



Construction Logistics Plan

Willow Tree Depot, Ditchfield Road, Hayes, UB4 4BH

Reference: NFC.WT.CLP – Rev A

Date Produced: 1st May, 2020



I. Introduction

I.1 Roles and Responsibilities

Client:	The London Borough of Hillingdon, Civic Centre, High Street, Uxbridge, Middlesex, UB8 1UW
Developer:	The London Borough of Hillingdon, Civic Centre, High Street, Uxbridge, Middlesex, UB8 1UW
Principal Contractor:	NFC Homes Limited, 78 Pall Mall, London, SW1Y 5ES.
Principal Designer:	NFC Homes Limited, 78 Pall Mall, London, SW1Y 5ES.

I.2 Background Information

As part of the construction of 10 houses at the Former Willow Tree Depot on behalf of The London Borough of Hillingdon, the Principal Contractor, NFC Homes, have produced this Construction Logistics Plan (CLP). The site lies within The London Borough of Hillingdon, with Planning Application No. 31572/APP/2017/4624.

The development involves the demolition of the existing buildings and the erection of 10 two-storey houses across two blocks, with associated access, parking and landscaping.

This CLP seeks to discharge pre-commencement planning condition 12 (detailed below) for Planning Application no: 31572/APP/2017/4624, which relate to the topics of construction logistics, construction management and environmental management. The first part of this condition has been approved by the London Borough of Hillingdon

12. Prior to development commencing, the applicant shall submit a demolition and construction management plan to the Local Planning Authority for its approval. The plan shall detail:

- (i) The phasing of development works*
- (ii) The hours during which development works will occur*
- (iii) A programme to demonstrate that the most valuable or potentially contaminating materials and fittings can be removed safely and intact for later re-use or processing.*
- (iv) Measures to prevent mud and dirt tracking onto footways and adjoining roads (including wheel washing facilities).*

(v) *Traffic management and access arrangements (vehicular and pedestrian) and parking provisions for contractors during the development process (including measures to reduce the numbers of construction vehicles accessing the site during peak hours). The demolition and construction management plan shall demonstrate by means of autotrack, details of construction vehicles, including their sizes, manouvring into and out of the site in forward gear.*

(vi) *Measures to reduce the impact of the development on local air quality and dust through minimising emissions throughout the demolition and construction process.* (vii) *The storage of demolition/construction materials on site.*

(viii) *A written statement detailing Public Liaison with local residents to notify them of works relating to contamination and remediation.*

The approved details shall be implemented and maintained throughout the duration of the demolition and construction process.

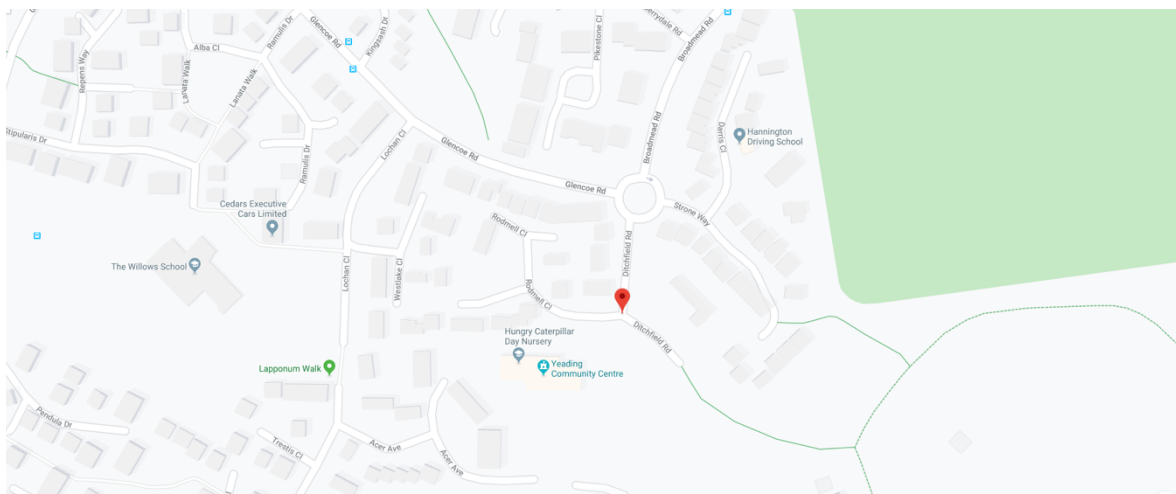
The aim of this CLP is to cover the areas of construction logistics, construction management and environmental management on the project, setting out the Code of Construction Conduct for the development, to prevent, reduce and mitigate potential significant impacts and effects. More specifically, the CLP will define relevant policies, legislative requirements, thresholds/limits, procedures, roles and responsibilities for the implementation of environmental and management controls throughout the duration of the works.

The CLP details management measures to minimise environmental impact from the demolition and construction phases of the development. Further, it produces a framework within which the measures will be implemented throughout the project. The CLP provides project-specific management measures and is a dynamic document which should be reviewed if activities or conditions on site change that may influence management measures.

2. Site Description

2.1 Site Location

The site is located on Ditchfield Road, Hayes, opposite Yeading Community Centre in the London Borough of Hillingdon. Previously the site was a Post Office depot.



3. Proposed Development

3.1 Overview

The development involves the erection of 6 x 3-bed/5-person houses and 4 x 4-bedroom/6-person houses, involving demolition of vacant depot building.

