



**Construction Management and
Mitigation Plan For:**

Main Avenue, Cowlersley, Kirklees.

Date: March, 2026

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1.0 Introduction

Strata are committed to ensuring all their developments accord to current legislation in respect of health, safety, environmental and Local Planning Authority planning policies.

Strata are extra vigilant to ensure construction is undertaken in a safe manner, not just for their construction personnel but for visitors and neighbouring occupants alike.

This Construction Management and Mitigation Plan has been provided as a guide to assist the Strata Team diminish the likelihood of harm caused to persons, property and the environment.

Whilst every effort has been made to cover all aspects to fulfil our obligations, there may be times where other legislation or policies may take precedence, Additionally, further actions over and above those referenced within the document may at times be required.

This Construction Management Plan should be read alongside the Production Management Plan which shows the proposed build route and layout of the site facilities during construction which is appended to this statement (Appendix 1).

2.0 Our Statement

Strata aim to commence works on site end of 2025 with an expected build programme duration of around 2.1 years (subject to market conditions). The current build sequences can be seen on the submitted Production Management Plan an extract of which is shown below and included at Appendix 1.

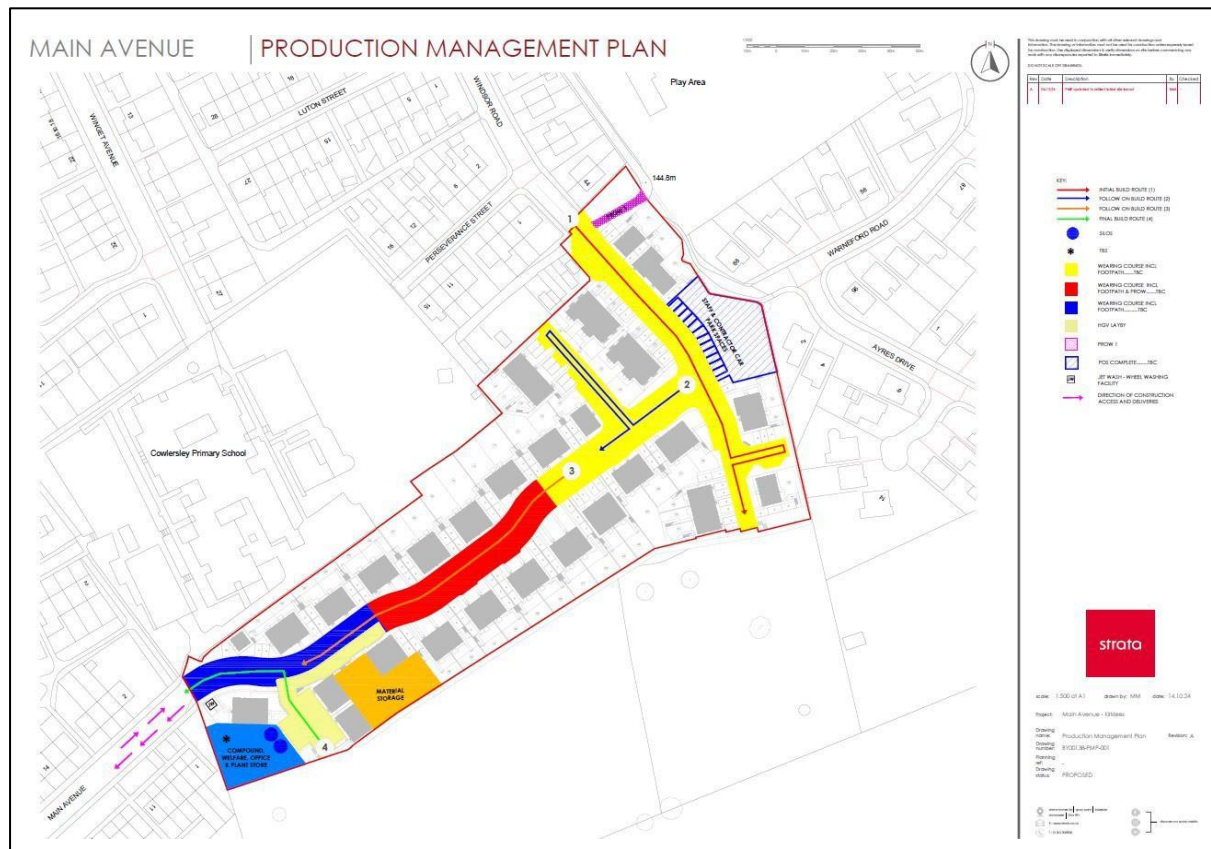


Figure 1 – Production Management Plan

Resident Engagement and Liaison

Local residents, businesses and Ward Members will be informed of the proposed commencement of development via a letter drop at least 5 working days prior to commencement. The letter will include details of where copies of this CMP will be available to view and will provide contact details for the site manager. The area proposed for the letter drop is shown below on figure 2.



Figure 2 – Letter Drop Area

Continued engagement will take place throughout the course of the development when different build stages are reached or if particular issues that arise need to be addressed more publicly.

Potential nuisance caused by deliveries, traffic and parking will be considered, and minimised, at all time. Any agreed road or footpath diversions will be clearly signed, segregated and kept neat and tidy at all time.

Contact details for the Site Manager will be available on a board displayed outside the Site Office and also on the fencing at the main entrance to the site on Main Avenue. The Site Manager will be Waleed Azam. His contact details are as follows:

- Email: waleedazam@strata.co.uk
- Phone: 07970682692

The Site Manager is responsible for ensuring compliance on site at all times with health and safety standards and processes whilst co-ordinating the day-to-day schedule of labourers and resources.

We will have an assigned resident liaison officer who will organise letter drops and will respond to any queries raised by members of the public regarding the works on site. Our resident Liaison Officer for the site is Olivia Lefevre who can be contacted at:

- Email: OliviaLefevre@strata.co.uk

- Phone: 01302 308508

The Environment

The potential environmental and ecological effects of site operations should be identified and evaluated, with appropriate action taken to minimise all forms of pollution. Every effort shall be made to reduce, reuse and recycle waste. Materials shall be obtained from sustainable sources, and local resources used where possible.

Environmental standards and targets should be documented and monitored on site.

If a temporary generator is needed for the development, it should be a quiet generator which is discretely sited away from the site boundary and general operational areas.

Spill kits shall be provided on site conveniently located within the site compound and clearly labelled to enable the prompt capture of any spills at source. The site manager is competently trained to manage the operation of dealing with site spillages.

Construction waste shall be disposed of into clearly identified skips located within compound area. Plasterboard will be disposed of in specific plasterboard skips which will allow the scrap to be returned to the manufacturer.

Locally sourced labour is preferred and van sharing or cycling to work encouraged.

Respect to our Neighbours

A Strata site should have a positive influence on the local community. The site team and resident liaison officer will interact proactively with existing and new residents, local businesses and schools throughout the duration of the development to keep all persons with an interest in the scheme well informed.

Any complaint should be logged and handled positively to achieve a satisfactory outcome for all concerned.

A photographic survey and record shall be kept of all existing roads and structures which are affected by the development for future reference.

Respect to our Fellow Site Team

Everyone on site shall maintain the positive and respectful Strata image and fully adhere to the company's safety standards of dress and behaviour.

Improper conduct, failing to follow company policy and inappropriate language shall be subject to disciplinary action. Pride in the management and appearance of the site, its temporary facilities and the surrounding area should be shown at all time by everyone.

Safe Working Environment

Strata have systems in place to ensure that construction work is carried out with care and consideration for the safety of the public as well as for those visiting and working on site.

There are no exceptions - the company Health and Safety policy and procedures shall be adhered to all times.

3.0 Site Specific Details & Procedures:

3.1 Hours of Operation

The hours of work for the site are set out below:

Monday to Friday: 7:30am – 6:30pm Saturday:
8am – 1pm

Woodside Green Primary School hours are 8.40am – 3.15pm; deliveries shall not occur during school pick up and drop off times 08.20 to 09.00hrs and 14:55 to 15.35hrs (except from during school holidays).

No works will take place on Sundays or Bank Holidays unless prior written permission is obtained from the Local Planning Authority.

Working hours must be adhered to at all times. Any working hours proposed outside of the agreed times must be accepted in writing by the Local Planning Authority and all affected persons notified prior to commencement of any works.

The arrival, departure, loading and unloading of all goods vehicles, waste vehicles and other construction traffic movements must take place within the standard site working hours, unless otherwise approved by the Local Planning Authority. Should it be necessary for any construction traffic movements to occur outside of standard site working hours, these must be agreed in writing in advance with the Local Planning Authority.

3.2 Site Accommodation

The Site Office, within the site compound, will act as a rest space for those working on site. It will accommodate the services required to ensure those working on site can maintain positive health and wellbeing.

The Site Office will shelter those working on site from wind and rain. It will act as a rest space for those on site, providing an adequate number of tables, seating with backs, a means for heating water for drinks and for warming up food alongside being adequately heated. These rest areas are not to be used to store plant, equipment or materials.

Toilet facilities will be provided within the Site Compound, which are fully flushing and supported by running water. These toilets will be connected to mains water and drainage systems. The availability of these services will be dependent on the Local Water Authority and their timescale for service provision. A temporary/portable toilet facility will be provided

prior to this water connection and following the disconnection towards to end of the construction process.

Smoking will be prohibited within the Site Office and upon the construction site itself.

The site will also include directional signage for the Site Office. This is to ensure site operatives and visitors are aware of the routing arrangements when accessing the Site Office and Compound.

3.3 Storage

Safe and efficient storage depends on good co-operation and co-ordination between all involved in the construction of the site - including, client, contractors, suppliers and the construction trades.

Materials

The site manager will be responsible for ensuring all materials are stored safely and pose no danger to human and environmental health.

The Materials Stores must be kept tidy at all times and be arranged as instructed and set out by the construction management team. The extract below at Figure 3 shows the demarcated areas for material storage within the site.

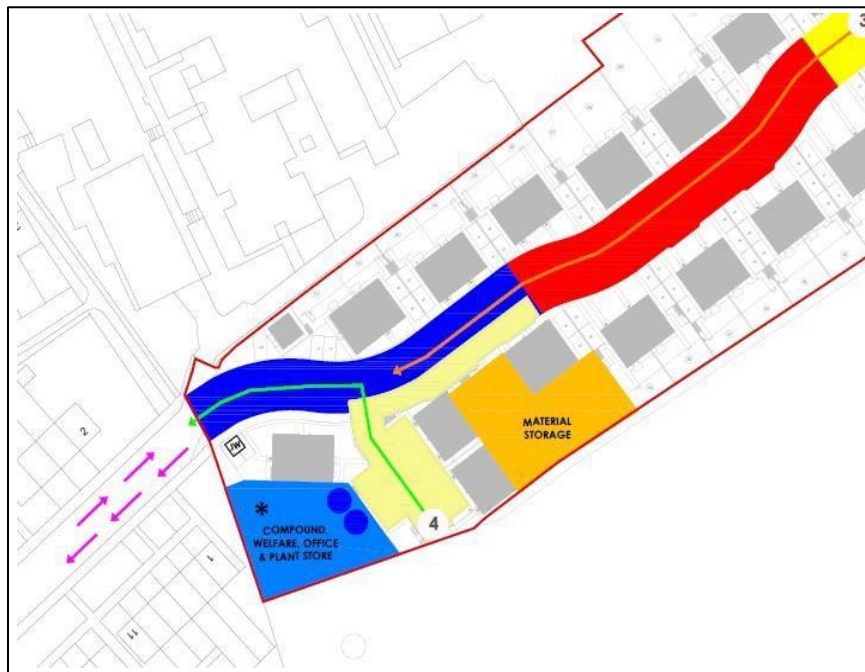


Figure 3 – Material Storage Areas

The Materials Store will be monitored by the Site Manager who will document all materials in storage.

