

# The Design Process

The Russell & Strathmore Schools  
Design & Access Statement



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# 4.1 The Design Process

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## Introduction

Over the last year the Atkins design team have been working closely with the LBRuT Client departments, the staff and pupils of the Russell and Strathmore Schools, LBRuT Planning Department, school governors and other key stakeholders, to define the outline brief and develop this into a robust design proposal for submission in this planning application.

The developed brief requires the Russell Primary and Nursery School to expand from a 1FE to a 1FE plus a shared form of entry (an additional 4 classrooms) as part of a shared form of entry policy in the Ham and Petersham area. This would mean the school growing from its current 236 pupil capacity to 330 pupil capacity, plus 26 pre-school places, making a new total pupil capacity of 356 pupils.

The developed brief also requires part of the Strathmore School to relocate from its current site and building to co-locate with the new Russell School.

The existing Strathmore SEN provision will be split into three separate parts and be relocated as follows:

- Strathmore at Russell Primary School - 18-24 Primary School places
- Strathmore at Grey Court School - 18-24 Secondary School places
- Strathmore at St Richard Reynolds Catholic College - 18-24 Secondary School places

## Key Objectives and Design Principles

The proposed co-located Russell Primary School and Strathmore SEN provision is accommodated within a new purpose designed complex, comprising two teaching wings connected by a single storey link block containing the main entrance lobby, staff room, WCs, offices, corridor and some teaching space.

The Strathmore SEN wing comprises 3 nr SEN teaching classrooms and associated group rooms, WCs, sensory room, play rooms, hygiene facilities, stores and offices. This wing is arranged over a single storey.

The Russell Primary School wing comprises 11nr primary school classrooms and 1 nr pre-school classroom and associated group rooms, WCs, hygiene facilities, stores and cloaks areas. This wing is arranged over two stories.

The gross internal floor area of the proposed co-located provision is 2576 sqm.

The developed overall site plan, floor plans, sections, elevations 3D views, accommodation schedule and outline specification are included within Section 4 of the Report. This section also includes a number of buildings that have inspired the proposals for this site.

These are civic buildings, designed by Hampshire County Council Department of Architecture.

These building are similar in size, scale, massing, materiality etc. to the proposals for Russell and Strathmore Schools.

Read in conjunction with the elevations and 3D views, the general intent for the look and feel of the proposed building is captured within this section of the report.

The developed overall site plan shows hard and soft landscaping, car parking, site access and egress etc. This is also included within Section 6 of the report, which includes a strategy for the hard and soft landscaping, street furniture, boundary treatments etc.

## Consultation Process

The accommodation schedule for the co-located school buildings is informed by relevant Building Bulletin documents such as BB99 (Primary Schools) and BB102. The brief and proposed design solution has evolved over a number of engagement meetings and consultation events with LBRuT Client departments, the staff and pupils of the Russell and Strathmore Schools, LBRuT Planning Department, school governors and other key stakeholders.

This process has been supported by an analysis of the existing facilities offered by the two existing schools, which includes the merits and shortcomings of the existing facilities.

## Vision and Image:

As the design has developed, a vision and image for the development has emerged, which can be summarised as follows:

- A building that will define the quality of the teaching and learning.
- A building that will make a positive statement to the local residents.
- A building that will complement the surrounding buildings of particular architectural merit and be sensitive to its surroundings.
- A building that will be welcoming and inclusive.
- A building that will be accessible and modern and portray quality.
- A building that will be safe for staff, pupils and visitors

## Options

Atkins and Faithful and Gould were initially commissioned by London Borough Richmond Upon Thames to investigate the feasibility of expanding the existing Russell Primary School from a 1FE to a 1FE plus a shared form of entry (an additional 4 classrooms) as part of a shared form of entry policy in the Ham and Petersham area.

This would mean the school growing from its current 236 pupil capacity to 330 pupil capacity plus 26 pre-school places, making a new total pupil capacity of 356 pupils.

In so far as the Stathmore SEN provisions are concerned, LBRuT have obligations and commitments regarding the co-location of SEN provisions alongside main stream school provision. There are proven educational benefits for SEN pupils, in receiving their education within a mainstream school or within a co-located SEN school and mainstream school.

The feasibility study should also investigate the co-location of part of the existing Strathmore SEN provision within the new school complex.

Three options for redeveloping the site were considered as part of the original feasibility study for the site. All of these options were based on the fundamental premise that the two schools must become co-located within the same building complex and that to meet programming, policy and budgetary constraints the existing Strathmore SEN school would need to remain completely operational in it's current form for the duration of the development.

Options 1 and 3 comprised remodelling, refurbishments and extensions to the existing Russell Junior school building, followed by the demolition of the existing Strathmore SEN School, the Russell Infants School, Annexe Building and demountable Staff Building.

Option 2 comprised the construction of a new purpose designed co-located school complex and ultimate demolition of all of the existing buildings on the site

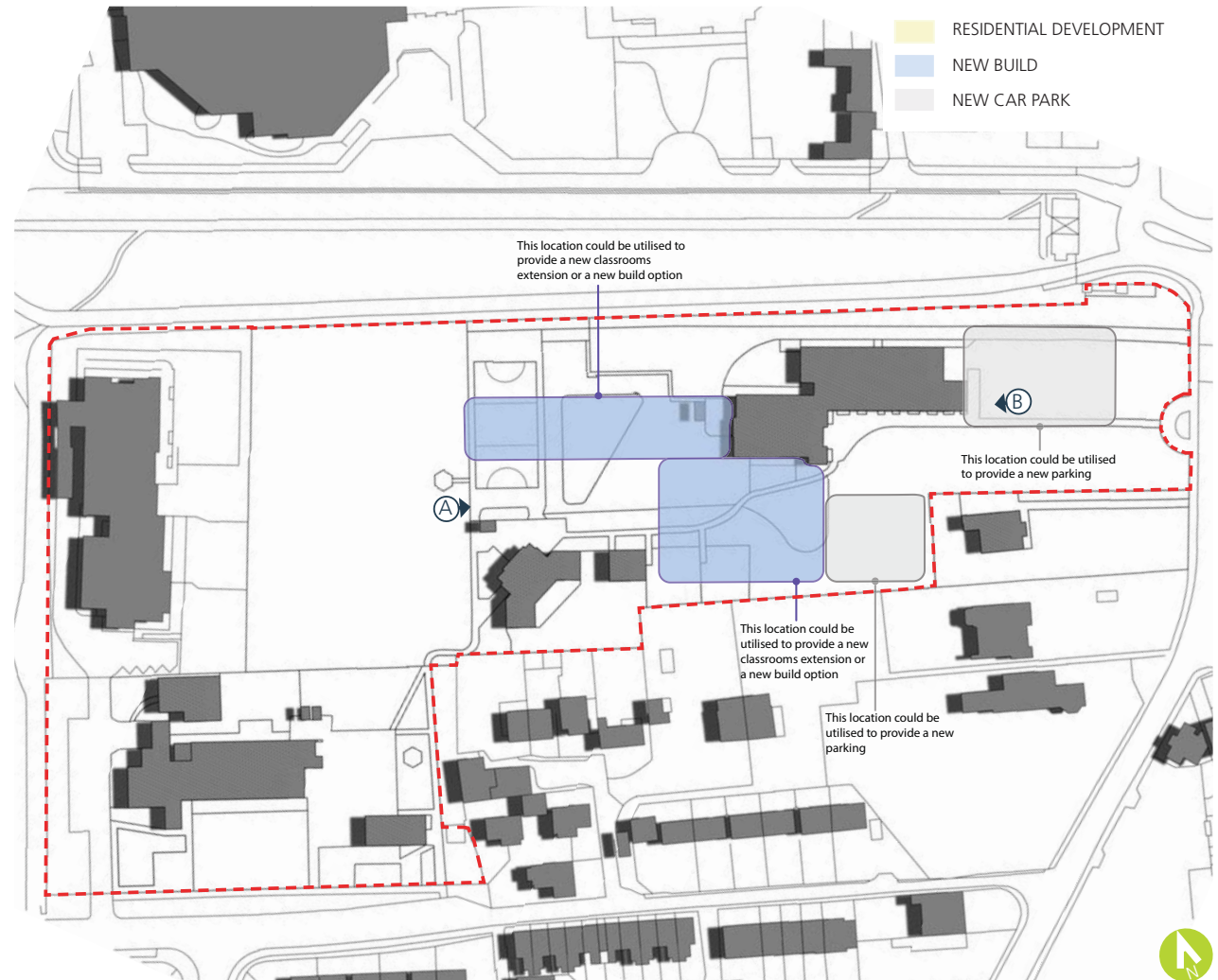
Following extremely careful consideration by the school, governors and the LBRuT client team, the new build option 02 was deemed to be the preferred option. Although this was the more expensive of the three options, it offered distinct benefits and advantages over the other options, which are summarised as follows:

- A new build solution will enable all areas of the school to comply with current building bulletin recommended area standards.
- A new build solution will enable all areas of the school to comply with current building regulation standards.
- A new build solution will enable a significant reduction in building footprint, compared to options 1 and 3. The impact on the Metropolitan Open Land (MOL) is therefore less.
- The new building is set further back into the MOL, as viewed from Petersham Road, which mitigates the increased overall building height and lessens the potential visual intrusion into the MOL, when viewed from Petersham Road.
- The floor planning, in particular the circulation is far more efficient and the gross internal floor area is relatively less, thus reducing running costs and whole-life costings.