The houses will be built in a single phase.

The works will take place in the following sequence:

1. Demolition of the existing buildings
2. Construction of the foundations
3. Construction of the two-storey houses across two blocks
4. Construction of the access and parking
5. Establishment of the landscaping



Figure 3.1 Proposed Site Plan

3.2 Proposed Development Layout

The development involves the erection of 6 x 3-bed/5-person houses and 4 x 4-bedroom/6-person houses, involving demolition of vacant depot building.

3.3 Proposed Demolition Work Scope

Prior to the commencement of ground works on site:

1. Site will be setup and hoarding erected
2. All relevant services will be disconnected
3. All Asbestos Containing Materials (ACM) is identified and removed by an accredited/competent contractor.
4. The existing flats and existing garages will be demolished
5. The existing asphalt areas and concrete slab will be broken up



Demolition will commence with stripping and removal of all internal furnishings from the existing building.

All ACM will be removed by a licensed contractor in line with Thames Laboratories Asbestos Documents. This will be followed by the hard demolition works, the method of which will be carried out using a 360 JCB (21 ton) to pull the building down, then transfer the debris to skips for removal.

Please note all demolition works have already been completed prior to NFC's involvement in the scheme. Please refer to the details submitted for planning condition 12 under application 31572/APP/2019/73.

3.4 Contamination

Contaminated material will be removed at the start of construction during the foundation excavation. All materials will be disposed of safely by a licenced waste carrier. Please refer to the details submitted for planning condition 11 for further information.

Further, please find enclosed a written statement detailing Public Liaison with local residents to notify them of works relating to contamination and remediation.

3.5 Proposed Construction Scope of Works

The key construction work scopes will comprise:

1. Foundations
2. Substructure works
3. Superstructure works
4. External building finishes
5. M&E works
6. Internal fitout
7. Groundworks and landscaping

The foundation construction will take into account, the ground conditions as detailed in the Site Investigation Report. It is not anticipated that the foundation construction will harm the local environment e.g. noise, and this will be reviewed constantly on site.

The superstructure will be traditional masonry, in line with the London Borough of Hillingdon's requirements.

4. Development Programme and General Arrangements

4.1 Construction Programme

The construction programme is 53 weeks and the development is due for completion in Spring 2020.

4.2 Hours of Site Operation

Hours of work across the Site, including hours of delivery, will be the following, unless agreed otherwise with the London Borough of Hillingdon in advance:



Monday to Friday 08.00 – 18.00 hrs; and Saturday 08.00 – 13.00 hrs.

Working hours will comply with the London Borough of Hillingdon's guidance, as detailed below:

Demolition and construction works which are audible at the site boundary shall only be carried out between the hours of 08.00 and 18.00 hours Monday to Friday and between the hours of 08.00 hours and 13.00 hours on Saturday. No works shall be carried out on Sundays, Bank or Public Holidays.

The scheme will be registered with the Considerate Constructors Scheme.

4.3 Security

A gateman will be employed to control access/egress from the Site entrance. Static out-of-hours security will be required for the duration of the works. The contact number for out-of-hours security will be visibly marked on the hoardings.

CCTV will be installed for the duration of the works.

4.4 Site Inductions and Training

All persons carrying out work on-site will be required to complete the Contractor's Application and Approval Arrangement. This will include a Site induction, provision of proof of competence and the passing of a short test. The induction programme will incorporate the following:

- An outline of the key hazards on-site;
- Site rules;
- Health and safety procedures;
- Site monitoring and reporting procedures; and
- General site rules for vehicles.

4.5 Health & Safety

The on-site works will be planned, set up and run in accordance with the NFC Homes procedures which are supervised and audited by an independent Health and Safety company and the client (see below for further details), and also the provisions of the Construction Design Management (CDM) Regulations 2015. Pre-construction and construction plans will cover all aspects of site control such as pre-order meetings prior to subcontract order placement, the requirement for competent trade site supervision and all necessary site checks and audit procedures. Audits will be undertaken fortnightly by the Contractor and monthly by the Client. Any issues raised will be addressed immediately by the site management team.

During demolition and construction, all method statements will incorporate regulatory safety matters and will be maintained on Site for inspection by the Health Executive, the London Borough of Hillingdon and others as appropriate. This will be included in the Construction Phase Plan (CPP) which the Contractor will produce. This will be produced prior to start on site and will be updated throughout the construction programme. The CPP is produced as a standalone document to ensure all Health and Safety issues have been properly considered during the project development.

Health & Safety Consultants HS Direct will be appointed throughout the duration of construction. HS Direct will provide the Contractor with detailed information on the rules and regulations set by the Health and Safety Executive (HSE) as required. They will also provide information and assist with Risk Assessments, Method Statements and COSHH Assessments.

4.6 Plant and Equipment

Consideration has been given to the types of plant that are likely to be used on-site during the construction phases of the development. The plant and equipment associated with each key element of the construction process is set out in Table 4.1.

