



create

Denville Hall Development Limited

DENVILLE HALL, NORTHWOOD

Demolition and Construction

Environmental Management Plan

Independent, multidisciplinary engineering
and environmental consultants

DENVILLE HALL, NORTHWOOD

Demolition and Construction Environmental Management Plan

Document Reference: SFH/VL/P25-3695/05

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Date: August 2026

DOCUMENT AND QUALITY CONTROL

Revision/Date	Writer	Reviewer	Approver	Nature of Revision
First Draft Issue July 2026	Stella Fletcher Helps, BSc (Hons)	Paul Zanna, BSc (Hons)	Paul Zanna, BSc (Hons)	Draft issued for client review
Draft Issue 04/08/2026	Stella Fletcher Helps, BSc (Hons)	Paul Zanna, BSc (Hons)	Paul Zanna, BSc (Hons)	Updated following client comments
Final Issue 11/08/2026	Stella Fletcher Helps, BSc (Hons)	Paul Zanna, BSc (Hons)	Paul Zanna, BSc (Hons)	Final issue
Final Issue 20/08/2026	Stella Fletcher Helps, BSc (Hons)	Paul Zanna, BSc (Hons)	Paul Zanna, BSc (Hons)	Final issue

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1.0 INTRODUCTION

Brief

- 1.1 Create Consulting Engineers Ltd was instructed by H&H Property Services Limited (London) on behalf of the client, Denville Hall Development Limited, to prepare a Demolition and Construction Environmental Management Plan (DCEMP) for the proposed development of Denville Hall, Northwood (the 'Site').

Project Context

- 1.2 The proposed development is for assisted-living residential development with the construction of three new buildings comprising of 12 assisted-living units (Class C2) in two separate buildings (Buildings A and B) and proposed ancillary communal space, including café and restaurant (Buildings C) accessed through connecting link building.
- 1.3 The demolition would see no. 48 (Building A) and no. 60 (Building B) Ducks Hill Road, garage and wooden storage unit removed to make space for the proposed development.
- 1.4 A plan showing the current site context is provided in Figure 1.1 below:

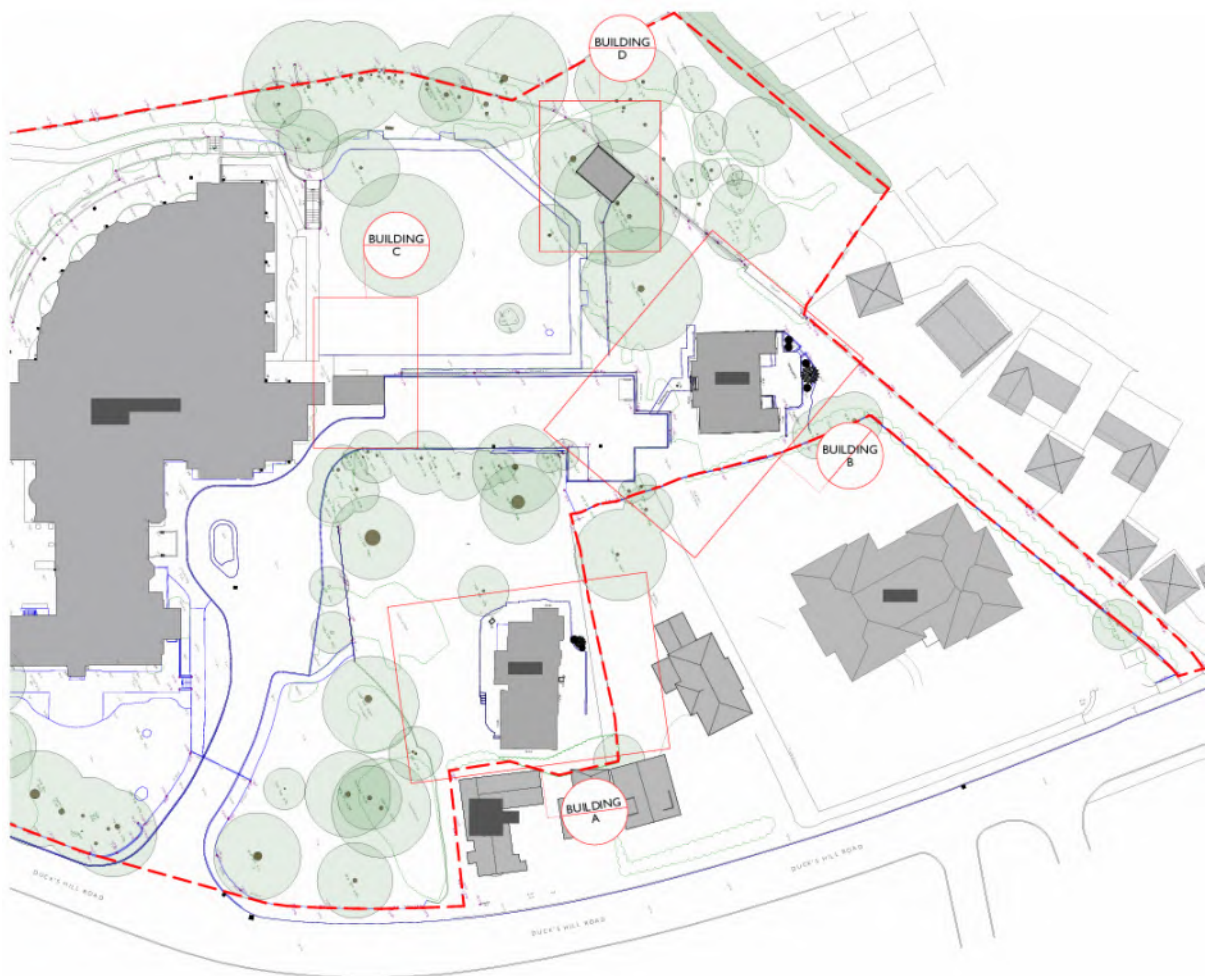


Figure 1.1: Current Site

1.5 An illustrative masterplan for the proposed development is provided in Figure 1.2 below.



Figure 1.2: Illustrative Master Plan Planning Context

1.6 Planning permission has been granted for the development Site (Application Ref: 924/APP/2022/3603) on 24 November 2023, subject to several pre-commencement conditions.

1.7 This document deals with the following pre-commencement conditions:

1.8 Condition 6 states:

Prior to the commencement of the development hereby approved (including demolition), a Demolition and Construction Logistics Plan (DLP/CLP) and a Demolition and Construction Management Plan (DMP/CMP) shall be submitted to, and approved in writing by, the Local Planning Authority, to minimise impacts to the local highway network, and to control noise, vibration, dust and air pollutants generated as a result of the construction process. These documents shall be prepared in accordance with the London Freight Plan, 'The Control of Dust and Emissions from Construction

and Demolition' Supplementary Planning Guidance, BRE Pollution Control Guides 'Controlling particles and noise pollution from construction sites' and 'Controlling particles, vapour and noise pollution from construction sites'.

The DLP/CLP and DMP/CMP shall include details of (but shall not necessarily be limited to):

- (i) a programme of works, including hours of construction;
- (ii) the measures for traffic management and encouragement of sustainable modes of transport for workers, including prohibition of construction vehicles parking on the local highway network within the vicinity of the application site;
- (iii) the haulage routes and details of a vehicle booking system including use of a banksman (if applicable), ensuring construction deliveries are received outside peak hours;
- (iv) any closures of public routes and diversions, demonstrating how time spent closed to the public has been minimised;
- (v) the provision of secured restricted access as the sole means of entry to site for cyclists along with a secured turnstile entrance for pedestrians;
- (vi) a site plan identifying the location of the site entrance, exit, visibility zones, wheel washing, hard standing, hoarding (distinguishing between solid hoarding and other barriers such as heras and monarflex sheeting), stock piles, dust suppression, location of water supplies and location of nearest neighbouring receptors;
- (vii) the loading, unloading and storage of equipment, plant, fuel, oil, materials and chemicals;
- (viii) details of cranes and other tall construction equipment (including the details of obstacle lighting);
- (ix) the means to prevent deposition of mud on the highway and chemical and/or fuel run-off from into nearby watercourse(s);
- (x) a dust risk assessment, including means to monitor and control dust, noise and vibrations, following the published guidance by The Institute of Air Quality Management (IAQM) on how to assess impacts of emissions of dust from demolition and construction sites.
- (xi) the likely noise levels to be generated from plant and construction works and the precautions set out to eliminate or reduce noise levels where the operational risk levels illustrated within The Control of Noise at Work Regulations 2005 could be exceeded;
- (xii) confirmation that a mobile crusher will/won't be used on site and if so, a copy of the permit and intended dates of operation; 924/APP/2022/3603 PDECSTD (ODB 2022)
- (xiii) confirmation of all Non-Road Mobile Machinery (NRMM) to be used, or a statement confirming that NRMM will not be used. All Non-Road Mobile Machinery (NRMM) and plant to be used on site of net power between 37kW and 560 kW shall comply with the emission standards set out in chapter 7 of the GLA's supplementary planning guidance "Control of Dust and Emissions During Construction and Demolition" and must be registered at <http://nrmm.london/>;
- (xiv) an asbestos survey and management plan; and
- (xv) the arrangement for monitoring and responding to complaints relating to demolition and construction. and, for the avoidance of doubt: - all Heavy Goods Vehicles associated with the development shall comply with the Direct Vision Standard, with a rating of 3 stars (or more). - all deliveries to the site, particularly Heavy Goods Vehicles, shall be made using vehicles which have a Class VI mirror fitted in accordance with EU directive 2007/38/EC;

The development hereby approved shall be implemented in accordance with the approved DLP/CLP and DMP/CMP.

REASON

To ensure that the proposed development does not interfere with the free flow of traffic and conditions of safety on the public highway, to ensure the development process does not have a significant adverse impact on the amenities of nearby residential properties, in accordance with Policies DMT 1, DMT 2, DMHB 11 and DMEI 14 of the Hillingdon Local Plan: Part Two - Development Management Policies (2020) and Policies D14, SI 1, T4, and T7 of the London Plan (2021). Also, to ensure that construction work and construction equipment on the site and adjoining land does not obstruct air traffic movements or otherwise impede the effective operation of air traffic navigation transmitter/receiver systems, in accordance with Policy DMAV 1 of the Hillingdon Local Plan: Part Two - Development Management Policies (2020).

Objectives

- 1.9 A DCEMP has been prepared to manage demolition and construction activities in order to minimise the impact of these activities on the surrounding community, both for the construction and demolition works on Site and the transport arrangements for servicing the Site demolition and construction.
- 1.10 The completed and approved DCEMP will detail how any traffic-related and environmental impacts associated with the proposed demolition and construction works will be mitigated and how the site contractor will manage the cumulative impacts of demolition and construction works at the site.

DCEMP Methodology and General Approach

- 1.11 The proposed development is noted as a major development and a DCEMP is required to ensure the development minimises the impact on the local environment and amenity of neighbours.
- 1.12 This DCEMP follows the best practice guidelines and requirements will be reviewed and assessed to ensure that best practice and lowest impacts are strived for at all times.
- 1.13 The approved contents of this DCEMP must be complied with, unless otherwise agreed by the Hillingdon London Council. The Developer shall work with Hillingdon London Council to review this DCEMP if problems arise in relation to the construction of the development.
- 1.14 The DCEMP is a working document and will be updated during the course of the development and is therefore subject to amendments. Any future revisions of the plan must also be approved by Hillingdon London Council and complied with thereafter. It should be noted that any agreed DCEMP does not prejudice or override the need to obtain any separate consents or approvals required.
- 1.15 It this instance, the DCEMP is primarily seeking to address the demolition phase and also the post demolition works to maintain a usable site due to the anticipated time delay between demolition and construction. As a result, a separate CEMP is required based on the principles of this plan should there be a prolonged delay between demolition and construction works to reflect any emerging guidance and legislation changes.

2.0 SITE LOCATION AND DESCRIPTION

Site Location

- 2.1 The Site is located approximately 1.8km to the west of Northwood Town Centre and 4.6km to the northeast of Harefield. The site is located in Northwood within the London Borough of Hillingdon. The Site is centered at National Grid reference 51°36'37"N, 000°26'25"W and the nearest postcode is HA6 2SB.
- 2.2 The location of the Site is shown in Figure 2.1 below.



Figure 2.1: Site Location Plan

Description of Site and Surroundings

- 2.3 The Site comprises of 5 existing buildings covering approximately 3.2 acres located on the west side of Ducks Hill Road. Denville Hall is an assisted living residence for members of the creative and performing industries with a capacity for up to 40 residents. The main building (Building C) is located to the north of the site within a 16th century locally listed building that was partially rebuild in 1851.
- 2.4 The subsequent four other buildings onsite, one outbuilding next to the main (Building C), a derelict old garage (Building D), a disused building divided into flats (Building B) and a single storey mid-century disused bungalow (Building A). The rest of the site is covered mostly by soft landscaping with a large carpark by the main building covered with tarmac and the main access tarmac route.

- 2.5 There are a number of important trees and Tree Protection Orders within the site which are considered in more detail in this document.
- 2.6 The Site is bound to the north by modern residential properties on Muscovy Place and Cygnet Close. To east the Site is bound by Ducks Hill Road, with residential properties to the south. To the west the site is tree-lined by parkland associated with The Riverside Club Leisure Centre. This western boundary forms the boundary with the Metropolitan Green Belt.
- 2.7 The site has a PTAL rating of 1a (Poor), however, it is located within about 1.2km of Northwood Underground Station and Northwood Town Centre.
- 2.8 The Topographic Survey has been carried out in the area of the site and summarises elevations. The Site is irregular in shape and generally falls downwards from west to east corners of the site.

Potential Sensitive Receptors

- 2.9 The nearest potentially sensitive receptors that may be affected by on and/or off-site construction works and associated traffic during the development process are noted as;
- Residential Dwellings located adjacent to the north, south, southeast, southwest and east/northeast;
 - Occupants of the adjacent Parkland associated with the Leisure centre to the west;
 - Occupants of The Gravel Pits Public Park to the east;
 - Occupants of The Riverside Club Leisure Centre located to the northwest;
 - Occupants of the pre-school to the northwest; and
 - Occupants of Kendall Manor adjacent to the south.
- 2.10 The locations of these potentially sensitive local receptors are provided in Figure 2.2 below:



Figure 2.2: Potential Sensitive Receptors

Site Management

- 2.11 The Developer will be responsible for providing all infrastructure including main routes across the site, strategic foul and surface water drainage, buildings, retained open spaces and landscaping areas.
- 2.12 The Developer will be responsible for compliance with the DCEMP and will implement a monitoring programme to ensure the contractor's performance and compliance with the requirements of the DCEMP throughout the development process are both monitored and reported.
- 2.13 The monitoring programme will be reviewed regularly and amendments to the DCEMP will be communicated with Hillingdon London Council and any other third parties, as required.
- 2.14 All complaints/queries will be reported directly to the Developer for action.

3.0 IMPLEMENTATION AND COMMUNICATION

Roles and Responsibilities

- 3.1 The Developer will have overall responsibility for ensuring the requirements of the DCEMP are complied with. The appointed contactor, will be required to prepare a detailed Environmental Action Plan for delivering the DCEMP, monitoring the performance of subcontractor and suppliers and maintain records to demonstrate DCEMP compliance prior to works commencing.
- 3.2 The appointed consultant will review the findings of the monitoring programme by the Main Contractor and undertake environmental site inspections and audits (in accordance with ISO 14001) on a regular basis to validate the monitoring records. This will include confirmation that all relevant consents, licenses and exemptions are obtained in advance of any applicable works.
- 3.3 The Developer's Project Manager will be responsible for liaising with Hillingdon London Council, as required, to address any environmental risk issues arising and review and update the DCEMP during the construction works, as required.
- 3.4 Contractor staff on Site are ultimately responsible for the implementation of the DCEMP and this will be communicated through site project meetings and toolbox talks throughout the project.

Communications

- 3.5 Liaison with the local community will be undertaken prior to and during the development works. The following communication measures and liaison strategy will be implemented:
 - Developer's Project Manager will deal with site-wide complaints (see below);
 - All Contractor's staff and subcontractors briefed on noise mitigation/permitted hours for works, vehicle routing, wheel wash requirements, etc.;
 - Communication of project works with key stages, potential noise and vibration issues and mitigation steps being undertaken to minimise impact;
 - Liaise with nearby construction sites to minimise overall impact/disruption.
- 3.6 All the members of the development team including their contractors, subcontractors and suppliers will be provided with a copy of the DCEMP and ensure the requirements are clearly communicated.
- 3.7 The Developer, or their appointed Main Contractor, will be responsible for ensuring all staff are provided with the required awareness and training to ensure site specific environmental and safety procedures are understood prior to commencing works. Training of staff will be monitored and recorded through a training and development, or appraisal programme and records are to be held on a central database and made available to all responsible parties.
- 3.8 Details of appropriate training programmes and procedures to raise environmental awareness for all contractors working on the site are to be provided to the Developer.

Contact Information

- 3.9 The full postal address of the site and planning reference relating to the construction works:

Site Address: Denville Hall, 62 Duck's Hill Road, Northwood, London, HA6 2SB

- 3.10 Contact address and full details for the person submitting the DCEMP:

Contact Name: Paul Zanna
Name of Company: Create Consulting Engineers Ltd
Address: Suite 505, Hamilton House, 1 Temple Avenue, London, EC4Y 0HA
Telephone: 020 7822 2300
Email: Paul.Zanna@createce.co.uk

- 3.11 Contact details for the Developer Project Manager responsible for undertaking the site works

Contact Name: Genevieve Hughes
Name of Contractor: H&H Property Services Limited
Address: 21 Aylmer Parade, Aylmer Road, London, N2 0AT
Telephone: 07769 228236
Email: genevieve@handhps.co.uk

- 3.12 Contact details for the person responsible for dealing with and complaints from local residents or businesses and community liaison:

Contact Name: Genevieve Hughes
Name of Company: H&H Property Services Limited
Address: 21 Aylmer Parade, Aylmer Road, London, N2 0AT
Telephone: 07769 228236
Email: genevieve@handhps.co.uk

4.0 THE SITE AND DEVELOPMENT PROPOSAL

- 4.1 Description of the site, the surrounding area and the development proposals for which this DCEMP is being prepared is summarised below.

Site: The Site comprises a pre-existing assisted-living care home, located approximately 1.8km to the west of Northwood Town Centre and 4.6km to the northeast of Harefield

The Site is currently accessed via Ducks Hill Road, A4180. There are currently two existing access stubs into the Site, one of which currently provide access to the block of flats and car park area occupying the east part of the Site which is no longer in use.

Surrounding Area: The Site is bound to the north by modern residential properties on Muscovy Place and Cygnet Close. To east the Site is bound by Ducks Hill Road, with residential properties to the south. To the west the site is tree-lined by parkland associated with The Riverside Club Leisure Centre. This western boundary forms the boundary with the Metropolitan Green Belt.

Development: The proposed development is for assisted-living residential development with the construction of three new buildings comprising of 12 assisted-living units (Class C2) in two separate buildings (Buildings A and B) and proposed ancillary communal space, including café and restaurant (Buildings C) accessed through connecting link building

- 4.2 A brief description of the proposed works, size, nature of the development and summary of the key issues are summarised below.

- 4.3 Site demolition phase of the development will comprise 8 phases, which are:

- Phase 1: Removal and protection of trees and vegetation as defined in the Tree Method Statement supplied in Appendix B
- Phase 2: Mobilise contractor compound within Work Zone 1
- Phase 3: Construct and secure temporary staff and visitor car park area, defined in red on Figure 4.1
- Phase 4: Demolition works within Work Zone 1
- Phase 5: Demolition works within Work Zone 2
- Phase 6: Demolition works within Work Zone 3
- Phase 7: Remove temporary car parking and install post demolition fencing works as defined on Figure 4.2
- Phase 8 Remove contractor compound

- 4.4 The boundaries of the phases are illustrated in Figure 4.1 below.



Works Programme

4.5 The development programme will begin in November 2026 and anticipated to be:

2 nd November 2026:	Commence enabling works
18 th November 2026:	Commence temporary car park works
December 2026:	Commence demolition
March 2027:	Remove temporary car park
March 2027:	Commence post demolition fencing works

5.0 ON AND OFF-SITE TRAFFIC ARRANGEMENTS

Site Management

- 5.1 The Developer will be responsible for completing all demolition and utility supply removal and then providing all infrastructure to serve the development inclusive of carriageways, parking, strategic foul and surface water drainage, buildings, open spaces and landscaping areas.
- 5.2 The Developer will be responsible for enacting the requirements of the DCEMP and implement a monitoring programme to ensure all contractors perform and comply with the requirements of the DCEMP throughout the development process.
- 5.3 The Developer will regularly review the monitoring programme and any amendments to the DCEMP will be communicated with the London Borough of Hillingdon and any other third parties, as required.
- 5.4 All complaints/queries will be reported directly to the Developer for action (see 3.12 for contact details).

Construction Vehicle Access

- 5.5 All construction traffic will utilise existing carriageways to access the Site. It is anticipated that the majority of construction traffic will enter and exit the site turning onto Duck Hills Road and the heading south towards Ruislip. The routing is outlined in Figure 5.1, below. No HGV right turn in, or left turn out will be permitted, LGV all turning movements are acceptable.

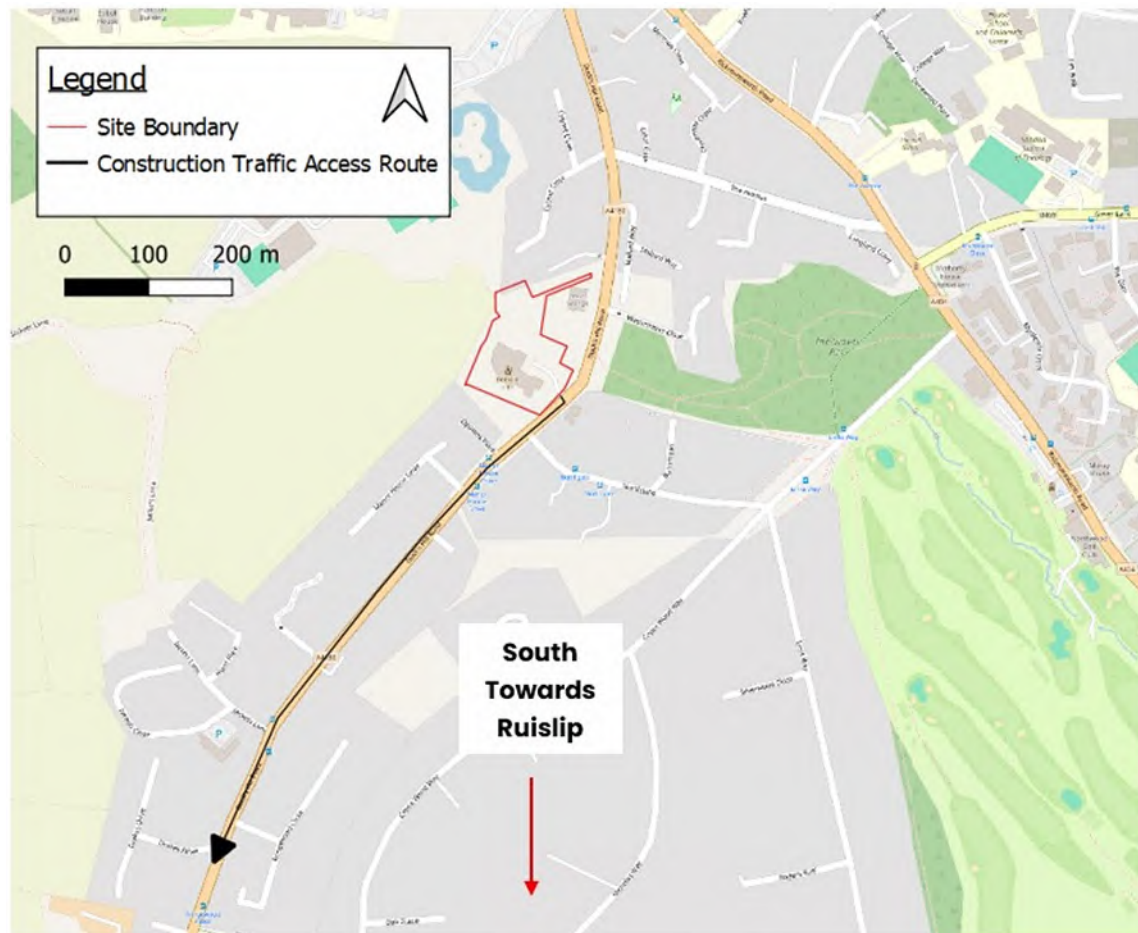


Figure 5.1: Vehicle Routing to Site

- 5.6 The approved route will be communicated to all contractors, subcontractors and suppliers and a requirement to use the route during construction will be emphasised.

Works Schedule

- 5.7 The development due to begin in November 2026 and demolition works are expected to be completed by February 2027. based on the current proposed phasing plan provided in section 4.5.
- 5.8 Given the uncertainty over the construction programme, a separate CEMP is required to ensure the latest guidance and legislation is adhered to. As such no construction works will be permitted until a CEMP is supplied and approved by the London Borough of Hillingdon for future construction activities.
- 5.9 The standard working hours for all construction activities will be as follows:
- Monday to Friday – 08:00am to 18:00pm
 - No Saturday working
 - No works will take place on Saturdays, Sundays or Bank Holidays
- 5.10 Site delivery hours for all construction activities will be as follows:
- Monday to Friday – 08:00 to 15:00
 - No Saturday deliveries
 - No works will take place on Saturdays, Sundays or Bank Holidays

- 5.11 Construction vehicles will not be permitted to access the Site outside of these hours. In the event of exceptional circumstances, for example due to restricted movements for vehicles such as mobile cranes falling outside of normal delivery hours, the Management team will be responsible for informing local residents and businesses.
- 5.12 Any proposed changes to these working hours will be agreed in advance with the London Borough of Hillingdon.

General Site Management

- 5.13 The appointed demolition and construction and contractors will comply with the following:
- Contractors Health and Safety Assessment Scheme (CHAS);
 - Considerate Constructors Scheme (CCS) or similar;
 - Construction Industry Training Board (or similar) scheme (CITB) with operatives and management holding CSCS, CPCs, CCDO, etc. cards;
 - Site Managers Safety Training scheme/CSCS Gold Card;
 - Qualified First Aid; and
 - Construction (Design & Management) Regulations 2015.

Material Storage and Compound Areas

- 5.14 The proposed location of the Contractor's compound is illustrated in Figure 4.1 (Section 4) and will be contained within Work Zone 1. This will be the principal storage and compound area with temporary buildings for site staff and welfare facilities associated with demolition and future construction works.
- 5.15 Material from the Demolition works will not be processed onsite and will not be moved to other work zones. Each work zone will stockpile material for removal to a suitable disposal facility as confirmed by the contractor.
- 5.16 The movement of HGV contractor vehicles should be minimised to reduce the level of traffic passing the care home. All works will be completed within each work zone to minimise unnecessary HGV movements.
- 5.17 A schedule of HGV movements will be supplied by the contractor to the developer on a weekly basis.
- 5.18 It is anticipated the compound area established in work zone 1 will be maintained for work zone 2 and work zone 3. Any changes to these compound areas will need to be agreed with the Developer for each phase of development.

