



Air Quality and Dust Management Plan

Rigeley Mews, NW10

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1. INTRODUCTION

1.1. Outline

- 1.1.1. This Air Quality and Dust Management Plan (AQDMP) has been prepared in response to one of the planning submission requirements (Planning Application Reference 2018/01943/FUL, Condition 9) set out by the London Borough of Hammersmith and Fulham (LBHF). Its objective is to ensure emissions are mitigated and minimised for the duration of the project. This management plan covers the risk assessment and mitigation measures required for the demolition and construction phases of the project at Rigeley Mews, NW10 (the Site).
- 1.1.2. The AQDMP has been prepared in accordance with the principles and requirements of *'The Control of Dust and Emissions during Construction and Demolition – Supplementary Planning Guidance (2014) Mayor of London (GLA SPG)'* and the *Institute of Air Quality Management's (IAQM) 'Guidance on the assessment of dust from demolition and construction.'*
- 1.1.3. To ensure that the document is effective as the works progress, the AQDMP will be reviewed and updated:
 - As instructed by the Project Manager; and
 - Following any changes to the scope of work that have had an impact on environmental requirements.
- 1.1.4. This document has been prepared by Picardi Architects, 119 Oxford Gardens, W10 6NE

1.2. Objectives

- 1.2.1. The purpose of this Air Quality and Dust Management Plan (AQDMP) is to:
 - Ensure compliance with all LBHF policies, including AQ principles in Planning Guidance SPD February 2018 and policy CC10 in the Local Plan;
 - Promote the use practices and plant that will limit environmental impact;
 - Provide information on the construction phase mitigation methods;
 - Improve opportunities for and encourage travel by sustainable modes and to reduce unnecessary travel; and
 - Raise awareness of the Air Quality and Dust Management Plan for staff and visitors.
- 1.2.2. In addition to the reduction of the company's carbon footprint, the contractor should expect to gain additional benefits:
 - Quality of life improvements for staff related to reduced congestion and stress and improved health and motivation
 - Demonstration to our clients and local communities our commitment to reduce the impact of travel on air quality, congestion and the reduction in the use of natural resources

1.3. Location, access and layout

- 1.3.1. The site address is Rigeley Mews, London. NW10.
- 1.3.2. The site is approximately 130m to the south of the A404 Harrow Road, and 115m to the east of A219 Scrubs Lane. It is located on the south side of Rigeley Road with Kenmont Gardens to the east, Waldo Road to the south, and Letchford Gardens to the west. All of the aforementioned roads form part of the Local Authority road network.
- 1.3.3. The vehicular site access is via Letchford Gardens, and pedestrian access is via Kenmont Gardens.
- 1.3.4. Vehicles coming from all directions will use access the site from the A219 Scrubs Lane to then Waldo Road then turn left into Letchford Gardens to enter site. Vehicles will reverse out within the site, and exist by turn right into Letchford Gardens then proceed until the junction of A404 Harrow Road. Rigeley Road and Kenmont Road will not be used for construction purposes so as to avoid the Kenmont Primary school. Pedestrian access via Kenmont Gardens will be maintained. This route can be seen in the figure below.
- 1.3.5. The site will connect to and adapt to the existing drainage system to prevent contaminated water from leaving the site.

1.4. Sensitive receptors

- 1.4.1. The site is located in a residential area with Kenmont Primary School nearby on Kenmont Road. The proposed works will aim to mitigate any negative impacts on the local community.
- 1.4.2. The Site is located within 20m of sensitive receptors, with the area predominately residential, with a mixture of town houses and apartment blocks on the surrounding roads. Kenmont Primary School is located on the opposite side of Rigeley Road to the Site is within 50m. The specific properties most likely to be affected are 12 to 45 Waldo Road, 1 to 17 Kenmont Gardens, 1 to 23 Rigeley Road, 1 to 10 Letchford Gardens. These are highlighted in the Figure below alongside Kenmont Primary School.

