

Abacus Primary School
Construction Management/Logistics Plan

PROGRAMME & METHOD STATEMENT

The Site

The main site access to Abacus Primary School is via Devonshire Hill. There is a separate access for vehicles; there is a pedestrian access that leads directly to the main reception within the main building both on the Devonshire Hill side and the Rosslyn Hill.

The proposed development comprises the following:

Abacus Primary School is currently an existing police station that is to be converted into accommodation for the Abacus Primary school.

The proposed construction works are programmed to commence in July 2016. The first activity will be to prepare the one third of the building for demolition. Kier Construction (as contractor) will create a site compound in the existing car park.

Once the demolition has been completed, this will trigger the commencement of the groundworks within the month of November to January.

The site will be managed in accordance with the related planning conditions, which will be discharged prior to development commencing. Provision will be made for the necessary wheel wash facility.

In summary, the overall construction programme comprises the following key elements:

- Demolishing the unoccupied one third of the building to make way for the new teaching spaces
- Building of new teaching spaces forming new classrooms and toilets etc.
- Refurbishment of the remaining two thirds of the existing building inclusive of some external renovations
- External landscaping work
- The proposed construction works are programmed to commence in July 2016.
- The first activity will be to prepare the one third of the building for demolition and Kier Construction to create a site compound in the existing car park.
- Appended to this document are the outline construction programme and a site layout drawing showing the construction sequence.

Construction Stage (Generally)

Immediately following appointment, and upon receipt of contract documentation and information, Kier Construction (KCL) will mobilise its site team.

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KCL will consult and explore with all the team members, adjacent occupiers and the local planning authority all measures to reduce any potential negative impact on the operation of the existing environs and adjacent occupiers. KCL is aware that the school and residential buildings are active as part of the development and will liaise with them to ensure deliveries and access is coordinated.

Our proposed basic site working hours would be:

Monday-Friday	8.00am to 18.00pm
Saturday	8.00am to 13.00pm (after 13.00 no working unless approved by Local Planning Authority)
Sunday & Bank Hols	NO WORKING (unless approved by Local Planning Authority)

Exceptions:

Extensive Impact breaking to be carried out only in the hours:

Monday-Friday 10am to 16.00pm

Upon instruction pre-planning and pre-commencing activities will commence. Design team meetings will be held at regular intervals to ensure achievement of consult design, specialist contractor design elements and to ensure that all designs are coordinated and monitored in accordance with the agreed programme. Review and comment of contractor detailed elements to ensure compliance with the contract requirements will be arranged and controlled by the Site Manager. The Site Manager will be a focal point for the receipt of all consultant designs, specialist contractor designs, issues and receipts for information and documentation to all parties inclusive of the employer's representative and design consultants.

Specialist key package trade contractors will be brought into trade contractor design and detailing development meetings and/or the design team meetings, as applicable, in order for any detailed designs to proceed in accordance with this documentation, programme requirements and the design development as a whole.

ORGANISATION OF THE SITE
Pre-start site Investigation

Prior to commencement of site works, an external survey has been carried out to confirm the extent of any existing services and the condition of the existing environs. The survey findings will be plotted on a drawing and a photographic record taken, which will be maintained as a record throughout the stages of the contract. Underground services surveys, electromagnetic or radar is compulsory on all our projects to prevent underground services being damaged by the works. Full regard will be had to this information when formalising method statements and permits to work on certain aspects of the works.

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An approved contractor will undertake demolition asbestos surveys prior to any asbestos being removed. The HSE will be notified as necessary according to the types of asbestos identified.

Notification of the project commencement will be given to all Statutory Authorities and the client's representative advising them of the construction works and KCL's proposed programme of works.

At the commencement of the contract, KCL will carry out the instigation of the Logistics and Pre-Commencement activities, which are outlined below.

Construction Logistics Plan

A copy of the proposed Construction Logistics Plan is attached.

The way in which the construction site is established and managed is critical to the success of the project. KCL appreciates the importance of minimising any disruption caused to adjacent public and roadway areas, members of the public and adjacent owners, and the need to manage the construction activity to minimise any detrimental impact.

KCL's goal, therefore, is to nurture positive relationships with the adjacent occupiers and the Local Planning Authority and operate in an efficient and considerate manner that allows us to meet our main objectives.

In order for us to achieve this KCL will provide an effective site establishment and a safe working environment with components and materials delivered swiftly and to the correct location.

There are particular logistical challenges to overcome to be able to successfully complete this project works, which are perceived to be as follows:

- Safety of members of the public, adjacent occupiers, construction staff, visitors and operatives
- The management of deliveries to the site

KCL's logistics regime for the project will be designed to meet these challenges, and is based on:

- Frequent team meetings to continually update, advise and coordinate construction activities
- Deliveries to the project utilising the defined access points
- Delivery and security directions and information established at the site entrance and along the site access routes to direct vehicles to the delivery access points
- Incorporating a wheel wash facility within the site compound to prevent the transfer of site material onto the public highway in the interests of safety and amenity

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- Effective management of materials movements
- Effective and detailed planning of all construction activities
- Controlled pedestrian access to the site area for personnel

Site Management

The site management for the project will comprise of a Site Manager who will lead the site team. Please refer to the organogram at the end of this document.

The Site Manager will be assisted and supported by additional site based construction management personnel. These will include Engineering and Quantity Surveying. The Senior Project Manager will oversee the project.

The site team will be supported and assisted by our head office. Personnel will be director level and technical, planning, safety, procurement and temporary works engineering departments.

Site Establishment

Clear signage will be displayed conveying specific instructions to all delivery and visiting personnel in the immediate site area and at prominent locations.

A reporting point will control access and egress of all visitors and site operatives to the area. The system will log all operatives on site and provide an accurate level of attendance.

Site office and welfare accommodation will be established within the site compound area.

The temporary welfare accommodation will comprise of an office area, drying room, canteen and welfare/toilet facilities.

The accommodation will be connected to permanent mains services for power, water and drainage.

All access routes and emergency exit routes to/from the site area will be clearly defined.

Wheel Wash Facilities

A wheel wash area will be provided during the early stages of the contract period and remain on site until necessary.

The strategy for wheel washing on this site will be as follows:

1. Attendant personnel will ensure that all vehicles will be jet-washed to ensure that mud and debris are fully removed prior to the vehicle leaving the site. This will be conducted on a ready-made hard standing area with a gradient to ensure surface water runs off and away from the access

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road. This will drain into a ground soakaway, which will be excavated prior to the start of ground works.

2. Monitoring of the vehicle movements by the site manager and gate personnel (Banksman) will be regular and frequent.
3. A standing order arrangement will be placed with a specialist plant-hire company for road cleaning vehicles. This is to ensure that if a need arises to clear off any and all, debris, dirt and nuisance material inadvertently tracked out of the site area onto local roads.

Fire Procedures

Fire control and alarm points will be established at suitable positions within the site area.

These will include suitable fire fighting extinguishers, fire alarm sounders, operation instructions and details of fire exit routes and the emergency fire exit routes and the emergency fire assembly points outside the building. Hot works permits will be utilised at all times.

Accurate records of site attendance of operatives, staff and visitors will be maintained via our site reporting point, which will be utilised for checking evacuation numbers in the event of evacuation of the building.

A site specific Fire & Emergency Plan will be implemented. This is held in the project Health & Safety Plan.

Movement and Hoisting of materials

Mobile cranes will be utilised for steel frame & roof construction. A forklift truck will generally be used for material off loading and distribution around the site.

Deliveries and Storage

During the initial construction phase on site an area for the storage of materials, small plant and tools will be established within the site compound. As the project duration progresses space will be allocated within various areas for the storage of materials and tools. This will be allocated by trades and good housekeeping in these areas will be stringently enforced.

During the construction of the main structure a tower crane will be used to unload the majority of heavy deliveries, other materials will be off-loaded by lorry mounted Hiab or hand. This will enable the unloading areas to be kept to a minimum of plant and materials, and use all available space around the site for storage. A separate method statement / safe system of work will be implemented for the use of the crane.

As far as practicable, materials deliveries will be scheduled to co-ordinate with the progress of the works, thus minimising the amount of materials stored on site. Specific areas will be designated for materials storage for each trade.

