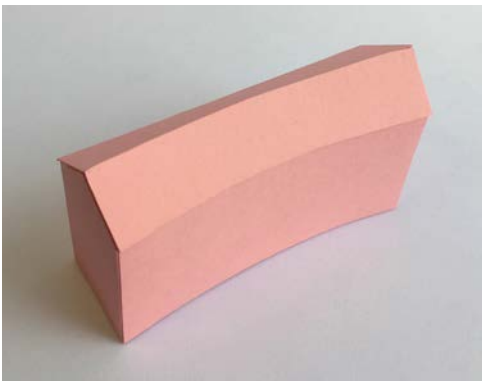
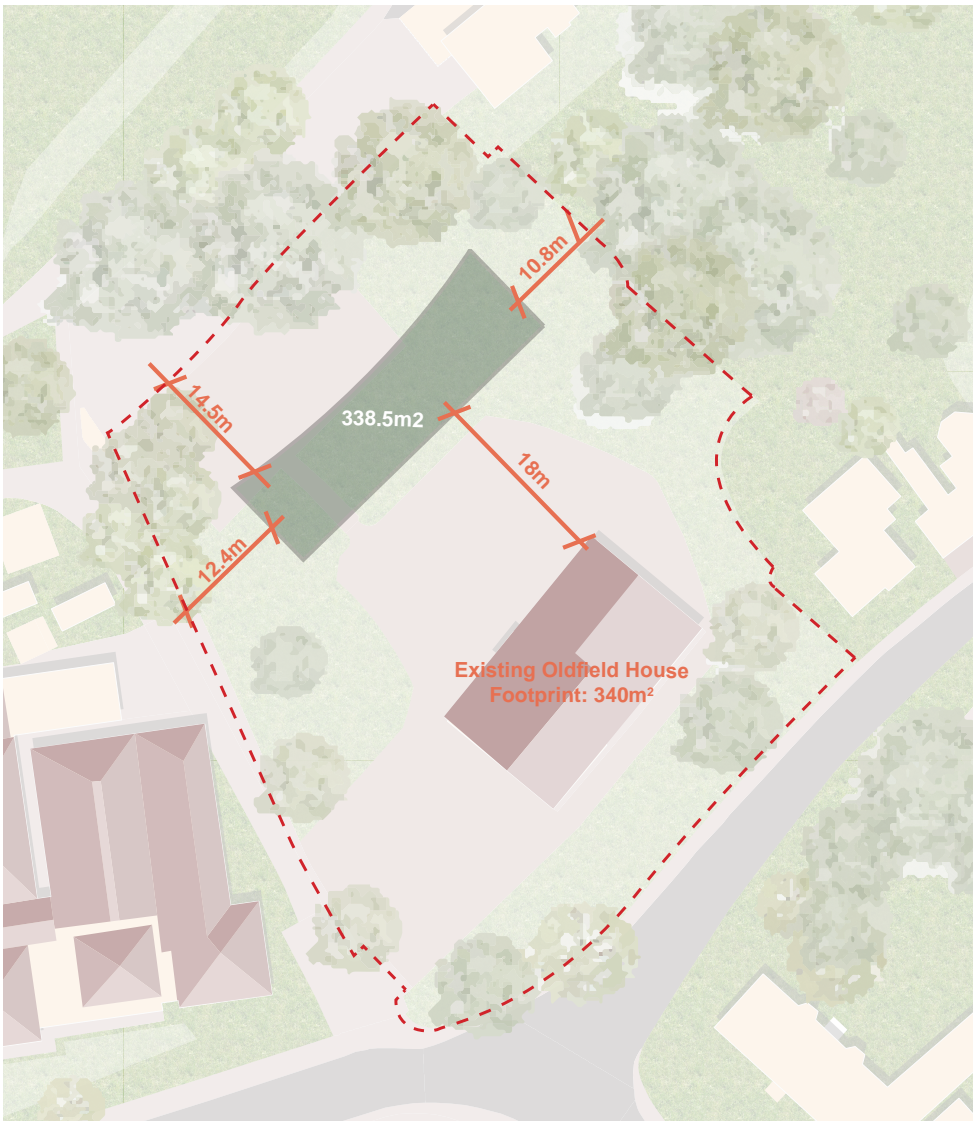
Water colour impression of ‘The Rig’ on Site Elevation

3.1 Early Design Options

3.1.1 Further developed Options - The ‘Bow’

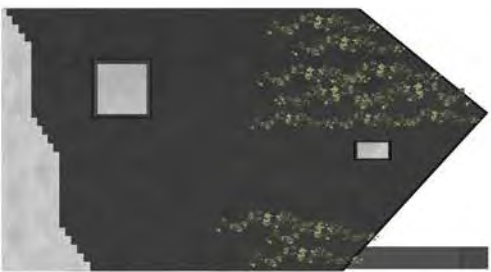
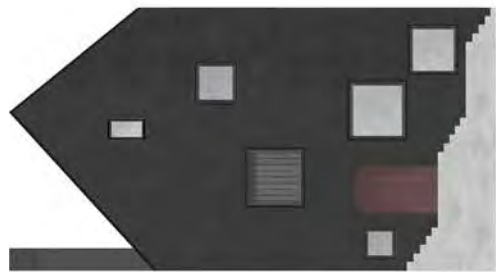
‘The Bow’ was developed to match the footprint of the existing Oldfield House. The mass sits towards the bottom of the slope closer to the cricket field boundary. The building’s north façade is gently faceted inwards responding to the focus views out to the natural landscape. Square windows of the classrooms spiral up and across, chasing around corners in playful misalignment.

The proposal sinks the lower ground level into the bank making best use of the site’s change in level. This allows outdoor access from both upper and lower ground floor levels. This cutting into the bank reduces the height impact of the building on the residents of Harrow-on-the-Hill. The south elevation will, therefore, be mostly hidden by the brick wall along Middle Road.