## 4.2 The Design Process - Building & Site Appraisal

### Initial Building Appraisal

During the initial client and school consultation, several areas were highlighted as development opportunities. These areas are highlighted on the following plan with a brief description of the opportunities available.



31 Potential Areas for Development

# 4.3 The Design Process

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## Preferred Option 02

The Strathmore SEN school and Russell Primary School are conceived as two distinct entities, within the same building complex. The layout of the new building is symbolic of the commitment of LBRuT to the co-location of SEN provisions alongside the main stream school provision.

The layout provides an environment conducive to educating primary school aged SEN pupils within a co-located SEN school and mainstream primary school.

Each school is accommodated within its own distinct block or zone. The Strathmore SEN block is a single storey construction and the Russell Primary School is a 2 storey construction. A single storey link block containing a shared entrance lobby, reception, staff room, WCs, Offices and some teaching space and a link corridor, joins the two schools and provides a suitable transition zone.

The accommodation within each block is arranged in a linear type format. The principal rooms or spaces are 'double-banked' either side of a top lit central corridor or internal street. In the case of the two storey Russell Primary School, voids are positioned within the corridor floor slab, which allow natural light to penetrate down to ground floor level, from first floor rooflights.



Ground Floor Plan_GIA	1928 m2
First Floor Plan_GIA	648.7 m2
<b>TOTAL GIA</b>	<b>2576.7 m2</b>

Ground Floor Plan

# 4.4 The Design Process

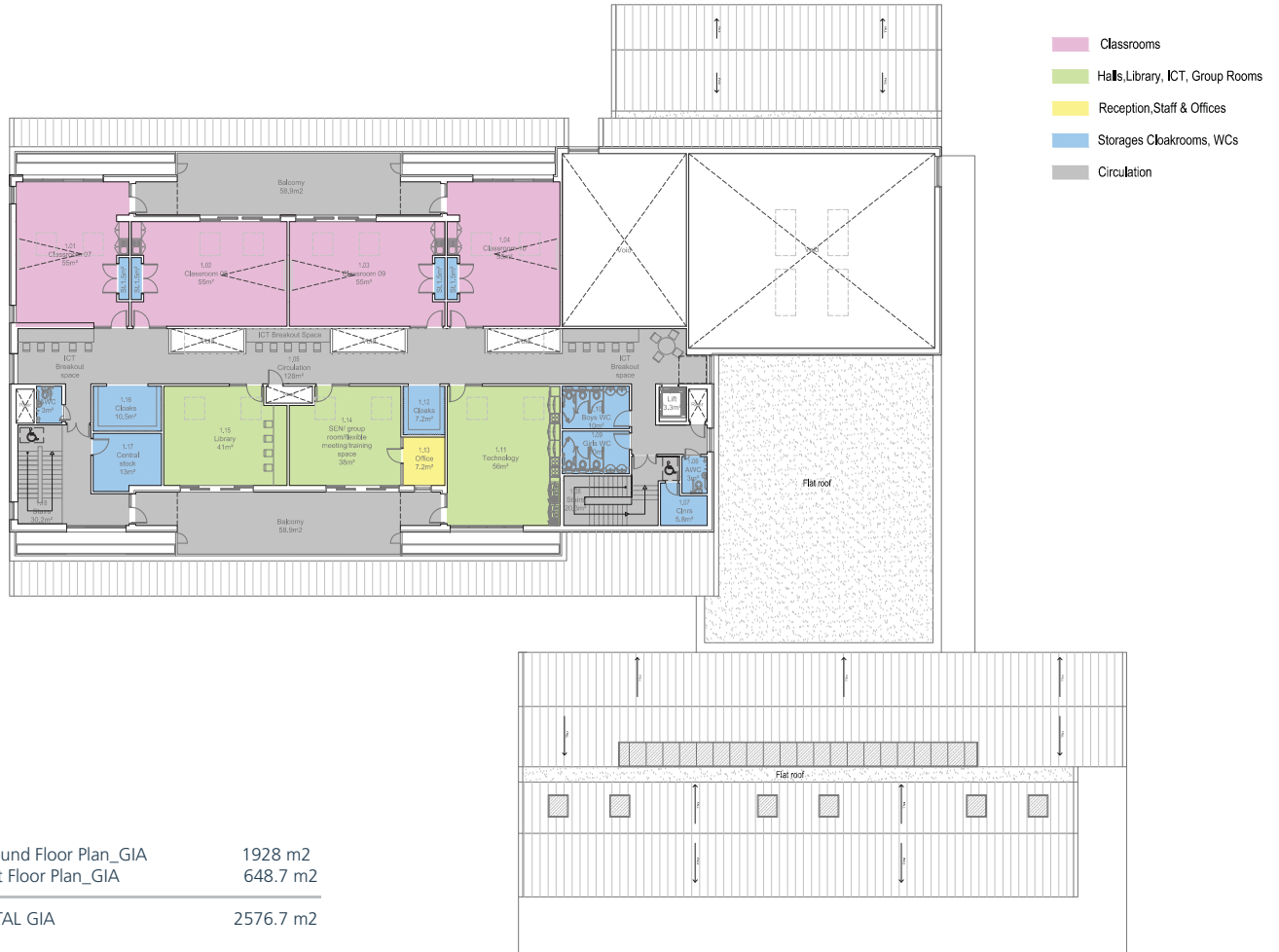
These voids provide a dual function in that they are also an integral part of the natural ventilation strategy for the buildings. Stale air from the ground floor classrooms is drawn through transfer grilles into the ground floor corridors. This air is drawn up through the voids in the corridor floor slabs and is expelled through the opening vents in the first floor roof lights.



