ARCHITYPE

Design and Access Statement - November 2012

Camden Centre for Learning: Key Stage 3 Site

Chalcot School, Harmood St, London, NW1 8DP

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Prepared for
London Borough of Camden

Contents:

Introduction

Introduction:

This Design and Access Statement has been prepared by Architype on behalf of Camden Council. It accompanies the full planning application for the proposed renovation and extension of the existing Chalcot School, Harmood Street, Camden, London NW1 8DP.

This statement should be read in conjunction with the application drawings and supporting documents.

Proposal:

The proposals include the renovation and extension of Chalcot School, for the provision of the Key Stage 3 element of the Camden Centre for Learning, which caters for secondary school students with social and emotional behavioural difficulties (SEBD). The Chalcot School site would provide places for a predicted maximum of 40 students.

There is no change of use - the school is currently for secondary school students with social and emotional behavioural difficulties (SEBD)

The majority of the proposed works entail internal reorganisation and fitting out of the existing building to provide modern teaching spaces. Proposals include a new small addition to the existing one storey extension alongside the entrance area and also landscape improvemements.

The floor area of the building will be increased by approximately 30m2. The proposal includes the widening of the main vehicular access to provide a division between vehicle and pedestrian access routes.

Chalcot School is one of two sites, that serves the newly formed Camden Centre for Learning (CCfL), at the following locations:

1. Chalcot School, Harmood St, London NW1 8DP
2. Agincourt House, Agincourt Rd, London NW3 2NY

Each of these buildings will be refurbished and extended to upgrade the existing schools' spaces and to provide additional facilities – both sites are required to improve the educational delivery through the newly formed CCfL. The existing Chalcot School only has boys so the facilities will be altered to accommodate female pupils.

This application proposal can be reviewed alongside the proposed scheme for Agincourt House, which is submitted as a separate planning application.

Project Team:

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Site Appraisal

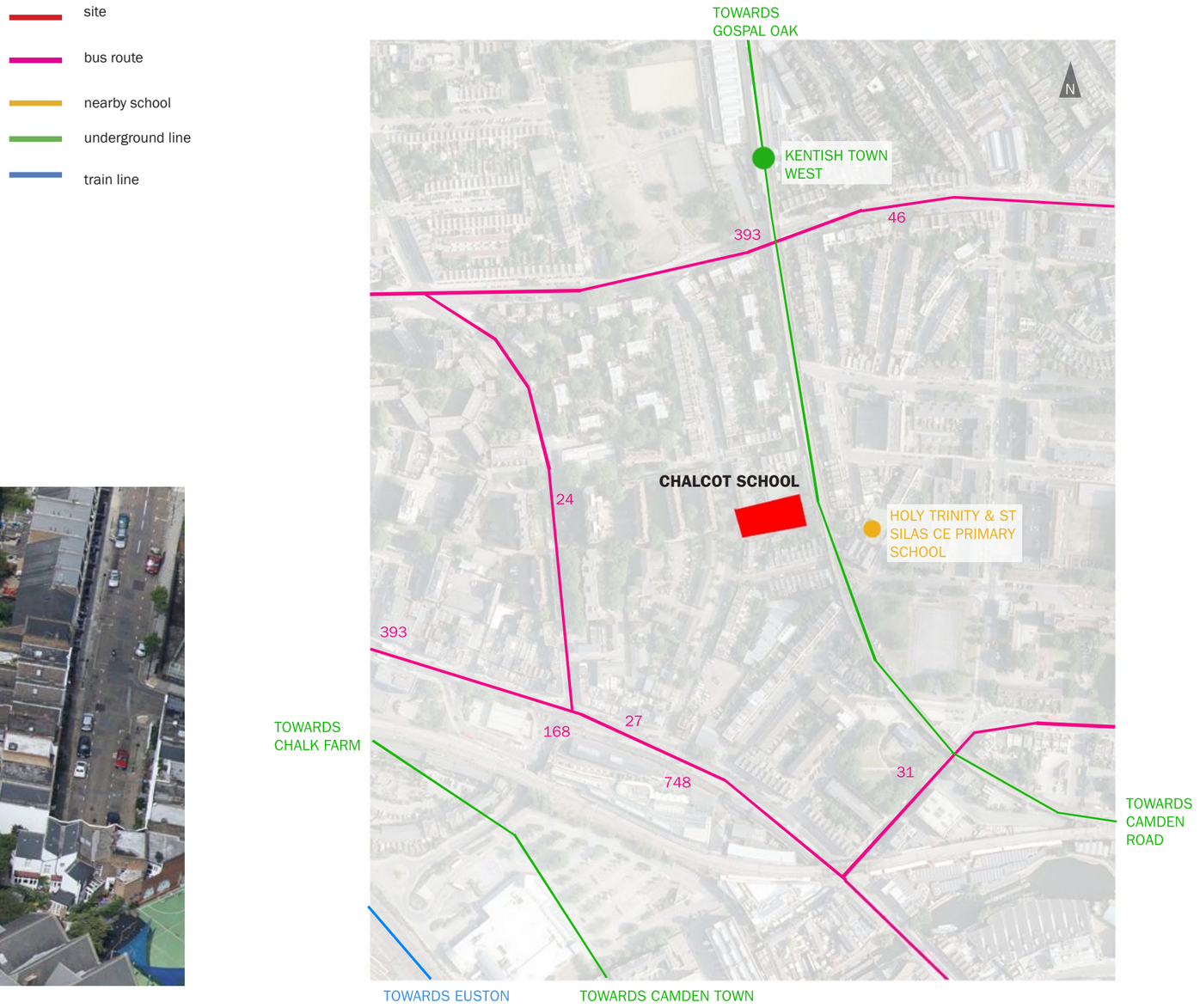
Site Appraisal: Site Analysis

Site Characteristics

The school site has the following characteristics:

- The site is situated in the Borough of Camden between Chalk Farm and Kentish Town.
- The school street frontage is along Harmood Street, a quiet residential street. The London Underground line is situated along the school site's eastern boundary, and alongside the school's Multi Use Games Area. The side or rear of the neighbouring terrace houses border the other boundaries of the school.
- The school is well served by public transport. Chalcot School is approximately 0.2 miles from Kentish Town West station on the London Overground and 0.4 miles from Chalk Farm on the Northern Line.
- Many bus routes stop on Chalk Farm Road, which is 0.1miles, or a two minute walk, from the south of the site.
- On street parking is limited with resident permits used on the surrounding roads. The school currently has some parking on site but the school community are keen to develop a policy of not needing to park on site by using public transport.
- The closest open space is Primrose Hill, 12 minutes away. The canal is a 5 minute walk away.

Aerial View of Chalcot School Site



Location of Chalcot School Site

Site Appraisal: Site Context

Summary of Site Analysis

- Block A, the main building, is a two storey Edwardian School.
- Block B and C are more recent extensions added in 2002 which attempt to replicate many of the Edwardian features.
- The school is accessed from Hamood Street.
- There is limited clear external playspace on the site, aside from the Multi Use Games Area.
- The site has historically been used for educational purposes so there is no required change of planning use.
- There is a steep bank to the railway line to the east of the site.
- Due to the nature of the users, security is an important aspect of the site, with the boundaries to surrounding residents needing to be carefully considered.
- It is a predominantly residential area, generally comprising two storey semi-detached and terraced houses. However, opposite the school is Harmood House, a four storey residential block built in the 1950s.
- There are four mature trees on the site, however they are considered of low value.
- The other school in the area, Holy Trinity Primary School, is a two minute walk from the site to the east.

Existing Site Area:

Incl. footprint -	3101sqm	Soft Informal -	194sqm
Excl. footprint -	2388sqm	MUGA -	1396sqm
Footprint -	713sqm	Hard Informal -	798sqm

Site Plan of Existing School

Site Appraisal: Existing Site Photographs

2002 Entrance - Block C

2002 extension - Block B - design derivative of Edwardian block

Fences and Gates - viewed from students' social space

Retaining wall to railway and warehouses.

2002 extension on Edwardian balcony - rear of Block A

Harmood Street Streetscape

Aerial photograph

Site Appraisal: Existing Site Photographs

Insensitive addition of services throughout the building

Damp damage in 2002 building

Water ingress damage in original building

Edwardian extension (Left) and 2002 extension (Right)

Existing store

First Floor hall with classrooms directly accessed from it and later insertions.

Ground Floor hall with classrooms directly accessed from it.

Site Appraisal: History & Conservation

As part of our work to develop a sensitive and informed approach to conservation issues Architype have researched the history of Chalcot School, previously Harmood Street School, through on-site and archive research.

• Chalcot is an Edwardian school, built between 1890 and 1910.

• It used to be called Harmood Street School for the Mentally Defective and then Harmood Street Boys Secondary. It was renamed as Chalcot School in the 1960s. The site has been in use as a school for over 100 years.

• The original Edwardian school was extended to the south east and a small ground floor extension and balcony added to the north in the 1920s-50s.

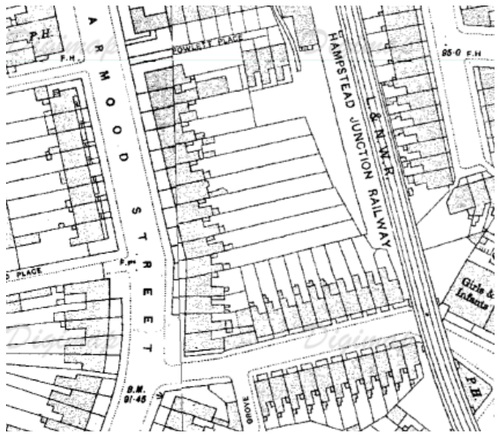
• An extension (Block B), and a second storey to the north, where previously there was a balcony, were added 10 years ago.

• Five years ago the original windows were replaced with double glazed sliding sash windows.

• Research of the building's historic features has exposed some areas which have shown the original finishes. However, the many different building users have, over the years, removed many of the original fixtures and fittings and carried out a series of insensitive internal changes.

To summarise, the information that has been discovered will help to inform the new works. The works will incorporate and restore original features where possible, particularly where they relate to the building's eventful history. However, the design of the new works need not to be totally beholden to the past. A new layer of history is now being proposed, which crucially provides a school environment catering for modern education practices, whilst respecting the existing building's features.