Any material waste should be stored within the Material Store zone and subsequently removed from site.

Tools

All tools and equipment when stored on site, must be stored within the Site Compound.

Those utilising equipment and tools on site, will have full understanding of how tools and equipment is expected to be stored. The construction management team will set out how tools are to be arranged within the store; all tools must be stacked carefully, and such storage should not pose any risk to the health and safety of anyone entering this storage unit.

Any electrical tools must be stored within the Site Compound. They should not be stacked carelessly, or with heavy objects, they should be placed away from any items that could impose damage to the casing or leads.

When items need to be stored in publicly accessible areas, steps must be taken to minimise the potential risks to members of the public, including children. The use of heras type fencing would be considered suitable in these situations.

Personal Protective Equipment (PPE) should be adequately stored at all times to prevent it from loss, damage or deterioration.

Storage of Potentially Polluting Materials

Where liquids are being stored, there is always a potential for leakage. Storage bowers will therefore be utilised to minimise the risk for any leakage. Storage bowers must be double skinned and be capable of holding 110% of the total storage capacity. The contents must not be allowed to run or drain onto the ground. The oil tank inside the bund must be completely contained, including all pipes. The bowers are to be locked when not in use. A spillage kit is to be positioned adjacent to the bowser at all times. The bowser must not be positioned any closer than 10m away from a watercourse / controlled waters.

Storage Fuel Bowers will be located within the Site Compound and will be stored at under 10% capacity.

3.4 Construction Traffic

Vehicle Routing – Internal

The first phase of road to be completed will be the blue shaded length of the extract below. This will include a turning head where the HGV layby is proposed, which will allow vehicles to enter the site and turn around before exiting again. A haul road will be constructed to allow access for staff and contractors to park their cars (hatched blue area)

until this length of road (shaded red and yellow) is completed to adoptable standards later in the build process.

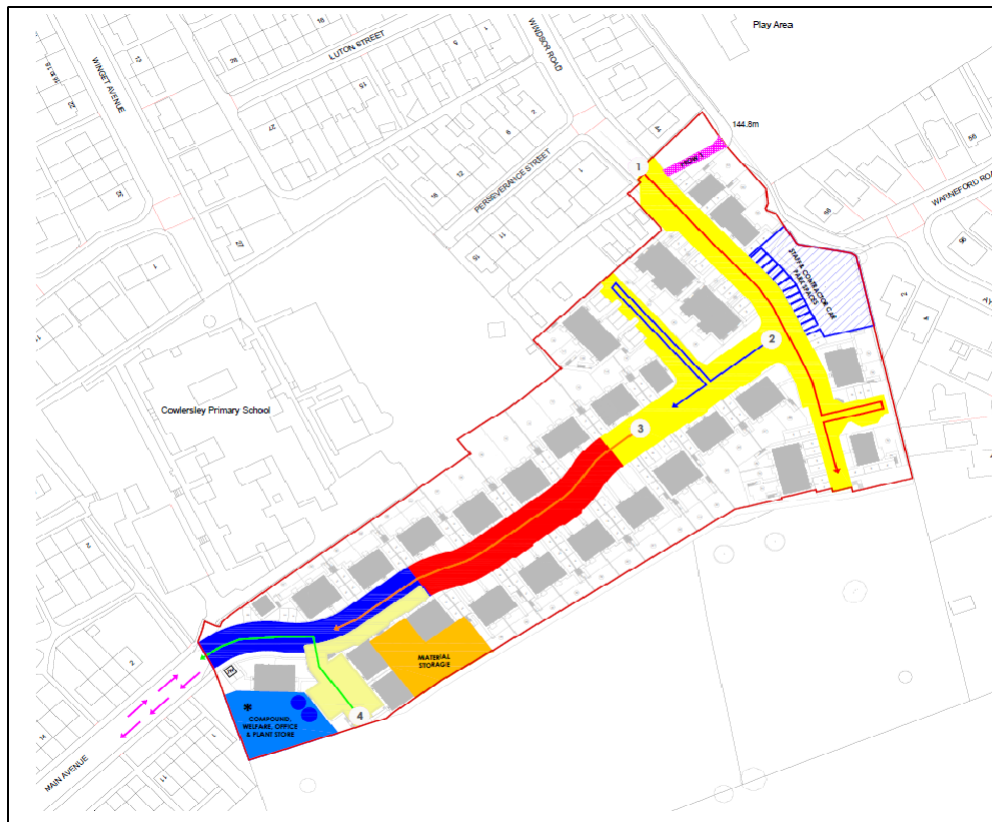


Figure 4 – Vehicle Routing Within The Site

Tracking has been provided for the largest vehicles which will enter/exit the site during this phase of works to ensure they can enter/exit the site safely. These tracking drawings are included at Appendix 2 for the following vehicles:

- 10.2m Large Tipper
- 16.5m Articulated Lorry
- 18m Low Loader
- 12m Rigid Truck
- 12.3m Mobile Crane

The full list of vehicles which will access the site during this phase is as follows:

- Crane
- Excavator
- Telehandlers
- Dumpers
- Roller
- Barbour Green

- Piling Rig
- Timber Wagons (Ranging between 18T & 26T)
- Brick Wagons (Ranging between 26T Rigid Vehicle & 44T Articulated & Drawbar Vehicles)
- Block Wagons (Ranging between 18T & 26T)
- Smart Roof Wagons (Ranging between 18T & 26T)
- Truss Wagons (Ranging between 18T & 26T)
- 18T Wagons for Stairs Deliveries
- Wagons for Insulation (Ranging between 18T & 26T)
- Wagons for Roof Tile Deliveries (Ranging between 18T & 26T)
- 18T Wagons for Tarmac Deliveries
- Wagon (8m3) for Concrete Deliveries
- 18T Wagons for Stone Deliveries
- 18T Wagons Removing Spoil

Vehicle Routing – Wider Strategic Road Network

Vehicles are to enter and leave the site via Main Avenue only.

Vehicles will follow prearranged routes around the site; this will be a circulatory route to reduce reversing once the later sections of road have been completed to basecourse. Details of the vehicle construction traffic route will be sent with all orders to suppliers and contractors to ensure all those driving onto site are aware of the route that must be adhered to.

In terms of vehicles travelling to and from the site, one traffic routing arrangement is proposed. This traffic routing arrangement will be followed throughout the course of construction and is identified below.



Figure 6 – Vehicle Routing Outside The Site

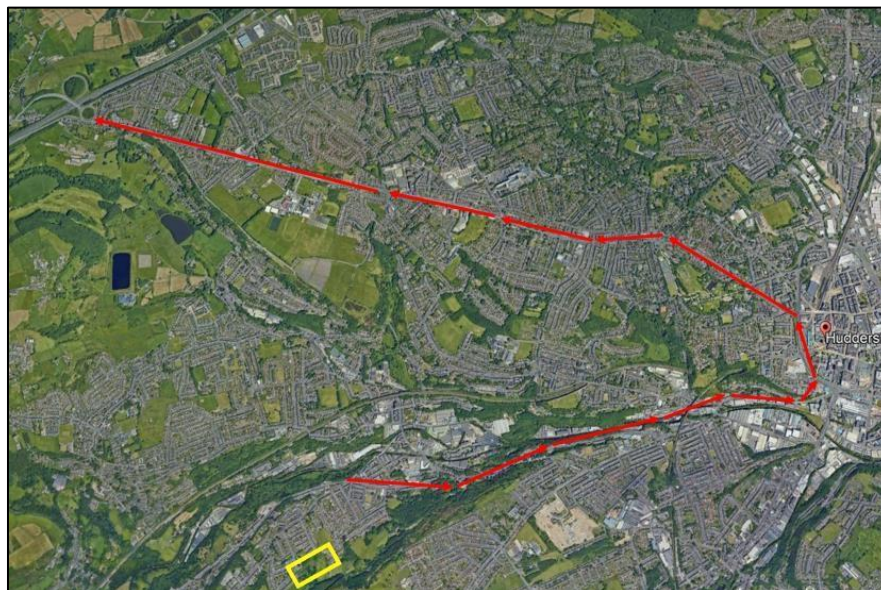


Figure 7 – Vehicle Routing Outside The Site

When leaving the site, all HGV traffic will be instructed to follow a direct route via Cowlersley Lane and the A62, towards New Hey Road leading onto the M62 junction.

HGV traffic will be mindful of the smaller residential streets in order to ensure no detrimental or harmful impact is placed upon surrounding dwellings and no damage is caused to existing roads.

Tracking has been provided for the largest vehicles which will utilise the existing road network when visiting site. These tracking drawings have been provided for construction vehicles entering the site from Cowlersley Lane onto Hazel Grove via Ladybower Avenue and Main Avenue and are included at Appendix 3 for the following vehicles:

- 10.2m Large Tipper
- 16.5m Articulated Lorry
- 18m Low Loader
- 12m Rigid Truck
- 12.3m Mobile Crane

The Site Manager will be responsible for ensuring that all those visiting and leaving the site have knowledge of this routing arrangement.

The Commercial Department will ensure that these traffic routing arrangements are explicitly stated when any orders are placed

3.5 Goods Vehicles

Parking and Manoeuvring

Goods vehicles will not be permitted to park on any surrounding streets. Parking must only take place within the Compound Area, associated drivers will be instructed with this information prior to delivery. 12 staff and contractor parking space are provided and are shown on the Production Management Plan (see extract below). All staff/contractor parking will be located in this area, with no parking permitted on the highway (including within the site).

