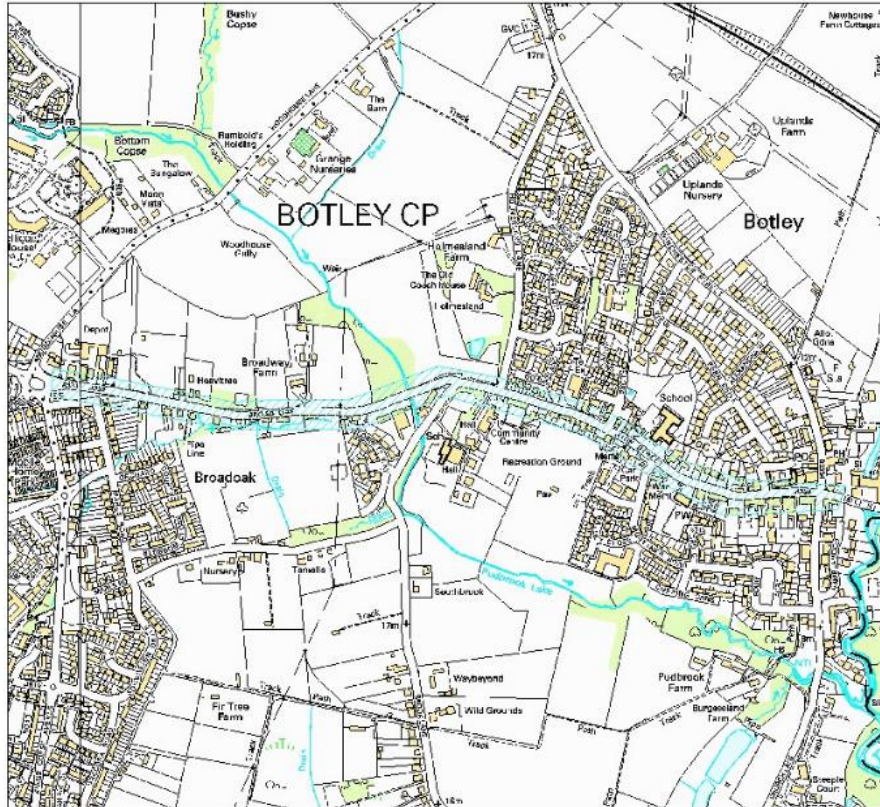




Botley Bypass Phase 3

Dust Management Plan December 2024

Project Name	Botley Bypass Phase 3		
Project Start Date	April/May 2025		
Project Duration	2.5 years		
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Revision Table

Revision	Summary of Changes Made	Revision By	Revision Date:
01			

List of Appendices

Appendix	Description	Required Y/N
A	Definitions	Y

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1.0 Introduction

This Dust Management Plan (DMP) has been prepared in response to planning condition 4 as set by Hampshire County Council in accordance with the IAMQ Guidance. Its objective is to dust emissions are minimised for the duration of the project at Botley Bypass Phase 3 and covers the risk assessment and mitigation measures required for the demolition and construction phases of the project.

2.0 Purpose

This Project is being completed on behalf of Hampshire County Council (HCC) and was granted planning permission in July 2017 under application reference 17/02023/HCS. Planning condition 4 requires the submission of a DMP to include:

Prior to commencement of development a site Dust Management Plan shall be submitted to, and approved in writing by, the Local Planning Authority. The Plan shall include monitoring as appropriate, as well as mitigation measures, in accordance with IAQM guidance in order to ensure that air quality objectives are not exceeded, particularly in respect of sensitive receptors.

Reason: In the interest in air quality and public health and in accordance with policy 59BE of the Eastleigh Borough Local Plan Review (2006) and policy DM19 of the Winchester District Local Plan Part 2 (2017). This information is required prior to commencement in order to satisfy the Local Planning Authority that air quality and public health will not be compromised before the works commence on site.

Milestone Infrastructure have been awarded the contract to complete the works at Botley Bypass. We recognise that the construction industry is one of the leading sources of dust complaints made to Local Authorities and therefore, consideration for dust throughout the works is required.

To ensure the above impacts are avoided, the site team will comply with the contents of this Dust Management Plan which outlines the key receptors, responsibilities, arrangement, systems and processes in place for the effective management of the environmental impacts which could arise from the construction works at Botley Bypass (Phase 3).

3.0 UK Air Quality and Dust Emissions

3.1 Guidance, legislation and policy

For the works being undertaken at Botley Bypass (Phase 3), the two main pollutants of concern considered within this assessment are particulate matter and dust.

The definition of dust given in the Institute of Air Quality Management (IAQM) "Guidance on the assessment of dust from demolition and construction" is as follows:

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“Solid particles that are suspended in air, or have settled out onto a surface after having been suspended in air.” Here, dust includes particles that give rise to soiling and effect human health and ecology. Construction activities can cause higher than normal dust deposition levels in the surrounding area. This can be caused by land preparation (e.g., demolition, land clearing, earth movement) or released from site plant and the movement of road vehicles.

Particulate matter suspended in the air can be abbreviated as PM. Airborne particulate matter with an aerodynamic diameter of less than 10 micrometres (μm) is referred to as PM₁₀. Elevated PM₁₀ concentrations may arise as a result of dust generating activities on site. The primary sources of PM₁₀ particles in the UK are combustion, quarrying and construction, and wind-blown dust. Exposure to particulate matter is associated with ill-effects to respiratory and cardiovascular systems among other health concerns. Exposure to finer particles (with a diameter of less than 2.5 μm , also known as PM_{2.5} particles) has a significant role in human all-cause mortality. These finer particles make up a significant proportion of PM₁₀. Without effective mitigation, major construction sites can cause an increase in annual mean PM₁₀ concentrations and breaches of the short-term 24 objective for PM₁₀.

Legislation, Guidance and Policy

The following legislation, guidance and policy will be considered and adhered to during the preparation of the Air Screening Quality Assessment:

- European Union (EU) Directive 2008/50/EC;
- The NPPF, updated on 20th December 2023);
- The National Planning Practice Guidance (NPPG), relevant chapters produced on 1st November 2019;
- Section 82 of the Environment Act (Part IV), updated 9th November 2021;
- The Air Quality Strategy for England, Scotland, Wales and Northern Ireland, Department for Environment, Food and Rural Affairs (DEFRA), 20072
- The Air Quality Standards (Amendment) Regulations (2016);
- Local Air Quality Management Technical Guidance 2022 LAQM.TG (22), DEFRA, August 2023
- The Control of Dust and Emissions during Construction and Demolition SPG, July 2014
- Land-Use Planning and Development Control: Planning for Air Quality, Environmental Protection UK (EPUK) and IAQM, January 20174

UK legislation and Guidance:

The Air Quality Standards (Amendment) Regulations (2016) came into force on 31st December 2016. These Regulations amend the Air Quality Standards Regulations 2010 and transpose the EU Directive 2008/50/EC into UK law. Air Quality Limit Values (AQLVs) were published in these regulations for 7 pollutants, as well as Target Values for an additional 6 pollutants.

Part IV of the Environment Act (2021) requires UK government to produce a national Air Quality Strategy (AQS) which contains standards, objectives and measures for improving ambient air quality. The AQS Framework was produced by the Department for Environment, Food and Rural Affairs (DEFRA) and updated in August 2023.

The AQS sets out Air Quality Objectives (AQOs) that are maximum ambient pollutant concentrations that are not to be exceeded either without exception or with a permitted number of exceedances over a specified timescale. These are generally in line with the AQLVs, although the requirements for compliance vary slightly.

The relevant values in this context for the protection of human health are presented in Table 1 below:

Table 1: Relevant values in this context for the protection of human health

Pollutant	Objective
NO ₂	1 hour mean concentration should not exceed 200µg/m ³ more than 18 times per year. Annual mean concentration should not exceed 40µg/m ³ .
PM ₁₀	24 hour mean concentration should not exceed 50µg/m ³ more than 35 times per year. Annual mean concentration should not exceed 40µg/m ³ .
PM _{2.5}	UK (except Scotland) annual mean should not exceed 25µg/m ³ . Exposure reduction (urban areas): target of 15%

3.2 Local Planning Policy

3.2.1 Eastleigh Borough Local Plan

The Eastleigh Borough Local Plan (2016-2036) was formerly adopted in April 2022.

Within the section 5.5 of the plan all *'New development will be assessed to consider its impact on residential amenity. This covers the amenity of existing residents living at or near the development and also the amenity of new residents. Residential amenity covers a variety of issues including overlooking, loss of daylight, loss of outlook, noise, fumes and dust and the impact of floodlighting and security lighting.'*

Additionally, section 5.47 relating to air quality in the Local Plan states:

The Borough Council will require developers to address means of mitigating air pollution, in particular measures to reduce traffic congestion (including the implementation of Travel Plans by businesses and developers).

Policy DM8 refers directly to considerations that are required in order to for a development to be permitted (Table 2).

Table 2: Policy DM8 on pollution from the Eastleigh Borough Local Plan

Policy DM8

1	Development will not be permitted if it is likely to cause loss of amenity or impact on public health or other unacceptable environmental impacts through: a. air pollution (including odours or particulate emissions); b. pollution of surface, underground, coastal waters or other watercourses; c. noise or vibration; d. light intrusion, both generally and with respect to the South Downs National Park's status as an International Dark Night Skies reserve; or e. land contamination
2.	Development susceptible to particular forms of pollution will not be permitted: a. where it will be adversely affected by such pollution, unless measures can be taken that adequately mitigate the polluting effects; or b. where it would inhibit existing economic or other activities giving rise to acceptable polluting effects.