Aerial Perspective From the North-East



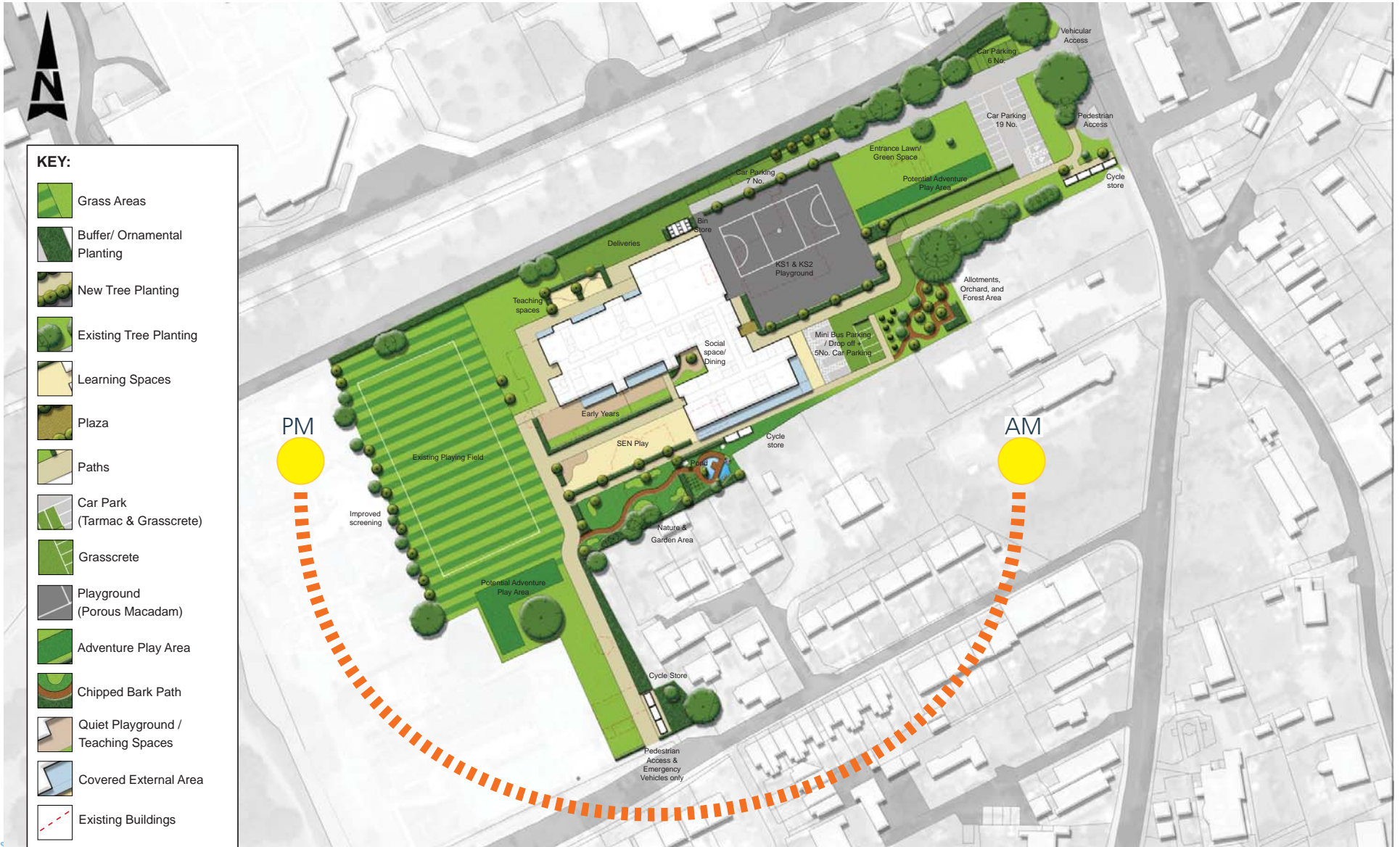
Aerial Perspective From the North-East



Ground Floor Plan_GIA	1928 m2
First Floor Plan_GIA	648.7 m2
<b>TOTAL GIA</b>	<b>2576.7 m2</b>

# 4.5 The Design Process - Proposed Site Layout

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## 4.6 The Design Process - Key Design Elements

### External Appearance, Massing & Facade Treatment

The materiality and massing for the new building has been driven in part by the desire to maintain a dialogue with the local vernacular buildings within this district of Richmond.

Clay facing brickwork and natural slate roofing predominate as materials used for surrounding buildings constructed in a range of different architectural styles, across a number of different eras.

The clay facing brickwork will be carefully selected to closely match the local clay indigenous to Richmond. This is symbolic of the building being intrinsically connected to its site and locality.

The first floor accommodation within the Russell Primary School is conceived as a series of 'loft' spaces, within a roof space. This allows the eaves line to the roof to be brought down to first floor level and reduces the scale of the facade to a level more appropriate for the younger (nursery and reception children).

The massing of each element of the building has been informed by the 'room in the loft' approach to arranging the first floor accommodation and the principal of incorporating pitched roofs with traditional roof pitches (i.e. 35 degree min.).



Architectural Inspiration - Alton Library, Alton, Hampshire, by Hampshire County Architects



However, the overall height of the two storey Russell Primary School block is directly informed by the feedback received from LBRuT planners during our submission for pre-application planning advice.

Previous iterations of the proposals for the building facades showed the overall height of the building some 1.5m higher than currently drawn. In response to these proposals, LBRuT advised the design team to reduce the ridge line down to a height in keeping with the parapet of the a flat roofed two storey school building. The rationale of LBRuT was an acknowledgment that the existing school buildings within then MOL do not exceed one storey (with a pitched roof) and a desire to lessen the impact of the building in respect of the MOL.

To address this planning directive, the Atkins design team increased the area of flat roofing between the pitched roofed elements of the primary school block and reconfigured the pitched roofing to the main and small hall. This effectively reduced the ridge line down to a height considered more appropriate for the site by the LBRuT Planners.

The fenestration is arranged as simple vertical or horizontal slots within the facade, with the glazed panels extending down to floor level. The vertical emphasis to gable fenestration embrace the long views across the site, to the north-east and south-west

The colour scheme and vertical formatting of the glazed spandrel panelling to glazed curtain walling and 'Trespa' type wall panelling, is a reference to the building's wooded setting and is symbolic of the new and existing tree planting on the site and the status of Russell Primary School as a Forest School.

#### Material Choice

The proposed material palette used for the new building will comprise of the following:

- Slate Coloured Pitched Roofing
- Clay Facing Brickwork
- PPC Aluminium Double Glazed Windows, Doors & Glazed Curtain Walling
- Zinc effect Cladding Panels with appropriate Jointing (Balcony Cheeks)

#### 3D Views



View of the Russell Primary School Looking North-East



View of the Strathmore SEN School Looking South-West



East and North Elevations



East Elevation



North Elevation

- Ceramic Backed Double Glazed Coloured Spandrel Panels to Glazed Curtain Walling
- Zinc Effect Parapet Cappings
- Coloured 'Trespa' Wall Panelling
- High Performance Flat Roofing

### Sectional Treatment

The sectional treatment of the building has been designed to allow for the following:

- Good Natural Ventilation and Internal Air Movement
- Good Internal Natural Daylight Levels
- Good Access to External Teaching and Recreational Areas (Balconies and Ground Floor External Classrooms)
- Bring the Eaves Line Down to an Appropriate Height for Infant pupils.

### Scale & Amount

The scale and amount of the development proposals for the site and building are directly informed by the following :

- The recommendations and requirements of the planners in respect of the following :

The location of the site within Petersham conservation area  
 The designation of part of the site as Metropolitan Open Land (MOL)  
 Protected Views (Ham House to Orleans House, Marble Hill House, Twickenham to Petersham)  
 The adjacency of the site to listed buildings and Buildings of Townscape Merit  
 The adjacency of the site to an historic park and garden

- A thorough analysis of the brief developed with the respective head teachers, governors, staff and pupils.
- A thorough analysis of the brief requirements set out within BB99 (DfE Guidelines on the design of Primary School Buildings) and BB102, Designing for disabled children and children with special educational needs.



South Elevation / Section



South Elevation



West Elevation

## Layout

The development of the proposed overall site layout has been a collaborative event, with the Atkins Design Team, the school staff, pupils and governors, the LBRuT client department and the LBRuT planners all contributing to proposals included within this Design and Access Statement.

Specific examples of the direct school led design initiatives include the covered balconies to the first floor of the Russell Primary School, The size and layout of the entrance lobby and waiting area, the covered external teaching spaces to the ground floor classrooms to both schools and the covered external space at the entrance to Strathmore SEN school.