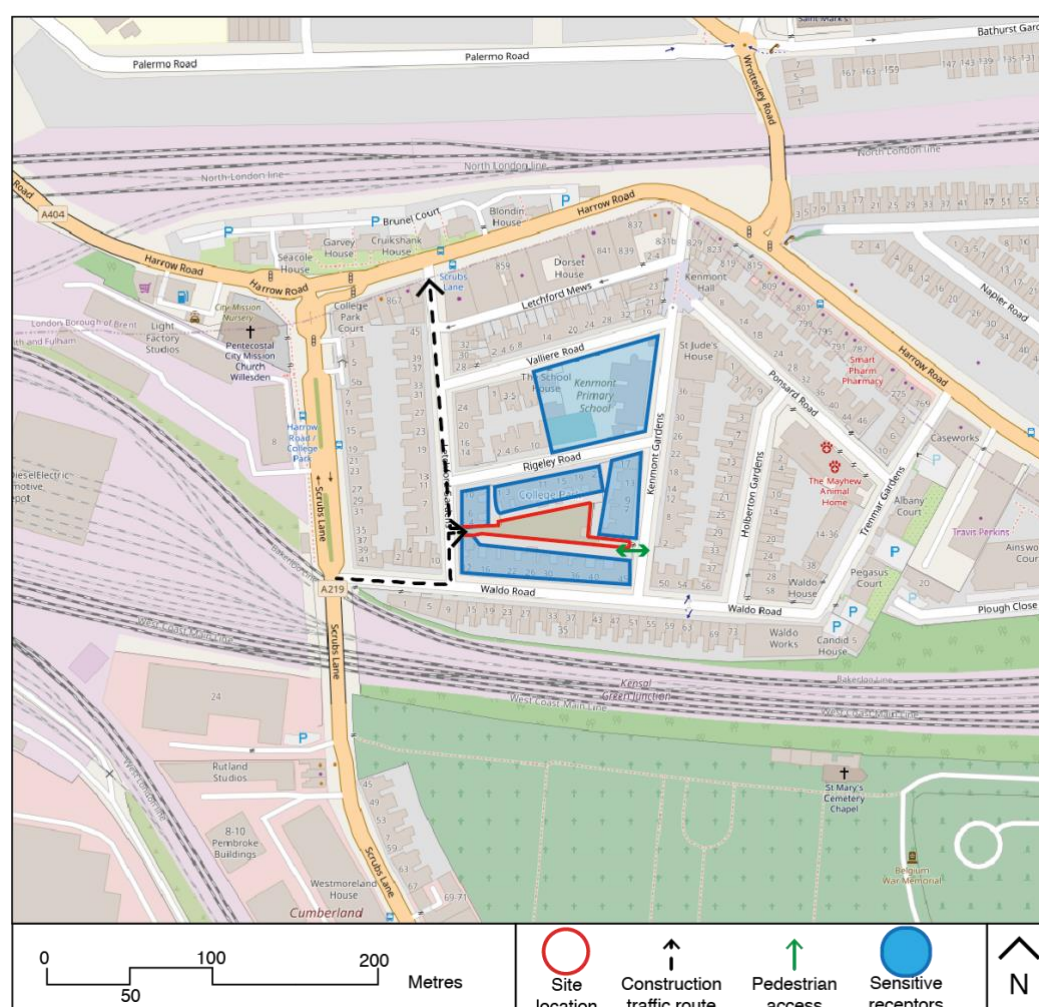


Figure 1 Location Map and Sensitive Receptor Locations

1.5. Site contacts + trained personnel

- 1.5.1. The Client has appointed Ray Property London who have considerable experience and a demonstrable track record of delivering high quality residential refurbishment projects who will accept, adopt, finalise and implement this AQDMP for the Works. This commitment will be enforced with a contractual obligation placed upon the Contractor through the Building Contract. The project manager is Michael Raileanu, who can be contacted at the following:

Ray Property Services LTD
106 Hall Lane, E4 8EU
raypropertylondon@gmail.com
07572450186

1.6. Programme

- 1.6.1. The overall duration of the Construction Works has been assessed at 65 weeks, 15 months
- 1.6.2. Works are to commence in summer 2021. Based upon construction duration of 15 months, the works will complete in autumn 2022.

Phase	Duration (Weeks)
1. Site setup	1
2. Demolition	3
3. Ground Works, Basement Excavation – Casting of concrete	25
4. Structural works / Super structure	18
5. Internal Fit-Out	18
Total	65

- 1.6.3. Following the Site Setup, Phase 2 sees the existing dilapidated structure removed in its entirety. Careful dismantling will be undertaken in order to reduce noise and dust emissions to as low as practical. Phase 3 will see a basement excavation and concrete and mortar will be delivered pre-mixed so no dust creation on Site as much as possible to reduce disturbance and emissions.

1.8. Fuel stored on site

- 1.6.4. Fuel stored on site is for the digger and machinery. It will be stored in special tanks to ensure environmental compliance with PPG2 Regulations for fuel storage.

2. AIR QUALITY STATEMENT: LEGISLATION + POLICY

2.1. Overview

2.1.1. This section summarises the relevant national legislation, policy and planning guidance in relation to air quality for the proposed development. In addition, UK regional and local planning policy guidance has been reviewed in order to identify relevant air quality policy implications related to the proposed development.

2.2. Legislation in England

2.2.1. Air Quality

The Air Quality Standards Regulations 2010⁵ came into force in June 2010; they implement the EU's Directive 2008/50/EC on ambient air quality. Part IV of the Environment Act 1995¹ requires that every local authority shall periodically carry out a review of air quality within its area, including likely future air quality. As part of this review, the authority must assess whether air quality objectives are being achieved, or likely to be achieved within the relevant periods. Any parts of an authority's area where the objectives are not being achieved, or are not likely to be achieved within the relevant period must be identified and declared as an AQMA. Once such a declaration has been made, Authorities are under a duty to prepare an Action Plan which sets out measures to pursue the achievement of the air quality objectives within the AQMA.

2.2.2. The air quality objectives specifically for use by local authorities in carrying out their air quality management duties are set out in the Air Quality (England) Regulations 2000² and the Air Quality (England) (Amendment) Regulations 2002³. In most cases, the air quality objectives are numerically synonymous with the limit values specified in the EU Directives although compliance dates differ.

2.2.3. The Environment Act also requires that the UK Government produces a national 'Air Quality Strategy' (AQS) containing standards, objectives and measures for improving ambient air quality and to keep these policies under review. Further details of the AQS are presented in Section 2.3.1.

Statutory Nuisance

Section 79(1)(d) of the Environmental Protection Act 1990⁴ defines one type of 'statutory nuisance' as "*any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance*". Where a local authority is satisfied that a statutory nuisance exists, or is likely to occur or recur, it must serve an abatement notice. Failure to comply with an abatement notice is an offence. However, it is a defence if an operator employs the best practicable means to prevent or to counteract the effects of the nuisance.

