

DESIGN & ACCESS STATEMENT

MEADOW HIGH SCHOOL EXPANSION HAREFIELD

MAY 2022
PROJECT NO. 4266



HILLINGDON
LONDON

Issue Status

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Meadow High School is a community special school for pupils with Moderate Learning Difficulties and some complex needs and autism. The Local Authority urgently needs more special school places to meet growing demand for MLD in the borough.

Currently, there are only three schools in Hillingdon that support children with SEND and every special school in the Borough is full, with demand increasing significantly over the last few years. Therefore, the need for a new facility is paramount to ensure that there are enough SEND school spaces available.

The need is urgent as the pupils are already in primary schools and this needs to be reflected in an increase of secondary school provision.

Meadow High School is very full – currently with 257 pupils. Despite a new-build project recently constructed on the site, facilities need to be increased to suit demand and to replace dilapidated school buildings. This has initiated the project to expand the school to the Harefield Academy site.

Harefield Academy maintains a discrete residential boarding block for 50 pupils, which is now empty and decommissioned, adjacent to the main school block. This is the largest unused education building within the borough.

This Design & Access Statement supports the planning application to re-use and extend the existing residential boarding block, and demonstrates how this site is entirely suitable for an expansion of Meadow High School



EXISTING BUILDING PRIOR TO DECOMMISSION

Project Team

Local Authority
London Borough of Hillingdon

End User
Meadow High School

Site Occupant
The Harefield Academy



chadwickdryerclarke studio
architects + designers

Turnberry

Michael Hadi Associates Ltd

Architects
Chadwick Dryer Clarke

Landscape Architects
Hyland Edgar Driver



Acoustic Consultants
Sharps Redmore

Structure and Civil Engineers
Michael Hadi Associates



Planning Consultant
Turnberry

MEP Service Engineers
Edward Pearce

Fire Engineer
Hoare Lea

Transport Consultants
Robert West



1.01 PROJECT BACKGROUND

SPECIAL SCHOOL EXPANSION SITES



The London Borough of Hillingdon has initiated two projects to propose the expansion of pupil numbers of Meadow High School over two sites.

Site A comprises a site at Harefield Academy, Hillingdon, in west London (the subject of this planning application). The brief requires the establishment of a new facility for up to 90 pupils identified as 'Pathway 1', which are children with complex learning difficulties and autistic spectrum conditions.

Site B comprises the existing site of Meadow High School. The brief requires the replacement of existing single-storey structures on the site with a new building (or buildings) that will allow pupil numbers to increase. This will form the basis of a separate planning application.

The two sites are approximately eight miles apart and as such it is not anticipated that facilities will be greatly shared. The development at Harefield Academy will be reasonably autonomous and act as a dedicated facility for up to 90 Pathway 1 pupils.





Meadow High School is a local authority maintained community special school in Uxbridge. The school currently serves 257 pupils in school years 7-14 (pupil ages 11-19).

Maintained by the London Borough of Hillingdon, the school has a designation of Complex and Moderate Learning Difficulties (including Autistic Spectrum Conditions).

"Our provision focuses on personalised learning to meet the holistic needs of the individual. This means that we baseline and monitor progress not only towards the aspirations and outcomes as identified in the EHCP, but also in relation to communication, emotional regulation and independence."

Meadow High School

It is the intention of this project to expand the provision of Meadow High School by creating a 90-pupil facility at the Harefield Academy site, re-purposing a redundant building for a positive community use.

c.1950s	John Penrose Secondary School comprising multiple one and two-storey educational buildings on site.		JOHN PENROSE SECONDARY SCHOOL PRE-2005
JULY 2005	Planning granted for redevelopment of former John Penrose School to form Harefield Academy school for 1000 students. App ref: 17709/APP/2004/1914		
SEPTEMBER 2005	John Penrose School closed, Harefield Academy opens as an academy specialising in sports.		MAIN ACADEMY BUILDING COMPLETED 2008
SEPTEMBER 2008	Completion of new three-storey academy building, with dedicated sports hall and sports facilities.		
APRIL 2009	Planning submission for new build. Application ref: 17709/APP/2009/624 Proposed Boarding Provision The Harefield Academy, Harefield, UB9 6ET		BOARDING HOUSE COMPLETED 2010
SEPTEMBER 2010	Completion of boarding house		
MAY 2022	Boarding house is empty and decommissioned.		BOARDING HOUSE EMPTY 2022

The Harefield Academy site has a recent history of development that is outlined here.

The residential boarding block on the site has unfortunately been unused and empty for several years since its construction in 2010.

The intention of this project is to re-use this modern building to sustainably provide a new home for Meadow High School and support children with Special Educational Needs and Disabilities within the London Borough of Hillingdon.

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2.01 THE SITE

AERIAL CONTEXT



The site comprises the south eastern corner of the Harefield Academy site. This lies on the edge of Harefield, a suburban area of the London Borough of Hillingdon.

The site is centred upon a residential boarding block constructed approximately 11 years ago for boarding pupils.