3.2.2 Eastleigh Borough Air Quality Action Plan (2020 - 2025)

This plan sets out Eastleigh's actions aiming to improve air quality in Eastleigh Borough from 2020 to 2025. The Action Plan was adopted by the Council in February 2020 and approved by the Department for Environment, Food and Rural Affairs in March 2020. The plan has five topic areas:

Table 3: The five topic areas set out within the Eastleigh Borough Air Quality Action Plan (2020 – 2025)

1	Environment	- Improved monitoring of pollutant concentrations including number of locations and frequency of monitoring - Improve the use of publicly available charging points by 2025 - Consider the use of green infrastructure
2	Transport	- Improve the length of accessible cycling paths across the Borough and install electric bike charging stations - Reduce vehicle emissions through awareness of idling and single occupancy (including use of car clubs) - Improve public transport - Increase the number of low emission taxi's - Improve availability of air quality and traffic data
3	Health & Social Policy	Increase public awareness of air quality issues and the benefits of an active lifestyle
4	Housing	Ensure that development adheres to policies set out in the emerging Local Plan relating to air pollution impacts and supports high quality sustainable development, particularly for developments in or close to AQMAs.
5	Economy & Regeneration	Improve Eastleigh Borough Councils emissions though reduce business mileage, reduce vehicle fleet emissions and promote sustainable travel choices to staff, Councillors and visitors through travel planning.

There are also specific actions set out within the Eastleigh Borough Air Quality Action Plan (2020 - 2025) relating to the local area of Hedge End, West and Botley (Table 4), which mentions the delivery of Botley Bypass.

Table 4: The actions relating to Local Area: Hedge End, West End & Botley as set out within the Eastleigh Borough Air Quality Action Plan (2020 – 2025)

	Action	Organisations Involved	Key Performance Indicator
HEWEB2	Consider potential locations and funding sources to install electric vehicle charging points	Eastleigh Borough Council External partners	Increase number of available charge points, to be reviewed annually
HEWEB3	Delivery of Botley Bypass scheme	Hampshire County Council	Works commence by 2021 Completion of Bypass by December 2023
HEWEB4	Following completion of Botley Bypass, reduce HGVs using High Street	Eastleigh Borough Council Hampshire County Council	Reduce number of HGVs on Botley High Street following completion of Bypass

3.3 Other relevant legislation:

- Health and Safety at Work Act 1974.
- 2002 Control of Substances Hazardous to health Regulations.

4.0 Responsibilities

4.1 General

1. Project Managers/ Site Agents/ Environment Advisors will ensure that this plan is followed at all times.
2. Estimators will make provision for dust management equipment prior to the project commencing. This will include using dust suppression options such as mobile bowser for haul routes and compound area, sheeting on vehicles when necessary, wheel washing facilities, and appropriate material and waste storage.
3. Site Managers are responsible for the on-site implementation of this plan. This includes ensuring the required equipment is in place, all staff are trained, all required permits/ permissions are in place and that reporting requirements are met.

4.2 Site specific

The Environmental Advisor shall complete regular site inspections to ensure this plan is being adhered to. The site team shall also regularly review the live data provided by the dust monitors as discussed in Section 12.3.3.

For further information on site specific responsibilities see both the Botley Bypass Construction Environmental Management Plan (CEMP) for Main Works and Bridge Works.

5.0 Site Description

5.1 Description of Works

Phase 3 of the Botley Bypass scheme is part of a larger delivery of infrastructure designed to alleviate traffic congestion along the A334 Botley high street and the additional congestion from a new housing development and a local secondary school. The scheme was granted planning approval by Hampshire County Council (HCC) in November 2017.

Phase 3 of the Botley Bypass scheme focuses on upgrading the main bypass which is located to the north and east of Botley village and include land to the west of the B3354 Winchester Street.

The scope of this scheme is to provide a new single carriageway link between the existing junction at B3354 Winchester Street and the A334 Mill Hill/Station Hill. The bypass is 1.8km long and 7.3m wide. A 3m wide shared use foot/cycleway is provided along the southern side.

The 68m long bridge over the River Hamble is a 2-span continuous plate girder steel bridge supported by reinforced concrete abutments, with an intermediate pier on piled foundations. The bridge spans have been positioned such that the River Hamble will flow under the west span and the stream will flow under the east span.

5.2 Local conditions

5.2.1 Air Quality Background

The works are not located within an Air Quality Management Area (AQMA), however High Street, Botley was declared an AQMA in 2011 and covers a number of properties along High Street from the Maypole roundabout to the Winchester Street junction. The AQMA was declared due to exceedances in Nitrogen dioxide (NO₂) and follows a 5m corridor either side of A334. This is located approximately 350m south of the development as shown in Figure 1 below.

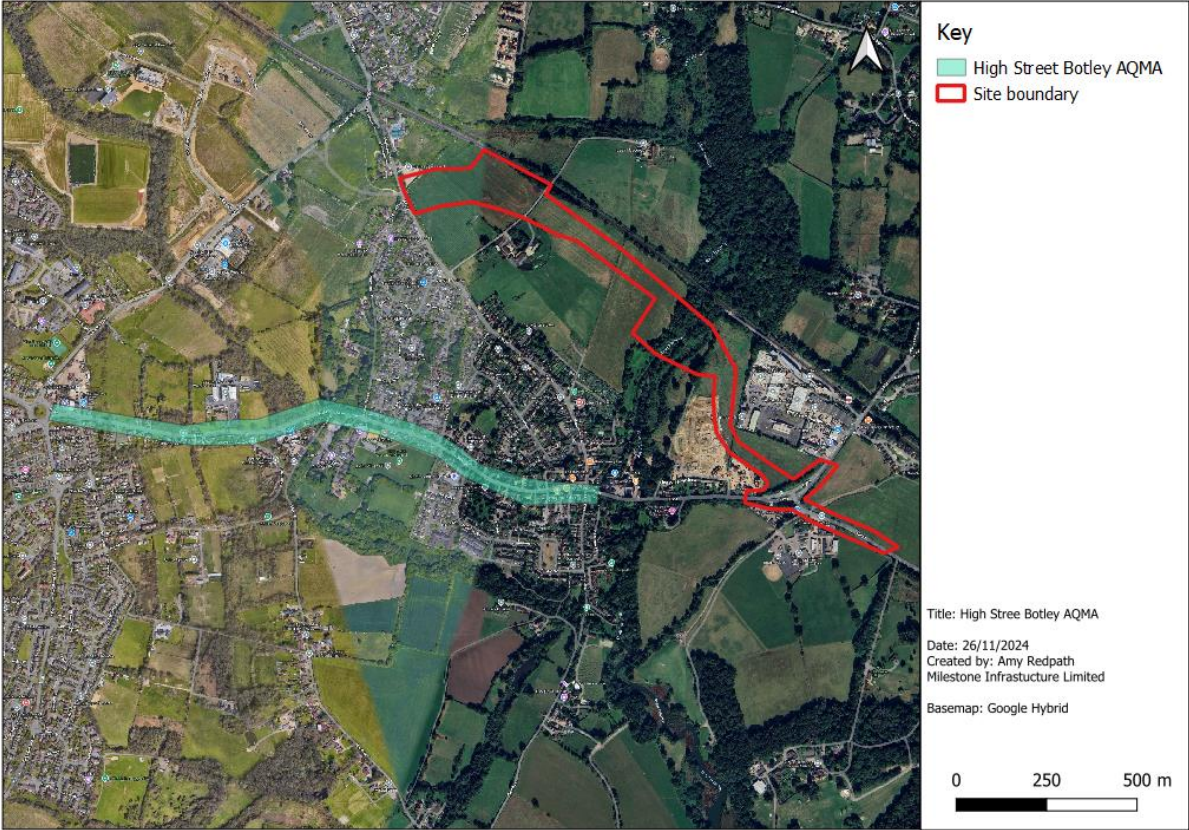


Figure 1: High Street Botley AQMA proximity to the Botley Bypass (Phase 3) development.

The Eastleigh Borough Council 2024 Air Quality Annual Status Report (ASR) states that there are four AQMA's within Eastleigh, all declared for exceeding the annual objective of $40\mu\text{g}/\text{m}^3$. During 2023 a reduction in concentration of nitrogen dioxide was measured at all monitoring locations and no exceedances of objective levels were recorded. This trend was noted as being due to post-pandemic traffic levels, as well as upgrades to the local fleet following council initiatives.

In order to determine local air quality, the council produces annual monitoring reports which provides a detailed overview of air quality in Eastleigh. The most recent report was published in June 2024. This report noted that the High Street AQMA (No.4) has been compliant for more than five years with concentrations sitting currently at $22.6\mu\text{g}/\text{m}^3$. For this reason, the 2025 report shall look at revoking this AQMA.

Eastleigh undertake monitoring using both Automatic and Non-Automatic Monitoring Stations. The closest automatic monitoring station which is the only location where PM10 and PM2.5 monitoring is completed, is ES1 shown in Figure 2, central Eastleigh. Non-automatic monitoring has been completed for NO₂ at 54 sites during 2023 including High Street Botley AQMA (BOT) as shown in Figure 3. The most recent annual recordings at these stations are shown in Table 5 below.

Table 5: Showing the Annual Mean Monitoring Results for NO₂, PM10 and PM2.5 ($\mu\text{g}/\text{m}^3$) of the closest monitoring stations to the development. Data taken from Tables 3-4, A.6, Table A.8 in the Eastleigh Borough Council 2024 Air Quality Annual Status Report (ASR).

