

Royal Borough of Kensington and Chelsea

# New Barlby Schools

Work Stage 3 VE Report 13 February 2018

Penoyre  
& Prasad



## Contents

<b>1 Executive Summary</b>	1	<b>9 Appendices</b>	
1.1 Summary of WS3 design development	1	A - General Arrangement Plans and CGI views	77
1.2 Issues to be signed off	1	B - Barlby Primary Area Schedule	86
1.3 Next Stage	1	C - Special School Area Schedule	87
<b>2 Introduction</b>	5	D - Outline Specification Table of Contents	88
<b>3 Project Briefing Summary</b>	9	E - P&P Stage 3 Drawing Issue Sheets	92
3.1 Consultation	10	<b>10 Consultants Reports &amp; Drawings</b>	
3.2 Brief	10	In separate volumes:	
3.3 GIA	13	• P&P   Architecture (drawings, schedules, specifications and room data sheets)	
3.4 External areas	14	• KBD   Catering	
<b>4 Approvals &amp; Consents</b>	17	• TLP   Landscape	
4.1 Planning	19	• SGD   Transport	
4.2 RBKC highways department	19	• Curtins   Structures and Drainage	
4.3 Building Control and Fire	19	• (includes Flood Risk)	
4.4 Sunlight and Rights of Light	19	• Etude   Sustainability & BREEAM	
<b>5 Stage 3 Design Development</b>	21	• Hoare Lea   Services	
5.1 Schools layouts	22	(includes acoustics, daylight, fire, security and air quality)	
5.2 Interior design	27		
5.3 Massing	34		
5.4 Elevational development	36		
5.5 Boundaries and Entrances	42		
<b>6 CDM 2015/Principal Designer</b>	49		
6.1 Construction Phasing	53		
6.2 Hazard Schedules	58		
<b>7 BIM</b>	61		
<b>8 Design Team Summaries</b>	65		
8.1 Landscape	66		
8.2 Transport	67		
8.3 Structures	68		
8.4 Drainage	68		
8.5 Sustainability & BREEAM	69		
8.6 MEP	70		
8.7 Security	71		
8.8 Daylight	71		
8.9 Fire	72		
8.10 Acoustics	72		
8.11 Catering	73		

# 1 Executive summary

This RIBA Work Stage 3 VE report includes and updates the work completed during RIBA Work Stage 3 for new Barlby Primary and Special Needs Schools and for the enabling works, with the Design Brief amendments, including value engineering carried out from October 2017 to February 2018.

This document was prepared by Penoyre & Prasad and includes summaries and information from other disciplines from the design team – services, structures, landscape, sustainability and BREEAM, catering, transport, fire engineer, acoustics, flood risk and below ground drainage.

The Stage 3 VE design proposals and outline specifications have been issued for costing. A cost report will be issued under a separate cover. Also refer to the Project Manager's Risk Register and Programme.

## 1.1 Summary of Work Stage 3 VE design development

The work developed in Work Stage 3 VE is based on the site strategy, Project Brief and consultants' strategies and design principles agreed for Work Stage 3.

The building layouts in this report have undergone changes requested and validated by the client team - RBKC Corporate Property, RBKC Children and Family Services, Barlby School Primary head teacher and the Special School advisor.

The school layouts and detailed design agreed in Stage 3 have been developed in Stage 3 VE and involved the following areas of omissions and amendments requested by the Client Team as part of the VE requirements:

- Omit Respite to Special School including stair and lift core, and one classroom
- Lower ground floor plant remodelling
- Omit aluminium fins at plant room, halls and roof terrace. Add indented brickwork detail in lieu.
- Omit approx 12 areas of recessed brickwork
- Amendments to special school entrance to omit recess
- Omit metal cladding to columns, entrance, bin store and substation at Special School entrance
- Amendments to structure and foundations following omission of Respite facilities
- Amendments to column grid to suit revised wall details
- Omit cavity wall insulation as specified in WS3 to all mineral wool insulation in brick external walls, move inner leaf inwards 50mm to maintain U-values.
- Reduction in height to internal glazed screens and doors
- Omit feature display shelving to primary school stair, add timber lined balustrade
- Omit 50% Primary School window seats
- Reduce tile specification in corridors
- Amendments to rooftop plant and plant enclosure on

- Special School and Primary School roof
- Addition of life Safety standard to sprinkler system
- Addition of Lifts to Primary School and Special School to Evacuation standard
- Addition of roof top generator for lift and sprinkler enhancement located in Primary School plant enclosure
- Alternative lighting suppliers
- Reduction of CCTV cameras
- Omit Radiant panels to Special School and add low surface temperature radiators
- Omit Radiant panels to Primary School hall, add heating via Air handling plant.
- Reduction to extent of main roof terrace to 190m2
- Increased height to Orchard Terrace to 2.4m
- Reduction in area to minibus drop off with reduced numbers of minibuses.
- Increased ground level play areas to Special School and Primary School
- Revised secondary entrance to Special School
- Reduced landscape equipment specification
- Additional paving to Treverton Street

## 1.2 Issues to be signed off

- The layouts and area schedules (rev M) including the revisions made since Work Stage 3:

- the Special School entrance area
- the revised Special School internal layout, including staff and training room layout, Therapy Suite layout, classrooms at lower ground floor
- Amendments to Primary school roof terrace, Orchard roof terrace
- Review of the Barlby School entrance area
- Review of the Barlby School staff and admin layouts
- School Hall layouts and use and AV design

- The façade design and materials (excluding specific brick and exact colours, to be confirmed in next stage following review of site sample panels), for full planning application submission.

- The strategies for services, structures, landscape, sustainability and BREEAM, catering, transport, fire engineering, acoustics, flood risk and below ground drainage, interiors and FF&E.

## 1.3 Next Stage

Following approval of Work Stage 3 VE and submission of a full planning application, the architect will be novated to a preferred contractor. Together with the contractor and a directly appointed consultant team, co-ordinated Work Stage 4 proposals will be developed, for tender in the autumn. The team will continue to work closely with the current RBKC client team during the next stage.

## 2 Introduction

The Royal Borough of Kensington and Chelsea (RBKC) wish to commission a high quality building to accommodate two new Barlby Schools.

- the existing Barlby Primary School with increased capacity from 1.5 FE to 2FE, a 30 place nursery and retaining the “Orchard” – a unit for 12 children with Autistic Spectrum Conditions (ASC);
- a new 80 place Special Needs School for children and young people with Severe Learning Difficulties (SLDs) and Autistic Spectrum Conditions (ASCs), which will include a 6 place Respite unit.