"When it comes to historic school buildings, Constructive Conservation is the philosophy that English Heritage believes should guide refurbishment projects. This approach means being positive about the adaptation of historic buildings where it is sensible to do so, in turn meaning that the building can continue to accommodate new uses and equipment and enable modern teaching methods. Such an approach ensures that the inspirational surroundings offered by historic school buildings are not denied to future generations of students, while also reusing finite resources in the interests of sustainability and value for money."
English Heritage

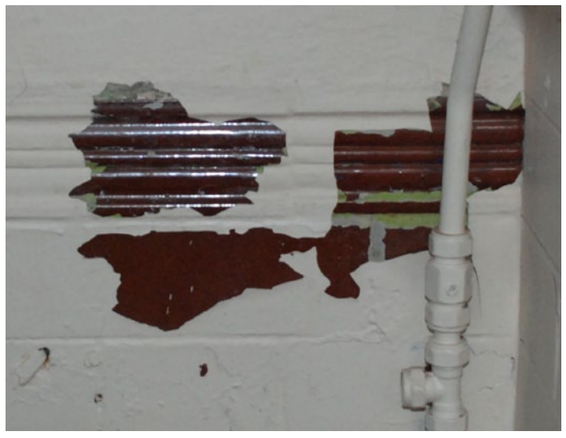


1896

1916

1963

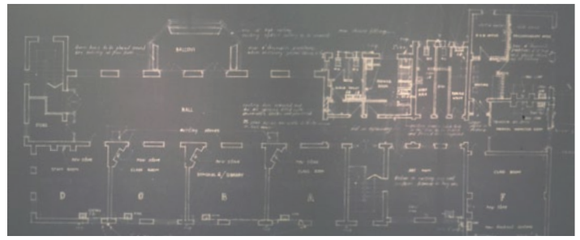
First storey red brick extension added in place of balcony.



Glazed bricks evident behind paint.

Original metalwork finish to rain water hoppers

Original glazed brick fireplaces.



First Floor Plan - drainage plans.

Original girls entrance to Harmood Street School

Use: Policy and Building Requirements

Use: Policy Context and Building Use / Requirements

Planning Use
The planning use is classified as D1 non-residential institution and will remain D1.

The design has been developed within the planning regulatory framework. The following were some of the policies identified and followed:

National Policy Context
- PPS 1 - Delivering Sustainable Development
- PPS 5 - Planning for the Historic Environment
- PPS 9 - Biodiversity and Geological Conservation.
- PPS 20 - Renewable Energy
- NPPF (March 2012).

Regional Policy Context - London Plan (July 2011)
The key objectives of the London Plan have been incorporated into the design.
- Objective 1: To accommodate London's growth within its boundaries without encroaching on open spaces
- Objective 2: To make London a better city for people to live in.
- Objective 3: To make London a more prosperous city with strong and diverse economic growth
- Objective 4: To promote social inclusion and tackle deprivation and discrimination
- Objective 5: To improve London's accessibility
- Objective 6: To make London a more attractive, well-designed and green city.

Local Policy Context - Camden
- Unitary Development Plan - Camden Council
- London Borough of Camden Local Development Framework (Core Strategy and Development Policy documents) as adopted on 8th November 2010

Additional Guidance
- Refurbishing Historic School Buildings - English Heritage
- Practical considerations for the design and implementation of refurbishment projects of historic school buildings - English Heritage.

- Policy DP22 of the LDF expects non-domestic developments of 500sqm of floorspace or above to achieve "very good" in BREEAM assessments and "excellent" from 2016 and encouraging zero carbon from 2019 - this does not relate to this scheme, given its small size of expansion.

Building Use

Camden Council's Vision
Camden Council aims to improve the special education provision for secondary school students with SEBD needs. The Camden Centre for Learning has been formed to provide these improved services.

Purpose of the Camden Centre for Learning's Facilities (CCfL)
The Camden Centre for Learning (CCfL) will be a single coordinated provision for up to 100 secondary school students aged 11-16 with Social Emotional Behavioural Disorder (SEBD) including those who have been referred to a Pupil Referral Unit (PRU) via amalgamation of services from three separate school sites (one special school designated for SEBD and two pupil referral units).

This includes 115 Brecknock Road, one of the sites currently used for delivery of secondary school education for students with SEBD. This site will be closed once the other two sites' works are completed.

Two existing sites are proposed for use for the educational delivery of the newly formed CCfL Centre for Learning, at the following locations:
1. Chalcot School for Boys, Harmood St , London NW1 8DP
2. Agincourt House Agincourt Road London NW3 2NY

Each of these buildings will be refurbished and extended to upgrade the existing schools' spaces and to provide additional facilities on both sites.

The construction must be robust and easy to maintain - buildings occupied by students with BESD must be able to withstand harsh treatment.

Chalcot School - Key Stage 3 Provision - Specific Use Requirements
The CCfL facilities at the Chalcot School site will be altered to accommodate female pupils as currently only boys are catered for. The student group is Key Stage 3 girls and boys characterised by a SEBD profile for Special Educational Needs.

Additional requirements for facilities include:
- provision for 1:1 teaching spaces
- spaces for multi-agency working, including teaching, office and meeting spaces
- meeting rooms for additional liaison with parents – to provide improved support for students

- street access and building access - alterations to meet school's requirements

Design Process and Design Strategies

Design Process: Design Development and Consultation

Design Development
The Camden Centre for Learning had an initial feasibility study undertaken, however key changes to the buildings' requirements and budget meant that both the brief and design strategies had to be developed anew and the project's feasibility re-investigated.

The phases of the design process commencing in August 2012 were:

• Design Brief / Initial Concepts
Development of both the vision and the brief were undertaken for the Camden Centre for Learning as a whole, along with the development of the specific requirements for each of its two sites (Chalcot School and Agincourt House site). The use of the existing building's spaces were initially set out, and the additional space requirements for new build additions were identified. Initial massing studies for incorporating new build additions on each site (Chalcot and Agincourt) were studied, and presented so the pros and cons for each option could be discussed. The architectural treatment of the existing buildings was reviewed in each presentation, along with the educational delivery across the two sites. A spatial diagram of all required spaces was presented for each site.

• Preferred Option
This development stage included identifying the option that provided the best architectural arrangement of the site, that most efficiently made use of both sites with their existing buildings.

• Development of the Preferred Option -
The preferred option was developed more fully and this design provides the basis for this planning application.

Consultation - Stakeholders
An extensive programme of consultation has taken place in developing both the design brief and the design proposals for the Camden Centre for Learning, for both the Chalcot School and Agincourt House sites. At the outset of the project a comprehensive consultation plan including all of the stakeholders. was formulated.

The development of the Camden Centre for Learning proposals entailed the coordination of a matrix of consultation, including the staff and students at three sites: Chalcot School, Agincourt House and 115 Brecknock Road. A summary of the stakeholders who were consulted with are listed here.

CLIENT / BUILDING GROUP: Brief, Review of Design Proposals
• Project Manager: Camden Council
• Head of SEN, Camden Council
• Head of Welfare, Inclusion and Support in Education, Camden
• Director of Camden Centre for Learning, Camden
• Director of Camden Centre for Learning, Camden
• Chartered Clinical Psychologist, Portman NHS Foundation Trust, Tavistock Centre, Camden

FACILITY USER GROUPS: Brief, Review of Design Proposals
• Senior Leadership Team, Camden Centre for Learning
• All Staff of Chalcot School
• All Staff of Agincourt House
• All Staff of 115 Brecknock Road
• All Students of Chalcot School, Agincourt School, 115 Brecknock Road

COMMUNITY: Review of Design Proposals
• Parents / Carers of all Students
• Neighbours and Local Residents

PLANNING DEPARTMENT: Review of Design Proposals
• Planning Officer
• Conservation Officer

CRIME ADVISORY / SECURE BY DESIGN
• Camden Police

CAMDEN PROCUREMENT DEPARTMENT
• Meeting and correspondence took place to develop a coherent delivery strategy for both sites.

Consultation Process
The current design is the result of many months of development in conjunction with the matrix of consultees as listed here.

CLIENT / BUILDING GROUP: Brief, Review of Design Proposals
• Regular monthly meetings have been held with the Building Group, which represents the key stakeholders from Camden Council. The building's brief and design proposals were presented at milestone stages of the design process.

FACILITY USER GROUPS: Brief, Review of Design Proposals
• Three major consultation exercises were undertaken to initially develop the project's vision, aims and specific requirements. Design Proposals were presented for discussion.

• Consultation took place at an Inset Day, with all staff , and to obtain meetings have been held with the Building Group, which represents the key stakeholders from Camden Borough Council.

• We met with staff to receive views on requirements for specific subject teaching rooms, for ICT, for security.

• Scheme Proposals for both Chalcot School and Agincourt School were presented to all of the staff. A plan to present to all students is also scheduled.

COMMUNITY: Presentation of Design Proposals
• A Public Presentation was widely advertised and held at both Chalcot School and Agincourt School. The response was enthusiastic and no objections were made.

•A separate presentation session was held for parents

CONSULTATION WITH PLANNING DEPARTMENT:
• An application for pre-application advice was made for the Camden Centre for Learning in August 2012, incorporating both the Chalcot School and Agincourt House.

• See Case Reference CA/2012/ENQ/06985

• Three meetings were held with Ben le Mare (Senior Planning Officer) and Alan Wito (Conservation Officer) and input from the planners have been incorporated into the current schemes.

CRIME ADVISORY / SECURE BY DESIGN
• A meeting was held with the Camden Police to discuss the design proposals.
• A meeting was held with the Camden Police to discuss the design proposals.


Public Consultation Session with Parents


Public Consultation Session with Neighbours / Public


Public Consultation Session with Neighbours / Public

Design Strategy: Concepts, Scale and Layout

Vision of Camden Centre for Learning's Facilities (CCfL)
The Camden Centre for Learning (CCfL) will provide special school facilities for up to 100 secondary school students aged 11-16 with Social Emotional Behavioural Disorder (SEBD). This provision is to be split between Agincourt and Chalcot Schools.

The primary task of the CCfL is to meet the social, emotional, behavioural and academic needs of children with SEBD through the provision of fit for purpose, robust facilities and 21st Century teaching space with a high quality identity and image.

Improved Facilities for Learning
The existing facilities at the Chalcot School site are being upgraded through a re-organisation of spaces within the existing building, along with renovation works that includes new services (mechanical and electrical), improved acoustics, and upgraded finishes. A small addition of new build construction is integrated alongside the existing building.

All spaces will now better address the educational needs of students with BESD, and integrate up to date pedagogical thinking for provision of this Special Educational Needs group. Additionally, the school's facilities will now accommodate female pupils.

The school's improved environmental conditions - consisting of better daylighting, reduced glare and improved ventilation - will have a positive impact on students' ability to learn.