Site Name	NO ₂ ($\mu\text{g}/\text{m}^3$)	PM10($\mu\text{g}/\text{m}^3$)	PM2.5($\mu\text{g}/\text{m}^3$)
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	2020	2023	2020	2023	2020	2023
BOT (Non-automatic)	27.6	23.9	N/A	N/A	N/A	N/A
ES1 (SO50 5QT) (Automatic)	34.1	25.7	16.6	13.7	8.7	6.4
Shown in the green square Figure 2						

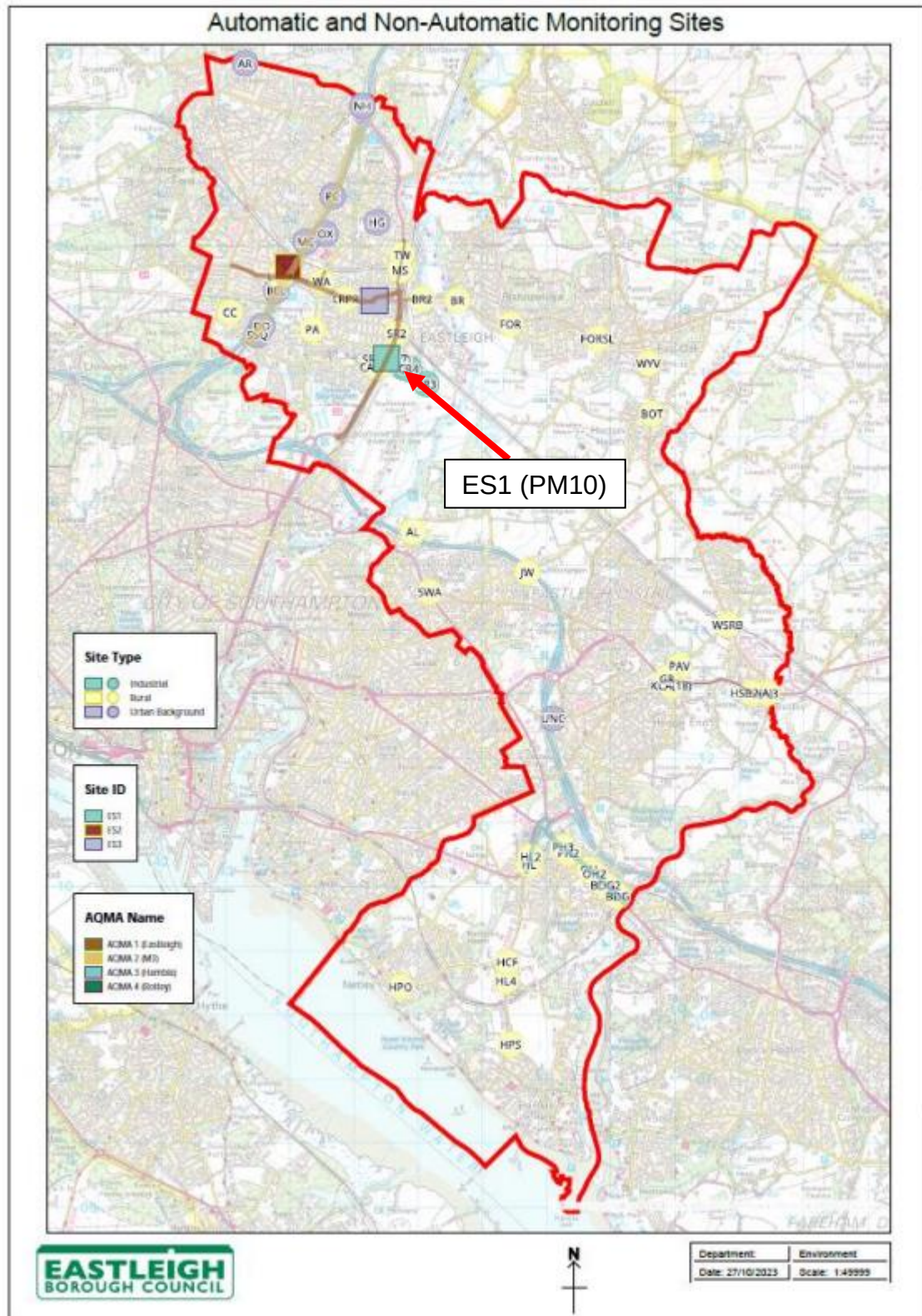


Figure 2: Taken from the LAQM Annual Status Report 2024 – Map of Automatic, Non-Automatic Monitoring Site and AQMAs across the Borough (Figure D.2)

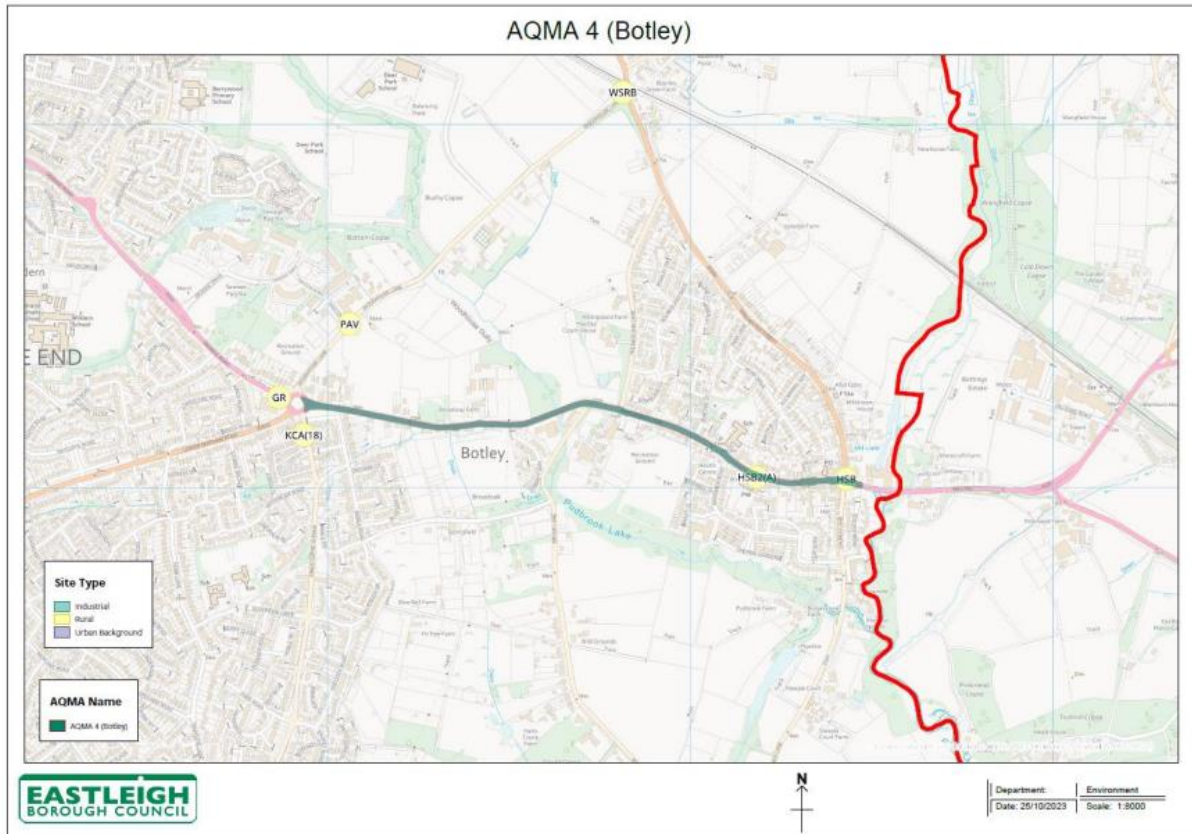


Figure 3: Taken from the LAQM Annual Status Report 2024 –High Street Botley AQMA (No4) and diffusion tube locations (Figure D.6).

5.2.2 Prevailing meteorological conditions

Depending on the strength and direction of the predominant wind, wind plays a significant influence in the long-distance dispersion of polluting particles. The prevailing wind direction is predominantly from the South-West (SW) to North-East (NE) as shown within Figure 4 below. Therefore, in the event of any dust emissions from site, the receptors most likely to be impacted are those immediately north/north-east. This means any dust arisings are less likely to impact the AQMA and Botley town centre. The industrial area off Hillson's Road including Botley Station shall be more likely to be impacted should not dust mitigation be utilised.

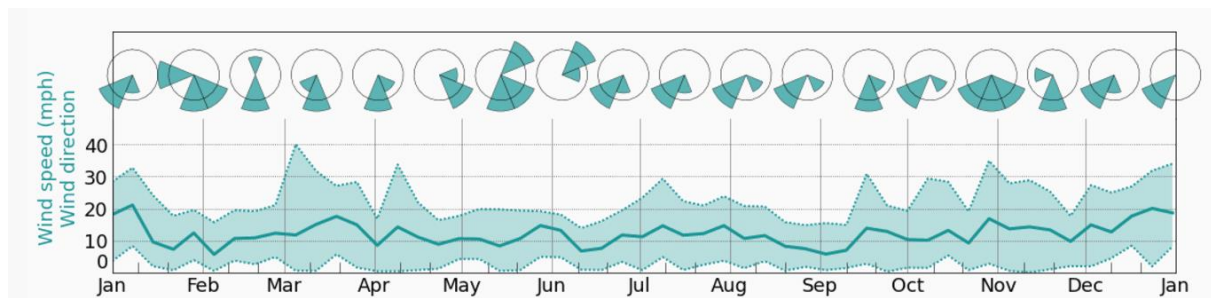


Figure 4: Wind rose based on Botley readings from Meteoblue website showing average wind direction and speed in 2023.

The local rainfall is greatest between the months of October to January, however significant precipitation occurred between the months of March to May (Figure 5).