Early Elevational Material Study - The Bow

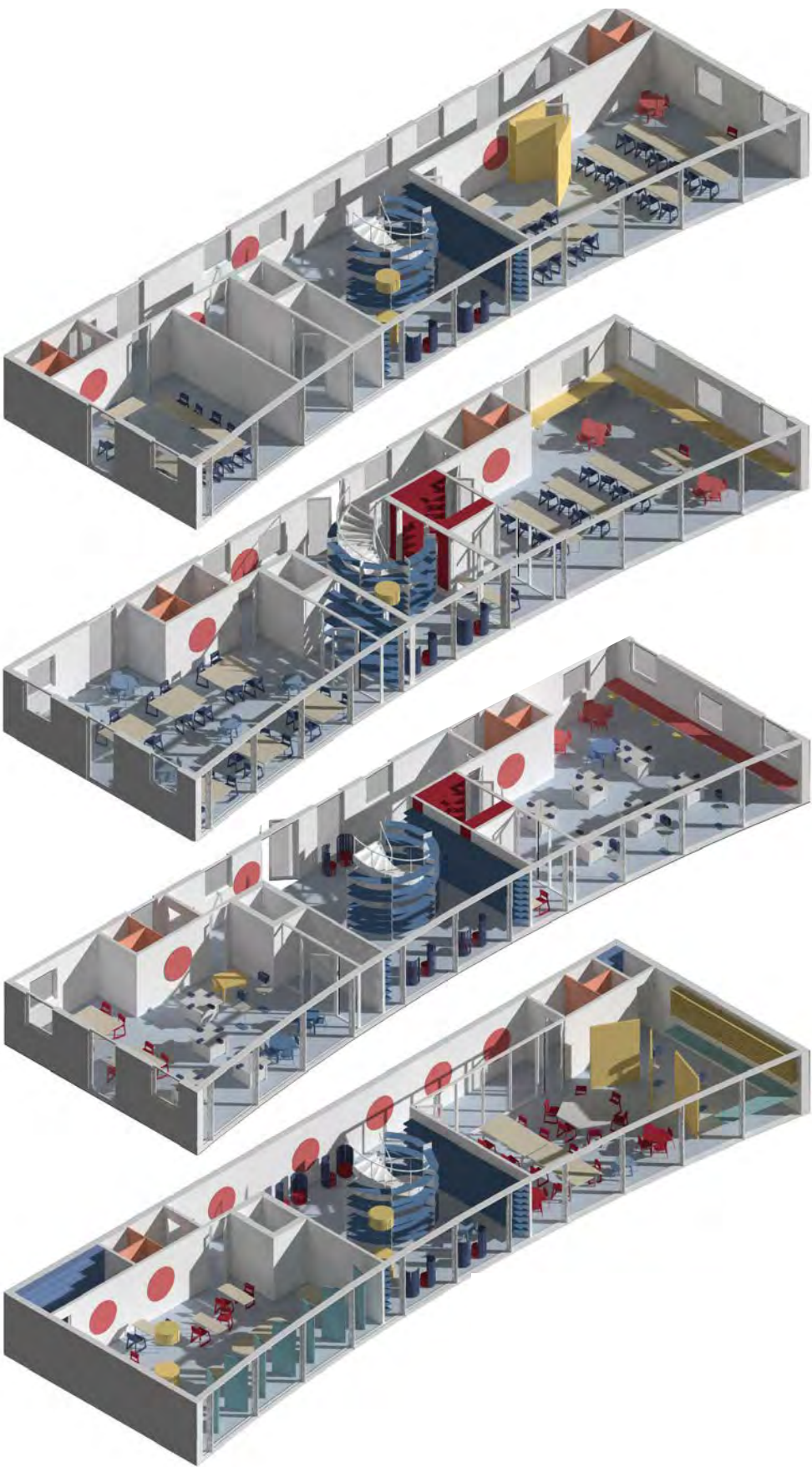
Bricks with GRC on the Field Elevation



3.1 Early Design Options

3.1.1 The 'Bow'

Exploded Axonometric Diagram



Maths
Second Floor

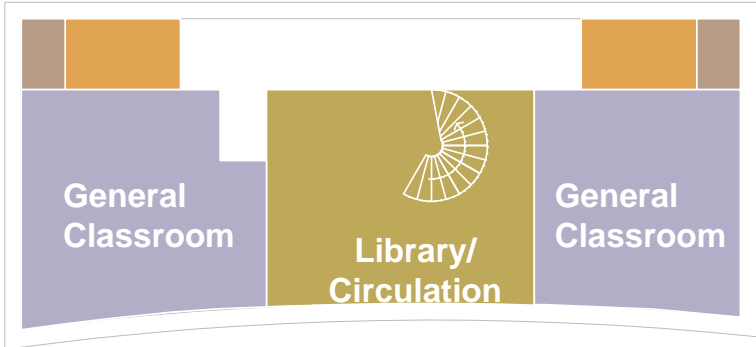
ART
First Floor

D.T
Upper Ground

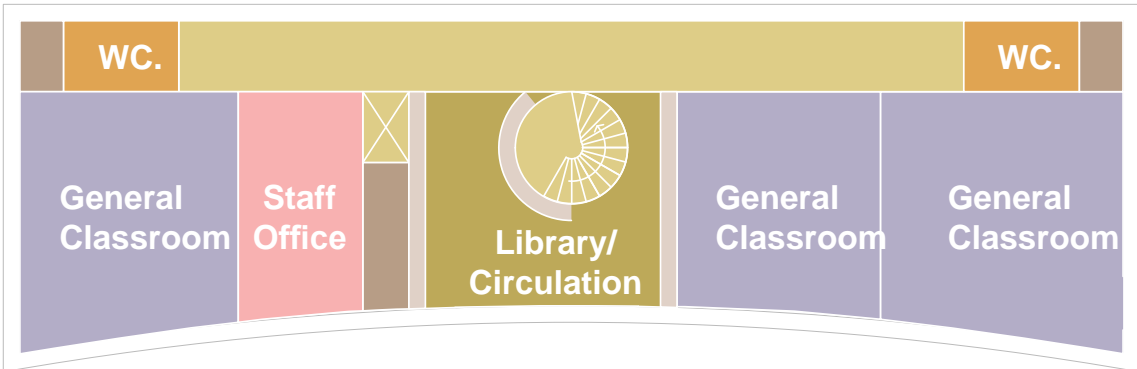
STEAM
Lower Ground

The 'Bow'