The fundamental requirements that inform the position of the building on the site are three fold as follows:

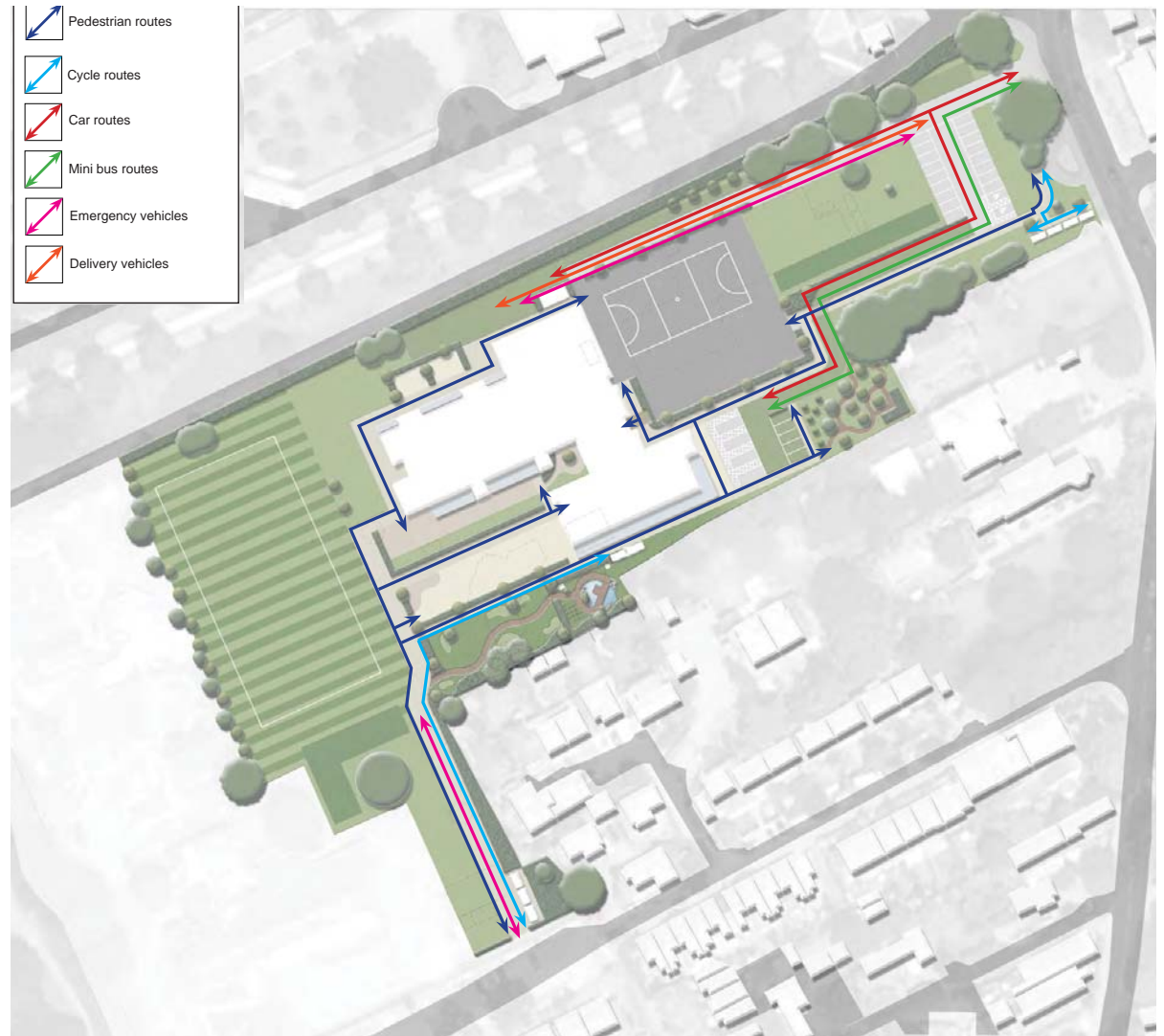
- All existing buildings that currently occupy the site must remain fully operational for the duration of the construction of the new school complex.
- The new development must respect the MOL, particularly when viewed from Petersham Road.
- The existing sports pitch must remain fully operational for the duration of the construction of the new school complex.

The solutions for the overall site layout are covered in more detail within Section 5 of this Report - Landscape.

In broad terms however, the solutions will provide stimulating and vibrant learning environments, focussing on the internal and external settings to provide formal and informal learning resources for children of all abilities.

The vision for The Russell & Strathmore Schools is to create a welcoming and safe learning environment. Access provisions to the building have been designed to ensure the safety of pupils entering and circulating around and within.

The shared main entrance to the co-located building has been designed to be a pleasant and welcoming arrival space. Further design development of the facade treatment to the link block, which could include the introduction of graphical manifestations to glazing, coloured fins to curtain wall mullions, will engender a sense of ownership and uniqueness for pupils, staff governors and visitors alike.



## Internal Layout

The fundamental requirement for the interior architecture is for all classrooms to have direct access to external teaching space.

The layout allows each first floor classroom to the Russell Primary School to have direct access out onto a covered balcony.

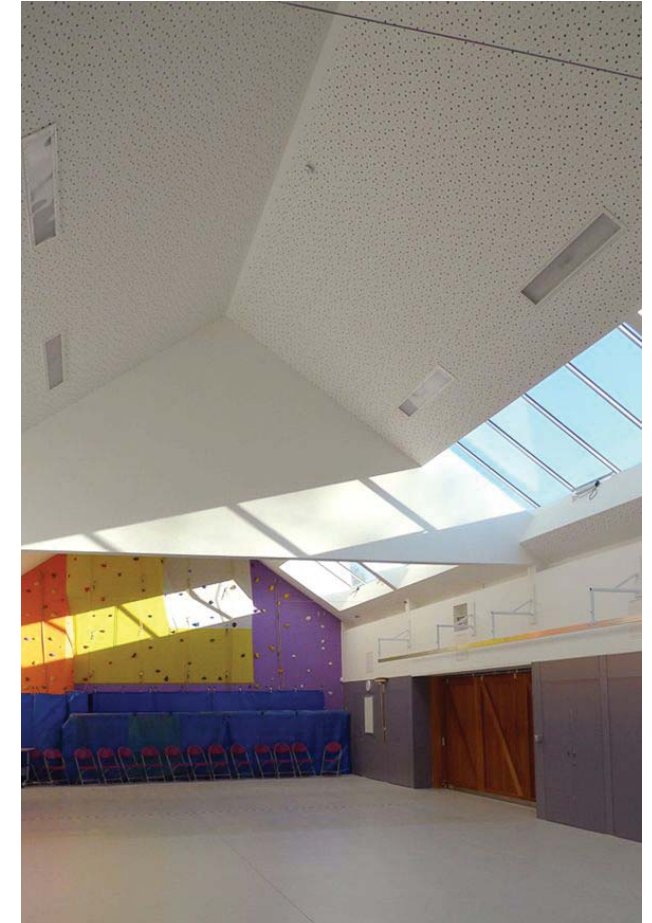
A similar principal applies to the ground floor classrooms to both the Stathmore SEN School and the Russell Primary School. Every ground floor classroom has a direct connection to an external teaching space.

This accords with the status of the Russell Primary School as a Forest School and complies with the requirement for each pupil to spend a certain amount of time outdoors (half of the curriculum).

The new buildings are characterised by an open and airy environment. This is achieved through the incorporation of wide corridors, double height spaces, roof windows, generous glazing with windows extending down to floor level,