2.3. Policy

2.3.1. UK Air Quality Strategy

As described above, the Environment Act 1995 requires the UK Government to produce a national AQS. The AQS establishes the UK framework for air quality improvements. Measures agreed at the national and international level are the foundations on which the strategy is based. The first Air Quality Strategy was adopted in 1997⁵ and replaced by the Air Quality Strategy for England, Scotland, Wales and Northern Ireland published in January 2000.⁶ The 2000 Strategy has subsequently been replaced by the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007.⁷

2.3.2. The Environment Act 1995 requires that the Environment Agency has regard to the AQS in exercising its pollution control functions. Local Authorities are also required to work towards the Strategy's objectives prescribed in regulations for that purpose. The air quality objectives in the AQS are a statement of policy intentions and policy targets. As such, there is no legal requirement to meet these objectives except in as far as they mirror any equivalent legally binding Limit Values in English Regulations.

2.3.3. National Planning Policy Framework

The National Planning Policy Framework¹³ sets out government planning policies for England. With regard to air quality; Paragraph 109 states:

"The planning system should contribute to and enhance the natural and local environment by:... preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability..."

Paragraph 120:

"To prevent unacceptable risks from pollution and land instability, planning policies and decisions should ensure that new development is appropriate for its location. The effects (including cumulative effects) of pollution on health, the natural environment or general amenity, and the potential sensitivity of the area or proposed development to adverse effects from pollution, should be taken into account."

Paragraph 124: "Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan."

¹ Department for Environment Food and Rural Affairs. (2003), 'Part IV of the Environment Act 1995 Local Air Quality Management'.

² Statutory Instrument. (2000), 'Air Quality (England) Regulations', No. 928. Queen's Printer of Acts of Parliament.

³ Statutory Instrument. (2002), 'Air Quality (England) (Amendment) Regulations', No. 3043. Queen's Printer of Acts of Parliament.

⁴ Parliament of the United Kingdom. (1990), 'Environmental Protection Act', Chapter 43. Queen's Printer of Acts of Parliament.

⁵ Department for Environment Food and Rural Affairs. (March 1997), 'The United Kingdom National Air Quality Strategy', Cm 3587, Department for Environment Food and Rural Affairs.

⁶ Department for Environment Food and Rural Affairs. (January 2000), 'The Environment Strategy for England, Scotland, Wales and Northern Ireland – Working Together for Clean Air', Cm 4548, Department for Environment Food and Rural Affairs.

⁷ Department for Environment Food and Rural Affairs. (July 2007), 'The Air Quality Strategy for England, Scotland, Wales and Northern Ireland', Cm 7169, Department for Environment Food and Rural Affairs.

2.3.4. The Environment Act 1995 requires that the Environment Agency has regard to the AQS in exercising its pollution control functions. Local Authorities are also required to work towards the Strategy's objectives prescribed in regulations for that purpose. The air quality objectives in the AQS are a statement of policy intentions and policy targets. As such, there is no legal requirement to meet these objectives except in as far as they mirror any equivalent legally binding Limit Values in English Regulations.

2.3.5. **The Mayor of London's Air Quality Strategy**

The Mayor of London's Air Quality Strategy was published in December 2010.⁸ It includes policies to reduce emissions from transport, such as improvements to the London bus and taxi fleets, widening the application of Low Emission Zones, targeting air quality 'priority locations' and encouraging behavioural change to promote cycling, walking and the use of sustainable public transport. A package of non-transport policy measures is also proposed to reduce emissions to air from industry, commercial buildings and residential dwellings. These are intended to improve localised air pollution through a range of policies including reductions in construction dust and stricter control of emissions from power generation. The London Air Quality Strategy also sets out how regional and local planning processes will be used to enable future developments to be 'air quality neutral or better'.

2.3.6. **The London Plan**

The spatial development strategy for London, known as the London Plan⁹, addresses the spatial implications of the Mayor's Air Quality Strategy. In 2011, the Greater London Authority (GLA) and Mayor of London published the London Plan 2011, which replaces the previous London Plan of 2008. This is the overarching strategic plan for London, providing an integrated framework for economic, environmental, social and transport development up to the year 2031. It forms part of the wider development context for Greater London and provides the framework to which local authorities' planning policies and decisions must conform. Four sets of alterations have been made to the 2011 London Plan to update it in accordance with emerging Government guidance and legislation; in March 2016 the 'London Plan (consolidated with alterations since 2011)' was published taking account of these updates.

2.3.7. Policy 7.14 ('Improving Air Quality') of the London Plan states that development proposals should:

- Minimise increased exposure to existing poor air quality and make provision to address local problems of air quality...such as by design solutions, buffer zones or steps to promote greater use of sustainable transport modes through travel plans;
- Promote sustainable design and construction to reduce emissions from the demolition and construction of buildings following the best practice guidance in the GLA and London Councils' "The control of dust and emissions from construction and demolition";
- Be at least "air quality neutral" and not lead to further deterioration of existing poor air quality (such as areas designated as Air Quality Management Areas (AQMAs));
- Ensure that where provision needs to be made to reduce emissions from a development, this is usually made on-site. Where it can be demonstrated that on-site provision is impractical or inappropriate, and that it is possible to put in place measures having clearly demonstrated equivalent air quality benefits, planning obligations or planning conditions should be used as appropriate to ensure this, whether on a scheme by scheme basis or through joint area- based approaches;
- Where the development requires a detailed air quality assessment and biomass boilers are included, the assessment should forecast pollutant concentrations. Permission should only be granted if no adverse air quality impacts from the biomass boiler are identified.

2.3.8. The Mayor of London produces SPG to provide further guidance on policies in the London Plan. In April 2014, SPG on Sustainable Design and Construction was published. This includes a requirement that new developments in London are 'air quality neutral', meaning all major new developments must calculate the building and transport-related emissions of NOx and PM10 and compare these with a benchmark for development. The SPG on Sustainable Design and Construction also sets emission standards for solid biomass and combined heat and power (CHP) plants in London.