The external spaces are essential social and learning spaces so their design has been given high priority in the current proposals. These include an integrated landscaping design that addresses both boys and girls usage.

Multi-agency Working
Facilities incorporate provision for 1:1 teaching spaces, and spaces for multi-agency working, including teaching, office and meeting spaces. Meeting rooms for additional liaison with parents are integrated to improve support for students.

New Improved Street Identity
The existing facilities, as viewed along the street, offer a poor impression of the school and this has a negative impact on the public impression of students with SEBD, and on the students' view of their own school. The existing pedestrian gates and blue painted solid metal vehicular gates are of poor visual quality.

The new street face, with new access gates, address this issue and offer a greatly improved contribution to the streetscape. The grilles on the existing windows, which present a poor image of the school are being proposed for removal.

Shared Image and Character of both Sites for CCfL
Both school sites - Chalcot and Agincourt - should share a distinct street presence, with a similar type of street identity.

Maintaining Urban Scale
The existing Edwardian building is visible along Harmood Street and this is maintained in the proposals. The new build addition is set back and will hardly be seen from the street.

Integration of New Additions with Existing Buildings
The character and scale of the existing Edwardian building is respected and its positive presence on the site is reinforced with the new measures.

The new addition is distinctly separate from the character of the Edwardian building. Its distinct identity with contrasting materials assists in identifying the single storey addition as a separate pavilion, visually connected to the green screen of foliage in its foreground.

High level fencing


High level fencing above existing gate


Residential street surroundings


Existing 2002 lobby extension


Original Hoppers to be retained


Photographs of the Existing Site and Building

Design Strategy: Concepts, Scale and Layout

Design Proposals

Improved Street Identity: New Access Gates with Integrated Security

The existing two entrances – for both vehicular and pedestrian - are maintained, however they are altered to provide new access conditions that better suit the school's needs.

Currently, the pedestrian access route leading to the building's main entrance is not segregated from the vehicular route. With the entire area paved with asphalt, there is the potential for a vehicle to knock over anyone visiting the school by foot.

The newly proposed segregated pedestrian access gate for the main school entrance offers a great improvement. A distinct pedestrian access route, with new paving marking the pathway with a colour and finish that contrasts with the adjacent asphalt finish, provides a more clear division from the car park. The asphalt finish to the car park will be maintained.

The student entrances are also altered. Students attending the main school will now enter through the gate integrated into the service vehicular gates. Vehicles will only be using this gate for access for occasional use - emergencies and for maintenance. Therefore the school can manage this to ensure there is no overlap of students and vehicles.

An existing pedestrian gate will lead to the entrance door for the 1:1 students. This allows the required segregation from the rest of the students.

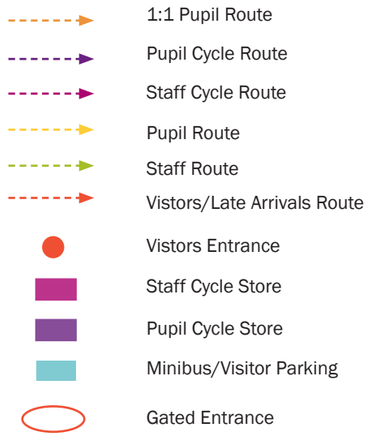
Security of the students and the adjacent properties has led to the current use of high level chain link fencing situated above the security fence and gates. Consultation with neighbours and the school has confirmed that they would prefer to maintain this security fencing.

Our proposal is to integrate new mesh fencing into the new boundary design but use this as an opportunity to provide a decorative artwork. The proposed mesh has a pattern of steel wire "lacework" integregated, which has the added advantage of making the mesh fence more difficult to climb, hence improving security. The final pattern of the steel wire lacework will be developed with the school.

A similar visual treatment of the gates and fence along the street occurs at the CCfL's Key stage 4 site at Agincourt House - this offers a overarching identity.

The timber vehicle gates will be of painted vertical boarding. The solid timber panels - without views in or out provided - is dictated by the site's safeguarding and privacy requirements.

The pedestrian gates leading to the main entrance, also of vertical timber boards, will have openings between the boards, to offer narrow slot views into areas of the school grounds.



Key to Proposed Site Plan with Principal Access

Proposed Site Plan with Principal Access Routes

Image of Lacework Treatment of Mesh Panels

Elevation of Proposal for New Gates and Boundary Treatment along the Street

Design Strategy: Concepts, Scale and Layout

Improvements / Alterations to the Existing Building

Internal Alterations
The existing building will be refurbished to provide improved internal spaces for learning - this includes improved environmental and acoustic characteristics. Very few existing walls will be removed, instead some of the classroom spaces will be divided to provide smaller 1:1 teaching spaces. The energy efficiency of the existing building will be improved e.g. with insulation added in the roof spaces.

Alterations to the External Facades
Alterations include:
- new external door leading directly to kitchen: this door will be integrated into an existing window opening.
- grilles to the existing windows are proposed to be removed.
- the external ductwork for the boiler will be moved inside the building
- existing rain water pipes will be altered from circular rain water pipes to vandal resistant ones. The existing hoppers will be retained and the new rain water pipes will be black to match the existing
- existing single glazed windows will be replaced with double glazed units
- a new build extension is integrated with the existing single storey block

Architectural Appearance
The removal of the grilles will substantially improve the appearance of the existing building. The grilles were installed on all of the windows in 2002.

Photograph of existing windows with metal mesh grilles

Perspective View of Proposal for New Gates and Boundary Treatment along the Street

Design Strategy: Concepts, Scale and Layout

New Build Addition: New Entrance Lobby and Meeting Room
The existing single storey office extension, constructed in 2002 with a pitched roof and brick clad walls accompanied by arched windows, has a “faux” traditional appearance that attempts to emulate the Edwardian main building . The character of this extension sits uncomfortably alongside the main building, being neither visually connected nor contrasting with the existing.

New Build Extension to Existing Entrance Lobby
The existing lobby, with its flat roof, will be raised in height to meet the new extended flat roof. This roof is raised to enclose the decorative brickwork surround to the existing portal (originally the boy’s entrance), and this will now be utilised as the entrance into the main building.

New Build Extension to Existing Single Storey Offices
A new build addition, with its meeting room, is proposed as being situated in front of the existing office extension. This existing office extension would be re-clad in the same materials as the new build with new elevations and a new roof, and consequently would be integrated with the form of the new addition. The alterations mean that the single storey extension (formed of the two extensions, 2002 and proposed) would have a single, coherent identity with the visual expression of a single extension instead of a composite of varying new build extensions. The form of the extension block is kept low in height with a saw tooth roof providing rooflights into internal spaces. The extension’s finishing material - glazed tile - contrasts with the existing Edwardian brick building.

As part of the school’s new brief to improve multi-agency working and to instigate a wider network of support for students, a meeting room alongside the existing entrance is required. The new addition incorporates a new meeting room, and this will be used for meeting with parents, teaching staff and multi-agency teams. The meeting room’s location in a separate block, offers an independent position away from the main school, and this can be crucial in negotiating engagement with parents, who can shy away from returning to school.

Massing
The massing of both extensions - both single storey - adapt well to the existing extensions and offer an improved architectural appearance.

Architectural Appearance
To reinforce the independent character of the single storey meeting room / offices block, the proposal is to finish both the existing and new extension with glazed tile. This finish has the added advantages of being robust, difficult to climb. Also the tile can be easily added to the existing brick walls as a finish.

Both the sloped roof finished with zinc roof and the tile wall finish are used at the Agincourt school site. This sharing of the palette of materials, along with the roof form of the extension, aid in making visual connections and providing a unified identity for both sites.

Perspective Birds Eye View of Proposed New Build Extension

Design Strategy: Concepts, Scale and Layout

The New Meeting Room with its Garden
The meeting room opens onto a garden that creates a boundary with the approach to the school entrance. This garden screens, the glazed openings in the facade of the meeting room to provide privacy for this space.

Additionally this garden offers a supervised outdoor facility for student's use. Students will be invited to access the garden via the meeting room, and the garden can incorporate a miniature kitchen garden, for use by food tech students.

The New Entrance Lobby
Currently there is no reception area or reception desk. Visitors have to enter the office to get signed in and the administration staff working in the office are interrupted by visitors arriving at the school entrance.

School staff are currently at risk as there is no barrier between office staff and people arriving at the main entrance, who may include angry parents or students.

Health and safety for staff and students is improved with the new addition as a new reception desk is situated as a barrier between visitors and office staff. A new first aid room is also situated alongside the office, for use by students who are ill or need to physically withdraw from their classrooms.

The extension to the entrance provides a larger area for greeting visitors and allows for a proper reception desk. The new entrance doors now lead into the main building via the original Boys entrance, with its decorative brickwork.

Perspective View of Proposed New Access Route, New Entrance and New Extension

Design Strategy: Concepts, Scale and Layout

New Solid Wall Finish to the Rear Elevation of the Existing Single Storey Offices
The existing rear elevation of the offices (pitched single storey as indicated in the adjacent photograph) is shielded from the students' social and play area because students have attempted to damage the windows and also try to distract office staff.

Proposals to block up the existing windows and to provide daylighting via a new side window and a new rooflight, mean that the metal fencing can be removed. This offers an improvement to the architectural appearance and gives more landscaped area to the students.

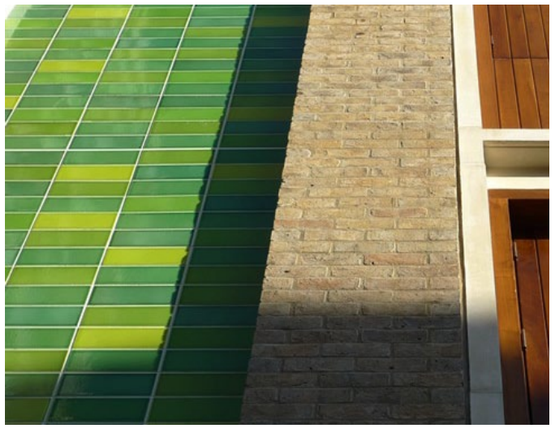
Palette of Materials
The new entrance will be a combination of glazed and solid panels, situated in a window-wall frame. The frame of this screen and the double glazed window is aluminium.

The walls will be finished in tile with some render panels.