Interior Precedents



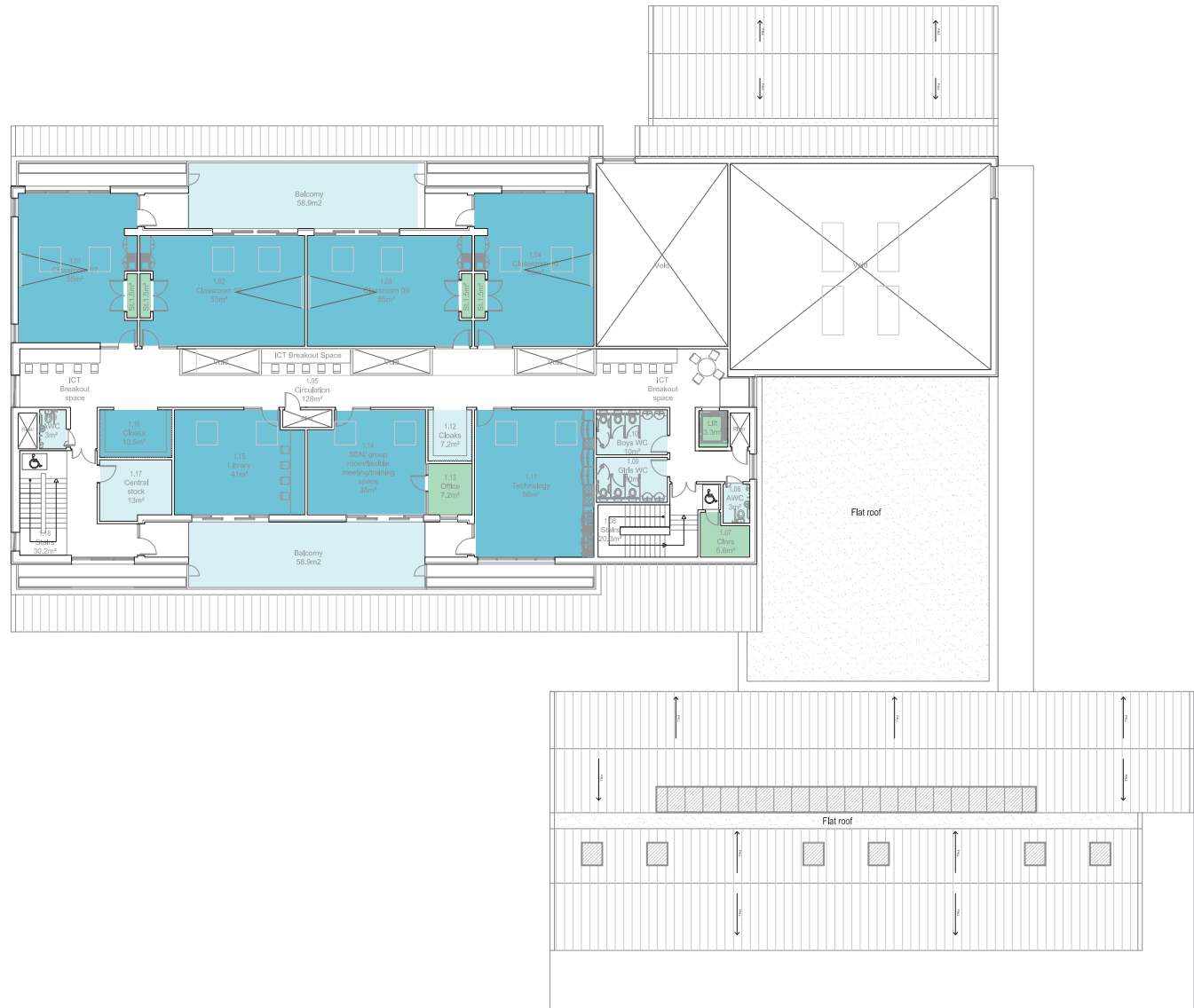
Ground Floor - Internal Layout

- Teaching areas
- Staff areas
- Non Teaching areas used by pupils



### First Floor - Internal Layout

- Teaching areas
- Staff areas
- Non Teaching areas used by pupils









# Landscape

The Russell & Strathmore Schools  
Design & Access Statement



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# 5.1 Landscape - Overview

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## Setting and Planning Considerations

The site is located in Richmond, Greater London, and is bordered by predominantly residential properties to the east and south. Bordering the site to the north is The German School with access to Ham polo club. To the west of the site is Strathmore School and a significant area of green space, further west is Ham House & Gardens (National Trust).

The main vehicle access to the site is off Petersham Way which runs the length of the eastern boundary. A secondary entrance is off Meadlands Drive located at the south-western corner of the site.

The school falls under an Archaeological priority zone/ area of significance (Richmond Park), and is also part of the Ham House conservation area. The Copse, the area of land to the west of Strathmore School, is designated Metropolitan Open Land (MOL), and there are no listed buildings or Buildings of Townscape Merit on the site.

## Vision

The vision is to provide a stimulating and vibrant learning environment, focussing on the internal and external settings to provide both formal and informal learning resources for children of all abilities while ensuring a stimulating and enriching environment is provided that does not compromise the openness of the MOL.

## Concept & Principles

The landscape and its relationship with the school buildings will be critical to the success of the scheme. The design will successfully integrate the structural components of the school into the landscape and retaining existing features where possible to create a stimulating and inspiring landscape that is sympathetic to its context.

Both Russell and Strathmore School have been heavily involved in the design development of the external layout. Through detailed consultation the design has evolved to address the concerns of each party and meet the aspirations of both schools.

Considered and sensitive design techniques have been adopted throughout the design process, and the existing topography of the site will be utilised to reduce the impact of development on the surrounding environment and the MOL. Fundamental to this approach will be the retention of existing mature trees across the site wherever possible, and the provision of new planting to strengthen and augment the existing planting.

The ethos that architecture, landscape, and community are intrinsically linked will be promoted by providing efficient circulation routes throughout the site, linking a series of dynamic, flexible and robust external spaces each of which will be designed to enrich and

provide and imaginative environment reflective of a school with a strong community ethos at its core.

One of the key principles of the design is “The shared and integrated environment” approach to the scheme. Key design considerations have included:

**Primary School:** Provision of both hard and soft surfaces to create varied opportunities for noisy and quiet, active and sedentary, lone and social play, with a priority based on the separation of quiet play areas from boisterous play areas. Informal recreation areas for sitting and socialising, provision for small groups and quiet activities, hard surface play area for team games. Grass pitches for both summer and winter games, along with informal group activities, have also be provided.

**SEN School:** Areas accessible to pupils throughout the school day will be enclosed and separate from pedestrian and vehicular access to the school and parking areas, the latter allowing for the high staff to pupil ratio and the expected greater number of visitors. The main entrance will be designed to take account of the number of cars, taxis, and minibuses which arrive at the beginning and end of the school day.

It is envisioned that each educational provision will be able to operate separately within its own space, yet still be able to demonstrate the flexibility to be able to join and share external spaces with the other educational facilities provided. The concept of “The shared and integrated environment” will create a strong sense of identity for the School, but the core ethos will be set within a unifying design for the site as a whole that draws on the existing materials palette to present a legible and easily comprehensible spatial fabric.

Once the existing building is removed it will allow for the provision of hard landscape elements such as parking and play space to be located on the existing footprint, thereby limiting the impact on the existing open green space.

The landscape concept will make use of the existing landscape setting to compose and arrange spaces for social and quiet uses throughout, and will be developed in response to the current and future requirements of the School.

Existing trees have been retained where possible and proposals have been developed in conjunction with Arboricultural advice. Where trees are to be lost, mitigation measures have been proposed to compensate for the loss.

Trees will be planted in a linear formation through the site taking cues of the exiting tree locations which appear to date back to old hedge lines prior to any former development.

The existing playing fields to the rear of the school will be retained with provision for Nursery and Reception play with clear defined access routes linking separate spaces. Proposals will ensure security and safety whilst allowing the opportunity for interaction between all pupils.

The existing nature area will be predominantly retained with an additional area being created to enhance the space. Small teaching spaces will be created with the design of the area being developed in conjunction with school and appointed ecologist.

## Access Strategies

The access strategy will focus on providing safe, secure and efficient movement corridors for all users, but with an emphasis on pedestrians and cyclists. The car park layout will maximise the number of spaces whilst being mindful of the loss of green space and impact on existing trees. Vehicle movement corridors will be clearly segregated and demarked from pedestrian and cycle routes. Minibus parking and drop off facilities will be integrated into the design, and every care will be taken to ensure minimal impact on existing vegetation, and providing clear, comprehensible non-vehicular access routes linking the minibus parking facilities directly to the School.

## Materials

The scheme will utilise a carefully balanced selection of new materials, a range of textures being exploited to provide clear spatial demarcation whilst ensuring continuity and legibility throughout. All external spaces will be designed using age-appropriate materials, and will be safe and stimulating for all users.

The choice of hard materials will be sympathetic to the surrounding environment, with an emphasis on natural materials and colours which are in harmony with existing landscape.

The planting palette will contribute to the overall identity of the School whilst reinforcing site geometry, directing views, and defining comfortable, flexible spaces. Existing trees will be retained wherever possible, and will be supplemented with new tree and shrub planting that complements the existing planting palette without adversely affecting the existing nature of the MOL.

Species will be predominantly native, taking cues from the existing species found onsite. However, where opportunities allow, a more diverse range of plants species will be promoted, providing a rich landscape for all pupils to learn and enjoy.

In addition to the nature area, an orchard and allotment area is proposed. This will allow pupils to fully engage with the landscape and learn through physical involvement with the outdoors.