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Movement of materials around the site will be carried out using a pallets trucks, trolleys or other equipment suited to the specific task. Use of such equipment will eliminate / minimise manual handling as far as reasonable practicable.

Deliveries will be organised to avoid the peak time periods and will be largely accommodated within the stipulated times of 08:00 - 18:00 Monday to Friday and between 08:00 - 13:00 on Saturdays. All deliveries to the site will be via the site access point along Devonshire Hill. All vehicle movements and deliveries will be controlled both into and out of the site.

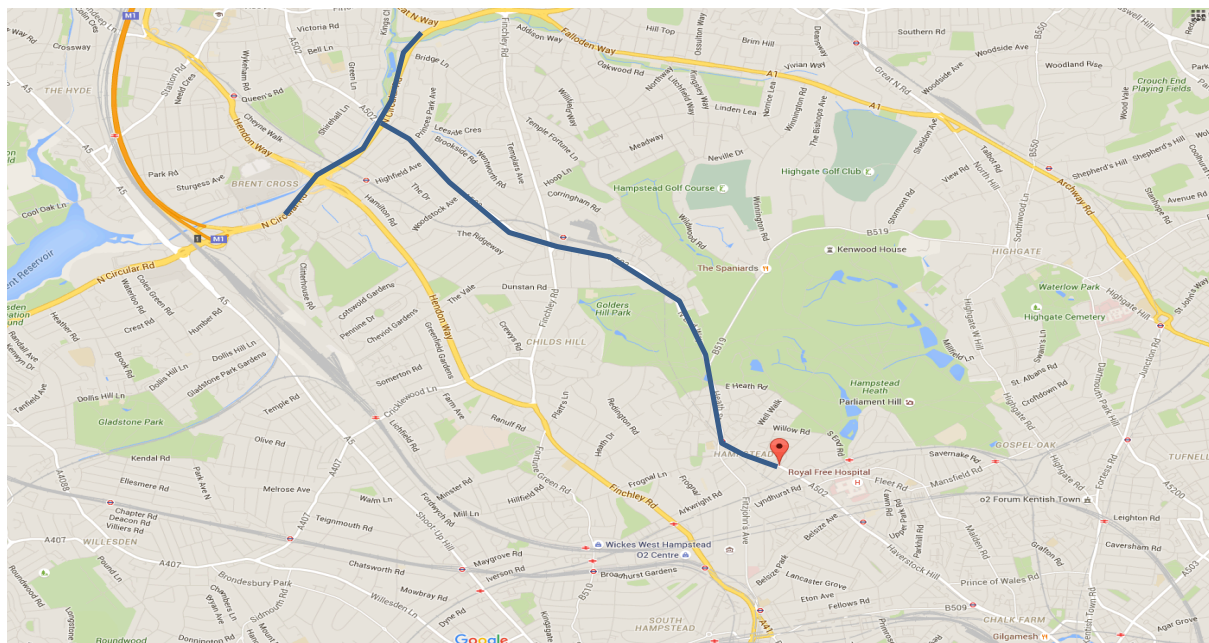
Proposed Delivery Routes (Construction Vehicles)

This is as follows:

The site is easily accessible as there are several major roads that run in the vicinity: A1, M1, A406, A502 and A41

Most likely route for traffic

Follow the A406 on to A502 moving past Golders Green on to Hampstead.

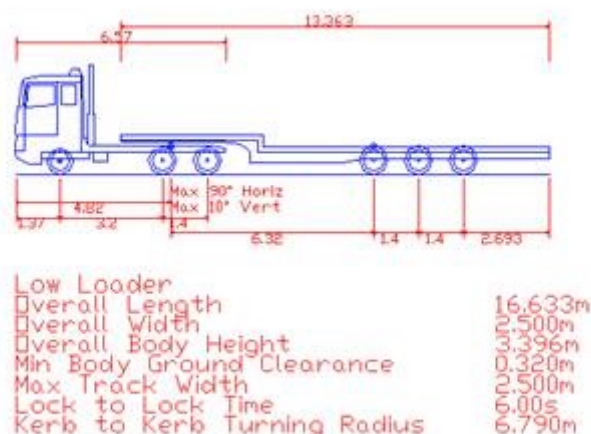


All concrete, screed and mortar deliveries will be proposed as "ready mixed" and will be delivered to site in appropriate vehicles. Concrete and screened placement techniques will be changed and adapted to suit the location and suitability of the equipment for its placement.

Because of the size of these loads we are unable to turn the vehicles on site. However all unloading will be undertaken within the site but the vehicles we

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have to drive in and reverse out. These vehicles will be accompanied by two dedicated traffic marshals who will ensure the safe entrance and egress. Largest vehicle to site will be:



Scaffolding

Conventional scaffolding will be independent with boarded lifts to suit the nature, location and type of the particular operations.

Scaffold design and loading will be adequately assessed, designed and evaluated by our specialist trade package contractor and checked by our temporary works structural engineer. All scaffolding will be securely tied to the structure and will include suitable ladder access.

Scaffolding will be provided, erected and maintained in accordance with all current statutory regulations. Suitable guard railing will be utilised to prevent falling from unprotected edges and staircases as applicable.

No person other than a certified competent scaffolder will be permitted to erect, alter, adapt or dismantle any conventional scaffolding.

Temporary Services

110v power will be utilised, several positions around site areas will be provided and this scheme will be developed in the fullness of time.

Water will be provided direct from the mains system for use in the construction process and welfare facilities.

Telephone lines and an electronic data transfer line will be provided to site office areas.

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It is assumed that the water, power and drainage be taken from the existing supplies and that they are adequate for the construction requirements of the project.

All meters will be read and readings logged before handover to the Client.
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Dust and Noise Control of Emissions from Site

Reference Document: **The control of dust and emissions from construction and demolition, Best Practice Guidance**

Management of noise pollution will be given a high priority. Wherever possible, electrically operated plant will be utilised. If electrically operated plant is deemed to be unsuitable, then only plant and equipment that is correctly silenced and muffled in accordance with current legislation will be utilised.

Introduction

This development is small in nature and retains almost all of the existing tarmac roads and hard-standings. A Wheel wash and dust mitigation strategy will be provided as described above to ensure that nuisance is prevented.

Air Quality Impact assessment

The air quality impact of the development, both within and outside the site boundary, is listed below. This gives guidance on the likely impact of the works. Possible air quality risks and mitigation measures are outlined and will help prevent it impacting on the locality past the site boundary.

As the **Best Practice Guidance** states, *"it is essential to have effective dust and emission control measures in place for every dust generating activity carried out on site, not only to protect the health and safety of the on-site workforce, but also members of the public in the locality. The air quality impact evaluation applies to all proposed construction activities, including site clearing, demolition and construction phases."*

In order to successfully control demolition and construction activity, it is important to evaluate the risk from pollutants emitted from site. It is envisaged that this approach will bring additional benefits, such as a reduction in the number of nuisance complaints; the majority of which relate to dust and noise emitted from construction activities.