Plant	Stage			
	Demolition	Substructure	Superstructure	Sub Fit Out
360 Excavators	✓	✓	✓	
Dumpers	✓	✓	✓	
Air Compressors			✓	✓
Power Tools	✓	✓	✓	✓
Hand/Power Tools		✓	✓	✓
Scaffold		✓	✓	
Muck Away Lorries	✓	✓		
Flat Bed Lorries		✓	✓	✓
Skips and Skip Trucks	✓	✓	✓	✓
Telehandler		✓	✓	✓
Cherry Picker		✓	✓	✓
Cement Mixers		✓	✓	
Scissor Lifts			✓	✓

Table 4.1 Plant and Equipment

5 Key Roles and Responsibilities

Role	Responsibility
Client	– Overall responsibility for the successful completion of the project. – To make suitable arrangements for managing a project including making sure other duty holders are appointed as appropriate and sufficient time and resources are allocated.
Principal Designer	– Management of Health and Safety in the pre-construction phase of a project. The role extends to the construction phase through the principal designer's duties to liaise with the principal contractor and ongoing design work. – Assist the client in identifying, obtaining and collating the pre-construction information. – Provide pre-construction information to designers, the principal contractor and the subcontractors.

	– Ensure that all designers comply with their duties and cooperate with each other. – Liaise with the principal contractor for the duration of the project. – Prepare the Health and Safety File.
The Principal Contractor	– Overall responsibility for submission of the CLP to the Planning Authority and securing Hillingdon approval of this document prior to works commencing; – Responsible for ensuring Sub Contractors comply with the CLP – Liaison with the community and regulatory authorities including Hillingdon, the Highways Authority, Thames Water and the Environment Agency as and when required – Ensure compliance with environmental legislation, as well as Health and Safety Requirements.
Principal Designer	–
Subcontractors	– Implementation of CLP – Ensure compliance with environmental legislation, as well as Health and Safety Requirements.
Site Manager (Site Community Liaison Manager and Environmental Co- Ordinator)	– Site management, oversight of operations, deliveries and general housekeeping – Oversight of weekly Site audits – Appointment of Site environmental co-ordinator and ensuring that individuals have sufficient time, resource and training to discharge responsibilities – Review implementation of corrective actions; and – Track progress of the CLP against internal targets and report back to both staff on the ground and to contracts manager/corporate level. – Responsible for day-to-day community liaison and complaints handling – Preparation and management of information on project programme, noisy works, site contacts and health and safety information to the Site neighbours. – Deliver environmental aspects of Site inductions; – Carry out toolbox talk training and work with Site foremen to ensure implementation of good practice; – Carry out weekly Site audits and preparation of detailed monthly audit report.
Contracts Director	– Management and delivery of the project in its entirety
Contracts Manager	– Reporting directly to the Contracts Director

Table 5 Roles and Responsibilities

6 Public Liaison

6.1 Site Wide Liaison Strategy

The Site Manager will be the Site Community Liaison Officer who will be named at all site entrances and their contact details provided. He will liaise with neighbours and relevant



stakeholders on a regular basis to inform them of forthcoming construction activities and timings of abnormal loads, and to establish and maintain good relationships.

Site neighbours will be provided with details of the proposed construction programme and with regular updates on any changes, and specifically of any activities which have the potential to cause nuisance and generate complaints.

We propose the following:

1. A pre-start meeting held at a venue locally and to which all neighbours are invited. We will introduce NFC Homes and the key members of staff, discuss the project and answer any questions residents may have.
2. We will provide all attendees with the details of the construction programme and the contact details for the Contracts Director and Site Community Liaison Officer, both of whom will be available 24 hours a day, seven days a week, to ensure all local residents have a point of contact.
3. The resident meetings will continue monthly throughout construction. This allows us to give updates on progress on site and to ensure any resident concerns can be raised and requests accommodated.

6.2 Community Centre Liaison

In January 2020 we held a pre-start meeting with the Yeading Community Centre, which lies opposite the site, to make them aware of all information relating to the construction works.

6.3 Complaints Procedure

The Site Community Liaison Officer will make stakeholders aware of the complaints procedure as part of the site wide liaison strategy. The complaints procedure will include the following aspects:

- Setting-up and maintaining a complaints register, which records all correspondence/telephone contact from the general public or stakeholders
- Classifying the nature of correspondence (e.g. complaint, enquiry, comment);
- Assigning required action to an appropriate member of the Developer management team or site team
- Ensuring close-out of actions and updating of the complaints register with a record of all actions and outcomes.

Where incidents are reported and remedial actions are required or in the event of complaints, Hillingdon's Environmental Health Department will be copied into all correspondence as this will enable Hillingdon to pinpoint areas for improvement on major projects in the future and also to highlight good practice to be carried forward in future projects.

7 Construction Logistics and Access Arrangements

7.1 Construction Site Layout

The site set up layout is shown in Figure 7.1, it will include:

1. Vehicular gates off Ditchfield Road



2. NFC Homes parking spaces in the east of the site, immediately as you enter
3. Site welfare cabins (stacked), including office, drying room, canteen and store
4. Portaloo in the south east corner of the site
5. Two storage areas to the north of the site

The permanent site hoarding will be 2.4m timber hoarding in red. The primary purpose of the hoarding is to prevent unauthorised/unsafe access to the construction site. The hoarding will also provide a clear and secure demarcation between operational activities and other areas and provide information regarding the proposed development and its progress.

Welfare Plan

Willow Tree



Figure 7.1 Proposed Construction Site Layout

7.2 Access Arrangements for Vehicles

NFC Homes contractors have been given permission to park within the Yeading Community Centre.

Loading and unloading of contractor vehicles up to 10m in length will be carried out in the designated loading and unloading bay outside the site cabins.

Deliveries will take place at the south of the site. The deliveries will be managed from the site cabins which will be located in the existing parking area.