# 5.2 Landscape - General Arrangement



# 5.3 Landscape - Materials

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## EDGING

### Standard Kerb

Location(s): Car Park & Roads  
Manufacturer: Marshalls  
Product: HB2  
Dimensions: 125 X 255mm  
Colour: Natural



*Note: Droppers, quadrants required as per detailed design*

### Standard Pre-Cast Concrete

Location(s): Pedestrian Areas  
Manufacturer: Marshalls  
Product: EF  
Dimensions: 200 x 50mm  
Colour: Natural



*Note: Where appropriate galvanised steel edging and concrete block edging to be used to match paving - not shown)*

**ALL IMAGES ARE PROVIDED FOR INDICATIVE PURPOSES ONLY.  
EXACT SPECIFICATIONS SUBJECT TO DETAILED DESIGN.**

## SURFACING

### Vehicle Standard Tarmac

Location(s): Road & Car Park  
Manufacturer: Contractors choice  
Product: Coated Macadam  
Colour: Black



*Note: White lining to be as per London Borough of Richmond-upon-Thames Highways Design Standards for vehicular areas*

### Pedestrian Standard Tarmac

Location(s): Building Surrounds/ Footways  
Manufacturer: Contractors choice  
Product: Coated Macadam  
Colour: Black



### Slab Paving

Location(s): Main Building Entrance  
Manufacturer: Marshalls  
Product: Saxon  
Dimensions: 450x450x50mm  
Colour: Natural



### Resin Bound Gravel

Location(s): Social/ Dining/ Teaching Spaces  
Manufacturer: Sureset  
Product: Permeable Paving Surface  
Dimensions: 6mm  
Colour: Norwegian Pearl / Golden Pearl



### Self Binding Gravel

Location(s): Ecology Area  
Manufacturer: Breedon Aggregates  
Colour: Golden Amber



# 5.4 Landscape - Materials

## Block Paving

Location(s): Building Surrounds/ Footways  
 Manufacturer: Marshalls  
 Product: Keyblok  
 Dimensions: 200x100x50mm  
 Colour: Burnt Ochre



## Block Paving

Location(s): Building Surrounds/ Footways  
 Manufacturer: Marshalls  
 Product: Keyblok  
 Dimensions: 200x100x50mm  
 Colour: Natural



## Grasscrete

Location(s): Parking/ Delivery/ Circulation Areas  
 Manufacturer: Marshalls  
 Product: Grassguard 180  
 Dimensions: 500x300x100mm  
 Colour: Earth Brown



## Impact Absorbing Surfacing

Location(s): SEN Space  
 Manufacturer: Contractor to submit proposals  
 Product: Wetpour Safety Surfacing  
 Colour: To be confirmed

*Note: It is the Contractors responsibility to ensure that final design has approval of the play equipment manufacturer.*



## FENCING & GATES

### Closeboard Fencing

Location(s): Northern External Boundary  
 Manufacturer: Contractors choice  
 Height: 1.80m  
 Material: Treated softwood  
 Colour: Natural



### Timber Palisade Fencing/ Gates

Location(s): Internal Boundaries  
 Manufacturer: Contractors choice  
 Height: 1,200mm  
 Material: Treated softwood  
 Colour: Natural



### Weldmesh Fencing/ Gates

Location(s): Internal Boundaries  
 Manufacturer: CLD Fencing System  
 Product: Ultimate Profiled Panel System  
 Heights: 2,030 & 1,800mm  
 Material: Metal mesh and wire  
 Colour: Black



*Note: Solid panels around SEN space in selected locations*

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## 5.5 Landscape Furniture

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### Bin Store

Manufacturer: Falco UK Ltd  
Product: Falcolok-500  
Material: FSC Hardwood  
Colour: Natural



### Timber Bench

Manufacturer: Woodberry  
Product: Modular Bench (Solid Straight)  
Material: Hardwood Timber  
Colour: Natural



### Cycle Shelter

Manufacturer: Marshalls  
Shelter: Velozone  
Cycle Rack: R10  
Colour: To be confirmed



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# 5.6 Planting Strategy

## PLANTING STRATEGY

### Generally:

Materials, goods and workmanship shall be the best quality of their respective kinds, and those for which there is a British Standard or Code of Practice shall comply therewith. Planting shall not include species that are poisonous or have thorns. In regard to the timing of Horticultural Works, planting shall be carried out between November and March subject to suitable weather conditions. Bulbs shall be planted during October. Suitable weather conditions shall mean when the ground is moist but not wet and workable. Planting shall be suspended during periods of drought, when soil is frost-bound or waterlogged, during persistent drying cold winds or during any other conditions unfavourable to successful establishment.

The planting scheme outlined in the proposals will respond to the differing needs identified across the site. On the site boundaries where appropriate planting will be predominantly native adding ecological value and providing a buffer between the site and neighboring properties. Careful consideration will be taken as to exact locations mindful of foundation depths, light levels and visual intrusion. The intention is to create a vegetation structure which helps the edges of the development blend in well with the surrounding landscape.

### Trees, Shrubs & Hedges:

BS 5236 – for Standard Trees 3.6m high and over. BS 3936 - Part 1 for Feathered trees, Whips and Shrubs - All plants shall comply with this specification and the relevant parts of BS 3936 and shall be to the height and/or spread as detailed. They shall be well grown, bushy, healthy and well established nursery stock of good form, hardy, free from defects, furnished with a fibrous root system exactly true to name as specified. Hedge plants will be planted in two staggered rows and kept regularly clipped at the required height.

### Origin of Plants, Certification and Labelling:

All plants shall have been obtained from a reputable nursery and grown within the British Isles for at least one growing season if stock of local provenance is not available. The contractor shall provide a Certificate of Local Provenance and confirmation that all plants supplied comply with the specification. Plant samples shall be approved on site by the Landscape Architect prior to planting. In all grass/perennial planting the collection will be tagged with waterproof durable labels as specified by the Landscape Architect.

### Tree Stakes & Ties

Tree stakes shall be straight peeled larch, ash or chestnut free from projections and pointed at one end. Impregnated with non-injurious timber preservative to at least 150mm above ground level and stained/painted black. The dimensions shall be 1800mm long x 75mm round x 1 per tree driven to finish 1000mm above ground level. Tree Ties shall be rubber or plastic webbing using spacer blocks or collars to hold tree clear from stake at all points. Blocks, which require a nail fixing, will not be permitted. The type of all tree ties shall be subject to approval. Each stake shall have one tie fixed with 100mm of the top of the stake. Ties shall be fixed so that they cannot work loose and drop down the stake and tree.

### Mulch

The mulch shall comprise matured British conifer bark with an even particle size distribution of 15 – 65mm with no dust or fines and less than 5% wood content. The mulch shall be matured for 16 weeks and naturally heat treated where temperatures have exceeded 50 degrees Celsius for a minimum period of 14 continuous days followed by a period of stabilisation. The pH shall be between 4.5 and 5.8. The mulch shall be pest, disease and weed free and free of Methyl Bromide contamination. Samples will be submitted for consideration and approval prior to use on site.

### Peat Free Tree and Shrub Planting Compost

Documentary evidence of the use of peat free soil materials must be supplied from nursery growers and suppliers for plants that are not soil grown. Organic composted material must be graded 25mm and free from biodegradable material.

### Turfing

Approved topsoil to be 150 mm thick is to be provided and spread by the contractor to all turf areas as specified on the drawings. At edges of sculptural landform, material is to be applied and compressed as necessary to create sharp angular corners allowing appropriate conditions for turf establishment. On landform where banks exceed 30-degree slopes the turves are to be laid horizontally and secured with Greenstake biodegradable landscape stakes. Turf species mix to include; 25% Aberimp (perennial Ryegrass); 20% Raisa (Chewing Fescue); 35% Barcrown (Slender Creeping Red Fescue); 20% Limousine (Smooth Stalked Meadow Grass).

### Seeding

Seed mixtures from suppliers must contain varieties of British origin that are in the top ten recommended varieties listed by STRI 2000 with regards to wear and tear and establish in a wide range of soils.

### Tree pit in paving size and Construction

Pits: shall be 600 mm wider than the diameter of the rootball with a minimum size of 900 x 900 mm. Minimum depth of topsoil to be 900 mm, the depth of the excavated pit will be sufficient to accommodate the rootball and to obtain the correct planting depth. Break up bottom of pit to 150 mm deep and scarify the sides of the pit with a fork.

### Tree pit in grass or shrub areas size and Construction

Pits shall be 600 mm wider than the diameter of the rootball with a minimum size of 900 x 900 mm. Minimum depth to be 750 mm. Where necessary the depth shall be increased to accommodate the depth of the rootball and to obtain the correct planting level. Break up bottom of pit to 150 mm deep and scarify the sides of the pit with a fork.

## 5.5 Landscape - General Planting

### INDICATIVE PLANT LIST

#### TREES

(12 - 14cm girth, Rootball)

Acer campestre 'Streetwise'  
Pyrus calleryana 'Chanticleer'  
Quercus robur 'Fastigiata'



#### BUFFER PLANTING

(Tree and shrub mix to be set out on a 1.5m grid with staggered rows) 60-80cm, Bareroot.