The new flat roof will be finished in 3 ply felt or roofcrete, while the sloped roof will be finished in zinc. Double glazed rooflights

Photograph of the rear of the eisting office block, proposed as being finished with tile cladding

Perspective View of proposed elevation to offices (with tile cladding) - see Landscape Plan for indication of landscaping alongside tiled wall



Photograph of example of a possible tile finish option

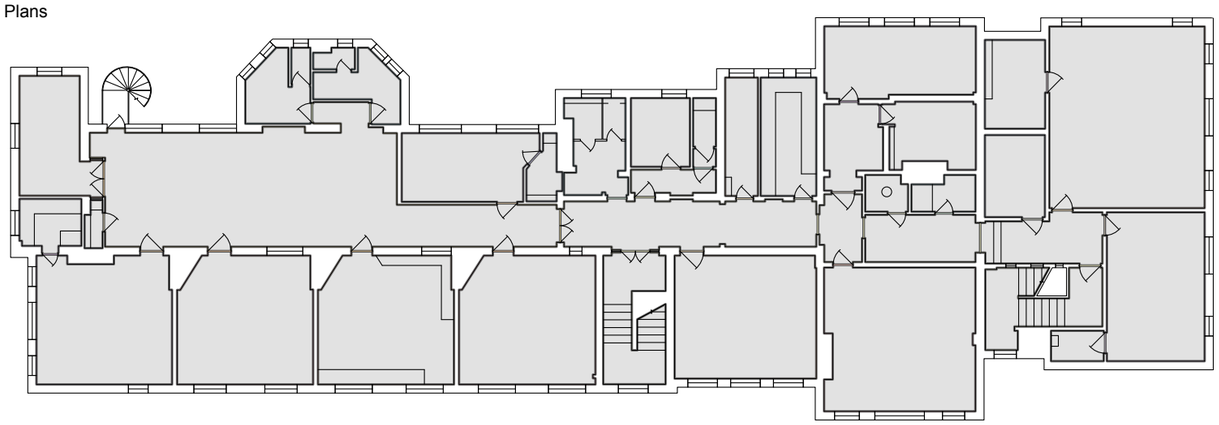
Photograph of the existing entrance and the existing office block

Proposed Section showing existing Boys entrance, now integrated within the exterior of the school's reception area

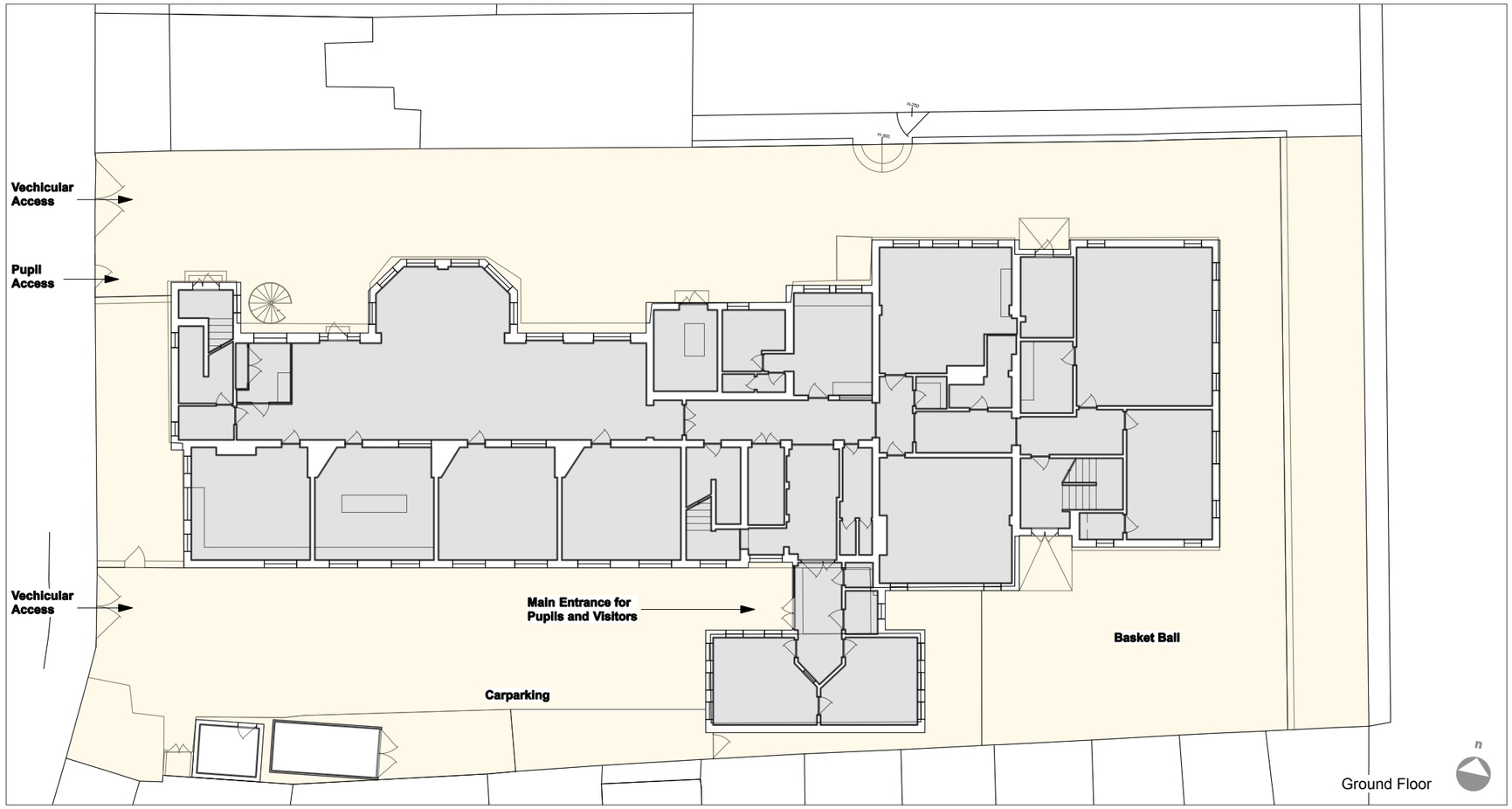
Design Strategy: Concepts, Scale and Layout

Photograph showing existing Boys entrance, now to be integrated within the exterior of the school's reception area

Chalcot Existing Floor Plans



First Floor



Floor Plans of Existing Building

Design Strategy: Concepts, Scale and Layout

Improvements / Alterations to the Existing Building - Ground Floor

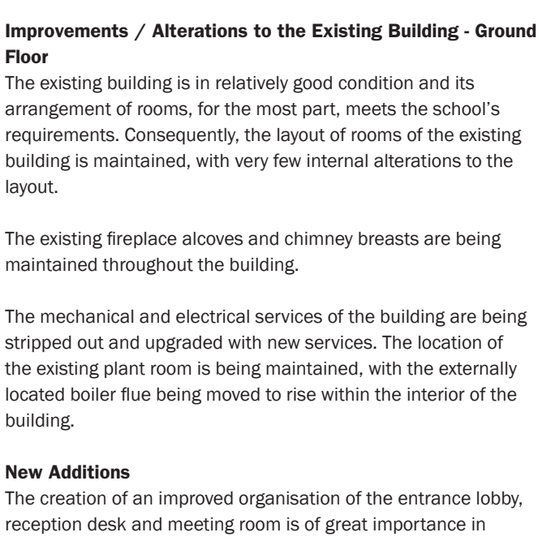
The existing building is in relatively good condition and its arrangement of rooms, for the most part, meets the school's requirements. Consequently, the layout of rooms of the existing building is maintained, with very few internal alterations to the layout.

The existing fireplace alcoves and chimney breasts are being maintained throughout the building.

The mechanical and electrical services of the building are being stripped out and upgraded with new services. The location of the existing plant room is being maintained, with the externally located boiler flue being moved to rise within the interior of the building.

New Additions

The creation of an improved organisation of the entrance lobby, reception desk and meeting room is of great importance in meeting the new requirements of the school.



Example of a Reception Desk by Architype

Proposed Plans - Ground Floor

Design Strategy: Concepts, Scale and Layout

Improvements / Alterations to the Existing Building - First Floor

The existing arrangement of rooms on the first floor is retained although in certain situations smaller rooms are provided by subdividing existing rooms. This occurs, for example, when creating the smaller meeting rooms and new corridor. This alteration means that students do not have to circulate through the hall to gain access to these smaller meeting rooms and break out spaces.

Removal of Existing Outdoor Staircase

The existing external metal staircase is being removed and the internal staircase is being brought back to use. This alteration improves the security for the school, and health and safety of the students.

Photograph of External Staircase

Proposed Plans - First Floor

Landscape Design

Landscape: Proposals

Landscape Proposals
Chalcot School has 4 distinct areas that make up its external realm.

1. The street façade with entrances
2. The main entrance with carpark
3. The playground space
4. The multi-use games area

1.0 Introduction – the case for a new external realm

The existing external environment for students at Chalcot School is focused upon ball games with a basketball hoop and enclosed multi-use games area. From consultation it is clear that, for the existing cohort of students, this provision is inadequate. There are limited opportunities for socialising in a seated, informal environment and there is no provision for physical activity and sport – such as climbing and balancing – or informal 'letting off steam'. Add to this the inclusion of girls within the school – it is critical to the well-being of the school that students have positive, fun things to do during break time, that gives them choices of where and with whom they wish to be.

The design of the outside spaces focuses on creating informal zones, within the limited space, in which multiple activities can take place. This includes, where possible, physical excursion, with informal group social spaces. Hence there is a hang-out zone created from in-situ staked rocks, adjacent to the multi-use games area and abuting the climbing zone. This allows students to observe, socialize and actively participate – if that's their wish.

2.0 Opportunities and constraints through the landscape development

The site has several significant constraints that have significantly influenced the development of the landscape design.

2.1 Conservation Area
From the outset of the design's development, there has been consideration and appreciation of the unique qualities of the neighbourhood. The treatment of the frontage has been approached to find a sympathetic, elegant solution that balances the security requirements with the visual qualities of the residential street.

2.2 Existing Urban Landscape
Along Harmood Street, there is a strong civic character created by the tightly knitted terraced housing, street trees and open estates on the opposite side.

2.3 Existing Trees
There are notable street trees along Harmood Street, including one Lime Tree at the front of the school.

To the rear of the school site there is a group of mature sycamore trees. Individually these trees are of low visual quality, however they provide a visual separation between the school and the neighbouring commercial buildings.

The Camden Council tree officer has inspected the condition of these trees. In the findings it was proposed that the tree furthest south be removed and replaced due to it's poor condition, it's neighbouring tree to have a crown reduction of 20% and the other trees be managed to keep their size down.

The officer noted that for the long-term maintenance of these trees the structural integrity of the raised planter needs to be examined and the trees be maintained at a height of between 10-14m to ensure they do not become unstable.