The aspirations for the two new schools, from RBKC Tender document (January 2015) are that they:

- Reflect corporate pride in education and create sense of place;
- Create separate school identities whatever the configuration;
- Create a range of learning opportunities, indoor and outdoor, with outdoor spaces which relate well to the indoor;
- Especially in the case of a special school, have robust finishes but adaptable spaces, recognising the likelihood of changing needs over time.

This Stage 3 VE Report has been prepared by Penoyre and Prasad Architect to include the updates to the scheme developments during October 2017 to February 2018, since the Design Stage 3 report issued 02/06/2017.

During Stage 3 the scheme has progressed from a scheme design to a developed design, with a more detailed external appearance and internal layout, developed and tested with client and user input.

The report demonstrates how the proposed architectural and interior design for the two schools will address the functional and spatial arrangements required, as well as communicate how the proposals use the shared site to give separate identities, outdoor spaces, boundaries and entrances for the two schools that relate to their immediate context.

The report sets out key elements of the design process and the reasoning behind the proposals, with input by a range of consultants, stating the key performance standards and targets to be achieved. Appendices to this report include coordinated design team drawings, specification and reports.

The Stage 3 VE report and accompanying Appendices should be read in conjunction with the Stage 3 VE Cost Plan.

RBKC have also set high ambitions for the future redevelopment of the area surrounding the Barlby New Schools is located, to become “a conservation area of the future”. As both schools are providing children and students amongst whom there are autistic students in the Special School and the Orchard Unit, this adds significant strategic considerations, both to the current scheme and the future redevelopment.

Enabling works were developed and approved during Stage 3. A separate planning application was made and works completed to provide replacement accommodation in the summer of 2017 and in advance of the new school project. This timing was to minimise the disruption and suit the needs of the children with ASC using the existing Barlby School Orchard facilities, which will need to be demolished during the works.

The new Barlby schools are required to have a long design life for structure and fabric of at least 60 years. It is expected that the roof and below ground waterproofing should provide this standard. Windows and doors should aim for this standard within industry accepted norms, and the building environmental services should comply with the design life set out in the latest CIBSE guide. The BREEAM target is Excellent.

### Design Team:

Architecture	Penoyre and Prasad
Landscape	The Landscape Partnership
Ecologist	The Landscape Partnership
Catering	Kevin Barnes Design
Sustainability and BREEAM	Etude
Structural Design	Curtins
Drainage and Flood Risk	Curtins
MEP Engineering Design	Hoare Lea
Daylighting	Hoare Lea
Security	Hoare Lea
Acoustic Design	Hoare Lea
Fire Strategy	Hoare Lea
Vertical Transport	Hoare Lea
Air Quality	Hoare Lea
Transport Consultants	SDG
Planning Consultants	GVA
Cost Consultants	Arcadis
Project Managers	Lend Lease

## 3 Project briefing summary

### 3.1 Consultation

#### Client

The following Client meetings, presentations and workshops were held during Stage 3 and Stage 3 VE:

- Monthly Project Board Meetings
- Monthly Project Team Meetings. starting on 14 Mar 2017 when Lend Lease Project Managing team were appointed.
- Design Team Meetings with Client, on 14 Dec 2016 and fortnightly between 14 Mar 2017 and the end of Stage3;
- On 8 Dec 2016 a presentation was given to RBKC Lead Cabinet Members;
- On 28 Feb 2017 a Factual Briefing was given to RBKC Planning Committee Members;
- On 18 May 2017 a presentation was given to RBKC Corporate Property Board;
- A Landscape briefing meeting for the Primary School was held on 6 Dec 2016 and led by TLP.
- An Interiors Briefing meeting for Barlby Primary was held on 30 Jan 2017;
- An Interiors briefing meeting for Special School was held on 1 Mar 2017;
- An ICT briefing meeting for Barlby Primary was held on 21 Feb 2017;
- A Security briefing meeting for Barlby Primary was held on 27 Mar 2017 ;
- A Security briefing for meeting for Special School was held on 4 Apr 2017.
- Catering layout was reviewed by Client and Stakeholders at a meeting on 4 December 2017 (see additional Brief information, 3.2, p12)

#### Stakeholders & Public Consultation

- On 30 Nov 2016, the scheme was presented to Barlby School Governors and Staff.
- On 31 Jan 2017, a public consultation event was held at Barlby Primary School. This was organised by RBKC, at the same day and time as a public consultation for the housing masterplan was being held at the nearby Trevorton Tower Clubroom. Parents, governors, school staff and neighbours attended the event and provided feedback through RBKC.
- A further exhibition at Barlby School has been arranged for 21 February 2018 to reflect the WS3 VE revisions
- Refer to Section 4 of this report for consultation related to Planning.

#### School Visits

The following building visits were made during Stage 3 with the Client and the Landscape Architects:

- Phoenix Special School on 30 Jan 2017;
- Prior Weston Primary School, on 7 Mar 2017.

### 3.2 Brief

#### Stage 3 Brief Development

The briefing principles that were set out in the previous stages were further developed at Stage 3.

Additional briefing principles were received on the subjects of Landscape, Interiors and Security.

#### Brief changes

After the verbal approval of Work Stage 2 VE report 14/12/16 and instruction to proceed Work Stage 3, the Client advised the scheme must respond to the following brief changes:

- Mar 2017 | change of application boundary. The project was initially developed with the housing masterplan, assuming its works would be carried out in sequence with the schools works. The instruction to separate the scheme from the housing masterplan resulted in: increased complexity of the phasing; a change of site boundary to include the area south of the site, revised access to the Primary School and changes to the treatment of the existing MUGA outside of the site; change in design of the east boundary. The Energy Centre option was also omitted.
- Feb 2017 | ICT server ownership. Following the appointment of an ICT consultant by RBKC, the Client advised that the server rooms could not be shared between schools.
- Mar 2017 | Facilities management office ownership. On the first Security briefing meeting, the Client advised that the facilities management office could not be shared between schools.
- October 2017 Respite facilities to be omitted, along with a package of VE requirements to be explored.
- December 2017 Evacuation lifts and life safety level of sprinklers added, insulation to walls to be changed to mineral wool.

#### Further briefing and design development

The following items require further briefing and design development in consultation with the Client to be fully developed throughout Stage 4:

- FF&E (equipment, fitted furniture and loose furniture) types, products, colours and finishes.
- Signage and wayfinding
- Interiors including finishes, lighting and colours
- Ironmongery
- Phasing to be further developed with Project Manager and Contractor
- Hall Design and AV
- External terraces

Note the risk that a newly appointed head teacher may have different views on the Special School briefing items received to date.