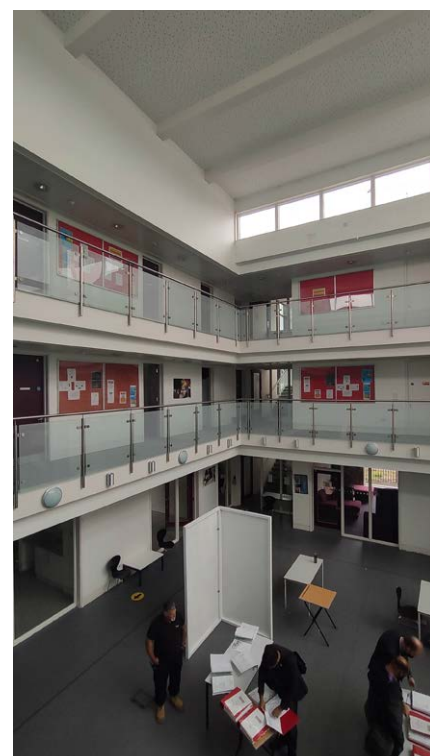
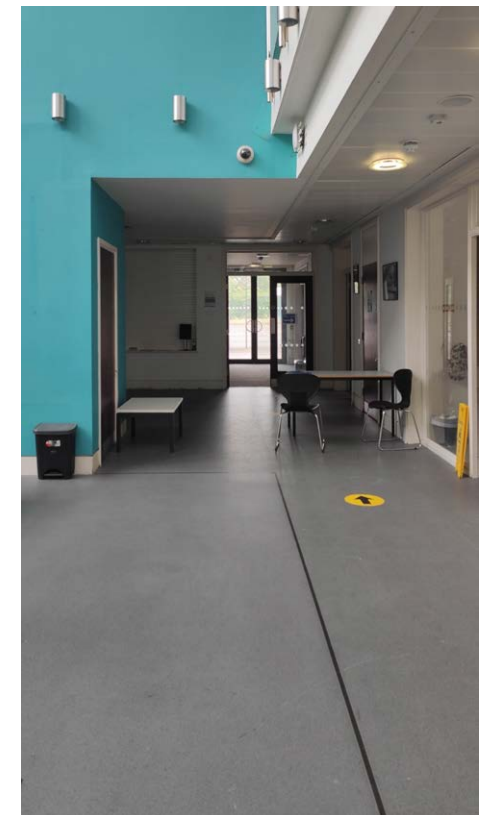
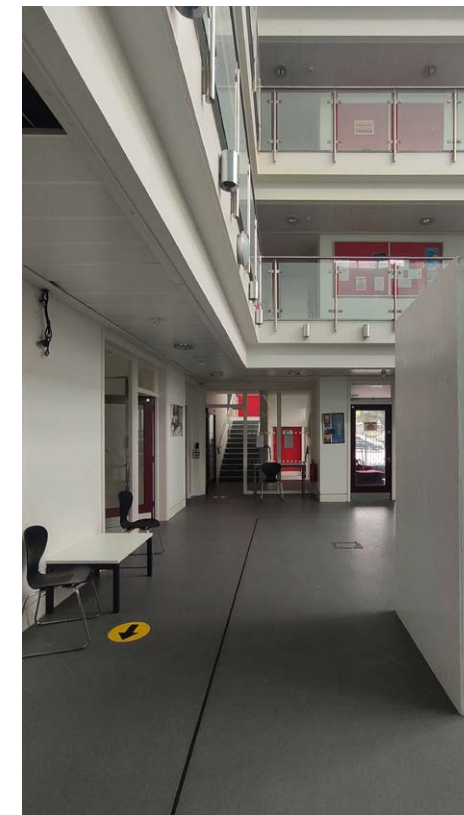
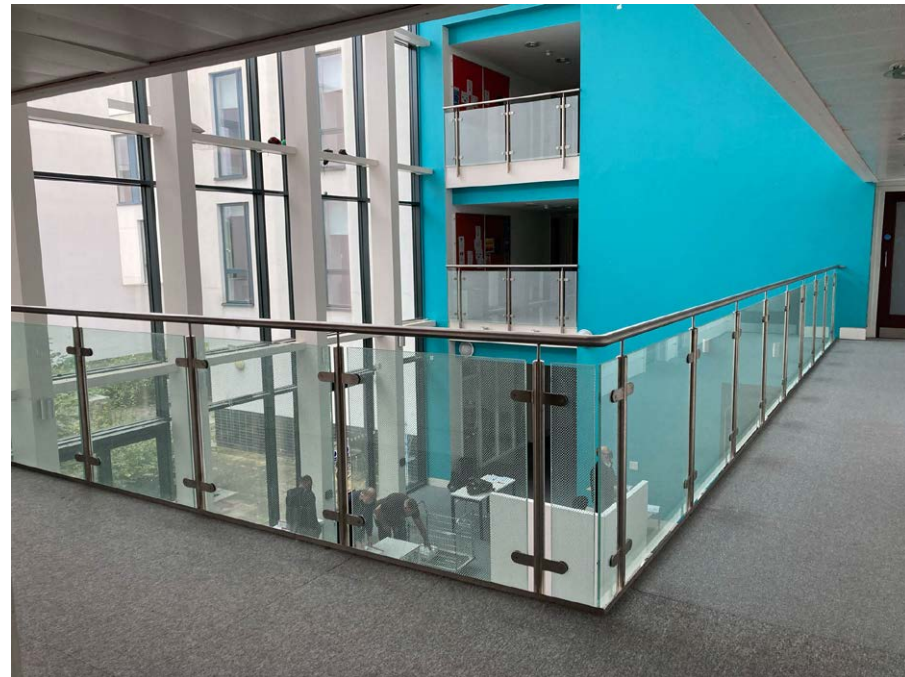
The intention is for this building and its immediate surroundings (indicated by the 'red line' in this image) to be leased by LBH for use by Meadow High School, requiring a change of use of the building from residential to a building for educational purposes.

The existing building will need to be extended and undergo an extensive programme of alterations to make the building suitable for the needs of the pupils, visitors and staff of the school.

Part of an existing adjacent sports court and related soft landscaped areas are intended to form the external areas of the school site.