2.3.9. In July 2014, the Mayor published SPG on the control of dust and emissions during construction and demolition,¹⁰ which sets out measures to reduce emissions of dust, PM10 and PM2.5 associated with construction and demolition activities in London. It also aims to control nitrogen oxides (NOx) from these same activities by introducing an Ultra Low Emissions Zone (ULEZ) for non-road mobile machinery.

2.3.10 **The Mayor of London's Transport Strategy**

The Mayor's Transport Strategy (MTS) compliments the above regional policy documents by setting out policies and measures for the development of London's transport infrastructure.¹¹ It aims to promote improvements in air quality, by "reducing air pollutant emissions from ground- based transport" while enabling economic, social and environmental development. The MTS recognises that air quality in London is the worst in the country and supports the policies included in the Mayor of London's Air Quality Strategy, such as the expansion of Low Emission Zones and improvements to bus and taxi fleets.

⁸ Greater London Authority (December 2010). Clearing the Air: The Mayor's Air Quality Strategy.

⁹ Greater London Authority (March 2016). The London Plan: The Spatial Development Strategy for London (Consolidated with alterations since 2011).

¹⁰ Greater London Authority (2014). Supplementary Planning Guidance on The control of dust and emissions during construction and demolition, July 2014.

¹¹ Greater London Authority (2018). Mayor's Transport Strategy, March 2018.

2.3.11. **Hammersmith and Fulham Local Plan (2018)**

The Hammersmith and Fulham Local Plan sets the development framework for the area and was adopted in February 2018.¹² The plan contains one policy relating to air quality, this is Policy CC10 – Protecting and Enhancing Environmental Quality, replacing Local Planning Policy CC4 and DMH8 of the Core Strategy 2011. CC10 policy states:

‘The council will seek to reduce the potential adverse air quality impacts of new developments by:

- a) ‘requiring all developments which may be impacted by local sources of poor air quality or may adversely contribute to local air quality to provide an air quality assessment’ ...*
- b) ‘requiring mitigation measures to be implemented to reduce emissions’ ...*
- c) ‘requiring mitigation measures that reduce exposure to acceptable levels’...*
- d) ‘to implement proposals in the Council’s Local Air Quality Management Plan’...*

2.3.12. **Hammersmith and Fulham Air Quality Action Plan**

The Air Quality Action Plan (AQAP) for Hammersmith and Fulham was updated in 2018 and recommends actions to improve air quality within the Borough. The AQAP focuses on areas for the Council to work upon including, campaigning to the Mayor of London, Transport for London and national government to shift towards cleaner buses and taxis to run within the borough, promoting sustainable transport, to encourage the uptake of low emission vehicles along with ensuring developments and buildings are designed to manage air quality and emissions.

2.4. Summary

2.4.1. This Section has identified the legislation and policy framework relevant to the assessment. On the basis of the above, applicable numerical standards are summarised in Table 1. It should be noted that the air quality objectives only apply in locations of relevant exposure i.e. where members of the public might reasonably be exposed to pollutants for the respective averaging periods. Table 2 provides details of where the objectives should and should not apply and therefore the types of receptors that are relevant to the assessment.

¹² London Borough of Hammersmith and Fulham (2018), Hammersmith and Fulham Local Plan

3. AIR QUALITY STATEMENT B: AIR QUALITY DUST RISK ASSESSMENT

3.1. Overview

3.1.1. This section sets out the approach for the assessment of impacts on air quality during construction phase and the approach undertaken for the air quality neutral assessment for the proposed development. No detailed modelling of emissions from onsite energy plant or road traffic emissions is required.

3.2. Demolition and Construction Phase Impacts

3.2.1. Demolition and construction activities can result in temporary effects on dust. 'Dust' is a generic term which usually refers to particulate matter in the size range 1-75 microns in diameter; the most common impacts from dust emissions are soiling and increased ambient PM₁₀ concentrations. Dust can be mechanically transported either by wind or re-suspension by vehicles. It can also arise from wind erosion on material stock piles and earth moving activities. Further details on the construction dust assessment can be found below.

2.2.2. There is also the potential for Site traffic associated with the construction activities on the Site to have an effect on local pollution concentrations.

3.3. Assessment of Risk

3.3.1. The Mayor of London's 2014 Supplementary Planning Guidance, *Control of Dust and Emissions during Construction and Demolition*, recommends splitting the construction phase into four separate source categories and determining the dust risk associated with each of these individually. This assessment has determined the risk of each of the following source categories:

- Demolition;
- Earthworks;
- Construction; and
- Track out (the transport of dust and dirt onto the public road network).

3.3.2. The risk of each source for dust effects is 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. The assessment is used to define appropriate mitigation measures to reduce the level of effects such that they are not significant.

3.3.3. The assessment considers three separate effects from dust:

- Annoyance due to dust soiling;
- Harm to ecological receptors; and
- The risk of health effects due to a significant increase in exposure to PM₁₀.

3.3.4. This assessment follows the steps outlined in the Mayor's Supplementary Planning Guidance, which is as follows:

- *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.

3.4. Step 1: Screening the need

3.4.1. Step 1 of the assessment applies screening criteria to the proposed development. These are detailed below:

Table 1: Step 1 screening criteria

Type of receptor	Criteria distance	Rigeley Mews screening
<i>Human</i>	<p>Within 50m of the boundary of the site</p> <p>Within 50m of the route(s) used by construction vehicles on the public highway, up to 500m from the site entrance(s)</p>	<ul style="list-style-type: none"> - 39 adjacent residential properties - Kenmont Primary school within 50m of site to the north
<i>Ecological</i>	<p>Within 50m of the boundary of the site; or</p> <p>Within 50m of the route(s) used by construction vehicles on the public highway, up to 500m from the site entrance(s).</p>	<ul style="list-style-type: none"> - No significant receptors meet criteria

3.4.2. The Site is located within 50m of suitable receptors, namely the adjacent residential properties surrounding the Site and Kenmont Primary School. Therefore, an assessment of the likely impact of dust from the demolition, earthworks, construction, and trackout phases is required.