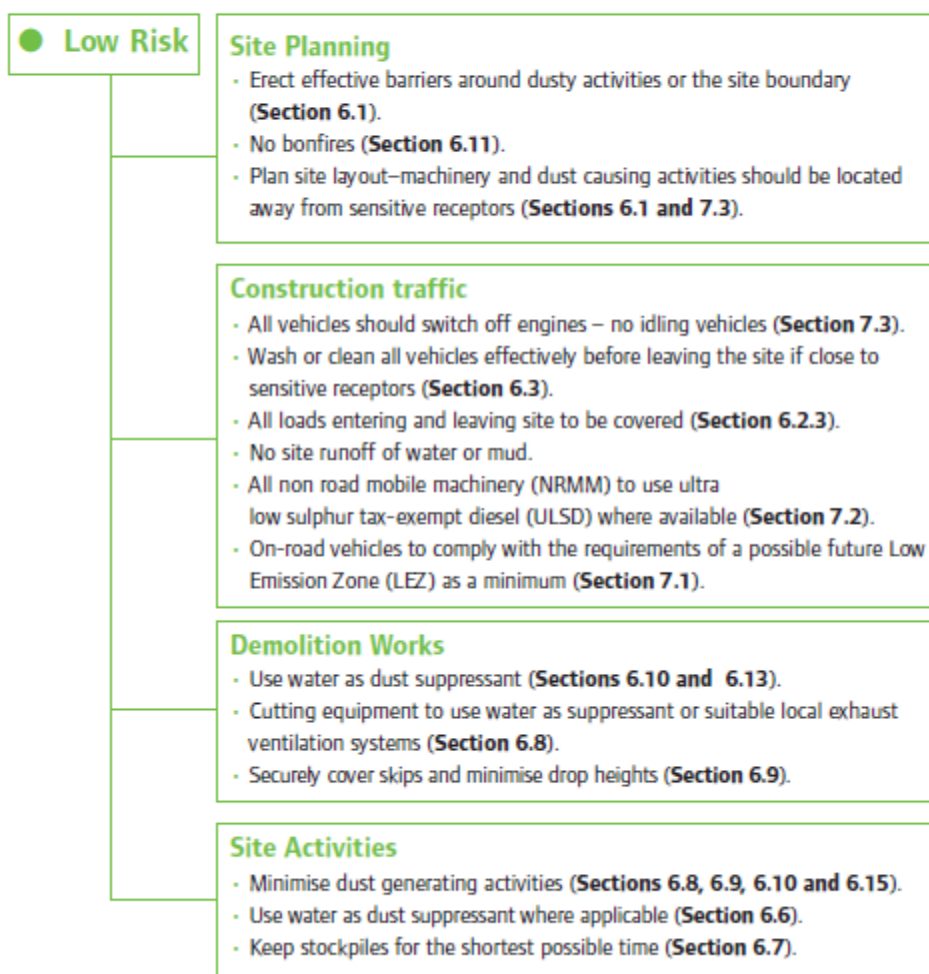
1. As Per the **Best Practice Guidance** 4.1. This is a low risk project being the new build below 1000m², however as stated above, the likely nuisance from the works can be easily managed by prevention, suppression or containment.

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2. Determine the risks and best practice measures that could be required by the local planning authority (LPA) for mitigation. Regarding the flow diagrams in sections 4.2 of the **Best Practice Guidance Site Planning**

4.2 Mitigation Measures for Low Risk sites

These sites will be small developments on land with an area of up to 1,000 square metres with the potential for an infrequent impact on sensitive receptors. The following Best Practice Measures should be used:



- Effective site Barriers will be provided
- There will be no Bonfires
- Dust causing activities centre on existing structures and will therefore not be able to be re-located. However sensitive receptors off site are separated from the work by Hard-standings. The School is however immediately adjacent. Mitigation measures will therefore be needed.

Construction Traffic

- There will be no idling engines on site
- Vehicles will be washed clean to prevent dust, debris and nuisance off site.

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- Loads will be covered to prevent dust or nuisance
- There will be no site runoff of water or mud
- Non-road mobile machinery will use ultra-low sulphur diesel where available.
- On-road vehicles will comply with possible future low emission zone.

Demolition Works

- Water and dust suppression will be used
- Cutting equipment will use water and screening, exhaust ventilation suppression techniques.
- Skips will be securely covered

Site Activities

- Dust will be minimised per pro the **Best Practice Guidance section 6**
- Water will be used to suppress dust
- Stockpiles will be securely sheeted where possible however it is not anticipated that large stockpiles will be utilised. Much of the development is Modular construction or internal refurbishment.

Site Evaluation - Best Practice Guidance

"The need and ability of a developer to deploy effective control measures is often dependant on the size and scale of a development. Therefore, it is the intention of this document that best practice activity uses three criteria to assess the potential impact of a demolition or construction site. These criteria take account of the:

- *The area taken up by the development*
- *The number of properties being developed*
- *The potential impact of the development on sensitive receptors close to the development, for example housing, schools, hospitals and other building uses which would be affected by high levels of air pollution or dust."*

This project is not anticipated to have high levels of dust. Adequate dust mitigation will be put in place.

We acknowledge that Demolition or construction activities can have a site impact on sensitive receptors such as the adjacent school buildings and houses:

- Location of the building site is within a residential area
- Proximity of sensitive receptors is present
- Demolition will need to take place
- Excavation will take place
- Stockpiles are not anticipated or if used, will be of a very short duration due to the extent of the works and tight access.

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- Occurrence and scale of dust generating activities - including cutting, grinding and sawing. Intermittent and minor
- On-site concrete crusher or cement batcher – Not anticipated at this time
- Number and type of vehicles and plant required on-site **See schedule below**
- Potential for dirt or mud to be made airborne through vehicle movements. The site is mostly Permanent tarmac and hard standings therefore the risk of dust nuisance from vehicle movements will be low
- Weather conditions

Method Statement

We have assessed this project as a low risk using the criteria above from the **Best Practice Guidance**

Summary of work to be carried out

Building/area of work	Method	
Refurbishment	Refurbishment	Asbestos Removal Materials and debris Manhandled use hand mechanical means
Link Building	Steel frame new link to new reception	Delivered to site and installed using a Mobile Crane External brickwork and glazing
Existing building	Demolition of one third	Asbestos removal Demolition of Building using machines
New Build	Concrete frame	Delivered to site and installed using a tower Crane

Site layout and access

Including proposed haul routes, location of site equipment including supply of water for damping down, source of water (wherever possible from dewatering or extraction), drainage and enclosed areas

See the logistics plans attached

- Inventory and timetable of all dust generating activities**
- List of all dust and emission control methods to be used**

a) Inventory and timetable of all dust generating activities b) List of all dust and emission control methods to be used		
Building/area of work	Method	Dust Suppression
Refurbishment	Soft Strip Internal works	Spray Water where required

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Existing building	Demolition of one third of existing building	Water Spray Dust Suppression by hose from water main or Bowser. Dust boss to be used. Extraction plant and install dust Screens where required Minimise drop heights to control the fall of materials.
New Build	Substructures	Water Spray Dust Suppression by hose from water main or Bowser
New Build	Concrete Frame	Dust suppression not required. Monitoring only
Site General	Vehicle Movement	Highway monitoring Highway cleaning using hire vehicle when required Vehicle gate, exit and entrance monitoring. Gate Marshall wheel cleaning
Site General	Stockpiling	Is not anticipated for dusty materials other than demolition or excavation and then only for a very short time. Install dust Screens if required. Water Spray Dust Suppression by hose from water main or Bowser

Authorised Responsible person on-site for air quality will be the Site Manager.

Summary of monitoring protocols and agreed procedure of notification to the local authority nominated person(s)

A site log book to record details and action taken in response to exceptional incidents or dust-causing episodes will record the results of routine site inspections. This is detailed in the Health and Safety Plan.

Asbestos

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An asbestos notification to the HSE and method statement submission will be completed and approved prior to start.

Demolition Notice

Is to be submitted to the local authority

Contaminated Land

A soils report has been undertaken on the site and has not identified any contaminated land.

Dust

Dust and Debris will be kept at low levels and cleared regularly.

This will include measures to reduce construction and demolition dust such as:

1. Onsite Daily Dust Assessment will be done all throughout the project
2. Vehicles check on the loading area by onsite gateman/banksman
3. Designated wheel cleaning facilities will be available on the site to prevent muck or spoil straying off the site, or in surrounding area during the construction activity
4. Internal construction routes will be watered as necessary using a water bowser and surfaces will be kept in good order
5. Vehicles carrying loose aggregate and workings will be sheeted at all times
6. Vehicles carrying skips will be sheeted at all times
7. Design controls for construction equipment and vehicles will be implemented and appropriately designed vehicles will be used for materials handling
8. Exposed soil and material stockpiles will be dampened, if necessary, using sprinklers and hoses
9. Wind speed will be observed prior to conducting dust-generating activities to determine the potential for dust nuisance to occur, avoiding potentially dust-generating activities during periods when wind may carry dust into sensitive areas and dust generating operations during periods of high or gusty winds will be avoided
10. Stockpiles of soils and materials will be located as far as possible from sensitive properties, taking account of prevailing wind directions and seasonal variations in the prevailing wind
11. Windbreak netting (debris netting) will be positioned around materials stockpiles and vehicle loading / unloading areas, as well as exposed excavation and material handling operations
12. Completed earthworks will be covered or vegetated as soon as is practicable
13. Regular inspection and, if necessary, cleaning of local highways and site boundaries will be carried out to check for dust deposits (and removal if necessary)
14. Surface areas of stockpiles will be minimised (subject to health and safety and visual constraints regarding slope gradients and visual intrusion) to reduce area of surfaces exposed to wind pick-up
15. Dust-suppressed tools will be used wherever practicable

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16. All construction plant and equipment will be maintained in good working order
17. There will be no unauthorised burning of any material anywhere on site

The site will be kept clean and tidy at all times and will accord with any statutory requirements. Dust will be managed using standard dust suppression techniques including water sprayed on vulnerable areas to damp down material where needed.