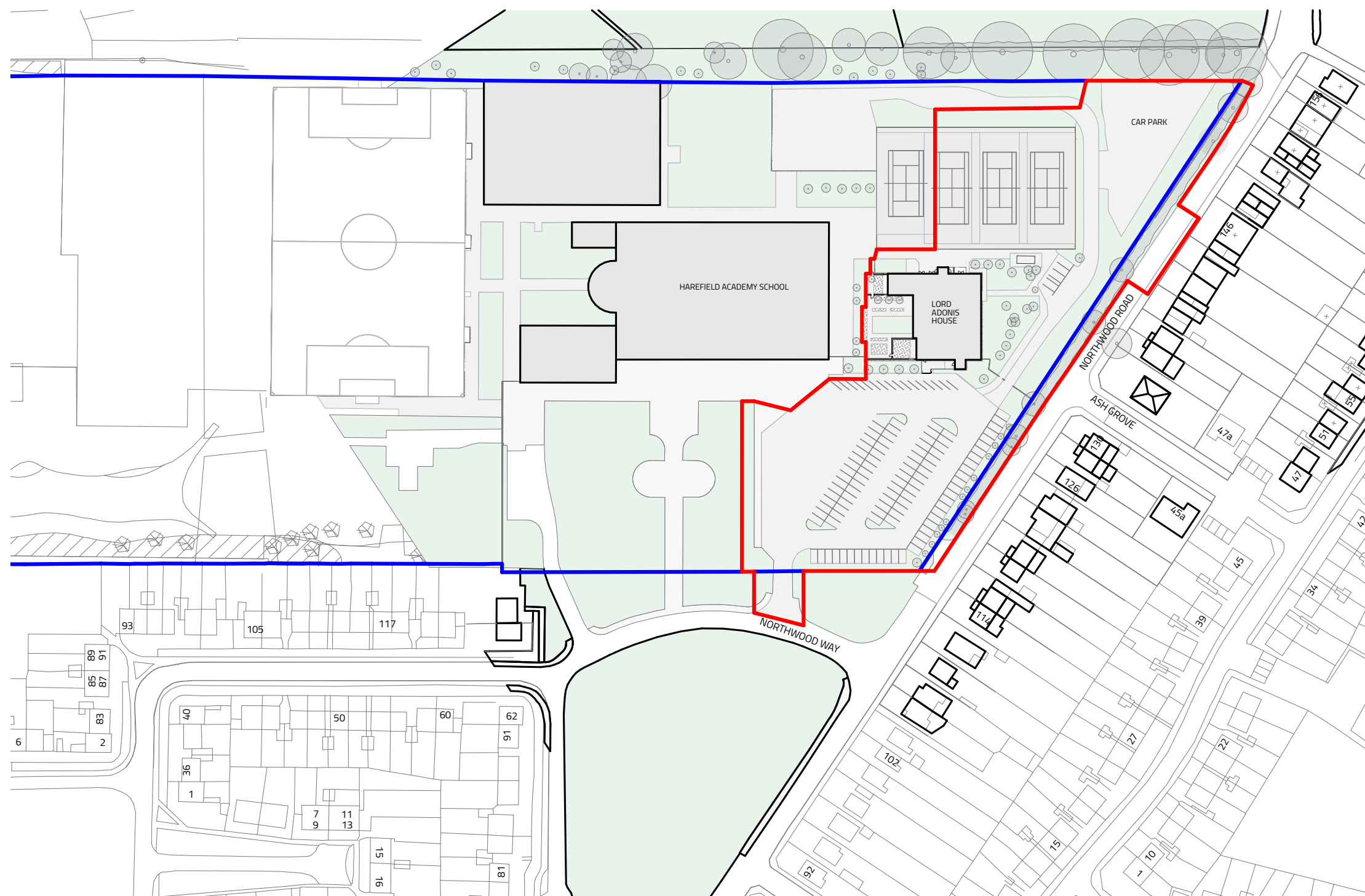


PHOTOS INTERNALLY AND EXTERNALLY OF THE RESIDENTIAL BLOCK OCT 2021-FEB 2022



2.03 THE SITE

EXISTING SITE PLAN

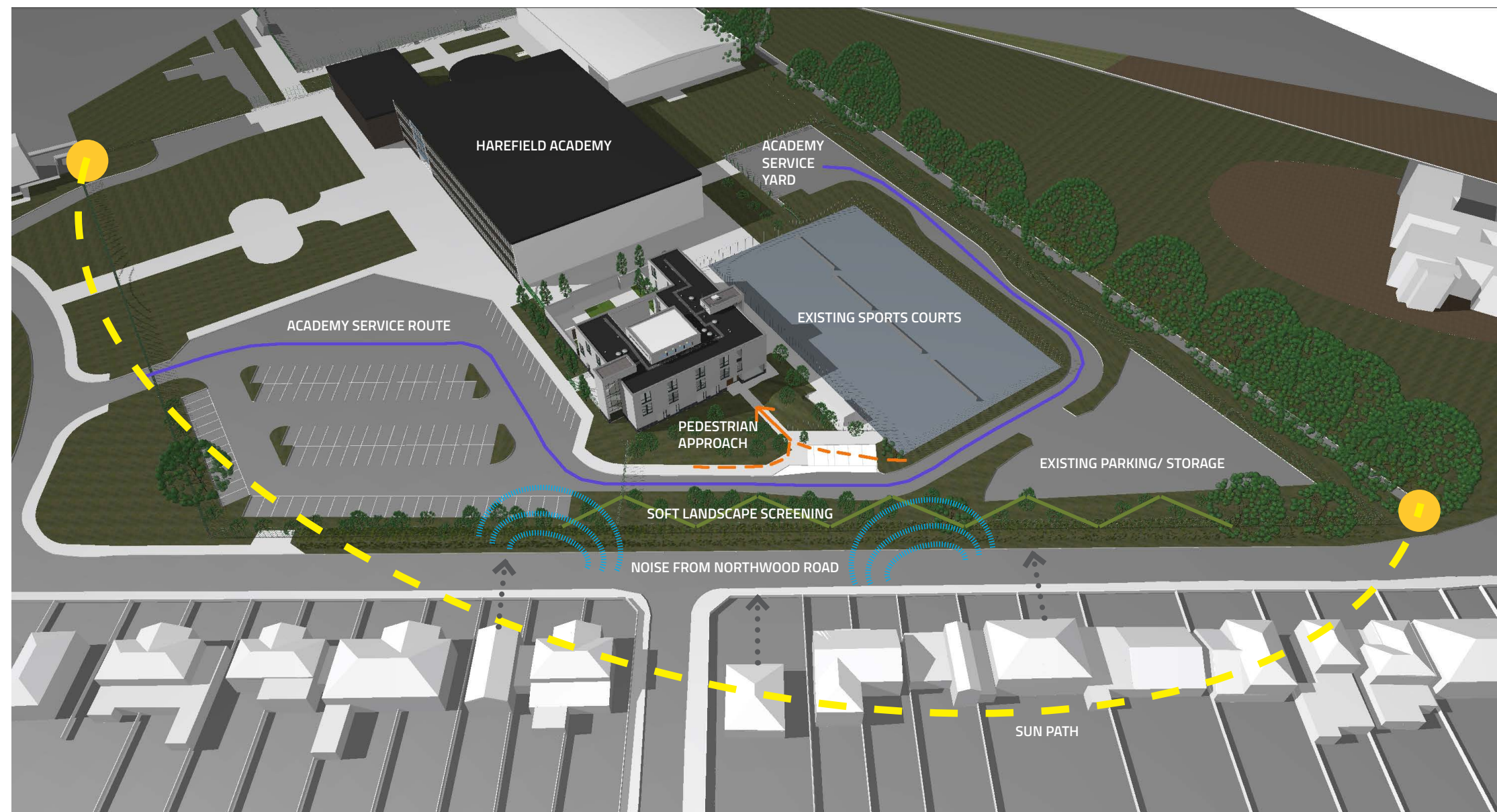


The site is accessed through the main car park for Harefield Academy. An existing fence and gate separates the site from the car park.

Part of an adjacent sports court and associated soft landscaped areas are intended to form the external areas of the school site. The sports courts will be sub-divided to form a dedicated area for Meadow High School.

An existing access road through the site provides access for deliveries to Harefield Academy, including its kitchens. This route is currently open to the main car park and is not controlled or gated.

EXISTING LOCATION PLAN



MODEL OF EXISTING SITE



PHYSICAL CONSTRAINTS

The site sits adjacent to a busy road (Northwood Road) with residential neighbours opposite, partially screened from the site by a buffer strip of soft landscape.

To the north-west of the site sits the main Harefield Academy building. The residential block is flanked by the academy's main car park to the west.

To the northern edge of the site lies a mature tree belt.

Key constraints include:

Measured noise levels from Northwood Road suggest types of ventilation for the school.

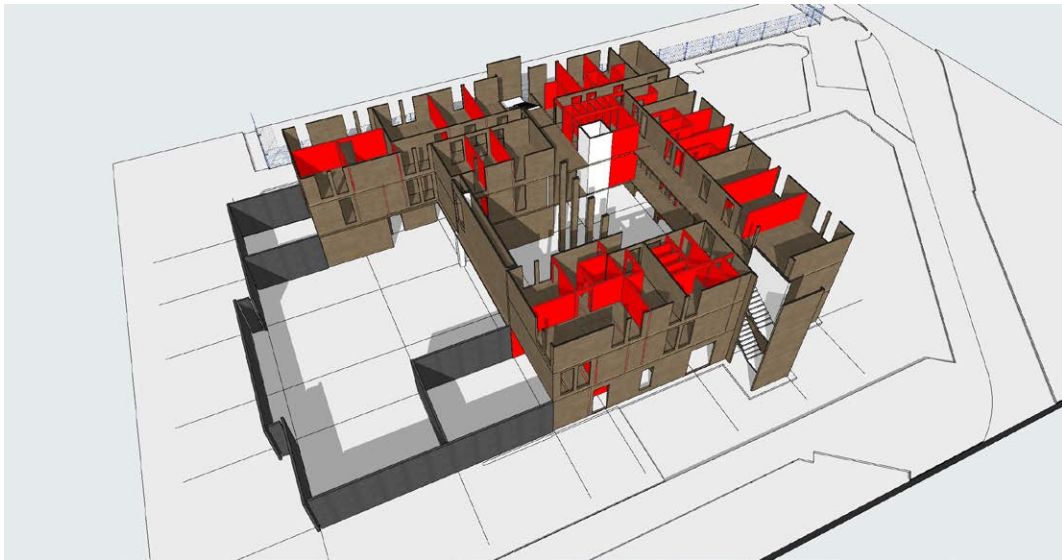
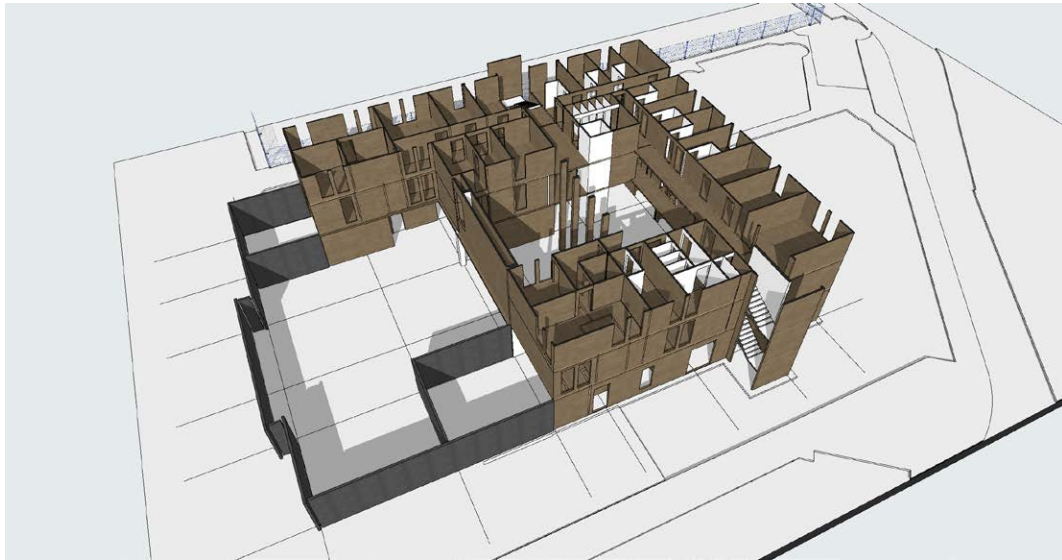
The existing service access route uses an existing internal road to service Harefield Academy. This route will run past/ through the proposed school site.