3.4.3. It is not considered that there is a requirement for a detailed assessment of the effects on ecological receptors as there are no notable ecological receptors with the area of influence as defined above.

3.4.4. The figure below presents the dust assessment buffers used for determining the proximity of sensitive receptors to the proposed development. There are no ecological receptors within 500m of the proposed development, therefore construction effects on ecological receptors have not been considered further.

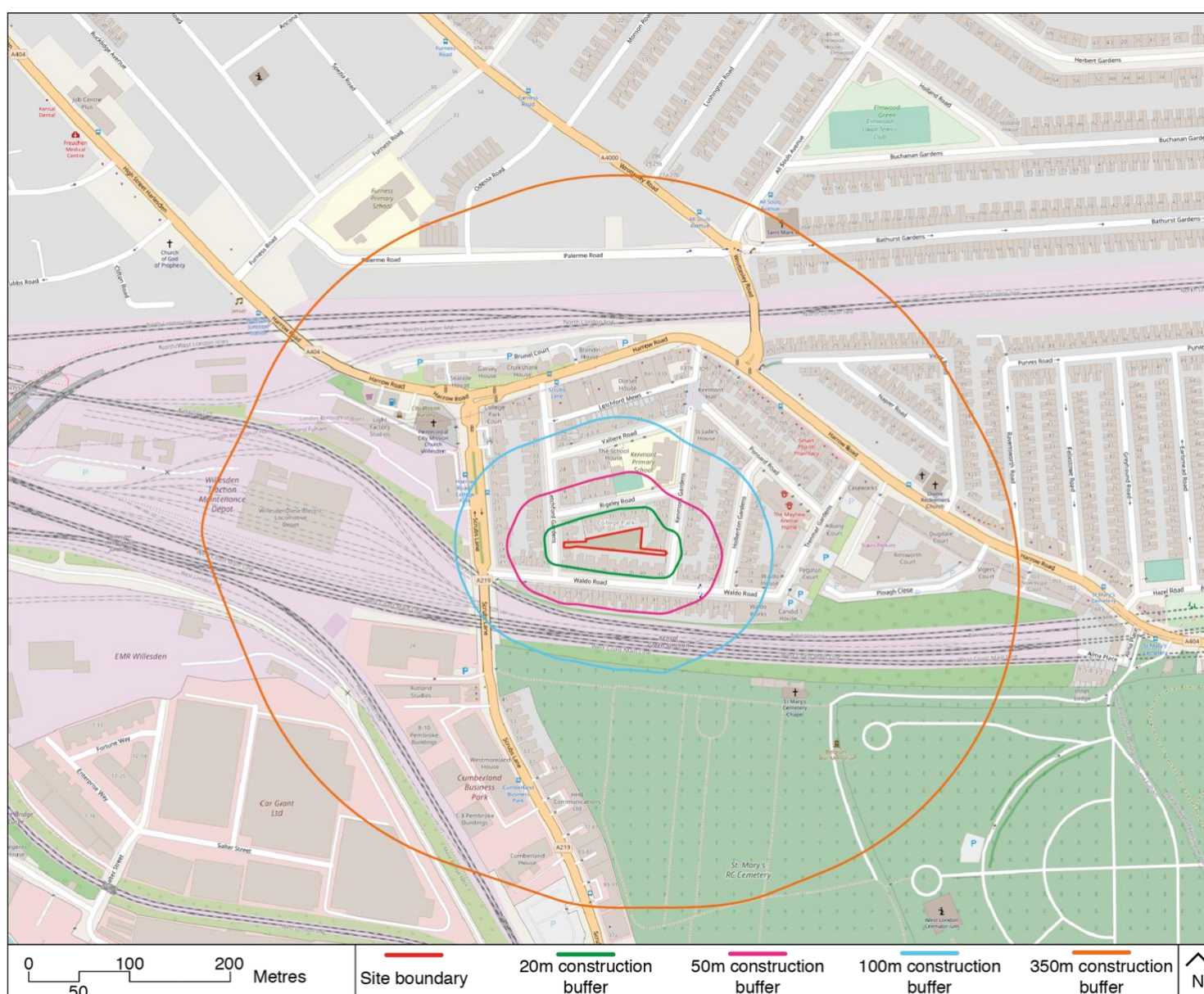


Figure 2 Construction Dust Assessment Buffers

3.4.5. **Is there a need for a detailed assessment? Yes**

3.5. Step 2: Assessing the risk of dust impacts

3.5.1. The risk of dust arising in sufficient quantities to cause annoyance is determined using four risk categories: negligible, low (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; and
- The sensitivity of the area to dust impacts.