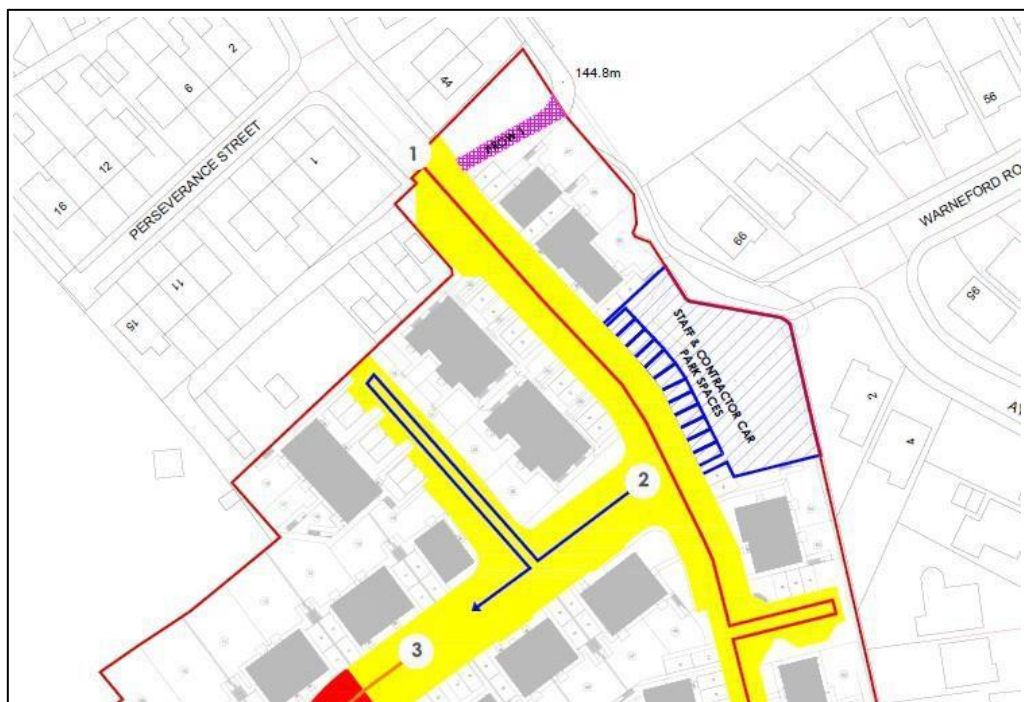


Figure 8 – Staff and Contractor Parking

The site manager will carry out a toolbox talk with all members of staff and contractors on site to explain where the parking area is and to ensure that they use the designated parking area and do not park on the highway. The site manager will monitor this throughout the course of the development and will act appropriately if this is not adhered to.

Where appropriate, deliveries shall be arranged on a just-in-time basis in order to prevent vehicles queuing outside the site onto Main Avenue.

Vehicle manoeuvring shall be planned to ensure that lorries do not arrive or depart outside standard working hours. No daytime or night-time parking of vehicles will be permitted outside agreed areas.

All goods vehicles will be required to adhere to the maximum speed limit of 15mph on surfaced roads and 10 mph on un-surfaced haul roads and work roads. This will be signposted throughout the site and will be monitored by the site manager.

Loading and Unloading

The loading and unloading of goods vehicles must only take place within the remits of the site.

The generation of dust whilst loading or unloading materials must be controlled by using chutes, bagging, sheeting and damping down. Where vehicles are leaving unpaved sites, adequate wheel washing arrangements shall be employed to prevent contamination of the highway. Loads containing waste material leaving site shall be sheeted before travelling on the highway.

All unloading and loading of materials will be monitored through a booking in system by the Site Manager. A designated waiting areas for the unloading and loading of materials will be provided on site. This is shown on the Production Management Plan (appendix 1) and can be seen on the extract below in light yellow.

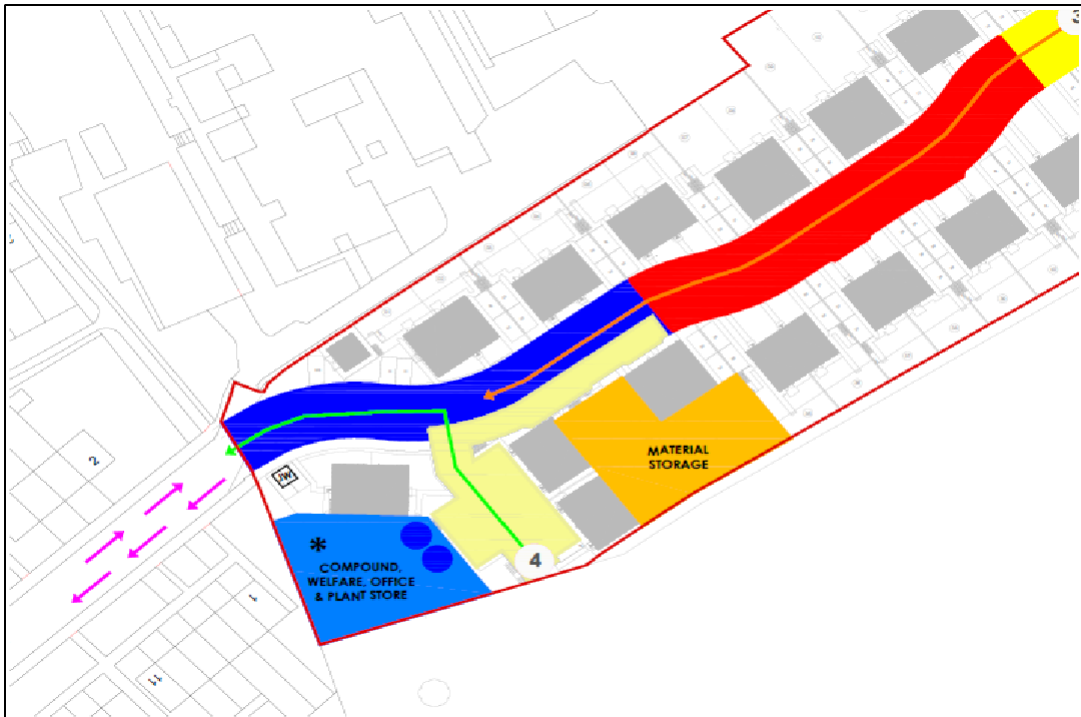


Figure 9 – Vehicle Waiting Area

Signage

The site will also include directional signage throughout the development. This is to ensure construction vehicle drivers are aware of the routing arrangements to the site & within the site.

Signage will be included for pedestrian and construction vehicle routes, parking, waiting areas, loading & storage areas. It will also include the site's speed limits

3.6 Groundwater Protection

The risks posed to groundwater during the construction phase of the development have been assessed, with necessary measures proposed.

The implementation of mitigation measures designed to protect groundwater are identified below:

- To carry out regular inspections of all discharge points and associated pipework, drainage systems, collection ditches, lagoons, oil separator (and drip-trays) and watercourses to check that these are in good order.
- Any fuels and chemicals must be utilised away from all drains and watercourses, and where appropriate, bunds and drip trays provided.
- Drip trays must be used when refuelling the mobile plant.
- Any refuelling areas must be isolated away from surface water drains.

- All drains must be protected and covered.
- Care must be taken when installing drainage to avoid cross contamination.
- The site manager must ensure that correct connections are being made with either foul sewers, surface water drains or combined systems.

Discharge of Water

When water is discharged on site, the appropriate consents for this disposal will be checked over, and all associated personnel will be made aware of the quantity and quality of water that can be discharged. Water will be treated effectively before disposal where necessary.

There will be regular checks for any visible signs or smells of pollution in watercourses at or near the site. If a settlement tank is being used, the site manager will carry out daily checks to ensure it is in full working order.

Spillage Response

The site will be regularly inspected for spillages. Emergency procedures will be in place to ensure any spillages are dealt with immediately and accordingly. In all instances the Strata Emergency Incident Response Procedure should be used: Stop, Contain, Notify.

Spill kits will be available (e.g. oil only, chemical or general use) and adequately stocked. Any spillages will be cleaned using the agreed wet handling methods.

3.7 Mud & Debris Prevention

In order to prevent mud and debris being carried onto the highway the Site Manager will carry out regular inspections of the surrounding roads to ensure that they are kept clean. These inspections will be recorded and kept in the site office within the Site Compound.

A regular regime of road cleaning using a contracted road sweep will be put in place before work commences on site. During the autumn and winter months this will occur daily. In spring and summer this will occur every two weeks in good weather. If an unexpected incident happens, the road sweeper can be mobilised within the same day to rectify the incident. Where on-site operations require or when weather is inclement, a wheel wash will be used for all vehicles from commencement on site

All drivers of vehicles leaving site should ensure that their vehicles wheels are clean. A jet wash will be provided to enable wheel washing. Any debris or mud carried on to Main Avenue should be swept clear immediately. The Site Manager will be responsible for enforcing that all vehicles leaving the site are clean.

3.8 Dust Management

Dust disturbs neighbouring residents. For example, annoyance is caused when residents have to re-clean washing that has been hanging out and when they have to wash cars, curtains and windows. Windblown dust can be unsightly and impactful on those living within the surrounding area. In exceptional circumstances, dust can affect health – e.g. asthma can be exacerbated by exposure to respirable dust.

Dust is generally considered to be any airborne solid matter up to about 2 mm in size. Particle sizes can vary considerably, depending on their origin, and the smallest particles can be breathed in. Some dust, such as limestone dust, is chemically active.

Any dust arising from activities on the site must be minimised. The effects of particles on human health are a matter of growing concern. This applies especially to the size fraction below 10µm which are commonly known as PM10 and a range of health effects including respiratory, cardiovascular problems and increased mortality.

Local Authorities are now required to assess local air pollution levels including particulates and have specific duties where required national standards are not expected to be met. There is evidence that construction site activities may be a significant local source of particulate pollution, affecting the local surroundings and its habitants as well as those working on the site.

Local Authorities also have specific duties and responsibilities regarding dust that causes a statutory nuisance under the provisions of the Environmental Protection Act 1990.

Construction site managers are made aware of the potential health effects of dust particulates and ensure that basic remedial action is taken to limit particle pollution. Any dust arising from activities on the site must be minimised by a suitable method e.g. damping or enclosure. Dusty materials must be covered or damped down when stored on site.

Further to this, no burning of waste materials shall be carried out on site; all waste materials must be disposed of at a suitable waste disposal site again to prevent a statutory nuisance being caused.

The importance of dust control is recognised especially in respect of any major earthmoving work, on site crushing/stockpiling and vehicle loading or movement over unsurfaced areas.

‘Construction Dust’ is a general term describing the range of dusts that may be encountered on a building site. The three main types are:

1. Silica Dust – created when working on concrete, mortar and sandstone
2. Wood Dust – created when working on softwood, hardwood and other wood-based products such as plywood and MDF
3. Lower Toxicity Dusts – created when working on low silica content materials such as gypsum (in plasterboard), limestone, marble and dolomite

Prolonged, long term exposure to these dusts can lead to health-related issues such as lung cancer, silicosis, chronic obstructive pulmonary disease & asthma

With good management, dust from construction is rarely a recurrent or severe problem beyond 100m from the site, although in very dry and windy weather, and during particular operations, occasional problems can occur at greater distances.

Effective dust control in these circumstances is a matter of priority to the site management team.

There is no requirement for major costs on plant, but simple, practical and continuous attention to routine site management procedures is required.