Travel Plan and Car Parking

- 5.19 The Site will be accessed direct from Duck's Hill Road only. No access will be permitted via the secondary access to work zone 2. All constructor movements will be managed via a security gate located by the current Care Home gated entrance.
- 5.20 The vehicle access route to the temporary car parking will be signed. A designated safe route for pedestrians to access the Care Home reception area from the car park will be signed as shown on Figure 4.1

- 5.21 A total of 8No. parking spaces will be made available for contractor parking, located within work zone 1.
- 5.22 A total of 20No. parking spaces will be made available for staff and visitors of the Care Home
- 5.23 No contractor parking will be permitted in the temporary staff and visitor car parking area, all contractor parking is only permitted in work zone 1.
- 5.24 No off-site contractor parking is permitted.

Developer Obligations

- 5.25 The Contractor is responsible for the management of construction activities on the site including access arrangements, general facilities and general demolition and construction traffic management procedures.
- 5.26 The Contractor will be required to provide wheel washing facilities to service all contractor vehicles leaving the site prior to moving onto the Ducks Hill Road. The location of this facility will be at the exit of work zone 1 and work zone 2, under no circumstances should contractor movements exit the work zone without first using the wheel washing facilities.
- 5.27 The site link-road and Ducks Hill Road will be inspected on a regular basis, and a road sweep will be deployed as required.
- 5.28 All contractor's and their supplier's operatives will be fully inducted to the site on the first day of attendance and will be fully briefed on access to the site and parking arrangements and the compliance requirements with this DCEMP.

6.0 TRAFFIC MANAGEMENT

Potential Sensitive Receptors

- 6.1 The nearest potentially sensitive receptors that may be affected by on or off-site construction traffic during the development process are as follows:

Existing Local Residences

- 6.2 The nearest existing local residences are located adjacent to the north and south of the Site. Given the close proximity of these local residences, it is considered the risk of impact by construction traffic to these sensitive receptors is high.
- 6.3 The procedures outlined in this DCEMP aim to minimise the impact of construction traffic on local residences, as far as practicable, through the control of operational hours and the strategic routing of construction vehicles into the Site.

Local Schools

- 6.4 The nearest local school is located approximately 320m to the northeast of the Site. Given the distance between this potential receptor and the Site and the construction vehicle routing strategy proposed, it is considered that the risk of impact on this receptor is minimal.

Local Road Network

- 6.5 The local road network relative to the Site comprises Duck's Hill Road along the western Site boundary, with construction traffic entering and exiting Site via this carriageway using the same access to also serve the care home.
- 6.6 The risk of impact to this highway is considered to be high.
- 6.7 Impact to these highways will be minimised by the provision of on-site wheel wash facilities at all exits of the Site and through regular checking and clearance of mud and debris from the adjacent highway, as outlined in Section 5.26. A managed security point will be implemented by the contractor at the care home main gates to ensure all the safety of all movements onsite.
- 6.8 As the site is constrained, 5mph speed limit warning notices will be placed and enforced onsite.

Residents and Businesses in wider geographical area

- 6.9 The residents and businesses in the wider general area include the residents and trades in the Northwood area and, in particular, to the users of the local road network (Duck's Hill Road).
- 6.10 The risk of impact by construction traffic to these receptors is considered to be low to moderate over the duration of the demolition works.
- 6.11 As outlined above, the aim of this DCEMP is to, wherever possible, mitigate the impact of construction traffic on the local environment and local road users by directing construction traffic via approved access routes and using higher classified highways in and around Northwood and the development

Site. Construction traffic will avoid existing residential areas, thereby mitigating the impact on wider residences.

Construction Traffic

- 6.12 At this stage of the process, the expected frequency and types of vehicles anticipated to require access to Site is unknown. Details of the generic type of vehicles which are expected to access the site during the initial demolition works are summarised below:

General:

Construction Site Staff

Size and types of vehicle: Cars and small vans.
Location: Limited parking will be made available in the Site Compound for site staff and contractors.
No on-road parking along Duck's Hill Road will be permitted.

Site Construction Works

Size and types of vehicle: Site Plant, Mobile Crane, 360degree Excavator and Articulated Lorries
Location: Accessing Site from Duck's Hill Road.

- 6.13 Details on how pedestrian and cyclist safety will be maintained during construction, including any proposed alternative routes (if necessary), and any Banksman and/or Traffic Marshall arrangements as summarised as follows:

- All vehicles over 3.5 tonnes, drivers will be required to be accredited with the Fleet Operator Recognition Scheme (FORS), Silver Level. Drivers will have undertaken cycle awareness training and vehicles associated with the development will need to have sideguards fitted (unless demonstrably unable to do so); have close proximity warning systems fitted, external warning devices, rear facing CCTV camera (or Fresnel Lens); have a Class VI mirror; and have prominent signage warning cyclists of the dangers of 'undertaking' on the inside of such vehicles.
- A gateman barrier will be provided at the Site access and Banksman will be made available to direct construction traffic in and out the Site as required.
- A segregated pedestrian safe route will be provided and managed through the demolition period.

- 6.14 Details of any diversions, disruption or other anticipated use of the public highway during the construction period are as summarised as follows:

- It is proposed that construction traffic will avoid residential streets wherever possible
- A secure hoarding or heras fencing will be in place around the works area with a security gate at the Site access.
- In the event that temporary closures will be required, ramped access with barriers will be provided in compliance with Chapter 8 of the Traffic Signs Manual and Red Book etc. Traffic management barriers will be in place to demarcate the delivery areas and to segregate them from traffic, as required.
- Construction vehicles will only access the site as illustrated in 5.1. Banksman will be utilised as appropriate.

- Exiting vehicles will obey all the traffic management restrictions currently in place, in addition to any temporary restrictions that may be required as part of the works.
- The adjoining public highway will be assessed on a regular basis to ensure that it is kept clean and free from obstructions.
- Clear and sustained dialogue will be maintained with local schools, and other affected parties throughout the works. In the event of temporary Traffic Management Orders (including road closures) being required, the applicant will ensure adequate liaison takes place with the relevant Council Officers in good time.
- Management Orders (including road closures) being required, the applicant will ensure adequate liaison takes place with the relevant Council Officers in good time.

Road Closures

6.15 It is not anticipated that road closures will be required during the course of the works.

Chapter 8 Traffic Management Requirements

6.16 It is anticipated that temporary traffic signs will be installed on Duck's Hill Road for the duration of the works period in accordance with Chapter 8 of Traffic Signs Manual.

Materials and Plant

6.17 The delivery and removal of materials and plant to the Site will be detailed by the Site Contractors prior to commencement of works and defined within a work programme, including initial HGV / site plant mobilisation plans.

Site Boundaries

6.18 In accordance with the Phasing Plan shown on Figure 4.1 for the Site, heras fencing on posts is required.

Site Lighting

6.19 Site compound will contain 4No. Low spread floodlights addressing any points noted in the ecology report

Site Security

6.20 Authorised persons only will be allowed access to the Site.

6.21 A Site Risk Assessment will be prepared by the Contractor prior to commencement of works detailing site security measures and roles and responsibilities for site security during the construction works.

7.0 ENVIRONMENTAL ISSUES

Environmental Risk Management

- 7.1 An Environmental Risk Register (ERR) will be developed by the Contractor's Project Manager prior to commencement of any construction works. This will detail all potential environmental risks associated with the construction works and identify measures to mitigate the impact of these environmental issues to local receptors. A proforma for the ERR is provided in Appendix A.
- 7.2 The ERR will be reviewed and approved by a representative of the Developer and will be accompanied by appropriate risk assessments and method statements, outlining control measures.

Potential Environmental Receptors

- 7.3 The nearest potential receptors likely to be affected by the development during the construction process are identified below.

Receptor:	Existing local residences to the north, south, southeast, southwest and east/northeast
Likely impacts:	Noise, dust and other impacts from on-site construction works.
Receptor:	Kendall Manor to the east of the Site
Likely impacts:	Noise, vibration and dust and other impacts from on-site construction works
Receptor:	Pre-School approximately 320m to the south of the Site.
Likely impacts:	Noise, dust and other impacts from on-site construction works.
Receptor:	The Riverside Club Leisure Centre located to the northwest
Likely impacts:	Noise, dust and other impacts from on-site construction works
Receptor:	Local residents and businesses in wider geographical area.
Likely impacts:	Traffic impacts from delivery and construction vehicles.

Potential Environmental Impact Activities

- 7.4 The following construction activities have the potential to have adverse upon local sensitive receptors:
- Impact of site clearance, ground preparation and drainage works;
 - Removal of surface vegetation and topsoils;
 - Establishing site compounds, storage areas and car parks;
 - Generation of waste materials;
 - Risk of spillage of hazardous substances (fuel oil, etc.);
 - Disturbance of flora and fauna;
 - Plant machinery and use of any powered tools being used during construction;
 - Construction activities such as hammering, drilling, sawing, angle grinding etc.;
 - Increased noise and vibration levels from traffic due to construction vehicles associated with the site, through vehicle movement and warning soundings; and
 - Communication noise between banksman and vehicle drivers when construction vehicles are manoeuvring around the site.

Environmental Control Measures

- 7.5 In order to comply with the requirements of the DCEMP and mitigate the potential impacts of the following environmental procedures will be implemented, which will include method statements, review of environmental risks and a risk assessment to ensure adequate control, measures are implemented to mitigate the potential impact.

Heritage

- 7.6 A Heritage Impact Assessment has been provided by The Heritage Advisory, Document Ref: 2022/5588. The report suggests given the historic and architectural interest of Denville Hall it has been recognised as a locally listed building.
- 7.7 Principally, proposals comprise the removal of existing, later buildings across the site that currently represent negative impingement upon all heritage assets of relevance by virtue of ongoing obsolescence and inevitable degradation. Therefore, impacts upon relevant heritage assets have been assessed as being beneficial.
- 7.8 Site Investigation report which assesses available data to confirm that nothing archaeological significance is present within the site. The development proposals do not affect any heritage assets of archaeological significance and therefore is not supported by a more detailed assessment.
- 7.9 The Contractor will ensure Denville Hall remains protected at all times from the risk of dust and vibration impacts.

Water Quality

- 7.10 Surface water and groundwater quality in the local area is considered to be sensitive with surface water courses and groundwater classified as medium sensitivity (ES, 2006). Control measures are therefore required to protect the local water environment, including the following:
- All site works to be completed with suitable drainage control measures, in accordance with Environment Agency's pollution prevention guidance;
 - Wheel wash facilities will be provided for existing/proposed haul roads for vehicles leaving and entering the Site;
 - The design of Sustainable Urban Drainage Systems (SUDs) prior to development and use of pollution control measures to prevent impact on surface water or groundwater (see Condition 16); and
 - All construction plant/materials will be stored on hardstanding surface to minimise the risk of impact to underlying soils and water environment.
- 7.11 Below-ground storage and outfall to existing sewerage along Duck's Hill Road has been recommended for the Site due to space restrictions for attenuation ponds and addressed out with this document, the contractor shall be aware of surface water risk to the site during the demolition and construction phases.

Tree Protection and Removal

- 7.12 An Arboricultural Method Statement & Tree Protection Plan has been prepared by Lanpro Services Ltd on the 31st of July and attached in appendix B. The report seeks to provide a schedule of work/supervision to guide all personnel, visitors and sub-contractors undertaking construction

activities on the Site. This includes tree removal, pruning, vegetation clearance, groundworks, construction works and landscaping works.

- 7.13 The report identifies the removal of eight individual trees, one group of trees and the partial removal of one tree group categorised as low quality (Category C), together with three individual trees categorised as very low quality (Category U), is required to facilitate the approved demolition works.
- 7.14 These removals shall be completed prior to the commencement of demolition activities on the site. Tree protection fencing must be installed to protect the Root Protection Areas (RPAs) of all retained trees and exclude all construction activities from RPAs. Tree protection fencing will only be removed once all demolition work is complete.
- 7.15 All tree work will be undertaken by a suitably qualified, insured and experienced Arborist working in accordance with British Standard 3998: 2010 Tree Work – Recommendations. No tree works will be undertaken by construction workers unless qualified to do so.
- 7.16 Prior to commencement the applicant of the development should appoint a suitably qualified, independent arboricultural consultant to act as the Arboricultural Clerk of Works (ACoW). A pre-commencement site meeting will take place once the tree protection measures have been erected and installed. Compulsory attendees will include the Arboricultural Clerk of Works (ACoW) and the Site Manager (SM).
- 7.17 The site office and compounds must be located outside of the RPAs and canopy spreads of all retained trees. Access to the site office and construction compounds must avoid low tree canopies to avoid the need for pruning to allow taller construction vehicles to gain entry to the compound.
- 7.18 The following works schedule will be carried out throughout the entire construction process;
- Pre-Demolition Phase;
 - Removal of the trees outlined at s2.4 within the associated TPP by a competent contractor.
 - Preliminary site meeting. The location and specification of tree protection measures such as fencing, ground protection and cellular confinement systems are to be discussed and marked out on site.
 - Installation of temporary tree protection fencing, ground protection and cellular confinement systems.
 - Demolition Phase;
 - Positioning of site office and compounds
 - Undertake demolition phase of works.
 - Post-Demolition Phase;
 - Removal of temporary tree protection fencing and ground protection.
 - Site check by Arboriculturist to inspect retained trees and specify any remedial works necessary.

Noise and Vibration

- 7.19 During the construction works, elevated noise levels will be experienced by adjacent residential properties to the north, south, southeast, southwest and east/northeast of the development Site.
- 7.20 An Environmental Noise Assessment providing the baseline acoustic environment of the site and the proposed construction noise and vibration have been documented in a separate report, prepared by

Stroma Built Environment Ltd, document ref: 09-21-88961 – AC – 1v1, undertaken in July 2022, see appendix C.

- 7.21 The impact to these residential receptors to the north, south, southeast, southwest and east/northeast of the Site would be classified as short-term noise increases and maintained within acceptable limits for construction sites.
- 7.22 The demolition and construction works will comply with BS:5228-1:2009+A1:2014: “Code of Practice for Noise and Vibration Control on Construction and Open Sites Part 1: Noise” with the following mitigation measures implemented in order to minimise potential effects associated with noise and vibration:
- Neighbours will be advised ahead of any specific noisy works;
 - All noisy works, where audible at the eastern or northern site boundary, will be undertaken during 08:00 and 18:00 weekdays, with no weekend working;
 - All vehicles, plant and other equipment will be fitted with silencers, mufflers or other acoustic reducing covers as practicable;
 - Where vehicles are standing for a significant period of time, engines to be switched off and the use of vehicles’ horns will be permitted only when absolutely necessary (and in line with the requirements of the Highway Code);
 - Workers using any noisy plant should be fully trained and provided with suitable ear protection;
 - The quietest and newest plant machinery should be used at all times, all plant machinery to be fitted with effective exhaust silencers;
 - Locating noise-generating fixed plant as far away from sensitive receptors as possible;
 - Limit the requirement for generators and motor-driven tools, where possible;
 - Avoidance of percussive equipment where possible;
 - Use enclosed chutes and conveyors;
 - Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment;
 - Acoustic enclosures to be fitted where possible to suppress noisy equipment; and
 - Shouting and raised voices will be kept to a minimum and the use of radios, except where required for safety reasons, will be prohibited.
- 7.23 Sequencing of the works will be controlled in order to minimise the impact of increased noise during site activities and protection measures will be employed for noisy activities, where practicable.
- 7.24 Noise monitoring will be undertaken to ensure works comply with BS:5228-1:2009+A1:2014 for the residential receptors and the guidance within Document Ref 09-21-88961 – AC – 1v1 for the residential receptors
- 7.25 The site is in a moderate noise environment dominated by Ducks Hill Road traffic. The daytime ambient noise level has been monitored at the eastern boundary of the site along Duck’s Hill Road as being 56dB LAeq,16h. The daytime ambient noise level was also monitored along the northern boundary as being 46dB LAeq,16h.
- 7.26 Evidence that construction workers have been trained on the latest version of BS5228, Parts 1 and 2, will be made available on site and provided to the HSE (if required) and will be made available for inspection by other parties on site should this be required. Simple training could involve the use of Tool Box Talks or more in-depth training if required.

- 7.27 Permanent Class 1 sound level meters will be installed at appropriate site boundaries (eastern and northern) during demolition and construction activities. In order to keep the ambient sound below levels stipulated above, alerts via email and/or SMS will be provided when a level of 65 dB $L_{Aeq,10h}$ is exceeded.
- 7.28 Continuous vibration and noise monitoring would be required adjacent to Building B and Building A as shown on Figure 7.1. Noise and vibration monitoring should be in line with the Code of practice for noise and vibration control on construction and open sites **BS 5228-1-2009+A1-2014**.
- 7.29 Noise monitoring should not exceed 65dB L_{Aeq} , during daytime works. Vibration monitoring should not regularly exceed 0.3 mm/s⁻¹ and should not exceed 1 mm/s⁻¹ as this level of vibration of this level in residential environments will cause complaint, these levels are subject to discussions with the Hillingdon London Council.

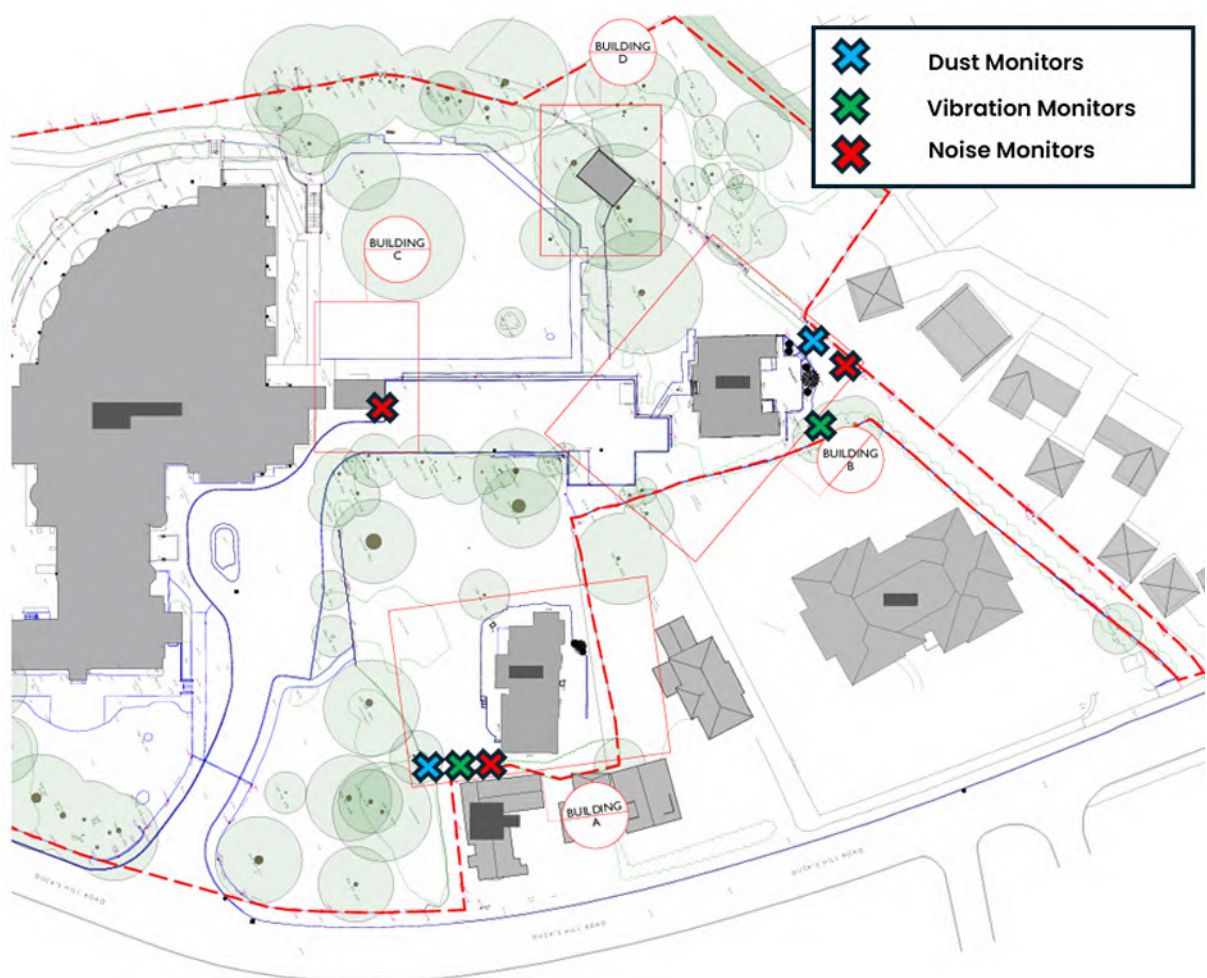


Figure 7.1: Monitoring Locations on Site

- 7.30 Detailed weekly/monthly reports of the sound monitoring will be provided to the Council on request which is available through Create Consulting Engineers Ltd.
- 7.31 All complaints will be directed to the Developer's Project Manager for action, who will liaise with Hillingdon London Council throughout the construction period.

Air Pollution/Dust

- 7.32 The following construction activities have the potential for adverse effects upon local sensitive receptors, which will include local residents, local ecology, local transport infrastructure, drainage systems and controlled waters.
- 7.33 The main sources of particulate emission will occur during site demolition, construction traffic, material handling, construction and fabrication processes and site restoration on completion.
- 7.34 A Demolition and Construction Management Plan (DMP/CMP) (Document Ref: OB/VL/P25-3695/03 has been prepared by Create for the construction phases of the development and this is included in Appendix C in this report.
- 7.35 This report sets out an AQDMP to provide an assessment for the risk of dust and particulate matter (PM₁₀ and PM_{2.5}) due to construction practices, and provide mitigation measures, where necessary, to reduce these risks and mitigation measures proposed in order to minimise potential effects from air pollution/dust are summarised below:

Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary.
- Develop and implement DMP, which may include measures to control other emissions, approved by the Local Authority.

Site Management

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the local authority when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the logbook.

Monitoring

- Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked.
- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked. This is the responsibility of the demolition contractor.
- Increase the frequency of site inspections by the demolition contractor accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Agree dust deposition, dust flux, or real-time PM₁₀ continuous monitoring locations with the Local Authority, specifically for Demolition activities.
- Commencement of baseline monitoring at least three months before work on site.

Preparing and Maintaining the Site

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.
- Avoid site runoff of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.
- Cover, seed or fence stockpiles to prevent wind whipping.

Operating Vehicles/Machinery and Sustainable Travel

- 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 of 15mph on surfaced and 10mph on unsurfaced haul roads and work areas.
- Implement a Travel Plan that supports and encourages sustainable travel.

Operations

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

Waste Management

- No bonfires and burning of waste materials

Earthworks

- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.
- 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.

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

Trackout

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site, This may require the sweeper being continuously in use.
 - Avoid dry sweeping of large areas.
 - Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
 - Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
 - Record all inspections of haul routes and any subsequent action in a site log book.
 - Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowzers and regularly cleaned.
 - Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).
 - Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.
 - Access gates to be located at least 10 m from receptors where possible.
- 7.36 If significant dust is identified beyond the site boundary, a Dust, Exceedance, Trigger, Incident and Complaint (DETIC) Form should be completed with immediate investigation via cross checking of site activities and monitoring data.
- 7.37 A daily visual inspection of the site will be carried out by the Site Manager, or an appropriately trained operator for *a minimum of two times per day* at a number of Visual Dust Monitoring locations around the Site, as detailed in the appended AQDMP.
- 7.38 As a minimum, the following areas will be inspected for deposition of dust:
- Site access
 - All locally parked cars within 50 metres of the site boundary
 - Denville Hall including windows, doors and frames.
- 7.39 Inspection results will be recorded in a Weekly Dust Monitoring Form and any specific notes relating to dust soiling or dust generating activities will be recorded. The Weekly Dust Monitoring Forms will be issued to SCDC by email upon request.
- 7.40 During all demolition activities, monitoring of dust, PM10 and PM2.5 is required to protect the nearby amenity of human health and any property from dust soiling. After these activities are complete, monitoring can be discontinued unless otherwise required by the London Borough of Hillingdon
- 7.41 It is recommended that two automatic monitoring stations, are installed during the demolition activities. These monitors are unmanned and completely autonomous monitoring platforms.

Measurement results are accessible via a cloud-based system which allows viewing of the defined parameters in both real-time, 5-minute, hourly and 24-hr averages.

- 7.42 The monitoring locations are shown in Figure 7.1.
- 7.43 Where any high levels of dust soiling are identified which may be caused by construction activities at the site, additional dust mitigation measures will be implemented. Further monitoring may then be undertaken to demonstrate the effectiveness of such mitigation measures

Waste Management

- 7.44 All waste materials produced on site will be subject to Duty of Care under the Environmental Protection Act (1990) and liaison with the Environment Agency prior to commencement of works will be required.
- 7.45 All waste materials leaving the site will be transported by registered waste carriers and disposed to appropriately licensed disposal sites documented by waste transfer notes.
- 7.46 A Waste Management Strategy will be prepared, by the demolition contractor for the demolition phase of the development and incorporate the following:
- Re-use and recycling of construction materials
 - Segregation of wastes; and
 - Raise awareness of minimum packaging requirement
- 7.47 The following measures will be undertaken to mitigate any impacts associated with waste material generation:
- Waste materials will be segregated by type and classification, with separate storage areas / vessels assigned accordingly;
 - All waste will be stored in designated areas with closed drainage;
 - Skips will be covered and regularly checked, and emptied / replaced when full;
 - All hazardous wastes should be stored in bunded areas;
 - All waste removal to be undertaken by registered waste carriers and disposed to appropriately licensed disposal sites, with checks to confirm receipt by disposal site; and
 - Consignment notes will be inspected for accuracy and completeness and all records are to be kept for a minimum of three years.

Hazardous Material Storage

- 7.48 Hazardous materials used on construction sites (e.g., fuel oil, chemicals, cleaning materials, paints, etc.) have the potential to cause pollution and the Environment Agency's pollution prevention guidance should be adhered for the handling and storage of hazardous materials.
- 7.49 The use of potentially hazardous materials will be minimised with designate access routes for delivery and transport of such materials. All site staff will be made aware of the risks and storage/use procedures required for each of the hazardous materials through training and tool box talks.
- 7.50 All plant and equipment should be stored in areas of hardstanding where possible or in areas less susceptible to pollution incidents, with static plant placed within drip trays to prevent leaks/spills impacting the underlying soils/water environment.