An existing soft-landscape buffer zone provides screening and amenity to residential neighbours.

External areas will be required for the operation of the school for PE, break-time etc, and this will require partial redevelopment of the sports court area.

PLANNING POLICY CONSTRAINTS

The site is subject to several areas of local and national planning policy. Please refer to Turnberry's planning statement for a summary of relevant policy as understood by the project team.



STRUCTURAL ANALYSIS OF CLT FRAME



EXISTING CUT-AWAY SECTION THROUGH ATRIUM AND GARDEN

The existing building comprises residential accommodation (principally a series of bedrooms and kitchens) arranged over three storeys around a central atrium. Primary circulation is via a 1.5m wide walkway around the atrium.

BB104 suggests a corridor width of around 2.2m to major circulation routes to enable a turning circle for wheelchair users in special schools. Therefore the walkways will need to be widened to upper floors.

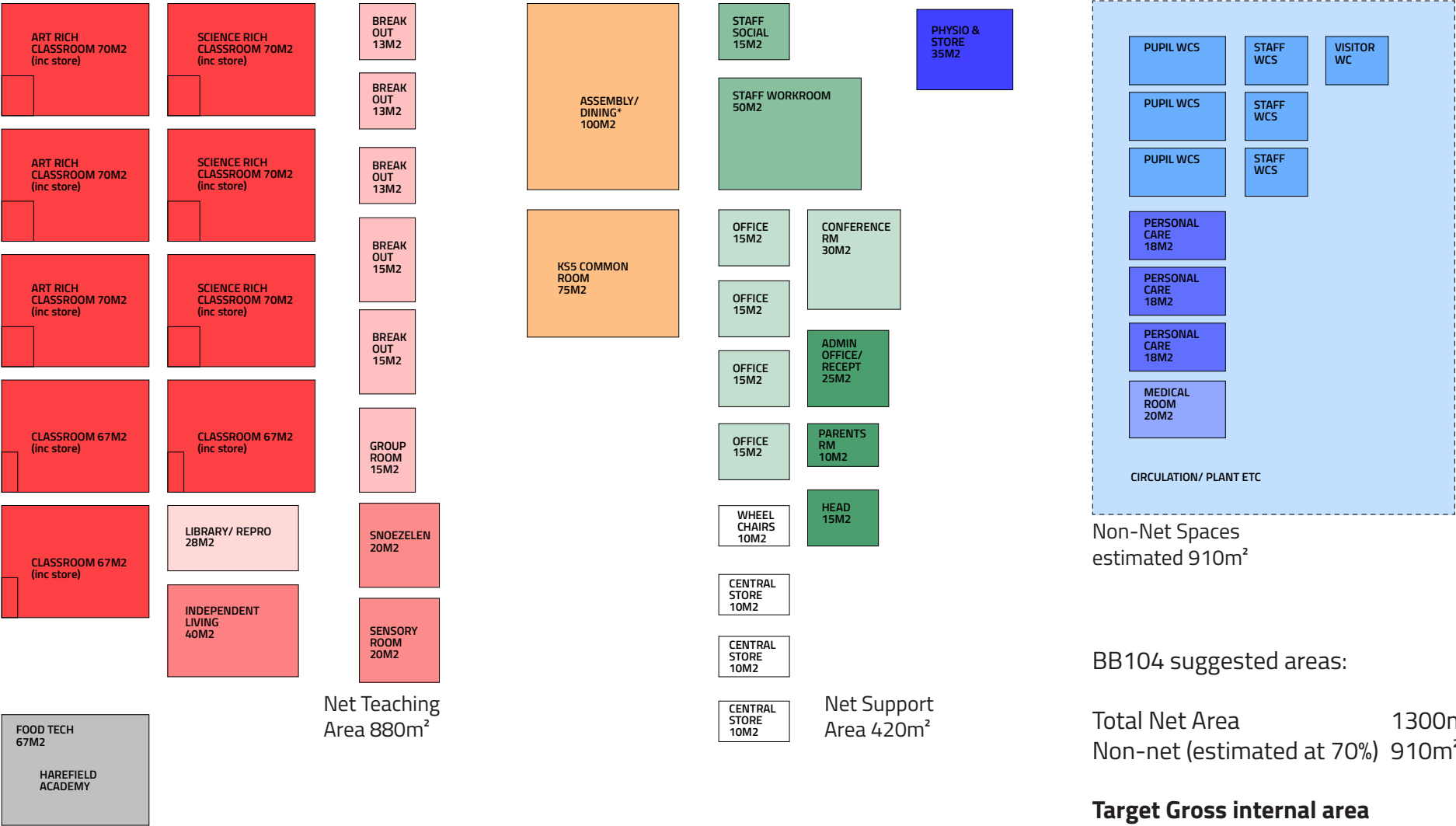
A 8P lift services the upper floors, but it is unlikely that this size of lift will suit the needs of the school given the needs of some of its pupils. It is therefore proposed that a new 13P lift will be installed to improve vertical circulation and act as an evacuation lift in the event of an emergency.

A key constraint of the building is its cellular layout, formed using a CLT structure, which has been based upon the need to form bedroom spaces as the original use of the building. The structure is fire-protected and acoustically treated with applied plasterboard linings.

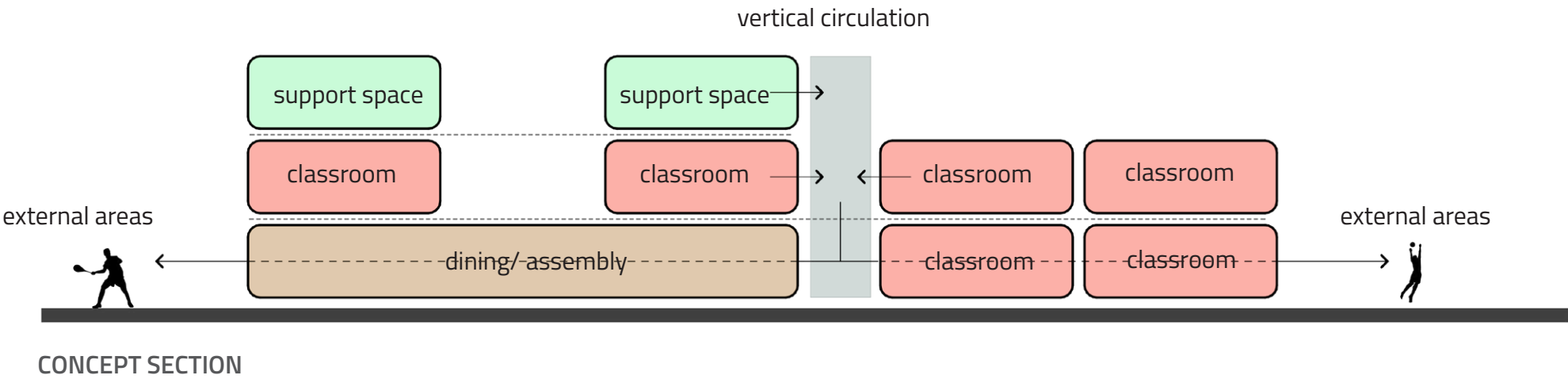
A change of use to a school building requires much larger spaces to be formed to create classrooms, common rooms etc. This will require the removal of non load-bearing walls as well as some load-bearing/ shear walls.