#### Occupancy

The total occupancy for the school did not change from Stage 2 and is:

##### BARLBY PRIMARY

420 pupils (including 12 place SEN unit) - 4 to 11 years old  
30 place nursery - 3 to 4 years old  
80 staff

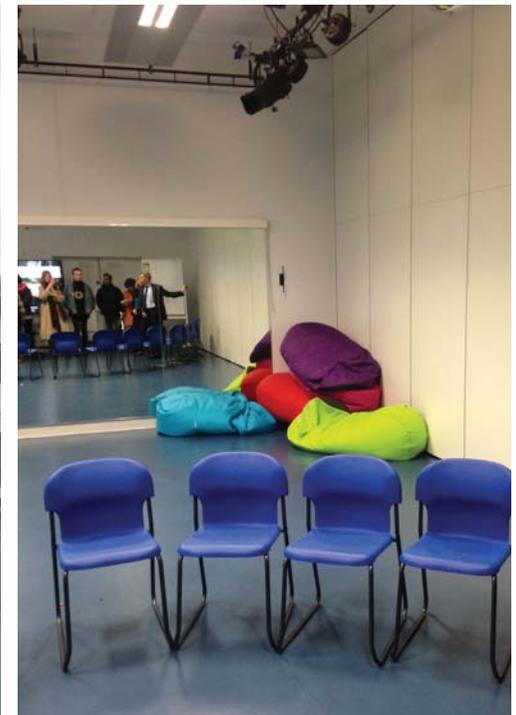
##### SPECIAL SCHOOL

80 pupils - 2 to 19 years old  
90 staff

(In WS3 VE, the Respite facilities were omitted)



Visit to Prior Weston Primary - terrace planter



Visit to Phoenix Special School - performance hall

## Revised Strategic Briefs

The briefs remained generally the same as set out in Work Stage 2 VE report with some amendments and comments added in this Work Stage 3VE shown in **bold blue** and as described on 3.2 Stage 3 Brief Development.

## BARLBY SCHOOL STRATEGIC BRIEF

### Arrival and General Principles

1. The need for a welcoming building for all pupils, their families and carers, staff and visitors, to support the school's vital role at the heart of the community.
2. The need for a non-institutional, domestic-like atmosphere across the school; uncluttered but homely supported by the lighting design (varied) and the furniture.
3. The need for good display for large and 3D/relief works throughout the school, preferably not covered behind acrylic/glass cases.
4. The need for a calm, low arousal environment with pockets of stimulation that inspire creativity and the imagination.
5. The benefit of a range of space sizes and types throughout the school, recognising that children are always learning, not just in the classroom.
6. The need for appropriate security and services zoning to enable out-of-hours community use of the school.

### Classrooms and Support Rooms

7. The need to keep nursery and reception classes together on the ground floor, with direct access to a shared play area. And the benefit of year 1 classrooms clustered with the early years classes. On WS2 it was agreed that Y1 could be located on floor above Early Years and its play area located adjacent to Nursery play.
8. The need for flexible use of space in the early years class spaces, and the benefit of a moving acoustic partition wall between classrooms in reception and nursery to enable year group mixing and activities.
9. The benefit of shared active learning spaces (like the Ark Brunel model)
10. The need of a suite of different sized teaching spaces shared across year groups (preferably years 2,3,4 and 5,6): ideally two intervention rooms for 6 children and a room for 12-15 for each suite to offer intervention spaces and allow for a third teacher in each year group.
11. The need to integrate the Orchard into the main school, possibly with classes on different floors.
12. The need of a 'therapeutic suite' of rooms connected to an external play area to provide a distinct, calm and nurturing environment for the emotional and behavioural needs of the pupils (a third of whom are registered with these support needs) – to include the Learning Mentor's office, a shared room for nurse and social workers, the Art Room (where the

- Clare team can continue their work with Barby and local children), a Bodyshop, an intervention/break-out room.
13. The benefits of a library resource centre at the heart of the school. On 21 Feb 2017 ICT workshop, the headteacher requested for the library to be designed to allow for part of it to be used as an ICT room for 30 children.
  14. The need for ICT within the classrooms. Also a fridge and sink in each classroom.
  15. *A Science room was omitted from the brief by Client team request on 14.01.2015*
  16. The need for a flexible configuration of the large and small halls, directly connected to adequate storage space for chairs, staging, PE equipment, to allow for whole school and community activities (as the Ark Brunel model). The benefit of the large hall opening up to the Special School hall for occasional bigger school/community events.
  17. The need for a shared kitchen and building/site management facilities with the Special School. On 27 Mar 2017 Security meeting, the Client advised that the facilities management offices should not be shared between schools.

### Staff and Admin

18. The need for a good staff room that is private, restorative and focused on their needs, ideally well connected to main teaching spaces for easy, regular access, recognizing that staff can be on site between 6.30am and 6pm. The benefit of a larger room for staff connected to a smaller work prep room and direct access to a private outside space.
19. The need for good admin space that enables staff to do focused work without distraction as well as be available to respond to enquiries at the front desk.
20. The benefit of an open welcoming front desk, not cut off by protective glass, but part of a secure front-of-house zone with a security barrier to the main body of the school.
21. The need for a private working space for the Bursar, connected to the admin area.
22. The benefit of the head's office located near the entrance, but not with direct access to the front lobby area.
23. The need for a store room adjacent to the delivery entrance to keep supplies out of corridor spaces when they arrive.
24. The need of an interview/meeting room adjacent to the entrance.
25. The need of a community room near the entrance, adjacent to external space and possibly adjacent to the hall, with separate access to allow flexibility of use for after hours clubs and holiday play (as Ark Brunel model). To have the space and facilities to use for food technology classes with pupils. Possibility to be used for Orchard children lunch area.