- 7.51 Refuelling areas for plant will occur in designated areas underlain by impermeable hardstanding with spill kits provided. Deliveries and refuelling off site plant and machinery will be undertaken by responsible persons and storage tank levels check during delivery refuelling to avoid overfilling.
- 7.52 Site drainage plans will be reviewed and maintained on Site and on-site drainage will be regularly check and tested, where appropriate.
- 7.53 All hazardous materials stored on site will be clearly labelled and any leaking or empty containers will be removed and disposed of site by a licensed waste contractor.
- 7.54 Appropriate spill control procedures will be put in place and implemented in such an event. Appropriate staff will be trained on spill contingency planning and the Environment Agency will be notified in the event of a spill.
- 7.55 A Control of Substances Hazardous to Health (COSHH) will be carried out for all hazardous materials to be handled or stored on Site using supplier's data sheets, to confirm suitable storage, handling and disposal requirements. The contractor will designate COSHH responsibility to a suitable staff member, who will maintain COSHH records and briefings of site staff.

Contamination Issues (including asbestos)

- 7.56 A site investigation has been undertaken across the site (Soil Consultants Ltd, Site Assessment Report ref: 10767/JW_Rev3, 27th of July 2026) and attached to Appendix E. The site has been assessed as being not being contaminated overall, as no discernible widespread contamination was identified in the investigation, however there is one localised contamination issue that needs management.
- 7.57 An initial site investigation was undertaken in October 2022, with a further review of the results/conclusions by the consulting engineer, limited supplementary investigation and gas monitoring instructed by the client and undertaken 2026.
- 7.58 The key contamination finding was benzo(a)pyrene at 6.53 mg/kg in one made ground sample (S1 at 0.2 m depth), which exceeded the C4SL threshold of 5.7 mg/kg for soil organic matter of 6%.
- 7.59 Therefore, it is recommended that in order to protect human health the pathway of potential exposure is broken. It is recommended all soils within a 3m radius are removed to a depth of 0.5mbgl and replaced with certified clean topsoil. This method of localised removal of made ground within the area of elevated benzo(a)pyrene should reduce the risks to acceptable levels.
- 7.60 A cover layer could be placed above any made ground/soil remaining in-situ in areas of sensitive use.
- 7.61 Planning condition 13 (iv) of the development requires independent chemical testing of all imported soils. It is recommended that a free returns policy for non-compliant imported soils is written into any contractual arrangements with suppliers.
- 7.62 During the single monitoring visit undertaken in 2022 a maximum carbon dioxide concentration of 5.0% was recorded in BH01, and concentrations of methane, hydrogen sulphide and carbon monoxide were below the instrument limit of detection.
- 7.63 During the subsequent five visits undertaken in 2026, carbon dioxide concentrations of ≥5% were measured in WS01 on two occasions corresponding to depleted oxygen concentrations;

concentrations of carbon dioxide were generally low in all remaining boreholes. Methane concentrations were below the instrument limit of detection.

- 7.64 All site workers will be made aware of the potential for contamination issues on the Site and any risk mitigation, remedial measures and / or personal protective equipment (PPE) requirements will be clearly communicated at project meetings and / or through tool box talks if required.
- 7.65 No Asbestos-Containing Materials (ACM) were observed on site nor identified in the 8 soil samples.
- 7.66 An Asbestos Survey of the site has been carried out by Scancross Environmental Services Ltd Document Ref: 13366/192, on the 14th of April 2021, the full report is located in Appendix F.
- 7.67 The inspections were carried out on the detached bungalow, three-storey property converted into flats and detached garage store.
- 7.68 The survey found asbestos in the kitchen floor tiles of Flat 3, cement sheet undercloak to the garage roof edges, external cement sheets at the garage rear elevation, and presumed asbestos in the bungalow and flat roof cowls and dormer-bay undercloak; several sampled items were confirmed asbestos-free, including the loft pipe residue, balcony slabs, and eaves hatch panels.
- 7.69 The Control of Asbestos Regulations 2012 – Approved Code of Practice and guidance published by the HSE identifies the risk associated managing and working with asbestos. The guidance identifies that prior to any demolition a refurbishment and demolition (R&D) survey must be carried out to identify all asbestos-containing materials that could be disturbed by the works. This condition has been satisfied by the Asbestos Survey which was undertaken on the 14th of April 2021, as included in Appendix F.
- 7.70 The following activities may result in potential adverse effects upon local sensitive receptors (soil and groundwater).
- Excavation, handling and storage/stockpiling of any contaminated soils (if encountered) prior to off-site disposal;
 - Storage and use of fuels, oils, chemicals and other hazardous materials; and
 - Removal of contaminated soils (if encountered) and other waste materials from the site to the licensed disposal facility.
- 7.71 The following mitigation measures are proposed in order to minimise potential effects from contamination (including asbestos):
- Storage of contaminated soils in containers, or on impermeable hardstanding with controlled drainage and covered with sheets if held for a long duration;
 - Ensure any vehicles removing materials from the site are securely covered to prevent escape of materials during transport;
 - Dedicated hazardous material storage area may be required and will be confirmed by the contractor.

Ecology

- 7.72 A Bat Emergence Survey for the Site was carried out between May and June 2026 by The Ecology Co-op (Report Reference: P11114) the full report is available in appendix G. This report outlined the presence of roosting bats and evaluate the conservation importance of the site at Denville Hall, further to a proposal to demolish the Flats, Garage, and the Bungalow.
- 7.73 The report concluded no bats were seen to emerge from the Flats on either survey. This suggests that there are no bat roosts present within the buildings. It was noted that the sites utilised by common and soprano pipistrelle bats for foraging purposes, and that brown long-eared, Myotis sp. and noctule bats commute across the site.
- 7.74 Therefore, it is considered highly unlikely that the features identified in the bat scoping survey are regularly used by roosting bats.
- 7.75 Two birds were identified to be nesting on the south-eastern corner of the roof of the dormer window on the first survey.
- 7.76 The proposal to demolish the building will result in the loss of a bird's nest identified on the south-eastern corner of the dormer window. Demolition of this building will therefore need to be timed outside of the nesting bird season, avoiding March–August inclusive, unless the area is first searched by a suitably qualified ecologist and no active nests are found. If an active nest is found, works must be postponed until the young have fledged.
- 7.77 The following precautionary mitigation measures are to be implemented prior to the start of works;
- Roof and hanging tiles on the building should be subject to removal by hand prior to the demolition of the building.
 - Replacement nesting opportunity must be incorporated into the new building, through addition of a bird box. This should be installed at a minimum height of 3.5m above the ground, out of view of direct sunlight, with clear unobstructed access to the entrance.
 - If at any point bats, or significant evidence of bats (such as fresh accumulations of droppings) are found, works must halt, and an ecologist must be contacted.

8.0 MONITORING, COMPLIANCE, REPORTING AND CONSULTATION

Communications Strategy

8.1 Liaison with the local community will be undertaken prior to and during the construction works. The following communication measures and liaison strategy will be implemented:

- Developer Project Manager will deal with Site-wide complaints (see below);
- All Contractor's staff and subcontractors briefed on noise mitigation/permitted hours for works, vehicle routing, wheel wash requirements, etc.;
- Communication of project works with key stages, potential noise and vibration issues and mitigation steps being undertaken to minimise impact;
- Liaise with nearby construction sites to minimise overall impact/disruption; and
- Undertaking quarterly meetings with local residents, businesses and representatives of Hillingdon London council, starting on 1 Nov 2026 (i.e., prior to any commencement of works on site) and other meetings will be held as and when required.

Contact Information

8.2 The full postal address of the Site and planning reference relating to construction works:

Site Address: Denville Hall, 62 Duck's Hill Road, Northwood, London, HA6 2SB

8.3 Contact address and full details for the person submitting the DCEMP:

Contact Name: Paul Zanna
Name of Company: Create Consulting Engineers Ltd
Address: Suite 505, Hamilton House, 1 Temple Avenue, London, EC4Y 0HA
Telephone: 020 7822 2300
Email: Paul.Zanna@createce.co.uk

8.4 Contact details for the Developer Project Manager responsible for undertaking the site works:

Contact Name: Genevieve Hughes
Name of Contractor: H&H Property Services Limited
Address: 21 Aylmer Parade, Aylmer Road, London, N2 0AT
Telephone: 07769 228236
Email: genevieve@handhps.co.uk

8.5 Contact details for the person responsible for dealing with and complaints from local residents or businesses and community liaison:

Contact Name: Genevieve Hughes
Name of Company: H&H Property Services Limited
Address: 21 Aylmer Parade, Aylmer Road, London, N2 0AT
Telephone: 07769 228236
Email: genevieve@handhps.co.uk

Traffic Impact Management

8.6 Details describing how traffic associated with the development will be managed in order to reduce/minimise traffic congestion and any other measures which will be implemented to reduce the impacts of construction can be summarised as follows:

- The impact of construction traffic will be monitored through the life of the project and the level of disturbance to the public will be kept to a minimum – actions will be considered if appropriate to reduce identified impacts;
- For construction traffic, the approved lorry routes outlined in section 6.6 must be followed during the course of the development. The route has been identified to avoid residential roads and optimise the use to major 'A' and 'B' roads; and
- Where possible, HGV movements will be minimised during peak hours traffic.

Monitoring

8.7 The monitoring programme for noise, vibration and dust levels during construction works will be undertaken in accordance with the procedures outlined in Section 7 and documented. The Developer will be held responsible for implementing this programme and documenting the results of the monitoring, together with any subsequent mitigation measures required / implemented.

8.8 The DCEMP shall be reviewed and updated during the course of the construction work phases, to ensure it remains appropriate and effective in mitigating environmental risk issues. The DCEMP will be reviewed for each phase of development, with any updates and / or revisions submitted to Hillingdon London Council for approval prior to further works commencing.

8.9 All DCEMP updates/revisions will incorporate a review of past performance, complaints raised and any additional mitigation measures implemented on prior phases of development in order to maintain effective environmental management best practice for this Site.

8.10 Any proposed changes to the monitoring programme for subsequent phases will be detailed and submitted to Hillingdon London Council for approval.

Reporting & Complaints

8.11 The Developer's Project Manager will hold overall responsibility for the reporting of any environmental issues, complaints or environmental performance issues.

8.12 Details of monitoring compliance and any environmental issues will be communicated through the quarterly meetings with local residents and businesses.

8.13 All complaints will be recorded and responded to in a reasonable timeframe. A register will be maintained and held on a central database, accessible by all responsible parties and will document the nature of the complaint, the date received, actions taken (and by when) and responses provided (again by when).

8.14 The Developer will be responsible for maintaining a record of all complaints received and implementing any further required mitigation measures and reported progress until resolved.

Consultation

8.15 The following summarises the intended consultation process:

- **Hillingdon London Council:** Hillingdon London Council will approve the DCEMP via the discharge of the planning condition; and
- **Local residents:** Local residents affected by the works will be contacted by letter during the mobilisation period immediately following Contractor appointment, informing them of what will be happening and providing contact names and telephone numbers.

8.16 Regular communications will be maintained with affected neighbours regarding site activity, deliveries and traffic. Should there be any complaints, local residents will be able to contact the persons responsible (see Section 10.5). A record will be kept of all comments/complaints.

8.17 This section of the DCEMP will be updated with regard to who was consulted, how the consultation was conducted and the comments received in response to the consultation. The DCEMP will then be updated highlighting what changes have been (or cannot be) made and the accompanying rationale behind the outcome.

Cumulative impacts

8.18 The following summarises how the cumulative impacts of construction in the vicinity of the site will be managed:

- 1-month prior to work beginning and every month during the construction process a review of surrounding development will be completed by the Developer Project Manager to ensure knowledge of local issues which may affect deliveries and access;
- Should there be a requirement a liaison meeting will be convened on a monthly basis to ensure that construction activities are co-ordinated and any site issues addressed; and
- Any amendments required as part of the review process will be communicated to Hillingdon London Council.

Additional Considerations

8.19 Other points that will be considered:

- Ensure that site lighting does not affect local site residents;
- Register the project with the Considerate Constructors Scheme; and
- Ensure appropriate controls are in place to minimise anti-social behaviour impacts from the conduct of builders e.g. provision of suitable smoking area, tackling bad language and unnecessary shouting.

9.0 REPORT DISCLAIMER

- 9.1 Create Consulting Engineers Ltd disclaims any responsibility to the Client and others in respect of any matters outside the scope of this report.
- 9.2 The copyright of this report is vested in Create Consulting Engineers Ltd and Denville Hall Development Limited (the Client). The Client, or their appointed representatives, may copy the report for purposes in connection with the development described herein. It shall not be copied by any other party or used for any other purposes without the written consent of Create Consulting Engineers Ltd or H&H Property Services Limited (London) (the Client).
- 9.3 Create Consulting Engineers Ltd accepts no responsibility whatsoever to other parties to whom this report, or any part thereof, is made known. Any such other parties rely upon the report at their own risk.

APPENDIX A

Environmental Risk Register Proforma

ENVIRONMENTAL RISK REGISTER PROFORMA:

No.	Source / Hazard	Risk Assessment (pre-mitigation)			Risk Mitigation Measure	Risk Assessment (post-mitigation)		
		Likelihood of occurrence (L)	Severity (S)	Potential Risk (L x S)		Likelihood of occurrence (L)	Severity (S)	Potential Risk (L x S)

Likelihood of Occurrence: Negligible (1) - Unlikely (2) - Probably (3) - Likely (4) - Highly Likely (5)
 Severity: Very Low (1) – Low (2) – Medium (3) – High (4) – Very High (5)
 Potential Risk: Low Risk (1 to 2) – Medium Risk (3 to 6) – High Risk (8 to 12) – Very High Risk (15 to 25)

Completed By:..... **Date:**.....

Authorised By:..... **Date:**.....

APPENDIX B

Tree Protection/Removal Method Statement

Arboricultural Method Statement & Tree Protection Plan

Denville Hall

July 2026



**Site Address: Denville Hall, 62 Ducks Hill Road, London,
Northwood, HA6 2SB**

Project Number: 7056

Client’s Name: Create Consulting Engineers



July 2026

120 Moorgate,
London,
EC2M 6UR

Issue Sheet

Revision	Date	Description	Prepared by	Checked by	Approved by
P01	30.07.26	First issue	Ryan Gledhill	Isaac Walls	Isaac Walls

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APPENDIX 1 TREE PROTECTION PLAN

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1 Introduction

1.1 Appointment

- 1.1.1 Lanpro Services Ltd. was appointed by Create Consulting Engineers, to produce an Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) in accordance with British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations'.
- 1.1.2 The proposed development includes demolition of no. 48 and no. 60 Ducks Hill Road, garage and wooden storage unit to facilitate the erection of three new buildings comprising of 12 assisted-living units (Class C2), proposed ancillary communal space, including cafe and restaurant, external connecting link building, landscaping and external works.
- 1.1.3 This AMS and TPP have been prepared to discharge a planning condition attached to the approved planning permission (Reference No. 924/APP/2022/3603). GHA Arboricultural Consultancy previously prepared an Arboricultural Impact Assessment (AIA) and associated Tree Impact Plan (TIP) for the site. Information relating to the site's arboricultural features, including tree measurements, quality categorisation, and survey comments, is contained within the Tree Survey Schedule included in the previously submitted AIA and should be referenced if required.
- 1.1.4 This AMS and TPP relate solely to the demolition phase of the proposed development.
- 1.1.5 The following schedule and drawings are to be read in conjunction with this report and are included as appendices:
- Tree Protection Plan (Appendix 1)

Pertinent Documents

Document/Drawing	Document/Drawing Number	Company of Origin
Tree Protection Plan	7056-LAN-XX-XX-M2-AR-7301 P02	Lanpro
Demolition Routes Layout	3695-CCE-XX-XX-DR-C-0011-P04	Create
Arboricultural and Planning Integration Report	GHA/DS/122660:21	GHA Arboricultural Consultancy

1.2 Objectives

- 1.2.1 The objective of this AMS is to provide a schedule of work/supervision to guide each stage of development whilst outlining the steps of the work process. This will ensure that the development is carried out effectively and the retained trees are adequately protected.
- 1.2.2 The AMS must be followed by all personnel, visitors and sub-contractors undertaking construction activities on the Site. This includes tree removal, pruning, vegetation clearance, groundworks, construction works and landscaping works.

- 1.2.3 A copy of this Method Statement and Tree Protection Plan must be accessible to all personnel, visitors and sub-contractors entering the Site.

1.3 Site Description

- 1.3.1 The Site is located at Denville Hall, 48 and 60 Ducks Hill Road, Northwood, London, HA6 2SB, centred on National Grid Reference TQ 090 908 (approximate), within the administrative boundary of the London Borough of Hillingdon.
- 1.3.2 The Site comprises Denville Hall and its associated grounds, including areas of hardstanding, access roads, landscaped gardens, and mature tree cover. The Site is bounded by existing residential development and benefits from an established tree population both within the Site and along its boundaries.

1.4 Relevant Legislation, Policy and Guidance

- 1.4.1 The preparation of this Arboricultural Method Statement (AMS) and Tree Protection Plan (TPP) has had regard to the following legislation, planning policy and best practice guidance:
- Town and Country Planning Act 1990
 - Town and Country Planning (Tree Preservation) (England) Regulations 2012
 - Forestry Act 1967
 - The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024
 - National Planning Policy Framework 2024
 - Hillingdon Local Plan: Part 1 – Strategic Policies (2012)
 - Hillingdon Local Plan: Part 2 – Development Management Policies (2020)
 - BS5837:2012 Trees in relation to design, demolition and construction – Recommendations
 - BS3998:2010 Tree Work – Recommendations. London: BSI

2 Arboricultural Method Statement

2.1.1 Introduction

- 2.1.2 The purpose of this AMS is to provide guidance to ensure appropriate protection and mitigation are given to retained arboricultural features during the project development works.
- 2.1.3 This AMS is to be read in conjunction with the AIA (Reference no. GHA/DS/122660:21) as included within the submitted documentation for planning approval 924/APP/2022/3603.
- 2.1.4 This Method Statement identifies key activities which have the potential to harm trees. Activities are considered in the expected chronological order of the Development. Measures to avoid or mitigate the potential impacts on trees have been provided and will be followed on-site in collaboration with the project arboriculturist.

2.2 Pre-Start Requirements and Communication

- 2.2.1 Prior to commencement of any development works, the applicant of the approved Development should appoint a suitably qualified arboricultural consultant to act as the Arboricultural Clerk of Works (ACoW). The role of the ACoW is to ensure that specified tree protection/mitigation measures are carried out during the entire construction process.
- 2.2.2 The following AMS must be presented to all personnel, visitors and sub-contractors involved with Site activities. This includes tree removal, pruning, vegetation clearance, groundworks, construction works and landscaping works.
- 2.2.3 It is the responsibility of the Site Manager, ACoW or nominated personnel with arboriculture qualifications to communicate the contents of this Method Statement to all personnel, visitors and sub-contractors undertaking different relevant activities.

2.3 Sequence of Works

- 2.3.1 The following sequence of works will be undertaken as shown in Table 1 below.

Table 1: Works Schedule

Construction Stage	Arboricultural Operation	Supervision Required
Pre-Demolition	Removal of the trees outlined at s2.4 within the associated TPP by a competent contractor.	No, the tree contractor is to update ACoW with photos once completed.
Pre-Demolition	Preliminary site meeting. The location and specification of tree protection measures such as fencing, ground protection and cellular confinement systems are to be discussed and marked out on site.	Yes, ACoW, site manager, and applicable contractors/consultants, to be present. All attendees will provide contact details and these will be noted on the

		contact form in the appendices of this document.
Pre-Demolition	Installation of temporary tree protection fencing, ground protection and cellular confinement systems.	Yes, the ACoW and site manager to inspect the installed tree protection measures and update the tree officer post supervision.
Demolition Phase	Positioning of site office and compounds	No, the site manager is to update the ACoW to ensure no temporary buildings or services are located within retained trees RPAs.
Demolition Phase	Undertake demolition phase of works.	Yes, periodical unannounced site visits by the ACoW to ensure adherence to the method statement.
Post Demolition Phase	Removal of temporary tree protection fencing and ground protection.	Yes, ACoW to inspect the site once complete and decommission the tree protection on site.
Site Check by Arboriculturist to Inspect Retained Trees and Specify Any Remedial Works Necessary		

2.4 Tree Removals

- 2.4.1 The removal of eight individual trees, one group of trees, and the partial removal of one tree group categorised as low quality (Category C), together with two individual trees categorised as very low quality (Category U), is required to facilitate the approved demolition works. These removals shall be completed prior to the commencement of demolition on site. It is recommended that the arboricultural features identified for removal are marked on site by the ACoW before works commence to ensure that only the approved trees are removed and to avoid inadvertent impacts on retained trees.
- 2.4.2 All tree work will be undertaken by a suitably qualified, insured and experienced Arborist working in accordance with British Standard 3998: 2010 Tree Work – Recommendations. No tree works will be undertaken by construction workers unless qualified to do so.
- 2.4.3 To avoid unlawful impacts on nesting birds in accordance with ecological advice, all tree work needs to be scheduled before the start of nesting seasons in March.
- 2.4.4 No additional works to trees will take place without prior consultation with the project Arboriculturist and an update to this Arboricultural Method Statement being carried out.

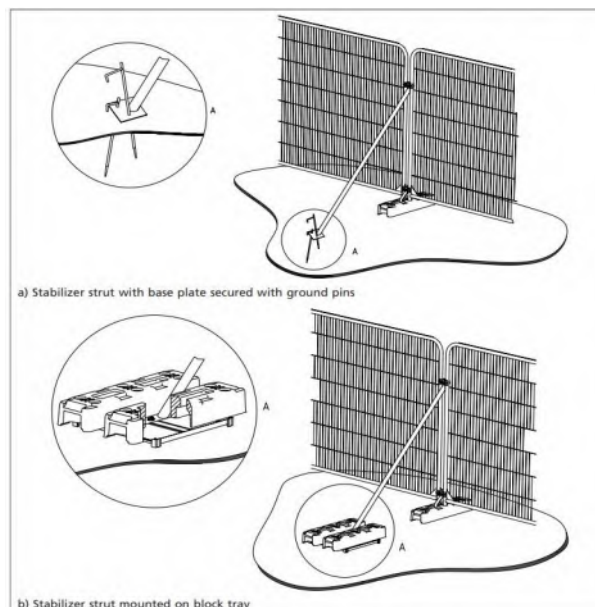
2.5 Installation of Tree Protection Fencing

- 2.5.1 Tree protection fencing must be installed in the locations shown on the associated Tree Protection Plan before any construction activities or materials enter the Site.
- 2.5.2 The locations of these measures are designed to protect the Root Protection Areas (RPAs) of all retained trees and exclude all construction activities from RPAs. The column entitled

‘Radius of RPA (m)’ in the Tree Survey Schedule gives the horizontal radius that the RPA stretches from each tree. For trees in groups or woodlands, the RPA will be measured from the stem of the outermost tree at any given location.

- 2.5.3 The RPA is the minimum area of roots required for a tree to survive. As such the RPA must be considered sacrosanct and a Construction Exclusion Zone as delineated by tree protection fencing and ground protection.
- 2.5.4 Tree protection fencing and ground protection will be installed before any materials enter the Site or construction activities begin such as setting up a site compound, groundworks, installation of services or other building works.
- 2.5.5 Tree protection fencing locations will be marked on-site by an engineer working with GPS coordinates based on the Tree Protection Plans.
- 2.5.6 Tree protection fencing will consist of a vertical scaffold framework made of posts, well-braced to resist impacts. The framework must be driven into the ground, taking care to avoid any large structural roots (>25mm in diameter) and underground services. Onto this framework, Heras fencing will be securely fixed with anti-tamper couplers between fence panels. An alternative acceptable specification that avoids driving posts into the ground would be bracing Heras fencing with bracing poles and ground pins or bracing poles with block trays as shown in Figure 1 below.
- 2.5.7 Signage will be attached on every second fence panel that reads ‘Tree Protection Zone – Keep Out’.

Figure 1. Temporary Tree Protection Fencing Specification as per BS5837: 2012



- 2.5.8 Once fencing has been installed and before construction activities begin, a site check by an Arboriculturist will be conducted to check the locations and suitability of the tree protection measures. **Construction must only proceed once sign-off from the Project Arboriculturist has been received.**

- 2.5.9 The ACoW will inspect the tree protection measures on-site and request changes if necessary. The ACoW will only check the tree protection measures are fit for the purpose of protecting the retained trees. It is up to the Site Manager and other contractors to work around these protection measures, if any contractor has doubts about being able to work around the tree protection measures, they are to voice their concerns in this meeting, and potential alternatives will then be offered to the local planning authority for written approval.
- 2.5.10 Once installed, tree protection fencing will not be moved or altered in any way without prior consultation and sign-off from an Arboriculturist. If fencing does need to be moved back to create construction space, appropriate ground protection must be used to cover the exposed RPA during works until such time as tree protection fencing can be reinstated in its original position.
- 2.5.11 It is the responsibility of all persons working on the Site to ensure that the fencing remains intact and in the correct locations throughout construction. It is also the responsibility of all persons working on the site to respect the Construction Exclusion Zones created by the tree protection fencing. In the event that any fence panels are damaged, this must be rectified immediately to restore the Construction Exclusion Zone.
- 2.5.12 Tree protection fencing will only be removed once all construction and landscaping work is complete.