A Construction Dust Assessment has been carried out for the Site which is appended to this statement (appendix 4). As a result of this assessment, the following control procedures are to be complied with on site:

- Information will be available on a board displayed along the fencing at the main entrance of the site on Main Avenue detailing the name and contact details of the person responsible for air quality and dust management. This will also include Strata's office contact details.
- Daily inspections will be undertaken on-site and off-site to monitor dust. All monitoring results will be recorded and made available to Kirklees Council upon request.
- Limitation of the area(s) of working for the construction phase so those vehicles are confined within an area that can be subjected to appropriate dust control.
- Vehicles, where possible, will be limited to the temporary roads to be constructed from adjacent strata homes site.
- Where possible stockpiles of dusty material should be located to provide the optimum practical buffer distances to off-site properties. The stockpiles will be positioned to minimize the effect on existing surrounding dwellings.
- Where possible, extremely dry materials will be stored in banded areas and not allowed to dry out. If the required materials are to be dried out for a specific construction process, additional control measures will need to be put in place.
- In extremely dry conditions, stockpiles will be sprayed with sufficient water to remove the dust hazard without creating unnecessary run offs. During these extremely dry periods, the frequency of inspections shall be increased.

- Spraying of delineated areas, such as rear gardens, temporary roads, site fencing, barriers and scaffolding etc., with water supplied (subject to appropriate licensing) as and when conditions dictate.
- Where possible, areas of paving or other hard standings should be maintained. All such areas should be kept wet using appropriate application systems, e.g. bowsers, and/or cleaned when necessary.
- Wheel/body washing facilities will be provided in the form a jet wash system situated at the site access/egress point as soon as is practicable to ensure mud is not carried out onto the existing highway. The jet wash system will be readily available at the site entrance.
- In extremely dry conditions or during an activity with a high potential to produce dust, the frequency of site inspections will be increased by the site manager.
- Vehicles carrying dust-forming material either on or off the site are to be sheeted, if there is any risk of dust blow. Vehicles carrying cement are to be enclosed in tankers and the material is to be stored within silos upon entering the site.
- Where excessive dust is created from site operations such as cutting, grinding or sawing, then either water suppression systems will be employed or a designated cutting area that is screened and protected will be introduced.
- Any materials that have the potential to increase the levels of site dust present on site shall be removed, unless being re-used on site. If these materials are to be re-used on site, effective covering shall be utilised on site.
- If complaints arise or incidents of dust deposition occur, these will be investigated immediately, and necessary action taken. A complaints log will be kept and maintained by the site management team. The complaints log will be available to Kirklees Council upon request.
- Screening will be provided on site around areas and along the site boundary where excessive dust is created from site operations. The screening must be the height of any stockpiles present on site.
- Consideration will be given to minimise drop heights from conveyors, loading shovels, etc.
- Any works associated with scabbling will be avoided where possible.
- Letter drops will be carried out to all residents and businesses; this will include details of working hours, measure taken to protect their amenity and contact telephone numbers for all enquiries.
- In the event of a complaint or concern is raised, an immediate review will be completed by the site manager to remove the problem wherever possible or minimise the issue. The relevant parties will be notified of the outcomes. Road sweepers will be regularly in use and the roads monitored for cleanliness.
- There will be no burning of waste on site. All waste will be disposed of in skips.

3.9 Noise Management

In order to ensure that any noise associated with the development does not cause detriment to amenity or nuisance (especially those living and working in the vicinity), specific measure will be put in place.

Contractors are expected to use the best practical means to minimise noise on site. They are expected to consult the useful guidance detailed in BS5228 2009: 'Noise and Vibration Control on Construction Sites' Parts. However, it should be noted that this is only a guide and does not prejudice any requirements which may be made by the Council:

- Hoods on vehicles and machinery to be kept closed.
- Screening between the source and a receiver of noise to be considered where noise is likely to be emitted for prolonged periods. (This is generally only feasible to apply to things which are static such as a generator.)
- The higher a screen the more effective it is. A screen that is placed near to either the noise source or the receptor is more effective than one, placed halfway between the two.
- Use only plant conforming with relevant standards and directives on emissions.
- Hoods and doors on compressors and cranes etc should not only be closed but also be tightly fitting and well-sealed
- Electrically powered plant is quieter than diesel- or petrol-driven plant.
- Operate plant properly so that it does not cause excessive noise.
- Shut down plant when it is not in use.
- Maintain plant properly - adequate lubrication to reduce squeaks and the tightening of loose nuts and bolts to minimise rattles are part of routine maintenance.
- Ensure that audible warning systems (including reversing alarms) are switched to the minimum setting required by the Health and Safety Executive. Consider the use of alternative systems (e.g. cab-mounted CCTV) where appropriate. Traffic routes that avoid reversing on site will minimise the impact.
- Wherever possible fixed noise sources should be sited away from noise sensitive areas such as nearby dwellings
- Scaffold erection or dismantling can cause disturbance to site neighbours. All works therefore shall be undertaken with due consideration, in particular when working adjacent to neighbouring properties.
- Audits of site activities should be done at regular and frequent intervals during the construction programme to check that noise mitigation is being undertaken. These audits will be carried out every four to six months and this period will be re-assessed every six months and increased or reduced as necessary.

3.10 Waste Management

The process of waste management during the construction phase of the development have been assessed, with necessary measures proposed.

Principles of the Waste Hierarchy will be applied to all wastes generated onsite, with reuse options prioritised. Outstanding wastes will be segregated on site into the following streams:

- Inert
- Timber
- Plaster
- Mixed Compactable Waste

Working alongside one of our approved waste management contractors, all waste will be removed from site and taken directly for recycling or to an offsite waste transfer station where waste will undergo further segregation and processing to remove recyclable material ensuring that where possible, construction waste is diverted from landfill. Regular waste audits will be conducted by Strata and the appointed waste contractor to track performance and ensure compliance against Strata practices.

3.11 Protocol for Construction Pollution

Within this document various protocols have been identified in order to deal with any, noise, water and air pollution that may occur during the course of construction.

Strata aims to ensure that the construction process minimally impacts neighbouring residents and the surrounding environment.

Subsequently with regards to water pollution, procedures will be put into place as discussed in Section '3.6 Ground Water Protection'. Thus, water courses will be regularly monitored by the site manager. With emergency procedures being put into place ensure any spillages are dealt with immediately and accordingly.

In terms of noise pollution, as discussed in Section '3.9 Noise Management' contractors are expected to use the best practical means to minimise noise on site. They are expected to consult the useful guidance detailed in BS5228 2009: 'Noise and Vibration Control on Construction Sites' Parts.

Further to this as discussed in Section '3.8 Dust Management', construction site managers are made aware of the potential health effects of dust particulates and ensure that basic remedial action is taken to limit particulate pollution. As a result, any dust arising from activities on the site will subsequently be pre-empted and minimised via suitable and appropriate actions.

3.12 Construction Methods

Methods of Piling

The foundation solution for the whole site is a driven pile as a result of the ground investigation report. Whilst piling can cause adverse noise and vibration issues, the development requires this solution.

In order to mitigate the duration of piling on site, it is anticipated that 2 piling visits will be undertaken per annum - with the duration of each visit lasting around 4-6 weeks. This will enable approximately half the number of homes expected to be completed, to be piled.

Piling is to take place in batches which will follow the route of the build programme as identified upon the submitted Production Management Plan (Appendix 1).

There are some areas on site which will be more sensitive than others, due to being closer to sensitive receptors. Residents of existing dwellings will be notified two weeks before any planned piling activity and be provided with site management contact details should issues arise.

Through the employment of a specialised piling contractor, professional standards will be adhered to and where required vibration monitoring equipment will be deployed at the boundary of potential sensitive receptors. This will allow levels of ground vibration to be assessed and enable any extreme vibration from piling activity to be identified. Should extreme levels of vibration occur, activity on site will be seized and the reasons as to why this occurrence has taken place will be explored; seeking to implement measures to mitigate such activity prior to continuing.

With regards to noise associated with the proposed piling works; this is to be mitigated by using a sound deadening jacket/shroud. Routine monitoring of noise levels at the perimeter of the site will be undertaken. Where possible piling will take place at locations near to sensitive receptors across the middle of the day.

Strata will monitor the local area around the site for future developments which are to come forward and will work with other developers to minimise disturbance if required.

3.13 Light Management

Construction works will take place during the daytime, mitigating the need for new dwellings and associated infrastructure to be externally lit during the construction process.

External lighting will only be utilised upon the site where deemed necessary from a Health & Safety perspective.

Lighting Required for Health & Safety Purposes

For Health & Safety purposes lighting will be utilised within the materials store & site compound area towards the end of the day in darker months in order to ensure these areas can be utilised safely by the Site Team.

Security lighting will be provided within the materials store and site compound area to ensure that all plant is adequately protected from theft.

If deemed necessary from a Health & Safety perspective, external lighting in the form of a portable light may be used temporarily by the Site Team.

If such lighting intervention is required, the light will be turned on only at specific intervals during working hours and such lighting facility will only be directed within the construction site itself and will not spill light onto sensitive receptors.

Temporary Floodlights

The proposed working hours ensure that construction works will only take place during the daytime, thus meaning that temporary floodlights will not be required during the construction process.

Light Pollution Mitigation

To prevent light pollution and associated nuisance the follow measures will be implemented upon the site:

- Floodlights will not be used.
- Only security lighting will be turned on in an evening and this will be limited to the site compound/materials store area avoiding light spill to neighbouring properties.
- External lighting will only be utilised when necessary from a Health & Safety perspective.
- If portable lighting is required from a Health and Safety perspective, it will be utilised only during working hours and over specific time intervals.
- Any portable lighting will be directed and adjusted precisely to avoid light spill.
- Regular inspections will take place for any forms of lighting present upon the Site, in order to ensure it is working effectively and without disturbance.
- The site will not be excessively lit thus avoiding potential glare.
- Tilt fixtures will be utilised effectively in order to avoid any potential glare.
- Any security lighting will be mounted at appropriate heights and angles so that they

illuminate the relevant areas only.

Where appropriate, dimmers and motion sensors will be utilised to ensure only necessary areas are lit, reducing overall glare.

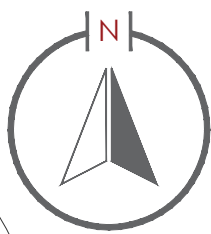
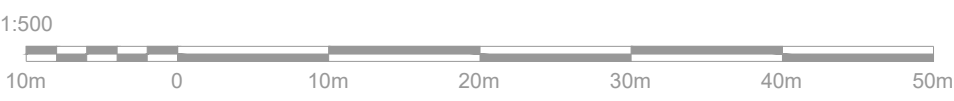
3.14 Other Measures

Strata will monitor the local area around the site for future developments which are to come forward and will work with other developers to minimise disturbance if required.

Appendix 1 – Production Management Plan

MAIN AVENUE

PRODUCTION MANAGEMENT PLAN



This drawing must be read in conjunction with all other relevant drawings and information. The drawing or information must not be used for construction unless expressly issued for construction. Use displayed dimensions & verify dimensions on site before commencing any work with any discrepancies reported to Strata immediately.

DO NOT SCALE OFF DRAWINGS.