### Outside Space

26. The need for spacious playground drop-off space, and sufficient adjacent pavement area, to avoid bottlenecks at beginning and end of the school day.
27. The need of the playground spaces for community use at weekends and holidays (noting adequate management and maintenance requirements to facilitate this).
28. The need of a variety of external environments, including rougher, 'wild' areas and undulating landscape areas to encourage different kinds of creative play.
29. The need for covered external play areas.
30. The benefits of rooftop play areas with potential for outdoor learning and play, raised beds etc, recognising the benefit of fewer larger spaces over many smaller ones. **October - January 2017: The roof top terrace was reduced to 190m2, compensated for by the increase of play area at ground floor level.**

### 31.

#### Furniture and Finishes

32. The need for robust materials and finishes.
33. The benefit of carpets wherever possible, to reinforce the domestic feel.
34. The benefit of good, flexible, furniture that supports the ethos of the school.
35. The benefit of a curtain within class spaces to be able to separate off part of the space for changing or different activities.
36. The benefit of a coat cupboard outside the classroom to reduce clutter and arousal in the classroom.
37. The need to minimize visual clutter and have minimal signage.

Refer to point 3.3 for information on schools' gross internal floor area (GIA) and to **Appendix B** for Barby Primary revised Schedule of Accommodation.



Photo of 3d printed model prepared in mid Stage 3 - Primary School façade on foreground

## 3 Project briefing summary

### 3.2 Brief

#### SPECIAL SCHOOL STRATEGIC BRIEF

##### Arrival and General Principles

1. The need for a secure entrance and site perimeter.
2. The need for a low arousal environment:
  - a. clutter-free spaces with minimal visual detail, ideally with built-in storage
  - b. limited views out of all teaching and circulation spaces
  - c. low noise levels with good, absorptive acoustics, especially low-impact floor finish
  - d. adjustable light levels with no fluorescent fittings
  - e. a stable temperature
3. The need for a ventilation system that does not cause distraction to pupils (eg through background drone noise or low level opening windows) or compromise the low arousal environment in summer conditions.
4. The need for space for the children to be able to freely move about (eg pacing or jumping) in all of their learning and social environments without disruption to others or restraint to their own needs, and for staff to be able to contain any incidents of pupil distress without crowding in and further distressing a pupil and their peers.
5. The need for clear boundaries and secure access zones throughout the building and site to provide the safe containment of pupils without over-limiting their freedom.
6. The need for visual coherence and minimal statutory signage that is distracting to pupils; clear labelling and signage, for rooms to be easily identifiable without language by pupils.

##### Classrooms and Support Rooms

7. The need of good classroom connectivity for regular pupil needs:
  - a. close connection to the outside, ideally with direct access from classrooms
  - b. close proximity to WCs, ideally adjacent to classrooms for early years and primary
  - c. direct connection to resource space for teaching and snack materials from classrooms
  - d. close connection and easy access to calming support spaces for pupils (wet play, sensory play, soft play, body works, winter garden).
  - e. proximity and easy access to support spaces (food tech, music, hall, dining)
8. The benefit of a changing area adjacent to wet play.
9. The need for flexibility in the classrooms to be able to create sheltered, semi-protected environments for different pupil activities – ideally through furniture that can be easily be

arranged and rearranged according to each class and pupil need.

10. The benefit of a PE hall that accommodates trampolining, with adjacent storage for the equipment.
11. *Winter garden omitted from brief on WS2 VE.*
12. The benefit of locating post 16 classroom(s) adjacent to the respite area to allow for use of the respite room for life skills and with direct access to an external terrace. On WS2 it was agreed to locate the Post 16 classrooms on Lower Ground floor to allow direct access to playground.
13. *Dedicated therapy room for KS1 and KS2 omitted from brief on WS2 VE.*

##### Staff and Admin

14. The need for a good staff room that is private, restorative and focused on their needs, benefiting from good connection to main teaching spaces for easy, regular access and direct access to a private outside space.
15. The benefit of separate staff work room directly connected to a training rooms with kitchenette area, located to allow for use by other schools, recognizing that the facilities will be used for outreach training.

##### Outside Space

16. The need for clear, secure and safe separation of vehicles with easy, spacious access route to classrooms that enables the efficient drop-off and collection of pupils from mini-buses and taxis.
17. The need for a secure, green external environment with robust equipment, that is easily manageable for staff (good sight lines) and gives a sense of freedom for pupils.
18. The benefit of covered external play area, recognising year round use of the outdoor space, throughout the day.
19. The need for a robust, semi-cushioned, year round external ground surface – not grass (Astroturf as used at Queensmill, or similar).
20. The benefit of access to a natural environment.

##### Furniture and Finishes

21. The need for robust materials and finishes.
22. The benefit of good, flexible, furniture that supports the ethos of the school.
23. The need for neutral colours throughout.

##### Respite Provision: omitted

##### October 2017: the second floor Respite area, stair and lift was omitted

Refer to point 3.3 for information on schools' gross internal floor area (GIA) and to **Appendix C** for Special School revised Schedule of Accommodation.

##### Catering update

##### Comments emailed 6 December 2017 following the Catering Meeting on 4 December 2017:

**The catering kitchen is to be shared between the SEN and Primary Schools, and it is envisaged that it will be run by one operator/contractor with staff dedicated to each school to deal with their specific menu and serving requirements. Autistic children may not be able to eat during allocated lunchtime and therefore will need flexibility of the kitchen and staff to accommodate their staying longer in the lunch hall in order to finish their meals. The kitchen has been designed to cater for up to 559 meals per day. Each school will serve a minority of students with specific and individual dietary needs, as determined by each school, as well as the normal school meals offer, and the kitchen has been designed to allow for this flexibility.**



Photo of 3d printed model prepared in mid Stage 3 - Special School façade on foreground

## 654-06C- Barlby New Schools

### Area Summary

Revision	Date	Status	Notes
rev A	06-Apr-16	stage 2	Issued for Work Stage 2 report
rev B	19-Aug-16	stage 2VE	VE target reductions
rev C	28-Oct-16	stage 2A-VE	Issued for Work Stage 2A report
rev D	02-Jun-17	stage 3	Issued for Work Stage 3 report
rev E	13-Feb-18	stage 3VE	Issued for Work Stage 3VE report