Deliveries to the site will be on average in the order of 5 to 10 deliveries per day (generally between 3m and 10m in length); however, this will vary on the stage of the development. The typical type of vehicles making the majority of the day to day deliveries to the site will be vans, measuring in the region of 4.1m by 1.7m.

All larger vehicles will be guided by two banksmen, one who will stop oncoming traffic and the other who will direct the driver. Vehicles will drive south down Ditchfield Road and turn left into the vehicle gates. The gates will be closed by a banksman when the vehicle is on site and the delivery will be made. To leave the site, vehicles will reverse out of site, will then drive forwards and south east down Ditchfield Road, reverse back down Romdell Close and then forwards north up Ditchfield Road to leave.

Smaller vehicles will be able to drive on to site in forward gear and will be guided by banksmen on departure.

Large deliveries/collections will typically be carried out by concrete and muck away lorries during sub-structure and main structure works, then flatbed lorries for all other deliveries, measuring no greater than 10m long by 2.5m wide. Vehicles making deliveries to the site or removing spoil or demolition material will travel via designated routes which will be agreed with the Highways Authority or TFL as required.

- Contractors will co-ordinate all deliveries and collections to/from the Site, and ensure that as far as possible:
- All delivery and collection vehicles are aware of the approved routing
- Haulers notify relevant authorities prior to deliveries or collections in accordance with the Road Vehicles (Authorisation of Special Types) (General) Order 2003 if required;
- Occupants of adjacent buildings are consulted to avoid delays to service deliveries due to construction vehicles; and
- Deliveries are made on a 'just-in-time' basis.
- School times to be avoided.

All delivery drivers must report to the Site Office, and when on site must wear safety helmet, safety footwear and hi-visibility clothing. Deliveries shall be refused if drivers do not conform.



Once through the gates, **ALL** vehicles must be escorted to their offloading or loading area at all times by a representative of the contractor organising the delivery. All Trade Contractors are responsible for ensuring all of their suppliers, operatives and visitors are aware of and comply with these restrictions.

All deliveries will be made to the designated areas within the Site. No waiting will be permitted on site. It is not acceptable for vehicles to arrive at site early and wait in potentially dangerous or unsuitable locations that may cause damage, hazardous obstructions and/or congestion. Nor is it acceptable for vehicles arriving early to circulate and contribute to local congestion and pollution. If vehicles are unable to wait on site then they must be turned away and not wait on adjacent public highway.

All access routes and internal haul routes for Site traffic will be clearly signed at changes of direction. Areas for vehicle storage, deliveries, and parking will also be identified.

7.3 Construction Vehicles Required

Construction vehicles that are required at the site during the groundwork stages of the development include: site excavators, dumper, cement mixers, telehandler, cherry picker, scissor lift.

The site will require mobile cranes for the construction of the timber frame and as when needed throughout the development. The cranes will operate within the site boundaries, locations of which are to be confirmed.

7.4 Proposed Vehicle Routes

All deliveries will access the site via Ditchfield Road. Ditchfield Road is considered wide enough for construction vehicles such as concrete mixer trucks, roll on/off skips, lorries etc.

Please find below the proposed traffic plan – figure 7.2.