It is proposed to remove three of these trees, due to the overshadowing and darkness they create at the rear of the site.

The client recognises the importance of having trees within the school grounds and propose to replace them with semi-mature trees of greater seasonal interest and lighter foliage.

Existing Trees in Consultation
Through consultation with the school it emerged that there is great concern about the quality of this group of mature trees. It is felt they contribute very little to the site. Instead create a sense of dampness and darkness at the rear of the site and combined with the low visual quality of the existing chain-link fence, rear brick wall, add to a sense of neglect and austerity.

The Proposal
In light of the tree officers findings, the consultation and the opportunity this development provides for undertaking significant landscape improvement works to the school grounds, it is proposed that all the trees at the rear are removed. To mitigate this loss, it is proposed the trees are replaced elsewhere on the site and in addition a significant mixed native hedgerow be planted at the rear of the site to screen the walls and existing fencing. This would be maintained to a height of 2.4m and become a significant structural element to the environment. This hedge will contribute to the overall biodiversity of the site, with its ecohabitat providing a feeding source for birds.

The trees can be removed in stages, as the school incorporates its plans for the use of this area for increased student use.

3.0 Boundaries

The Street Façade
The visual quality of the existing street façade is currently dominated by a pair of blue steel vehicular gates on either side of the school building and high level chain-link fencing. They are flanked by brick walls. There is an original pedestrian gate within the wall to the north.

Directly in front of the school is a large Lime street tree, that partially obscures the original fence and small overgrown garden between the curtilage of the building and the back of pavement. There is a sign providing the name of the school.

The Proposal
It is proposed to restore and repaint the existing railings, tidy up the existing garden by replanting the beds and introducing some plinths for the school to display 3D artwork.

The double steel gate to the north will be replaced by a painted timber gate. The existing pedestrian gate will be replaced by a timber gate. Refer to the architectural statement.

It is proposed to widen the entrance in the south to allow for a separate pedestrian access route. This will enable the school to keep the new timber vehicular gate shut, except for deliveries and parking use. All visitors enter via an intercom linked timber painted gate.

Introducing the new pedestrian access has implications on re-aligning the existing bell-mouth, repositioning an existing BT pole, as well as realigning an existing street parking bay.

To create a visually unified and elegant solution for the security issues raised with this school, it is proposed to remove the existing high level fencing and replace it with filigree designed chainlink, that acts both as an attractive art piece for the wider street and provides a secure solution for the school environment.

4.0 The Existing Main Entrance with Carpark

To access the existing main entrance, it is necessary to cross the existing carpark, entering through shared vehicular and pedestrian gates, that are kept open throughout the school day.

The environment created is an open and visually harsh space with a carpark, steel shipping container and binstore area.

The Proposal

It is proposed, in line with the new pedestrian entrance to create a paved pedestrian pathway leading directly to the front door. The space will be separated from vehicles by a kerb.

The carpark will be reduced in size by an increase in the proposed building footprint and the creation of a small garden.

5.0 The Garden

The garden is connected directly to the new meeting room, to be used by those within the school. It is physically linked to the building by a brick wall. The garden will be planted with bamboo and evergreen shrubs including hebe and choisya to provided seasonal interest, strong scent and nectar for insects.

The service yard will be defined with designated space for wheelie bins, a covered bicycle shelter and a mini-bus parking bay, with a space for a disabled user.

6.0 The Playground Space

The existing playground is open and austere. There are very few opportunities for play or recreation, except for basketball and football in the multi-use games area. Its physical form is defined by the space between the existing brick boundary walls and the building line. There is a distinct change in level created by a brick retaining wall 600mm high.

There is no planting except for some existing mature sycamore trees to the rear of the site. There is one bench.

The Proposal
It is proposed to create distinct zones within the playground. These include:
- Table tennis and outdoor gym – a space where students can be physically active either working out on the fixed gym equipment, or playing ping-pong on the outdoor fixed table.

- Climbing zone – developing the area to become an active linear space with climbing apparatus focusing on upper body strength, with potentially a timber balustrade incorporated along the brick edge.

- Hanging Out Zone- using the existing change in level by the MUGA, is proposed to create a space for socialising using stacks of natural rocks.

- Dining Area – a fixed table and benches outside the cafeteria provides a space for outside eating or outdoor classroom.

- The existing bike store is retained in the current position.

- A separate 1:1 entrance is create internally by the erection of a timber fence, surrounded by defensive planting, broken by a fire escape exit.

- Multi-use Games Area
There will be no works on this space as part of this application, apart from creating a new store for outside equipment against the existing brick wall.

7.0 Biodiversity

It is proposed that new pockets of planting are introduced, to increase the biodiversity of the site and provide visual amenity value. On the site it is proposed to introduce 3 bird boxes.

8.0 Hard Landscape

A robust and simple palette of materials will be selected, with colours and textures to complement the materials of the existing building. The entrances and prominent spaces will have high quality paving. Those spaces dedicated to recreation will have continuous surfaces suitable for multiple uses.

Residential street, with notable street trees.

Front of school with austere gates,shared pedestrian vehicular entrance.

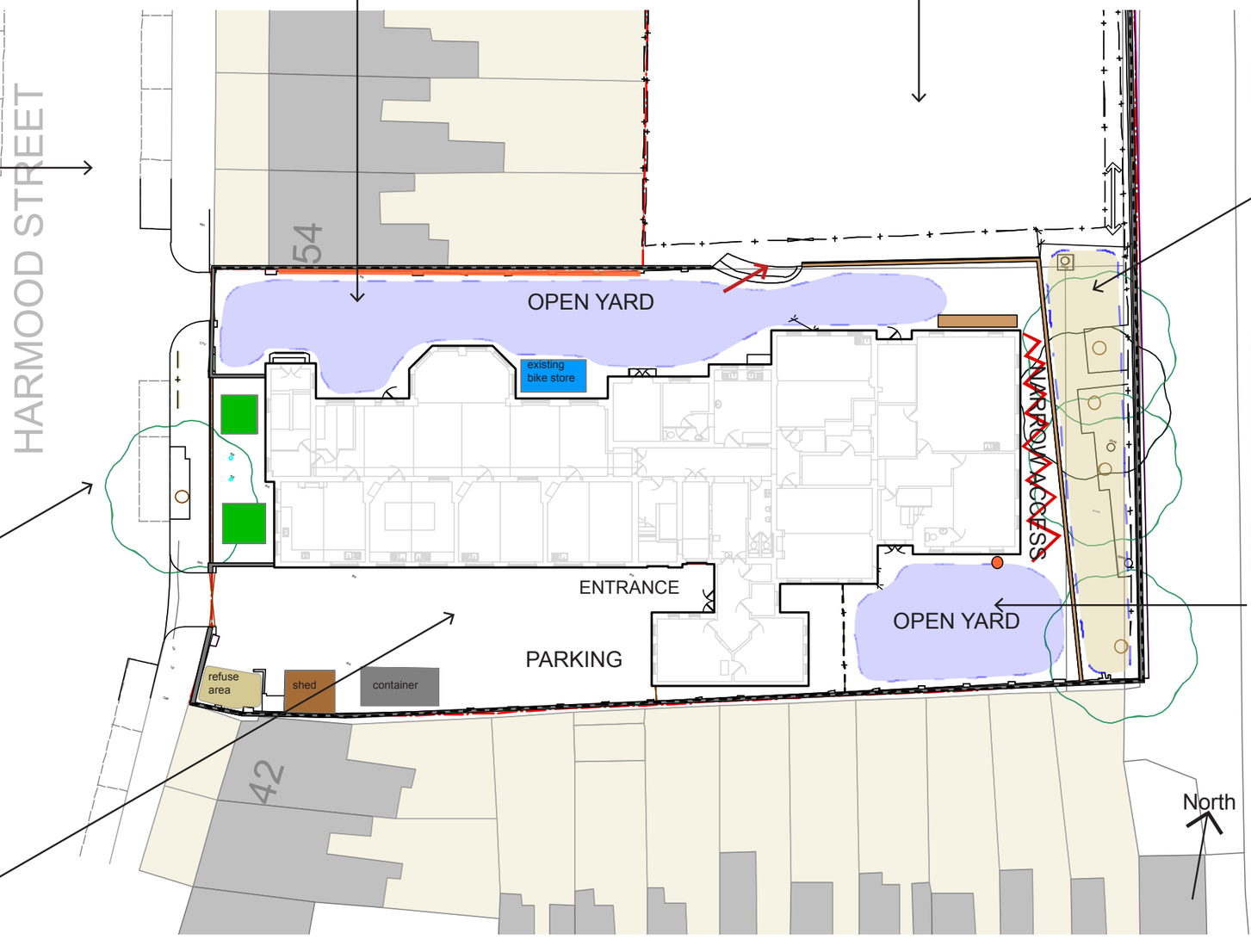
Entrance to school, empty space dominated by carparking.

Narrow playground space with no facilities for recreation

Existing multi-use games area

Raised narrow space with mature sycamore trees, enclosed by neigbouring building and existing building.

Yard space dominated by high fences, boundary walls, line markings and single basketball hoop on wall.



Existing Landscape Plan with Photos

Landscape: Management

9.0 Landscape Management Plan

9.1 Planting Design Intentions

The planting design intention is to have simple planting solutions that provide seasonal interest and thrive in this environment.

- The approach and public face of the school are intended to have a tidy and distinctly green edge with semi-ornamental shrubs.
- To the rear and more private part of the school it is proposed to have simple planting solutions that provide a visually green relief.

9.2 General Maintenance

It is presumed that the care of the planting will be undertaken by the maintenance team, unless specifically planted by the school and pupils.

9.2.2 Semi-ornamental Shrub Beds

- Planted as pot grown specimens with a minimal mix of deciduous, evergreen and flowering species to give all year interest and sensory characteristics. The shrub beds are to be kept tidy and litter free.
- Thin out last year's growth after flowering and dead head.
- Regular inspection of plants for potential problems to respond before pests and diseases and remove manually before they spread and chemical control is required.
- Remove and replace severely diseased or damaged plants.
- Prune to remove any dead, damaged, diseased wood or crossing branches, cutting back to healthy wood.
- Remove suckers from grafted/budded plants.
- Prune to encourage the plants natural character and thin branches to prevent overcrowding. Do not use electric hedge cutters.
- Cultivate twice yearly by turning over the surface layer of soil (where not mulched), in spring and summer
- Hoe and hand weed during the growing seasons and thin in time to prevent overcrowding.
- Undertake annual inspection of play equipment for repairs/replacement of parts/tightening of fixings.