The floor-to-floor storey heights are approximately 3m, which suits the residential nature of the boarding block. However, this is low for a school building, and so services distribution and the ventilation strategy will need to avoid the need for deep ceiling voids by avoiding large air ducts or cross-overs.

With low ceilings and deeper rooms to be formed for classroom spaces, some windows require amendment/ replacement to provide better levels of ventilation to these spaces. Additionally, new window openings are required in the external envelope to suit new room positions.



ACCOMMODATION SCHEMATIC



The accommodation for the site has been guided by the principles of **BB104 - Area Guidelines for SEND and Alternative Provision** and informed by the input of the specialist teaching team at Meadow High School as well as the education team at London Borough of Hillingdon.

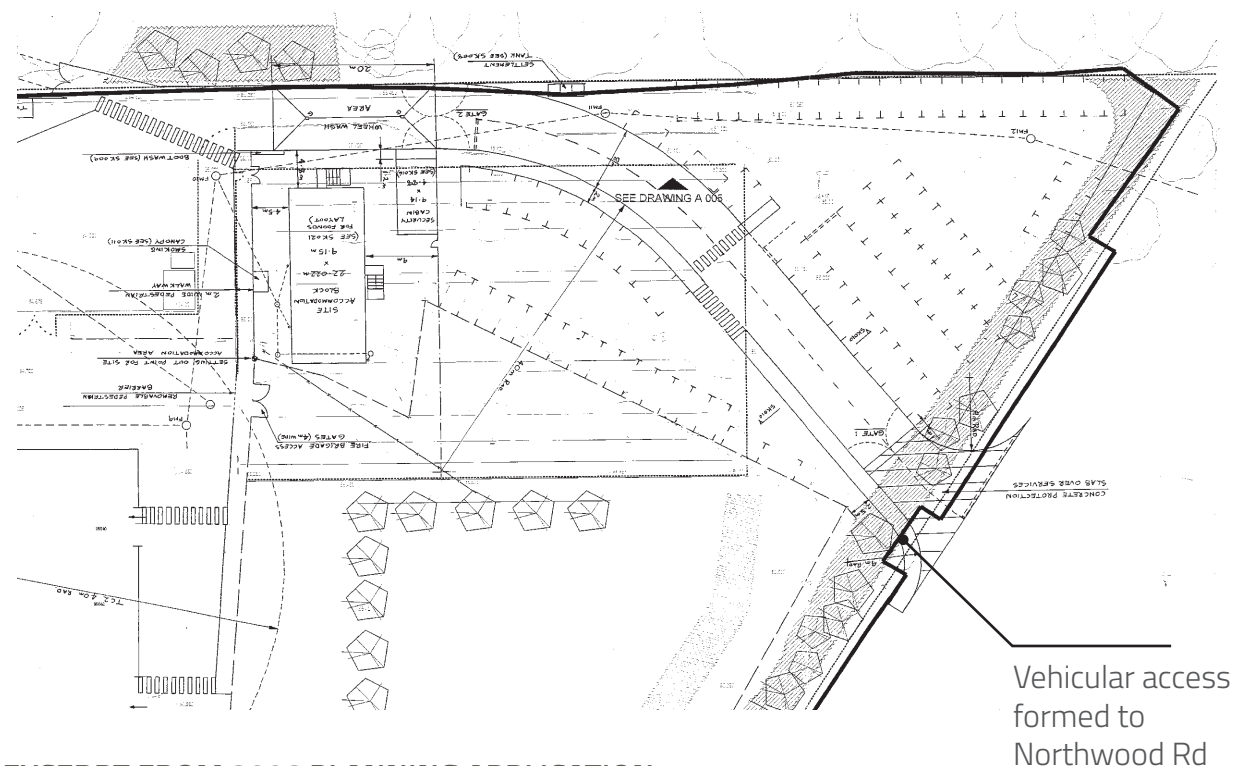
For 90 pupils, primary learning spaces are split into 9 classrooms of 10 pupils, with associated break-out spaces directly accessed from classrooms or shared as larger group rooms. This reflects the pedagogy of the Pathway 1 cohort and has been developed in a series of meetings and workshops with the school's teaching staff.

The classrooms are arranged at ground and first floors, limiting the vertical movement of pupils to the upper second floor. More specialist spaces are included to the second floor to include a food tech room, library and therapy rooms.

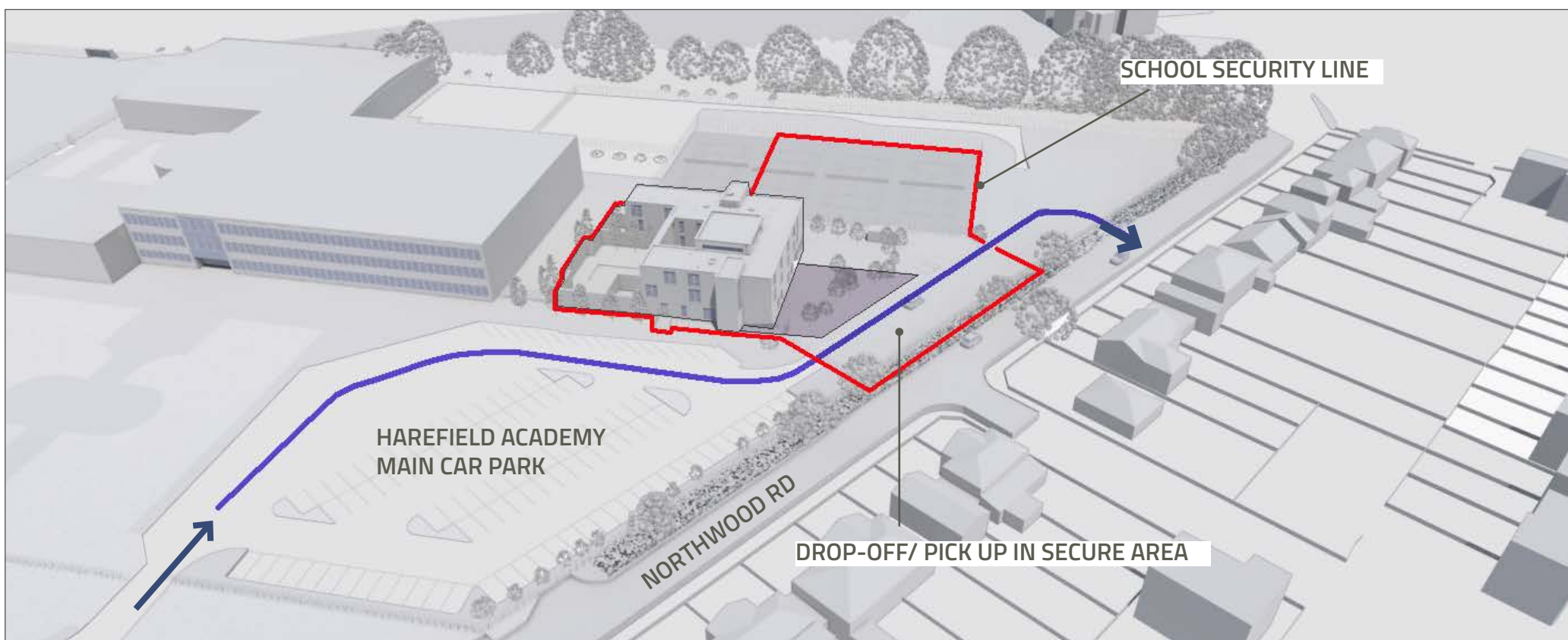
To the ground floor, the existing atrium space will be re-purposed as a central 'heart' to the school, providing a larger space for assembly, indoor PE and dining, with a quiet dining space for pupils who require a calmer environment.