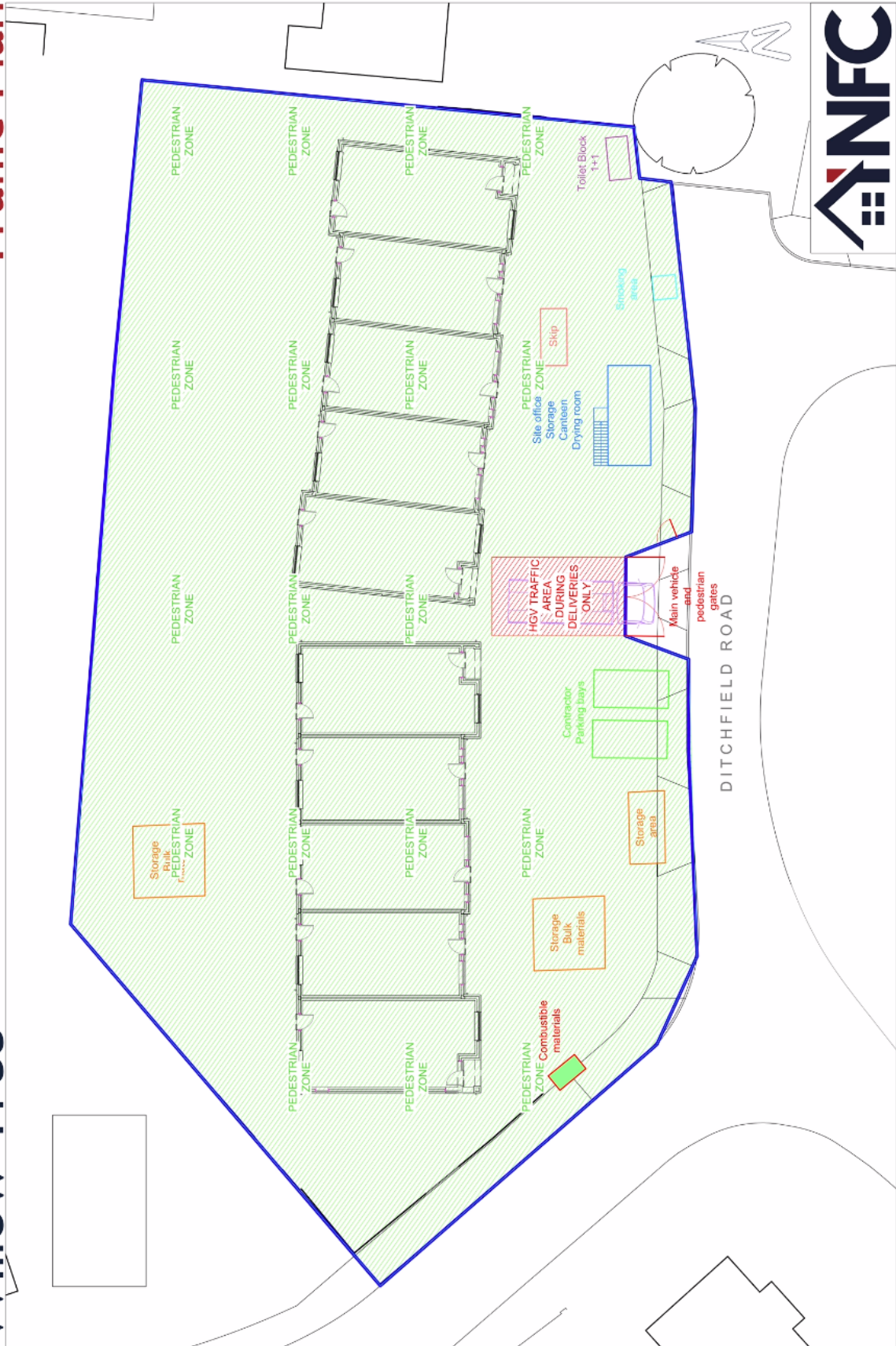


Figure 7.2 – Traffic Plan

7.5 Site Cleaning Measures

Site operatives will sweep/clear any debris brought onto the pedestrian walkway and carriageway from the site on a daily basis and as it is required throughout the day, to prevent nuisance or hazards to other highway users and/or the Developer. Collected debris will be disposed of at a licensed waste disposal facility.

As we will be keeping the existing tarmac and build up, we do not expect the site to be muddy. We therefore do not anticipate any issues with mud getting onto the highway, but will monitor this carefully.

However, we will keep a jet spray on site in the event that any vehicle gathers dirt. The vehicle will be sprayed on exiting the building site.

These measures will ensure that no mud is deposited on to the highway, footway or adjoining roads.

7.6 Material Storage

The material storage areas will be developed as the work progresses, with the majority of storage area located in the north of the site as shown in Figure 7.1. All materials will be stored on site and stacked safely to avoid collapse of packs or materials becoming damaged. The materials will be stacked in such a way so that the mechanical equipment can easily pick up the pallet or item to be transferred. There must be adequate space around the stored goods so that operatives can carry out their works safely.

7.7 Plant Storage

Any plant left on site overnight will be stored in NFC Homes' designated parking spaces. It is expected that only a telehandler and a digger will be left on site overnight. The CCTV on site will cover these parking spaces and will be monitored 24 hours a day.

8 Traffic Management

8.1 General

We recognise that traffic movements arising from construction activities will require a management strategy in order to minimise the impact on the surrounding road network from congestion, access problems, air quality and noise emissions.

The sensitive receptors that may be affected by the site construction works and associated traffic flows, are as follows:

- Existing local residents
- Local air quality
- The local road network
- School children

8.2 Site Access

Access to the Site will be through the double hoarding gates from Ditchfield Road

During the construction period, trained personnel will patrol the site access in order to control vehicle and pedestrian movements.

No temporary diversions or closures of roads and/or footpaths have been anticipated at this stage. However, should the need arise to temporarily alter access arrangements, notice will be given by the construction contractor to the London Borough of Hillingdon, the police and the emergency services sufficiently in advance of the required closure or diversion dates. All routing of demolition and construction vehicles will be agreed in advance with the London Borough of Hillingdon where required.

8.3 Signage

All access routes and internal haul routes for Site traffic will be clearly signed at changes of direction. Areas for vehicle storage, deliveries, and parking will also be identified. External signage, providing information to the public in respect of Health & Safety, restricted access, and traffic diversions (if necessary) will be provided at the site entrances and at points along the site boundary.

8.4 Monitoring Activities

All traffic will report to the site office, which will be staffed during normal working hours. Two banksmen will be available to facilitate large vehicle movements into and around loading and unloading area and outside the site as required. The Site Manager will conduct regular inspections to ensure adequate implementation of control measures, in particular with relation to the presence of signage, and inspections of plant.

9 Site Hazards

A review has been undertaken of the potential sources of adverse impacts associated with the construction works. The results of this have been presented in Table 9.1.

Issue	Potential Impacts
Dust/Air Quality	Wind-blown dust from ground surfaces, stockpiles, vehicles, work faces and cutting and grinding of materials. Exhaust emissions from lorries and plan delivering and removing materials including dust and particulates
Ecology	Water/mud runoff into drains
Energy Usage	Indirect impacts associated with energy consumption such as CO2 emissions, depletion of natural resources, air pollution etc.
Fuel and Construction Materials Storage	Accidental spills, discharges to drains/storm water systems, contamination to ground
Hazardous Materials and Contaminated Land	Exposure of the work force to deleterious/hazardous material and contaminated land, mobilisation of any source contaminants and creation of pathway from source to groundwater receptor.
Noise	Increase noise levels from plant during general construction works (e.g. from the use of air compressors and diamond cutters) on-site
Site and Surroundings Pedestrian Access	Restrictions on pedestrian access to walkways, footpaths and roads

Traffic	Traffic congestion caused by the site traffic. Increased vehicle movements mainly consisting of HGV's. Transfer of mud and material from vehicles onto the public highway. Disruption from abnormal loads. Exhaust emissions.
Waste	Waste generation which will be controlled through the Site Waste Management Plan (SWMP)
Water and Water Usage	Increased sediment loadings to storm water system. Potentially contaminated storm water runoff. Natural resources depletion
Vibration	Increased vibration levels from vehicles. Increased vibration levels from plant during general construction works.