Overall GIA Summary				
	WS3 As per schools schedules of accommodation rev. L	WS3 VE As per schools schedules of accommodation rev. M	WS3 & WS3 VE area difference	Comments
<b>Barlby School (without Shared Kitchen &amp; Plant)</b>				
Main School	2503.0	2496.0	-7.0	includes Community facilities
Nursery	123.0	119.0	-4.0	
Community Room				included in Main School
Specialist SEN	114.0	113.0	-1.0	
<b>TOTAL BARLBY SCHOOL</b>	<b>2740.0</b>	<b>2728.0</b>	<b>-12.0</b>	Includes 46% of total partitions
<b>Special School (without Shared Kitchen &amp; Plant)</b>				
Main School	2641.0	2508.0	-133.0	
Respite	498.0	0.0	-498.0	
<b>TOTAL SPECIAL SCHOOL</b>	<b>3139.0</b>	<b>2508.0</b>	<b>-631.0</b>	36m2 were moved to Shared Spaces GIA. Includes 43% of total partitions.
<b>Shared Spaces</b>				
<b>TOTAL SHARED KITCHEN</b>	<b>164.0</b>	<b>200.0</b>	<b>36.0</b>	36m2 difference were previously allocated to Special School. Includes 4% of total partitions
<b>Schools GIA total without Plant</b>	<b>6043.0</b>	<b>5436.0</b>	<b>-607.0</b>	
<b>Shared Plant total GIA</b>	<b>535.0</b>	<b>545.0</b>	<b>10.0</b>	Includes shared bin store, servers, plant, risers and 7% of total partitions
<b>TOTAL GIA</b>	<b>6578</b>	<b>5981</b>	<b>-597.0</b>	

Overall GIA Area Summary

### 3.3 Gross Internal Area

Schools Schedules of Accommodation were revised for end of Work Stage 3 VE. These schedules retained the areas from the previous revision as record of what was signed-off by the Client Team and WS3 VE columns were added with the areas being achieved by the current general arrangement plans and with the difference between revisions.

The documents can be found in:

- Barlby Primary Schedule of Accommodation: **Appendix B**
- Special School Schedule of Accommodation: **Appendix C**

For clarity, shared spaces like plant and kitchen areas are not accounted on school specific schedules and are listed on the Area Summary.

#### Schools Areas

Without taking into account any plant area, the GIA of both schools on the current proposal is 597 sqm less than the previous Work Stage 3 area.

To compare GA Plans between stages, refer to the following revisions of drawing series 654-G-200:

- Work Stage 2 VE - revision H
- Work Stage 3 - revision N
- The main changes on the school layouts that affected the GIA are:
  - re-design of Special School visitor and pupil entrances to improve circulation;
  - The Respite area in the Special School has been removed.

#### Plant Areas

Plant requirements were developed by the MEP engineers and Low Energy consultants in Work Stage 3 and the total area is 83 sqm less than in the previous work stage. The total area includes main riser voids.

One of the main reasons for the area difference was the confirmation of the sprinkler tank requirements which led to its reduction.

Note current design and costing assumes a school-only energy centre is located on the school site. Design Team advised throughout Stage 3 that any changes to the current energy centre strategy will be abortive work.

Refer to MEP and Sustainability summaries on Section 9 and to reports and drawings issued in separate volumes for further detail on plant.

## 3 Project briefing summary

### 3.4 External Areas

The two schools are on a restricted site and there is not enough site area available to meet all the external area requirements of BB102 and BB103. The external area requirements were set at Stage 0 brief by RBKC for a total site area of 8,200m<sup>2</sup> for both schools, and with minimum external areas to be achieved including roof terraces of 3,750m<sup>2</sup> for Barlby School. These areas were used as key principles to generate the proposals for Work Stage 1 submission.

During Stage 1 design discussions, Ark Brunel Primary school (also designed by Penoyre and Prasad) provided a useful benchmark reference area for a new primary school on a restricted site. This school has an external net site area of 3,500m<sup>2</sup>.

Stage 3 external areas were affected by the changes in site boundary, building layouts and footprint but overall did not deviate considerably from the areas met on Stage 2. Work Stage 3 VE areas were revised by reducing the area required for the Special School mini-bus drop off.

Barlby Primary external area was reduced to 3725m<sup>2</sup>. This was mainly due to the reduction of the large roof terrace as it no longer extends above the Special School - this change was possible as the mini-bus drop off area to the Special School was reduced. Barlby Primary external area is very close to the minimum target area of 3,750m<sup>2</sup> set out in the Stage 0 brief. It also exceeds the minimum area of 3,500m<sup>2</sup> set by the benchmark RBKC reference school, Ark Brunel.

Refer to the Landscape summary on **Section 9** and Landscape Architect's report and drawings on a separate volume for further information on the proposals for external areas.

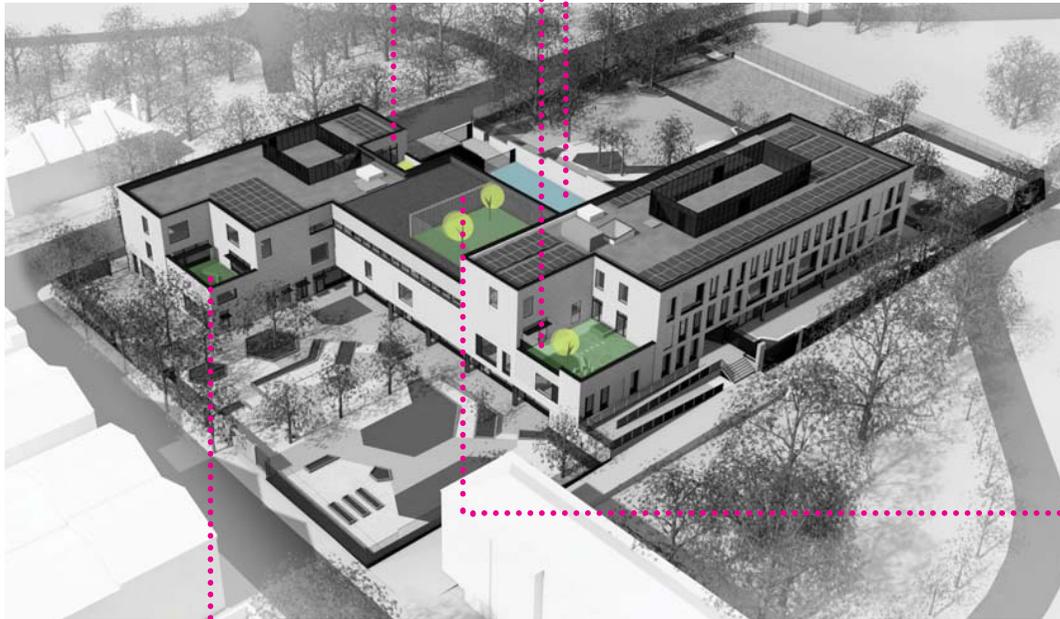
External Areas Summary			
	WS3	WS3VE	WS3 & WS3 VE area difference
<b>Barlby School</b>			
Reception & Nursery	354	354	0
Y1 - Y6	2930	3080	150
Terraces (Orchard + Roof terrace)	555	293	-262
<b>TOTAL BARLBY SCHOOL</b>	<b>3839</b>	<b>3727</b>	<b>-112</b>
<b>Special School</b>			
Primary	1421	1550	129
Secondary			
Life-Skills / Drop-off	793	522	-271
Terraces	344	128	-216
<b>TOTAL SPECIAL SCHOOL</b>	<b>2558</b>	<b>2200</b>	<b>-358</b>
<b>External Circulation</b>			
Barlby Visitor Entrance	125	125	0
Special School Visitor Entrance / Parking / Vehicle	197	147	-50
<b>TOTAL EXTERNAL CIRCULATION</b>	<b>322</b>	<b>272</b>	<b>-50</b>
<b>Roof (non-accessible)</b>			
Barlby Roof	884	884	0
Special School Roof	474	471	-3
Sedum Roof	0	263	263
<b>TOTAL ROOF</b>	<b>1358</b>	<b>1618</b>	<b>260</b>