9.3 Yearly Programmes

- Generally void work during frosts
- Compost organic materials

Spring

- Cultivate twice yearly by turning over the surface layer of soil (where not mulched), in spring and summer
- Remove any dead plant material and litter
- Apply a general slow release NPK fertilizer to shrub beds to manufacturers recommendations
- Prune shrubs to remove dead branches
- Adjust and inspect tree ties and stakes
- Provide support for plants that may need it
- Trim lavenders back to old wood
- Tie in new growth on climbers
- Clip groundcover to encourage bushy growth in April
- Cut back Cornus by one third annually in spring

Summer

- Hoe or hand weed to remove weeds
- Cultivate twice yearly by turning over the surface layer of soil (where not mulched), in spring and summer
- Continue to respond to any pests or diseases
- Water containerized planters and any recently planted items
- Monitor all plants for stress and water if necessary
- Dead head to encourage flowers
- Check stakes
- Prune any dead stems from evergreens
- Tie in new growth of climbers

Autumn

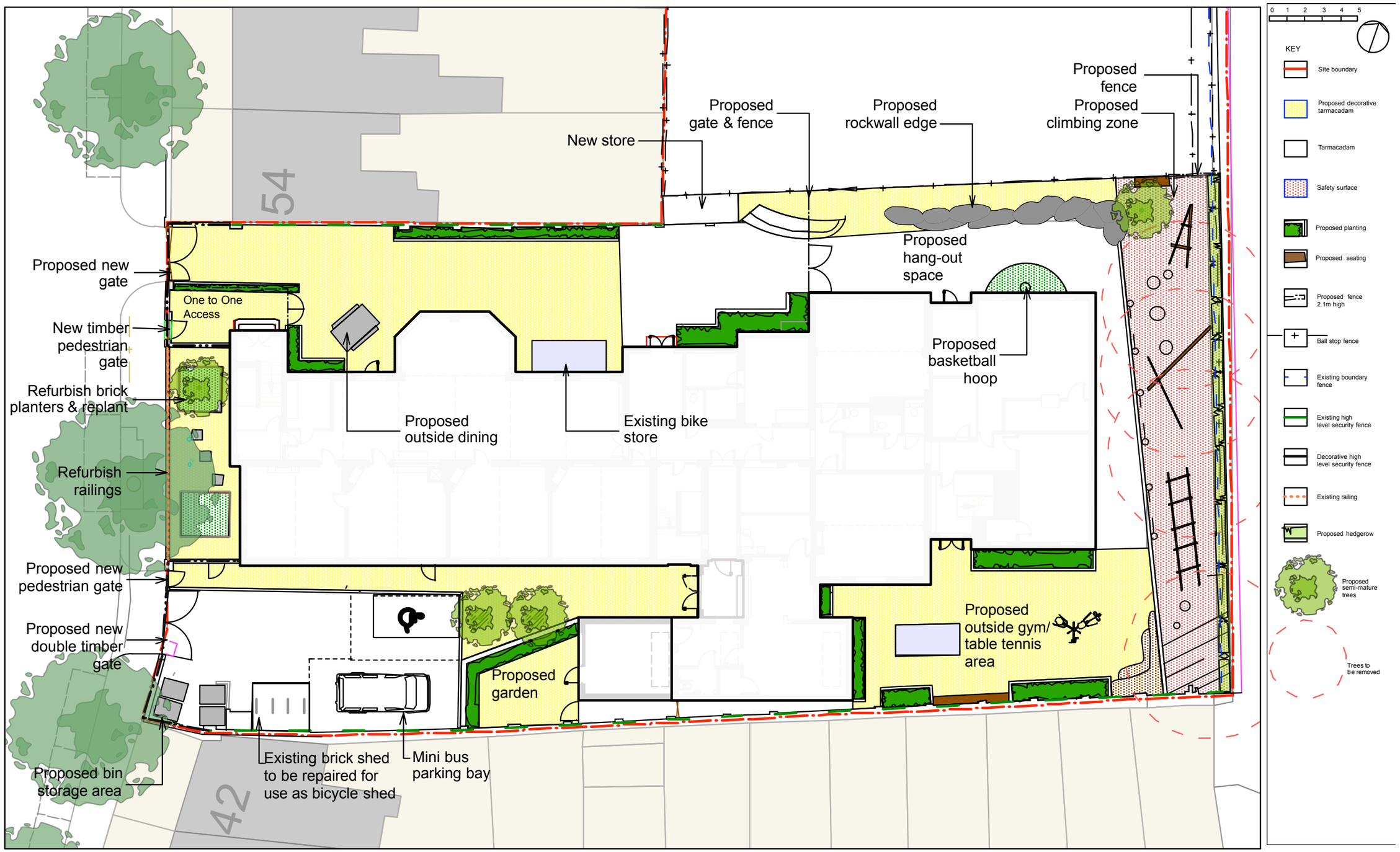
- Continue to monitor for pets and diseases
- Collect fallen leaves to compost. Remove from areas of hard standing and where they are covering smaller plants. Generally a layer of leaves can be left to rot down naturally within shrub beds.
- Remove any dead materials
- Replenish bark mulch to maintain a depth of approx. 50mm
- Prune climbers and tie in to supports

Winter

- Keep tidy clearing leaves and plant debris
- Prune shrubs and roses if required
- Generally heavy prune deciduous shrubs in winter with a second review when the plant is in leaf and light prune evergreens in spring/summer

Hard areas

- In winter, check play equipment, benches, bins and other structures a repair as necessary, reapply wood oils as necessary. Check for weathering and splinters Check paths and edgings for repairs
- Keep areas of hard standing clear or debris, litter and weeds
- Repair any boundaries or landscape furniture as required
- Undertake annual inspection of play equipment for repairs/replacement of parts/tightening of fixings.



Proposed Landscape Plan

Access Plan

Access

Introduction
This access statement aims to explain how the needs of disabled people and the general public are incorporated into the design and arrangements of the scheme, and how the principles of inclusive design have been implemented. However, these proposals are tempered by noting specific arrangements that have been found to be necessary in providing safety and robustness in other precedent SEBD schools.

Inclusive Design
The design recognises that people are very different in their needs and the way that they use the built environment. An inclusive environment recognises and accommodates these differences in a way that is universal. The principle of an inclusive environment will be one that is:

- Easily used by all people without undue effort, special treatment or separation
- Able to offer people the freedom to choose how they access the buildings and allow them to participate equally in all activities it may host
- Able to embrace diversity and difference
- Safe
- Fit for purpose
- Compliant with legal and best practice

However, our approach also recognises that the SEBD provision cannot have disabled students or teachers due to the physicality of the environment and rarely even has disabled visitors. When it does it is in a tightly managed situation with high staffing levels to ensure safety.

Scope Covered by Statement
The statement confirms the development's conformance with access requirements and covers the approach to the building, external areas, entrances, horizontal circulation, internal areas and facilities within the buildings.

Design Appropriate to SEBD Function
There have been repeated discussions with the current site manager and a series of visits have been carried out to learn from other SEBD and PRU schools. This highlighted that there are some issues that are specific to SEBD that we need to address. For example:

- Doors swings should open into corridors where they don't form an unreasonable obstruction. This is because the children often kick the doors to try and gain access to the classrooms. By swinging into the corridor the force of the kick is taken harmlessly on the door rebate rather damaging the lock which can lead to students and teachers becoming trapped in classrooms.

- The door handles will be knob handles rather than lever handles. These are more difficult to grasp for older or disabled people but they are also significantly more difficult to damage as the lever handles can be over extended until they break.

- All glazing has to be above waist height so that it is more difficult to be damaged. The glass specification will be toughened and laminated for strength and security.

- Windows will be easy to use, sliding action windows with robust grills to allow large opening areas for ventilation without the risk of falling out the window.

- All staff at the Chalcot School site, indeed both sites for the Camden Centre for Learning , will have to be able bodied without disabilities to cope with the demands of this special needs student group.

Parking
There is currently provision for a few car parking places but the limitations of the site mean that this will be limited to two parking spaces sized for both disabled use and minibus use in the proposal. These spaces are adjacent to the main entrance.

Cycle storage
There is currently cycle storage provision for both staff and students and this is being maintained.

Main entrances
Leading into each of the two sides of the building, there is a well marked entry point for students and visitors. Each has a clear supervision of entry areas.

The contractor will ensure that on completion:
- All external routes are level and provide for wheelchair access
- All new gates provided will give a minimum of 800mm clear opening width through one leaf
- External surfaces will be firm and even. External surfaces are smooth and firm with level junctions between different materials.

Horizontal circulation
The proposals offer level access to all areas on the ground floor, and consolidate the plan so that circulation routes are DDA compliant throughout the ground floor. All exits are situated on the ground floor have level thresholds. Doors clear opening widths are as noted previously.

Vertical circulation
There is no lift access to the new build first floor in the existing building, and the works to this site do not include incorporae a lift.

Camden Centre for Learning could accept students in wheelchairs in their Agincourt site.

Sanitary accommodation
A disabled WC is located by the entrance for visitors use.