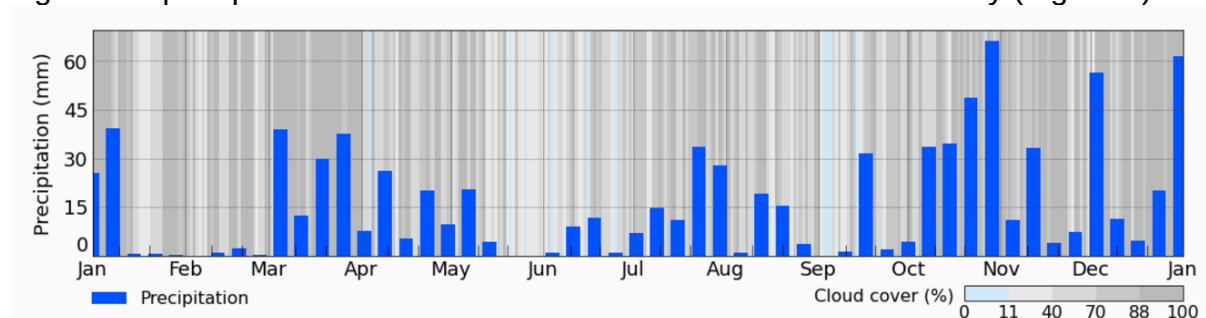


Figure 5: Precipitation based on Botley readings from Meteoblue website showing average precipitation throughout 2023.

5.2.3 Topography

Works are largely taking place across farmland north of Botley. The land is relatively flat, with a gentle sloping gradient down towards the River Hamble where the works will cross. The river itself provides a natural dust barrier through the number of mature trees and scrub making up habitat either side of the River. Some of the trees will be impacted by the works, however, this is not likely to cause great impact to this existing barrier. The line of trees and hedge running either side of the railway north of the site also provides a natural barrier for any dust moving northwards from the works.

Finally, a large amount of development has taken place both to the west and east of the site as part of the Botley upgrades. Some of these developments are expected to still be in the construction phase when works on the Bypass commence which may result in sections of unvegetated, bare ground along the developments borders.

5.3 Staff, Welfare and Operating Hours

The site will begin operating May 2025, with advance vegetation clearance likely to start February 2025. The project is predicted to be completed in May 2027. Works will be completed throughout the year in dry and wet conditions. Hours of operation shall be Monday to Friday 0800-1800 and Saturday 0800-1300.

5.4 Site layout and access

The security of a site is important, not only for the protection of the environment, but to prevent unauthorised access and pollution prevention. Heras fencing will be installed around the entirety of the site perimeter throughout the duration of the works. During out of hours, holiday or non-working periods only permitted key holders will be able to grant access to the site. Access controls are managed by the Project and Works Manager.

In daytime hours the site has sufficient staff on site to manage access and security arrangements, preventing unauthorised access.

Vehicle access to the site will be via both Winchester Road and Station Road. Pedestrians can access the site also via Winchester and Station Road in addition to the three pedestrian footways crossing the site.

Figure 6 below shows the haul route to and from the site, alongside the compound area located at SO30 2AA.

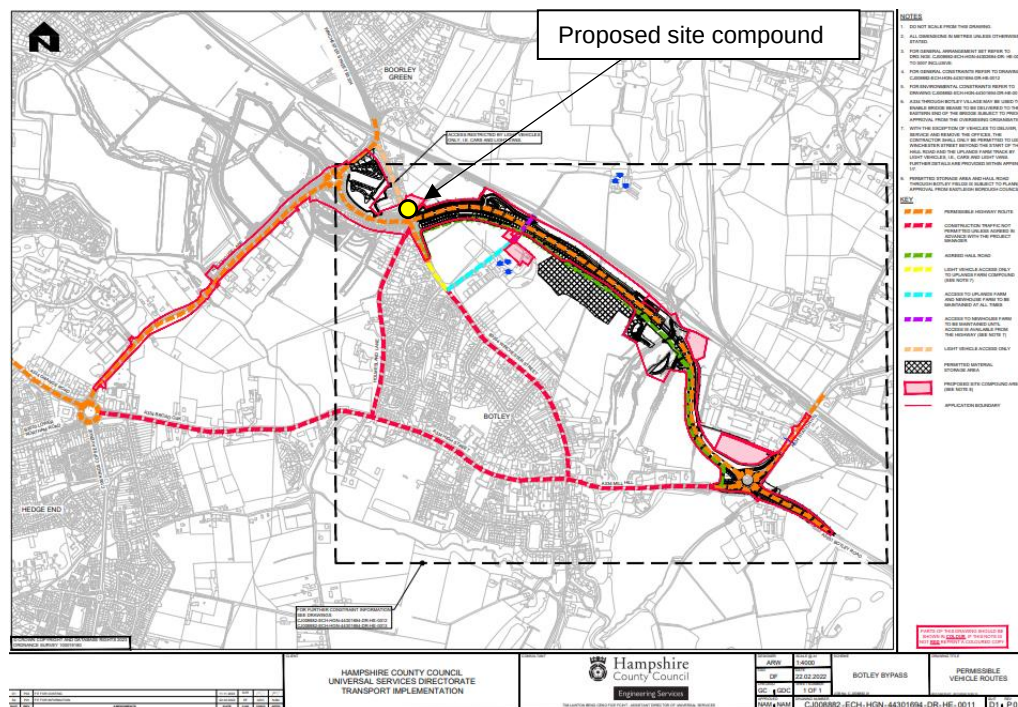


Figure 6: Proposed Haulier Routes at Botley Bypass (Phase 3).

6.0 Air Quality Dust Risk Assessment

6.1 Overview

This section sets out the risk assessment for each stage of works incorporating magnitude, sensitivity of local receptors and work activity. Both the site and compound area have been included within this assessment although no detailed modelling of emissions from onsite energy plant or road traffic emissions is required.

6.2 Assessment of Risk Methodology

In order to reflect the different potential impacts, the IAQM Guidance on the assessment of dust from demolition and construction, suggests breaking site activities into four main categories. These include:

- Demolition;
- Earthworks;
- Construction; and
- Trackout.

A risk category shall be assigned to each of the four areas assuming no mitigation is applied, except where legislation requires it. The risk shall be described as 'negligible', 'low risk', 'medium risk' or 'high risk' depending on the nature and scale of the construction activities and the proximity of sensitive receptors to the construction site boundary.

Three separate areas shall be considered during the assessment:

- The risk of health effects from an increase in exposure to PM₁₀ and PM_{2.5},
- Annoyance due to the deposition of dust; and
- Harm to the natural environment.

The steps in which with assessment shall be completed will follow the below steps in line with the IAQM Guidance (January 2024):

- Step 1: Screen the need for a detailed assessment;
- Step 2: Assess the risk of dust impacts;
- Step 2A: Define the potential dust emission magnitude;
- Step 2B: Define the Sensitivity of the area; and
- Step 2C: Define the risk of Impacts.

These steps are then followed by the site-specific mitigation and consideration of residual effects.

7.0 STEP 1: Screening the need for a detailed assessment

Initial mapping of both human and ecological receptors shows there to be a number of local receptors within close proximity to the site. These are shown in Figure 7 (human receptors) and Figure 8 (ecological receptors).

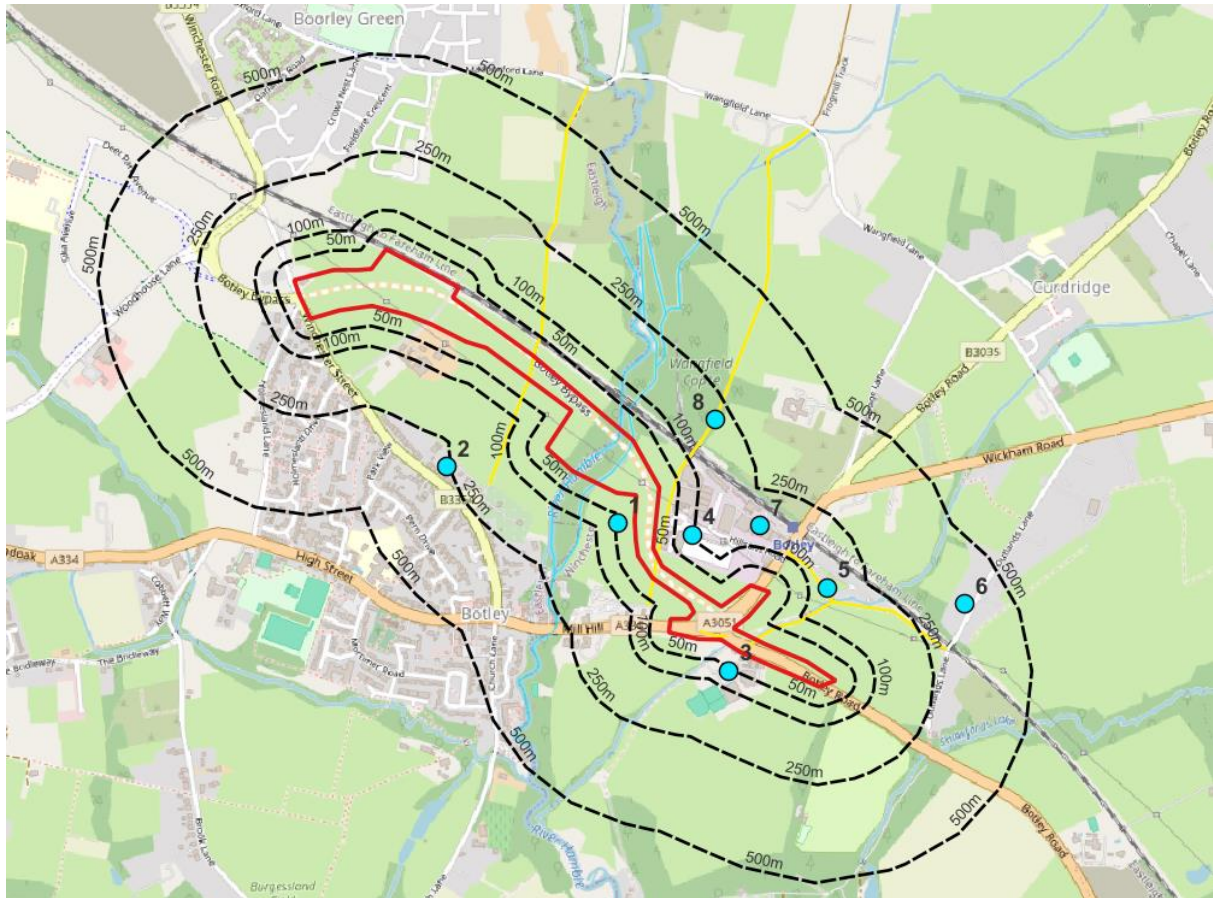


Figure 7: Sensitive human receptors (blue) within the 500m of the site.