External Area Summary

## Terraces

### 65m<sup>2</sup> Special School Staff Terrace

Private and restorative space for staff.  
To be used as break-out space from training room



### 99m<sup>2</sup> Primary School Orchard Terrace

Aimed to provide a calm and nurturing environment for the emotional, behavioural and special needs of children. Orchard classrooms have direct access to this terrace.

### 522m<sup>2</sup> Special School Drop-off / Life Skills

Designed to be flexible, for children to play, use bicycles and with markings to simulate road crossings and junctions to help the development of life skills.



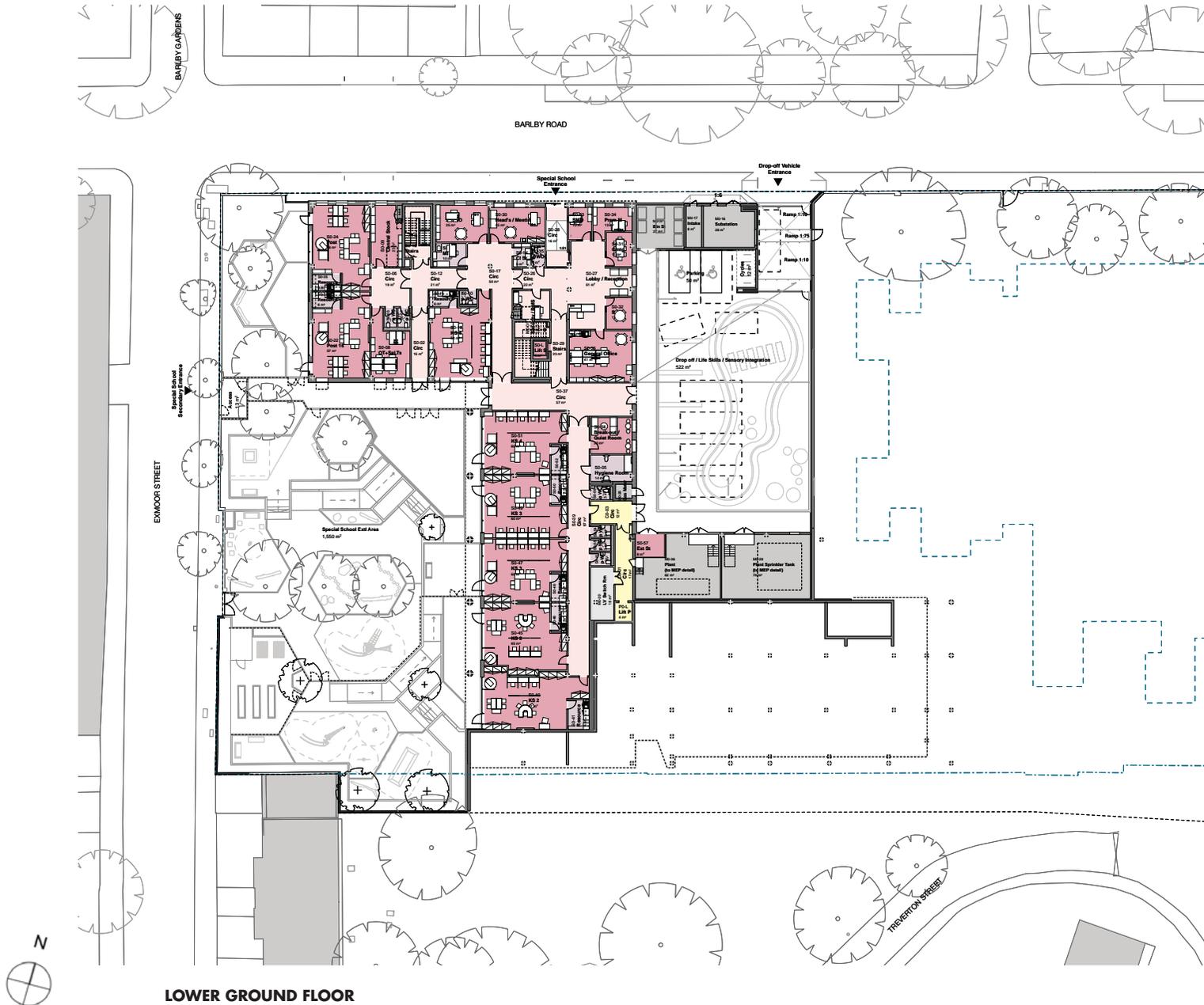
### 189 m<sup>2</sup> Large Roof Terrace for Primary School

This terrace is designed with different settings to allow for a range of activities: outdoor learning and play, growing, reading, break-out from library, potential for BBQ and social gatherings and a safe location to house the school pets. The occupation is limited to 60 people.

### 60m<sup>2</sup> Special School Early Years Terrace

This will be the main playground space for the younger children. It has direct connection with Y1 and Reception classrooms.

## 5 Design development



LOWER GROUND FLOOR

### 5.1 Schools layouts

The school layouts were developed in Stage 3 and Stage 3VE in coordination with the building massing and façade development, the daylight, ventilation and comfort requirements, the FFE space planning, the integration of MEP risers and development of structural frame.