Vehicle wheels will be checked on exiting the area to ensure their cleanliness. Wheel cleaning facilities will be utilised to ensure no debris strays on, or is trafficked to the surrounding roads.

Suitable concrete vehicle wash down areas will be established in the same location as the Wheel wash areas, so that "wash out" spoil and grout from concrete delivery vehicles will be washed out within a contained area. This area will be cleaned on a daily basis and the spoil removed from the site via rubbish disposal vehicles. Dust suppression will be used during demolition.

Wheel Wash Facilities

A wheel wash area will also be provided during the early stages of the contract period and remain on site until necessary.

The strategy for Wheel Washing on this site will be as follows:

1. Attendant personnel will ensure that all vehicles will be jet-washed to ensure that mud and debris are fully removed prior to the vehicle leaving the site. This will be conducted on a ready-made hard standing area (as shown on the attached Logistics Plan) with a gradient to ensure surface water runs off and away from the access road. This will drain into a ground soakaway, which will be excavated prior to the start of ground works.
2. Monitoring of the vehicle movements by the site manager and gate personnel (Banksman) will be regular and frequent.
3. A standing order arrangement will be placed with a specialist plant-hire company for road cleaning vehicles. This is to ensure that if a need arises to clear off any and all, debris, dirt and nuisance material inadvertently tracked out of the site area onto local roads.

In addition to the above a wet dust suppression generally on site will be used and dust swept up using specialist plant as when required.

Pre-site Preparation

We will follow best practice to prevent dust and other pollutant emissions from being carried outside the boundary.

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- Machinery, fuel and chemical storage and dust generating activities will not be located close to boundaries and sensitive receptors if at all possible
- Barriers will be erected around dusty activities or the site boundary
- We will wash or damp down haul routes both within and outside the site
- There is an existing water supply on site for dust suppression

Mobile crushing plant

There is no requirement for this scheme to have mobile crushing plant.

Concrete batching

There is no requirement for this scheme to have concrete batching.

Excavation and earthworks

Excavation and earthwork activities can be a potential source of dust outside the site if they are not properly controlled.

- We will provide a control zone around the site boundary to protect sensitive receptors as an area of hard standing
- We have provided effective vehicle cleaning and specific wheel-washing facilities at the site exit

Stockpiles and storage mounds

We will avoid the use of long-term stockpiles on site wherever possible. If necessary, the following measures may be put in place:

- We will make sure that stockpiles exist for the shortest possible time
- Whenever possible keep stockpiles or mounds away from the site boundary sensitive receptors, watercourses and surface drains
- Wherever possible, enclose stockpiles or keep them securely sheeted
- We will re-use hard core material where possible to avoid unnecessary vehicle trips
- Enter all information, of vehicles entering/leaving site, in a log book

Cutting, grinding and sawing

Ideally, these activities will not be conducted on site and pre-fabricated material will be brought in where possible. In cases, where such work must take place, then the following techniques will be followed:

- When materials, such as concrete slabs or bricks, are cut with a power tool we will use extraction or suppression and or a water spray

Chutes and skips

We will:

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- Securely cover skips
- Minimise drop heights to control the fall of materials
- Regularly damp down surfaces with water

Scabbling

This will only be undertaken as a last resort

We will:

- Pre-wash work surfaces
- Screen off work areas
- Vacuum up all dusty residue rather than sweeping away

Bonfires

No burning of any material will be permitted on site.

Dealing with spillages

The following measures will be followed:

- We will use bunded areas wherever practicable
- regularly inspect the site area for spillages
- have spillage kits readily available
- clean spillages using agreed wet handling methods
- vacuum or sweep regularly to prevent the build-up of fine waste dust material, which is spilled on the site and is designated as waste that is no longer fit for use will be dealt with in accordance with the Waste Management Licensing Regulations (WMLR), 1994
- Inform the Environment Agency, London Fire and Emergency Planning Authority (LFEPA) or the Health Protection Agency (HPA) if harmful substances are spilled

Demolition activities

Potential dust hazards will be assessed according our professional and statutory standards, to BS 6187: Code of Practice for Demolition 19.

The site asbestos will be dealt with by a registered contractor at all times and removed according to appropriate regulations and approved codes of practice/HSE guidance such as HSG24820 and MDHS10021.

- Surveys have been conducted and assessed for completeness by a certified practitioner
- We will ensure that a specialist contractor removes any asbestos before demolition
- Materials will be removed from site as soon as possible
- We will bag and remove any biological debris or damp down before demolition

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COSHH

Hazardous or contaminated materials Under the Control of Substances Hazardous to Health (COSHH) Regulations, 2002, we will ensure that site managers take into account risks to the workforce from exposure to any harmful substances generated by work activities.

Sand, Grit and Shot Blasting

There is no requirement for this scheme to have sand, grit and shot blasting.

Welding and soldering

We will follow control measures in HSE guidance notes EH54 and EH55.

Emission controls for vehicles and plant

On-road vehicles and Off-road vehicles and plant

All heavy goods vehicles will meet European emissions requirements.

- We will encourage low sulphur fuel in all our vehicles
- Control queuing or parking of vehicles outside the site, both during and before the site opens
- We will avoid the use of diesel or petrol powered generators by using mains electricity or battery powered equipment where possible and if safety concerns can be overcome
- Consolidation centres are not needed on this project

Waste Disposal

A waste removal strategy will be developed during the pre-commencement period. This strategy will be incorporated within all trade contractor orders.

Two alternative strategies will be investigated and the appropriate solution will be incorporated within all trade package requirements:

1. A system of central rubbish skips, which will be removed from site on a regular basis. Trade contractors will be required to provide, transport and deposit their rubbish within the provision.
2. A system of large wheeled bins will be established and provided by trade contractors. Trade contractors will also provide smaller wheeled bins for use at the workstation. They will be required to deposit their rubbish within their particular large wheeled bin utilising the smaller bins to transport rubbish from the work place to the compound. The larger wheeled bins will be emptied and the rubbish removed from the site on a regular basis utilising a suitable compactor vehicle. Costs of removal will be apportioned appropriately between the relevant sub-contractors.

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Safety

During the Pre-commencement phases of the project, methods will be analysed, detailed method statements, risk analysis undertaken, and adequate provisions made by ourselves and the trade package contractors, such that safe means of access, methods, tools and equipment are utilised.

All trade package contractors are obliged to provide safety policies, plans and method statements and will be interviewed prior to order placement on all aspects of safety, health and welfare.

All sites are subject to independent site safety checks, inspection and reports by our site safety inspectors and advisors.

Quality Control

Where possible, sample areas and mock-ups will be created that will reflect the required quality levels and to resolve interface difficulties at early stages in the project.

Separate checklists will be created for each and every element of the works. No checklist will be signed off until the required standard of workmanship is achieved. Additional checklist will be proposed when required. Acceptance of all elements of the works will be subject to signing off.

The snagging and de-snagging of areas will be addressed in the working space, as each section of the building is completed. Once this is agreed, areas of the building will be "closed off" and a restricted access policy implemented. Our aim is to strive to provide a project, which actually achieves a 'defect free' handover.

Construction methodology/sequencing & programme narrative

Prior to the commencement of the project works, the preliminary Health and Safety and Fire Safety Plan has been prepared. This plan will be progressively refined and developed as trade package contractors and specialists are appointed and more specific and detailed methods, techniques and requirements are established.