Rev	Date	Description	By	Checked
A	06.12.24	PMP updated to reflect latest site layout	MM	-

- KEY:
- INITIAL BUILD ROUTE (1)
-
- FOLLOW ON BUILD ROUTE (2)

*



scale: 1:500 at A1 drawn by: MM date: 14.10.24

Project: Main Avenue - Kirklees

Drawing name:

Production Management Plan

Drawing number:

BY00138-PMP-001

Planning ref:

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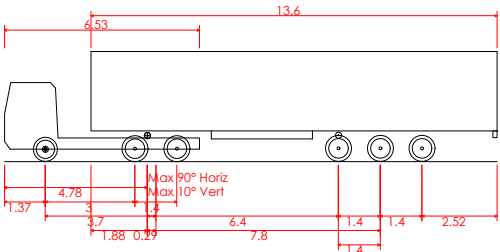
Drawing status:

PROPOSED

Revision:

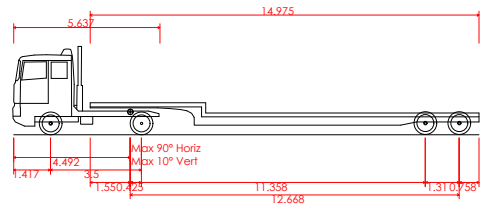
A

Appendix 2 – Construction Vehicle Tracking on Site



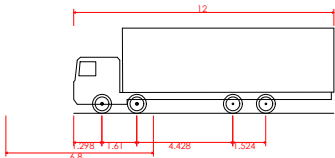
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m

	---	-----	--	--
Date	Rev	Description	Drawn	Chkd
 TPS			TPS Transport Consultants Ltd Stonebridge Court 151-153 Wakefield Road Horbury Wakefield WF4 5HQ t: 01924 664638 e: info@tpsconsultants.co.uk www.tpsconsultants.co.uk	
Project				
Land at Main Avenue, Huddersfield				
Title				
Swept Path Analysis - 16.5m articulated vehicle				
Date	Designed by		Checked by	
21/10.24	ST		JT	
Drawing Number			Scale @ A3	Revision
P2445 - T - 1005a			1:250	



Generic Low Loader with Trailer Steering (18.0m)
Overall Length 17.918m
Overall Width 2.540m
Overall Body Height 3.408m
Min Body Ground Clearance 0.332m
Max Track Width 2.520m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.350m

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Project				
Land at Main Avenue, Huddersfield				
Title				
Swept Path Analysis - Low Loader				
Date	Designed by		Checked by	
21/10.24	ST		JT	
Drawing Number			Scale @ A3	Revision
P2445 - T - 1006a			1:250	



Rigid Truck
Overall Length 12.000m
Overall Width 2.500m
Overall Body Height 3.928m
Min Body Ground Clearance 0.412m
Track Width 2.471m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 11.900m

Date	Rev	Description	Drawn	Chkd



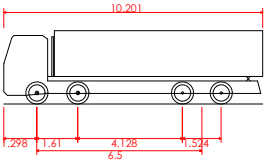
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e: info@tpsconsultants.co.uk
www.tpsconsultants.co.uk

Project
Land at Main Avenue, Huddersfield

Title
Swept Path Analysis - Rigid Truck

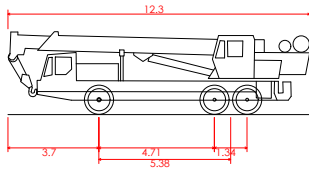
Date	Designed by	Checked by
21/10.24	ST	JT

Drawing Number	Scale @ A3	Revision
P2445 - T - 1007a	1:250	



Large Tipper
Overall Length 10.201m
Overall Width 2.495m
Overall Body Height 2.890m
Min Body Ground Clearance 0.341m
Track Width 2.471m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 11.550m

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Project				
Land at Main Avenue, Huddersfield				
Title				
Swept Path Analysis - Large Tipper				
Date	Designed by		Checked by	
21/10/24	ST		JT	
Drawing Number			Scale @ A3	Revision
P2445 - T - 1008a			1:250	



Large Mobile Crane
Overall Length 12.300m
Overall Width 2.430m
Overall Body Height 3.386m
Min Body Ground Clearance 0.590m
Track Width 2.430m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 10.000m

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Date	Rev	Description	Drawn	Chkd
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Project				
Land at Main Avenue, Huddersfield				
Title				
Swept Path Analysis - Large Mobile Crane				
Date	Designed by		Checked by	
21/10/24	ST		JT	
Drawing Number			Scale @ A3	Revision
P2445 - T - 1009a			1:250	

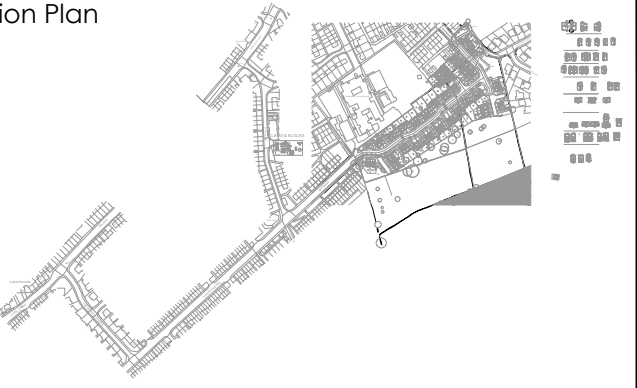
Appendix 3 – Construction Vehicle Tracking for Wider Strategic Road Network



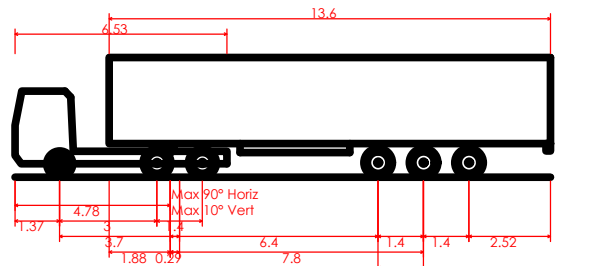
Standard Notes

1. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and specification.
2. This drawing should not be scaled.

Location Plan



Notes and Keys



Max Legal Length (UK) Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

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Date	Rev	Description	Drawn	Chkd



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Project
Land at Main Avenue,
Cowlersley, Huddersfield

Title
Swept Path Analysis
16.5m articulated vehicle

Status INFORMATION

Scale @ A1	Date Created	Drawn	Checked
1:1000	21/10/24	ST	JT
TPS Project Number			Revision
P2445			
Drawing Number			
P2445 - T - 1005			



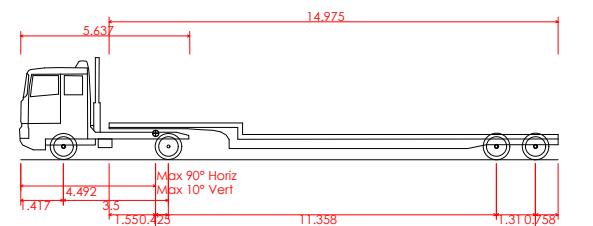
Standard Notes

1. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and specification.
2. This drawing should not be scaled.

Location Plan



Notes and Keys



Generic Low Loader with Trailer Steering (18.0m)	
Overall Length	17.918m
Overall Width	2.540m
Overall Body Height	3.408m
Min Body Ground Clearance	0.332m
Max Track Width	2.520m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.350m

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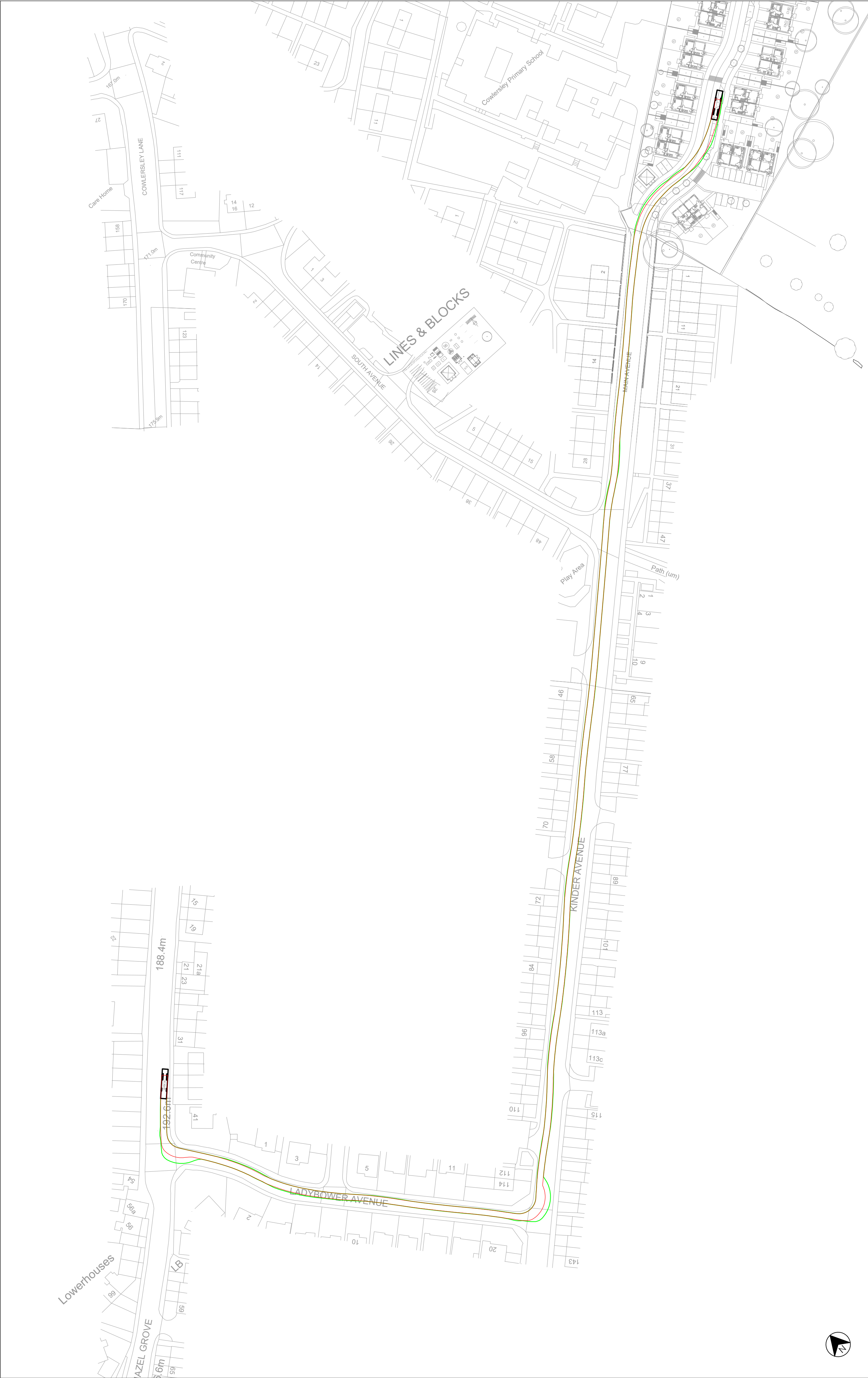
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Project
Land at Main Avenue,
Cowlersley, Huddersfield

Title
Swept Path Analysis
Low Loader

Status INFORMATION

Scale @ A1	Date Created	Drawn	Checked
1:1000	21/10/24	ST	JT
TPS Project Number			Revision
P2445			
Drawing Number			
P2445 - T - 1006			



Standard Notes

1. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and specification.
2. This drawing should not be scaled.