This work was carried out in consultation with the Client. The areas revised since Work Stage 3 include:

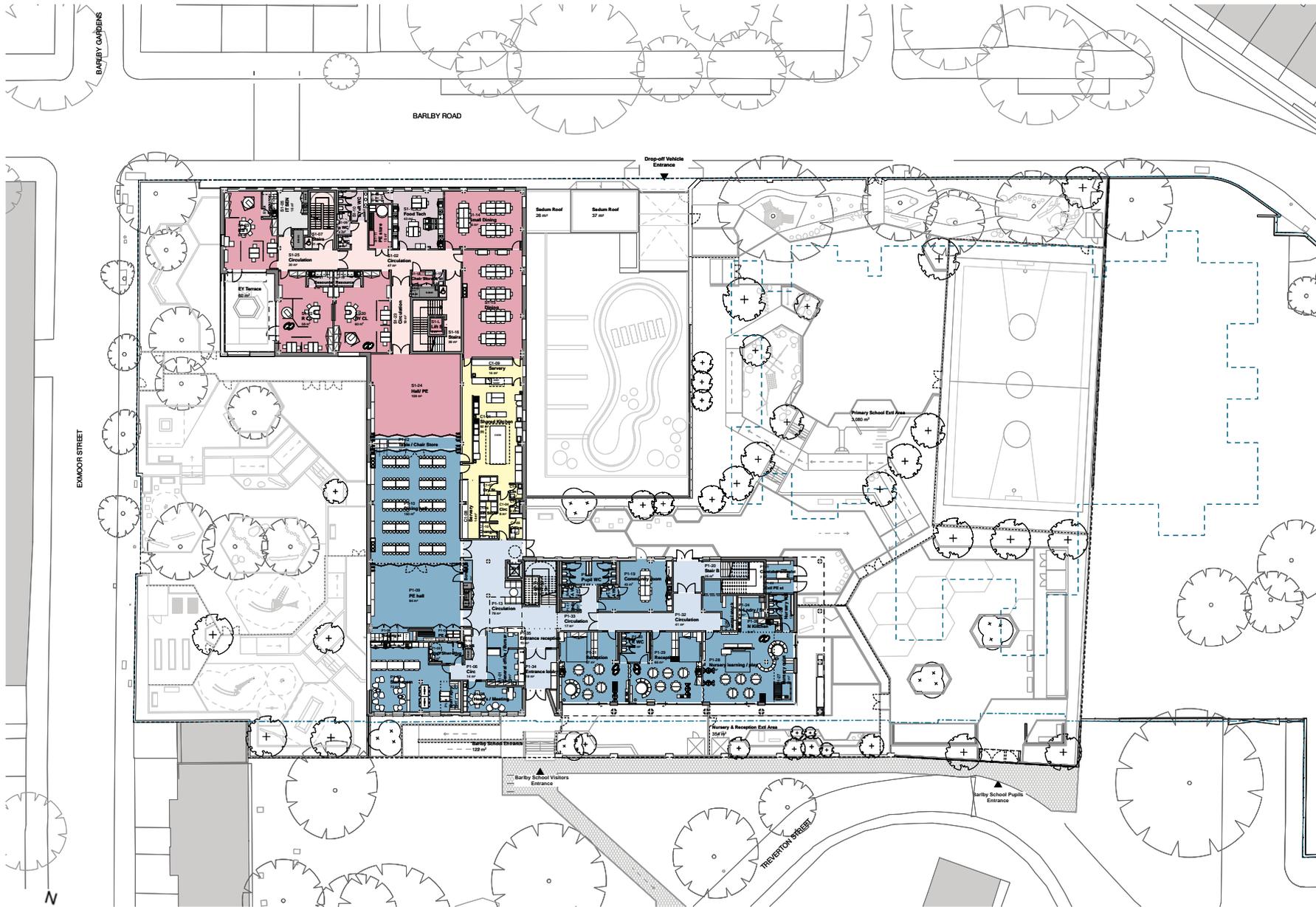
- Omission of the Special School Respite Area, stair and lift core
- Reduced area to Special School Early years terrace
- revised Special School entrance area;
- bin store and plant relocations on lower ground floor;
- Special School stairway configurations;
- addition of a breakout room on the (Lower) Ground floor of the Special School;
- Relocation of Post 16 Special school classrooms
- Special School staff and training room layout;
- Special School Therapy Suite layout;
- Primary School main stairway treatment;
- Primary School roof terrace area reduction
- Raising of Primary School Orchard roof terrace walls;
- reduction in the overall length and GIA of the Special School

Options were reviewed for Low Surface Temperature radiators or underfloor heating instead of radiant panels in Special School classrooms, underfloor heating or Air handling unit heating to the school halls; and underfloor heating instead of radiators in the Primary School Nursery, and Reception classrooms. Low Surface Temperature radiators were agreed for the Special School classrooms, and Air handling unit heating to the Primary school halls.

The current layout was presented to the Client team (RBKC Corporate Property, RBKC Education, Barby headteacher and Special School advisors) at a meeting at Queensmill School on 5 December 2017. The shared kitchen layout and ancillary rooms were adjusted further in response to comments and feedback, within the footprint already established, with further input from the catering consultant.