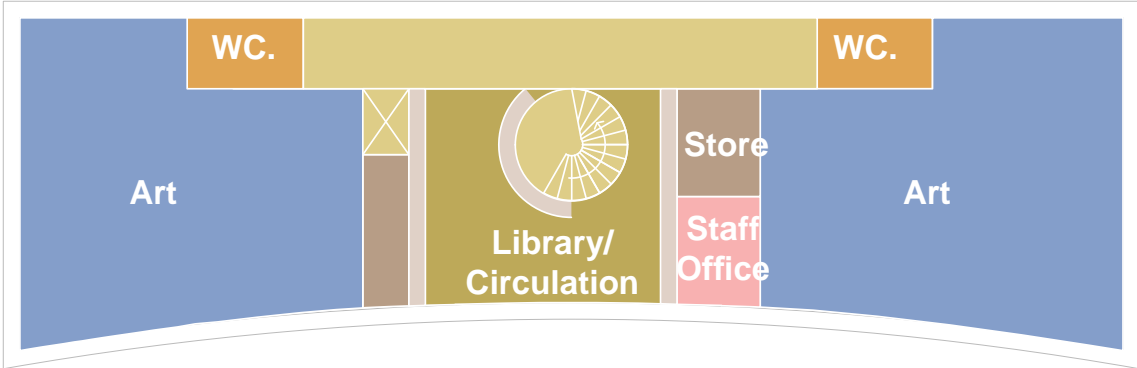
Educational Layout Plans



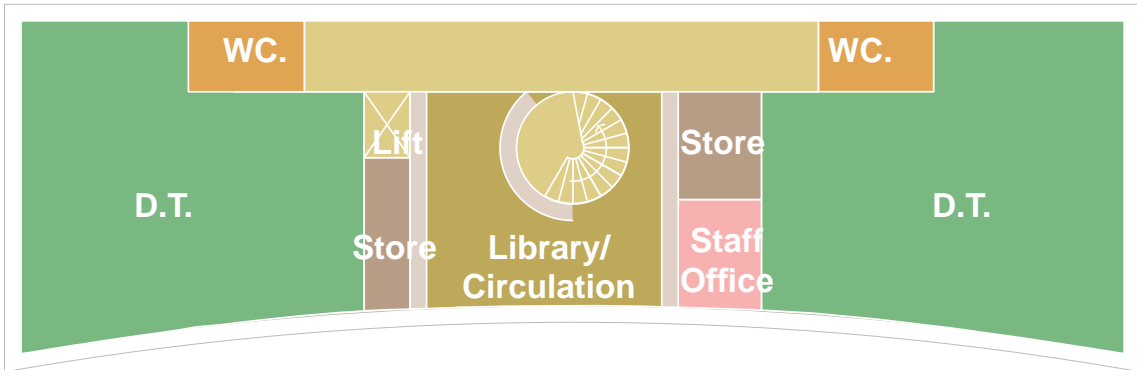
Maths
Attic



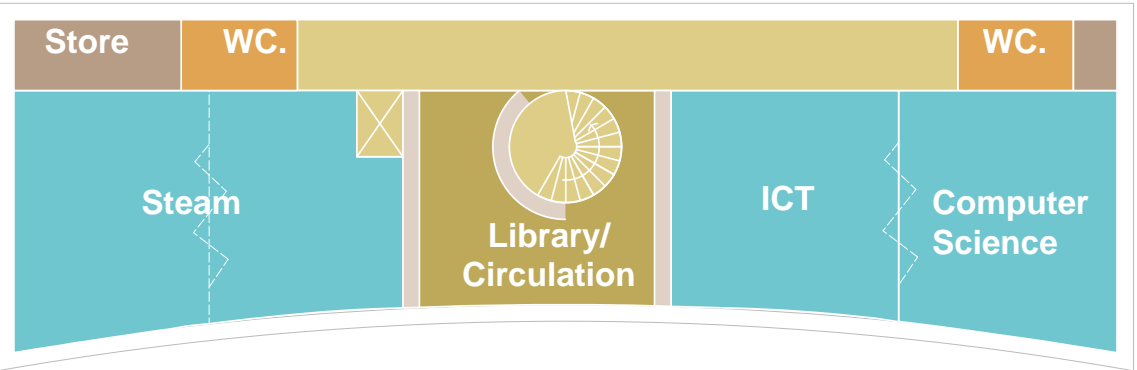
Maths
Second Floor



ART
First Floor



D.T
Upper Ground



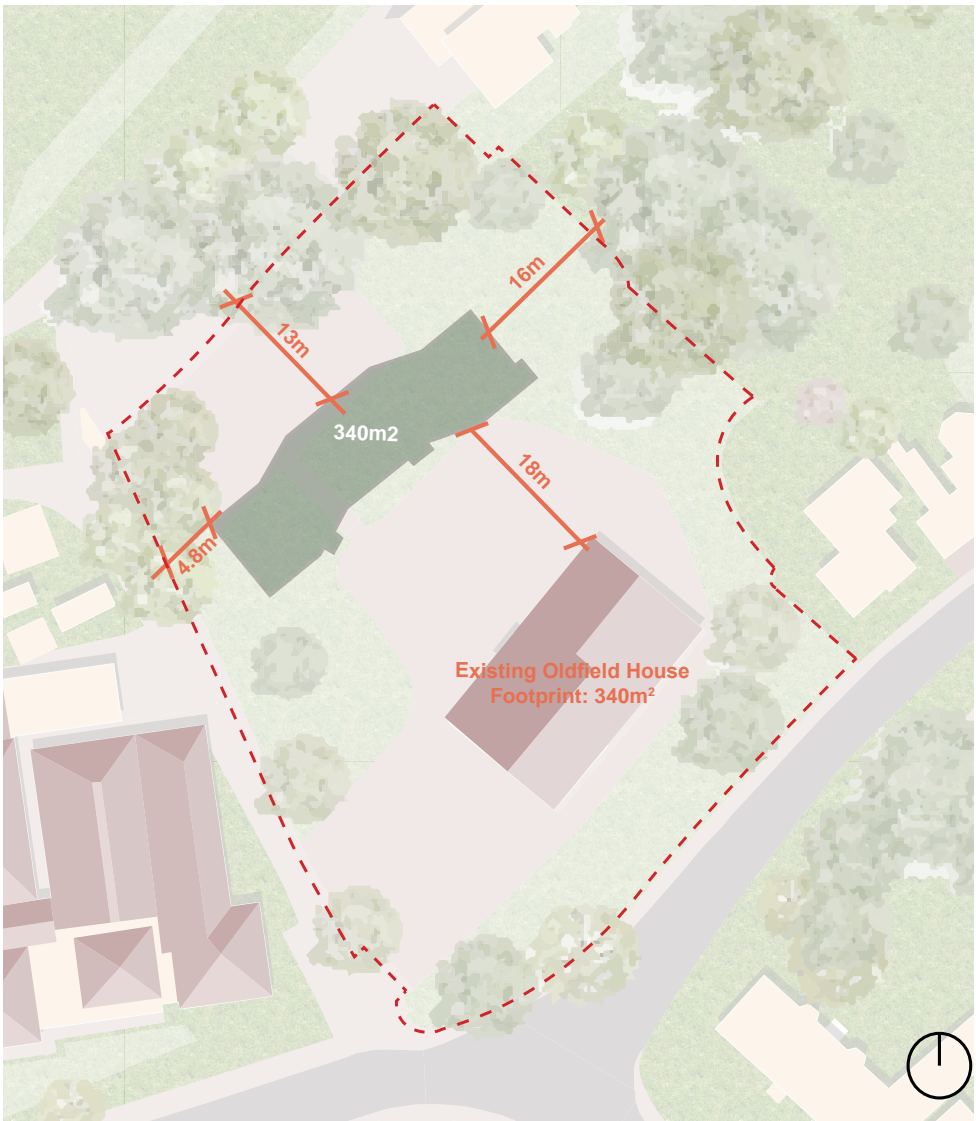
STEAM
Lower Ground

3.1 Early Design Options

3.1.2 Further developed Options - The 'Rig'

Similar to 'The Bow', 'The Rig' has the same footprint as the existing Oldfield House. The building has a differentiated volume, making a formal, stepped facade, and having equally stron profiles to the other sides of the site. The building's volume accentuates its 'object' quality at the same time making connections to the historic structure nearby.

The building plan is cranked to take full advantage of the plot and to mitigate the buildings elevational presence as it faces the cricket pitches. The east and west ends of the building are set back and thus the affect of a continuous wall is avoided. The wing's main entrance face south and sited in a natural position for students approaching from the main school complex. Secondary entrances are offered along the same south wall accessing the ground floor concourse. The front door itself is in studded oak boards.



Early Elevational Material Study - The Rig

Vertical Timber weatherboards



3.1 Early Design Options

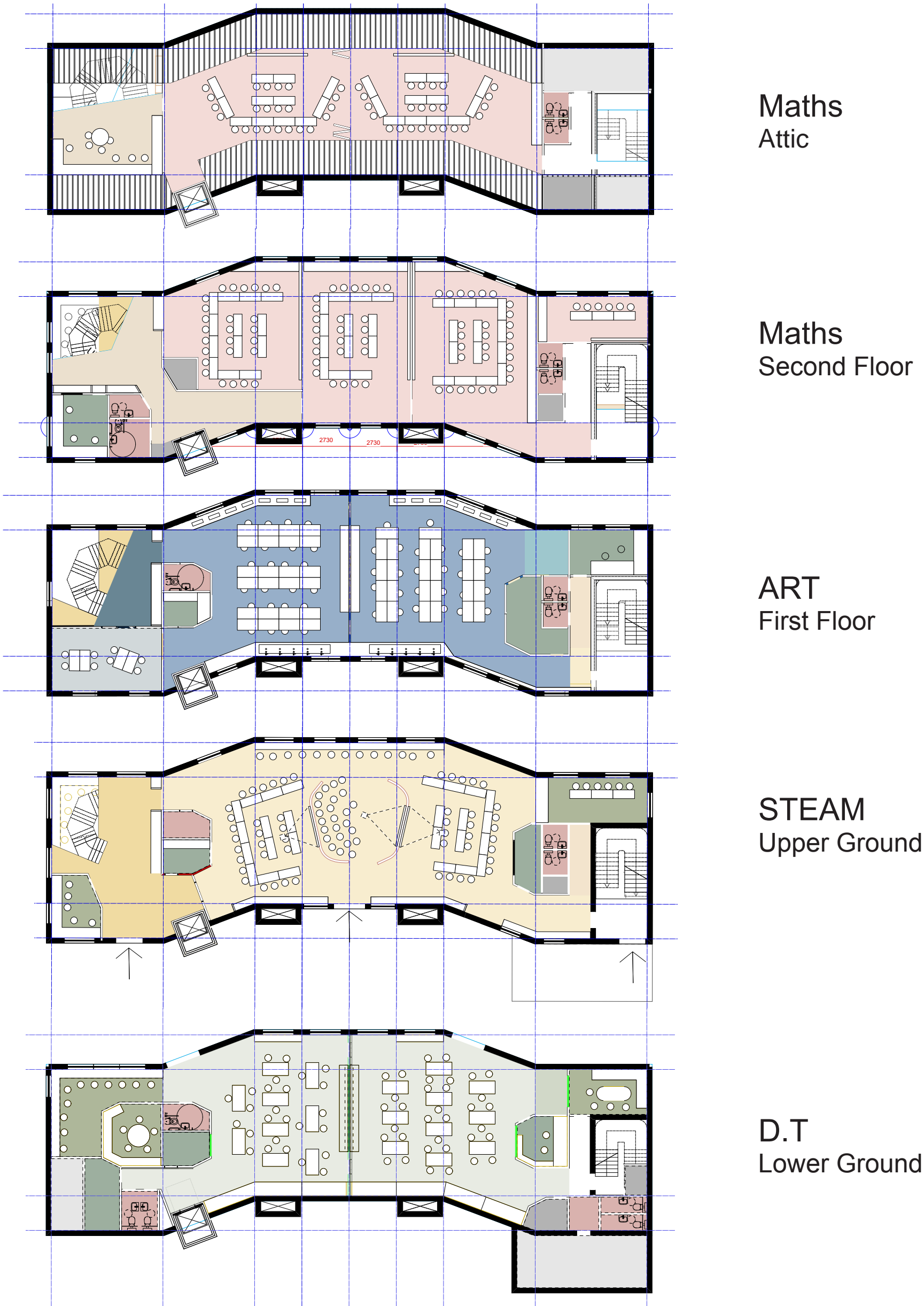
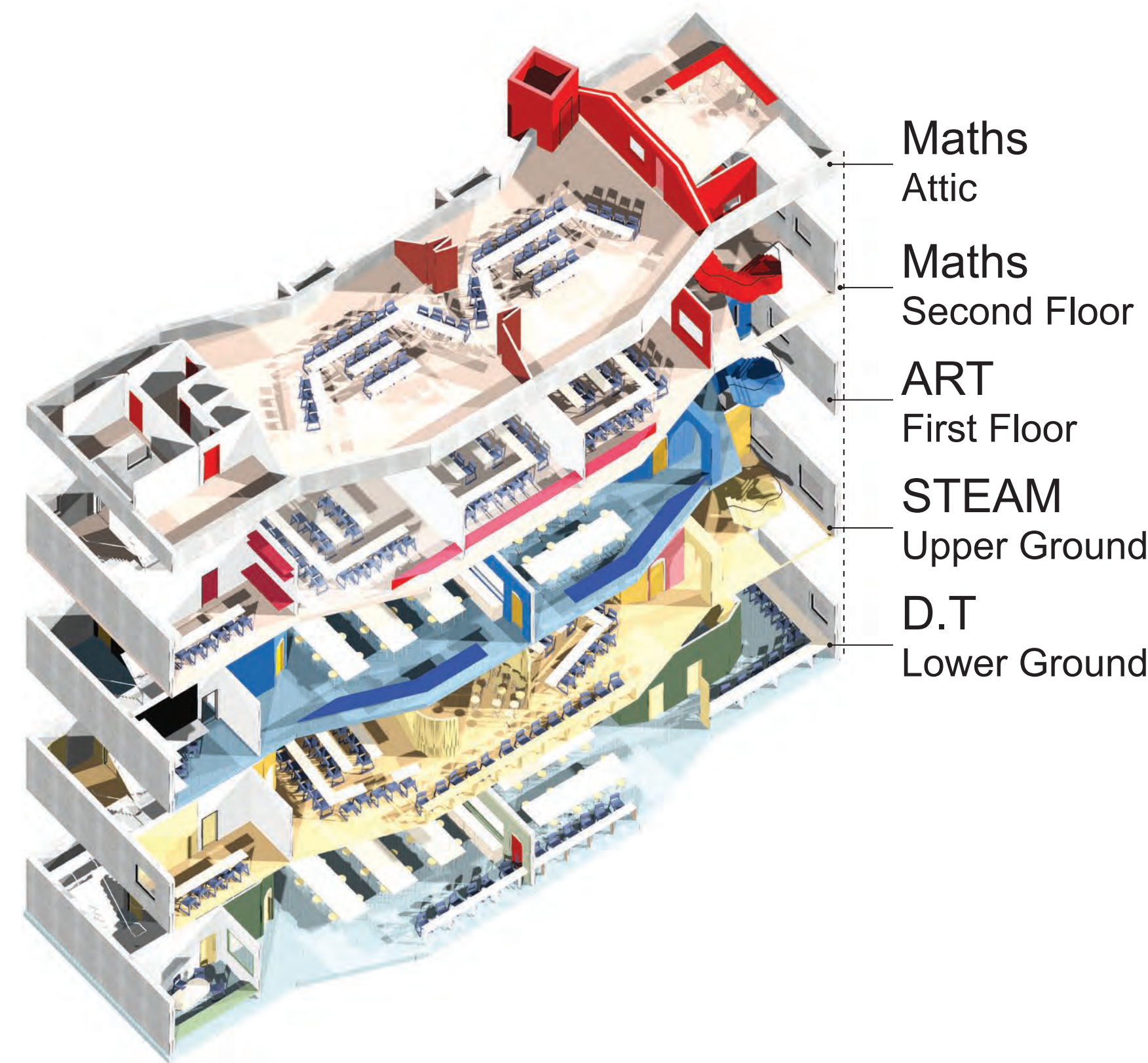
3.1.2 Further developed Options - The 'Rig'