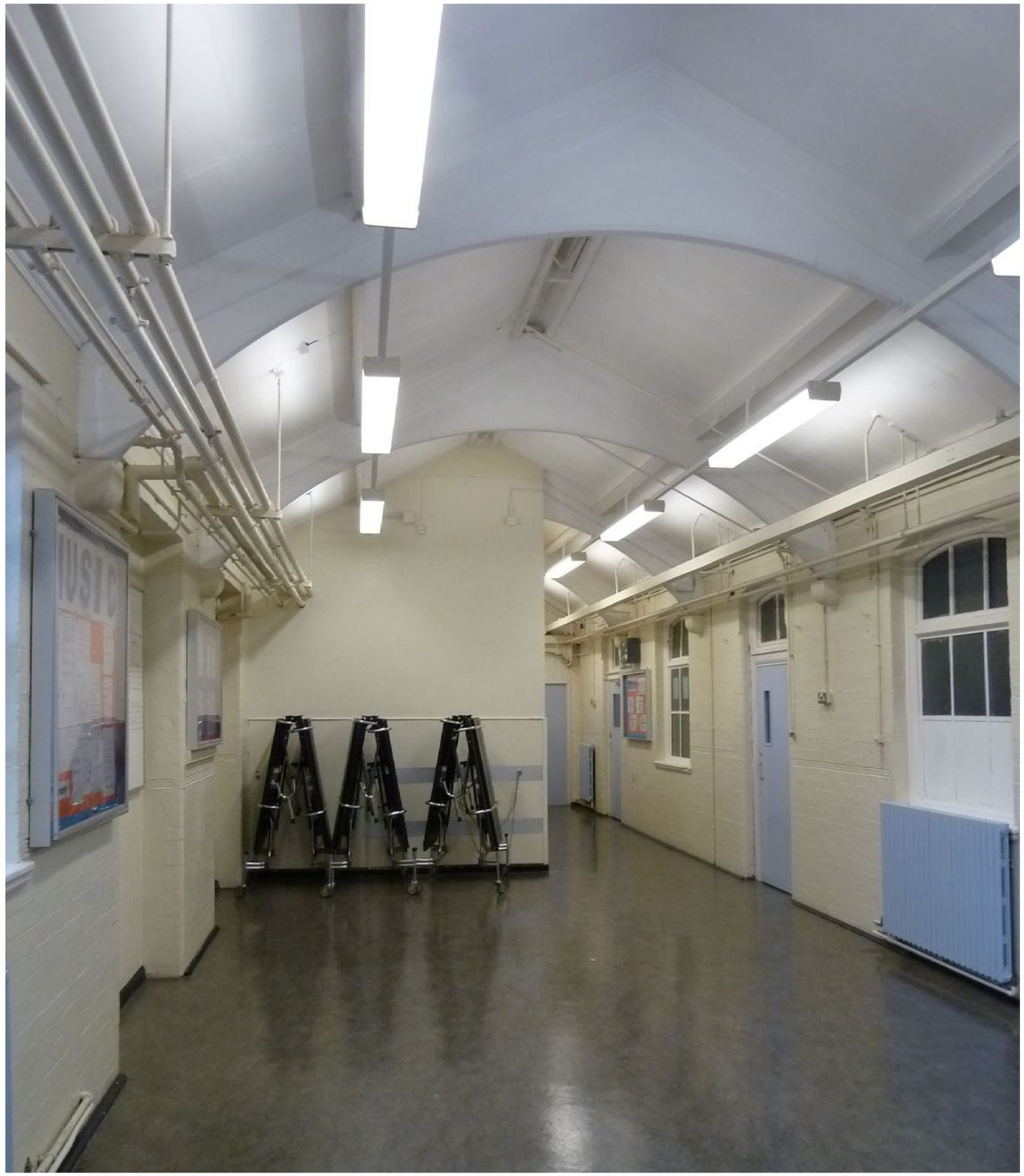
In all the sanitary installations, taps will be either push fittings on a time delay or sensor fittings. The importance of visual contrast will be taken into account.

Means of escape for disabled people – principles
Safe, efficient egress depends upon a combination of management procedures and building design. Specific evacuation strategies will be devised for people who need assistance, and these strategies will take into account the building design, the known needs of people occupying the building, as well as the unknown needs of visitors.

Access Management

Management Issues
The following management and maintenance issues will be considered to ensure that access is achieved and maintained:

- external routes – keeping in good repair and free of obstructions, ice, snow and surface water;
- doors – adjustment of door closers, ironmongery kept in good working order;
- horizontal circulation – keeping routes free from obstructions, keeping furniture layouts and seating arrangements accessible;
- WCs – ensuring that manoeuvring space in accessible compartments are not obstructed by bins, sanitary disposal equipment etc., replenishment of toilet paper and paper towels in accessible WCs as well as other WCs;
- communication – new good quality signage to integrate with the existing sign system, and all information is to be kept up-to-date, signers and translation services provided as necessary, appropriate provision accurate access information and other literature;
- alarm systems – checking and staff training in procedures;
- surfaces – ensuring that cleaning does not cause slippery surfaces maintaining junctions to avoid worn surfaces becoming trip hazards, replacing like-for-like and maintaining colour contrast in redecoration;
- lighting – replacing of bulbs, keeping windows and light fittings clean;
- means of escape – specific evacuation strategies to be devised for people who need assistance, including staff, pupils and visitors. Also consider staff training, regular practices, maintenance of fittings and equipment and reviewing evacuation procedures;
- training –staff training is critical to maintain access and to provide accessible services and employment opportunities.



Photograph of First Floor Hall

Environmental Design & Refuse / Recycling Plan

Photographs of Existing Windows

Environmental Strategies

Existing Environmental Performance and Issues
The existing buildings have many environmental performance issues that we are trying to address. This is particularly important due to the sensitivity of the students to poor environmental performance e.g. poor ventilation leading to lack of concentration.

Insufficient Ventilation - This is as a result of a series of issues, including that some of the sash windows can't be opened fully. This doesn't allow sufficient ventilation. Additionally, the high level Edwardianventilation systems have also been fixed shut. This means that some areas and particularly corridors are stuffy and overheat.

Proposed Strategy for Works to Existing Building
The significant upgrade to the existing building will be balanced against the need to conserve the original appearance as the school and also ensuring the robustness and ease of use required in an SEBD specialism school.

Insulation - will be fitted within the existing roof spaces. The type of insulation will be a natural materia that it is hygroscopic and is able to breath in the same way as the original fabric. We are not currently proposing internal insulation of the existing masonry walls due to concerns over disproportionate cost and potential subsequent damp issues caused by interstitial condensation.

Air Tightness - will be achieved in the new build extension using traditional wet plaster but with modern air tightness tapes and seals e.g. around windows. Air tightness will be improved with the existing building where possible.

Windows - existing single glazed windows will be fitted with double glazing, Also new means of opening the windows will be provided which eases the occupants to obtain improved natural ventilation.

Replacement of services - All the existing services are to be replaced as they are extremely inefficient and date from a variety of eras which complicates integration of new systems. They will all be replaced with a single, coherent, efficient system designed for low energy usage.

Mechanical Ventilation with heat recovery - This is being provided in all required rooms and the ventilation runs will be carefully integrated for minimum impact on the original spaces. To prevent overheating in summer, the strategy is to use natural ventilation and measures, such as the addition of self winders, are being taken to improve the use of the existing windows.

Soft Landings - our post-occupancy studies have shown that there can be significant fluctuation in environmental performance depending on user engagement and knowledge. It is crucial that the users are well informed as to how the building works so that they can save the maximum amount of energy. For this reason, Architype have recommended that the client undertake the Soft Landings programme, which aids users in settling into a new building and sets up an energy management routine.

Proposed Strategy for Works to New Extension
Similar strategies are being followed in the new build extensions as in the existing building. This is to ensure that they function as a single building and provide economies of scale both in construction and maintenance. Specific issues are:

Windows - throughout the new build element the windows will be the extremely robust sliding aluminium windows with integrated security grills in the opening element. The grills allow the windows to be securely left open at night allowing night cooling. Also in the new build will be rooflights to allow a high level of natural light throughout and a low to high flow of air from the windows.

Detailing - The new building will be detailed with high levels of air tightness using wet plaster and modern air tightness tapes. It will also be designed to have minimal cold bridges to ensure a very thermally efficient envelope.

Sanitary Fittings
Low water usage fittings or adapters will be specified throughout wherever possible.

Pipework
Fittings and pipework will also comply with requirements for water efficiency.

Sustainable Use of Materials
Architype have traditionally had a very materials led approach to sustainability, believing in fabric first solutions.

The materials to be used will be non-toxic, low embodied energy, recyclable materials wherever possible. These are also being chosen for their robustness due to the unusually high level of maintenence required by SEBD provision schools.

The palette of materials will conform to the following:

- Careful specifiation of materials to ensure Low Global Warming potential.
- All materials to be Green Guide A rated wherever possible
- Careful control of contractor in terms of sourcing of materials
- All timber to be FSC approved or reclaimed
- Materials will be sourced so as to have the lowest possible environmental impact. The design team are committed to specifying natural and recycled materials over synthetic and high energy alternatives. For example, a recent project used locally grown thatch as its cladding due to its extremely low embodied energy.

However, we are also having to customise the palette of materials to suit the requirements of the users. For example, the clay based paints that we would prefer to use are not sufficiently robust and cleanable so washable, however water based, paints will be used instead.

Refuse / Recycling Plan
The site plan incorporates an area for waste disposal storage and this area incorporates a zone with bins for recycling paper, glass and plastics. See the Landscape Plan for the location of refuse / recycling storage area, which is positioned in its current location adjacent to the main gates.

Photograph of Tub for Kitchen Garden

Photograph of Existing Windows

Appendix 1: Transport Report

Parking Management Plan
The school is keen to develop a policy for reducing the number of cars arriving at their site, and for their school to promote an environmentally responsible travel plan.

With this in mind, it is now agreed that staff will not bring their cars to work. They will make use of the excellent public transport links or they will cycle to work.

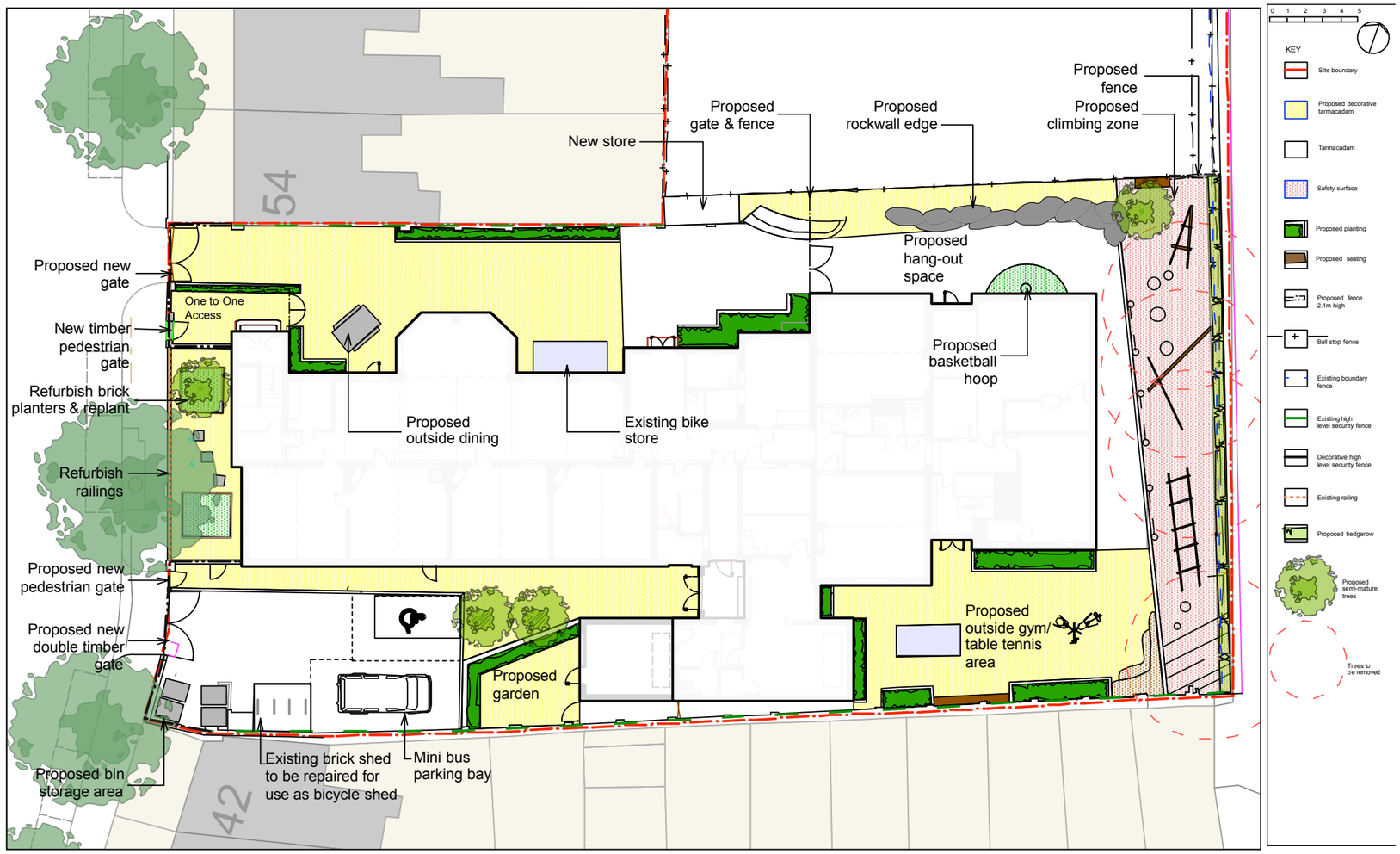
Students will arrive by minibus or by taxi. Those students living nearby will be encouraged to cycle or walk to the school.