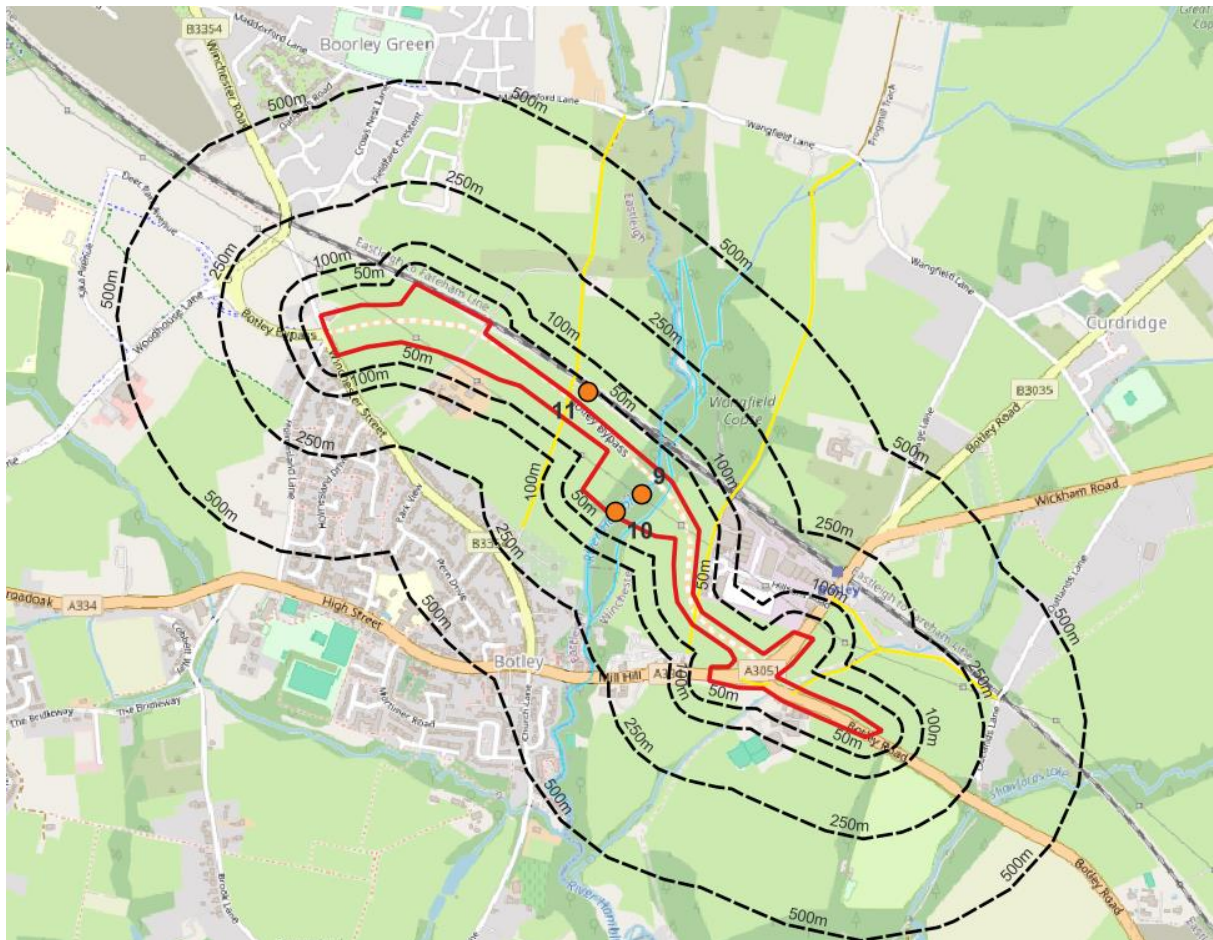


Figure 8: Sensitive ecological receptors (orange) within the 500m of the site.

A breakdown of these receptors can be found in Table 6 below.

Table 6: Showing the Annual Mean Monitoring Results for NO₂, PM₁₀ and PM_{2.5} (µg/m³) of the closest monitoring stations to the development. Data taken from Tables 3-4, A.6, Table A.8 in the Eastleigh Borough Council 2024 Air Quality Annual Status Report (ASR).

Receptor number	Human/Ecological	Description
1	Human	A new housing development is currently being constructed adjacent to the site. There is potential these may be occupied by the time works start.
2	Human	Works will be completed within 200m of residential housing within Botley, a small village to the east of Hedge End.
3	Human	Businesses including an equestrian centre operate out of Pinkmead, approximately 50m south of the works.
4	Human	Within 100m of the works boundary, a number of industrial units operate including an industrial park to the north-east of works.
5	Human	Residential housing approximately 200m north-east of the site.

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6	Human	Residential housing approximately 400m north-east of the site.
7	Human	Botley Train Station is located approximately 100m north of the area of works.
8	Human	Three Public Right of Way routes run through the site which will be impacted by the works. Walkers on the routes may be receptors of any dust within or outside of the site's boundaries.
9	Ecological	The River Hamble supports a large array of wildlife from fish, invertebrates, commuting and foraging bats.
10	Ecological	The woodland either side of the River Hamble supports bats, reptiles, and nesting birds.
11	Ecological	The hedge line along the railway line is likely to provide habitat for a number of species and commuting/foraging habitat for bats.

Due to the presence of sensitive receptors within 50m of the site, a detailed assessment is required.

8.0 STEP 2: Assess the Risk of Dust Impacts

The risk of dust arising in sufficient quantities to cause annoyance is determined using four risk categories: negligible, small, medium and high. A Site is allocated to a risk category based on two factors:

- The scale and nature which determines the dust emission magnitude (Step 2A); and
- The sensitivity of the area to dust impacts (Step 2B).

Step C shall combine the risk levels of both Step 2A and Step 2B to determine the overall risk category for the four potential activities as outlined in section 6.2 (demolition, earthworks, construction, and trackout).

9.0 STEP 2A: Define the Potential Dust Emission Magnitude

The table below sets out the criteria for dust emission magnitude as described within the Guidance on the assessment of dust from demolition and construction IAQM Guidance (January 2024).

Table 7: Criteria for dust emission magnitude. Text shown in bold are areas most relevant to Botley Bypass (Phase 3).

Source	Large	Medium	Small
Demolition	• Total volume of building to be demolished >50,000m³, or • Potentially dusty construction material (e.g., Concrete), or on-site crushing and screening, or	• Total volume of building to be demolished 20,000m³ – 50,000m³, or • Potentially dusty construction material, or	• Total volume of building to be demolished <20,000m³, or • Construction material with low potential for dust release (e.g., Metal cladding or Timber), or

	• Demolition activities >20m above ground level;	• Demolition activities 10-20m above ground level	• Demolition activities <10m above ground demolition during wetter months.
Earthworks	• Total site area >10,000m² • Potentially dusty soil type (e.g., Clay, which will be prone to suspension when dry to due small particle size), or • >10 heavy earth moving vehicles active at any one time on site, or • Formation of stockpile enclosures >8m in height; • Total material moved >100,000 tonne (where known).	• Total site area 2,500m² – 10,000m², • Moderately dusty soil type (e.g., Silt), or • 5-10 heavy earth moving vehicles active at any one time, or • Formation of stockpile enclosures 4m – 8m in height, or • Total material moved 20,000 tonnes – 100,000 tonnes (where known).	• Total site area <2,500m², or • Soil type with large grain size (e.g., Sand), or • <5 heavy earth moving vehicles active at any one time, formation of stockpile Enclosures <4m in height, or • Total material moved <10,000 tonnes (where known), or earthworks during wetter months.
Construction	• Total building volume >100,000m³, or • Piling, or • On site concrete batching; or • Sandblasting	• Total building volume 25,000m³ – 100,000m³, or • Potentially dusty construction material (e.g., concrete), or • On-site concrete batching;	• Total building volume <25,000m³, or • Construction material with low potential for dust release (e.g., metal cladding or timber)
Trackout	• >50 HDV (>3.5t) outward movements in any one day, • Potentially dusty surface material (e.g., high clay/silt content), • Unpaved road length >100 m;	• 10-50 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 (high clay content);	• <10 HDV (>3.5t) trips in any one day, • Surface material with low potential for dust release, • Unpaved road length <50m

Based on the criteria outlined in the above table, the magnitude of dust emissions generated by the Site are detailed in the Table 8 below.

Table 8: Dust emission magnitude from Botley Bypass (Phase 2) works.

Source	Assessment	Potential Dust Emission estimate based on criteria
Demolition	Limited demolition to be completed, however concrete and other potentially dusty materials will be used as part of construction. This has been included in the construction magnitude risk below.	Medium
Earthworks	The site area is >150,000m ² and involves a large amount of earth works. The earth shall be used where possible on site under a Materials Management Plan.	Large
Construction	Use of concrete and piling during the rebuild stage has the potential to cause dust.	Large
Trackout	Due to the large amount of earthworks and unpaved surface is likely to be present across a large portion of the site. Waste and materials will need to be tracked across site due to the scale and nature of the works.	Large

10.0 STEP 2B: Define the Sensitivity of the Area

The sensitivity of an area to both humans and local ecology takes account of a number of factors including:

- The specific sensitivities of receptors in the area (a);
- The proximity and number of those receptors (b);
- In the case of PM₁₀, the local background concentration (c); and
- Site-specific factors, such as whether there are natural shelters, such as trees or other vegetation, to reduce the risk of wind-blown dust (d).