Refurbishment Works

Installation of internal works and services will commence at the earliest date. This works involves the existing structure as well as new structure such as partition walls to divide up the space. Where they are required stud partitions will be erected in three stages, erection of studwork and application of wall finishes to one side, followed by the installation of services and joinery within partitions, followed by the application of wall finishes to the other side. Prior to the installation of any vinyl or carpet floor finishes, decorating works will be applied to walls and ceilings. Generally, furniture, fitting out works and final finishes, decorating works will be applied to walls and ceilings.

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Sub-structures

Reduced level excavations will commence following removal of the existing building, vegetation & top soil. Earthmoving plant and equipment will be utilised that corresponds with the quantity of soil to be relocated, the quantity of soil to be removed from site and the timescale within which the operation requires completion.

New build areas:

- Mechanical demolition and subsequent waste removal
- Excavation & concreting of foundations will commence following reduced level dig and hard-core fill
- The under slab drainage and ground floor slabs will commence prior to the commencement of the frame

Superstructures

Upon completion or part completion of the substructures the main frame/structure will commence

New Build area:

A detailed method statement for concrete frame erection will be produced by the works contractor and agreed with Kier Construction prior to commencement. Erectors working at height will use mobile elevated work platforms in conjunction with safety harnesses. Tower crans will lift the shuttering and concrete into place.

Envelope cladding

Windows & external doors will be erected following the completion of sufficient surrounding masonry and cladding.

Roof Claddings

Following completion of the superstructure, roof edge guard- railing and safe provisions will be installed at roof levels. As these works proceed, roof works will be commenced with the works sequenced on our programme.

Roofing works to higher levels will generally proceed in advance of roofing to lower areas such that scaffolding can be removed and lower roof works completed.

Internal Works

Installation of internal works and services will commence at the earliest date following sufficient completion of the preceding envelope and structure works.

MF stud partitions will be erected in three stages, erection of studwork and application of wall finishes to one side, followed by the installation of services

Abacus Primary School **Construction Management/Logistics Plan**

and joinery within partitions, followed by the application of wall finishes to the other side. Prior to the installation of any vinyl or carpet floor finishes, decorating works will be applied to walls and ceilings. Generally, furniture, fitting out works and final finishes, decorating works will be applied to walls and ceilings.

External Works

These works will be carried out as an on-going activity throughout the construction period, upon sufficient completion of the main building envelope. Initial works will include, establishing formation level, mains drainage, mains services and base course to surface finishes, with soft landscaping to all areas carried out towards the latter end of the construction period in one operation.

Mechanical/Electrical/Performance Service – Generally

Mechanical, Electrical and performance services are recognized as substantial and complex both in themselves and their integration and interface with other building finishes and components.

Mechanical and Electrical installations to plant areas, risers, mains and first fixing will be commenced at the earliest date following formation and completion of preceding works to these areas.

Pipework and ductwork concealed by non-access type finishes will be zone tested prior to finishes/enclosure being applied. In-progress testing of primary/secondary distribution will be as per Kier Construction Quality Plan and in accordance with CIBSE/BSRIA and IEE regulations and recommendations and also the particular requirements of the project specification.

Second fix and connections will be co-ordinated with other finishing trades, with continuing in progress testing.

Final fixing is in conjunction with the fitting out trades and specialist equipment installations.

Mechanical/Electrical Services – Testing and Commissioning

The complete services installations will be tested and commissioned in accordance with the specifications and current CIBSE commissioning codes, IEE regulations; BSRIA codes of practice and manufactures recommendations.

A detailed method statement will be issued for approval prior to the commencement of pre commissioning and commissioning activities for all installed systems.

A programme will be issued prior to commencement of commissioning showing durations and dates for witness of testing of system by the design team. Prior notification of all tests will be given to the client to attend as required. Were

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tests are to be witnesses, we will require confirmation of the clients representatives to enable the demonstration to proceed.

Full details for each system will be issued for approval prior to the commencement of commissioning. The details will include all necessary design data together with all associated schematics. All commissioning data together with all associated schematics will be submitted on the agreed proforma.

Static tests of all systems will be completed and certificates issued in accordance with the Quality Plan as the installation progress, and prior to the commencement of pre commencement checks.

Items of major plant will be pre-commissioned by the manufacturers or suppliers and all pre-commissioning will be recorded and test sheets issued to the commissioning subcontractor. The manufacturer or supplier will also carry out performance testing on a major plant.

Testing and commissioning of specialist systems will be carried out by the specialist system supplier/installer and all test certificates will be issued.

All statistic tests, pre-commissioning checks, commissioning of major plant and installed systems will be carried out by our mechanical and electrical subcontractor and his specialist suppliers as appropriate with our personnel to ensure all tests are in accordance with the agreed method statements and to ensure the test certificates are signed and issued.

On completion of the commissioning activates the complete system will be offered for demonstration and witness testing to the client.

On completion of successful witness tests for each system the signed test sheets and commissioning data will be issued to the client for acceptance. All commissioning test sheets will be incorporated into the operation and maintenance manuals.

Considerate Constructors Scheme

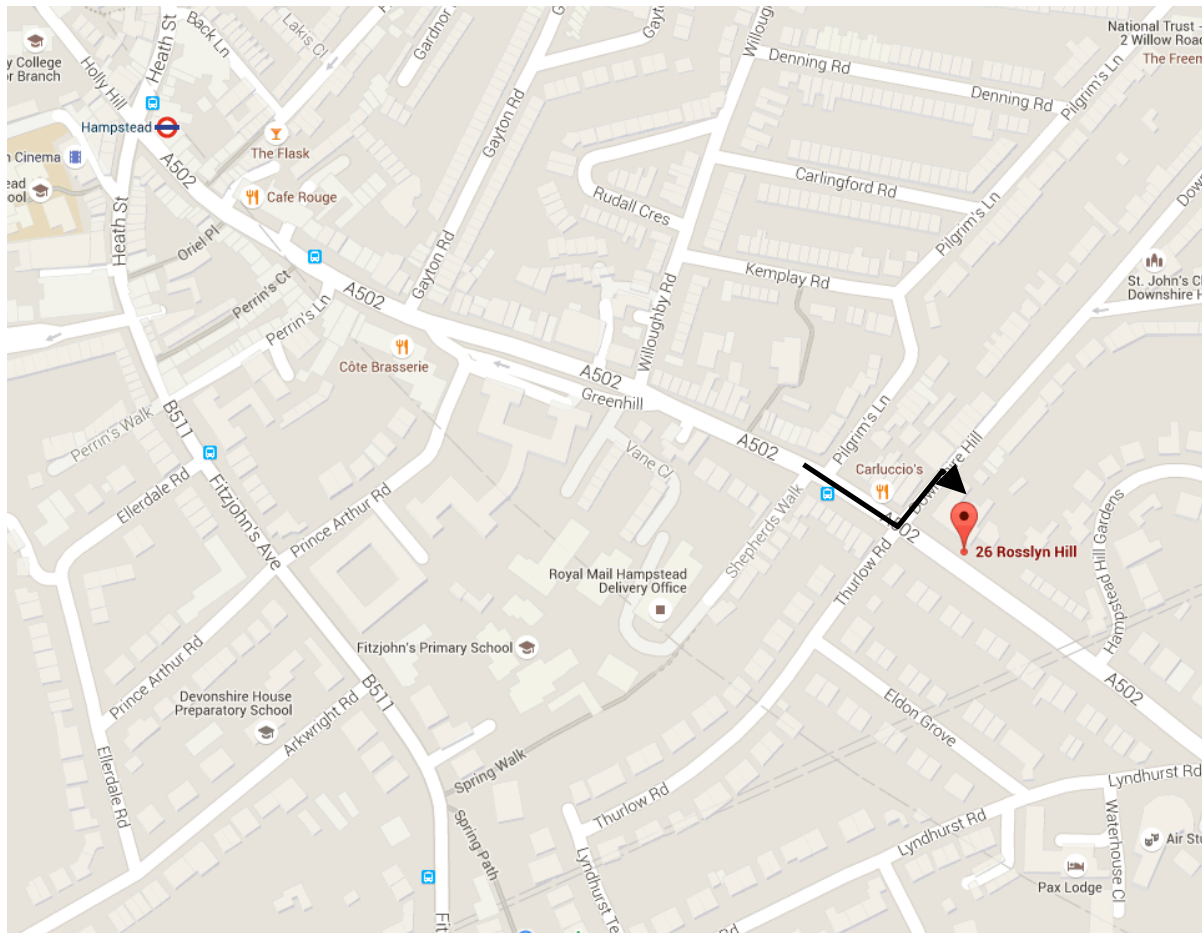
At Kier Construction we pride ourselves on being good neighbours and considerate of the communities within which we work and in which we want to play our part.