The Transport Plan alludes to the environmental policies, and the school's Travel Plan will be developed to incorporate this intention.

Parking Spaces on Site
The existing car park is re-organised to situate a car parking space for the school's minibus. In addition, there is one dedicated car parking space for disabled users.

The minibus will often be away from the site, and will follow a timetable known by the school. This means that occasionally a visitor

There are few visitors making their way to this site: parents will be requested to come by other means than arriving by car.



Rev	Description	Date	Rev	Description	Date
A	Draft for planning	16/11/12	D	Trees removed, replace-ment trees, hedge added.	30/11/12
B	Amendments: parking bay notes, access to kitchen	21/11/12			
C	Amendments: parking bay notes, recycling,trees altered.	24/11/12			

Chalcot School
Landscape Masterplan

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Project Number	Drawing Number	Drawing Status	Revision	Scale	Date
051/CH	L02	FOR PLANNING	D	1:200 @ A3	Nov 12

Appendix 2: Aboricultural Report

Appendix 3: Acoustic Report

CHALCOT SCHOOL - CAMDEN

INTRODUCTION

Michael Popper Associates have been appointed as the mechanical, electrical and environmental engineering consultants for the refurbishment and extension of Chalcot School by Camden Council.

It should be noted that, at this stage of the design, the approaches outlined in this report are strategic and where equipment specifically defined it is subject to review and change as the design develops.

However, the design team shall remain committed to the principles herein.

This document will outline the systems to be used in and indicate what measures are to be put in place to minimize the impact of the plant on:-

- Local air quality
- Noise emanating from the site

The following ventilation or extraction systems have been identified:-

- Catering kitchen extract
- General ventilation

In addition there are a number of existing boilers and hot water heaters that will be modified as part of the project.

BOILERS & FLUES

The existing flues run on the outside of the building as shown in the photograph below:-

These will be removed and relocated such that all flues leave through the roof of the building and discharge at high level.

KITCHEN AREA

The existing kitchen extract system consists of a cooking canopy close-coupled to an extract fan discharging at low level through the wall of the ground floor.

This will be replaced with a new system consisting of a canopy and fan –complete with attenuation as necessary- which will discharge at high level at approximately the height of the ridgeline of the building in which it is housed.

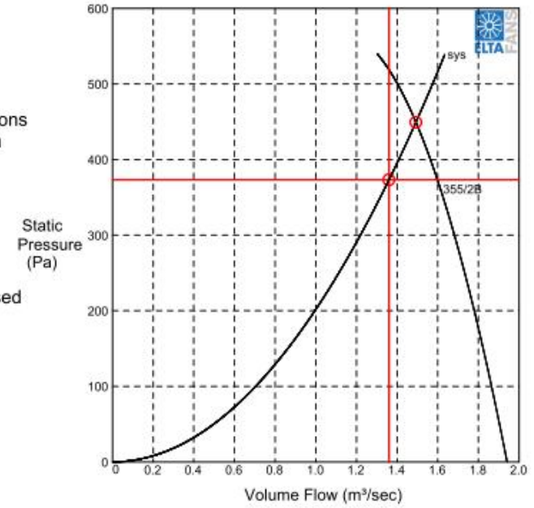
At present the precise duty for the fan is not known however below is information for a suitable fan unit and attenuator combination that is likely to meet requirements.

ELTA FAN DATA FOR MODEL SLC355/2-3B

Fan Code: **SLC355/2-3B**

Requirements

Volume:	1.36 m³/s
Static Pressure:	300 Pa
Selection Pressure:	373 Pa at std conditions
Operating Duty:	1.493 m³/s at 449 Pa
Temperature:	20 deg C
Altitude:	0 m



Density: 1.2 kg/m³

Fan Data (at STP)

Type:	Revolution Long Cased Axial Fan
Diameter:	355 mm
Speed:	2840 RPM
Weight:	26 kg
Specific Fan Power:	1.84 W/(l/s)

Motor Data (at STP)

Motor Power	2.2 kW
Electrical Supply:	415V@50Hz
Motor Speed Poles:	2 Poles

SOUND DATA - with 2DP Silencer Adjustment

Spectrum (Hz)	63	125	250	500	1K	2K	4K	8K	dBA @ 3m
Sound Power (dB)	75	74	69	61	52	51	50	47	44

Note: Levels are quoted as in-duct values. dBA values are average spherical free-field for comparitive use only.

Being a school kitchen, it is unlikely to generate high levels of odour or grease that would be present in other types of kitchen and therefore, other than the standard grease baffles, no further controls on the discharged air are proposed.

GENERAL VENTILATION

A number of heat recovery ventilation units will be utilised in the development. These will be located on the existing flat roofs and be equipped with attenuation as necessary as recommended by a qualified acoustician.

The details below are for a typical HRVU unit as manufactured by VES Ltd.

ECO NRG P
Sizes 0, 1&2

- Compact construction, with 15mm double skinned case and Class O rated thermal/acoustic infill.
- Fitted dual fan speed controller as standard for commissioning, max/min speed, 0-10volt control, and compatible with the AQ air quality sensor.
- High spec fans with backward curved single inlet impellor and external rotor motor.
- High efficiency cross flow heat exchanger with fitted bypass damper and 230 volt actuator.
- Plantroom / ceiling void unit flat orientation with top or bottom access, and weatherproof construction with top access and powder coat paint finish in Signal Grey to RAL 7004.
  - Filter fitted to both supply and extract inlet, pleated, synthetic, grade G4.
  - Circular spigot connections with rubber duct seal.
  - Built in LPHW coil or EHB.
  - Drain pan suitable for use with optional peristaltic pump.
  - Fitted prewired isolator as standard.
  - Units can be hung with drop rods or supplied with optional self levelling feet.
  - Optional fitted and wired control system with touch screen remote.
  - Fans and bypass damper motor fitted with quick change plug connectors for easy maintenance.

Sound Data

Ecovent NRG P	Sound Spectrum dB re10^{-12}w PWL Centre Frequency Hz								Casing Noise Breakout	
	63	125	250	500	1k	2k	4k	8k	NR @ 1m	NR @ 3m
Size 0	64	72	66	66	63	59	60	55	35	30
Size 1	62	68	66	68	65	60	61	57	35	30
Size 2	64	70	68	70	67	62	63	59	40	35
Silencer IL, dB	6	8	12	19	28	30	24	21	n/a	n/a

Sound Power Level PWL, dB, linear, in accordance with ISO13347-1:2004
Silencer model ALS 5/1200/STD/CS designed to meet NR 35/40 within conditioned space.

There are also two proposed extract only units to assist with temperature control in the large halls. Typical details are shown below:-

Silencers designed to fit directly onto unit.

WEATHERMASTER SOUND LEVELS

Model WM WS, WE	SPL *dBA	Sound Power Level Spectrum dB re 10^{-12} w PWL Centre Frequency - Hz							
		63	125	250	500	1K	2K	4K	8K
111	54	73	64	59	59	66	65	64	64
112	57	72	65	59	63	70	68	67	66
113	61	76	74	69	70	73	70	69	69
214	58	75	72	68	63	70	67	66	67
215	67	78	77	76	76	79	77	75	77
223	47	69	66	59	58	58	56	54	50
224	58	69	70	64	69	69	57	65	61
226	64	75	76	70	72	75	75	73	67
325	58	71	70	64	68	69	57	66	60
326	64	75	76	70	72	75	75	73	67
327	62	73	75	68	72	74	73	70	65
428-1	64	76	77	70	72	72	71	70	64
428-3	64	76	77	70	72	72	71	70	64
429-1	64	75	76	71	74	74	75	73	68
429-3	64	75	76	71	74	74	75	73	68
4210-3	71	83	84	80	81	82	81	79	72

** At 3 metres from outlet, free field.*

SILENCERS

Designed to fit directly to the inlet and outlet of the Weathermaster range, will also accept inlet and outlet cowls.

Silencer Model	To fit Size	Dimensions - mm W	H	L	FW	FH	G	CBW	CBL	Weight kg
WA 100	1	500	250	1000	540	290	38	600	850	25
WA 200	2	550	450	1000	590	490	50	650	850	34
WA 300	3	700	500	1000	740	540	50	800	850	50
WA 400	4	900	750	1200	960	810	112.5	1000	1050	72

ATTENUATION

Insertion Loss, dB.

Model	Centre Frequency - Hz 63	125	250	500	1K	2K	4K	8K
WA 100	4	8	14	28	36	36	28	22
WA 200	4	7	13	25	32	32	23	18
WA 300	4	8	14	28	36	35	28	22
WA 400	5	5	16	30	39	39	31	26

MPA- 28th November 2012