2.6 Installation of Ground Protection

- 2.6.1 Due to the encroachment of construction activities and parking within the Root Protection Areas (RPAs) of retained trees, together with the frequency and duration of anticipated loading, ground protection shall comprise a no-dig construction requiring no excavation. This approach will prevent root severance and minimise soil compaction. In addition, the completed surface and all constituent layers shall be permeable to allow retained roots to continue to receive adequate air and water.
- 2.6.2 To achieve this, a cellular confinement system will be used to construct the proposed footpath. Such systems provide an above-ground sub-base with a high load-bearing capacity while minimising impacts on the underlying rooting environment. Suitable proprietary systems include:
- Geosynthetics Cellweb Tree Root Protection System ¹
 - Wrekin's Protectaweb ²

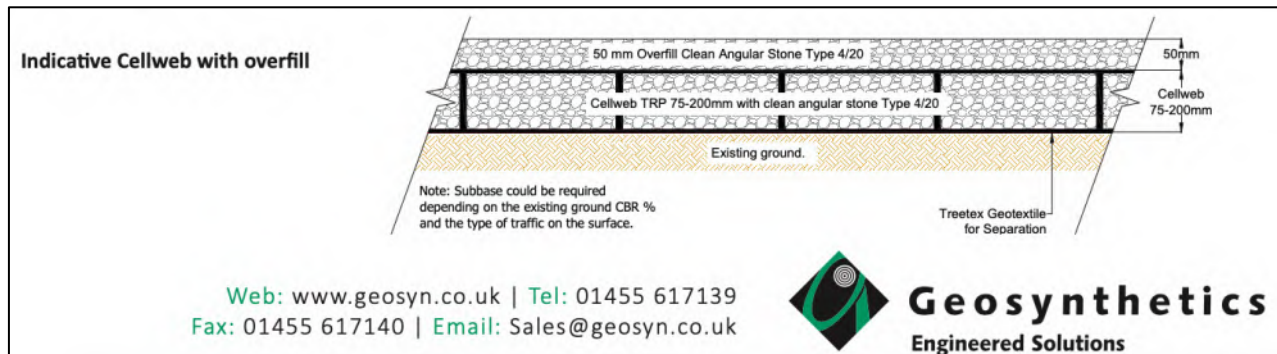
¹ <http://www.geosyn.co.uk/product/cellweb-tree-root-protection>

² <https://www.wrekinproducts.com/geosynthetics/geocells-geocellular-paving/protectaweb>

- Core Landscape Products' Core TRP³

2.6.3 An indicative construction detail for the Geosynthetics Cellweb Tree Root Protection System is shown in Figure 2.

Figure 2 Indicative Geosynthetics Cellweb Footpath Details



2.6.4 The chosen cellular confinement system must have the following specifications:

- No required excavation into the ground;
- A permeable geotextile laid at ground level to prevent soil migrating into the cellular matrix reducing the permeability of the system over time;
- A cellular matrix that is suitable for the weight of the intended loads (i.e. pedestrians/cyclists). This will inform the depth of the cellular grid layer which can range from 75mm to 200mm as shown in Figure 2 above. A depth of 75mm is usually sufficient for footpaths;
- The cellular matrix must be filled with a no-fines stone aggregate, ideally 20/40mm stones however, where not available, 4/20 stone can be used. Type 1 aggregate must not be used;
- A permeable finishing layer such as porous asphalt or blocks.
- Edge supports which require no excavation. Kerb stones set into concrete haunching are not appropriate as this would require excessive digging into RPAs. Instead, timber edging will be used where it is set above ground level with regular pegs into the ground pinning it into position.

2.6.5 The following methodology will be used to install the no-dig footpath in conjunction with any specific methodology provided by the product manufacturer:

³ https://www.corelp.co.uk/core-tree-root-protection/?utm_term=protecting%20trees%20during%20construction&utm_campaign=AP+%7C+Search+%7C+Tree+Root+Protector&utm_source=adwords&utm_medium=ppc&hsa_acc=3393753656&hsa_cam=9567872581&hsa_grp=95517313662&hsa_ad=423203799057&hsa_src=g&hsa_tgt=kwd-6304883325&hsa_kw=protecting%20trees%20during%20construction&hsa_mt=b&hsa_net=adwords&hsa_ver=3&gclid=EAlaI QobChMI0ujQzfCu_wlVTu7tCh3zOgxEAAAYASAAEgKEYvD_BwE

1. No digging will occur at any time within RPAs. No hard surfacing will be within 0.5m of a tree stem to avoid future stem growth causing hard surfaces to heave.
2. Prior to installation of the footpath, the ground will have been protected from soil compaction by suitable ground protection over RPAs (see Tree Protection Plans). No soil compaction must be present prior to installing the footpath. If soil compaction is present, an Arboriculturist must be consulted and decompaction with an air spade may be required prior to footpath installation.
3. An Arboriculturist will attend the site to supervise the removal of any existing vegetation along the route using hand tools. No machinery will be used to clear vegetation. Any surface roots encountered will be worked around and hollows can be filled with sharp sand (not builder's sand). No excavation will take place to level the area.
4. Once the surface has been prepared, the permeable geotextile will be laid.
5. Edging will be installed comprised of softwood edging boards placed above ground level. These will be held in place with pegs spaced a minimum of 500mm apart and driven into the ground, avoiding any large (>25mm diameter) roots.
6. The cellular layer will then be laid on top of the geotextile and pinned into position as per the manufacturer's instructions to achieve the specified cell diameter. Cells will be filled with a minimum of 100mm depth no-fines angular fill (20/40mm, or if not available then 4/20 may be appropriate). The infill material will be placed at the end of the footpath and then pushed over the expanded cells. Machinery can then work from the filled cells or from adjacent ground protection.

2.6.6 Once the cellular system has been filled, a second layer of permeable geotextile shall be laid over the aggregate before the permeable wearing course is installed.

2.7 Pre-commencement Site Meeting

2.7.1 A pre-commencement site meeting will take place once the tree protection measures have been erected and installed. Compulsory attendees will include the Arboricultural Clerk of Works (ACoW) and the Site Manager (SM). A record will be kept of all matters discussed within this AMS to ensure project-wide understanding. The name, role and company of each attendee will be recorded to confirm that all parties have received a copy of the Arboricultural Method Statement and Tree Protection Plan and understand the specified arboricultural requirements.

2.8 Site Office and Compounds

2.8.1 The site office and compounds must be located outside of the RPAs and canopy spreads of all retained trees. Access to the site office and construction compounds must avoid

low tree canopies to avoid the need for pruning to allow taller construction vehicles to gain entry to the compound.

2.8.2 No materials or machinery must be stored within RPAs at any point.

2.8.3 The storage of oils, fuels and chemicals within the compound will be confined to areas with impervious bases and surrounded by impervious bunds. All materials storage facilities and areas must consider the effects of sloping ground on the movement of potentially harmful liquids towards retained trees.

2.9 Ground Works

2.9.1 This Method Statement will be provided to groundworks contractors in advance of groundworks commencing.

2.9.2 Only approved ground works will be carried out within the RPAs of trees to be retained as shown on the Tree Protection Plans. Ground levels will not be raised or lowered within RPAs. No heavy machinery or soil storage will enter RPAs. No mechanical excavation will take place within RPAs.

2.10 Demolition Phase of Works

2.10.1 All demolition works shall be undertaken strictly within the designated work areas shown on the TPP. Under no circumstances shall demolition activities, plant movements or material storage extend beyond the approved working areas into the Root Protection Areas (RPAs) of retained trees unless specifically identified within this AMS and protected by the approved ground protection measures.

2.10.2 Demolition shall progress in a manner that minimises disturbance to retained trees and their rooting environment. Where structures or hard surfaces are located adjacent to retained RPAs, materials shall be dismantled and pulled back into the demolition footprint before being processed or loaded onto plant. Materials shall not be pushed, dropped or pulled into retained RPAs, nor shall demolition plant operate outside the approved working areas.

2.10.3 Demolition arisings shall be removed progressively from the Site to avoid unnecessary stockpiling. At no time shall demolition materials, waste, spoil, fuels, chemicals, plant, machinery or equipment be stored within exposed RPAs or within areas protected by tree protection fencing unless expressly permitted within this AMS.

2.10.4 Where temporary access routes or ground protection have been installed within RPAs, these shall be used solely for the purposes identified within this AMS. Construction traffic shall remain on the approved protected routes at all times and shall not deviate beyond the limits of the installed ground protection.

2.10.5 On completion of the demolition works, all demolition arisings, plant, equipment, temporary materials and waste shall be removed from the Site, or relocated outside

retained RPAs, prior to the removal of any tree protection fencing or temporary ground protection.

2.11 Removal of Temporary Tree Protection and Ground Protection

- 2.11.1 Temporary tree protection fencing and ground protection shall remain in position for the duration of the demolition works and shall not be removed, relocated or altered without the prior approval of the ACoW.
- 2.11.2 The removal of tree protection fencing and temporary ground protection shall only take place once all demolition works have been completed, all plant, machinery, materials, temporary works, waste and demolition arisings have been removed from the Site or relocated outside retained RPAs, and there is no further risk of damage to retained trees.
- 2.11.3 The removal of the tree protection measures shall be undertaken carefully to avoid damage to retained trees, exposed roots or the surrounding ground conditions. Any fixings, supports or temporary ground protection materials shall be lifted clear of the ground without excavation wherever practicable.
- 2.11.4 Following the removal of the temporary tree protection and ground protection, the ACoW shall undertake a final inspection of the retained trees and their RPAs. The inspection shall confirm that the retained trees have not sustained damage during the demolition phase and that the RPAs remain in a satisfactory condition. Any defects or damage identified during the inspection shall be recorded and appropriate remedial recommendations provided where necessary.

2.12 General Precautions

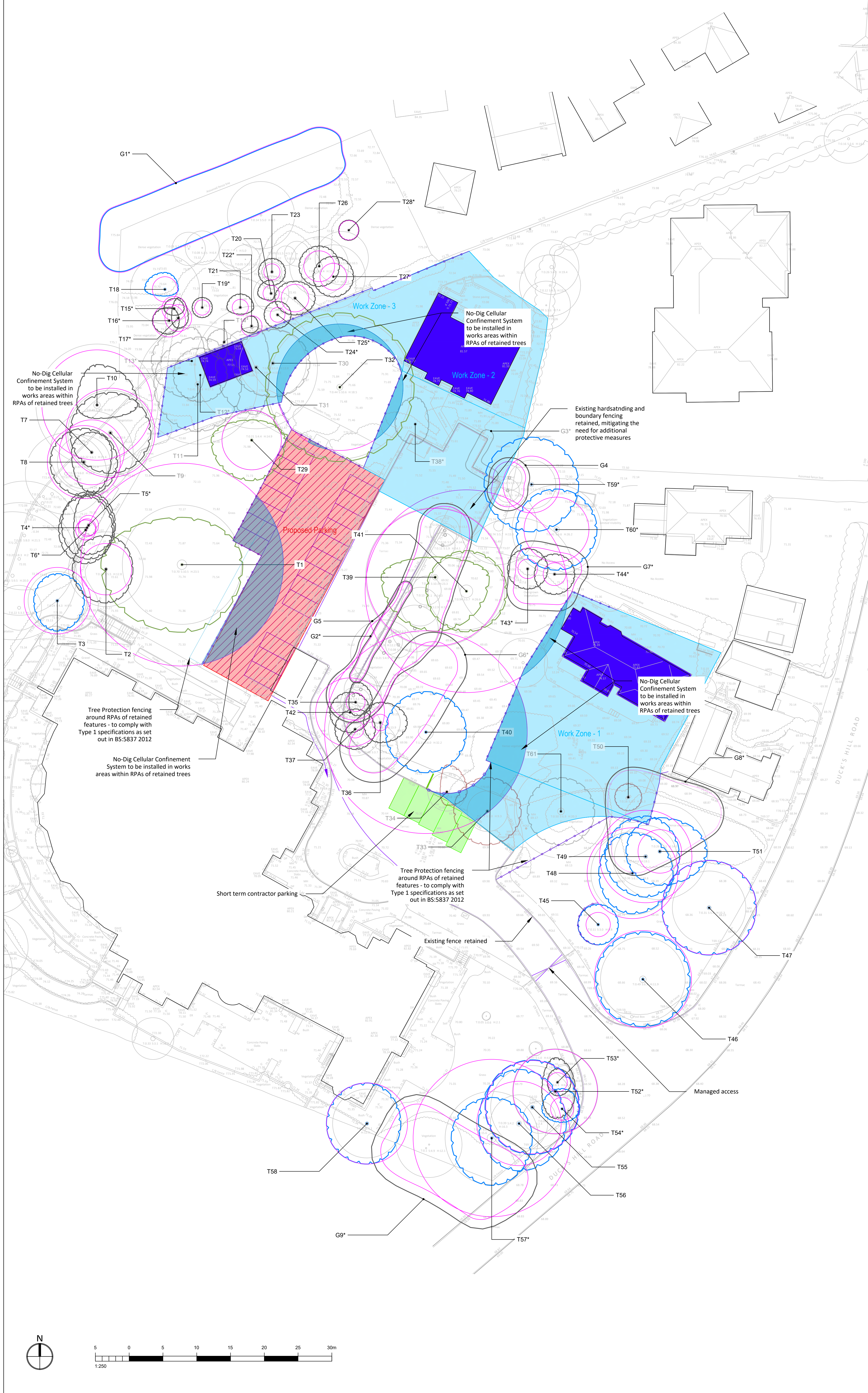
- 2.12.1 It is important that all workers on site are aware of the arboricultural constraints and protection requirements.
- 2.12.2 A copy of this report and the attached Tree Protection Plans must be available in the Site Office at all times and provided to relevant contractors ahead of time.
- 2.12.3 Planning of demolition activities will take account of the canopies of existing trees to ensure that no movements of materials impact the trees, potentially causing physical damage.
- 2.12.4 Movement of machinery or equipment with a hydraulic lifting arm will be carried out under the supervision of a banksman to ensure that adequate clearance distances are always maintained.
- 2.12.5 No spoil, oils, chemicals or building materials are to be stored within the RPA, particularly those whose accidental spillage could potentially cause contamination and damage to a tree. No fires will be sited near tree canopies.
- 2.12.6 RPAs will be considered as a Construction Exclusion Zone.

2.13 Contingency Actions

- 2.13.1 In the event of a breach of conditions, AMS or tree protection which causes undue damage to the supporting soils around the protected trees; or any damage to a retained tree such as to the root system, stem or branch structure: the ACoW must be contacted and work must immediately stop. A photographic record of the breach and/or damage must be made by an appointed site supervisor. The ACoW may have to visit the site to assess the damage caused and a plan of action will be worked out. Contact with the LPA may be necessary to update them on the tree protection area breach. A record of all correspondence between all parties involved will be kept.
- 2.13.2 The following table outlines the actions that must be taken in the event of a breach of conditions, AMS or tree protection and the required time scales.

Action		Timescale
1- All works stop in the vicinity of the AMS/TPP breach and the ACoW will be contacted.		At occurrence
2- SM to record details of the breach including written and photographic evidence. These will then be relayed to the ACoW via Email.		Within 10 Minutes
3A- Upon instruction from the PA, tree protection is to be re-instated as per the AMS and TPP. If action 3B is deemed not necessary by the ACoW action 4 can be carried out.	3B-If necessary the LPA will be contacted by the ACoW and will be provided with pertinent information regarding the breach of the AMS/TPP.	3A-Within 1 hour
		3B-Within 3 days or following a site visit
4A- Site visit conducted by the ACoW: All damage and breaches of the AMS/TPP will be photographically documented.		During the Site visit.
4B- Any immediate corrective actions that can be carried out will be actioned on site during the visit.		
4C- Any further corrective actions that can be carried out will be planned and the ACoW will instruct the SM and the LPA/other pertinent parties will be informed of these actions.		
5- Further corrective actions will be carried out as per action 4C. The SM will then update the ACoW once these corrective actions have been carried out.		Up to 2 weeks after action 4C

Appendix 1 Tree Protection Plans



NOTES

Do not scale from this drawing electronically or manually, use written dimension only.

All dimensions are in m unless stated otherwise.

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CDM 2015

The Construction (Design and Management) Regulations 2015 (CDM 2015) makes a distinction between domestic and commercial clients and outlines the duties you, as client, have under Health and Safety Law (HSE).

These duties can be found at:
<http://www.hse.gov.uk/construction/2015responsibilities.htm>

It is your responsibility as a client to make yourself aware of your roles and responsibilities under CDM 2015 and act accordingly.

Key

- Existing Buildings
Refer to Topographical Survey for full details
- Work Zones
Refer to design proposals for full details
- Parking Areas
Refer to design proposals for full details
- Parking Areas - Short term
Refer to design proposals for full details
- Demolition Works
Refer to design proposals for full details

Tree Protection Plan

- Category A tree as defined by BS5837:2012
HIGH quality value
- Category B tree as defined by BS5837:2012
MODERATE quality value
- Category C tree as defined by BS5837:2012
LOW quality value
- Category U tree as defined by BS5837:2012
VERY LOW quality value
- RPA
Root Protection Area
- No-Dig Cellular Confinement System
To be installed within works areas in RPAs of retained trees
- Tree Protection fencing
Around RPAs of retained features - to comply with Type 1 specifications as set out in BS 5837:2012
- Existing Tree Removed
Removed to facilitate development
- Tree Identification Marker

Tree identifier labels:

T = Tree
H = Hedge
G = Tree Group
W = Woodland

PD0	REVIEWED BY: LC	DATE: 22.07.26	CHECKED BY: HC	DATE: 28.07.26
P01	REVIEWED BY: LC	DATE: 31.07.26	CHECKED BY: HC	DATE: 02.08.26

PURPOSE OF ISSUE
PL - PLANNING SUBMISSION 3

DRAWING STATUS
S1 - SUITABLE FOR CO-ORDINATION

PROJECT TITLE
Denville Hall

CLIENT
Create Consulting Engineers Ltd

DRAWING TITLE Tree Protection Plan	SCALE 1:250 @ A1
---------------------------------------	---------------------

DATE 22.07.26	DRAWN BY LC	CHECKED BY IW	APPROVED BY RC
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DRAWING NUMBER
7056-LAN-XX-XX-DR-AR7301 - P02

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Planning | Design | Environment

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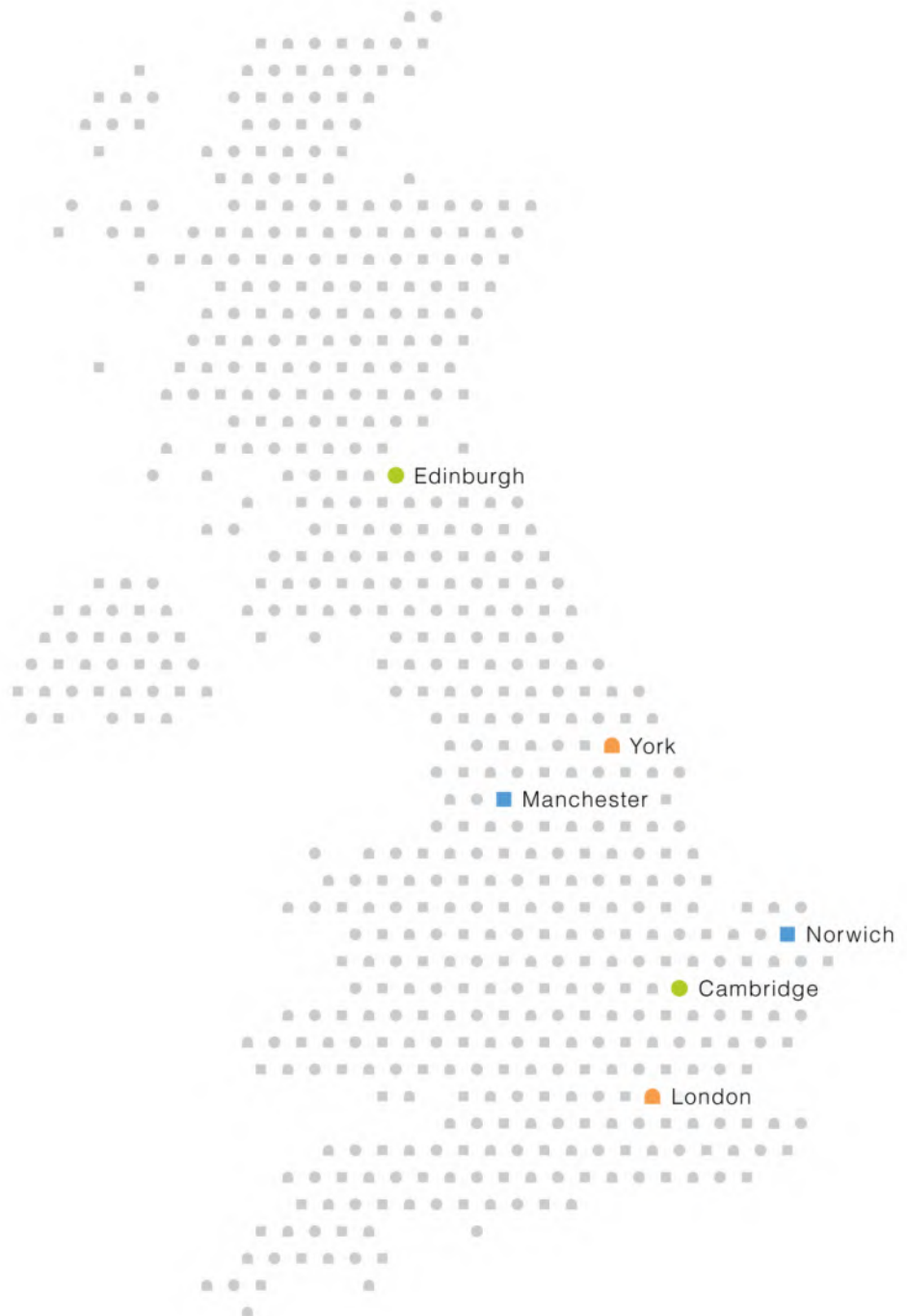
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APPENDIX C

Environmental Noise Monitoring Report



Environmental Noise Assessment
Denville Hall
Duck's Hill Road
Northwood, London, HA6 2SB
Stroma Built Environment Ltd.
SBE Ref: 09-21-88961 – AC – 1v1

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I. Revision History

Revision	Date	Description		
1v1	02/08/2022	First issue		
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II. Executive Summary

Stroma Built Environment has been appointed to provide acoustic consultancy for the proposed Denville Hall residential care home development located on Duck's Hill Road, Northwood. The development involves demolition of two currently unoccupied buildings on the site and the construction of three new buildings, landscaping and remodelling of parking. The purpose of this assessment is to consider the existing noise climate, the acoustic influence on the development and assess the noise impact of the development on the area.

Stroma Built Environment have carried out a baseline noise survey at the site in July 2022 to assess site noise levels. The noise climate at the site is controlled by noise attributable to local and distant road traffic, primarily road traffic on Duck's Hill Road.

A three-dimensional Cadna-A noise model has been developed to predict noise levels incident on the new building façades, and to assess noise from the development. Based on predicted noise levels incident on the new building façades, minimum sound insulation performances of building envelope elements are set out in Table 5 on page 14.

Preliminary proposals for external walls and roof build-ups have been assessed and are suitable. Provision of 'standard' thermal double glazing rated not less than 34 dB R_w should be capable of providing the required sound insulation rating. Trickle ventilators should have a rating of at least 36 dB $D_{n,e,w}$ in the open position.

Rain noise drumming on rooflights to bedrooms during heavy rain could potentially result in of sleep disturbance. It is recommended that rooflights which are designed to mitigate rain noise are sought.

Predicted noise levels incident on the most noise exposed new extension façades correspond to a 'low' risk of having an adverse effect on occupants should they wish to open windows to mitigate overheating, or for any other reason.

Consideration has been given to the potential adverse impact of noise due to the operation of the new restaurant and café, and the proposed changes to the site's parking arrangements, on nearby noise sensitive premises. These proposals are not expected to result in an adverse impact.

Representative site background noise levels have been used to inform noise limits proposed to control noise emissions from new sources of building services noise introduced by the scheme in line with guidance given in BS 4142:2014 *Methods for rating and assessing industrial and commercial sound*. It is recommended that the rating level from new building services plant to not exceed 5 dB below the existing site representative background sound level, set out in Table 6 on page 18.

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1. Introduction

- 1.1 Stroma Built Environment (SBE) has been appointed by Change Project Consulting to provide acoustic consultancy for the proposed Denville Hall residential care home development located on Duck's Hill Road, Northwood, Greater London, Middlesex, HA6 2SB.
- 1.2 The development involves the demolition of two currently unoccupied buildings on the site and the construction of:
- Building A - a two storey building containing six assisted living flats
 - Building B - a three storey building with basement level containing a cinema, gym and six assisted living flats
 - Building C – a single storey building containing a restaurant and café
 - In addition, construction of a single storey extension to the existing Denville Hall building (essentially part of Building C) to create a conference room, and enclosed walkways linking all of the new buildings to the existing Denville Hall building and extension.
 - Landscaping of external spaces, remodelling of existing parking and creation of a parking area to the north of the site accessed from Duck's Hill Road
- 1.3 The Stage 2 Master Plan is included in Appendix I with labels added identifying Buildings A, B and C.
- 1.4 The purpose of this assessment is to consider the existing noise climate around the proposed development site in relation to the acoustic influence on the development, and assess the noise impact due to the development with consideration to existing background sound levels at nearby noise sensitive premises.
- 1.5 Whilst every effort has been made to ensure that this report is easy to understand, it is technical in nature; to assist the reader, a glossary of terminology is included in Appendix III.

2. Relevant Standards and Guidance

Planning Requirements

- 2.1 An application is due to be submitted to the London Borough of Hillingdon Planning Applications Team. A pre-application was submitted and a response letter was issued outlining some considerations including a section on noise, an extract of which is included below.

Policy D14 of the London Plan (2021) states that residential development proposal should manage noise by avoiding significant adverse noise impacts on health and quality of life, mitigating and minimising the existing and potential adverse impacts of noise on, from, within, as a result of, or in the vicinity of new development without placing unreasonable restrictions on existing noise-generating uses, where it is not possible to achieve separation of noise-sensitive development and noise sources without undue impact on other sustainable development objectives, then any potential adverse effects should be controlled and mitigated through applying good acoustic design principles and where it is not possible to achieve separation of noise-sensitive development and noise sources without undue impact on other sustainable development objectives, then any potential adverse effects should be controlled and mitigated through applying good acoustic design principles

Policy EM8 of the Hillingdon Local Plan: Part 1 - Strategic Policies (November 2012) states that the Council will seek to ensure that noise sensitive development and noise generating development are only permitted if noise impacts can be adequately controlled and mitigated.

Extract from pre-application planning response letter

Planning Guidance

National Planning Policy Framework

- 2.2 The current planning guidance for the assessment of the potential environmental noise impact is outlined in the National Planning Policy Framework (NPPF) February 2019. Whilst the NPPF does not set criteria that must be achieved, the NPPF does make reference to appropriate control of potential noise impacts in paragraph 170e and 180:

Paragraph 170 e

“planning policies and decisions should contribute to and enhance the local environment by... e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability...”

Paragraph 180 b

“Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should... b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason...”

- 2.3 Therefore the policy requires that new developments are not affected to an unacceptable degree by environmental noise.

Noise Policy Statement for England

- 2.4 The Noise Policy Statement for England (NPSE) provides further guidance on the Government's policy with regard to the potential impacts of noise. The NPSE states the aims of Government policy relating to noise are:

"Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- *avoid significant adverse impacts on health and quality of life;*
- *mitigate and minimise adverse impacts on health and quality of life; and*
- *where possible, contribute to the improvement of health and quality of life"*

- 2.5 The Explanatory Note to the NPSE provides further guidance on how significant noise effects should be determined. The concepts of No Observed Effect Level (NOEL), Lowest Observed Adverse Effect Level (LOAEL – the lowest noise level at which an adverse effect can be observed) and Significant Observed Adverse Effect Level (SOAEL – the noise level above which significant adverse effects on health and quality of life can be observed) are introduced, however the NPSE also states that:

"It is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times."

WHO 'Guidelines for Community Noise'

- 2.6 The World Health Organisation (WHO) has published guidelines that relate to acceptable levels of noise from a health perspective detailed in the WHO 'Guidelines for Community Noise', 1999. The document sets out the following criteria that should be achieved on residential balconies, terraces and in outdoor living areas to protect the majority of people from being annoyed during the daytime, set out in Table 1.