Exploded Axonometric Diagram

Reviewing and developing the academic layout with key circulation considerations.

The 'Rig'

Education Layout Plans - developed in conjunction with input from the School's Senior Management Team.



3.1 Early Design Options

3.1.2 Further developed Options - The ‘Rig’

Visualisation



Northern View from the field
Artist's Impression by Forbes Massie Studio



Southern View
Artist's Impression by Forbes Massie Studio

3.2 Stakeholder Engagement

At each design stage, consultation with the school’s stakeholders have taken place via presentations and Q&A sessions. A public consultation was also held on 9 January 2019. Below is a summary of the Consultation Report prepared by Camargue, please refer to the Appendix 5 for the full report.

Summary of the Pre-application community consultation

Before submitting a planning application to Harrow Council, the School engaged with key stakeholders and the local community to present its emerging proposals and obtain feedback on its draft plans. This community engagement programme was separate from, and in addition to, the pre-application dialogue entered into by the School with the London Borough of Harrow, the local Design Review Panel, and other statutory and technical consultees.

The Conculation report describes the School’s approach to community engagement on its emerging plans, which centred around a public consultation event on 9 January that was supported by other consultation and engagement tools.

Around 35 people attended the public consultation event and took the opportunity to ask questions and comment on the plans. A total of three feedback forms and two emails were submitted to the School.

Overall feedback to the proposals was largely positive, with general support for the educational objectives of the new building and acceptance that Oldfield House did not merit protection. The height of the proposed building relative to surrounding buildings was generally considered appropriate, as was the overall approach to design and choice of materials, the protection of existing trees, and retention of the car park.

The main issues of interest and potential concern related to the construction period and how disruption would be managed. Typically, visitors were pragmatic about construction being a temporary inconvenience and were reassured that a Construction Management Plan was being prepared as part of the planning application. However, there was a desire to see the School keep the construction period as short as possible; minimise construction

traffic; prevent on-street parking by contractors; and minimise dust and noise.

The closest neighbours on Crown Street were most concerned about the plans. They believed the proposal was unwarranted, not in keeping with the s106 restriction on development across the School, too big and bulky, and would block their view.

Revised proposals

The plans for New Oldfield House have evolved since the consultation in response to the School’s dialogue with Harrow Council and the Design Review Panel. Community feedback was also a key consideration when the changes were being made to ensure local concerns were addressed.

For the reasons set out within this report, it is considered that the School’s approach to pre-application consultation and community engagement has met the guidance in the NPPF and the Council’s SCI. It has raised awareness of the proposals, identified support for the School’s objectives and helped ensure key concerns are addressed.

The School will continue to keep the local community and relevant stakeholders updated during the application and, if approved, during construction.

3.3 Preferred Option - Big House & Small House

A Design Review Panel took place on 5th December 2018. Below are a few points extracted from the feedback from Richard Cottrell, DRP Chair.

Massing and Layout

- The panel have a concern that the new open plan building arrangement, although commended in principle, is too heavily reliant on moving elements. The scheme should be properly future-proofed for change and adaptability.

Circulation

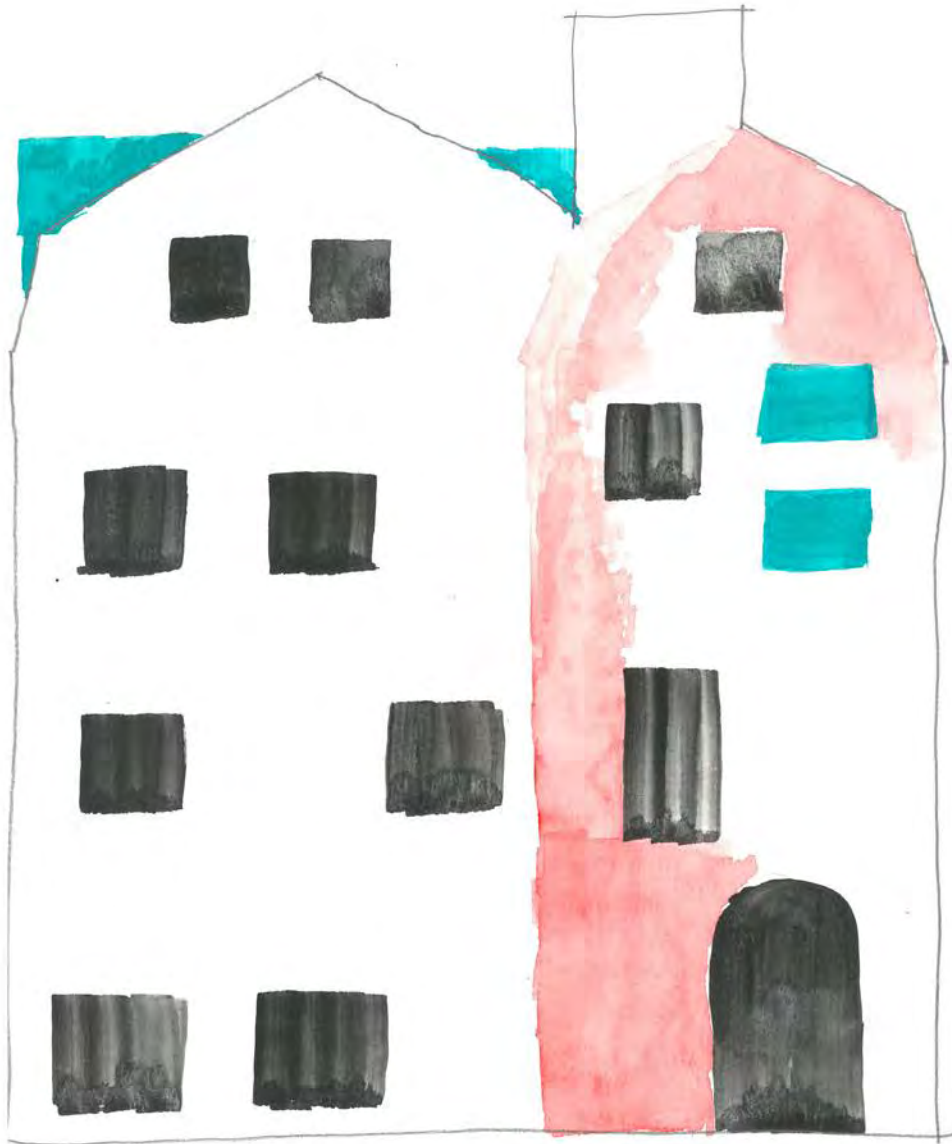
-To have a building of 5 stories gives lots of complication in terms of accessibility and circulation.