#### Further development to be carried out in Work Stage 4

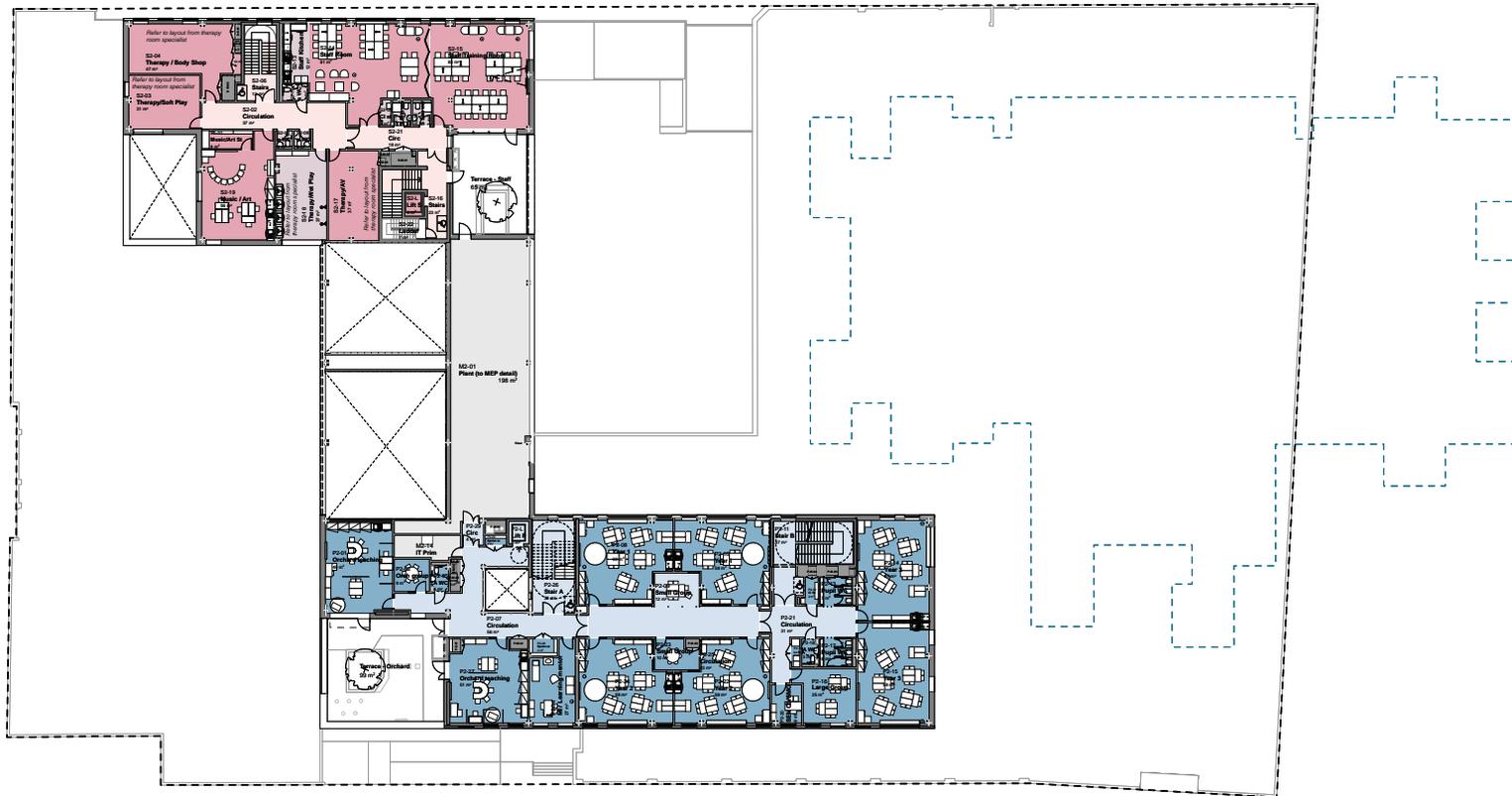
- Primary entrance and reception in conjunction with reception desk joinery and atrium design development.
- Primary school hygiene room and staff shower in conjunction with central stock area.
- Option to be reviewed for heating instead of radiant panels to the Special School PE Hall.



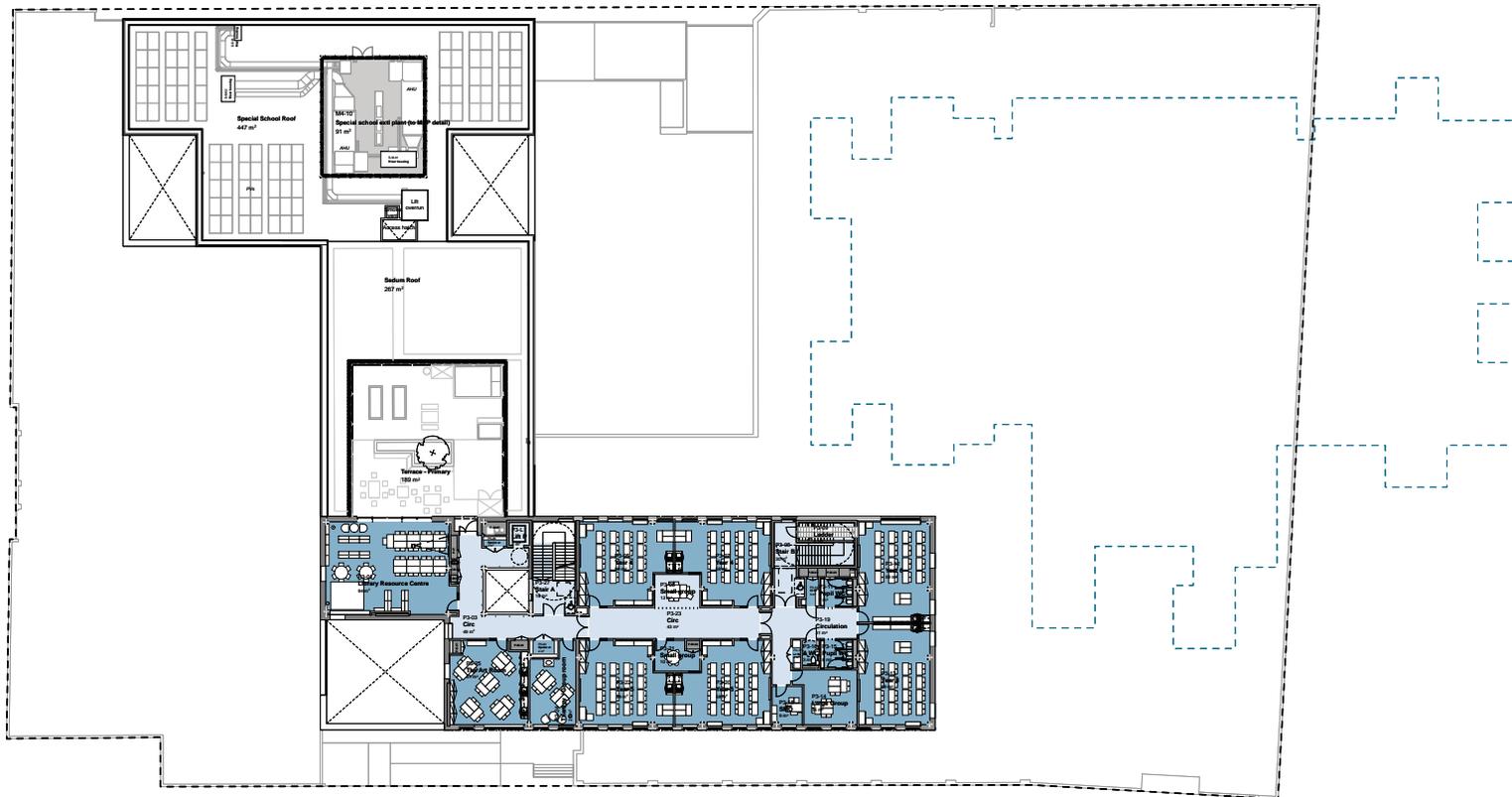
**GROUND FLOOR**

# 5 Design development

## 5.1 Schools layouts



FIRST FLOOR



**SECOND FLOOR**