The CCS scheme fits perfectly with this ethos. All our projects are registered as a matter of course with the Considerate Constructors Scheme which is an independent inspection authority who monitors our impact on the local community. We are active associate members helping to shape the strategy with the CCS.

The Code commits contractors within the Scheme to be Considerate and Good Neighbours, as well as Clean, Respectful, Safe, Environmentally conscious, Responsible and Accountable.

Abacus Primary School Construction Management/Logistics Plan

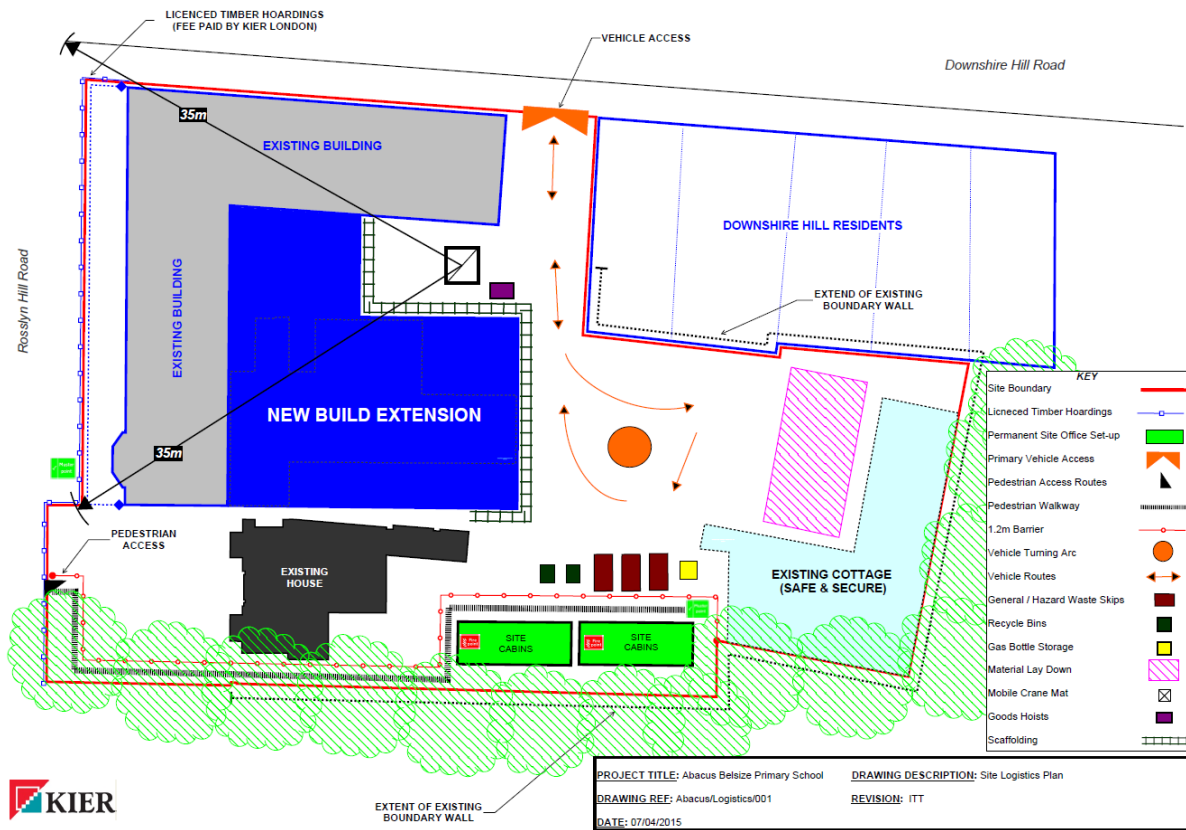
Site Location Map



Abacus Primary School
Devonshire Hill
London
NW3 1PD

Abacus Primary School Construction Management/Logistics Plan

Logistic plans and site set up

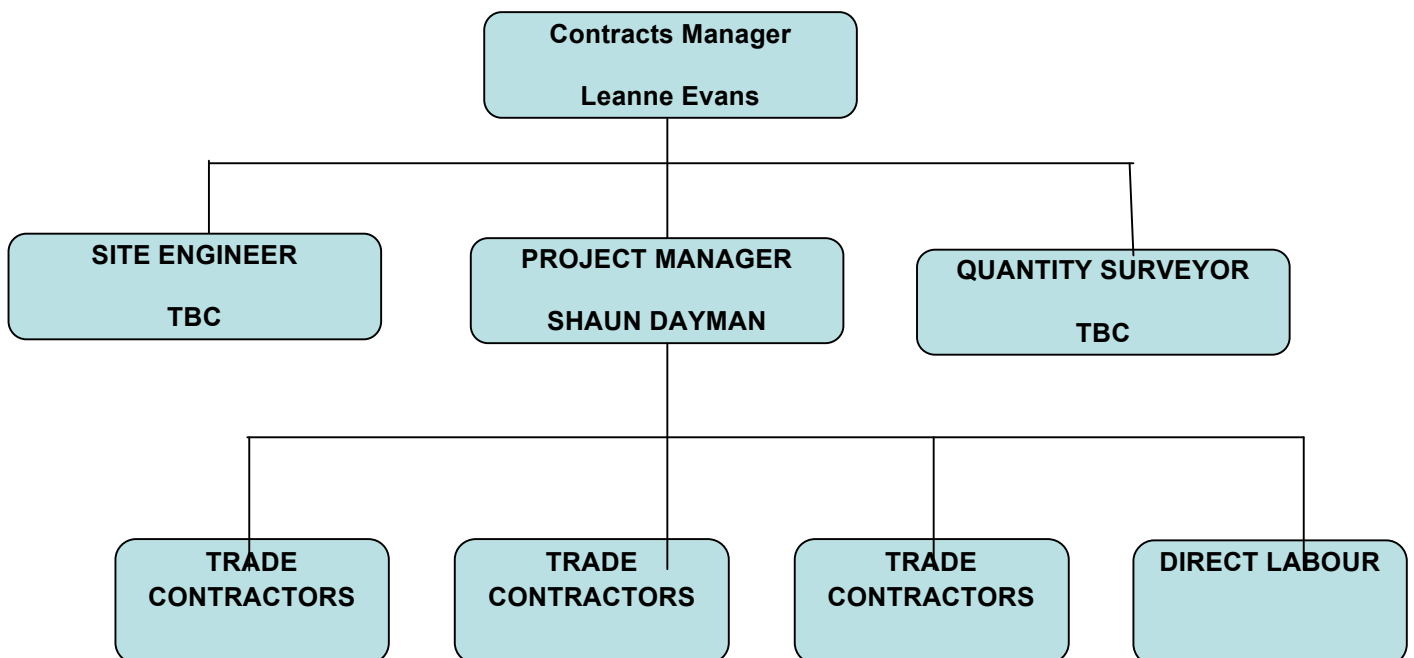


Abacus Primary School
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ORGANISATIONAL CHART