Architecture

-The façade facing the playground should be the primary façade with the façade facing the cricket ground as a back. There is no legibility to the access to the proposed building. The building should articulate the entrance to the building on the playground side with more clarity in detailing, diagram, and materiality.

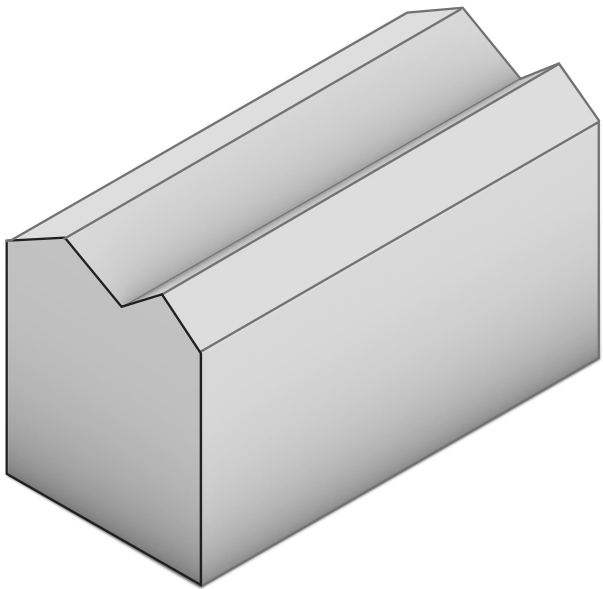
Further to the DRP comments, a new concept was proposed. The proposed new Oldfield House is set below the position of the current Oldfield House adjacent to Piggy Lane and facing the Harrow School cricket pitch. The location is set further back from the previous proposed area, which brings less impact on and enhances the character of the Conservation Area Setting and Harrow School Boundary. The improved scheme has a simplified building form, and it reduces excavation and avoids Category B tree roots.

The proposed building plan is divided into two parts, the Big House to the north and the Small House to the south. The Big House accommodates a timetabled formal learning environment while the Small House accommodates circulation integrated with informal learning zones and breakout areas. The Main Pupil's Entrance faces west, and sited in a natural position for students approaching from the main school complex. Secondary entrances are offered along the same south wall accessing the ground floor concourse into the innovative STEAM Centre. All teaching spaces face north, and large-scale windows will ensure glare-free daylighting levels to the teaching and learning spaces.