Acer campestre  
Cornus sanguinea  
Corylus avellana  
Crataegus monogyna



#### SHRUBS

(Planted as single specimens or in single specie groups of 3-5, intermittently spaced through groundcover) 3ltr Container

Choyisya 'Aztec Pearl'  
Choisya ternata 'Sundance'  
Cornus alba 'Sibirica Variegata'  
Hebe 'Red Edge'  
Lavandula angustifolia 'Hidcote'  
Spirea japonica 'Candlelight'  
Spirea japonica 'Firelight'



#### GROUNDCOVER

(Planted in single species drifts of between 5 and 17) 2ltr Container

Ceanothus 'Blue Mound'  
Geranium macrorrhizum 'Ingwersen's Var.'  
Vinca minor 'Bowles Var.'



**ALL IMAGES ARE PROVIDED FOR INDICATIVE PURPOSES ONLY. EXACT PLANT SPECIES SUBJECT TO DETAILED DESIGN.**









# Access and Movement

The Russell & Strathmore Schools  
Design & Access Statement



06

# 06. Access and Movement

06

## Introduction

This section refers to the many aspects of transit of users within and around the school. Primarily it relates to pedestrians, vehicles, cyclists and emergency access and egress for vehicles and people as well as to issues regarding safety and security.

External landscaped areas, to where the natural contours of the site create level changes into the building; will be addressed with ramped access points or softly sloping landscaped areas. Best practice guidance has been referred to in developing these proposals:

- The Disability Discrimination Act 2005
- DfE Area Guidelines
- BS 8300:2001 'Design of buildings and their approaches to meet the needs of disabled people. 'Code of Practice'.
- The Building Regulations Approved Document M: Access and facilities for disabled people. 1999
- Building Bulletin 91
- Building Bulletin 94

## Pedestrians

There are two pedestrian points to The Russell & Strathmore School sites.

The main school pedestrian entrance for pupils is located on Petersham Road, to the south of the vehicular access point.

A second pedestrian access is located on the south side of the site on Meadlands Drive.

## Vehicular Access

The main vehicular access for the site is from Petersham Road, where vehicles enter and exit the school car park from a single access/ egress point. Vehicular access for private motor vehicles and emergency service vehicles (fire tenders and ambulances) is via this main site access.

Access for emergency vehicles (fire tenders and ambulances) only can be gained via the site access from Meadlands Drive.

There is limited on site staff parking only provision. Parking includes designated accessible parking bays (blue badge) which are adjacent to the entrance doors. There is no on site parent or visitor car parking provisions.

There are two allocated on-site bicycle shelters. One is located adjacent to the pedestrian access from Petersham Road. The other is located to the south side of the Strathmore SEN building. Cyclists will be required to dismount upon entering the site.

## Public Transport Accessibility

The Russell and The Strathmore Schools are approximately 1.4 miles from Richmond underground and Overground stations.

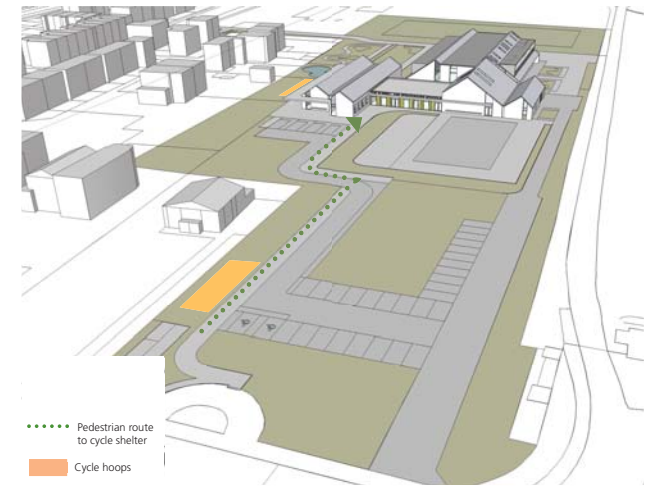
Both schools are accessible by bus with routes 65 and 371, Kingston to Richmond, stopping just next to the Russell School entrance and approximately 2 minutes walk away from the Strathmore School entrance.

Refer to the Transport Statement prepared by WYG, which accompanies the Submission, for further details.

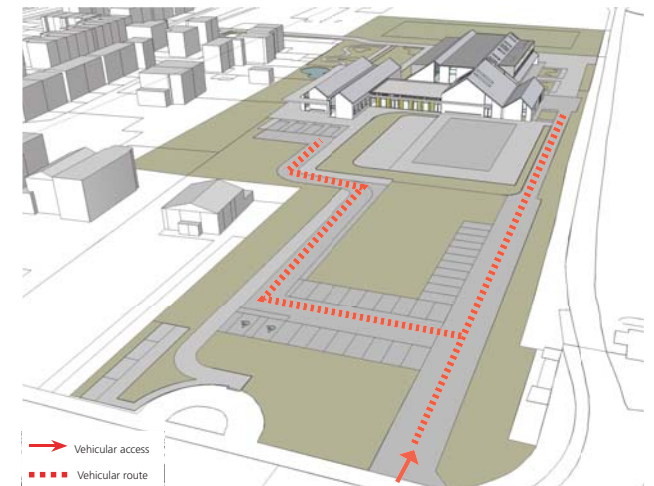
## External Movement

The Disability Discrimination Act 2005 places a duty on Richmond Upon Thames to ensure that the physical features of the built environment are not barriers to public services, education or employment.

Consequently, the design will comply with BS8300, Approved Document M and where applicable accredited service specific guidance.



Cyclist Access



Vehicular Access & Routes

**Car Parking**

The main parking area for the school is located to the North-East of the school site divided from the main pedestrian entrance and comprises a large area with approximately 19 no. car parking spaces, two of which are designated 'blue-badge'. There are a further 13 no. car parking spaces located adjacent to the main car parking area and alongside the vehicular access driveway that runs alongside the northern edge of the KS1 & KS2 Playground.

These additional 13 no. spaces will be paved with a grasscrete type product, The objective is to minimise the extent of hard paving materials and preserve as much of the current quality of the MOL as possible.

Parents/carers dropping-off and collecting their children and visitors to the school will not be permitted to park on site and will be required to use the on street car parking available within the surrounding residential roads.

**Service and Emergency Access**

Service vehicles will access the site through the main vehicular entrance from Petersham Road.

Bin stores are located north of the site, behind the Kitchen.

Access for emergency vehicles (fire tenders and ambulances) only can be gained via the site access from Meadlands Drive.

**Russell School - 'After Hours' Access**

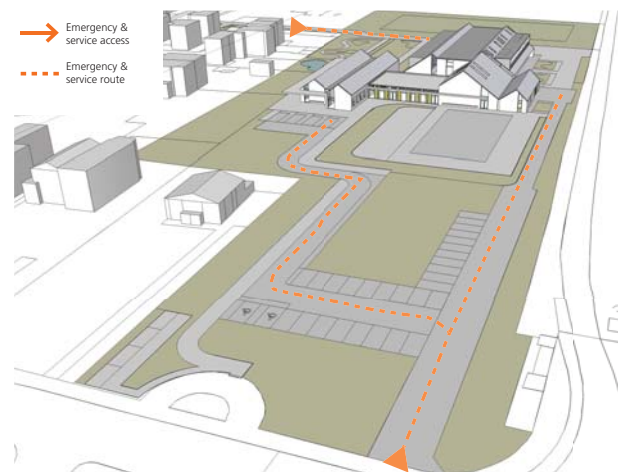
Access to the Main & Small Halls for community and / or after school activities will be from the main entrance to the Russell Primary School. Provisions will be made for locking down the rest of the school to prevent unauthorised access.