Figure 9.1

10 Noise and Vibration

10.1 General

Receptors that may be affected by the elevated levels of noise and vibration as a result of the construction works are as follows:

1. Local residents in the immediate surrounding area;
2. Construction workers; and
3. Fauna in the surrounding area.

The developer and all contractors will implement standard, best practice management and operational controls in order to minimise the potential for any adverse impacts. Work and noise generation outside agreed hours will be prohibited, without the prior agreement of the Contractor and the London Borough of Hillingdon where required.

The timing, duration and mitigation measures to be adopted are described in the subsequent sections.

10.2 Noise Regulations

The Control of Noise at Work Regulations came into force for Great Britain on 6 April 2006. Their aim is to ensure that workers' hearing is protected from excessive noise at their place of work. The site manager will ensure that all site workers comply with these regulations.

Hazard:	Noise from demolition Loud noises can cause distraction and nuisance to neighbouring properties
Control Measures:	Working hours shall be strictly enforced. Where ever practicable noisy tasks shall be carried out between 9am-3pm and on Monday-Friday. All plant and machinery shall be turned off when not in use. Where practicable equipment and tools shall be dampened.
Regulation:	Contractors and sub-contractors must have regard to BS 5228-2:2009 "Code of Practice for Noise Control on Construction and Open Sites" and the Control of Pollution Act 1974.

10.3 Noise Management Controls

Contractors will be required to ensure that works are carried out in accordance with best practicable means as stipulated in the Control of Pollution Act 1974 and Code of Practice BS 5228:2009.

To minimise effects due to noise, site-specific best practice measures will be implemented by the Contractor/s. The following mitigation measures will be employed at the Site:

1. Limiting activities that may give rise to the highest noise levels, as well as HGV deliveries to the Site to the hours 08:00 to 18:00 Monday to Friday and 08:00 to 13:00 on Saturdays
2. Implementing traffic management systems at the entrances to the Site at all times to control the traffic into the Site
3. Maintaining the 2.4 m high hoarding around the boundary of each development plot and the construction compound to screen noise from low level sources and/or street level receptors
4. Restricting night time working to exceptional circumstances
5. Substituting noisy plant with quieter alternatives
6. Providing enclosures and barriers around noisy plant
7. Operating plant at low speeds where possible and incorporating automatic low speed idling
8. Undertaking breaking out of concrete structures, where possible, using low noise impact methods including using bursting and splitting rather than percussive breaking
9. Using 'silenced' plant and equipment wherever possible and maintaining plant on a regular basis
10. Selecting electrically driven equipment where possible in preference to internal combustion powered; hydraulic power in preference to pneumatic; and wheeled in lieu of tracked plant
11. Temporarily screening or enclosing static noisy plant to reduce noise emissions and certifying plant to meet relevant standards
12. Using appropriate piling techniques and consulting with local residents as required;
13. Carefully using and siting of noisy plant
14. Maintaining plant regularly to minimise increase in noise with age and use
15. Switching off vehicle engines where vehicles are standing for an extended period of time
16. Minimising disturbance from reversing beepers through measures such as site layout, provision of screening or use of broadband sound emitting reversing alarms
17. Implementing noise monitoring to accord with maximum levels set out in the ES
18. Lowering materials whenever practicable rather than dropping
19. Making all contractors familiar with the guidance in BS 5228 and BS 7385 which will form a pre-requisite of their appointment
20. Equipping all vehicles, compressors and plant with effective silencers and noise reducing insulation in accordance with BS5228: 2009 Part 1
21. Implementing noise monitoring
22. Obtaining prior approval for any deviation from approved method statements from the Contractor
23. Investigating noise complaints immediately.

10.4 Noise Mitigation of Site Plant

The Pickerings 25.0kVA Multi-Phase Super Silent Diesel generator plant will be used on site, during the demolition and construction phases of the development. Pickerings 25kva diesel generator complies with HSE regulations for emissions and noise and will be fully canopied and silenced to whisper-quiet levels (LWA – 88, dBA @4m – 68, dBA @7m – 63).

NFC Homes will implement the following additional noise mitigation measures around the site plant, to minimise the impact on the neighbouring dwellings:

1. Positioning anti-vibration mounts (i.e. rubber mounts, spring mounts and dampers) underneath the generator, to isolate vibrations and reduces noise transmission.
2. Locating plant as far away from sensitive receptors (neighbouring dwellings) as possible.
3. Properly maintaining plant equipment.
4. Plant will be switched off when not in use.
5. Plant machinery to be fitted with effective exhaust silencers.

10.5 Vibration Management Controls

Site construction measures will be designed and planned to avoid the generation of vibration, or where vibration is unavoidable, to control vibration at source. Any piling, which tends to be the greatest source of ground-borne vibrations, will use techniques that minimise vibration and noise.