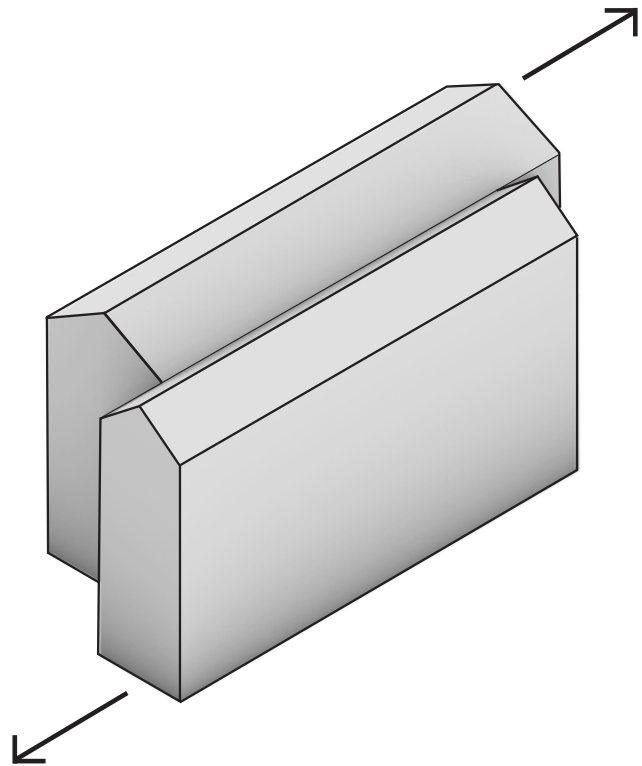


Watercolour impression following the DRP comments - Western Flank Elevation

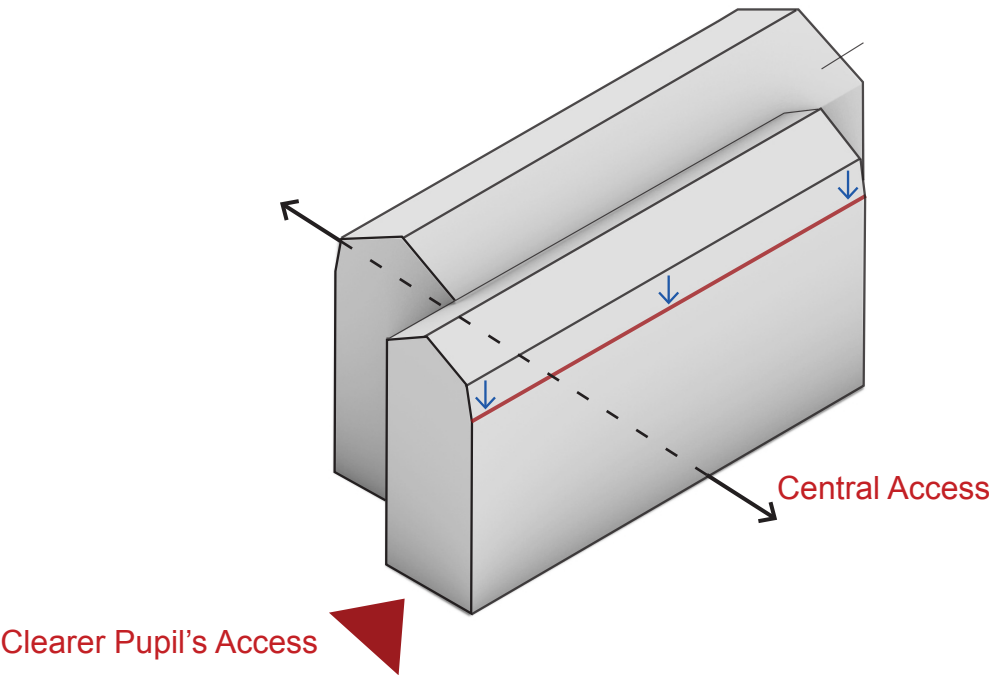
1. A new building form



2. Splitting the volume to mitigate mass and generate aesthetic interest



3. Shaping the elements



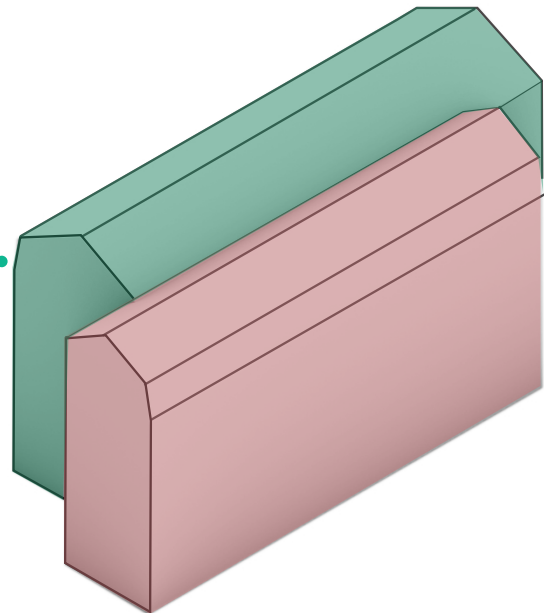
4. Big House and Small House

Big House

Academic
S.T.E.A.M
Maths
Art

Small House

Circulation
Quiet Learning
Gallery

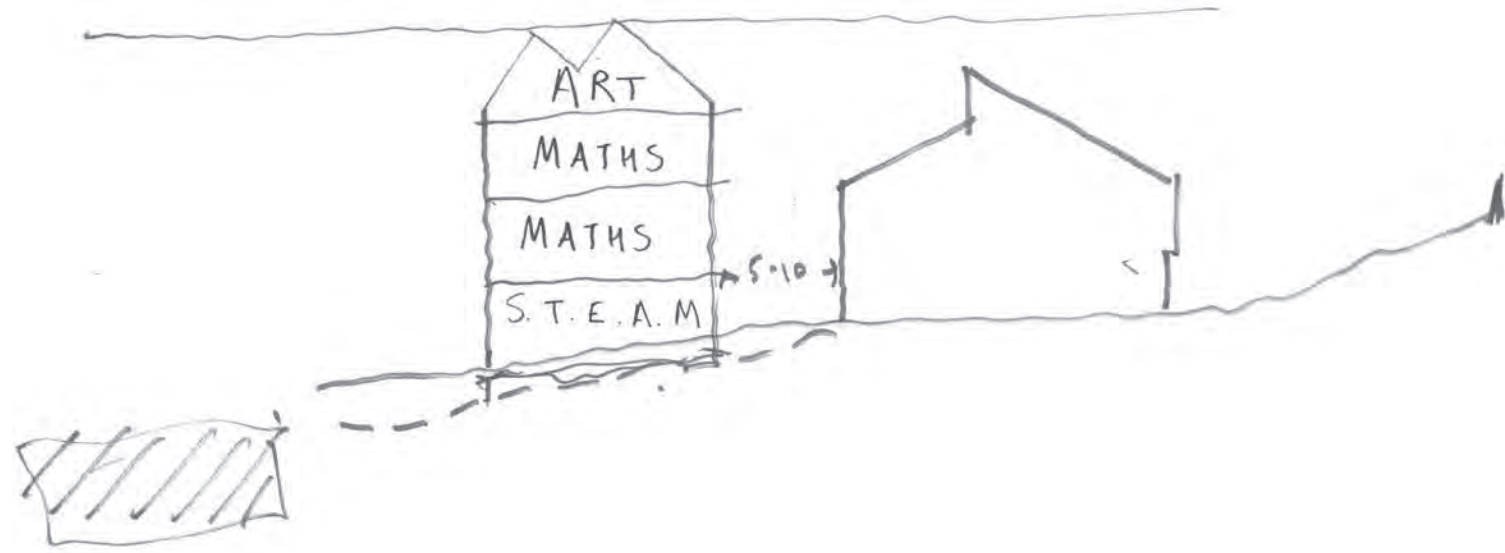


3.3.1 Big House & Small House Site Strategy

The proposed new learning wing to John Lyon School is set below the position of the current Oldfield House adjacent to Piggy Lane and facing the Harrow School cricket pitch. Its orientation and siting were chosen with deliberation. A lively mix of architecture exists at the site's boundaries including to the east at field level, a brick pavilion gifted to the Harrow School by King George III Listed Grade II*; and to the west, Harrow School Cricket Pavilion clad in red brick and tiled pitched roof with green painted timber details. This is the adjacent built environment into which the proposal insinuates itself with modesty and formality.



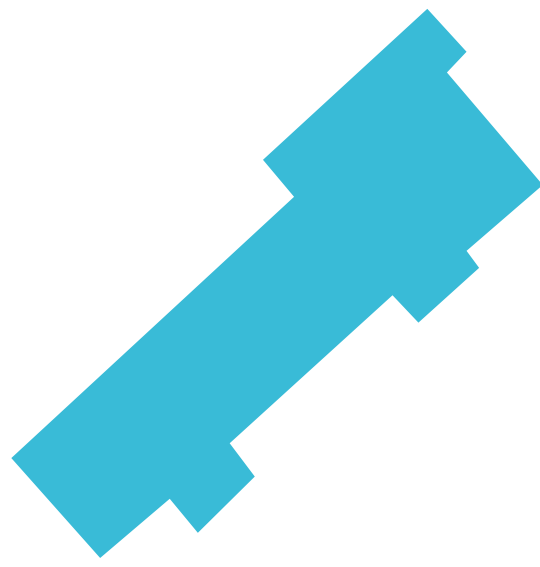
Initial sketch of level and proximity of the proposed building



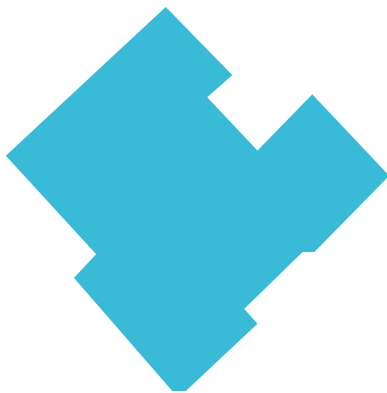
Scale Comparison with adjacent buildings



Proposed Oldfield House



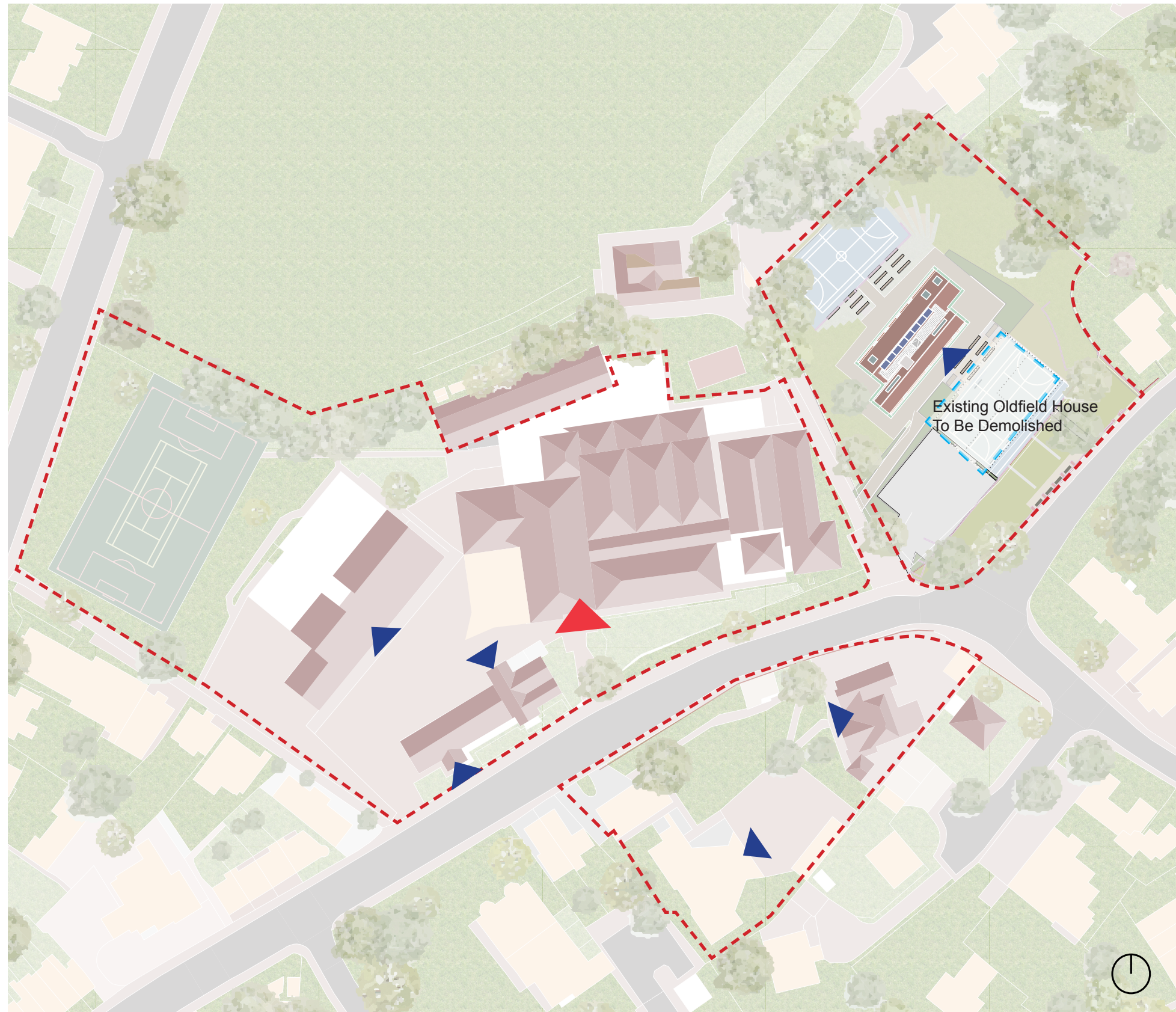
John Lyon School
Thomas Blackwell Building