Kier Construction Main Office

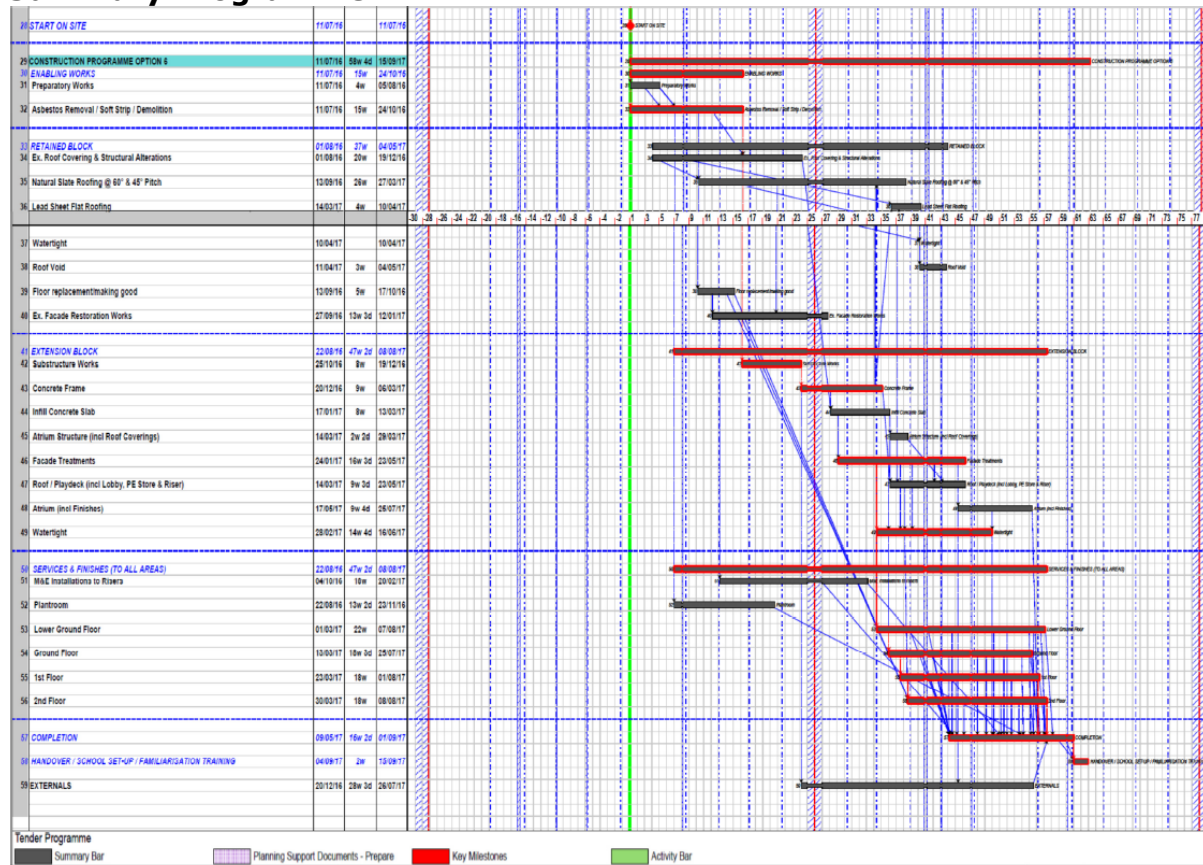
2 Langston Road
Loughton
IG10 3SD
T 0208 508 5622



Abacus Primary School Construction Management/Logistics Plan

Construction Programme

Summary Programme:



ABACUS PRIMARY SCHOOL **TRAFFIC ROUTING PLAN**

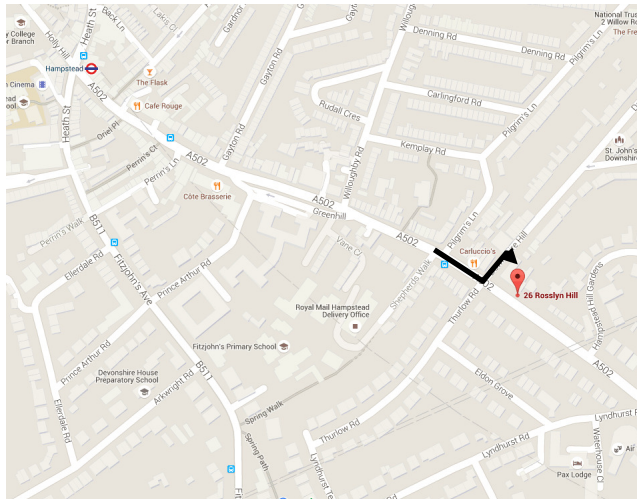
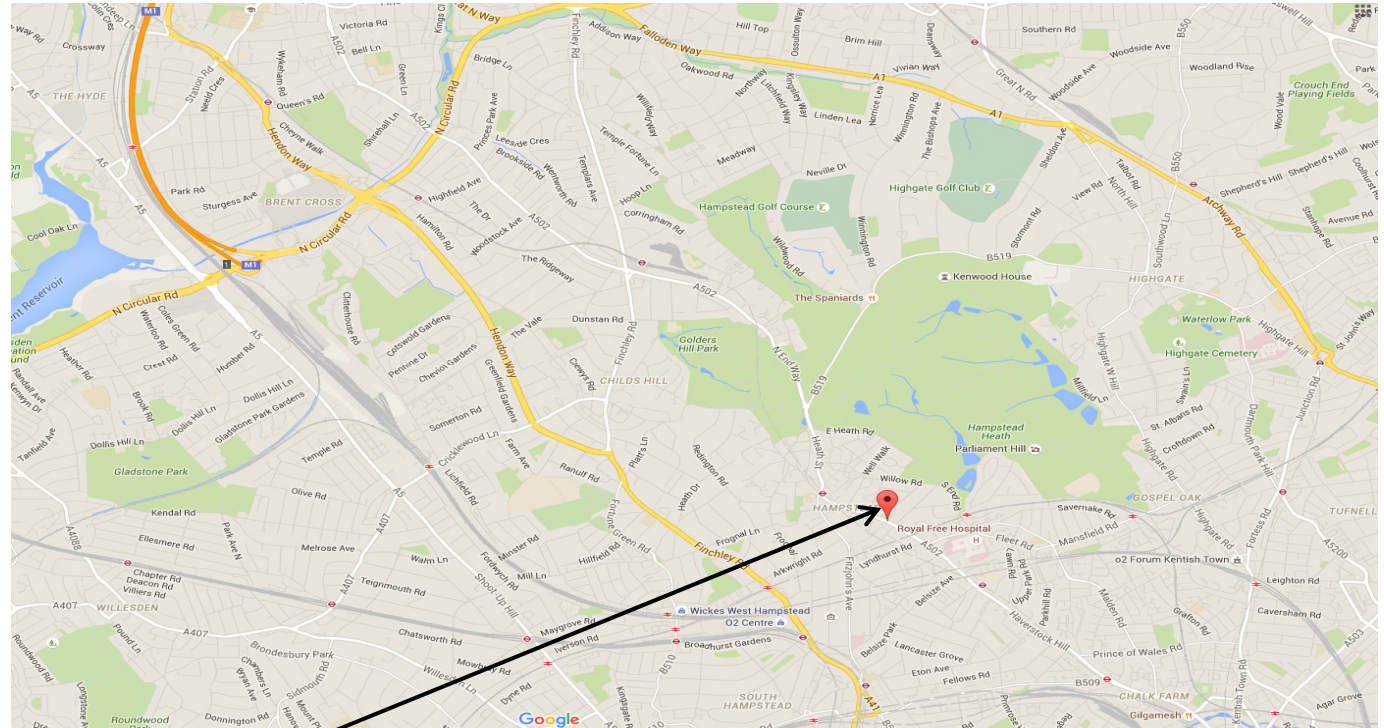
Following the routes to site and avoiding heavily congested will reduce the hazards caused by HGVs and vans to vulnerable road users.

ROUTES TO SITE:

The site is easily accessible as there are several major roads that run in the vicinity: A1, M1, A406, A502 and A41

Most likely route for traffic

Follow the A406 on to A502 moving past Golders Green on to Hampstead.