Location Plan

Notes and Keys

10.201

2.29

1.25

4.19

4.5

Large Tipper
Overall Length 10.201m
Overall Width 2.495m
Overall Body Height 2.890m
Min Body Ground Clearance 0.341m
Track Width 2.471m
Lock to lock time 6.0s
Kerb to Kerb Turning Radius 11.550m

Date	Rev	Description	Drawn	Chkd	

TPS

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Project

Land at Main Avenue,
Cowlesley, Huddersfield

Title

Swept Path Analysis
Large Tipper

Status

INFORMATION

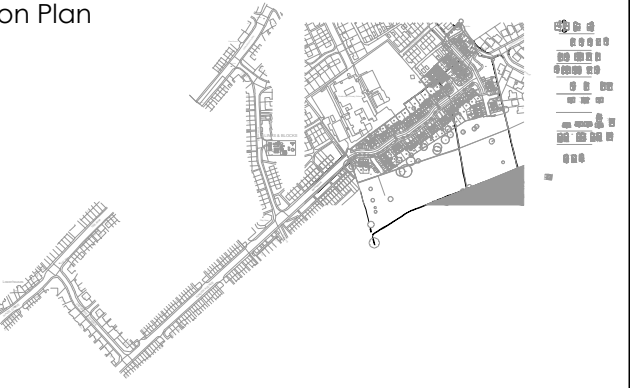
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Drawing Number P2445 - T - 1008			



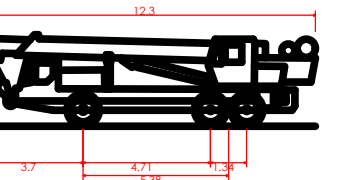
Standard Notes

1. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and specification.
2. This drawing should not be scaled.

Location Plan



Notes and Keys



Large Mobile Crane
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Track Width
Lock to lock time
Kerb to Kerb Turning Radius

2.300m
430m
386m
590m
430m
00s
0.000m

	***	*****	**	**
Date	Rev	Description	Drawn	Chkd



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Project
Land at Main Avenue,
Cowlersley, Huddersfield

Title
Swept Path Analysis
Large Mobile Crane

Status INFORMATION

Scale @ A1 1:1000	Date Created 21/10/24	Drawn ST	Checked JT
TPS Project Number P2445			Revision
Drawing Number P2445 - T - 1009			

Appendix 4 – Construction Dust Assessment

Report

Main Avenue, Cowlersley

Construction Dust Assessment

For Thirteen Housing Group

18 July 2025

Document Control

Project Title:	Main Avenue, Cowlersley
Project Number:	J10-16525B-10
Client:	Thirteen Housing Group
Principal Contact:	Claire Linley (Strata Homes Limited)
Document Title:	Construction Dust Assessment
Document Number:	J10-16525B-10-R01-02-F
Prepared By:	Dr Imogen Heard
Reviewed By:	Dr Denise Evans (Technical Director)

Revision History

01	17/07/2025	
02	18/07/2025	Minor amendments



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1 Introduction

- 1.1 This report sets out the construction dust risk assessment for the proposed development of 57 residential dwellings on land off Main Avenue, Cowlersley. It includes a summary of the works to be carried out and the potential sources of dust emissions during each stage of the works. It also provides a description of the nearest receptors to the site that will potentially be affected by any dust emissions. Finally, it sets out recommended measures to be applied to minimise the risk of dust impacts during the whole of the construction works.
- 1.2 This report has been prepared taking into account all relevant local and national guidance and regulations.

2 Assessment Approach

2.1 The criteria developed by IAQM (2024) divide the activities on construction sites into four types to reflect their different potential impacts. These are:

- demolition;
- earthworks;
- construction; and
- trackout.

2.2 The assessment procedure includes the four steps summarised below:

STEP 1: Screen the Need for a Detailed Assessment

2.3 An assessment is required where there is a human receptor within 250 m of the boundary of the site and/or within 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the site entrance(s), or where there is an ecological receptor within 50 m of the boundary of the site and/or within 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the site entrance(s).

2.4 Where the need for a more detailed assessment is screened out, it can be concluded that the level of risk is negligible and that any effects will be 'not significant'. No mitigation measures beyond those required by legislation will be required.

STEP 2: Assess the Risk of Dust Impacts

2.5 A site is allocated to a risk category based on two factors:

- the scale and nature of the works, which determines the potential dust emission magnitude (Step 2A); and
- the sensitivity of the area to dust effects (Step 2B).

2.6 These two factors are combined in Step 2C, which is to determine the risk of dust impacts with no mitigation applied. The risk categories assigned to the site may be different for each of the four potential sources of dust (demolition, earthworks, construction and trackout).

Step 2A – Define the Potential Dust Emission Magnitude

2.7 Dust emission magnitude is defined as either 'Small', 'Medium', or 'Large'. The IAQM guidance explains that this classification should be based on professional judgement, but provides the examples in Table 2-1.

Table 2-1: Examples of How the Dust Emission Magnitude Class May be Defined

Class	Examples
Demolition	
Large	Total building volume >75,000 m ³ , potentially dusty construction material (e.g. concrete), on site crushing and screening, demolition activities >12 m above ground level

Class	Examples
Medium	Total building volume 12,000 m ³ – 75,000 m ³ , potentially dusty construction material, demolition activities 6-12 m above ground level
Small	Total building volume <12,000 m ³ , construction material with low potential for dust release (e.g. metal cladding or timber), demolition activities <6 m above ground, demolition during wetter months
Earthworks	
Large	Total site area >110,000 m ² , potentially dusty soil type (e.g. clay, which will be prone to suspension when dry to due small particle size), >10 heavy earth moving vehicles active at any one time, formation of bunds >6 m in height.
Medium	Total site area 18,000 m ² – 110,000 m ² , moderately dusty soil type (e.g. silt), 5-10 heavy earth moving vehicles active at any one time, formation of bunds 3 m – 6 m in height.
Small	Total site area <18,000 m ² , soil type with large grain size (e.g. sand), <5 heavy earth moving vehicles active at any one time, formation of bunds <3 m in height.
Construction	
Large	Total building volume >75,000 m ³ , on site concrete batching; sandblasting
Medium	Total building volume 12,000 m ³ – 75,000 m ³ , potentially dusty construction material (e.g. concrete), on site concrete batching
Small	Total building volume <12,000 m ³ , construction material with low potential for dust release (e.g. metal cladding or timber)
Trackout ^a	
Large	>50 HDV (>3.5t) outward movements in any one day, potentially dusty surface material (e.g. high clay content), unpaved road length >100 m
Medium	20-50 HDV (>3.5t) outward movements in any one day, moderately dusty surface material (e.g. high clay content), unpaved road length 50 m – 100 m
Small	<20 HDV (>3.5t) outward movements in any one day, surface material with low potential for dust release, unpaved road length <50 m

^a These numbers are for vehicles that leave the site after moving over unpaved ground.

Step 2B – Define the Sensitivity of the Area

2.8 The sensitivity of the area is defined taking account of a number of factors:

- the specific sensitivities of receptors in the area;
- the proximity and number of those receptors;
- in the case of PM₁₀, the local background concentration; and
- site-specific factors, such as whether there are natural shelters to reduce the risk of wind-blown dust.

2.9 The first requirement is to determine the specific sensitivities of local receptors. The IAQM guidance recommends that this should be based on professional judgment, taking account of the principles in Table 2-2. These receptor sensitivities are then used in the matrices set out in Table 2-3, Table 2-4 and

Table 2-5 to determine the sensitivity of the area. Finally, the sensitivity of the area is considered in relation to any other site-specific factors, such as the presence of natural shelters etc., and any required adjustments to the defined sensitivities are made.

Step 2C – Define the Risk of Impacts

- 2.10 The dust emission magnitude determined at Step 2A is combined with the sensitivity of the area determined at Step 2B to determine the risk of impacts with no mitigation applied. The IAQM guidance provides the matrix in Table 2-6 as a method of assigning the level of risk for each activity.

STEP 3: Determine Site-specific Mitigation Requirements

- 2.11 The IAQM guidance provides a suite of recommended and desirable mitigation measures which are organised according to whether the outcome of Step 2 indicates a low, medium, or high risk. The list provided in the IAQM guidance has been used as the basis for the requirements set out in Section 4.

STEP 4: Determine Significant Effects

- 2.12 The IAQM guidance does not provide a method for assessing the significance of effects before mitigation, and advises that pre-mitigation significance should not be determined. With appropriate mitigation in place, the IAQM guidance is clear that the residual effect will normally be 'not significant'.
- 2.13 The IAQM guidance recognises that, even with a rigorous dust management plan in place, it is not possible to guarantee that the dust mitigation measures will be effective all of the time, for instance under adverse weather conditions. The local community may therefore experience occasional, short-term dust annoyance. The scale of this would not normally be considered sufficient to change the conclusion that the effects will be 'not significant'.

Table 2-2: Principles to be Used When Defining Receptor Sensitivities

Class	Principles	Examples
Sensitivities of People to Dust Soiling Effects		
High	users can reasonably expect enjoyment of a high level of amenity; or the appearance, aesthetics or value of their property would be diminished by soiling; and the people or property would reasonably be expected to be present continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land	dwellings, museum and other culturally important collections, medium- and long-term car parks and car showrooms
Medium	users would expect to enjoy a reasonable level of amenity, but would not reasonably expect to enjoy the same level of amenity as in their home; or the appearance, aesthetics or value of their property could be diminished by soiling; or the people or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land	parks and places of work
Low	the enjoyment of amenity would not reasonably be expected; or there is property that would not reasonably be expected to be diminished in appearance, aesthetics or value by soiling; or there is transient exposure, where the people or property would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land	playing fields, farmland (unless commercially-sensitive horticulture), footpaths, short term car parks and roads
Sensitivities of People to the Health Effects of PM ₁₀		
High	locations where members of the public may be exposed for eight hours or more in a day	residential properties, hospitals, schools and residential care homes
Medium	locations where the people exposed are workers, and where individuals may be exposed for eight hours or more in a day.	may include office and shop workers, but will generally not include workers occupationally exposed to PM ₁₀
Low	locations where human exposure is transient	public footpaths, playing fields, parks and shopping streets
Sensitivities of Receptors to Ecological Effects		
High	locations with an international or national designation and the designated features may be affected by dust soiling; or locations where there is a community of a particularly dust sensitive species	Special Areas of Conservation with dust sensitive features
Medium	locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown; or	Sites of Special Scientific Interest with dust sensitive features

Class	Principles	Examples
	locations with a national designation where the features may be affected by dust deposition	
Low	locations with a local designation where the features may be affected by dust deposition	Local Nature Reserves with dust sensitive features

Table 2-3: Sensitivity of the Area to Dust Soiling Effects on People and Property¹

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		<20	<50	<100	<250
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

Table 2-4: Sensitivity of the Area to Human Health Effects¹

Receptor Sensitivity	Annual Mean PM ₁₀	Number of Receptors	Distance from the Source (m)			
			<20	<50	<100	<250
High	>32 µg/m ³	>100	High	High	High	Medium
		10-100	High	High	Medium	Low
		1-10	High	Medium	Low	Low
	28-32 µg/m ³	>100	High	High	Medium	Low
		10-100	High	Medium	Low	Low
		1-10	High	Medium	Low	Low
	24-28 µg/m ³	>100	High	Medium	Low	Low
		10-100	High	Medium	Low	Low
		1-10	Medium	Low	Low	Low
	<24 µg/m ³	>100	Medium	Low	Low	Low
		10-100	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
Medium	>32 µg/m ³	>10	High	Medium	Low	Low

¹ For demolition, earthworks and construction, distances are taken either from the dust source or from the boundary of the site. For trackout, distances are measured from the sides of roads used by construction traffic. Without mitigation, trackout may occur from roads up to 250 m, as measured from the site exit. The impact declines with distance from the site, and it is only necessary to consider trackout impacts up to 50 m from the edge of the road.