STREETVIEW IMAGE



EXCERPT FROM 2006 PLANNING APPLICATION
 (CROPPED AND ROTATED FOR CLARITY)



ACCESS STRATEGY

A key design concept for the new facility is to restore a historic vehicular access from Northwood Road which has been established and used during prior phases of construction on the Harefield Academy site.

The site access is still partly visible from within the site and on Northwood Road.

Opening up this access allows a dedicated drop-off area for the school which is a key requirement to maintain safety and security for the pupils at the start and end of the school day. It is of course important that pupils cannot independently leave the site or get out onto Northwood Road, and so the drop-off zone needs to be a secured area.

Pupils arrive principally by a council transport service operating minibuses. The drop-off zone will contain space for multiple buses to park and wait whilst pupils are taken into or out of the school entrance by staff.

It is intended that the transport service will arrive at the site via the existing Harefield Academy car park entrance, and leave via the new vehicular access on Northwood Road.

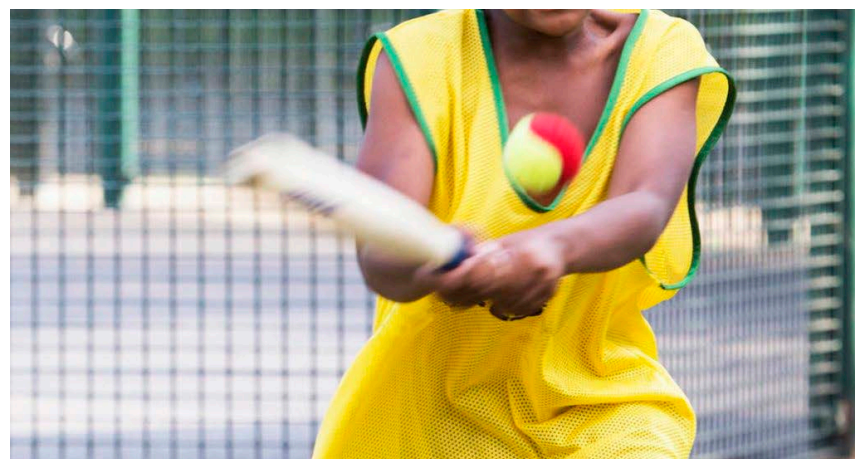
Please refer to Robert West transport assessment for further information.



ACTIVE PLAY EQUIPMENT



HORTICULTURE AND SENSORY GARDENS



STRUCTURED PE AND SPORT

A key benefit of the Meadow High School expansion is the ability to tailor the external environment towards the complex needs of their Pathway 1 children, who require the greatest level of support of their intake.

Key to this is the ability of the external areas to provide spaces for sport, movement and activity.

The proposals for the site provide new fitness equipment (in a dedicated outdoor gym area), play equipment to encourage physical exertion, a new 'scooter strip' using the drop-off area of the school during the middle of the school day, and an artificial grass MUGA which provides a soft surface for pupils should they fall whilst pursuing PE tasks.

The external areas will be used for games such as boccia, short tennis, cricket, rounders and athletics. The new MUGA will be fenced and surfaced to safely encourage these uses.

Additionally, the existing building benefits from a series of walled gardens opening onto the atrium and adjacent spaces, which is an attractive feature of the existing building.

As walled gardens they are secure, private and quiet, and it is the intention of the school to use these for horticulture and as sensory gardens for the benefit of their pupils.

The connection of the inside and outside spaces of the building has been a primary consideration of the design proposals and landscape strategy.

Please refer to HEDuk's landscape information for further details.

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4.01 DESIGN PROCESS

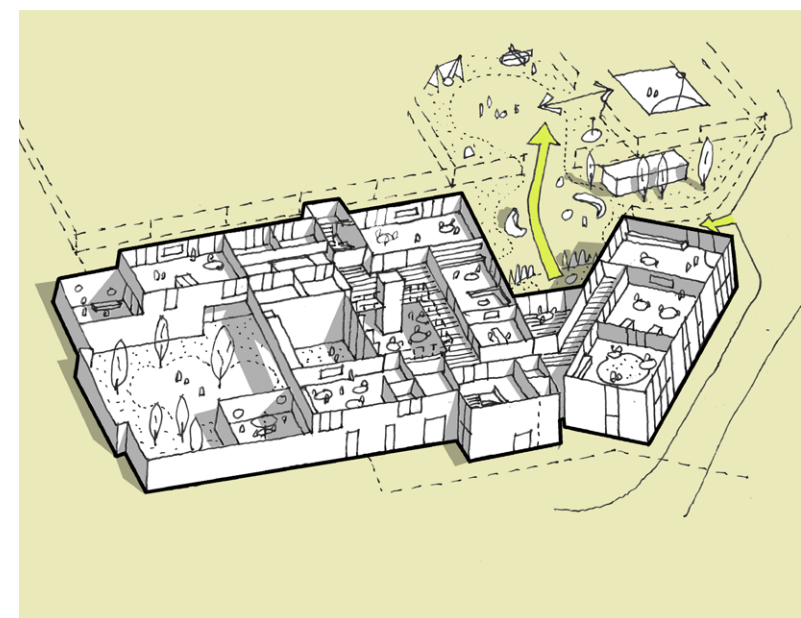
OPTION APPRAISALS



EARLY MASSING STUDIES



PREFERRED CONCEPT SOLUTION

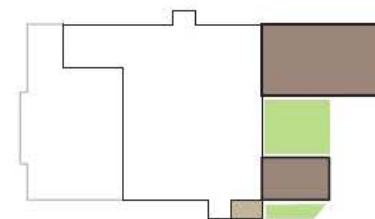
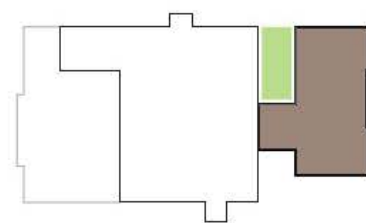
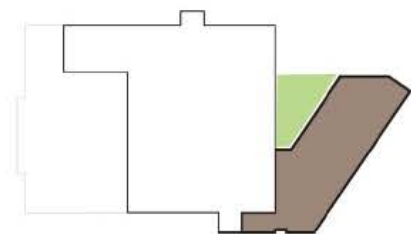


Since the instigation of the project, a number of design ideas have been explored with the school and council members to consider how the existing building and its external spaces could be re-purposed to meet the educational needs and vision of Meadow High School.

Early studies included looking at the best opportunities for extending the building to provide the required level of accommodation to BB104 standards.

It was agreed that extending the building towards the south of the existing building proved the most beneficial by increasing the connectivity of pupils to the external areas, but also allowing a cluster classrooms that efficiently concentrated circulation. Additionally, this allowed the classrooms to be retained at ground and first floor levels, minimising vertical travel for pupils who may have physical disabilities.