Table 1: Guideline values for community noise in specific environments (WHO)

Specific Environment	Guidance	Criteria Limit $L_{Aeq,16hr}$ (dB)
Outdoor living area	'Few seriously annoyed' in outdoor living areas	≤ 55
	'Few moderately annoyed' in outdoor living areas	≤ 50

IEMA 'Guidelines for Environmental Noise Impact Assessment'

- 2.7 The document 'Guidelines for Environmental Noise Impact Assessment' published by the Institute of Environmental Management and Assessment (2014) provides further guidance and suggests that the daytime threshold of Lowest Observed Adverse Effect Level is typically 50 dB $L_{Aeq,16hr}$ for residential dwellings.
- 2.8 Table 7-14 from the document provides guidance on assessing the impact due to a change in environmental noise level (originally from the HS2 Phase I Environmental Statement) and is reproduced in Table 2.

Table 2: Typical interpretation of impact from a change in sound level

Long-term Impact Classification	Short-term Impact Classification	Sound level change dB $L_{Aeq,T}$ (positive or negative) T = either 16hr day or 8hr night
Negligible	Negligible	≥ 0 dB and < 1 dB
	Minor	≥ 1 dB and < 3 dB
Minor	Moderate	≥ 3 dB and < 5 dB
Moderate	Major	≥ 5 dB and < 10 dB
Major		≥ 10 dB

Internal Ambient Noise Levels

- 2.9 Internal ambient noise levels in bedrooms must not exceed the values set out below, taken from BS 8233:2014 *Guidance on sound insulation and noise reduction for buildings* (BS 8233) and WHO *Guidelines for Community Noise* (1999) guidance.

Table 3: BS 8233 Internal noise levels for residential spaces

Activity	Location	Daytime (07:00-23:00)	Night Time (23:00-07:00)
Resting	Living Room	35 dB $L_{Aeq,16hr}$	-
Dining	Dining Room / Area	40 dB $L_{Aeq,16hr}$	-
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq,16hr}$	30 dB $L_{Aeq,8hr}$ (45 dB L_{AFmax})

- 2.10 ProPG *Planning & Noise – New Residential Development*, provides guidance for the assessment of noise affecting new residential developments. It draws on and adds to existing guidance, including BS 8233

and WHO *Guidelines for Community Noise* (1999) guidance. In relation to maximum noise events, ProPG states:

"In most circumstances in noise-sensitive rooms at night (eg bedrooms) good acoustic design can be used so that individual events do not normally exceed 45 dB $L_{Amax,F}$ more than 10 times a night. However, where it is not reasonably practicable to achieve this guideline then the judgement of acceptability will depend not only on the maximum noise levels but also factors such as the source, number, duration, predictability and regularity of noise events."

Noise Levels in External Amenity Spaces

2.11 With respect to noise levels in external amenity spaces BS 8233 states:

"For traditional external areas that are used for amenity space, such as gardens or patios, it is desirable that the external noise level does not exceed 50 dB $L_{Aeq, T}$, with an upper guideline value of 55 dB $L_{Aeq, T}$ which would be acceptable in noisier environments."

Control of External Noise Impact from Building Services

- 2.12 It is common for Local Authority planning requirements to require noise impact assessment. At the time of writing SBE are not aware of any specific noise impact assessment requirements for planning. Notwithstanding, it is good practice to control noise from mechanical services to ensure minimal impact on nearby noise sensitive receptors. It is recommended that noise from mechanical services plant to not exceed 5 dB below the representative background noise level when assessed at the nearest noise sensitive receptors when assessed in line with BS 4142:2014 *Methods for rating and assessing industrial and commercial sound* (BS 4142).
- 2.13 BS 4142 describes a method for assessing the likelihood of complaints from noise sources that are of an industrial nature (e.g. fans, pumps, chillers, air handling units etc.). The assessment methodology is based upon determining a 'rating level' for the equipment being assessed, which is the level of noise from the item or items of plant being assessed (measured as an L_{Aeq}).
- 2.14 The rating level is then compared with the underlying background noise level (measured as a L_{A90}) in the absence of noise from the item or items of plant being assessed. The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.
- 2.15 BS 4142 states that a penalty should be added for any plant which gives rise to noise features that may increase disturbance such as tonal, impulsive or intermittent characteristics. A rating penalty for a sound may be based on a subjective assessment of its characteristics.

3. Noise Survey

Site Description

- 3.1 Denville Hall is located in a predominantly residential area in Northwood, within the London Borough of Hillingdon. The site is bound by Duck's Hill Road (A4180) to the east, by residential premises to the north, east and south, and by open fields to the west. David Lloyd Northwood fitness centre is located approximately 200 m to the north-west. The M25 runs north to the south approximately 6 km to the west.
- 3.2 The nearest noise sensitive receptors (NSR) to the development are residential premises: numbers 58 (NSR A), 52 (NSR B) Duck's Hill Road, Marchbank House (NSR C) and the nearest residential premises on Muscovy Place to the north (NSR D). NSRs are identified in Figure 1 on the following page.

Baseline Noise Survey

- 3.3 A baseline noise survey was undertaken at the site between Thursday 21st and Monday 25th July 2022 to assess site noise levels, predict noise levels incident on the new building façades and establish background noise levels.
- 3.4 Long term noise measurements were obtained at position LT1 towards the front of the site, and position LT2 towards the back (north-west corner) of the site. Microphones were mounted on tripods approximately 1.5 m above the ground. Noise was measured using NTI XL2-TA Class 1 precision integrating sound level meters. Microphones were fitted with proprietary weather protection kits for the duration of the survey. The sound level meters are equipped with audio recording to enable sound sources to be identified.
- 3.5 Short term attended noise measurements were also obtained at a positions ST1 and ST2 outside louvred panels on the gable wall of the existing Deville Hall extension building as mechanical building service noise were observed to be emanating from louvres. Measured noise levels indicate that noise from louvres is moderate.
- 3.6 Weather conditions throughout the survey were suitable for a noise survey with wind speeds generally below 5 ms⁻¹ and no precipitation.
- 3.7 The noise climate at the site was observed as being controlled by noise attributable to local and distant road traffic, primarily by road traffic on Duck's Hill Road, and occasional aircraft passing overhead. Noise levels decrease as you move away from Duck's Hill Road heading north-west across the site.
- 3.8 Figure 1 below presents an annotated aerial image of the site indicating approximate noise measurement positions and identified NSR. Table 4 below presents a summary of the measured noise levels; plots of long term measured noise levels are presented in Appendix I.



Figure 1: Annotated aerial image of the site

Table 4: Noise survey noise level summary

Position	Date	Period	Measured sound pressure level, dB			
			$L_{Aeq,T}^{[1]}$	$L_{A90,T}^{[2]}$	$L_{A10,T}^{[2]}$	$L_{AFMax}^{[3]}$
LT1	21/7/22	Daytime 10:38-23:00	56	45	59	60-81
	21-22/7/22	Night time 23:00-07:00	49	37	54	46-76
	22/7/22	Daytime 07:00-23:00	56	46	59	60-93
	22-23/7/22	Night time 23:00-07:00	49	37	54	57-76
	23/7/22	Daytime 07:00-23:00	55	44	58	61-86
	23-24/7/22	Night time 23:00-07:00	48	37	52	45-70
	24/7/22	Daytime 07:00-23:00	54	44	57	60-85
	24-25/7/22	Night time 23:00-07:00	49	37	53	40-78
	25/7/22	Daytime 07:00-12:05	56	47	59	62-85
LT2	21/7/22	Daytime 10:55-23:00	46	39	48	46-73
	21-22/7/22	Night time 23:00-07:00	40	31	43	33-72
	22/7/22	Daytime 07:00-23:00	46	40	49	45-72
	22-23/7/22	Night time 23:00-07:00	38	32	42	40-62
	23/7/22	Daytime 07:00-23:00	46	39	47	46-75
	23-24/7/22	Night time 23:00-07:00	40	33	42	39-72
	24/7/22	Daytime 07:00-23:00	47	40	49	45-83
	24-25/7/22	Night time 23:00-07:00	39	32	43	38-68
	25/7/22	Daytime 07:00-12:00	46	43	48	47-78
ST1	21/7/22	Daytime 10:42-10:44	56	52	57	-
ST2	21/7/22	Daytime 10:38-23:00	49	46	48	-

Notes to Table 4:

[1] Logarithmic average over stated period

[2] Percentile over stated period

[3] Range over stated period

4. Building Envelope Sound Insulation

4.1 A three-dimensional Cadna-A noise model has been developed to predict noise levels incident on the new building façades. Duck's Hill Road has been modelled as the primary noise source affecting the site. The road has been modelled based on Department for Transport traffic count data^[1] checked against measured noise levels at position LT1. The noise model is based on the following:

- Road noise from Duck's Hill Road has been modelled as the primary noise source
- The propagation of sound is calculated according to ISO 9613-2:1996.
- The noise model layout is based on the drawings provided and local OS mapping data.
- Sound reflections up to the 2nd order have been considered.
- Ground absorption has been set as 0.5, meaning semi-reflective.
- General sound absorption of buildings set as 0.2, in line with ISO 9613 recommendations.

4.2 An image of daytime $L_{Aeq,T}$ noise contours from the model is provided in Figure 2 below.

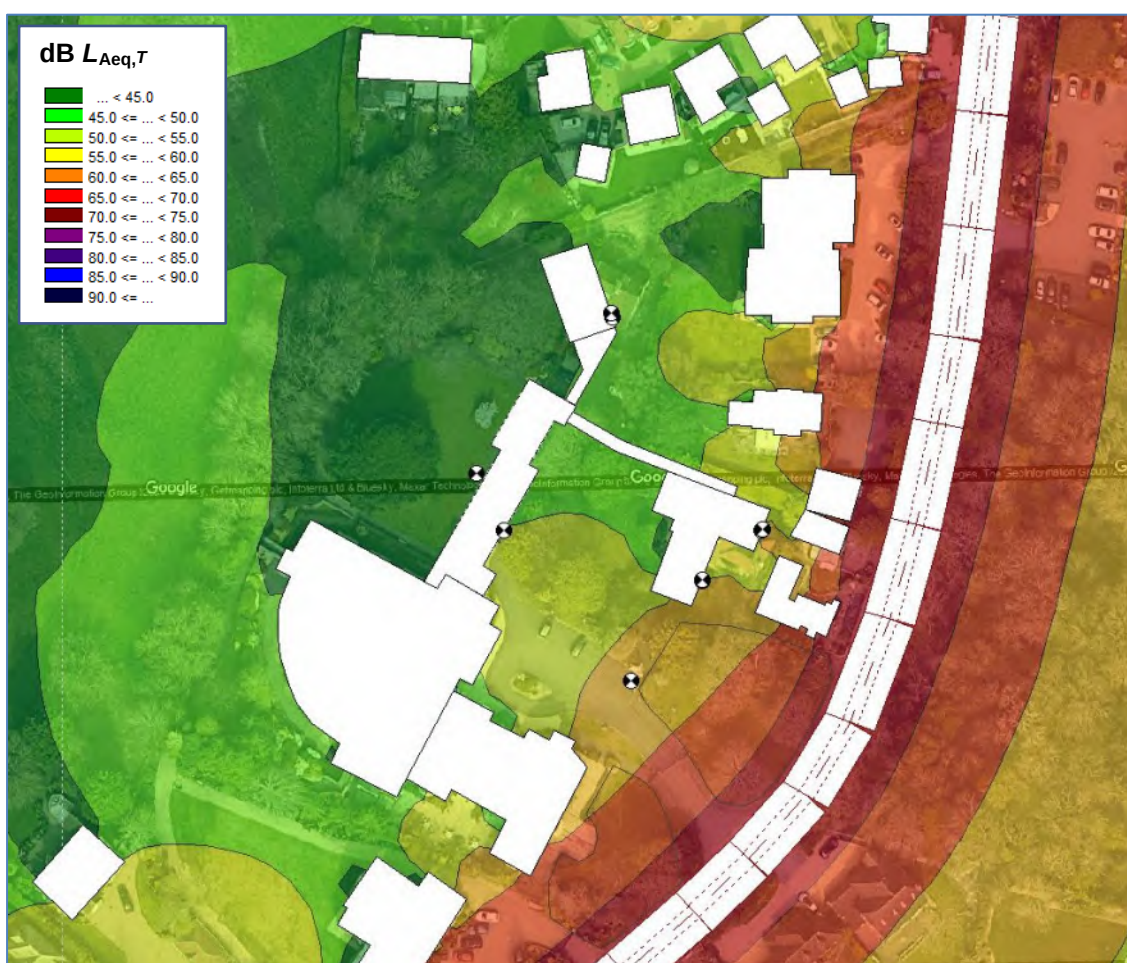


Figure 2: Daytime $L_{Aeq,T}$ noise contours showing road noise propagation from Duck's Hill Road

^[1] <https://roadtraffic.dft.gov.uk/manualcountpoints/78349>

Building Envelope Sound Insulation

- 4.3 Based on predicted noise levels incident on the new building façades, sound insulation requirements have been calculated according to the noise break-in calculation procedure from Annex G of BS 8233:2014 based on worst case noise levels. It is noted that controlling the intrusion of L_{AFmax} noise events (from passing motorbikes, cars with modified exhausts or HGVs) dictates building façade sound insulation requirements. Minimum sound insulation performances of building envelope elements are set out in Table 5.

Table 5: Sound insulation ratings of building envelope elements

Element	Minimum Sound Insulation	Example system
External walls	48 dB R_w	<i>Performance based on lowest performing external wall build-up – see paragraph 4.4</i>
Windows and rooflights (and spandrel panels if applicable)	34 dB R_w	Saint Gobain Planiclear 6 mm glass / 16 mm argon filled cavity / 4 mm Planiclear glass
Trickle ventilators (if applicable)	36 dB $D_{n,e,w}$	Greenwood 2500EA
Roof	40 dB R_w	<i>Performance based on estimate of roof build-up – see paragraph 4.10</i>

External Walls

- 4.4 Preliminary proposals for external walls include three possible build-ups comprising:
- Timber façade cladding
 - 200 mm of either Homotherm ID-Q11 rigid insulation board or battens and mineral wool insulation
 - 100-120 mm CLT panels
 - Internal plasterboard lining either on battens, fixed to the CLT or exposed CLT
- 4.5 Noise break-in calculations are based on the proposed external build-up with the lowest sound insulation performance, therefore, any of the proposed build-ups are capable of providing adequate sound insulation against the break-in of external noise.

Windows

- 4.6 Provision of 'standard' thermal double glazing comprising of 6 mm glass, 16 mm cavity and 4 mm glass should be capable of providing the required sound insulation rating.
- 4.7 Spandrel panels tend to be lightweight and there is a risk that the sound insulation rating is less than that of the windows which could result in the break-in of excess external noise. Should spandrel panels be proposed, the sound insulation rating of the spandrel panels should not be less than that of the windows.

Ventilators

- 4.8 Ventilation must be provided in accordance with Approved Document Part F, with either façade trickle ventilators or a full mechanical system. Should trickle ventilators be required, they should have a rating of at least 36 dB $D_{n,e,w}$. **Note that the required rating is the rating of the ventilator in the open position.**
- 4.9 **Should more than one trickle ventilator be required per bedroom, or more than two trickle ventilators be provided to living / kitchen / dining spaces, then a higher acoustic performance shall be required.**

Roof

- 4.10 The proposed roof construction is understood to be roofing tiles above ≥ 200 mm rigid insulation panels and 140 mm CLT panels.
- 4.11 Preliminary proposals for external walls include two possible build-ups. Noise break-in calculations are based on the proposed roof build-up with the lowest sound insulation performance, therefore, either of the proposed build-ups are capable of providing adequate sound insulation against the break-in of external noise.

Rooflights

- 4.12 Rain noise drumming on rooflights during heavy rain could potentially result in excessive internal noise level that could disturb occupants, particularly located in bedrooms where there is a risk of sleep disturbance. It is recommended that rooflights which are designed to mitigate rain noise are sought, such as 'Velux Super sound insulation' rooflights^[2].

Purge Ventilation

- 4.13 Approved Document Part F requires that intermittent rapid ventilation is supplied for occupants to quickly expel fumes from dwellings, such as those from painting or burnt toast. The use of open windows for purge ventilation is expected to be acceptable for short term use on the basis that the effect of increased internal noise levels would be expected by the occupant, and that the relative exposure would be small.

Mitigation of Overheating

- 4.14 Predicted noise levels incident on the most noise exposed new extension façades are up to 56 dB $L_{Aeq,16hr}$ during the day time, and 49 dB $L_{Aeq,8hr}$ during the night. The ANC published the *Acoustic Ventilation and Overheating Residential Design Guide* (Version 1.1, January 2020) to provide acoustic guidance relating to the ventilation for the mitigation of overheating. Based on this guidance, predicted noise levels incident on the most noise exposed new extension façades correspond to a 'low' risk of having an adverse effect on occupants should they wish to open windows to mitigate overheating, or for any other reason.

^[2] <https://www.velux.co.uk/products/roof-windows/special-function/super-sound-insulation?consent=preferences,statistics,marketing&ref-original=https%3A%2F%2Fwww.ecosia.org%2F>

5. Operational Noise Impact Assessment

Restaurant and Café Noise Impact Assessment

- 5.1 Consideration has been given to the potential adverse impact of noise due to the operation of the new restaurant and café on nearby noise sensitive premises. Noise from the restaurant and café has been modelled as follows:
- Noise levels based on typical spectral noise levels for a 'busy restaurant'. Given the use of the spaces, this is considered worst case.
 - Vertical area sources have been added to the noise model to Building C:
 - glazed areas are modelled with the reduction based on the minimum glazing performance from Table 5.
 - Sliding doors are modelled with no reduction assuming they are all open as may be the case when its warm, thereby representing the worst case.
 - A noise receptor has been placed to the south of the rear garden of 19/21 Muscovy Place, i.e. the nearest potentially noise sensitive location exposed to noise from the new restaurant and café.
- 5.2 Based on this assessment, noise levels in the rear garden of 19/21 Muscovy Place are predicted to be up to 46 dB $L_{Aeq,T}$ when the restaurant and café are busy and all sliding doors are fully open. This is below the limit of 50 dB $L_{Aeq,T}$ whereby '*Few [may be] moderately annoyed in outdoor living areas*' according to WHO 'Guidelines for Community Noise' (see Table 1).
- 5.3 Based on this assessment, it corresponds to a less than 1 dB noise change based on a measured daytime noise level of 46 dB measured at position LT2. According to IEMA '*Guidelines for Environmental Noise Impact Assessment*' resulting in a '*negligible*' impact (see Table 2).
- 5.4 Based on this assessment, and with consideration to the worst case assumptions (i.e. much of the time doors will be shut and noise will be contained by Building C) operation of the new restaurant and café is not expected to result in an adverse impact on the nearest noise sensitive premises.
- 5.5 Any mechanical kitchen plant introduced serving the new restaurant or café should adhere to plant noise limits set out in Section 6.

Car Parking and Access Road Noise Impact Assessment

- 5.6 Changes to the site's parking arrangements (and access to some extent) are proposed. Currently, all of the parking is located around the main entrance and centrally on the site where Building C is proposed. Proposals are for parking near the main entrance to be remodelled (14 spaces and drop-off/pick-up), and parking created towards the north of the site providing parking close to Building B (16 spaces) with a new access road added to provide access from Duck's Hill Road.

- 5.7 Should up to 16 cars arrive in one hour this is predicted to result in up to a 3 dB $L_{Aeq,1hr}$ increase above the prevailing noise level. If up to 16 cars arrive spread over the course of the day this is predicted to result in up to a 1 dB $L_{Aeq,16hr}$ increase above the prevailing noise level. Either way, this is below 50 dB $L_{Aeq,T}$ whereby '*Few [may be] moderately annoyed in outdoor living areas*', and it would result in a '*negligible*' long-term impact.
- 5.8 The potential impact must be considered against the site context. The site is an existing operational site, and the prevailing noise climate is controlled by road noise from Duck's Hill Road which is audible across the site and surrounding area. Therefore, the new access road and parking is unlikely to be perceived as having an adverse impact.
- 5.9 Based on this assessment and with consideration to the site context, the proposed changes to the site's parking arrangements and access are highly unlikely to have an adverse noise impact on the nearest noise sensitive premises.

Cinema

- 5.10 It is noted that a cinema room is proposed to the Building B basement level and that cinemas can generate relatively high noise levels. However, in this case, with consideration to the size of the cinema (floor area of around 69 m²), the end users and the fact that the cinema shall be located under ground level meaning that noise will be contained, the cinema operation is not expected to result in an adverse noise impact on the nearest noise sensitive premises.
- 5.11 Based on the assessment outlined above, noise from the proposed development is below the LOAEL, or Lowest Observed Adverse Effect Level. On this basis, no acoustic mitigation measures are required, other than adherence to mechanical plant noise limits set out in Section 6.

6. Building Services Noise Control

- 6.1 It is recommended that noise from new building services plant does not exceed 5 dB below the representative background noise level when assessed at the boundary of the nearest noise sensitive receptors when assessed in line with BS 4142. Table 6 presents fixed plant noise limits for the development which have been derived from a modal analysis of the 5 minute measured background noise measured at position LT2 for relevant day or night time period.
- 6.2 The proposed rating noise limits apply to all items of fixed plant mounted externally, ducted to the façade or otherwise audible external to the development. The rating noise level should be assessed with regard to the cumulative noise level from all items of fixed plant operating concurrently.

Table 6: Proposed fixed plant noise limits

Location	Period	Representative background noise level dB $L_{A90,5min}$	Proposed rating noise level dB $L_{Ar,Tf}$
At 1 metre from the façade of the nearest noise sensitive premises	Daytime 07:00-23:00	41	≤ 36
	Night Time 23:00-07:00	31	$\leq 31^*$
<i>* Due to low background noise levels at the development site, the night time rating noise level limit not exceeding background would be overly onerous, a noise level approaching inaudibility in anything other than laboratory conditions. BS 4142 states that, "Where background sound levels and rating levels are low, absolute levels might be as, or more, relevant than the margin by which the rating level exceeds the background. This is especially true at night". Therefore, the proposed rating noise level limit is based on the lowest measured night time $L_{Aeq,8hr}$.</i>			

- 6.3 The rating level in Table 6 should be assessed in accordance with BS 4142, including appropriate consideration of any tonal or impulsive characteristics of the proposed building services plant. It is prudent to ensure that building services noise is designed to be sufficiently below the recommended plant noise limit criteria such that the cumulative noise level from all sources does not exceed the stated target level.