Receptor Sensitivity	Annual Mean PM ₁₀	Number of Receptors	Distance from the Source (m)			
			<20	<50	<100	<250
	28-32 µg/m ³	1-10	Medium	Low	Low	Low
		>10	Medium	Low	Low	Low
	24-28 µg/m ³	1-10	Low	Low	Low	Low
		>10	Low	Low	Low	Low
	<24 µg/m ³	1-10	Low	Low	Low	Low
		>10	Low	Low	Low	Low
Low	-	>1	Low	Low	Low	Low

Table 2-5: Sensitivity of the Area to Ecological Effects¹

Receptor Sensitivity	Distance from the Source (m)	
	<20	<50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

Table 2-6: Defining the Risk of Dust Impacts

Sensitivity of the Area	Dust Emission Magnitude		
	Large	Medium	Small
Demolition			
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible
Earthworks			
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible
Construction			
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible
Trackout			

Sensitivity of the Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

3 Construction Dust Risk Assessment

- 3.1 The construction works will give rise to a risk of dust impacts during earthworks and construction, as well as from trackout of dust and dirt by vehicles onto the public highway. Step 1 of the assessment procedure is to screen the need for a detailed assessment. There are receptors within the distances set out in the guidance (see Section 2), thus a detailed assessment is required. The following section sets out Step 2 of the assessment procedure.

Potential Dust Emission Magnitude

Demolition

- 3.2 There is no requirement for demolition on site.

Earthworks

- 3.3 The characteristics of the soil at the site have been defined using the British Geological Survey's UK Soil Observatory website (British Geological Survey, 2025), as set out in Table 3-1. Overall, it is considered that, when dry, this soil has the potential to be moderately dusty.

Table 3-1: Summary of Soil Characteristics

Category	Record
Soil Layer Thickness	Intermediate - Shallow
Soil Parent Material Grain Size	Argillic ^a – Arenaceous ^b
European Soil Bureau Description	Mudstone and Sandstone
Soil Group	Light (silty) to Medium (silty) to Heavy
Soil Texture	Clayey Loam ^c to Loam to Sandy Loam

^a grain size < 0.06 mm.

^b grain size 0.06 – 2.0 mm.

^c a loam is composed mostly of sand and silt.

- 3.4 The site covers approximately 18,000 m², 15,000 m² of which will be subject to earthworks, involving removal of the foundations of previously demolished garage buildings and breaking up of a paved area. Dust will arise mainly from vehicles travelling over unpaved ground and from the handling of dusty materials (such as dry soil). Based on the example definitions set out in Table 2-1, the dust emission class for earthworks is considered to be small.

Construction

- 3.5 The proposed development involves the construction of 57 timber frame residential properties, with a total building volume of around 16,500 m³. Dust will arise from vehicles travelling over unpaved ground, the handling and storage of dusty materials, and from the cutting of concrete. The construction will take place over a two-year period. Based on the example definitions set out in Table 2-1, the dust emission class for construction is considered to be medium.

Trackout

- 3.6 During the majority of the works, there will be no more than three outward heavy vehicle movements per day, however, there could be a maximum of 30 outward heavy vehicle movements per day during the muck shift phase, which may track out dust and dirt. Based on the example definitions set out in Table 2-1, the dust emission class for trackout is considered to be medium.
- 3.7 Table 3-2 summarises the dust emission magnitude for the proposed development.

Table 3-2: Summary of Dust Emission Magnitude

Source	Dust Emission Magnitude
Earthworks	Small
Construction	Medium
Trackout	Medium

Sensitivity of the Area

- 3.8 This assessment step combines the sensitivity of individual receptors to dust effects with the number of receptors in the area and their proximity to the site. It also considers additional site-specific factors such as topography and screening, and in the case of sensitivity to human health effects, baseline PM₁₀ concentrations.
- 3.9 The IAQM guidance explains that residential properties are 'high' sensitivity receptors to dust soiling, while the Woodside Green Primary Academy is a 'medium' sensitivity receptor (Table 2-2). Residential properties are also classified as being of 'high' sensitivity to human health effects, as is the Woodside Green Primary Academy. There are 19 residential properties plus the Woodside Green Primary Academy within 20 m of the site (see Figure 3-1).

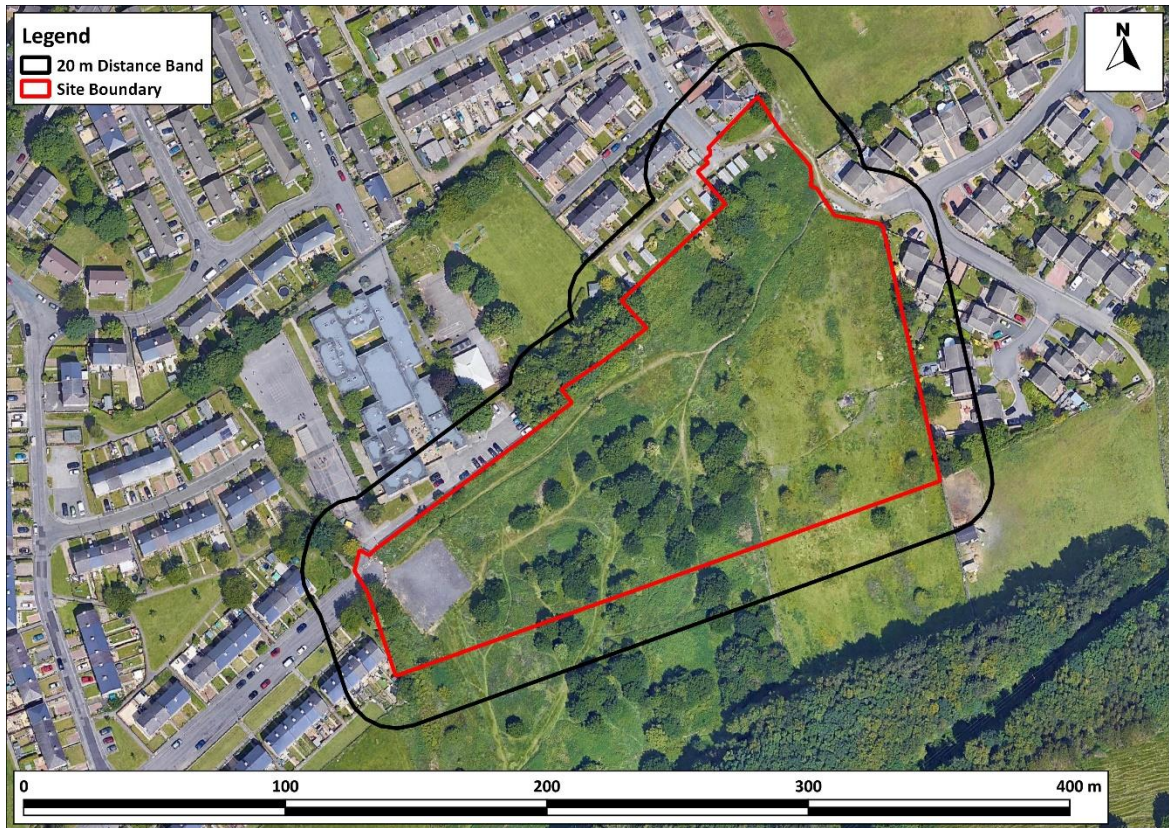


Figure 3-1: 20 m Distance Band around Site Boundary

Imagery ©2025 Airbus, Maxar Technologies.

- 3.10 The IAQM guidance (IAQM, 2024) explains that there is a risk of material being tracked 250 m from the site exit. Since it is not known which roads construction vehicles will use, it has been assumed that all possible routes could be affected. There are more than 100 residential properties within 20 m of the roads along which material could be tracked (see Figure 3-2).

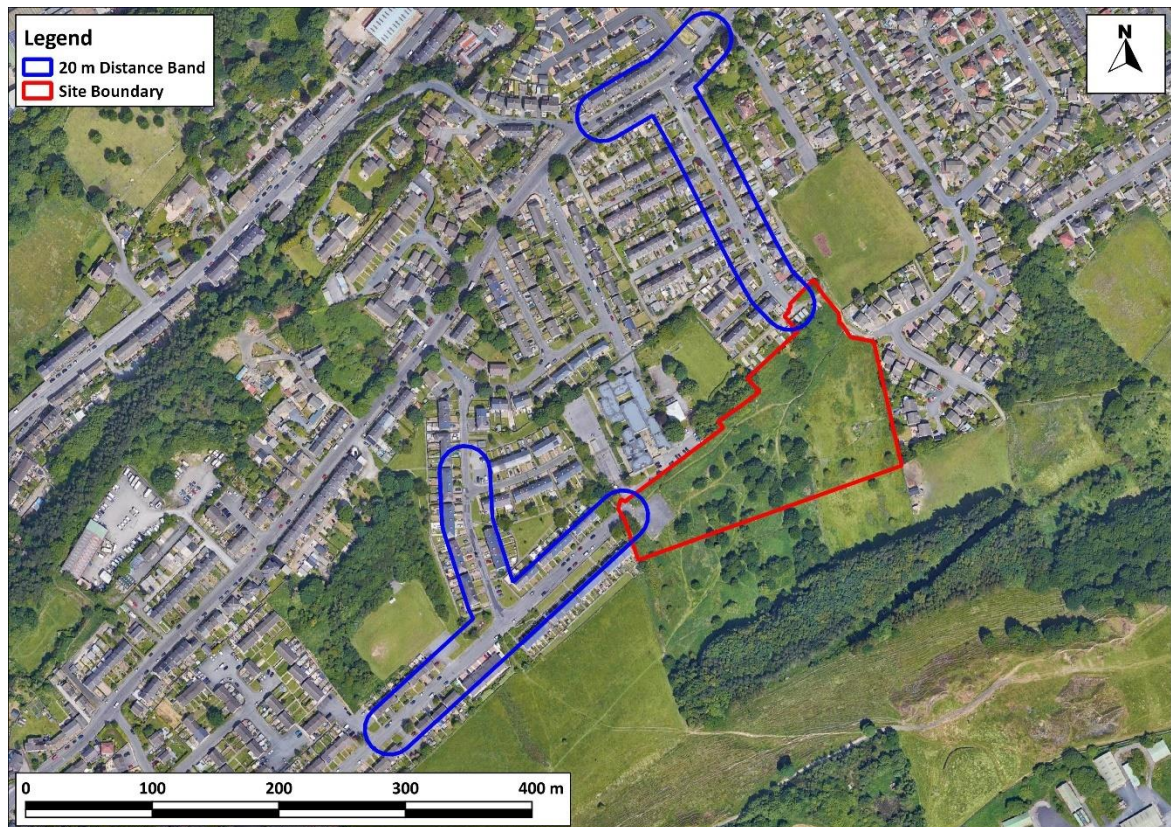


Figure 3-2: 20 m Distance Bands around Roads Used by Construction Traffic within 250 m of the Site Exits

Imagery ©2025 Airbus, Maxar Technologies.