RISK ASSESSMENT

Contract Title	Abacus	Contract No.	
Activity/Operations:	Deliveries to Site and Risks to Vulnerable Road Users	Sheet No:	01

HAZARD	WHO MIGHT BE HARMED	CONTROL MEASURES	SAFE SYSTEM OF WORK	TOOLBOX TALK	BY	DATE	DONE
Construction vehicles - HGVs & Vans Members of the public obstructing deliveries to and from site Construction vehicles obstructing the roads surrounding site	Vulnerable Road Users: Members of the public Cyclists Motorcyclists Students Site Personnel Tourists Visitors	Traffic routing plan advising suppliers and sub-contractors of roads and areas to avoid when delivering materials/skips etc Traffic marshals Road signage - both directional and hazard Separate access and egress points in/out of site - one way traffic Avoid deliveries around busy times Ensure that all vehicles and companies meet the minimum requirement of the Fleet Operator Recognition Scheme Bronze level	Refer to: Site Traffic Management Plan Traffic Routing Plan Guidance from the Fleet Operator Recognition Scheme (FORS) Kier Construction London SHE Bulletin for Managing Work Related Road Risk	Traffic Routing Plan to be briefed to all main supplier and sub-contractor vehicle drivers	Kier Site Management Team	07-12 2015	Yes all completed and control measure introduced to reduce risk - Leanne Evans (Contracts Manager)

PERSONAL PROTECTIVE EQUIPMENT: Tick box where required and specify grade of equipment

SAFETY HELMET		SAFETY FOOTWEAR		GOGGLES VISORS		EAR PROTECTION		SAFETY HARNESS BELT		GLOVES GAUNTLETS		OVER SHOES		HI VIS JACKETS		RESPIRATOR	
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Appendix to Question 10 – Dust mitigation measures

Applicants must complete the table below (extracted from the Mayors 'control of dust and emissions during construction and demolition' SPG).

Applicants should include all 'highly recommended measures' as a minimum.

XX Highly Recommended

X Desirable

MEASURES RELEVANT FOR DEMOLITION, EARTHWORKS, CONSTRUCTION AND TRACKOUT

	CIRCLE RISK LEVEL IDENTIFIED FOR SITE			TICK TO CONFIRM MITIGATION MEASURE WILL BE IMPLEMENTED
MITIGATION MEASURE	LOW RISK	MEDIUM RISK	HIGH RISK	
Site management				
Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.		XX	XX	✓
Develop a Dust Management Plan.		XX	XX	✓
Display the name and contact details of person(s) accountable for air quality pollutant emissions and dust issues on the site boundary.	XX	XX	XX	✓
Display the head or regional office contact information.	XX	XX	XX	✓
Record and respond to all dust and air quality pollutant emissions complaints.	XX	XX	XX	✓
Make a complaints log available to the local authority when asked.	XX	XX	XX	✓
Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and make an inspection log available to the local authority when asked.	XX	XX	XX	✓
Increase the frequency of site inspections by those accountable	XX	XX	XX	✓

for dust and air quality pollutant emissions issues when activities with a high potential to produce dust and emissions and dust are being carried out, and during prolonged dry or windy conditions.				
Record any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, and the action taken to resolve the situation is recorded in the log book.	XX	XX	XX	✓
Hold regular liaison meetings with other high risk construction sites within 500m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised.			XX	✓

MEASURES SPECIFIC TO DEMOLITION

MITIGATION MEASURE	LOW RISK	MEDIUM RISK	HIGH RISK	TICK BELOW WHERE MITIGATION MEASURE WILL BE IMPLEMENTED
Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust).	(X)	X	XX	✓
Ensure water suppression is used during demolition operations.	XX	(XX)	XX	✓
Avoid explosive blasting, using appropriate manual or mechanical alternatives.	(XX)	XX	XX	✓
Bag and remove any biological debris or damp down such material before demolition.	(XX)	XX	XX	✓

MEASURES SPECIFIC TO EARTHWORKS

MITIGATION MEASURE	LOW RISK	MEDIUM RISK	HIGH RISK	TICK BELOW WHERE MITIGATION MEASURE WILL BE IMPLEMENTED
Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces.		X	XX	
Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil.		X	XX	
Only remove secure covers in small areas during work and not all at once.		X	XX	

Preparing and maintaining the site				
Plan site layout: machinery and dust causing activities should be located away from receptors.	(XX)	XX	XX	✓
Erect solid screens or barriers around dust activities or the site boundary that are, at least, as high as any stockpiles on site.	(XX)	XX	XX	✓
Fully enclosure site or specific operations where there is a high potential for dust production and the site is active for an extensive period.	X	(XX)	XX	✓
Install green walls, screens or other green infrastructure to minimise the impact of dust and pollution.		(X)	X	✓
Avoid site runoff of water or mud.	XX	(XX)	XX	✓
Keep site fencing, barriers and scaffolding clean using wet methods.	X	XX	(XX)	✓
Remove materials from site as soon as possible.	(X)	XX	XX	✓
Cover, seed or fence stockpiles to prevent wind whipping.		(XX)	XX	✓
Carry out regular dust soiling checks of buildings within 100m of site boundary and cleaning to be provided if necessary.		(X)	XX	✓
Provide showers and ensure a change of shoes and clothes are required before going off-site to reduce transport of dust.	O		X	✓
Agree monitoring locations with the Local Authority.		(X)	XX	✓
Where possible, commence baseline monitoring at least three months before phase begins.		(X)	XX	✓
Put in place real-time dust and air quality pollutant monitors across the site and ensure they are checked regularly.		(X)	XX	✓
Operations				
Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.	(XX)	XX	XX	✓

Ensure an adequate water supply on the site for effective dust/particulate matter mitigation (using recycled water where possible).	XX	XX	XX	✓
Use enclosed chutes, conveyors and covered skips.	XX	XX	XX	✓
Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.	XX	XX	XX	✓
Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.		XX	XX	✓
Waste management				
Reuse and recycle waste to reduce dust from waste materials	XX	XX	XX	✓
Avoid bonfires and burning of waste materials.	XX	XX	XX	✓

		Safety and Health Risk Assessment							It is the responsibility of Line Management for the completion and approval of all Risk Assessments			
Contract: Abacus primary School		Area/task: Control of dust and emissions during demolition					Ref No:			Date: 04/01/16		
Risk Assessment Team: Leanne Evans		Line Management Approval Signature: R Bysouth					SHE Approval Signature (High Risk Activities only) :					
		Those at Risk A: All B: Public C: Contractor D: Vulnerable E: Employees		Likelihood: 1 Unlikely 2 Doubtful 3 Possible 4 Likely 5 Almost Certain 6 Certain		Severity: 1 First Aid 2 Medical treatment 3 Restricted Workcase 4 loss Time 1 + 5 RIDDOR 6 Death		Specific PPE requirements for task Hard hat, Hivi, gloves, glasses ear defenders, masks, boots				
Ref	Identified Hazards and Associated Risks	Those at risk	Initial Risk			Control Measures (ERIC PD)	Residual Risk			Review/Action/Owner		
			L	S	R		L	S	R			
1	Sensitivity of area to dust effects on people and property	A	4	5	20	Two dust monitoring sensitive receptors to be installed. An automatic particulate monitors at the site boundary to measure representative PM10 Levels. Fortnightly reports will be provided to the Council detailing any exceedances of the threshold and measures that are implemented to address these.	3	2	6	Site manager to ensure adequate screening is in place and dust suppression in use at all times		
2	Sensitivity of area to human health impacts	A	4	5	20	Wind blown dusts to be minimized by damping down.	2	2	4			
3	Sensitivity of area to ecological impacts	A	3	4	12	Buildings to be demolished mechanically (no explosive blasting).	2	2	4			
4	Risk of dust impacts demolition	C,E	5	4	20	Dustboss to be used during demolitions	3	2	6	Site manager to ensure adequate screening is in place and dust suppression in use at all times		
5	Asphyxia	C,E	2	2	4	Adequate means of monitoring / measuring toxic dusts to be provided and maximum exposure limits (WEL's) to be checked.	1	1	1			
6	Skin contamination	C,E	2	2	4	Clean down as you go policy to be adopted	1	1	1			
7	Inhalation of contaminants	C,E	2	2	4	COSHH data sheets checked for those materials producing dust, any toxic material identified, assessment to be made as to who, what, where and when work shall be completed.	1	1	1			
8	Ingestion of contaminants	C,E	2	2	4	COSHH data sheets checked for those materials producing dust, any toxic material identified, assessment to be made as to who, what, where and when work shall be completed.	1	1	1			
					0				0			
					0				0			