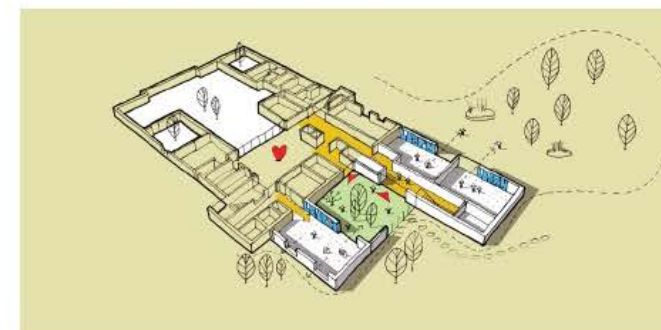
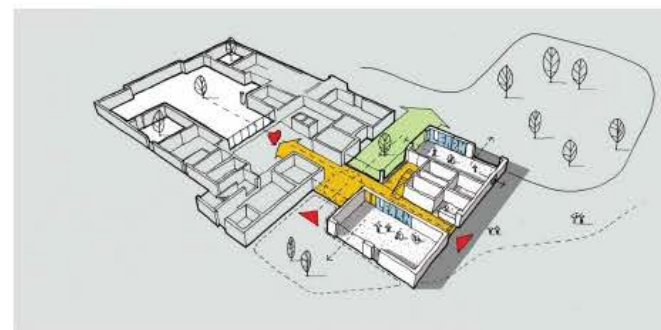
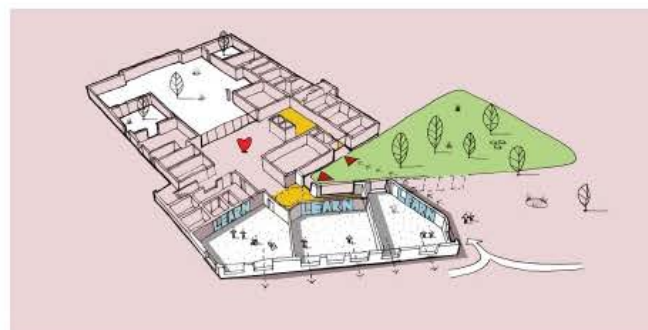
Preliminary massing studies/ ideas have been shared with the planning team and members of DfE at the instigation of RIBA Stage 2 for review and input.



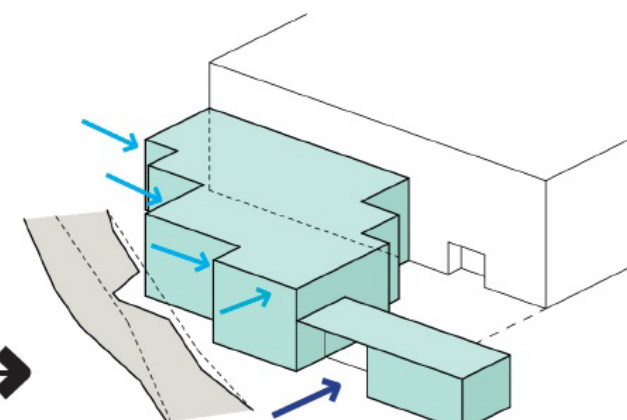
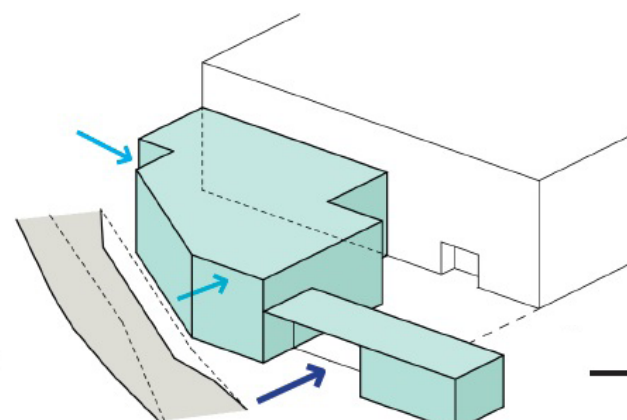
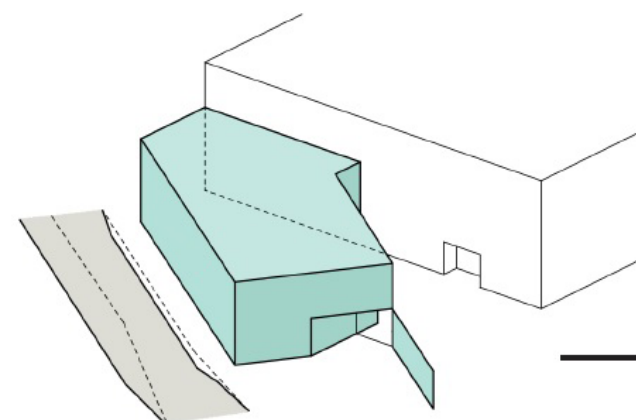
The extension design has also been developed in close consultation with the school team. The arrangement of learning spaces and how the extension connects to the refurbishment of the existing building has been a key consideration, and several ideas have been explored.

The extension has been designed to read - both in terms of its massing and materials - to feel related to the existing building.

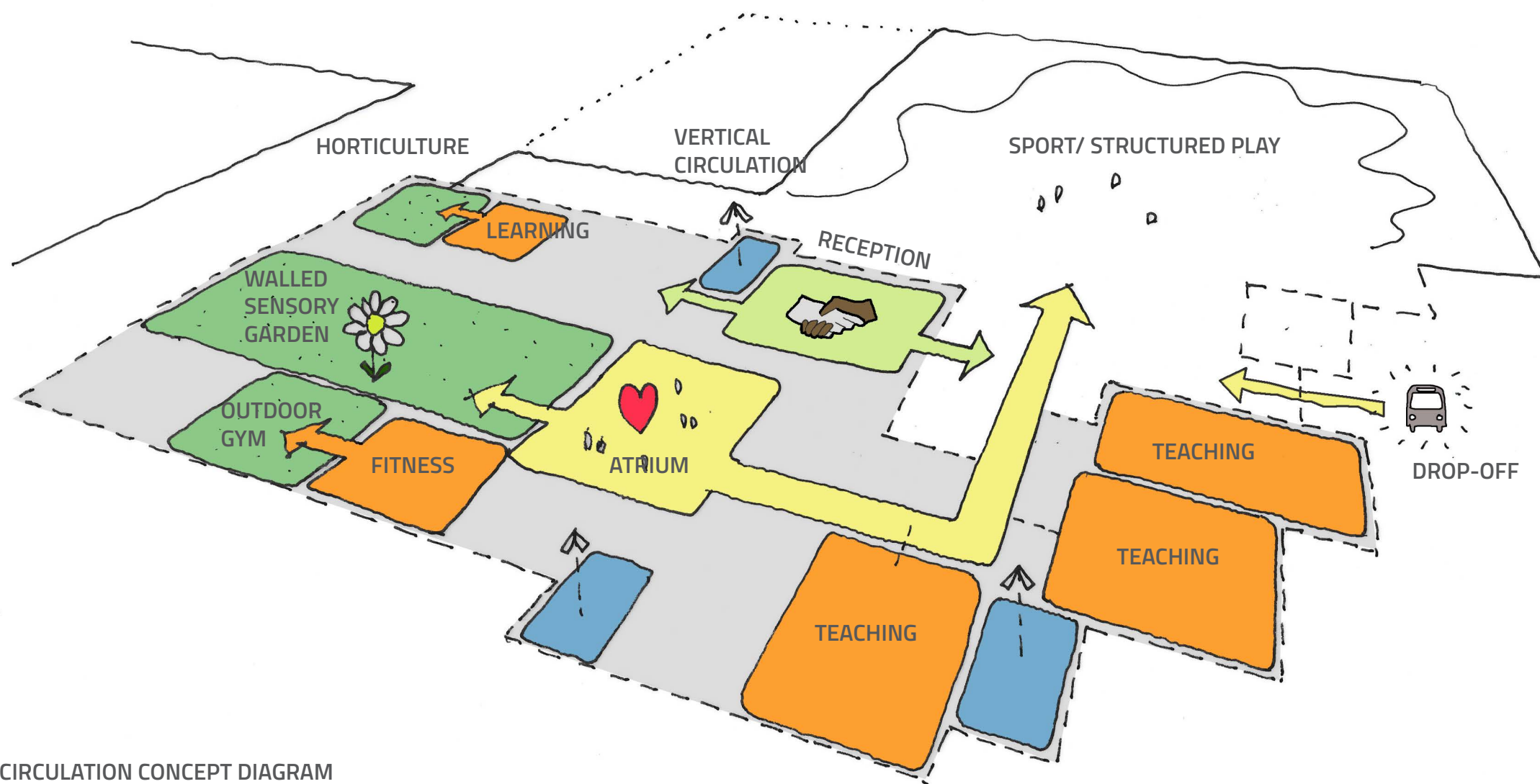
As the existing entrance to the school is set back well within the site, the extension forms a new clear entrance for the school, controlling security lines whilst providing a welcoming front for the new school.