Sensitivity of the Area to Effects from Dust Soiling

- 3.11 Using the information set out in Paragraph 3.9 and Figure 3-1 alongside the matrix set out in Table 2-3, the area surrounding the site is of 'high' sensitivity during earthworks and construction. Using the information set out in Paragraph 3.10 and Figure 3-2 alongside the same matrix, the area is also of 'high' sensitivity to dust soiling due to trackout.

Sensitivity of the Area to any Human Health Effects

- 3.12 The matrix in Table 2-4 requires information on the baseline annual mean PM₁₀ concentration in the area. The properties nearest the site are well away from local roads and the existing annual mean PM₁₀ concentration is best described by Defra's mapped background concentration (Defra, 2025), which is predicted to be 10.4 µg/m³ in 2026 (the year in which construction is expected to commence). Using the information set out in Paragraphs 3.9 and Figure 3-1 alongside the matrix in Table 2-4, the area surrounding the onsite works is of 'medium' sensitivity during earthworks and construction. Using the information set out in Paragraph 3.10 and Figure 3-2 alongside the same matrix, the area surrounding roads along which material may be tracked from the site is also of 'low' sensitivity.

Sensitivity of the Area to any Ecological Effects

- 3.13 The guidance only considers designated ecological sites within 50 m to have the potential to be impacted by the construction works. There are no designated ecological sites within 50 m of the site

boundary or those roads along which material may be tracked, thus ecological impacts will not be considered further.

Summary of the Area Sensitivity

3.14 Table 3-3 summarises the sensitivity of the area around the proposed construction works.

Table 3-3: Summary of the Area Sensitivity

Effects Associated With:	Sensitivity of the Surrounding Area	
	Earthworks and Construction	Trackout
Dust Soiling	High Sensitivity	High Sensitivity
Human Health	Medium Sensitivity	Medium Sensitivity

Risk and Significance

3.15 The dust emission magnitudes in Table 3-2 have been combined with the sensitivities of the area in Table 3-3 using the matrix in Table 2-6, in order to assign a risk category to each activity. The resulting risk categories for the four construction activities, without mitigation, are set out in Table 3-4. These risk categories have been used to determine the appropriate level of mitigation as set out in Section 4 (Step 3 of the assessment procedure).

Table 3-4: Summary of Risk of Impacts Without Mitigation

Source	Dust Soiling	Human Health
Earthworks	Low Risk	Low Risk
Construction	Medium Risk	Medium Risk
Trackout	Medium Risk	Medium Risk

3.16 The IAQM guidance does not provide a method for assessing the significance of effects before mitigation, and advises that pre-mitigation significance should not be determined. With appropriate mitigation in place, the IAQM guidance is clear that the residual effect will normally be 'not significant' (IAQM, 2024).

4 Mitigation

- 4.1 The site has been identified as a Low Risk site during earthworks and Medium Risk during construction and for trackout, as set out in Table 3-4. Comprehensive guidance has been published by IAQM (2024) that describes measures that should be employed, as appropriate, to reduce the impacts, along with guidance on monitoring during demolition and construction (IAQM, 2018). This reflects best practice experience and has been used, together with the professional experience of the consultant who has undertaken the dust impact assessment and the findings of the assessment, to draw up a set of measures that should be incorporated into the specification for the works.
- 4.2 These measures are described in Table 4-1, and should ideally be written into a Dust Management Plan. Some of the measures may only be necessary during specific phases of work, or during activities with a high potential to produce dust, and the list should be refined and expanded upon in liaison with the construction contractor when producing the Dust Management Plan.
- 4.3 Where mitigation measures rely on water, it is expected that only sufficient water will be applied to damp down the material. There should not be any excess to potentially contaminate local watercourses.

Table 4-1: Best-Practice Mitigation Measures Recommended for the Works

Measure	Desirable	Highly Recommended
Communications		
Develop and implement a stakeholder communications plan that includes community engagement before and during work on site		✓
Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environmental manager/engineer or the site manager		✓
Display the head or regional office contact information		✓
Dust Management Plan		
Develop and implement a Dust Management Plan (DMP) approved by the Local Authority which documents the mitigation measures to be applied, and the procedures for their implementation and management		✓
Site Management		
Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken		✓
Make the complaints log available to the local authority when asked		✓
Record any exceptional incidents that cause dust and/or air emissions, either on- or off- site, and the action taken to resolve the situation in the log book		✓
Monitoring		

Measure	Desirable	Highly Recommended
Undertake daily on-site and off-site inspections where receptors (including roads) are nearby, to monitor dust. Record inspection results, and make the log available to the Local Authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100 m of the site boundary, with cleaning to be provided if necessary	✓	
Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the Local Authority when asked		✓
Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions		✓
Agree dust deposition, dust flux, or real-time PM ₁₀ continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it is a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction (IAQM, 2018)		✓
Preparing and Maintaining the Site		
Plan the site layout so that machinery and dust-causing activities are located away from receptors, as far as is possible		✓
Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site		✓
Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period		✓
Avoid site runoff of water or mud		✓
Keep site fencing, barriers and scaffolding clean using wet methods		✓
Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below		✓
Cover, seed, or fence stockpiles to prevent wind whipping		✓
Operating Vehicle/Machinery and Sustainable Travel		
Ensure all vehicles switch off their engines when stationary – no idling vehicles		✓

Measure	Desirable	Highly Recommended
Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery-powered equipment where practicable		✓
Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on un-surfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate)	✓	
Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials		✓
Implement a Travel Plan that supports and encourages sustainable staff travel (public transport, cycling, walking, and car-sharing)	✓	
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		✓
Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate		✓
Use enclosed chutes, conveyors and covered skips		✓
Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate		✓
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		✓
Waste Management		
Avoid bonfires and burning of waste materials		✓
Measures Specific to Construction		
Avoid scabbling (roughening of concrete surfaces), if possible	✓	
Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place		✓
Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with	✓	

Measure	Desirable	Highly Recommended
suitable emission control systems to prevent escape of material and overfilling during delivery		
For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust	✓	
Measures Specific to Trackout		
Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use		✓
Avoid dry sweeping of large areas		✓
Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport		✓
Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable)		✓
Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits		✓

5 Residual Impacts

- 5.1 The IAQM guidance is clear that, with appropriate mitigation in place, the residual effects will normally be 'not significant'. The mitigation measures set out in Section 4 are based on the IAQM guidance. With these measures in place and effectively implemented the residual effects are judged to be 'not significant'.
- 5.2 The IAQM guidance does, however, recognise that, even with a rigorous dust management plan in place, it is not possible to guarantee that the dust mitigation measures will be effective all of the time, for instance under adverse weather conditions. During these events, short-term dust annoyance may occur, however, the scale of this would not normally be considered sufficient to change the conclusion that overall the effects will be 'not significant'.

6 Conclusions

- 6.1 The assessment has considered the impacts of the proposed development on local air quality in terms of dust and particulate matter emissions during construction.
- 6.2 The construction works have the potential to create dust. During construction it will therefore be necessary to apply a package of mitigation measures to minimise dust emissions. Appropriate measures have been recommended and, with these measures in place, it is expected that any residual effects will be 'not significant'.

7 References

British Geological Survey (2025) *UK Soil Observatory Map Viewer*.

Defra (2025) *Local Air Quality Management (LAQM) Support Website*, [Online], Available: <http://laqm.defra.gov.uk/>.

IAQM (2018) *Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites v1.1*, Available: www.iaqm.co.uk/guidance.html.

IAQM (2024) *Guidance on the Assessment of Dust from Demolition and Construction v2.2*, [Online], Available: <http://iaqm.co.uk/guidance/>.

Moorcroft and Barrowcliffe et al (2017) *Land-Use Planning & Development Control: Planning For Air Quality v1.2*, IAQM, London, Available: <http://iaqm.co.uk/guidance/>.

8 Glossary

AQC	Air Quality Consultants
Defra	Department for Environment, Food and Rural Affairs
DMP	Dust Management
EPUK	Environmental Protection UK
HDV	Heavy Duty Vehicles (> 3.5 tonnes)
IAQM	Institute of Air Quality Management
LDV	Light Duty Vehicles (<3.5 tonnes)
$\mu\text{g}/\text{m}^3$	Microgrammes per cubic metre
PM ₁₀	Small airborne particles, more specifically particulate matter less than 10 micrometres in aerodynamic diameter

9 Professional Experience

Dr Denise Evans, BSc (Hons) PhD MEnvSc MIAQM

Dr Evans is a Technical Director with AQC, with more than 25 years' relevant experience. She has prepared air quality review and assessment reports for local authorities, and has appraised local authority air quality assessments on behalf of the UK governments, and provided support to the Review and Assessment helpdesk. She has extensive modelling experience, completing air quality and odour assessments to support applications for a variety of development sectors including residential, mixed use, urban regeneration, energy, commercial, industrial, and road schemes, assessing the effects of a range of pollutants against relevant standards for human and ecological receptors. Denise has acted as an Expert Witness and is a Member of the Institute of Air Quality Management.

Dr Imogen Heard, BSc (Hons) MSc PhD

Dr Heard is an Associate of AQC with over 12 years' experience in the field of air quality. She has been involved in numerous development projects including road schemes, energy from waste facilities, urban extensions and energy centres. These have included the use of ADMS-5 and ADMS-Roads dispersion models to study the impacts of a variety of pollutants, including nitrogen dioxide, PM₁₀ and PM_{2.5}, and the preparation of air quality assessment reports and air quality chapters for Environmental Statements. She also has experience in undertaking construction dust risk assessments, Air Quality Neutral assessments and human health risk assessments, as well as in preparing local authority reports. Prior to joining AQC she worked as a scientist in the Atmospheric Dispersion and Air Quality area at the UK Met Office for four years, modelling the dispersion of a range of pollutants over varying spatial and temporal scales.



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