3.6. Step 2A: Potential dust emission magnitude

Table 2: Dust - Magnitude of Emission Criteria

Source	Magnitude		
	Large	Medium	Small
<i>Demolition</i>	Total building volume > 50,000m ³ , potentially dusty construction material (e.g. concrete), on site crushing and screening, demolition activities > 20m above ground	Total building volume 20,000m ³ - 50,000m ³ , potentially dusty construction material, demolition activities 10- 20m above ground level	Total building volume <20,000m ³ , construction material with low potential for dust release (e.g. metal cladding or timber), demolition activities <10m above ground, demolition during wetter months
<i>Earthworks</i>	Total site area >10,000m 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 >8m in height, total material moved >100,000 tonnes	Total site area 2,500m ² – 10,000m ² , moderately dusty soil type (e.g. silt), 5- 10 heavy earth moving vehicles active at any one time, formation of bunds 4m – 8m in height, total material moved 20,000 tonne – 100,000 tonne	Total site area <2,500m ² , soil type with large grain size (e.g. sand), <5 heavy earth moving vehicles active at any one time, formation of bunds <4m in height, total material moved <10,000tonne, earthworks during wetter months
<i>Construction</i>	Total building volume >100,000m ³ , piling, on site concrete batching; sandblasting	Total building volume 25,000m ³ – 100,000m ³ , potentially dusty construction material (e.g. concrete), piling, on site concrete batching	Total building volume <25,000m ³ , construction material with low potential for dust release (e.g. metal cladding or timber)
<i>Trackout</i>	>100 HDV (>3.5t) trips in any one day, potentially dusty surface material (e.g. high clay content), unpaved road length >100m	25-100 HDV (>3.5t) trips in any one day, moderately dusty surface material (e.g. high clay content), unpaved road length 50m– 100m	<25 HDV (>3.5t) trips in any one day, surface material with low potential for dust release, unpaved road length <50m

Source: *The Control of Dust and Emissions during Construction and Demolition – Supplementary Planning Guidance (2014) Mayor of London (GLA SPG)* and the *Institute of Air Quality Management’s (IAQM)*

3.6.1. Based on the criteria outlined in the above table, the magnitude of dust emissions generated by the Site are estimated to be **small**. This is because the building volume to be demolished, the earthworks area, the construction volume and the trackout impacts, all fall within the small category. This is detailed in the table below:

Table 3 Assessment of dust emission magnitude

Source	Assessment	Potential Dust Emissions estimate based on criteria
Demolition	Total building volume to be demolished is 754m ³ , which is included in the 'under 20,000m ³ ' category.	Small
Earthworks	Site area is approximately 941m ² , which is included in the 'under 2,500m ² ' category	Small
Construction	Construction building volume is 2,117m ³ , which is included in the 'under 25,000m ³ ' category	Small
Trackout	The potential dust emissions for 'trackout' is assumed at less than 10 HDV movements in any one day, which is less than 25 HDV trips in any one day, the partially paved road is 22m, less than 50m	Small

3.6.2. **Potential dust emission magnitude: Small**

3.7. Step 2B: Area Sensitivity

3.7.1. The sensitivity of the area around the Site considers the following factors that are assessed below:

- a) The specific sensitivities of receptors in the area;
- b) The proximity and number of those receptors;
- c) Local background PM₁₀ concentration; and
- d) Site-specific factors such as natural shelters such as trees.

3.7.2. A + B) Specific sensitivities of receptors in the area, proximity and number

The influencing factors on receptor sensitivity are shown in the table below:

Table 4: Construction Dust - Examples of Factors Defining Sensitivity of an Area

Receptor sensitivity	Example receptors	
	Human	Ecological
High	<p>Users expect of high levels of amenity.</p> <p>High aesthetic or value property.</p> <p>People expected to be present continuously for extended periods of time.</p> <p>Locations where members of the public are exposed over a time period relevant to the AQO for PM₁₀. e.g. residential properties, hospitals, schools and residential care homes.</p>	<p>Internationally or nationally designated Site e.g. Special Area of Conservation.</p>
Medium	<p>Users would expect to enjoy a reasonable level of amenity.</p> <p>Aesthetics or value of their property could be diminished by soiling.</p> <p>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 e.g. parks and places of work.</p>	<p>Nationally designated Site e.g. Sites of Special Scientific Interest.</p>
Low	<p>Enjoyment of amenity would not reasonably be expected.</p> <p>Property would not be expected to be diminished in appearance.</p> <p>Transient exposure, where people would only be expected to be present for limited periods. e.g. public footpaths, playing fields, shopping streets, farmland, short term car parks and roads.</p>	<p>Locally designated Site e.g. Local Nature Reserve.</p>

3.7.2.1. As seen in figure 1 in the previous section, the sensitivity of the receptors is assessed based on the type of receptor, in this instance, approximately 39 residential units within 20m of the Site, and Kenmont Primary School is within 50m of the site. There are no ecological receptors within 500m of the proposed development, therefore construction effects on ecological receptors have not been considered further. In terms of the trackout, the construction traffic route passes around 50 residential dwellings within 200m of the site, going from Scrubs Lane to Harrow Road via Waldo Road and Letchford Gardens.

3.7.3. C) Local background PM₁₀ concentrations

Information on air quality within the UK is available from a variety of sources including Local Authorities, national network monitoring sites and other published sources. The primary sources of data examined in this assessment are from local authorities near the site and the Department for Environment, Food and Rural Affairs (Defra). The PM₁₀ levels captured at these sites are summarised below, all data falls under UK Air Quality Objective of 40 µg/m³ and the closest monitoring locations to the site, both in Brent, appear to correlate to the Defra projections of c.18 µg/m³.

3.7.3.1. Defra projections

Background pollutant concentrations are estimated by are estimated on a 1km by 1km grid basis across the United Kingdom to support local authorities in their air quality Reviews and Assessments. The proposed development Site is located in grid square NGR: 521600, 183800. Data for this location was downloaded from the Defra website for the purpose of the assessment and the predicted PM₁₀ annual mean during 2018 is 18.21 µg/m³. This is less than the UK Air Quality Objective of 40 µg/m³.