Appendix I. Stage 2 Master Plan



Appendix II. Plot of Long Term Measured Noise Levels

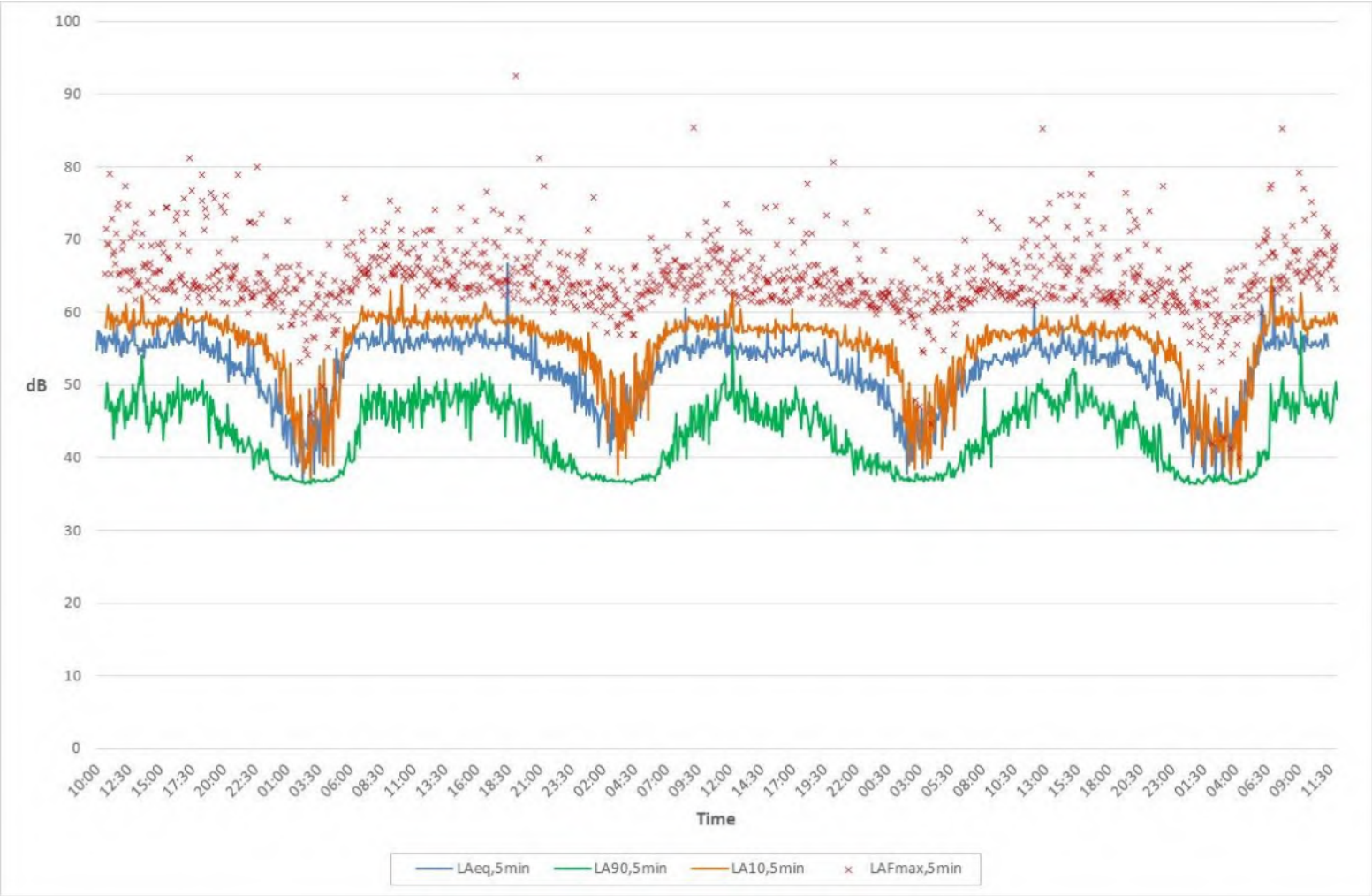


Figure A1: Noise level time history plot at LT1, between 21/7/22-25/7/22

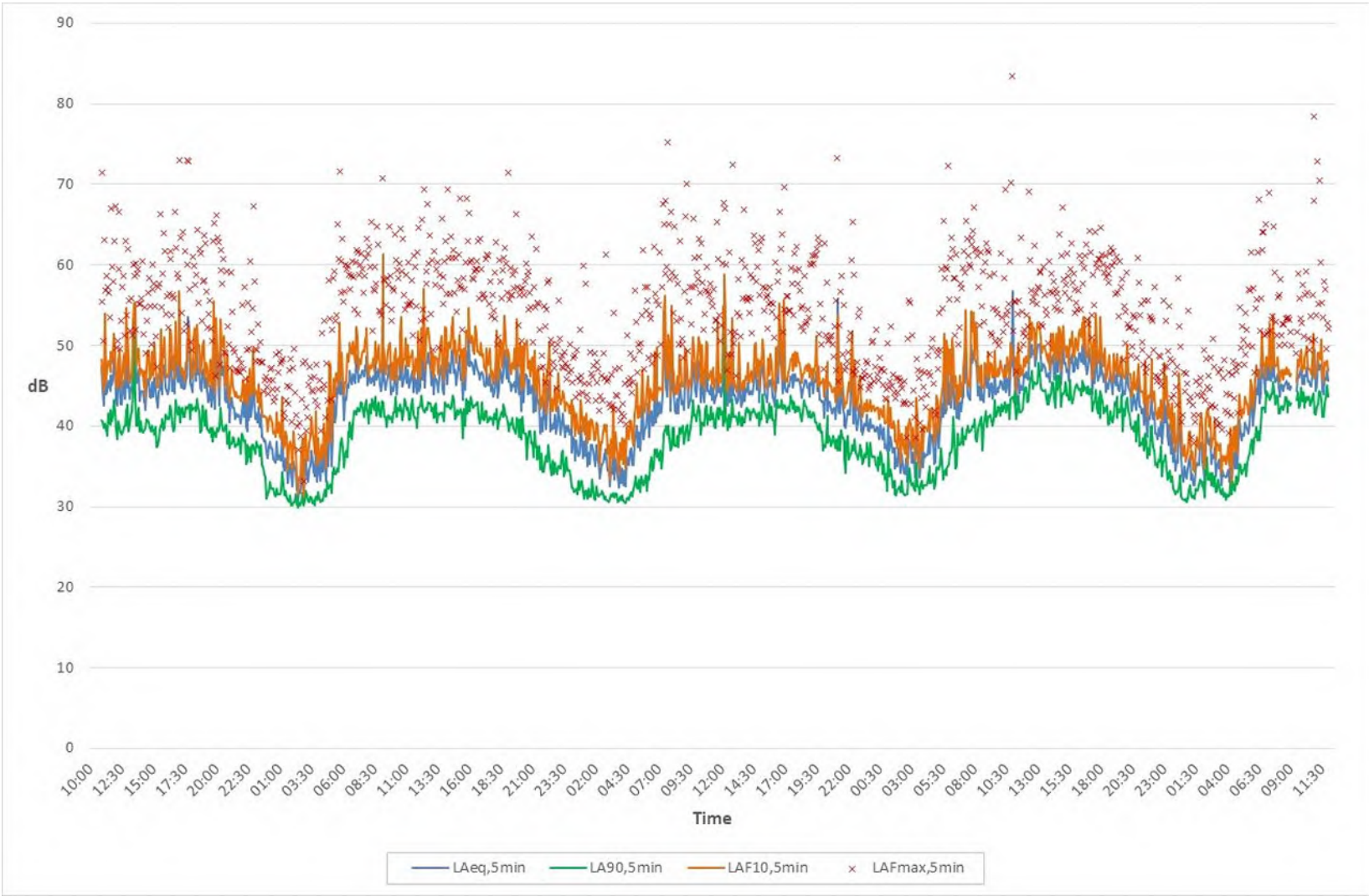


Figure A2: Noise level time history plot at LT2, between 21/7/22-25/7/22

Appendix III. Acoustic Glossary

Sound pressure level and the decibel, dB

A sound wave is a small fluctuation of atmospheric pressure. The human ear responds to these variations in pressure, producing the sensation of hearing. The ear can detect a very wide range of pressure variations. In order to cope with this wide range of pressure variations, a logarithmic scale is used to convert the values into manageable numbers. The decibel is the logarithmic unit used to describe sound (or noise) levels. The usual range of sound pressure levels is from 0 dB (threshold of hearing) to 120 dB (threshold of pain).

Frequency and hertz, Hz

Frequency is a measure of the rate of fluctuation of a sound wave. The unit used is cycles per second, or hertz (Hz). Sometimes large frequency values are written as kilohertz (kHz), where 1 kHz = 1000 Hz. The human range of hearing is commonly accepted to be 20 Hz to 20,000 Hz. Additionally, an octave can be used to describe the interval between a frequency in Hz and either half or double that frequency.

Frequency weighting

Different weighting networks can be applied to a given sound level in each stated octave band by a specified amount, in order to better represent the response of the human ear. The most commonly used weighting network is the 'A' weighting, and the letter 'A' will be included within a descriptor to indicate that the value has been 'A' weighted, e.g. $L_{Aeq,T}$ or L_{A90} . An 'A' weighted noise level may also be written as dB(A). Other weightings less commonly used are 'C' and 'D' weighting.

Noise indices

When a noise level varies with time, the measured 'A' weighted dB level will vary as well. In this case it is therefore not possible to represent the noise climate with a simple 'A' weighted dB value. In order to describe noise where the level is continuously varying, a number of other indices, including statistical parameters, are used. The various indices used are described as below:

$L_{Aeq,T}$	The 'A' weighted 'equivalent continuous noise level' which is an average of the total sound energy measured over a specified time period, T
L_{Amax}	The maximum 'A' weighted noise level that was recorded during the monitoring period.
L_{A10}	The 'A' weighted noise level that was recorded for at least 10% of the monitoring period.
L_{A90}	The 'A' weighted noise level that was recorded for at least 90% of the monitoring period, usually taken as the underlying 'background' noise level.

Appendix IV. SBE Acoustic Credentials

SBE have specialised in providing the UK Construction Industry with a range of acoustics services since 2006. Specialising in Building Acoustics, all SBE acousticians are members of the Institute of Acoustics.

SBE has been accredited for on-site acoustic testing by United Kingdom Accreditation Service (UKAS) since 2006 (Testing Laboratory Number 2587).

SBE meet the relevant acoustic requirements typically required in the UK, including for sound insulation testing as defined in Approved Document E for the purposes of testing for Part E to the Building Regulations 2010.

Appendix V. Report Conditions

This document has been prepared for the sole use, benefit and information of the Client. The liability of Stroma Built Environment Ltd. in respect of the information contained herein will not extend to any third party unless prior agreement is obtained in writing from Stroma Built Environment Ltd.

This report is limited to addressing the specific acoustic issues contained herein. Advice has been provided for acoustic reasons only and it is recommended that appropriate expert advice be sought on all the ramifications, e.g. safety, fire, structural, CDM etc., associated with any proposals contained herein.

The in-situ performance of acoustic measures is influenced to a large extent by the quality of workmanship and compliance with the specifications on-site during construction, as such, Stroma Built Environment Ltd. accepts no liability for issues with acoustic performance arising from such factors.

Acoustic survey and testing work carried out for the project is representative of the prevailing conditions at the time of the work. Conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times.

In particular, it should be noted that where calculations are carried out that are based on assumptions regarding certain aspects where information has not been supplied, these are provided for indicative purposes only and should be treated as such.

APPENDIX D

Dust Management Plan



Denville Hall Development Limited

DENVILLE HALL, 62 DUCKS HILL ROAD, LONDON

Demolition and Construction Management Plan
(DMP/CMP)

DRAFT

DENVILLE HALL, 62 DUCKS HILL ROAD, London

Demolition and Construction Management Plan (DMP/CMP)

Document Reference: OB/VL/P25-3695/03 DRAFT

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DOCUMENT AND QUALITY CONTROL

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DRAFT

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1.0 INTRODUCTION

1.1 Create Consulting Engineers Limited (CCE) have been commissioned by Denville Hall Development Limited to produce a Demolition and Construction Management Plan (DMP/CMP) for the demolition and construction phases of the Proposed Development at Denville Hall, 62 Ducks Hill Road, London.

1.2 The Proposed Development proposes the following:

"Demolition of no. 48 and no. 60 Ducks Hill Road, a derelict garage and wooden storage unit and the erection of 12 assisted-living units (Class C2) in two separate buildings (Buildings A and B) and proposed ancillary communal space, including café and restaurant (Building C) accessed through connecting link building. Proposals to include comprehensive landscaping proposals)."

1.3 The red line boundary of the Site is illustrated in Figure 1.1. The Site falls within the administrative boundary of the London Borough of Hillingdon (LBoH). The Site is bordered by suburban housing to the east and south, and open recreational land to the west. It is situated just off Ducks Hill Road, in a quiet, green, and predominantly residential environment with nearby institutional and leisure uses.

1.4 This Demolition and Construction Management Plan (DMP/CMP) has been prepared to support the discharge of Planning Condition 6 attached to Planning Permission Ref. 924/APP/2022/3603. The document has been prepared having regard to the requirements of the Local Planning Authority (LPA) and the Environmental Health Officer (EHO), including the requirement to minimise impacts associated with demolition and construction activities.

1.5 Planning Condition 6 requires:

"Prior to the commencement of the development hereby approved (including demolition), a Demolition and Construction Logistics Plan (DLP/CLP) and a Demolition and Construction Management Plan (DMP/CMP) shall be submitted to, and approved in writing by, the Local Planning Authority, to minimise impacts to the local highway network, and to control noise, vibration, dust and air pollutants generated as a result of the construction process. These documents shall be prepared in accordance with the London Freight Plan, 'The Control of Dust and Emissions from Construction and Demolition' Supplementary Planning Guidance, and BRE Pollution Control Guides 'Controlling particles and noise pollution from construction Sites' and 'Controlling particles, vapour and noise pollution from construction Sites'."

1.6 This DMP/CMP has been prepared to satisfy the requirements of Planning Condition 6 of Planning Permission Ref. 924/APP/2022/3603, taking account of the recommendations provided within the EHO consultation response. The document identifies the potential environmental risks associated with demolition and construction activities, including the generation of dust, particulate matter (PM₁₀ and PM_{2.5}), noise, vibration and other air pollutant emissions.

1.7 The DMP/CMP sets out the mitigation, monitoring and management measures that will be implemented throughout the works to minimise potential impacts on neighbouring properties, Site users and the surrounding environment. The measures detailed within this document will be secured through the application of Best Practicable Means (BPM), appropriate Site controls, monitoring procedures and effective construction management practices.

1.8 The DMP/CMP has been prepared in accordance with the London Freight Plan, the Mayor of London's *The Control of Dust and Emissions During Construction and Demolition* Supplementary Planning

Guidance, and the BRE Pollution Control Guides *Controlling Particles and Noise Pollution from Construction Sites* and *Controlling Particles, Vapour and Noise Pollution from Construction Sites*.

- 1.9 In accordance with Planning Condition 6 and the EHO consultation response, this DMP/CMP should be read alongside the accompanying Demolition and Construction Logistics Plan (DLP/CLP) (Ref: TR/VL/P25-3695/04).
- 1.10 The DLP/CLP sets out the measures required to manage construction traffic and minimise impacts on the local highway network, including delivery arrangements, vehicle movements and Site access arrangements. This DMP/CMP provides details of the procedures and control measures that will be implemented to manage dust, particulate matter, noise, vibration and air pollutant emissions arising from demolition and construction activities.

Assessment Scope

- 1.11 Planning Permission Ref. 924/APP/2022/3603 includes a requirement for the submission of a Demolition and Construction Management Plan (DMP/CMP), together with a Demolition and Construction Logistics Plan (DLP/CLP), prior to the commencement of any development works. This requirement seeks to ensure that the development is delivered to an appropriate standard, consistent with Policy D7 of the London Plan (2021), while safeguarding the amenity of surrounding occupiers and protecting the operation and integrity of the local highway network.
- 1.12 Demolition and construction activities have the potential to cause dust nuisances and adverse health impacts if appropriate mitigation measures are not implemented. In accordance with the Mayor of London's (MOL) Supplementary Planning Guidance (SPG) on 'The Control of Dust and Emissions During Construction and Demolition' and the Institute of Air Quality Management's "Guidance on the Assessment of Dust from Demolition and Construction (Version 2.2)", 2024, a risk assessment approach has been adopted to determine the necessary mitigation strategy.
- 1.13 This assessment identifies the potential environmental risks associated with the demolition and construction phases of the Proposed Development and sets out the measures required to minimise and manage these impacts throughout the works.



Figure 1.1: Site Location Plan

2.0 LEGISLATION, POLICY AND GUIDANCE

Legislation

Environmental Protection Act 1990

- 2.1 The Section 79 of the Environmental Protection Act 1990 gives the following definitions of statutory nuisance relevant to dust and particles:

"Any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance." and

"Any accumulation or deposit which is prejudicial to health or a nuisance."

- 2.2 Following this, Section 80 stipulates that where a statutory nuisance is found to exist, the local authority is required to serve an abatement notice. Failure to comply with such a notice constitutes an offence. If necessary, the local authority has the power to abate the nuisance directly and recover the associated costs.
- 2.3 The statutory nuisance provisions are relevant, among other matters, to the control of dust arising from demolition and construction activities. There are no statutory limit values for dust levels that automatically constitute a 'nuisance'; rather, nuisance is a subjective concept, largely dependent on existing local conditions and the degree of change experienced. The party responsible for the premises from which emissions originate must therefore employ Best Practicable Means (BPM) to prevent the occurrence of a statutory nuisance.

Environment Act 1995

- 2.4 Part IV of the Environment Act 1995 mandated that the Secretary of State produce a national Air Quality Strategy and establish a Local Air Quality Management (LAQM) framework. Local authorities must regularly review air quality within their areas to meet objectives defined in the Air Quality Regulations. Where objectives are unlikely to be met, authorities must designate an AQMA and produce an Air Quality Action Plan (AQAP) to deliver improvements.

The Environment Act 2021

- 2.5 The Environment Act 2021, enacted in November 2021, places a legally binding duty on the Secretary of State to establish air quality targets in secondary legislation, specifically for annual mean PM_{2.5} levels in ambient air.
- 2.6 In March 2022, the UK government proposed a legally binding target to reduce PM_{2.5} concentrations across England to 10 µg/m³ and achieve a 35% reduction in population exposure (from 2018 levels) by 2040.
- 2.7 Schedule 11 amends the Environment Act 1995 regarding the Secretary of State's reporting duties on air quality in England and clarifies local authority responsibilities to prepare action plans for AQMAs to ensure air quality standards and objectives are achieved.
- 2.8 The Environment Act 2021 established the Office for Environmental Protection as an independent environmental watchdog for the UK, replacing the European Commission in this capacity.

- 2.9 The Act 2021 also established a legally binding duty on the UK government to bring forward at least two new air quality targets in secondary legislation.
- 2.10 Schedule 12 of the Act amends the Clean Air Act 1993 to strengthen local enforcement of Smoke Control Areas. It allows local authorities in England to issue civil financial penalties for smoke emissions from chimneys—replacing the previous, more complex criminal prosecution system—and extends these smoke control regulations to moored vessels.

Air Quality Regulations

- 2.11 The primary statutory framework governing ambient air quality in England is established by the Air Quality Standards Regulations 2010 (as amended). These Regulations—alongside subsequent post-Brexit statutory instruments, including the Air Quality (Amendment of Domestic Regulations) (EU Exit) Regulations 2019 and the Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020—define legally binding concentration limit values for key pollutants that affect public health, specifically particulate matter (PM₁₀ and PM_{2.5}).
- 2.12 While the domestic Air Quality Objectives (AQOs) for Local Air Quality Management (LAQM) were originally set out in the Air Quality (England) Regulations 2000 and their 2002 Amendment, these standards have been largely consolidated into the 2010 statutory framework, with the numerical values of the domestic objectives matching the statutory limit values. For the protection of human health, these objectives apply to outdoor locations where members of the public are regularly present over the relevant averaging period of the objective (such as external building façades of residential properties, schools, and hospitals), excluding indoor environments or occupational workplaces.
- 2.13 Furthermore, the Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 s introduced new legally binding domestic targets for PM_{2.5} under the Environment Act 2021 to further drive down public health and environmental risks. These include a long-term annual mean concentration target of 10 µg/m³ across England by 2040, alongside an interim target of 12 µg/m³ to be achieved by 2028.
- 2.14 Therefore, the current AQOs, limit values and targets relevant to the Proposed Development and this assessment are listed in Table 2.1.

Air Quality Objectives (AQOs)		
Pollutant	Concentration (µg/m ³)	Measured as
Particulate Matter (PM ₁₀)	50	24-hour mean not to be exceeded more than 35 times per year
	40	Annual mean
	20	Annual mean
Particulate Matter (PM _{2.5})	12	Annual mean Interim target by 2028
	10	Annual mean legally binding target by 2040

**Note: if the annual mean concentration is less than 60µg/m³ then it can be assumed that the 1-hour mean standard is likely to be met*

Table 2.1: Air Quality Objectives (England)

Planning Policy

National Planning Policy Framework 2024

- 2.15 The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how these should be applied to achieve sustainable development. In relation to local air quality and environmental amenity, the Framework establishes the following core requirements:

Paragraph 199 (Air Quality & Compliance):

"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual Sites in local areas.

Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan."

- 2.16 **Paragraph 200 (The 'Agent of Change' Principle):**

Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed."

- 2.17 In accordance with Paragraph 200, the applicant acts as the 'Agent of Change' for the Proposed Development. As this scheme introduces new sensitive residential receptors into an established urban environment, this assessment actively evaluates whether future occupants would be exposed to adverse environmental pollution and confirms that suitable amenity standards will be achieved without imposing unreasonable restrictions on surrounding established commercial or agricultural uses.

Clean Air Strategy 2019

- 2.18 In 2019, the Department for Environment, Food and Rural Affairs (Defra) released the Government's Clean Air Strategy, which sets out a comprehensive plan to reduce emissions from all sources of air pollution. The Strategy aims to enhance air quality, protect ecosystems, and promote sustainable economic development. The primary focus of air quality management has primarily been related to NO₂ and its principal source in the UK, road traffic. It also includes specific targets to limit public exposure to airborne particulate matter (PM), consistent with the guidance provided by the World Health Organization (WHO).
- 2.19 Moreover, the Strategy affirms the Government's commitment to enacting new legislation to "create a stronger and more coherent framework for action to tackle air pollution...in line with the risk they

pose to public health and the environment, plus new local powers to take action in areas with an air pollution problem. These will support the creation of Clean Air Zones to lower emissions from all sources of air pollution, backed up with clear enforcement mechanisms.” New enforcement powers will also be given at national and local levels, across all sectors of society.

UK Air Quality Strategy 2023

- 2.20 The Air Quality Strategy for England provides the strategic framework from DEFRA to guide local authorities to “...*make best use of their powers and make air quality improvements for their communities.*” The document emphasises the critical role of local governments in achieving cleaner air and highlights its commitment to prioritizing planning reforms aimed at meeting the PM_{2.5} reduction targets set out in the Environment Act 2021.

Environment Plan 2023

- 2.21 The UK Government released the Environmental Improvement Plan 2023 on 31 January 2023, marking the initial mandatory assessment of the 25Year Environment Plan under the Environment Act 2021. A key air quality goal within the plan focuses on attaining “clean air” through reduced pollution across the country. This objective will be pursued by targeting major emission sources, resolving particular pollution hotspots at the local level, and substantially cutting ammonia emissions to safeguard both public health and natural ecosystems.

- 2.22 The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 set a new target for PM_{2.5} in ambient air to reduce air pollution's environmental and health impacts. These Regulations come into force on the day after the day on which they are made:

- *“A legal target to reduce population exposure to PM_{2.5} by 35 % in 2040 compared to 2018 levels, with a new interim target to reduce by 22 % by the end of January 2028.*
- *Legal concentration limits for a number of other key pollutants. We already meet the majority of these limits including for sulphur dioxide and coarse particulate matter. We are working towards meeting compliance with a 40 µg/m³ limit for nitrogen dioxide.*
- *A legal target to require a maximum annual mean concentration of 10 micrograms of PM_{2.5} per cubic metre (µg/m³) by 2040, with a new interim target of 12 µg/m³ by the end of January 2028.*
- *Legal emission reduction targets for five damaging pollutants by 2030 relative to 2005 levels:*
 - *Reduce emissions of nitrogen oxides by 73 %.*
 - *Reduce emissions of sulphur dioxide by 88 %.*
 - *Reduce emission of PM_{2.5} by 46 %.*
 - *Reduce emissions of ammonia by 16 %.*
 - *Reduce emissions of non-methane volatile organic compounds by 39 %.”*

- 2.23 The above targets are not intended to be applied retrospectively to planning applications submitted before the regulations came into effect. However, this assessment will be undertaken in consideration of the new PM_{2.5} legislation, ensuring that it is appropriately factored into the air quality assessment process. The assessment should clarify whether the predicted operational impacts are compared against these future targets, or only the current AQOs.

Regional Planning Policy

London Environment Strategy 2018

2.24 The London Environment Strategy was published by the Mayor of London in May 2018 with the aim of ensuring that *"London will have the best air quality of any major world city by 2050, going beyond the legal requirements to protect human health and minimise inequalities."* Chapter 4 of this document states that particulate matter (both PM₁₀ and PM_{2.5}) and NO₂ remain the two pollutants of specific concern in London and to improve air quality the following actions are required:

- *"Reducing exposure of Londoners to harmful pollution across London – especially in priority locations like schools – and tackling health inequality"*
- *Achieving legal compliance with UK and EU limits as soon as possible, including by mobilising action from the London boroughs, government and other partners*
- *Establishing and achieving new, tighter air quality targets for a cleaner London, meeting the World Health Organisation (WHO) health-based guidelines by 2030 by transitioning to a zero emission London."*

2.25 To achieve the Mayor of London's objectives, the following policies are directly relevant to the Proposed Development and have been considered within this assessment:

- Policy 4.1.1 *"Make sure that London and its communities, particularly the most disadvantaged and those in priority locations, are empowered to reduce their exposure to poor air quality."*
- Policy 4.1.2 *"Improve the understanding of air quality health impacts to better target policies and action."*
- Policy 4.2.1 *"Reduce emissions from London's road network by phasing out fossil fuelled vehicles, prioritising action on diesel, and enabling Londoners to switch to more sustainable forms for transport."*
- Policy 4.2.2 *"Reduce emissions from non-road transport sources, including phase out fossil fuels."*
- Policy 4.2.3 *"Reduce emissions from non-transport sources, including by phasing out fossil fuels."*
- Policy 4.3.2 *"The Mayor will encourage the take up of ultra low and zero emission technologies to make sure London's entire transport system is zero emission by 2050 to further reduce levels of pollution and achieve WHO air quality guidelines."*
- Policy 4.3.3 *"Phase out the use of fossil fuels to heat, cool and maintain London's buildings, homes and urban spaces, and reduce the impact of building emissions on air quality."*

The London Plan 2021

2.26 The London Plan 2021 is *"the Spatial Development Strategy for Greater London. It sets out a framework for how London will develop over the next 20-25 years and the Mayor's vision for Good Growth. The Plan is part of the of the statutory development plan for London, meaning that the policies in the Plan should inform decisions on planning applications across the capital."*

2.27 The following specific policies within the London Plan (2021) are directly relevant to the Proposed Development and the assessment of its impact on local air quality:

"Action D: In order to reduce the impact on air quality during the construction and demolition phase development proposals must demonstrate how they plan to comply with the Non-Road Mobile

Machinery Low Emission Zone and reduce emissions from the demolition and construction of buildings following best practice guidance.”

Local Planning Policy

London Borough of Hillingdon Local Plan Part 1 – Strategic Policies 2012–2026

- 2.28 The Hillingdon Local Plan: Part 1 – Strategic Policies (2012–2026) establishes a borough-wide spatial strategy to manage growth while protecting environmental quality and residential amenity. The Strategy sets out a long-term vision for development in Hillingdon and recognises that new development and infrastructure must be delivered in a sustainable manner that safeguards the borough’s environmental assets, including land, water, air and noise.
- 2.29 The following specific strategic policy within the adopted Hillingdon Local Plan Part 1 is directly relevant to the Proposed Development and to this dust management plan:

“Policy EM8: Land, Water, Air and Noise

All development should not cause deterioration in the local air quality levels and should ensure the protection of both existing and new sensitive receptors.”

- 2.30 Policy EM8 therefore provides the strategic policy basis for resisting development that would result in unacceptable impacts on amenity arising from pollution, including air quality effects. The policy is implemented through the more detailed, criteria-based Development Management Policies contained in Hillingdon Local Plan Part 2 (Adopted January 2020), including policies that require explicit consideration of dust, air quality and other environmental impacts associated with development.

Hillingdon Air Quality Action Plan (AQAP) 2019–2024

- 2.31 While the Local Plan provides the framework for the assessment of future development, air quality management within the London Borough of Hillingdon is supported by the Hillingdon Air Quality Action Plan (AQAP) 2019–2024, which is the most recently adopted AQAP and remains the formally operative document. The AQAP focuses on the delivery of immediate, council-led interventions to address air pollution and has been prepared in accordance with the London Local Air Quality Management (LLAQM) framework. It utilises data from the London Atmospheric Emissions Inventory (LAEI) to identify Air Quality Focus Areas (AQFAs) where pollutant concentrations and population exposure are highest.
- 2.32 The adopted Hillingdon Air Quality Action Plan 2019–2024 identifies a number of specific priorities to address air pollution within the borough. The AQAP states that its key priority actions are to:
- *“Reduce pollution concentrations, particularly in areas of highest exposure, and work towards compliance with air quality objectives.”*
 - *“Protect the health of residents, with particular focus on vulnerable groups and those living in Air Quality Focus Areas.”*
 - *“Continue to use the planning system to ensure that new development does not contribute additional air pollution and, where possible, contributes to improvements in air quality.”*
 - *“Minimise emissions from new development, transport, construction activity and the borough’s existing building stock.”*
 - *“Raise awareness of air pollution and its impacts on health among residents, businesses and schools.”*

- *“Lead by example through council operations, procurement and partnership working to improve air quality.”*

2.33 The AQAP details actions specifically addressing the dust emissions from developments and building. These actions include:

- Action 3: Ensuring enforcement of Non-Road Mobile Machinery (NRMM) air quality policies (addresses emissions from e.g. building Sites regarding cranes, generators, etc)

2.34 The London Borough of Hillingdon Air Quality Action Plan 2019–2024 is currently subject to consultation and is intended to be replaced by a new AQAP covering the subsequent plan period; however, until formally adopted, the 2019–2024 AQAP remains the most recent operative and adopted air quality action plan.

Guidance

National Planning Practice Guidance 2019

2.35 This guidance outlines key principles for integrating air quality considerations into the planning process. It specifies the level of detail required for air quality assessments of Proposed Developments and provides guidance on how to mitigate potential impacts. Additionally, the guidance offers insight into how local authorities should incorporate air quality into broader planning frameworks, such as Local Plans and neighbourhood planning, as well as how air quality considerations should be addressed in individual planning decisions.