As is the case for noise, contractors will be required to ensure that works are carried out in accordance with BPM as stipulated in the Control of Pollution Act 1974. Mitigation measures will likely include the following, where possible:

1. Undertaking compaction via vibrating rollers wherever possible;
2. Replacing plant and/or work methods producing significant levels of vibration by less intrusive plant or techniques;
3. Locating stationary plant, such as generators, pumps and compressors away from sensitive receivers and installed on resilient mountings;
4. Locating vibrating equipment as far from sensitive receptors as possible;
5. Providing cut-off trenches to interrupt the direct transmission path of vibrations between the source and receiver;
6. Reducing the energy input of hammer-driven piles in order to reduce vibration caused;
7. Using pre-boring and mudding to reduce the vibration levels from piling and to reduce the risk of collapse of the sides of the bore;
8. Using bottom-driven techniques rather than top-driven ones to reduce the produced vibration levels (although this might result in a slower production rate);
9. Certifying plant to meet any relevant EC Directive standards;
10. Undertaking awareness training for all contractors in regards to BS 5228 (Parts 1 and 2) which will form a prerequisite of their appointment; and
11. Maintaining a mitigation plan, to include justification for siting of plant, types of plant selected, periods of use, working hours, access points, schedule of works likely to cause complaints (if not pre- notified), as and when required.

10.6 Monitoring Activities

The Contractor will undertake monitoring in order to demonstrate compliance with occupational exposure standards for their employees as detailed in the COSHH Regulations 2002, as amended. Copies of the monitoring results will be made available to the London Borough of Hillingdon or the Health and Safety Executive (HSE) upon request. Contractors will be required to demonstrate that noise and vibration levels are maintained at acceptable levels and comply with the agreed maximum levels, throughout the duration of the works. This may involve a pre-start noise survey to be undertaken by contractors to define the current baseline and periodic surveys throughout the construction activities to ensure the measures and targets identified in this document are achieved.

Where construction activities are considered to give rise to significant levels of vibration, monitoring will be carried out by a suitable qualified individual appointed by NFC Homes.

10.7 Documentation

Details of incidents associated with noise and/or vibration and remedial action taken will be kept by relevant contractors. Complaints received will also be recorded and investigated. NFC Homes will also maintain records of all correspondence with the London Borough of Hillingdon and the neighbours regarding noise and vibration issues for the duration of the works.

Copies of documentation will be made available to Hillingdon as required. Contractors will maintain records of construction plant and equipment maintenance and these will be made available to the Developer as required.

11 Air Quality and Dust Management

11.1 General

This CLP has been prepared in accordance with the GLA's Supplementary Planning Guidance 'Control of Dust and Emissions During Demolition and Construction'.

1. Receptors that may be affected by the generation of dust and vehicle emissions as a result of the demolition and construction works are as follows:
2. Local residents in the immediate surrounding area
3. Local air quality;
4. Construction workers;
5. Flora and fauna in the surrounding area;
6. Visual amenity; and
7. External surfaces and materials (through surface soiling).

Measures will be put in place to manage the potential for dust and vehicle emission generation at the Site. These are discussed in the subsequent sections.

11.2 Management Controls

The Mayor of London's Best Practice Guidance on the control of dust and emissions from demolition and construction sites will be adhered to throughout the construction works on-site. The measures adopted will be consistent with this Guidance and proportionate to the risk

of dust nuisance in individual cases, and will therefore be more stringent where construction activities are closer to sensitive receptors.

Contractors will implement all necessary management and Best Practicable Means (BPM) to reduce levels of dust emissions from the Site. Site specific control measures will include:

1. Notifying the Developer well in advance when activities are planned adjacent to neighbouring residential properties to allow the Developer to assess the risks and advise on the baseline monitoring required
2. Planning and controlling the orientation, shape and locations of stockpiles to minimise the risk of dust raising through e.g. wind action, handling operations and transferring material onto stockpiles
3. Stabilising surfaces of long-term stockpiles in accordance with agreed method statements
4. Maintaining all haul and access roads and hard standings to minimise dust generation;
5. Using bowsters during dry periods to wet haul and access roads
6. Considering temporary surfacing where haul routes run over materials with a high dust raising potential that cannot be satisfactorily controlled by watering or other methods, if deemed appropriate by the Developer or the London Borough of Hillingdon.
7. Spraying of water mist where particularly dusty works are proposed
8. Sheeting vehicles transporting materials capable of generating dust, to and from the Site, on each journey to prevent release of materials and particulate matter. The sheeting material will be maintained in good order, free from excessive rips and tears
9. Enforcing a maximum speed of 4 miles per hour over all unmade surfaces. Reductions to this speed limit may be applied at the discretion of the contractor or the Developer where dust problems dictate
10. Prohibiting burning of wastes or unwanted materials on-site
11. Using, where appropriate, electrically powered plant instead of petrol or diesel;
12. Directing vehicle exhausts vertically upwards where possible, and directing away from the ground as a minimum
13. Locating/siting stationary plant as far as possible from inhabited buildings;
14. Covering any storage areas that are not enclosed
15. Avoiding prolonged storage of debris on-site
16. Erecting a barrier around dusty activities or around the Site boundary;
17. Not leaving vehicle engines, plant and equipment running for long periods when not directly in use, as far as possible
18. Properly maintaining fixed and mobile plant generating exhaust gases in accordance with manufacturers' requirements.