**Strathmore School**

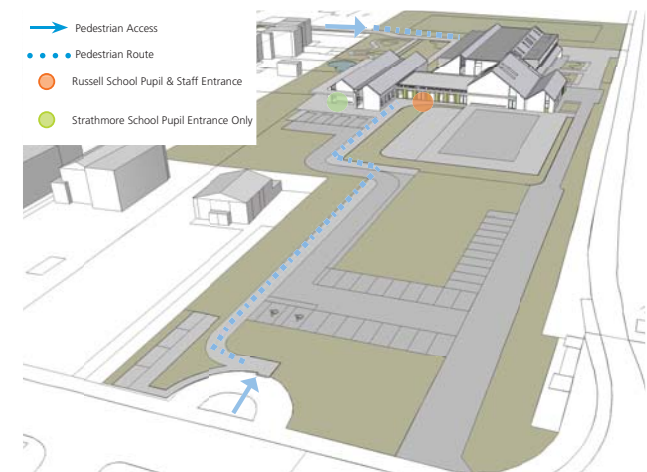
Similarly access to the Strathmore SEN School for community and / or after school activities will be from the pupil entrance to Strathmore School. Provisions will be made for locking down access to the link block rest of the school, to prevent unauthorised access.



Parking Distribution On Site



Emergency & Service Access



Pedestrian Access & Routes to Main Entrances



# Sustainability

The Russell & Strathmore Schools  
Design & Access Statement



07

# 7.1 Sustainable Development

07

## Introduction

The Russell & Strathmore Schools refurbishment and extension project has utilised and will continue to utilise a number of sustainable principles to inform and shape its overall design, from concept through to future design development, construction and site operation. These principles will cover all aspects of sustainability, taking into consideration the environmental and social aspects that relate to the development and surrounding area.

The development proposals are in accordance with current Government policy including planning guidance in respect of sustainability. The project will adopt appropriate measures to achieve BREEAM ratings of at least Very Good.

## BREEAM

Method Consulting LLP has been appointed to undertake the role of BREEAM assessor. The project will be assessed under BREEAM New Construction 2014; Design Stage Criteria. London Borough Richmond Upon Thames has confirmed that the scheme should achieve a minimum standard of BREEAM Very Good.

For further information refer to the BREEAM pre-assessment, prepared by Method Consulting LLP dated December 2014, which accompanies this Planning Application. The BREEAM assessment method will act as a control document to ensure that sustainable building techniques and materials are used in order to achieve the relevant credits.

## Energy Strategy

The latest update to Part L of the Building Regulations, which addresses the conservation of fuel and power, was introduced in April 2014 and forms part of the Government's target for all new homes to be zero-carbon by 2016 and new non-domestic buildings by 2019.

Further proposals are in place to amend Part L regularly, with further revisions expected in 2016 and 2019.

All new buildings other than dwellings must meet the requirements of Part L2A of the 2013 Building Regulations (Issue date April 2014), which now has a target of achieving a 9% reduction in carbon dioxide emissions (aggregate across development types) set

against the requirements of 2010.

Furthermore, in so far as projects within Greater London area are concerned area, as outlined in the Sustainable, Design and Construction SPG (published in April 2014), from 6 April 2014 the Mayor of London has applied a 35 % carbon reduction target beyond Part L 2013 of the Building Regulations

This is deemed to be broadly equivalent to the 40 per cent target beyond Part L 2010 of the Building Regulations, as specified in Policy 5.2 of the London Plan for 2013-2016.

In addition, the Atkins Design Team have been advised by LBRuT, through the submission for pre-application planning advice that the above noted 35 % carbon reduction target should include 20% achieved through renewable energies.

An energy assessment has been developed for the proposed building to assess the most sustainable and economically viable method of compliance.

Compliance with Building Regulations Approved Document Part L is best achieved by following the hierarchy of be lean, be clean and be green.

**Be Lean:**  
Reduce energy demand through adopting sustainable design principles.

**Be Clean:**  
Supply energy efficiently, with high performing services.

**Be Green:**  
Use renewable energy to limit reliance on Grid electricity and reduce CO<sub>2</sub>.

## Be Lean

The objective will be to drive down the energy demands by passive measures first. This will include high performing u-values and air permeability.

Solar control methods (such as Solar Control Glazing) will be considered to provide adequate natural daylight levels and uniformity in occupied spaces whilst reducing solar gains and

unwanted glare. Blinds will be used to allow occupants to control glare. This will greatly increase comfort levels.

The performance targets being aimed for the fabric of the building are noted below. These will need to be further refined through the detail design stage.

Walls	0.20 W/m <sup>2</sup> K
Floors	0.14 W/m <sup>2</sup> K
Roof	0.12 W/m <sup>2</sup> K
Windows	1.28 - 1.39 W/m <sup>2</sup> K

Air tightness levels are also of key importance to the project – a figure of 3m<sup>3</sup>/m<sup>2</sup>/h at 50Pa is currently targeted – a 70% improvement in comparison to the limiting value of 10m<sup>3</sup>/m<sup>2</sup>/h at 50Pa given by the Regulations.

## Be Clean

Efficient building services will further reduce the building energy consumption. Optimum energy efficiency is a primary consideration for all items of building services equipment. These will consider and include efficient heating and domestic hot water (DHW) systems, efficient ventilation systems and demand control efficient artificial lighting.

All of these elements will meet or exceed the minimum requirements of the Approved Document Part L and the supporting document Non-Domestic Building Services Compliance Guide 2013 Edition.

Energy efficient light fittings will be specified and controlled by daylight and occupancy presence detection where appropriate. This reduces energy consumption by ensuring that lights are not left on when spaces are not occupied, and lights are not unnecessarily on when the space is adequately lit by daylight alone.

For classroom windows, area zoned daylight dimming will be used around the perimeter of the building, within areas that can be adequately day lit. All compact fluorescent lamps will be fitted with high frequency ballasts.

To maximize the operational efficiency of the heating system, the following controls are proposed:



- Central time control of the heating system operation
- Weather Compensation
- Optimum Start/Stop
- Independent floor and zonal control
- Local temperature control
- The ventilation system will include Heat recovery

**Be Green**

The objective is to reduce energy use through the architectural design, using passive design principles.

This is translated into a minimized requirement for the contribution of low to zero carbon technologies.

The following graph shows the percentage contribution of the various aspects of energy for the school buildings.

Energy for domestic hot water contributes to the largest proportion of the carbon emissions at 67% of the total.

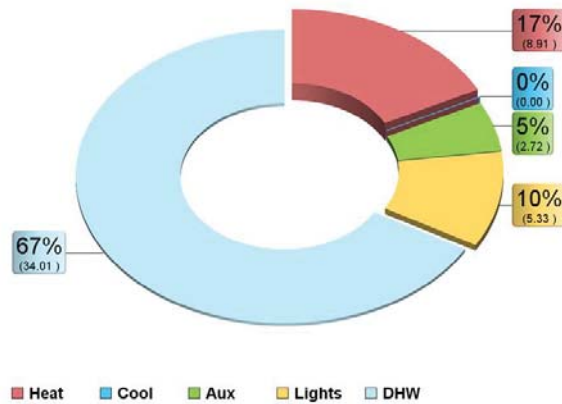
This is due to the higher demand for hot water. It is therefore important to consider technologies that will reduce the carbon emissions from the areas that produce the largest proportion of carbon emission.

The energy assessment has concluded that mini CHP and photovoltaics will be the most effective and economical way to reduce the carbon emissions of the school building.

The final design will include a mixture of mini CHP and photovoltaics low and zero carbon technologies.

**Percentage Carbon Emissions for School Buildings**

Actual Carbon  
(kg/CO2/m2.yr





# Drawing Submission List

The Russell & Strathmore Schools  
Design & Access Statement



08

# 08. Drawing submission list

08

## Drawing Submission List

Drawing name	Drawing number
Site Location Plan	ATK4010 - PL-1
Existing Site Plan	ATK4011 - PL-1
Topographical Survey Plan	ATK4012 - PL-1
Proposed Ground Floor Plan	ATK4210 - PL-1
Proposed First Floor Plan	ATK4211 - PL-1
Proposed Roof Plan	ATK4212 - PL-1
Proposed Elevations	ATK4300 - PL-1
Proposed Elevations	ATK4301 - PL-1
Proposed Elevations	ATK4302 - PL-1
Proposed 3D Images	ATK4500 - PL-1
Proposed 3D Images	ATK4501 - PL-1
Proposed 3D Images	ATK4502 - PL-1
Proposed 3D Images	ATK4503 - PL-1
External_General Arrangement	LA001 - PL-1
Access & Circulation Plan	LA002 - PL-1
Fencing Plan	LA003 - PL-1

## Document Submission List

Document name	Drawing number
Design and Access Statement	ATK4600 - PL-1