Examples of Factors Defining Sensitivity of an Area are shown in Table 9 below from the IAQM Guidance (January 2024) **(a & b)**.

Table 9: Examples of Factors Defining Sensitivity of an Area. Text shown in bold are options areas most relevant to Botley Bypass.

Receptor sensitivity	Sensitivity of People to Dust Soiling Effects	Sensitivities of People to the Health Effects of PM ₁₀	Sensitivities of Receptors to Ecological Effects
High	• Users can reasonably expect an 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. • Indicative examples include dwellings, museums and other culturally important collections, medium and long term car parks and car showrooms.	• Locations where members of the public are exposed over a time period relevant to the air quality objective for PM₁₀ (in the case of the 24-hour objectives, a relevant location would be one where individuals may be exposed for eight hours or more in a day). • Indicative examples include residential properties. Hospitals, schools and residential care homes should also be considered as having equal sensitivity to residential areas for the purposes of this assessment.	• 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 such as vascular species included in the Red Data List for Great Britain. • Indicative examples include a Special Area of Conservation (SAC) designated for acid heathlands or a local site designated for lichens adjacent to the demolition of a large site containing concrete (alkali) buildings.
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, aesthetic or value of their property could be diminished by soiling; or • The people or property would not reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land; • Indicative examples include parks and places of work	• Locations where the people exposed are workers, and exposure is over a time period relevant to the air quality objective for PM₁₀ (in the case of the 24- hour objectives, a relevant location would be one where individuals may be exposed for eight hours or more in a day). • Indicative examples include office and shop workers but will generally not include workers occupationally exposed to PM₁₀, as protection is covered by Health and Safety at Work legislation.	• Locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown; or • Locations with a national designation where the features may be affected by dust deposition. • Indicative example is a Site of Special Scientific Interest (SSSI) with dust sensitive features.
Low	• The enjoyment of amenity would not reasonably be expected; or	• Locations where human exposure is transient.	• Locations with a local designation where the features may be affected by dust deposition.

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	• Property 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. • Indicative examples include playing fields, farmland (unless commercially sensitive horticultural), footpaths, short-term car parks and roads.	• Indicative examples include public footpaths, playing fields, parks and shopping streets	• Indicative example is a local Nature Reserve with dust sensitive features
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As described within Section 7, the type of receptors for this project are largely residential properties and business, pedestrians, and ecological receptors such as bats, nesting birds and fish along the River Hamble.

Local background PM₁₀ concentrations (c)

As stated within Section 5.2.1, the best idea we currently have for PM₁₀ and PM_{2.5} local levels are 13.7µg/m³ and 6.4µg m-3 accordingly, observed in 2023 from ES1. These levels fall under UK Air Quality Objective of 40 µg/m³ for PM₁₀ and under 25 µg /m³ for PM_{2.5} within Eastleigh Borough therefore, the annual objective was achieved in 2023. Please note that these records are taken from ES1 monitoring station which is approximately 7.8km northwest of the site. For this reason, additional baseline records will need to be taken prior to works starting as discussed in Section 12.3.3.

Site-specific factors, such as whether there are natural shelters, such as trees or other vegetation, to reduce the risk of wind-blown dust (d)

Works shall be completed throughout the year in both wet and dry conditions. During summer, dense foliage from the mature trees lining the River Hamble will create a natural screen for dust and particulate matter. Understory scrub will provide some shelter throughout the year. This shall help protect residents and businesses to the east / northeast of the site when the prevailing dominant wind direction is from the southwest. This is particularly relevant for the new housing development being created immediately east of the River Hamble (Recpetor #1).

Additionally, to the north of the site, a line of trees and hedge create a natural corridor either side of the railway line running west to east. This shall help to provide dust protection for businesses and residents north of the site. There are several other hedgerows and lines of trees that create a natural shelter around the works as depicted in Figure 9 below. This also includes the compound to the northwest of the side which is surrounded by hedges to the south and east.

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The area with the least protection is directly south of the sites boundary, when works are commencing in the west section of the site. Extra consideration shall be given to wind direction during this phase of works.



Figure 9: Annotated aerial image (Google Maps) of the woody vegetated areas (shown in yellow) providing natural shelters and reducing the risk of wind-blown dust. The redline shows the site boundary.

Site sensitivity analysis

Based on the site information and the IAQM Guidance (January 2024) criteria, the area sensitivity to dust soil effects on people and property is **Medium**, as seen in the table below.

Table 10: Sensitivity of the area to dust soil effects on people and property taken from Table 2 of the IAQM Construction Dust Guidance. Bold text highlights the relevant sensitivities for Botley Bypass (Phase 3).

Receptor Sensitivity	Number of Receptors	Distance from the source (m)			
		<20	<50	<100	<350
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

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Based on the site information and the IAQM Guidance (January 2024) criteria, the area sensitivity of the area to human health impacts is **Low**, as seen in the table below.

Table 11: Sensitivity of the area to human health impacts taken from Table 3 of the IAQM Construction Dust Guidance. Bold text highlights the relevant sensitivities for Botley Bypass (Phase 3).

Receptor Sensitivity	Annual Mean PM ₁₀ concentration	Number of Receptors	Distance from the source (m)			
			<20	<50	<100	<250
High	>32µg/m3	>100	High	High	High	Medium
		10-100	High	High	Medium	Low
		1-10	High	Medium	Low	Low
	28-23µg/m3	>100	High	Low	Medium	Low
		10-100	High	Medium	Low	Low
		1-10	High	Medium	Low	Low
	24-28µg/m3	>100	High	Medium	Low	Low
		10-100	High	Medium	Low	Low
		1-10	Medium	Low	Low	Low
	<24µg/m3	>100	Medium	Low	Low	Low
		10-100	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
Medium	>32 µg/m3	>10	High	Medium	Low	Low
		1-10	Medium	Low	Low	Low
	28-23µg/m3	>10	Medium	Low	Low	Low
		1-10	Low	Low	Low	Low
	24-28µg/m3	>10	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
	<24µg/m3	>10	Low	Low	Low	Low
		1-10	Low	Low	Low	Low
Low	-	>1	Low	Low	Low	Low

Based on the site information and the IAQM Guidance (January 2024) criteria, the area sensitivity to ecology is **Medium**, as seen in the table below.

Table 12: Sensitivity of the area to ecological impacts taken from Table 4 of the IAQM Construction Dust Guidance. Bold text highlights the relevant sensitivities for Botley Bypass (Phase 3).

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

The overall sensitivity of the area to effects caused by construction activities based on the criteria presented above is summarised in the table below.

Table 13: Botley Bypass (Phase 3) areas of sensitivity summary.

Activity	Dust soiling		Human effects of PM ₁₀		Ecological impact	
	Sensitivity	Comment	Sensitivity	Comment	Sensitivity	Comment
Demolition	Medium	The sites boundary is located predominately within an agricultural	Low	Background annual mean PM ₁₀ concentration on site is less than	Medium	The River Hamble runs through the site with a number of trees and

Earthworks	Medium	setting with a number of natural barriers.	Low	24µg/m³(a). There are 0-10 sensitivity receptors (residential dwellings) less than 20m from the proposed site boundary	Medium	riparian vegetation present creating suitable habitats for protected species.
Construction	Medium	0-10 high sensitivity receptors (residential dwellings) are located less than 20m from the proposed site boundary when the new development commences.	Low		Medium	Although the site does not fall within a designated area, ecological surveys have confirmed the presence of numerous protected species on and near site.
Trackout	Medium		Low		Medium	

11.0 STEP 2C: Define the Risk of Impacts

Based on the site information and following the IAQM Guidance (January 2024) document, the overall risk of receptors to dust soiling effects, PM₁₀ effects, and ecological impacts are presented in the table below.

The risk of human effects from PM₁₀ is considered to be low providing best practices are followed. The larger risk to humans is from the presence of dust particularly during the earthworks, construction and track out operations. Due to the presence of natural barriers and the limited human proximity within 20m of the site, dust soiling is expected to be a medium risk. Additionally, due to the presence of protected species on site and quality habitat, ecological impact risk from dust is also thought to be medium during all stages apart from demolition. These areas shall be mitigated as part of the control measures set out in Section 12.0.

Table 14: Summary dust risk table to define site-specific using Tables 6-9 of IAQM Construction Dust Guidance.

Activity	Dust soiling	Human effects of PM ₁₀	Ecological impact
Demolition	Medium	Low	Medium
Earthworks	Medium	Low	Medium
Construction	Medium	Low	Medium
Trackout	Medium	Low	Medium

12.0 Dust and Emission Control Mitigation Measures

In order to alleviate the medium risk of dust on local residents and ecology, the below mitigations have been proposed. In line with the IAQM Guidance (January 2024), the following provisions have been divided into general procedures applicable to all site

works, and measures specifically applicable to demolition, earthworks, construction and trackout.

12.1 General Provisions

Industry best practices shall be implemented at all times to minimise dust emissions. The following general procedures should take place:

- The DMP shall be accessible and effectively communicated to all stakeholders on site.
- All relevant stakeholders will undergo appropriate training in line with dust mitigation methods outlines within this document.
- Good housekeeping procedures will be implemented and effectively managed to ensure limitation of dust and air pollution.
- Controls to mitigate dust and air pollution outlined in this document will be adhered to during the entire projects lifespan.