The Control of Dust and Emissions During Construction and Demolition SPG 2014

2.36 This Supplementary Planning Guidance (SPG) provides a methodology for evaluating the air quality impacts of construction and demolition activities, aligning with the IAQM Construction Dust Guidance. It identifies necessary control and mitigation measures to minimize adverse effects. These measures must be outlined in a draft Air Quality Assessment at the application stage and later formalised in a post-submission Air Quality and Dust Management Plan (AQDMP). The SPG also defines Site monitoring protocols, which vary based on the Site’s scale and the calculated risk of impact.

Guidance on the Assessment of Dust from Demolition and Construction 2024

2.37 This guidance provides advice, methodology and criteria to assess the dust impacts that arise from construction activities. This assessment evaluates the impact of dust soiling and human health impacts during the demolition, earthworks, construction and trackout activities.

2.38 The methodology is replicated in Appendix A of this report.

PM_{2.5} Targets: Interim Planning Guidance 2024

2.39 The interim guidance, published on 4 October 2024 by DEFRA, applies to future developments and those in pre-application stages at the time of publication. The guidance shifts the focus from solely assessing the risk of exceeding legal air quality limits to ensuring that mitigation measures are incorporated during the design phase. This approach aims to streamline the planning process while minimising pollution emissions and exposure. Until the release of the final guidance, applicants are advised to demonstrate in their planning applications that they have identified key sources of air

pollution within their schemes and have taken appropriate measures to minimise emissions of PM_{2.5} and its precursors as far as practicable.

2.40 The following questions are designed to support the interim process; however, applicants are encouraged to consider additional measures beyond those listed below:

1. How has exposure to PM_{2.5} been considered when selecting the development Site?

Applicants are advised to consider the following in their application:

- Site proximity to people (particularly large populations and/or vulnerable groups, e.g. schools, hospitals, care homes, areas of deprivation) and the impact of the development on these,
- Site proximity to pollution sources and the impact of these on users of the development,
- Exposure and emissions during both construction and in-use.

2. What actions and/or mitigations have been considered to reduce PM_{2.5} exposure for development users and nearby receptors (houses, hospitals, schools etc.) and to reduce emissions of PM_{2.5} and its precursors?

Applicants are advised to explain (with evidence where possible) why each measure was implemented. Or, if no mitigation measures have been implemented, why this was not proposed. Actions can refer to, but are not limited to, the following:

- Site layout,
- The development's design,
- Technology used in the construction or installed for use in the development,
- Construction and future use of the development.

London Local Air Quality Management Technical Guidance 2019

2.41 The Mayor of London provides technical guidance to assist London Boroughs in managing local air quality. This guidance, referenced as LLAQM.TG(19), outlines procedures essential for air quality assessments of new developments within Greater London. Accordingly, the methodologies presented in this report adhere to the standards set out in LLAQM.TG(19).

London Councils' Air Quality and Planning Guidance 2007

2.42 The London Councils have published guidance for conducting air quality assessments within London Boroughs, most of which are designated as Air Quality Management Areas (AQMAs). This document outlines preferred methods for assessment and provides a framework for determining the impact of development proposals. Its primary focus is twofold: evaluating the change in air quality resulting from a development and assessing the potential exposure of future occupants to existing pollution.

Guidance on Monitoring in the Vicinity of Demolition and Construction Sites 2018

2.43 This publication provides monitoring guidance depending on the risk of dust effects occurring, determined using IAQM's "Guidance on the Assessment of Dust from Demolition and Construction". Monitoring can be needed to ensure that the applied mitigation measures are effective in controlling dust emissions, and that there are no significant impacts on the surrounding environment.

Compliance with Planning Condition

2.44 This DMP/CMP has been prepared in accordance with Planning Condition 6 of Planning Permission Ref. 924/APP/2022/3603. The document addresses all matters required by the planning condition, including:

- Programme of works;
- Traffic management;
- Haulage routes;
- Site layout;
- Wheel washing;
- Dust suppression;
- Dust risk assessment;
- Dust monitoring;
- Noise and vibration management;
- NRM compliance;
- Complaint management procedures;
- Prevention of mud tracking;
- Storage of plant and materials; and
- Implementation of Best Practicable Means throughout demolition and construction.

2.45 The mitigation measures contained within this report shall be implemented throughout the demolition and construction phases of the development.

3.0 BASELINE CONDITIONS

Local Air Quality Management

- 3.1 The Proposed Development Site is located within the borough-wide Hillingdon Air Quality Management Area (AQMA), declared for exceedances of the annual mean NO₂ and 24-hour mean PM₁₀ air quality objectives. Existing air quality conditions in the area were reviewed using LBoH monitoring data, DEFRA background mapping and the London Atmospheric Emissions Inventory (LAEI).
- 3.2 LBoH monitors particulate matter at 11 continuous monitoring Sites within its boundary. The closest of is H11, located approximately 7 km from the Site, Table 3.1 shows the PM₁₀ annual mean over the past five years. These values are consistent below the UK AQOs of 40 µg/m³, although concentrations remain above the more stringent World Health Organisation (WHO) guideline of 5 µg/m³. Monitoring results also demonstrate a general improving trend in air quality in recent years after the effects of the COVID-19 pandemic.

Site ID	Site Name	NGR		Site Type	Annual Mean PM ₁₀ Concentrations (µg/m ³)				
		X	Y		2020*	2021*	2022	2023	2024
H11	Hillingdon 1								
	- South	510857	184917	Roadside	17	18	17	19	18
	Ruislip								

*The COVID-19 pandemic and related UK travel restrictions during 2020 and 2021 mean these data may not reflect normal pollution levels.
- Denotes unavailable data.

Table 3.1: Annual Mean Automatic Monitoring Results

DEFRA Predicted Background Pollutant Concentrations

- 3.3 DEFRA has produced predictions of background pollutant concentrations on a 1 km-by-1 km grid basis across the UK. These data sets are designed to assist Local Authorities (LAs) in their Review and Assessment of local air quality.
- 3.4 The Proposed Development Site lies closest to grid coordinate 508500, 191500. The predicted background concentrations for the present year (2026) and the Proposed Developments opening year (2029), are summarised in Table 3.2.

Pollutant	Predicted Background Concentration (µg/m ³)	
	2026	2029
PM ₁₀	12.63	12.38
PM _{2.5}	7.62	7.40

Table 3.2: DEFRA Predicted Background Concentrations

- 3.5 As illustrated in Table 3.2, all background concentrations remain below the relevant AQOs. Furthermore, concentrations are predicted to decline over time, reflecting anticipated improvements in vehicle emission standards and national energy trends by the time the Proposed Development is completed.

LAEI Air Quality Modelling Maps

- 3.6 Baseline air quality for the Proposed Development has been evaluated using the London Atmospheric Emissions Inventory (LAEI) 2019. This inventory utilises high-resolution emission factors and activity data to provide validated pollutant concentrations across Greater London for the 2019, 2025, and 2030 epochs.
- 3.7 The projected annual mean concentrations for the Site in 2025 and 2030 are summarised in Table 3.3 by extracting the values from the worst-case location within the Proposed Development (Site boundary closest to the A4180).

Pollutant	2025 Modelled Range ($\mu\text{g}/\text{m}^3$)	2030 Modelled Range ($\mu\text{g}/\text{m}^3$)	UK Air Quality Objective ($\mu\text{g}/\text{m}^3$)	WHO Limit Value ($\mu\text{g}/\text{m}^3$)
PM ₁₀	15.0–20.0	15.0–20.0	40 (Annual Mean)	15 (Annual Mean)
PM _{2.5}	8.50 – 10.25	8.50 – 10.25	10 (Legally Binding Target by 2040)	5 (Annual Mean)

Table 3.3: LAEI Projected Concentrations and Regulatory Compliance

- 3.8 The LAEI data predict that particulate pollutant concentrations at the Site will remain within the relevant UK air quality standards during the future operational years (from 2029). The modelled ranges for 2025 and 2030 overlap and are consistent with the long-term UK air quality objective set for 2040. While the results do not indicate a clear improvement between the assessed years, this reflects the use of concentration ranges, within which variation is expected, and future reductions may still occur. However, concentrations of PM₁₀ and PM_{2.5} are expected to remain above WHO guideline values.
- 3.9 Overall, the Site is located within an urban environment influenced by road traffic emissions, although baseline pollutant concentrations are not considered unusually high for a London borough location.

Smoke Control Area

- 3.10 The Site is located within London Borough of Hillingdon Smoke Control Area (SCA)¹. These are parts of UK where²:
- “you cannot release smoke from a chimney
 - you can only burn authorised fuel, unless you use an appliance approved by DEFRA (also known as an ‘exempt appliance’ or ‘DEFRA approved appliance’)”

Sensitive Receptors

- 3.11 A sensitive receptor is defined as any location that may be affected by changes in air quality as a result of a Proposed Development. These have been defined for construction dust impacts in the following Sections.

¹ Available at <https://uk-air.defra.gov.uk/data/sca/>

² Available at <https://www.gov.uk/smoke-control-area-rules>

- 3.12 The Proposed Development is located in proximity to several human receptors. Residential receptors are situated to the north/northeast and south/southeast of the Site. Northwood town centre lies approximately 1.5 km to the southeast. Mount Vernon Hospital is located approximately 380 m to the northwest, and Holy Trinity CofE Primary School is situated approximately 330 m to the north/northeast.
- 3.13 Ecological receptors were analysed using DEFRA MAGIC Maps webSite which provides authoritative geographic information about the natural environment from across government. This application is managed by Natural England.
- 3.14 The review showed that the Site boundary and trackout route do not lie within 50 m of an ecological receptor. The Site is within 100 m of The Gravel Pits; however, this is not classified as a designated Site. Therefore, ecological receptors have been excluded from this assessment.

4.0 CONSTRUCTION DUST RISK ASSESSMENT

- 4.1 This section serves as the Air Quality and Dust Management sub-plan, operating as an integrated component of the broader Demolition and Construction Management Plan (DMP/CMP) for planning reference 924/APP/2022/3603.
- 4.2 The undertaking of activities such as excavation, ground works, cutting, construction and storage of materials have the potential to result in fugitive dust emissions throughout the construction phase. Vehicle movements both on-Site and on the local road network also have the potential to result in the re-suspension of dust from haul road and highway surfaces.
- 4.3 The potential for impacts at sensitive locations depends significantly on local meteorology during the undertaking of dust generating activities, with the most significant effects likely to occur during dry and windy conditions.
- 4.4 The desk-study undertaken to inform the baseline identified a number of sensitive receptors within 250 m of the Site boundary. As such, a detailed assessment of potential dust impacts was required.

Dust and PM₁₀ from On-Site Activities

- 4.5 Construction operations can generate and re-suspend dust and PM₁₀. Dust may arise from the following activities:
- Site clearance and preparation, including demolition;
 - Creation of access routes, covering temporary entry and exit points for the Proposed Development;
 - Earthworks, encompassing excavation and soil relocation;
 - Materials handling, including storage, stockpiling, spillage and disposal of construction materials;
 - Vehicle movement, including excavators, dumper trucks and other construction vehicles operating within the Site;
 - Crushing and screening equipment used to process materials;
 - Plant emissions from construction equipment exhaust, particularly during peak operation or equipment failure;
 - Construction activities such as building erection, hardstanding installation and fabrication processes;
 - Finishing and refurbishment work, both internal and external; and
 - Landscaping operations following construction completion.
- 4.6 Dust generation will primarily occur during normal working hours. However, certain activities, such as major earthworks with exposed soil, could generate dust continuously if dust suppression measures are not maintained throughout the construction phase.

Assessment of Potential Dust Emission Magnitude

- 4.7 A qualitative assessment of the air quality impact during the construction phase was carried out in accordance with the methodology outlined within the Institute of Air Quality Management's "Guidance on the Assessment of Dust from Demolition and Construction (Version 2.2)" as well as in line with the "The Control of Dust and Emissions During Construction and Demolition SPG (2014)". The

methodology for this assessment is detailed in **Appendix A**. The findings of the construction dust assessment are presented as follows.

Demolition

- 4.8 The Proposed Development involves the demolition of no. 48 and no. 60 Ducks Hill Road, garage and wooden storage unit.
- 4.9 The total volume of demolition will be approximately 1,554 m³. The existing buildings comprise Bricks, slate, timber, plaster and plasterboard. While these include materials with a low dust-generating potential, the overall classification is determined by the scale of the works..
- 4.10 The demolition works will be take place at heights ranging from 2.7 m to 9.7 m above ground level. On-Site crushing of bricks may be undertaken to facilitate their reuse on Site.
- 4.11 Given the presence of potentially dusty materials, the dust emission magnitude for Demolition is classified as **Large** in accordance with the IAQM criteria outlined in Table A1.

Earthworks

- 4.12 Earthworks will primarily involve material excavation, haulage, Site levelling and landscaping.
- 4.13 According to the British Ecological Survey, the Site is underlain by the London Clay Formation, comprising clay, silt, and sand. The total Site area is approximately 12,161 m². There will be 4 HGVs active on Site at any one time. Bund heights will be 2.5 m.
- 4.14 Given the presence of potentially dusty materials, the dust emission magnitude for Earthworks is classified as **Medium** in accordance with the IAQM criteria outlined in Table A1.

Construction

- 4.15 The construction activities will involve the erection of three new buildings comprising of 12 assisted-living units (Class C2), proposed ancillary communal space, including cafe and restaurant, external connecting link building, landscaping and external works.
- 4.16 The total volume of buildings to be constructed is approximately 4,250 m³. Various materials will be used, including reinforced concrete, structural steel, steel framing system, cross laminated timber, glulam, and blockwork. As it is unknown whether on-Site concrete batching and/or sandblasting will occur, both activities have been included in this assessment.
- 4.17 In accordance with the criteria outlined in Table A1, **Appendix A**, the magnitude of potential dust emissions from construction is therefore **Medium**.

Trackout

- 4.18 Trackout activities will include vehicles accessing and leaving the Site while transporting construction materials and removing Site waste. There will be between 25 HGV movements per day. The length of unpaved road will be 60 m, with moderate potential for dust release from road surface material due to the clay content of the soil.

- 4.19 Given the potentially dusty surface material, the dust emission magnitude for trackout is classified as **Large** in accordance with the IAQM criteria outlined in Table A1.

Assessment of Sensitivity of the Study Area

- 4.20 Sensitive receptors have been categorised based on their proximity to the Site Boundary and existing annual mean PM₁₀ concentrations within the area. This has been used to determine the sensitivity of the surrounding area to demolition, earthworks, construction, and trackout activities, in accordance with IAQM guidance.
- 4.21 The Proposed Development is located within predominantly residential and green suburban environment. Based on the criteria shown in Table A2, **Appendix A**, the sensitivity of the receiving environment to potential dust impacts is considered to be high for residential receptors. This is because users would expect to enjoy a high and reasonable level of amenity, respectively.
- 4.22 Receptors sensitive to potential dust impacts during demolition and construction works were identified from a desk-top study. In accordance with IAQM guidance, the study area extends up to 250 m from the Proposed Development Boundary. A summary of the receptors within 250 m is provided in Table 4.1.
- 4.23 Receptors sensitive to potential dust impacts from trackout (the migration of dust onto the public highway) were identified within 250 m of the Site exit and within 50 m of the kerbside of the primary access routes. Construction vehicles are expected to access the Site via Ducks Hill Road. These findings are also consolidated within Table 4.1.
- 4.24 Reference should be made to Figure 4.1 for graphical representations of the construction dust buffer zones.

Distance from Site Boundary (m)/ Access Route (m)	Approximate Number of High Sensitivity Receptors
Construction	
Less than 20	10-100
Less than 50	10-100
Less than 100	10-100
Less than 250	More than 100
Trackout	
Less than 20	10-100
Less than 50	10-100

Table 4.1: Demolition and Construction Activities Dust Sensitive Receptors

- 4.25 A review of the Defra Multi-Agency Geographic Information for the Countryside (Magic) mapping service confirmed that no statutory ecological designations—such as SPAs, SSSIs, SACs, or LNRs—are located within 50 m of the public highway route used by construction vehicles (up to 250 m from the Site entrance). As such, the assessment of ecological receptors has been screened out of the dust assessment, in accordance with the IAQM guidance criteria.
- 4.26 In accordance with IAQM construction dust guidance, the sensitivity of the area to human health impacts is determined by combining receptor proximity with baseline annual mean particulate concentrations. The DEFRA background map concentration for PM₁₀ at the Site is 12.63 µg/m³. Because

this construction commencement year concentration falls well below the IAQM threshold of 24 µg/m³, the risk of short-term PM₁₀ health impacts from construction dust is significantly reduced.

- 4.27 Table 4.2 shows the sensitivity of the surrounding area in relation to dust soiling, human health impacts for each of the construction activities.

Receptor	Potential Impact	Sensitivity of the Surrounding Area			
		Demolition	Earthworks	Construction	Trackout
High	Dust Soiling	High	High	High	High
	Human Health	Low	Low	Low	Low

Table 4.2: Sensitivity of the Surrounding Area

- 4.28 As shown in Table 4.2, the sensitivity of the receiving environment to potential dust soiling impacts is classified as High for all construction activities. With respect to human health, the sensitivity is classified as Low for demolition, earthworks, construction activities, and trackout activities.

Risk of Impacts

- 4.29 Table 4.3 provides a summary of the risk of impacts for the proposed development. The predicted dust emission magnitude has been combined with the defined sensitivity of the area to determine the risk of impacts during the construction phase, prior to mitigation. Table 4.3 provides a summary of the risk of impacts for the Proposed Development. The highest risk category identified for each construction activity has been used to determine the level of mitigation required.

Potential Impact	Dust Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High	Medium	Medium	High
Human Health	Medium	Low	Low	Low

Table 4.3: Summary of Potential Unmitigated Dust Risks to Define Site Specific Mitigation

- 4.30 As indicated in Table 4.3, the highest dust soiling risk associated demolition and trackout activities is assessed as High. While, the dust soiling risk associated with the earthworks and construction phases is assessed as **Medium**. For human health effects, the dust risk is assessed as Medium for demolition and Low for earthworks, construction and trackout activities. The overall dust risk impact is therefore classified as **High** for all non-specified activities prior to the implementation of Site-specific mitigation measures.
- 4.31 It should be noted that the potential for impacts depends significantly on the distance between the dust generating activity and receptor location. Risk was predicted based on a worst-case scenario of works being undertaken at the Site boundary closest to each sensitive area. Therefore, with mitigation measures in place, illustrated in Table 4.3, the effects of dust from construction activities on sensitive receptors, will be negligible.



Figure 4.1: Construction Dust Assessment Buffer Zones

5.0 DUST MITIGATION MEASURES

- 5.1 The approved details shall be fully implemented and permanently retained and maintained during the entire construction period of the development. The continuing effectiveness of this DMP/CMP should be reviewed in consultation with Site management. The reviews will take into account the compliance records, complaints history, monitoring records and any recent sensitive developments on neighbouring land.
- 5.2 Reviews of the plan will also be undertaken in the event of continued exceedances of the dust risk criteria after mitigation measures have been established. The plan should be amended as necessary, including any changes to the monitoring methods and control measures which may be agreed. It is recommended that the DMP/CMP is reviewed six months from initial implementation. Following an initial review, it is recommended that the DMP/CMP should also be reviewed and updated where applicable below:
- As instructed by the Project Manager;
 - As any additional contractors are appointed; and
 - Following any changes to the scope of the Site works that have the potential to cause any adverse environmental effects associated with air quality or dust.
- 5.3 Any updates to the DMP/CMP should be agreed in writing with LBoH prior to implementation.

Roles and Responsibilities

- 5.4 The details of the Project Manager with Key roles and responsibilities relating to air quality during the demolition and construction works are shown below in Table 5.1.

Name	Genevieve Hughes
Position	Project Manager
Company	H & H Property Services
Address	21 Aylmer Parade, Aylmer Road, London N2 0AT.
Telephone	07769 228236
Email	genevieve@handhps.co.uk

Table 5.1: Site Manager's Details

- 5.5 The appropriate resources will be supplied to cover the requirements of this DMP/CMP and ensure that these are communicated effectively and acted upon in an appropriate manner.
- 5.6 The name and contact details of the Project Manager and Site Manager will be clearly displayed on the Site Hoarding for adjacent residents, or any member of the public should they wish to contact them. All staff will be responsible for minimising any dust emissions from the Site during the Site-preparation, demolition and construction phases.
- 5.7 Key roles and responsibilities of the project managers and Site managers, relating to air quality, are detailed in Table 5.2.

Role	Control Measure
Site Manager	• Ensure that the mitigation and monitoring requirements laid out in the DMP/CMP are carried out during works on Site. • Ensure that staff are aware of the requirements of the DMP/CMP and have access to the document. Regular training of staff should be implemented. • Undertake and record dust inspections of the Site as required by the DMP/CMP. • Ensure that Site documentation (including method statements and risk assessments) includes dust mitigations. • Act on complaints and dust alerts as detailed in the DMP/CMP. • Maintain up-to-date Site log of air quality events and complaints. • Investigate the cause of air quality events and complaints, as required. • Act as the key point of contact for queries and complaints regarding airquality emissions from Site.
All Site Personnel	• Carry out all works in line with the DMP/CMP requirements. • Report observations of dust events or deviations from the DMP/CMP procedures. • Attend environmental management training.

Table 5.2: Key Roles and Responsibilities

Training

- 5.8 The whole construction team should be provided with training on the on-Site pollution policy, set out by the project manager. This should be included in the induction for each worker onSite.

Programme of Dust Generating Activities

- 5.9 The overall programme will commence with Site set-up, tree protection measures and demolition in November 2026, lasting approximately 12 weeks. This will be followed by the main construction phase anticipated to start in Spring 2027, comprising approximately 6 months of flood mitigation groundworks and 18 months of building construction and landscaping. The total construction period is therefore expected to extend to Spring 2029.

Demolition and Construction Site and Equipment Layout

- 5.10 The demolition plan is illustrated in Figure 5.1. The Contractor will also provide a final construction plan for the construction phases. The plans will indicate the following:
- Hoarding on Site boundaries;
 - Location of NRMM;
 - Haul Routes within the Site
 - Materials and Stockpiling Area;
 - Fuel Storage area;
 - Wheel wash location; and
 - Water supply point; and
 - Site drainage to prevent contaminated water leaving the Site.



Figure 5.1: Demolition Route layout

Site Access

- 5.11 Construction vehicle access to the Site will be via Ducks Hill Road. The Site entrance and exit will be covered with hardstanding material to reduce the likelihood of spoil encroaching on the highway.
- 5.12 The access gate will be manned by a Traffic Marshal. They will be responsible for coordinating vehicles, ensuring the Site is kept secure, and monitoring the cleanliness of the roads.
- 5.13 Wheel wash facilities will be in place to clean vehicle wheels before leaving the Work zone 1 and 2. All vehicles will be checked for cleanliness before leaving the Site. Vehicles shall always be sheeted when leaving the Site. The use of our on-Site road sweeper will be deployed if there are any mud or debris within the vicinity of the Site.

Water Supply

- 5.14 Water supply to Site will remain live for the purpose of dust suppression and hydrants will be utilised and licences obtained. The project and Site manager will liaise with the Water company to ensure that the supply is metered.

Stockpiling and Material Management

- 5.15 There will be no stockpiling of materials taking place on the Site. Instead, wait and load vehicles will be used for muck away, and skips will be provided for other waste.
- 5.16 Oxygen and Propane gas cylinders or packs will be stored safely within a secure, well-ventilated area fitted with a lock. Propane will be stored separate from oxygen with a distance of at least three metres between them. Empty gas bottles will be stored separately.
- 5.17 All flammable materials or substances held on Site will be kept to minimum quantities and stored at least five metres away from any buildings; the location will be designated and clearly identified as a no smoking area.

Fuel on Site

- 5.18 Diesel or oil stored on Site will be stored within a bund or specific bunded container to prevent spillages from entering any water courses. This will be managed to ISO14001 requirements. All flammable materials/substances held on Site will be kept to minimum quantities and stored at least five metres away from any buildings; the location will be designated and clearly identified as a no smoking area.

Complaints Management

- 5.19 The management of complaints will be the responsibility of the contractor's Site Manager. Any complaints relating to dust or air quality issues will be reported and filed alongside any mitigation taken to rectify the issue.
- 5.20 A record of all environmental incidents as a result of dust will be recorded through the forms included in Appendices B, C and D. These forms will be made available for inspection, as necessary.

5.21 Records of all complaints and checks undertaken will be held at the Site for the duration of the works and will be investigated by the Site Manager. Information to be recorded and actioned includes:

- Time, date, identity and contact details of the complainant;
- The wind direction, strength and weather conditions;
- If the complainant has been referred by the local authority;
- Complainant description of the dust emission;
- Length of dusty emissions;
- Cause of dusty emissions;
- A Site inspection will be carried out immediately and its findings recorded;
- Dust mitigation methods will be employed immediately;
- A visit to the Site of complaint will be carried out as soon as possible to identify any ongoing problems;
- The complainant will be contacted and advised of mitigation and response; and
- The Local Authority will be notified that a complaint has been received.

On-road Vehicle Emissions & ULEZ Compliance

5.22 All on-road vehicles and HGVs accessing the Site will comply with TfL's London-wide Ultra Low Emission Zone (ULEZ) and Low Emission Zone (LEZ) standards as minimum (e.g. Petrol Euro 4/Diesel Euro 6 for light vehicles and Euro VI for heavy vehicles). Evidence that contractors and suppliers have been contacted and their responses to the applicant in respect to the use of ULEZ compliant vehicles can be found in **Appendix B**.

5.23 A ULEZ vehicle compliance Form for the duration of the works will be issued to LBoH prior to the commencement of demolition works and will subsequently be updated and submitted on a monthly basis.

5.24 The use of Ultra-Low Emission Vehicles (ULEV) (e.g. Electric, Hybrid (Electric-Petrol) where possible will be encouraged at the procurement stage of the tender for these services. The Applicant will actively work with suppliers that can provide electric or hybrid vehicles where practicable and details included in the ULEZ compliance Form.

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

5.26 The project manager must ensure on-road vehicle emissions comply with the following requirements set out by LBoH:

- Ensure that all on road vehicles comply with the relevant Euro standards as set out by Transport for London's Low Emission Zone and Ultra Low Emission Zone (ULEZ).
- Encourage the use of ultralow emission vehicles (ULEVs) for deliveries and Site operations. The project manager should set out targets for the use of ULEVs throughout the construction lifespan.
- Encourage Site workers to travel to and from Site using sustainable transport methods (e.g., public transport, cycling, walking, or car-sharing).
- Consolidate deliveries to avoid unnecessary vehicle trips, maximise vehicle utilisation by ensuring full loading and efficient routing.