3.7.3.2. Local authority monitoring

LBHF undertakes automatic monitoring for NO₂ and PM₁₀. There are two automatic monitoring sites operational within the Borough in 2021, these are:

- Hammersmith Town Centre (HF5), King St, W6 9HR
- Shepherds Bush, Shepherds Bush Green, W12 8UA

There are also local monitoring sites in neighbouring London Borough of Brent, Royal Borough of Kensington and Chelsea and London Borough of Ealing, which are:

- Brent - John Keble Primary School, Manor Park Rd, London NW10 4JJ
- Brent ARK Franklin Primary Academy, London NW10
- North Kensington, St Charles Square, W10 6EE
- Ealing, Horn Lane, W3 0PH

The monitoring data from these sites is captured in the table below.

Table 5 Automatic Monitoring Data for 24 hour mean PM10 objective

Site name	Environment	Data capture 2020 (%)	Distance to Development (km)	Annual mean concentration PM ₁₀ (µg/m ³)		
				2019	2020	2021
Hammersmith Town Centre	Urban Traffic	99	4.3	22	19	21
Shepherds Bush	Urban Traffic	82	3.1	24	28	21
Brent – John Keble Primary School	Urban Traffic	97	1.1	N/A	19	18
Brent – ARK Franklin Primary Academy	Urban Traffic	98	1.3	18	18	19
North Kensington, St Charles Square	Urban Background	100	1.8	15	13	16
Ealing, Western Avenue	Urban Traffic	90	2.6	28	24	26

3.7.4. D) Site-specific factors such as natural shelters such as trees

There are no site specific factors that significantly affect area sensitivity.

3.7.5. **Site sensitivity analysis**

3.7.5.1. Based on the site information and the Mayor’s guidance criteria, the area sensitivity to dust soil effects on people and property is **high**, as seen in the table below.

Table 6 Sensitivity of the area to dust soil effects on people and property

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		Less than 20	Less than 50	Less than 100	Less than 350
High	More than 100	High	High	Medium	Low
	10 - 100	High	Medium	Low	Low
	1 - 10	Medium	Low	Low	Low
Medium	More than 1	Medium	Low	Low	Low
Low	More than 1	Low	Low	Low	Low

3.7.5.2. Based on the site information and the Mayor’s guidance criteria, the area sensitivity of the area to human health impacts is **low**.

Table 7 Sensitivity of the area to human health impacts

Receptor Sensitivity	Annual Mean PM ₁₀ Concentrations	Number of Receptors	Distance from the Source (m)				
			Less than 20	Less than 50	Less than 100	Less than 200	Less than 350
High	>32µg/m ³	More than 100	High	High	High	Med	Low
		10 - 100	High	High	Med	Low	Low
		1 - 10	High	Med	Low	Low	Low
	28-23µg/m ³	More than 100	High	Low	Med	Low	Low
		10 - 100	High	Med	Low	Low	Low
		1 - 10	High	Med	Low	Low	Low
	24-28µg/m ³	More than 100	High	Med	Low	Low	Low
		10 - 100	High	Med	Low	Low	Low
		1 - 10	Med	Low	Low	Low	Low
<24µg/m ³	More than 100	Med	Low	Low	Low	Low	
	10 - 100	Low	Low	Low	Low	Low	
	1 - 10	Low	Low	Low	Low	Low	
Medium	-	>10	High	Med	Low	Low	Low
	-	1-10	Med	Low	Low	Low	Low
Low	-	1-10	Low	Low	Low	Low	Low

3.7.5.3. 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 8 Area Sensitivity

Activity	Dust soiling		Human effects of PM ₁₀	
	Sensitivity	Comment	Sensitivity	Comment
Demolition	High	10-100 high sensitivity receptors (residential dwellings) less than 20m from the proposed site boundary	Low	Background annual mean PM ₁₀ concentration on site is less than 24µg/m ³ (a). There are 10-100 high sensitivity receptors (residential dwellings) less than 20m from the proposed site boundary
Earthworks	High		Low	
Construction	High		Low	
Trackout	High	0-100 high sensitivity receptors (residential dwellings) less than 20m from the side of the road used by construction traffic 200m from the site entrance.	Low	Annual mean PM ₁₀ concentration on site is less than 24µg/m ³ (a). There are 10-100 high sensitivity receptors (residential dwellings) less than 20m from the side of the road used by construction traffic 200m from the site entrance.

3.8. Step 2C: Risk of impacts

3.8.1. Based on the Site information and following the GLA guidance document, the overall risk of receptors to dust soiling effects and PM₁₀ effects are presented in the table below.

Potential Impact	Risk			
	<i>Demolition</i>	<i>Earthworks</i>	<i>Construction</i>	<i>Trackout</i>
Dust Soiling	Medium Risk	Low Risk	Low Risk	Low Risk
Human Health	Low Risk	Low Risk	Low Risk	Negligible

3.8.2. As presented in the table above, the dust soiling effects for the proposed development are assessed to be risk at worst and PM₁₀ effects are deemed to be low risk without mitigation. Mitigation measures appropriate for the proposed development are presented in Section 4 to reduce the predicted risk to negligible.

3.8.3. **Overall the construction phase activities are assessed to have a 'Low Risk'**

4. DUST EMISSIONS CONTROL MEASURES

4.1. Overview

4.1.1. The construction phase activities are predicted to have a 'Low Risk' in terms of dust soiling at sensitive receptors and 'Low Risk' for PM₁₀ effects without mitigation. Best practice mitigation measures should be introduced to reduce the risk to negligible and should include techniques such as those outlined in Mayor's guidance for a 'Low Risk' construction site. The inventory and Timetable of Dust and NOx activities are presented below.