11.3 Vehicles and Machinery

All on-road vehicles will comply with the requirements of the London Low Emission Zone. NFC Homes will contact subcontractors and suppliers to request that low emission and non-diesel vehicles, as well as hybrid or electric excavators be used on site where practicable.

The use of diesel or petrol- powered generators will be avoided and mains electricity or battery-powered equipment will be used, where possible. If diesel generators are to be used, consideration will be given to turn such generators into hybrid (e.g. hybrid diesel-electric), where possible.



Construction site workers will use sustainable means of travel (public transport, walking and car-sharing). Information on public transport access to site will be provided in the form of noticeboards and toolbox talks. Car-sharing for contractors will be encouraged on-site by putting in place a notice board, in order for people to register and request lifts.

Electric charging points are available at the Square Car Park, SM5 3BN, in close proximity to the site (approximately 10 minutes walking distance). All parties will be informed of the location of this electric charging point to encourage the use of electric vehicles.

11.4 Documentation

Contractors will keep a record of all incidents that result in air pollution and remedial action taken. Complaints received will be recorded and investigated by relevant contractors. Where incidents are reported, and remedial actions are required or in the event of complaints, Hillingdon's Council's Environmental Health Department will be copied into all correspondence as this will enable Hillingdon to pinpoint areas for improvement on major projects in the future and also to highlight good practice to be carried forward in future projects. Records of correspondence with Hillingdon will be maintained and will be made available upon request.

12 Fire Safety & Emergency Procedures

Operatives will be informed at the site induction of Fire Points and the notices that denote their location. Operatives and other occupants will again be informed if Fire Point locations change i.e. due to works progress. Particular attention will be paid to fire protection and security; arrangements will be made to safeguard the access and emergency exits during the progress of the works.

NFC Homes Limited has allocated one fire safety co-coordinator for this project to ensure the maintenance of the above and to implement emergency evacuation procedures in the event of serious and imminent danger. Emergency escape routes and fire points will be displayed on the fire plan. Routes will be identified on site using signs as necessary. A mobile telephone as a minimum requirement will be allocated to this project for emergency use.

NFC Homes Limited will have an Accident Book on site for recording any incidents. Any incident which is governed by the current 'Reporting of Injuries Diseases and Dangerous Occurrences Regulations' (RIDDOR) legislation will be recorded / reported by the Site Manager.

The Site Manager must immediately be informed of any occurrence on site. The project's emergency procedures as well as the Site Safety Plan will be discussed during the site induction.

In the case of an accident:

- DO NOT ATTEMPT TO MOVE ANYONE
- ENSURE THE SAFETY OF OTHER PERSONNEL
- INFORM NFC HOMES LIMITED STAFF AND ALL OTHERS ON SITE
- USE THE MOBILE PHONE TO SUMMON EMERGENCY SERVICES
- THE FIRST AID BOX IS LOCATED IN THE SITE OFFICE

In the case of fire:



- IF SAFE TO DO SO - EXTINGUISH FIRE WITH SITE APPLIANCES
- RAISE THE ALARM BY SHOUTING 'FIRE' AND/OR USE THE AIR HORN PROVIDED IF SAFE TO DO SO.
- NOTIFY ALL NFC HOMES LIMITED STAFF AND ALL OTHERS ON SITE
- CALL EMERGENCY SERVICE FROM PHONE IN SITE OFFICE
- GO TO THE ASSEMBLY POINT THAT HAS BEEN ESTABLISHED

Fire & Emergency Procedures

- Every effort will be made to prevent the outbreak of fire.
- There will be NO SMOKING on site, a mandatory requirement of the Client and Principal Contractor in compliance with the Health Act 2007.
- Fire boards and manual alarms will be positioned on each floor for the duration of works in compliance with the Fire Emergency Plan.
- An Emergency Plan will be produced and posted at each floor level and will be updated as necessary as works progress.
- Emergency escape route arrows will be positioned throughout the development
- All personnel will be responsible for following the Emergency Procedure, and Fire and Emergency Plan to report at the designated Assembly Point.

A suitably robust means of alarm will be set up on all levels. All personnel on site will be informed of the method of raising the alarm in event of emergency. Typical systems may include a mechanical bell or air horn located on each fire board. More sophisticated systems may be remotely activated.

Means of escape:

- All escape routes from the construction areas are to be clearly marked using fire exit and escape route signs.
- All escape routes will be kept clear and will be lit during the hours of darkness.
- The Fire Warden will have the responsibility to make sure fire exit routes are kept clear at all times. If works are being carried out on a fire exit route then a temporary alternative route will be shown.

Means of extinguishing:

- Fire points with extinguishers will be prominently located within the building at each level and clearly signposted.
- A foam, CO2 or dry powder type extinguisher will be provided.
- The site office will have an individual extinguisher.

Means to minimise risk:

- Rubbish will be removed daily from the site and not allowed to build up.
- Instructions relating to inflammable materials will be strictly adhered to.
- Any gas bottles will be stored in a separate fenced compound clearly marked as flammable.
- Smoking will NOT be permitted in any areas of the site



Hot works permits:

- Comply with the relevant sections of 'Fire Prevention on Construction Sites' code of practice.
- We will issue our own hot works permits with fire extinguishers as stated in Method Statements and Risk Assessments with escape routes maintained at min 900mm width from any site boundary fencing.

Security:

- Special attention will be required to maintain fire exit routes when this conflicts with maintaining security on site

Distribution:

- The emergency fire plan will be communicated to any properties within close proximity of the site and that may be affected by it at any point during construction.