EXTENSION OPTION APPRAISAL



MASSING DEVELOPMENT SKETCHES



CIRCULATION CONCEPT DIAGRAM

This diagram demonstrates how the new extension works with the atrium 'heart' of the existing building to provide a legible circulation route to the building.

The new extension allows the differentiation of a pupil entrance from the main reception and visitor entrance, easing movements at the start and end of the day when staff are busy accompanying pupils to their transport.

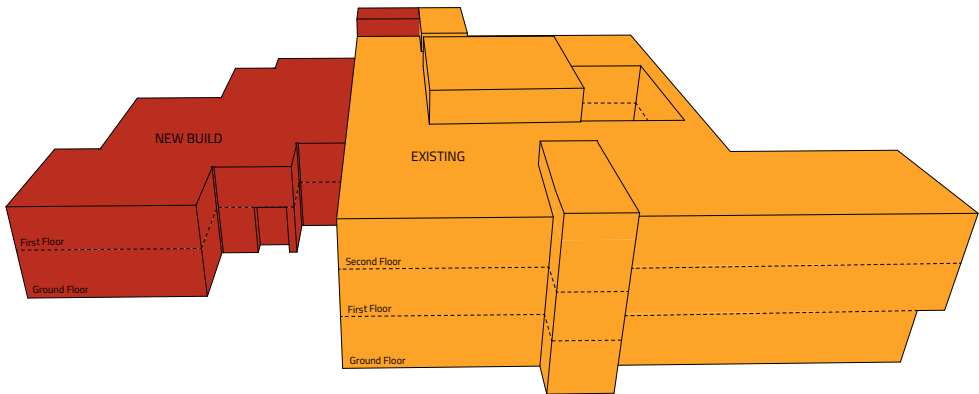
Additionally, the new extension 'opens up' to the adjacent structured play areas, forming a simple direct connection for pupils at break and lunch times.

4.04 DESIGN PROCESS

SCALE AND MASSING



MASSING IMAGE (SEEN FROM NORTH)



VOLUME STUDY

GIA FLOOR AREA OF EXISTING BUILDING = 1613M2 APPROX
GIA FLOOR AREA OF NEW EXTENSION = 622M2 APPROX

VOLUME OF EXISTING BUILDING = 6430M3 APPROX
VOLUME OF NEW EXTENSION = 2185M2 APPROX

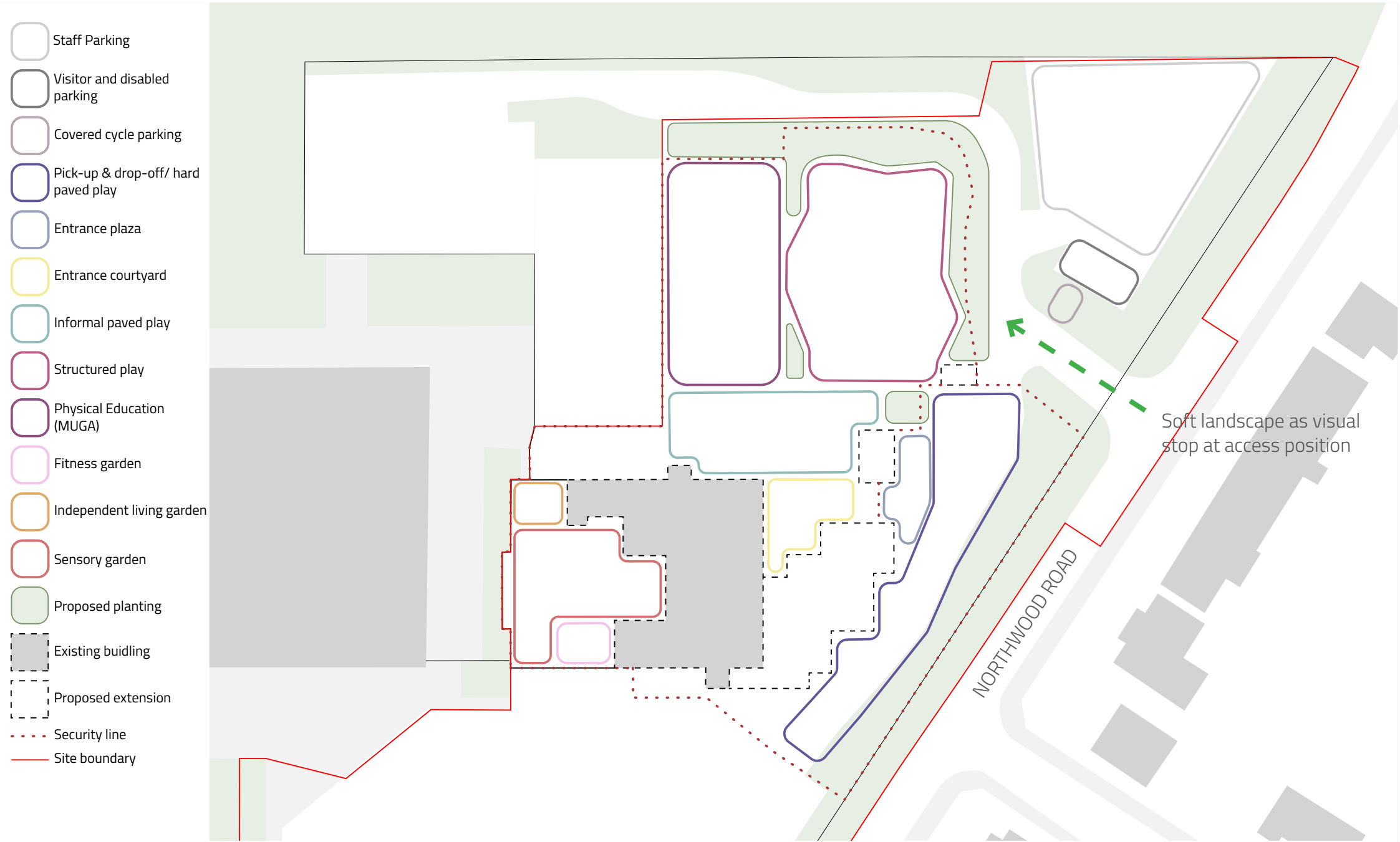
EXTENSION APPROX 34% VOLUMETRICALLY OF EXISTING BUILDING

The new extension has been designed to minimise its height and footprint relative to the existing building whilst providing the key aspects of the brief.

Storey heights are maintained to approximate the existing residential storey heights of the existing building.

The extension forms an entrance courtyard with the new building, clearly defining the new pupile entrance and the visitor entrance.

The form of the building is stepped to acknowledge the angle of Northwood Road adjacent, but the primary mass of the extension is opposite the junction with Ash Grove, between dwellings.



EXTERNAL AREA ZONING DIAGRAM

The external areas of the site have been efficiently planned to provide play and PE areas towards BB104 standards, but also to provide vehicle drop-off, parking and servicing.

At the new access point, new soft landscape has been introduced within the site to maintain the 'green' aspect along Northwood Road.

The new structured play area is bordered with new soft landscape to encourage habitat areas for pupil exploration.

The rear walled gardens are given their own landscape characters to relate to the internal functions of the adjoining spaces.

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5.01 DESIGN PROPOSAL

SITE INTENT



AERIAL VIEW OF PROPOSED DEVELOPMENT FROM THE WEST