4.2. Inventory and Timetable of Dust and NOx Activities

4.2.1. The activities and their duration for generating dust are as follows:

Phases	Duration (Weeks)	Average Daily Vehicles
6. Site setup	1	5
7. Demolition	3	5
8. Ground Works, Basement Excavation* – Casting of concrete	25	5
9. Structural works / Super structure	18	5
10. Internal Fit-Out	18	4
Total	65	

Figure 3 Site phases

**use of a hybrid excavator will be considered by the contractor if practicable*

4.2.2. All vehicles will be Euro VI compliant and the contractor will promote the use of Ultra Low Emission Vehicles (ULEVs) to access the site. Evidence of compliance, such as correspondence from the relevant contractors and/or evidence of FORS gold standard accreditation, will be sent weekly to LBHF by e-mail to airquality@lbhf.gov.uk.

4.2.3. All Non-Road Mobile Machinery (NRMM) will comply with the Stage IIIB emission criteria of Directive 97/68/EC and subsequent amendments.

4.2.4. It should be noted that registration of NRMM is not applicable because it is not proposed to use machinery over 37kw. However, the Site has been registered out of courtesy and if unexpectedly, machinery of greater than 37kw is used this will be registered on the NRMM register at <https://nrmm.london/user-nrmm/register> within 5- days of it arriving on Site, as required by the scheme. It should be noted that at the time of report production no specific NRMM had been ordered for the project and none was present on Site. As such, the inventory had not been completed as details were not available.

4.2.5. Internal walls will predominantly be either masonry (installed with the building) or metal stud (no dust from cutting).

4.2.6. Concrete and mortar will be delivered pre-mixed so no dust creation on Site.

4.2.7. No mobile crushing plant or concrete batching plant will be used at the Site.

4.3. Control of Air Pollution

4.3.1. General

- Display the name and contact details of person(s) accountable for air quality and dust issues on the application site boundary.
- Display head or regional contractor office contact information.

4.3.2. Site management

- Record all dust and air quality complaints, identify causes and take appropriate action and record measures to reduce emissions.
- Make the complaints log available to local authority when asked.
- Record any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, and the action taken to resolve the situation is recorded in the log book.

4.3.3. Monitoring

- Carry out regular on and off site inspections, especially where receptors are to monitor dust and record inspection results. An inspection log should be made available to the local authority when asked.
- Increase the frequency of site inspections by those accountable for dust and air quality pollutant emissions issues when activities with a high potential to produce dust and emissions and dust are being carried out, and during prolonged dry or windy conditions.

4.3.4. Planning and maintaining the site

- Plan site layout so that machinery and dust causing activities are away from receptors, as far as is possible.
- Erect solid screens or barriers around dusty activities or the application site boundary that are at least as high as any stockpiles on site.
- Keep clean using wet methods.
- Fully enclosure 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. A record of any site run off should be kept and actions to prevent reoccurrence.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Cover, seed or fence stockpiles to prevent wind whipping.

4.3.5. Operating vehicle/machinery and sustainable travel

- Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone and the London NRMM standards, where applicable
- Ensure all vehicles switch off engines when stationary - no idling vehicles.
- 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.
- A Construction Logistics Plan to manage the sustainable delivery of goods and materials is submitted alongside this document.
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking and car-sharing).

4.3.6. Demolition

- Ensure effective water suppression is used during demolition operations.
- Avoid explosive blasting, using appropriate manual or mechanical alternatives.
- Bag and remove any biological debris or damp down such material before demolition.

4.3.7. Earthworks

- Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.
- Only remove the cover in small areas during work and not all at once.

4.3.8. 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 suitable emission control systems to prevent escape of material and overflowing during delivery.

- For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust.

4.3.9. **Track Out**

- 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 the site are covered to prevent escape of materials during transport.
- Record all inspections of haul routes and any subsequent action in a site log book.
- Implement a wheel washing system.
- 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.

4.3.10. In addition to the mitigation measures specified above, consultation would be undertaken with any other consented developments under construction in the site's vicinity to reduce the potential for any unacceptable cumulative construction phase effects. Consultation should be held regarding logistics plans for both sites to ensure that deliveries do not coincide where possible. It is expected that best practice measures will be implemented on this site similar to those specified above and as such no cumulative effects are expected.

4.3.11. **Operational phase**

- No mitigation measures are required for the operation of the proposed development.

5. CONCLUSION

5.1. Summary

- 5.1.1. This report provides an assessment of the following key impacts associated with the construction and operational phase of the proposed development:
- nuisance and/or loss of amenity caused by construction dust on sensitive receptors; and
 - air quality neutral assessment as required by Mayor of London SPG.
- 5.1.2. A qualitative assessment of construction dust effects including the identification of existing sensitive receptors has been undertaken for the proposed development. Best practice guidance provided by the IAQM and the Mayor of London's SPG shows that the construction of the proposed development would cause a 'Medium Risk' to nearby sensitive receptors.
- 5.1.3. Mitigation measures, consistent with best practice guidance, have been recommended in line with 'Low Risk' construction sites and will likely reduce the risk to negligible.
- 5.1.4. In relation to the operational phase impacts of the proposed development, there is not expected to be a change in vehicle movements to and from the site. As such, no detailed operational phase assessment of traffic impacts has been undertaken.
- 5.1.5. An Air Quality Neutral Assessment has been undertaken as required by the Greater London Authority Sustainable Design and Construction SPG. The assessment showed the proposed energy plant emits a slightly higher mass emission of NO_x than the benchmark value for the proposed development. However, conservative assumptions were made and it is likely that, in practice, mass emissions will be lower than those calculated in this assessment. On this basis, the proposed development is considered to be air quality neutral.
- 5.1.6. The proposed development is considered to comply with all national, regional or local planning policy within LBHF.