12.2 Site management

12.2.1 Stakeholder Engagement

- Signage shall be displayed on public noticeboards describing the progress on site and explaining the reason for any activity that has the potential to cause nuisance for locals including dust. This shall be regularly updated and will include a contact number for the community liaison officer.
- A complaints system shall be available to all members of the public with the number available on the sites boundaries. All complaints shall be responded to and recorded in a central log. These will be made available to the local authority where requested.
- Where there is a risk of cumulative effects such as works on the housing development southeast of the site within the same timeframe, contact will be made with any other developer/site team to ensure that dust movement between sites is mitigated.

12.2.2 Site Inspections

- The Site Management Team and Environmental Advisor will undertake regular inspections to assess and inspect environmental compliance.
- All inspections will be completed, and findings recorded using the Health Safety Environment Inspection template on Procore.
- Any non-conformances will be shared with the site team and client if requested.
- The Environmental Advisor will complete joint inspections with the client where requested.
- The frequency of site inspections will be increased when activities with a high potential to produce dust and emissions are being carried out, and during prolonged dry or windy conditions.

12.3 Preparing and maintaining the site

12.3.1 Site Layout

- A site layout plan will be developed indicating the locations of the main dust causing activities with regards to the most sensitive receptors identified in Figures 7 and 8. The plan will be accessible to all contractors.
- The works will be planned so where practicable, works causing the largest amount of dust pollution will be completed away from sensitive receptors.
- The main contractors will also use appropriate methods, such as the erection of barriers along the site boundary, where appropriate, to mitigate the spread of dust to local residents and ecological receptors.
- The compound layout will be designed to mitigate dust as much as possible. This will largely be preventing waste from escaping (see Section 12.7) and keeping the topsoil bund covered or self-seeded to ensure it does not increase the risk of dust to nearby receptors.

12.3.2 Site Maintenance

- Mud tracked onto the highway will be avoided as reasonably practicable it can lead to dust when dry and can also pollute local waterways and sewers.
- All fencing, barriers and scaffolding should be regularly cleaned using wet methods, where possible to prevent re-suspension of particulate matter.

12.3.3 Monitoring

Environmental monitoring stations to continuously monitor dust shall be erected in approximately five locations surrounding the sites boundary. As shown in Figure 9 below, these locations have been selected to be within close vicinity to sensitive receptors and ensuring an accurate understanding of the risks of dust to local receptors. A short explanation for these locations has been provided in Table 15. Please note that the location of these monitors may change dependant on baseline data results.

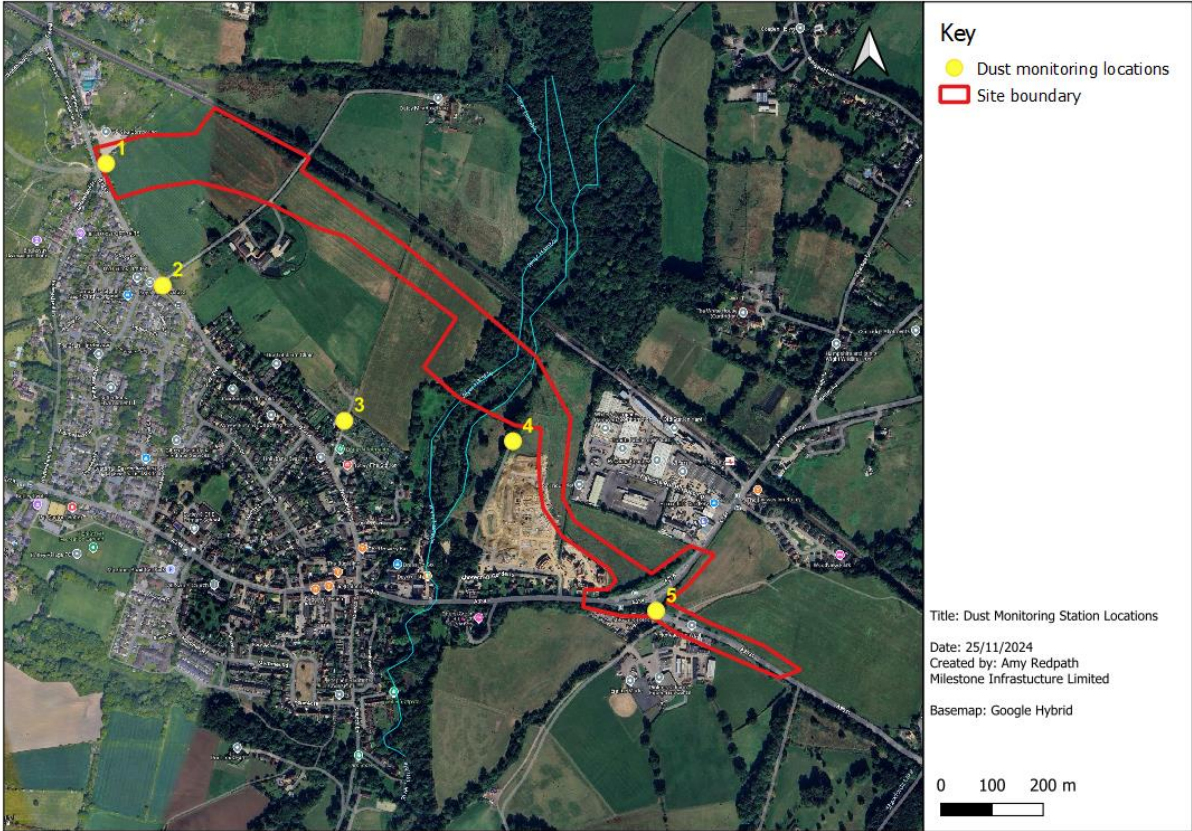


Figure 9: Approximate locations of the dust monitoring stations at Botley Bypass (Phase 3).

Table 15: Reasoning for the approximate locations of the dust monitoring stations at Botley Bypass (Phase 3).

Location Number	Approximate location	Reasoning
1	Immediately south of the proposed compound area at the SO30 2AA postcode.	This monitor will pick up any excess dust being transported within the compound area before it reaches the residential housing directly south of the compound on the opposite site of the carriageway.
2	On B3354 opposite Holmesland Drive.	This monitor shall provide a warning for any dust moving south from the site towards the residential housing along the B3354 to the north of Botley.
3	On the northern corner of the Botley Allotments (SO30 2ED).	Apart from the housing development being built to the southeast of the site, this location is the closest point in which residents currently reside.
4	The closest point to the River Hamble on the new housing development off Sherecroft Gardens.	This location will notify the site team of any dust moving towards the new housing development as well as the local ecology along the River Hamble.
5	On the southern side of the Mill Hill and A3051 junction near Pinkmead.	This shall identify any dust moving southeast across the site towards the most southern point of the sites boundary near Pinkmead. The specific location will be determined at a later date as with the above monitors; however, this one will likely need to be on Highways land.

Baseline Monitoring

Due to the lack of data for PM₁₀ across Eastleigh Borough, particularly within the local vicinity of the site, it is prudent to complete baseline monitoring prior to works

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commencing from the same locations identified in Figure 9 above. It is recommended that the monitoring stations should be set out three months prior to the construction phase of works to establish a base level of dust within the work environment.

Trigger Levels

The preferred monitoring stations will be continuous, automatic monitors which will trigger an alert to the site team via automatically generated emails and/or texts when the dust is nearing a limit. The trigger levels shall be as specified in Table 16 below.

Table 16: Dust trigger levels at Botley Bypass (Phase 3).

Location Number	Nearing breach alert trigger	Breach alert trigger
PM ₁₀	40	50
PM _{2.5}	20	25

Additional Monitoring

To supplement the particulate monitoring, the Project Manager will ensure that regular visual inspections are made across the site and its perimeter on a daily basis in order to identify any increases in dust.

The Project Manager is responsible for onsite monitoring and recording. However, this can also be completed by trained personnel. The inspections will focus on:

- Monitoring for conditions likely to increase the risk of dust release.
- Visual assessment of any dust release.
- Monitoring of any visible surface soiling.

The results of these inspections shall be recorded in the site diary. This will include both the prevailing conditions at the time of the observation (weather and nature of activity), and location of any visual increases in dust.

If visual dust monitoring around the perimeter of the site indicates a problem or the dust monitors are triggered, the contractor will respond as follows:

1. STOP work and contact Site Agent/Project Manager immediately.
2. Damp down working area before recommencing work.
3. Review working methods to ensure best practicable means are being used.
4. Review weather forecasts to confirm whether additional control measures are required.
5. Record on Optimus reporting system. All incidents are investigated, and appropriate corrective action taken.

Visual monitoring during periods of wet conditions, i.e. during precipitation, when the risk of fugitive emissions is lowest will not be necessary, although daily inspection of the public highway in the vicinity of the junction with the site access road will continue to ensure that any deposits of mud and debris are promptly cleared.

Should dust be released to the surrounding environment as a result of a particular activity, control measures would then be reviewed, and corrective measures applied until the dust levels return to normal. The activity will be reviewed in order to prevent re-occurrence.

12.3.4 Dealing with spillages

- All site staff will receive a toolbox talk on the spill response and incident reporting procedure prior to commencing work onsite.
- Any fuels, oils or hazardous materials will be appropriately stored and kept in bunded areas to prevent pollution of surface and ground waters.
- Spill kits will be provided on site for the duration of the works and construction staff trained in their correct application.
- Static plant equipment such as compressors, generators, and tower lights will be equipped with drip trays.
- Management of spillages are set out within the Botley Bypass Environmental Emergency Response Plan (Appendix within the CEMP).