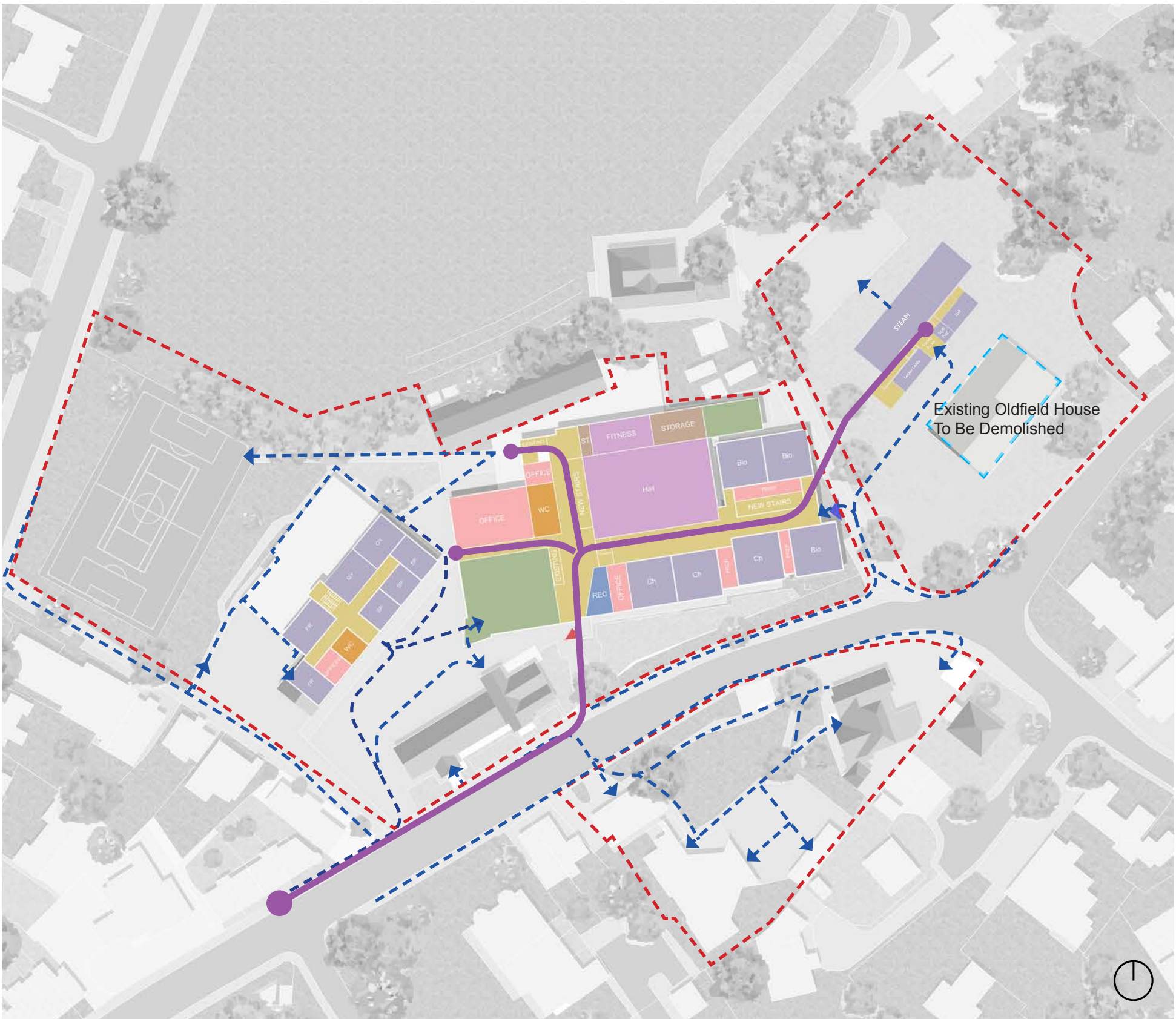
John Lyon School
Red House



3.3.2 Overview of Access and Cirulation to the Site



- John Lyon School Oldfield House Site Boundary
- ▲ Main School Entrance/ Reception
- ▲ Building Main Entrance



- John Lyon School Oldfield House Site Boundary
- John Lyon School Site Boundary
- Pupil Circulation
- John Lyon School New Circulation Route

3.3.3 Proposed Scheme Description

The building form takes its cues from the other historic Victorian and Edwardian buildings on the hill. The shifted volumes show a meticulous approach to scale and relief. The main elevations are articulated with a limited palette of materials, primarily comprising finely crafted hand fired bricks and crisp detailing; such as horizontal bands of dog tooth and wider areas of dentil brick detailing on the west flank elevation. The mix of three red, burnt black and orange brick types and colors reflect and blend the building form with the heritage setting with protective brick details to entrance ways and window cills.

The punctured openings are gathered to form a vertical order over the façade. Windows and glazed doors frames are colored green anodized aluminum with perforated brick detailing adjacent to openings to enable fresh air ventilation to learning spaces.

The deep reveals of the openings allow a modelling of light and shade appropriate to a building of such scale. Copper cowl details are paired with openings on the south wall, acting as shading devices to avoid over-heating in the summer months. The north wall is designed with a formal composure and large openings which faces both the cricket field and long views to hills beyond.

The materiality of the façade is offset by the peg tiled gambrel roof, which allow the top floor to be fully usable while respecting the eaves and ridge levels of the adjacent buildings. The pitched gables are a nod to the range of gables and finials that top many of the Harrow village roof tops.

Both elevations give a gentle expression to the function of each of the teaching rooms within. On the north elevation large scale glazed units are utilized to the ground floor STEAM concourse. The clear span structural elements allow this space to be set out as an open forum space, to be used for open evenings; such as art exhibitions, parent-student gatherings, end of year teacher-parent meetings and year seven intake events. The internal clear

span structure will also enable the open plan learning settings that the school require for long term flexibility.

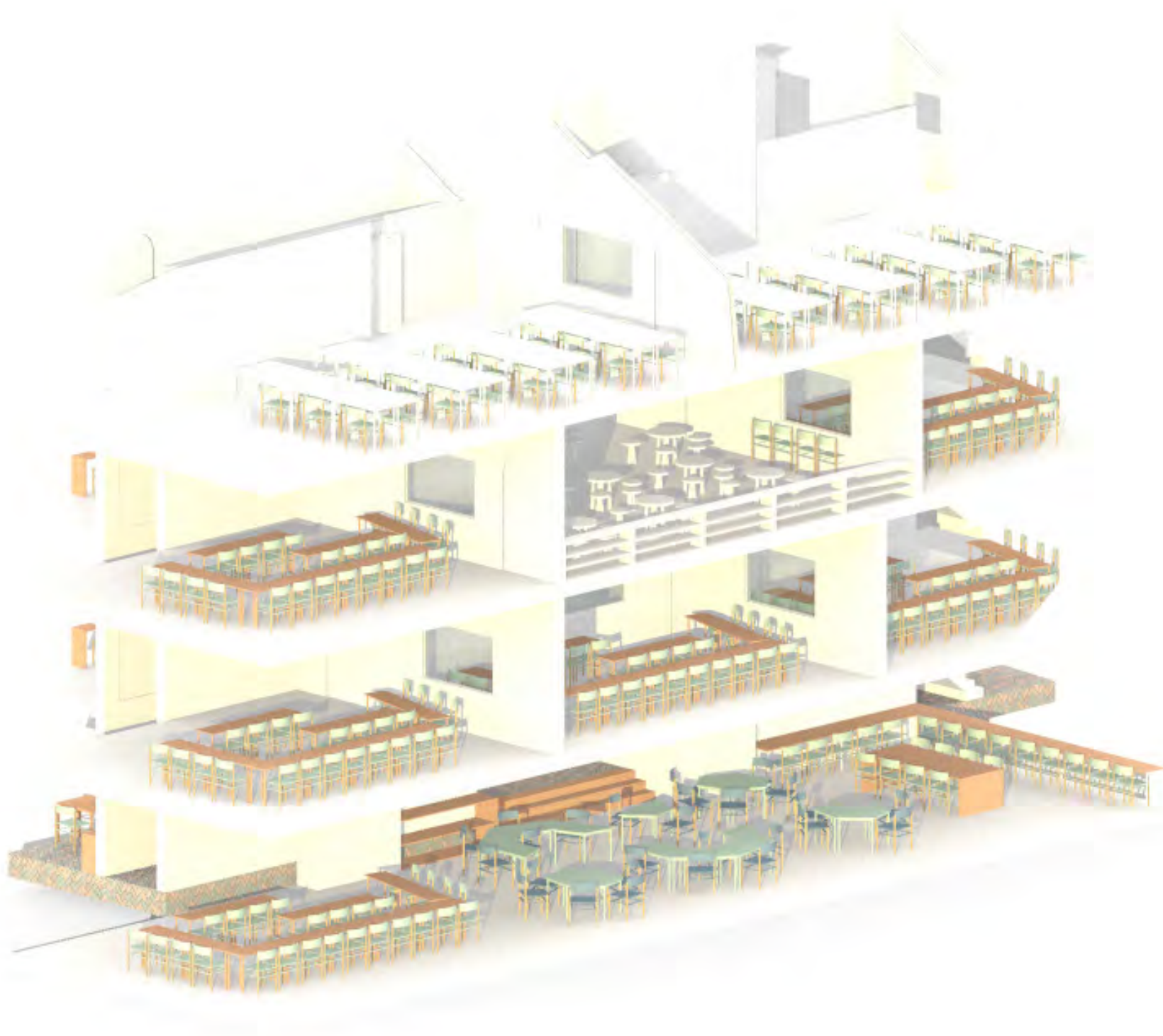
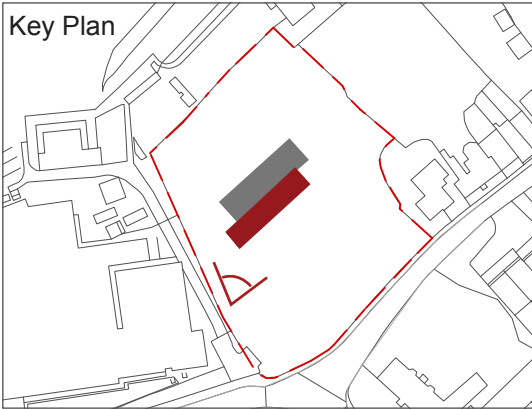
The main entrance lobby and West stair make the building permeable from this point through all levels. The generous circulation area in the Small House accommodates oak-lined independent learning areas and gallery space through all floors. These areas become a showcase to celebrate pupil's work, to encourage and motivates pupil's imagination and initiative, and to suit the school's aspirational ethos and values.

3.3.4 Area Schedule

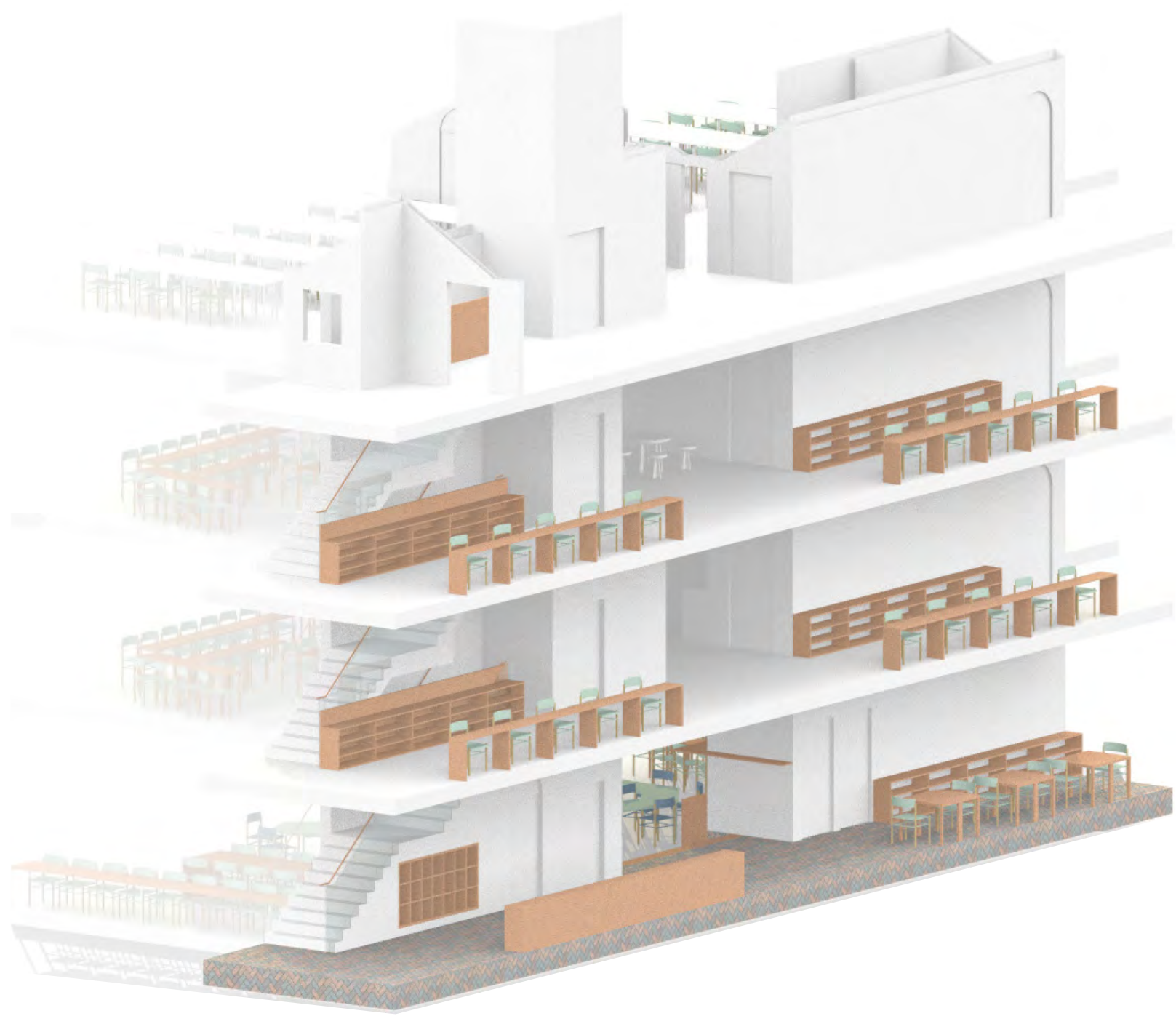
988B JOHN LYON SCHOOL SCHEDULE OF ACCOMMODATION					
	LG	UG	FF	SF	TF
Option 2B					
STEAM		55			
ICT		62			
Maths 1			51		
Maths 2			49		
Maths 3			52		
Maths 4				48	
Maths 5				56	
General Classroom		54			
WC		7	4	6	4
Circulation			59	68	32
Reading/Knowledge Wall			41	41	
Reading Room				23	
Staff Room		21		12	
Staff Room / Staff Pupil drop in		8			
Society Room		18			
Lobby		17			
Locker Lobby		24			
Art Staff + Resources					16
Gallery Space					16
6F Studio					11
Art Studio					68
Design and Ceramics Studio					81
Plant	30				
Total		265	255	253	226
Total (including plant)			1,031		

Proposed Site Plan





Big House
Time-tabled Formal Learning Area



Small House
Breakout Space & Independent Learning Area