12.4 Reducing Emissions from vehicles

- The Construction Traffic Management Plan (CTMP) details the transport to and from site including delivery schedules, timings and locations for unloading. The Plan aims to minimise queuing traffic.
- To limit emissions from plant and vehicles on site, the following measures will be implemented:
 - All vehicles and plant will be switched off when not in use
 - To limit emissions from construction equipment such as generators, where reasonably practicable, the use of diesel or petrol-powered generators will be reduced by using mains electricity, solar, or battery powered equipment.
 - Construction plant and vehicle exhausts should be directed away from the ground and be positioned at a height to facilitate appropriate dispersal of exhaust emissions.
 - Where suited to the vehicle, all non-road mobile machinery will use HVO fuel where possible.
 - Latest machinery models with suitable aftertreatment systems will be used where appropriate.

12.5 Reducing dust from plant, vehicles, and machinery

- Plant will be operated and maintained in accordance with the manufacturer's written recommendations.
- Vehicle, plant, and equipment maintenance records will be kept on site, and made available when requested.
- The speed limit on site will be set to 15mph across the majority of the site or 5mph in congested or sensitive areas. During the drier summer months speed limits may be further reduced to minimise dust accumulation.

- Where reasonable to enable operations to be effectively completed, the movement of plant and on-site vehicles shall be kept to a minimum.
- Construction plant will operate away from sensitive receptors where possible.
- On-site plant will be chosen carefully to avoid plant that are likely to generate excessive quantities of dust. Should this be unavoidable enclosing, shielding or provision of filters will be employed.

12.6 Operations

12.6.1 Drilling

- Where appropriate dust will be extracted at source through fitted dust suppression or vacuum to prevent exposure of workers to excessive dust inhalation;
- Where appropriate the exposed surface area that is being drilled will be watered down to limit dust emissions as necessary;
- If necessary, drilling activities likely to cause a risk of dust pollution, shielding or a barrier may be created around the area to minimise any airborne particles from leaving the immediate area.

12.6.2 Other

- Use cutting, grinding, or sawing equipment only if it is equipped with appropriate dust suppression techniques, such as water sprays or local extraction systems like suitable local exhaust ventilation
- Ensure there is an adequate water supply on-site for effective dust or particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- Utilise enclosed chutes and conveyors, and cover skips.
- Minimise drop heights from conveyors, loading shovels, hoppers, and other loading or handling equipment, and use fine water sprays on such equipment whenever appropriate.
- Ensure that equipment is readily available on-site to clean any dry spillages. These should be cleaned using wet cleaning methods and as soon as reasonably practicable after they occur.

12.7 Transportation, storage and handling of materials and wastes

To limit dust pollution through the storage and transportation of material and waste, the following measures will be taken as appropriate:

- Where waste has been produced, this will be removed from site as soon as possible.
- No burning of any material is permitted on-site.
- Vehicles transporting materials within or outside the construction site will not be overloaded.

- Where possible, storage of stockpiles and bunds are to be kept away from sensitive receptors including site boundaries, watercourses and drainage and should take into account the predominant wind direction.
- Stockpiles, mounds and bunds will be kept at a suitable angle and shape to avoid material slippage.
- Surfaces of long-term stockpiles that present a risk of dust or air pollution, will be stabilised or be covered with appropriate sheeting or kept watered down
- Fine dry material will be stored inside buildings or enclosures.
- Mixing of large quantities of concrete or other powdered materials and slurries are to be completed within a sheltered area away and from sensitive receptors where possible.
- Mixing powdered materials such as concrete will be completed using a process suitable for the prevention of dust emissions.
- Waste skips must sufficiently hold all waste and should remain level with the top of the skip. No waste should overflow the skip.
- Materials will not be accepted, nor should any further exaction be completed under the following circumstances:
 - If there is insufficient storage capacity within the waste storage area.
 - If there are extreme weather conditions, such as site flooding,
 - Abnormal site conditions preventing normal working
- During prolonged dry or excessively windy condition the disposal frequency from site to third party may be increased
- Site perimeter fencing/sheeting will be erected if necessary, behind and/or around the perimeter of stockpiles to capture any airborne debris, dust and particulates prior to it being dispersed off-site.

A Site Waste Management Plan has been created for Botley Bypass (Phase 3) as found within the Appendices of the CEMP.

12.8 Measures specific to demolition

Minimal demolition is required as part of the works, therefore, no specific measures beyond best practices are required.

12.9 Measures specific to earthworks

As shown in Table 14, earthworks are likely to hold the greatest risk in producing dust throughout the works. To limit dust pollution through excavations and earthworks activities, the following measures will be taken as appropriate:

- To avoid risk of run-off or dust generation topsoil will be stripped as close as reasonably practicable to the period of excavation or other earthworks activities.
- To control dust generation associated with the fall of materials drop heights from excavators to vehicles will be kept to the minimum practicable.
- Compaction of deposited materials with the exception of topsoil, as soon as possible after deposition.

- Dust suppression by spraying with water or using other appropriate measures to be used.
- Reseeding, planting or sealing of completed earthworks will be undertaken as soon as reasonably practicable following completion of the earthworks.

12.10 Measures specific to construction

Cement, sand, fine aggregates and other fine powders will be sealed after use and if necessary, stored in enclosed or bunded containers.

12.11 Measures specific to trackout

12.11.1 Haul routes

Haul routes have been developed in which movement to and from site will be completed to access the works area (Figure 6). These have been developed in line with the following measures:

- The haul route has been designed to avoid main sensitive receptors and control dust emissions as far as reasonably practicable.
- Regular inspection of haul routes will be carried out and will be cleaned as suitable to prevent trackout and suppress dust emissions.
- When required, a sweeper shall be used to ensure the public road remains dust free.

12.11.2 Wheel washing

The wheel-washing facilities will be provided at the exit points of the haul road on both the east and west sides of the site to minimise dust and air pollution. The water from this will be captured and transported off site for disposal to a correctly licenced facility. It will not enter the drainage on site.

12.11.3 Covering vehicles

Material deliveries entering and leaving the construction site will be covered by a fixed cover or appropriate sheeting suitable for the purposes of preventing materials and dust spillage.

12.11.4 Dust suppression

As discussed within Sections 12.6 and 12.9 dust suppression will be utilised where required during all stages of work. The quantity of water required for dust suppression will be monitored by the Project Manager to track the usage required.

12.12 Extreme weather conditions

In extreme weather conditions i.e., extended periods of dry weather, modification and/or stopping of operations will be implemented. The site will be shut down if

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conditions prevent normal working methods leading to an unacceptable risk, such as an increased risk of pollution from dust emission. Conditions include critical failure of the dust management measures, extreme weather conditions, or emergency situations. The Project manager will be responsible instructing site shutdown in these circumstances.

13.0 Resources

13.1 Water source

Water used for dust suppression will almost exclusively be taken through abstraction from the Hamble River through an Abstraction Licence issued by the Environment Agency.

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Appendix A – Definitions

Document Reference	Definition
Pollution	Pollution is the uncontrolled introduction of substances into the water of that are damaging to the environment.
Annoyance (dust)	Loss of amenity due to dust deposition or visible dust plumes, often related to people making complaints, but not necessarily sufficient to be a legal nuisance.
AQMA	Air Quality Management Area, declared by a local authority where its review and assessment of air quality shows that an air quality objective is likely to be exceeded.
Construction	Any activity involved with the provision of a new structure (or structures), its modification or re-furnishment. A structure will include a residential dwelling, office building, retail outlet, road, etc.
Deposited Dust	Dust that is no longer in the air and which has settled onto a surface. Deposited dust is also sometimes called amenity dust or nuisance dust, with the term nuisance applied in the general sense rather than the specific legal definition.
DMP	Dust Management Plan; a document that describes the site-specific methods to be used to control dust and air quality emissions.
Dust	Solid particles that are suspended in air or have settled out onto a surface after having been suspended in air. The terms dust and particulate matter (PM) are often used interchangeably, although in some contexts one term tends to be used in preference to the other.
Earthworks	Covers the processes of soil-stripping, ground-levelling, excavation and landscaping.
Effects	The consequences of the changes in airborne concentrations and/or dust deposition for a receptor. These might manifest as annoyance due to soiling, increased morbidity or mortality due to exposure to PM ₁₀ or PM _{2.5} or plant dieback due to reduced photosynthesis. The term 'significant effect' has a specific meaning in EIA regulations. The opposite is an insignificant effect. In the context of construction impacts any effect will usually be adverse, however, professional judgement is required to determine whether this adverse effect is significant based on the evidence presented.
Impacts	The changes in airborne concentrations and/or dust deposition. A scheme can have an 'impact' on airborne dust without having any 'effects', for instance if there are no receptors to experience the impact.
Nuisance	The term nuisance dust is often used in a general sense when describing amenity dust. However, this term also has specific meanings in environmental law: (a) Statutory nuisance, as defined in S79(l) of the Environmental Protection Act 1990 (as amended from time to time). (b) Private nuisance, arising from substantial interference with a person's enjoyment and use of his land. (c) Public nuisance, arising from an act or omission that obstructs, damages or inconveniences the rights of the community. Each of these applying in so far as the nuisance relates to the unacceptable effects of emissions.

	It is recognised that a significant loss of amenity may occur at lower levels of emission than would constitute a statutory nuisance. Note: as nuisance has a specific meaning in environmental law, and to avoid confusion, it is recommended that the term is not used in a more general sense
PM	Abbreviation for particulate matter suspended in the air. PM ₁₀ is airborne particulate matter with an aerodynamic diameter less than 10 microns (um); PM is less than 2.5gm.
Receptor	A location that may be affected by dust emissions during demolition and construction. Human receptors include locations where people spend time and where property may be impacted by dust. Ecological receptors are habitats that might be sensitive to dust.
Risk	The likelihood of an adverse event occurring.
Trackout	The transport of dust and dirt from the construction/demolition site onto the public road network, where it may be deposited and then re-suspended by vehicles using the network. This arises when heavy duty vehicles (HDVs) leave the construction/demolition site with dusty materials, which may then spill onto the road, and/or when HDVs transfer dust and dirt onto the road having travelled over muddy ground on site.