- Ensure vehicle engines are switched off when stationary to prevent unnecessary exhaust emissions and noise. Leaving an engine idling while stationary is an offence under Regulation 98 of the *Road Vehicles (Construction and Use) Regulations 1986* and Regulation 12 of the *Road Traffic (Vehicle Emissions) (Fixed Penalty) (England) Regulations 2002*. LBoH actively enforces anti-idling regulations, and drivers allowing engines to idle may be subject to a Fixed Penalty Notice (FPN).
- Route on-Site haulage and access points away from the Site boundary and sensitive off-Site receptors, such as nearby residential properties, schools, and healthcare facilities.
- To manage traffic movements and prevent congestion on the local road network, a Demolition and Construction Logistics Plan has been prepared in accordance with Transport for London's (TfL) *Construction Logistics Plan Guidance* (Report Ref: TR/VL/P25-3695/04). All vehicle movements, routing, and logistics management on Site must strictly adhere to the measures outlined in this document.
- Deliveries near sensitive locations, such as schools, must avoid peak hours to prioritise both air quality and safety.

OnSite Vehicles and Equipment

- 5.27 The demolition and construction practices must incorporate measures to limit emissions from onSite vehicles and equipment.
- 5.28 The project manager must ensure onSite vehicle and equipment comply with the following requirements:
- Where possible Sites should ensure that a suitable electrical supply is available prior to commencing to avoid the use of generators.
 - Sites should use electrical/battery powered equipment to avoid the use of diesel and petrol.
 - Where electrically powered equipment is not available Sites should use low emission vehicles and plant fitted with catalysts, diesel particulate filters or similar devices.
 - Plant and equipment should only be operated using ultra-low sulphur fuels.
 - All plant should be well maintained, with routine servicing of plant and vehicles to be completed in accordance with the manufacturer's recommendations and records maintained for the work undertaken.

Non-Road Mobile Machinery

- 5.29 All Non-Road Mobile Machinery (NRMM) used during the development must comply with the emission requirements outlined in the Greater London Authority's "Control of Dust and Emissions during Construction and Demolition" SPG (July 2014) or any subsequent amendments or guidance.
- 5.30 All NRMM will comply with Stage IV NO_x and PM₁₀ Emission Standards as stated in The NRMM (Type-Approval and Emission of Gaseous and Particulate Pollutants) Regulations 2018 and its subsequent amendments as a minimum if equal to or over 37 kW.
- 5.31 Where compliance with Stage IV requirements is not achievable or practical, an exemption will be sought from the GLA prior to arrival of the equipment on Site and the details recorded in the monthly NRMM compliance Form. These machines will need to meet Stage V. A copy of the NRMM Compliance Form is detailed in **Appendix C**, Figure C1.
- 5.32 Use of NRMM will be minimised as much as possible and electric or battery powered alternatives will be used as a preference. If NRMM under 37 kW is to be used, use of the equipment will be minimised

and kept as far away from sensitive receptors as is practicable. For NRMM under 37kW, the contractor will equipment fitted with after treatment devices where practicable.

- 5.33 NRMM where the power output is less than 37 kW will be fitted with an after-treatment device, stated on the approved list managed by the Energy Saving Trust; the ongoing conformity of plant retrofitted with suitable after treatment devices, to a defined performance standard, should be ensured through a programme of on-Site checks.
- 5.34 All NRMM for engines will be registered on the NRMM online register prior to the commencement of any demolition and/or construction works. A NRMM compliance form will be issued to the council on a monthly basis.
- 5.35 All relevant machinery emissions information and documentation will be stored and summarised within our electronic filing system. The project will record the plant details on a spreadsheet, or similar, and the NRMM online register will be completed and maintained by the project administrative support and overseen by the Site manager. The project team will co-operate with local authority inspections and provide the requisite information as required.
- 5.36 All NRMM with a net power between 37 kW and 560 kW used on Site shall comply with the requirements of the London NRMM Low Emission Zone and shall be registered on the relevant NRMM Register where required. Documentary evidence of compliance shall be maintained on Site and made available to the LPA upon request.

Other Air Emissions

- 5.37 The contractor's onSite health and safety manager must ensure compliance with the provisions of the Clean Air Act 1993, the Health and Safety at Work etc Act 1974, the Environmental Protection Act 1990 and the Non-Road Mobile Machinery (Emission of Gaseous and Particulate Pollutants) Regulations 1999 (SI 1999/1053).
- 5.38 They must also ensure compliance with the Control of Substances Hazardous to Health (COSHH) Regulations 2002, as amended. The developer/contractor must comply with HSE Guidance Note EH40 on Workplace Exposure Limits.
- 5.39 The contractor and health and safety manager must ensure compliance with the lead-in-air standards, which are set out in Appendix 1 of the Health and Safety Commission Approved Code of Practice: The Control of Lead at Works Regulations 2002.
- 5.40 The health and safety manager must ensure that all necessary precautions are taken to prevent the occurrence of smoke emissions or fumes from Site plant or stored fuel oils for safety reasons and to prevent such emissions or fumes drifting into sensitive receptor areas. In particular, plants should be well maintained, and measures taken to ensure that they are not left running for long periods when not directly in use.
- 5.41 It is a requirement to ensure that any process and/or equipment that requires an environmental permit (under The Pollution Prevention and Control Act 1999 and The Environmental Permitting (England and Wales) Regulations 2016) are operated in accordance with the conditions of that permit.

Demolition and Construction Dust Mitigation Measures

- 5.42 The mitigation measures to be implemented to ensure that Dust and PM₁₀ emissions from the Site are kept to a minimum during the demolition and construction phases are set out below in Table 5.3. These measures have been generated based on mitigation measures within the IAQM guidance and the outcome of the construction risks.
- 5.43 The overall dust risk level is classed as a **High** risk for all non-specified activities. Due to the 'Large' dust emission magnitudes across all construction activities, continuous real-time monitoring of PM₁₀ and PM_{2.5} will be implemented to ensure the effectiveness of mitigation.
- 5.44 With mitigation measures in place, identified in Table 5.3, the effects of all dusty demolition and construction activities on sensitive receptors, will be negligible.

Issue	Control Measure
Site Management	• Develop and implement a stakeholder communications plan that includes community engagement before work commences on Site. • Display the name and contact details of person(s) accountable for air quality and dust issues on the Site boundary. • Display the head or regional office information. • Develop and implement a Dust Management Plan (DMP) • Record and respond to all dust and air quality pollutant emissions complaints. • Make the complaints log available to the local authority when asked. • Carry out regular Site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked. • Increase the frequency of Site inspections by the person accountable for air quality and dust issues on Site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. • 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. Hold regular liaison meetings with other high risk construction Sites within 500m of the Site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised.

Issue**Control Measure****Preparing and
Maintaining the Site**

- Plan Site layout: machinery and dust causing activities should be located away from receptors.
- 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.
- Keep Site fencing, barriers and scaffolding clean using wet methods.
- Remove materials from Site as soon as possible.
- Cover, seed or fence stockpiles to prevent wind whipping.
- Carry out regular dust soiling checks of buildings within 100m of Site boundary and cleaning to be provided if necessary.
- Provide showers and ensure a change of shoes and clothes are required before going off-Site to reduce transport of dust.
- Agree monitoring locations with the Local Authority.
- Commence baseline monitoring at least three months before phase begins.
- Put in place real-time dust and air quality pollutant monitors across the Site and ensure they are checked regularly.

**Operating Vehicle/
Machinery and
Sustainable Travel**

- Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone.
- Ensure all non-road mobile machinery (NRMM) comply with the standards set within this guidance.
- 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 possible.
- Impose and signpost a maximum-speed-limit of 10 mph on surfaced haul routes and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).
- Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.
- Implement a Travel Plan that supports and encourages sustainable travel.

Operations

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
- Ensure an adequate water supply on the Site for effective dust/particulate matter suppression/mitigation (using recycled water where possible).
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.

Issue	Control Measure
	• Ensure equipment is readily available on Site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
Waste Management	• Reuse and recycle waste to reduce dust from waste materials. • No bonfires and burning of waste materials.
Demolition	• Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust). • Ensure 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.
Earthworks	• Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces. • Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil. • Only remove secure covers in small areas during work and not all at once.
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 overfilling during delivery. • For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.
Trackout	• Regularly use a water-assisted dust sweeper on the access and local roads, as necessary, to remove any material tracked out of the Site. • Avoid dry sweeping of large areas. • Ensure vehicles entering and leaving Sites are securely covered to prevent escape of materials during transport. • Inspect on-Site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable. • Record all inspections of haul routes and any subsequent action in a Site log book. • Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems and regularly cleaned. • Inspect haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable; • Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the Site where reasonably practicable). • Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the Site exit, wherever Site size and

Issue	Control Measure
	layout permits. • Access gates to be located at least 10m from receptors where possible. • Apply dust suppressants to locations where a large volume of vehicles enter and exit the construction Site.

Table 5.3: Dust Mitigation Measures

General Site Management,

Compliance with Approved Air Quality Commitments

5.45 The mitigation measures contained within this DMP/CMP are consistent with the commitments made during the planning application and include:

- Compliance with the Mayor of London Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance;
- Compliance with IAQM Guidance on the Assessment of Dust from Demolition and Construction;
- Compliance with the London NRMM Low Emission Zone;
- Implementation of dust suppression throughout demolition and construction;
- Management of construction traffic to minimise emissions;
- Display of "No Idling" signage where appropriate; and
- Application of Best Practicable Means to minimise dust emissions at all stages of the works.

6.0 DUST MONITORING DURING DEMOLITION AND CONSTRUCTION WORKS

- 6.1 Dust monitoring has been developed to demonstrate the effectiveness of the mitigation measures and to enable prompt investigation and implementation of corrective actions where elevated dust levels or complaints are identified. Monitoring records will be maintained throughout demolition and construction.

Visual Dust Monitoring

- 6.2 If significant dust is identified beyond the Site boundary, a Dust, Exceedance, Trigger, Incident, and Complaint (DETIC) Form should be completed with immediate investigation via cross checking of Site activities and monitoring data. The DETIC Form will record the remedial actions undertaken. A copy of the form is detailed in **Appendix D**.
- 6.3 The Site Manager will review DETIC Forms regularly to ensure that any necessary actions have been implemented, and to identify problem areas where additional mitigation against further dust emissions may be necessary. LBoH will be issued the Dust Event Form within 24 hours or the next working day if it occurs on a weekend or bank holiday.
- 6.4 Should any complaints be received relating to dust soiling, the results of these inspections will be recorded in the DETIC Form and issued to LBoH within 24 hours, or the next working day if it occurs at a weekend or bank holiday.
- 6.5 A daily visual inspection of the Site will be carried out by the Site Manager, or an appropriately trained operator. This includes checks of buildings within 100 m of the Site boundary to observe dust emissions and dust soiling, with particular attention given to areas upwind of on-Site activities. The inspections will include checks for dust soiling on surfaces such as street furniture, vehicles, and windowsills near the Site boundary, and cleaning if necessary.
- 6.6 Regular Site inspections will be carried out to monitor compliance with air quality and dust control procedures, record inspection results, and make an inspection log available to the local authority when asked.
- 6.7 The frequency of visual inspections will be increased when activities with a high potential to produce dust are being carried out on Site such as during demolition and earthworks. The frequency of inspections should also be increased during periods of adverse weather, i.e. during periods of dry weather with high wind speeds.
- 6.8 Where monitoring identifies elevated dust levels, or where complaints are received from neighbouring receptors, the Principal Contractor shall immediately investigate the cause, implement additional mitigation measures, record all actions taken and continue monitoring until dust emissions have returned to acceptable levels. All incidents and corrective actions shall be recorded using the Dust Incident and Complaint Forms contained within **Appendix D**
- 6.9 The results of these inspections will be recorded in the Daily Dust Monitoring Form, detailed in **Appendix E**, and issued to LBoH upon request.
- 6.10 As a minimum, the following areas will be inspected for deposition of dust:

- Site access and egress;
- All locally parked cars within 50 metres of the Site boundary; and
- Adjacent commercial and residential properties, including windows, doors and frames.

Active Dust Monitoring

- 6.11 The overall dust risk level is classed as high risk for all non-specified activities; therefore, continuous Site monitoring is required to manage the generation of dust, including PM₁₀, and PM_{2.5}, emissions during construction and demolition, in accordance with IAQM and MOL SPG guidance. After these activities are complete, monitoring can be discontinued.
- 6.12 Two automatic monitoring stations will be installed during all demolition and construction activities. These monitors are unmanned and completely autonomous monitoring platforms. Measurement results are accessible via a cloud-based system which allows viewing of the defined parameters in both real-time, 5-minute, 15-minute, hourly, and 24-hr averages.
- 6.13 The parameters to be monitored are particulate matters, PM₁₀ and PM_{2.5} to assess the concentration of dust produced during all demolition and construction works.
- 6.14 The contractor/client should ensure that the automatic monitors are MCERTS compliant for PM₁₀ and PM_{2.5}. In addition, the calibration certificates of these monitors should be supplied to LBoH.
- 6.15 The MOL SPG recommends a minimum of two monitors to be located on Site along a transect to protect sensitive receptors. Additionally, the IAQM guidance recommends that one monitor is positioned upwind and one downwind in relation to the prevailing wind direction.
- 6.16 The Site has predominantly south-westerly winds and therefore it is advisable to situate one monitor toward the northeastern boundary and one on the southwestern boundary to comply with MOL SPG and IAQM guidance.
- 6.17 The monitoring locations have been placed as follows:
- The north-eastern real time monitor will measure dust levels near the residential properties to the north and east of the Site, in particular the properties on Muscovy Place. This location is generally downwind of the Site under the prevailing south-westerly wind conditions and therefore represents the most sensitive receptor location for potential dust impacts. However, it may occasionally become upwind during less frequent north-easterly winds. Monitoring at this location will ensure dust soiling and health impacts are kept to a negligible level;
 - The second monitor will measure dust levels towards the listed building to the east and northeast of the Site, as well as nearby residential properties. This location is typically downwind of the Site under prevailing conditions and therefore represents one of the most sensitive receptor locations for potential dust impacts. However, it may occasionally become upwind during less frequent north-easterly wind conditions. Monitoring at this location will help ensure that dust soiling and potential health effects at both the listed building and nearby residential receptors remain negligible.
- 6.18 The location of the proposed monitoring locations are shown in Figure 6.1.
- 6.19 The monitors should contain an alert system to the contractor, client and the monitoring team when the Site action threshold is exceeded, as follows:

- 1-hourly PM₁₀ action threshold of 190 µg/m³ – Statutory/Agreed PM₁₀ Action Level;
- 15-minute PM₁₀ trigger threshold of 250 µg/m³– Statutory/Agreed PM₁₀ Action Level;
- 1-hourly PM_{2.5} trigger threshold [15 µg/m³ – provisional, currently under formal consultation with LBoH]; and
- 1-hourly PM_{2.5} action threshold [25 µg/m³ – provisional, currently under formal consultation with LBoH]

6.20 Definitive numerical thresholds for PM_{2.5} are currently subject to ongoing formal agreement with the LBoH, following which the monitoring platform configuration will be updated accordingly.

6.21 Where Site Action Levels are exceeded, the exceedance shall be reported to LBoH within two working days, together with the suspected cause of the exceedance and details of the measures implemented to prevent a recurrence. In the event of a significant breach of the PM₁₀ Site Action Level, works should cease immediately and only recommence once appropriate best-practice dust mitigation measures have been implemented. Repeated or significant breaches of the PM₁₀ threshold may result in enforcement action by the local authority to prevent a statutory nuisance.

6.22 To accompany the real-time dust monitoring, there will be Frisbee Gauges or Sticky Pads installed at two locations around the Site as shown in Figure 6.1. One gauge will be co-located with the real-time monitor at Monitoring Location 2, while the second will be installed at the south-western boundary of the Site. These measures will provide additional monitoring of dust deposition and help ensure that dust soiling effects are kept to a minimum.

6.23

6.24 Table 6.1 demonstrates Site action levels for sticky pads with a combined Effective Area Coverage (EAC) and Absolute Area Coverage (AAC).

AAC: Dust Coverage						
EAC: Dust Coverage		Level 0 <80% / interval	Level 1 80 – 95% / interval	Level 2 95 – 99% / interval	Level 3 99 – 100% / interval	Level 4 100% over 45 *
	Level 0 <0.5% / day	Very Low	Very Low	Very Low	Low	Medium
	Level 1 0.5 – 0.7% / day	Low	Low	Low	Medium	High
	Level 2 0.7 – 2.0% / day	Medium	Medium	Medium	High	High
	Level 3 2.0 – 5.0% / day	High	High	High	High	Very High
	Level 4 >5.0% / day	Very High	Very High	Very High	Very High	Very High

Table 6.1: Dust Emission Classification Applicable to Construction Sites

Reporting

- 6.25 During the complete works, a monthly dust monitoring report will be produced, detailing the outcome of the monitoring and providing recommendations and mitigation strategies based on the outcomes and relevant guidance (such as MOL SPG, IAQM and UK AQOs).
- 6.26 Site practices will be investigated and the DMP/CMP mitigation strategies, highlighted in Table 5.3, must be updated in accordance with any significant changes outlined in the monthly monitoring reports.
- 6.27 Where any Site action thresholds are exceeded and/or high levels of dust soiling are identified which may be caused by demolition and/or construction activities at the Site, additional dust mitigation measures will be implemented. Additional monitoring may then be undertaken to demonstrate the effectiveness of such mitigation measures.



Figure 6.1: Dust Monitoring Locations

Additional Requirements

6.28 The Contractor must supply the following to LBoH prior to any demolition and/or construction works commencing:

- All contractors and suppliers (e-mails, letters) will ensure that during the demolition and construction phases that they will be using ULEZ compliant vehicles (e.g. Euro 6 – Cars, Vans, LGV and Euro VI – HGV) and these vehicles are fully registered;
- Evidence of ULEZ Compliant Vehicles and ULEZ Vehicle Compliance Form;
- NRMM Site Registration and Compliance Form; and
- Calibration Certificates of MCERTS compliant PM₁₀ and PM_{2.5} monitors.

Community Liaison and Local Authority Engagement

Local Authority Liaison and Compliance

- The Principal Contractor will maintain open and proactive communication channels with the London Borough of Hillingdon's Planning Enforcement, Environmental Protection, and Highways teams throughout the duration of the demolition and construction phases.
- Any changes to core working hours, unexpected traffic disruptions, or out-of-hours emergency works will be agreed upon in writing with the local planning authority prior to commencement.

Stakeholder and Community Communications Strategy

6.29 To minimise disruption to local residents, schools, and businesses near Ducks Hill Road, the following measures will be implemented prior to Site mobilisation:

- Stakeholder Liaison Officer (SLO): A designated SLO will be appointed by the Principal Contractor to act as the primary point of contact for local stakeholders. Their contact details (phone number and email address) will be clearly displayed on a notice board at the Site entrance.
- Advance Notifications: Letter drops and informational circulars will be distributed to neighbouring properties at least 14 days prior to undertaking particularly disruptive activities (e.g., heavy demolition, major structural pours, or utility connections).
- Complaints Management Procedure: All complaints regarding noise, dust, vibration, or traffic congestion will be logged immediately in a dedicated Site register. The SLO will investigate the complaint, implement remedial action where necessary, and provide a response to the complainant within 48 hours.

7.0 CONCLUSIONS

- 7.1 This DMP/CMP Plan has been prepared to satisfy the requirements of Planning Condition 6 of Planning Permission Ref. **924/APP/2022/3603**. The report demonstrates how dust, particulate matter, noise, vibration and air pollutant emissions will be managed throughout demolition and construction in accordance with the London Freight Plan, the Mayor of London's The Control of Dust and Emissions During Construction and Demolition Supplementary Planning Guidance and the BRE Pollution Control Guides. Subject to implementation of the mitigation, monitoring and management measures described in this report, impacts on surrounding receptors are expected to be effectively controlled.

DRAFT

8.0 REFERENCES

- 8.1 *Best in Class Guidance on Dust and Emissions from Construction*. London Low Emission Construction Partnership (2019).
- 8.2 *LBoH (2025), LBoH Air Quality Annual Status Report for 2025*.
- 8.3 London Borough of Hillingdon (2019). Air Quality Action Plan 2019–2024 [online]. Available at: <https://modgov.hillingdon.gov.uk/documents/s45069/Air%20Quality%20Action%20Plan%202019-2024.pdf> [Accessed April 2026].
- 8.4 *London Borough of Hillingdon (2012). Local Plan Part 1: Strategic Policies [online]*. Available at: <https://pre.hillingdon.gov.uk/downloads/file/2206/local-plan-part-1-strategic-policies> [Accessed May 2026].
- 8.5 *Local Air Quality Management Technical Guidance (LAQM.TG22)*. Department for Environment, Food and Rural Affairs (2022).
- 8.6 *National Planning Policy Framework*. Ministry of Housing, Communities and Local Government (2024)
- 8.7 *Sustainable Design and Construction Supplementary Planning Guidance*. Mayor of London, Greater London Authority (2014)
- 8.8 *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Volume 1)*. Department for Environment, Food and Rural Affairs in partnership with the Scottish Executive, Welsh Assembly Government and Department of the Environment Northern Ireland (2007)
- 8.9 *The Control of Dust and Emissions from Construction and Demolition: Supplementary Planning Guidance*. Mayor of London, Greater London Authority (2014)
- 8.10 *The London Plan, March 2021*. Mayor of London, Greater London Authority (2021)

APPENDIX A

Air Quality Dust Risk Assessment Methodology

There is the potential for fugitive dust emissions to occur as a result of construction activities. These have been assessed in accordance with the methodology outlined within the Institute of Air Quality Management's "Guidance on the Assessment of Dust from Demolition and Construction (Version 2.2)", 2024.

Construction Phase Assessment

Activities on the construction Site have been divided into four types to reflect their different potential impacts. These are:

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

The potential for dust emissions was assessed for each activity that is likely to take place and considered three separate dust effects:

- Annoyance due to dust soiling;
- The risk of health effects due to an increase in exposure to PM₁₀; and
- Harm to ecological receptors with account being taken of the sensitivity of the area that may experience these effects.

The assessment steps are detailed below.

STEP 1

STEP 1 screens the requirement for a more detailed assessment. An assessment will normally be required where there is:

- a 'human receptor' within:
 - 250 m of the boundary of the Site; or
 - 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the Site entrance(s).
- an 'ecological receptor' within:
 - 50 m of the boundary of the Site; or
 - 50 m of the route(s) used by construction vehicles on the public highway, up to 250 m from the Site entrance(s).

STEP 2

STEP 2 assesses the risk of potential dust impacts separately for demolition, earthworks, construction and trackout activities. Each activity is allocated to a risk category based on two factors:

- The scale and nature of the works, which determines the magnitude of dust arising as: small, medium or large (STEP 2A); and
- The sensitivity of the area to dust impacts, which can be defined as low, medium or high sensitivity (STEP 2B).

The two factors are combined in STEP 2C to determine the risk of dust impacts without mitigation applied.

STEP 2A defines the potential magnitude of dust emission through the demolition phase. The relevant criteria are summarised in Table A1.

Magnitude	Activity	Criteria
Large	Demolition	- Total volume of building to be demolished greater than 75,000m³ - Potential dusty construction material (e.g. concrete) - OnSite crushing and screening - Demolition activities more than 12m above ground
	Earthworks	- Total Site area greater than 110,000m² - Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size) - More than 10 heavy earth moving vehicles active at any one time - Formation of bunds greater than 6m in height
	Construction	- Total building volume greater than 75,000m³ - On Site concrete batching - Sandblasting
	Trackout	- More than 50 Heavy Duty Vehicle (HDV) trips per day - Potentially dusty surface material (e.g. high clay content) - Unpaved road length greater than 100m
Medium	Demolition	- Total volume of building to be demolished 12,000m³ – 75,000m³ - Potential dusty construction material, - Demolition activities 6–12m above ground level
	Earthworks	- Total Site area 18,000m² to 110,000m² - Moderately dusty soil type (e.g. silt) 5 to 10 heavy earth moving vehicles active at any one time - Formation of bunds 3m to 6m in height
	Construction	- Total building volume 12,000m³ to 75,000m³ - Potentially dusty construction material (e.g. concrete) - On Site concrete batching
	Trackout	20 to 50 HDV trips per day - Moderately dusty surface material (e.g. high clay content) - Unpaved road length 50m to 100m
Small	Demolition	- Total volume of building to be demolished less than 12,000m³ - Construction material with low potential for dust release (e.g. metal cladding, or timber) - Demolition activities less than 6m above ground level - Demolition during wetter months
	Earthworks	- Total Site area less than 18,000m² - Soil type with large grain size (e.g. sand) - Less than 5 heavy earth moving vehicles active at any one time - Formation of bunds less than 3m in height
	Construction	- Total building volume less than 12,000m³ - Construction material with low potential for dust release (e.g. metal cladding or timber)

Magnitude	Activity	Criteria
	Trackout	• Less than 20 HDV trips per day • Surface material with low potential for dust release • Unpaved road length less than 50m

Table A1: Potential Dust Emission Magnitude

Step 2B defines the sensitivity of the area. The sensitivity of the area takes account of a number of factors:

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

Sensitivity	Examples		
	Dust Soiling Effects	Health Effects of PM ₁₀	Ecological Effects
High	• Users can reasonably expect enjoyment of a high level of amenity; or • The appearance, aesthetics or value of their property would be diminished by soiling; and • The people or property would reasonably be expected to be present continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land. • 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).^c • 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.

Sensitivity	Dust Soiling Effects	Examples Health Effects of PM ₁₀	Ecological Effects
Medium	• Users would expect to enjoy a reasonable level of amenity, but would not reasonably expect to enjoy the same level of amenity as in their home; or • The appearance, aesthetics or value of their property could be diminished by soiling; or • The people or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land. • Indicative examples include parks and places of work.	• Locations where the people exposed are workers^d, 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.

Sensitivity	Examples		
	Dust Soiling Effects	Health Effects of PM ₁₀	Ecological Effects
Low	- The enjoyment of amenity would not reasonably be expected; or - 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^b and roads.	- Locations where human exposure is transient. - Indicative examples include public footpaths, playing fields, parks and shopping streets.	- Locations with a local designation where the features may be affected by dust deposition. - Indicative example is a local nature reserve with dust sensitive features.

NOTES:

- People's expectations will vary depending on the existing dust deposition in the area.*
- Car parks can have a range of sensitivities depending on the duration and frequency that people would be expected to park their cars there, and the level of amenity they could reasonably expect whilst doing so. Car parks associated with a workplace or residential parking might have a high level of sensitivity compared to car parks used less frequently and for shorter durations, such as those associated with shopping. Cases should be examined on their own merits.*
- This follows Defra guidance as set out in LAQM.TG(22).*
- The air quality objectives and limit values do not apply to people in the workplace, although, such people can be affected by exposure of PM₁₀. However, they are considered to be less sensitive than the general public as a whole because those most sensitive to the effects of air pollution, such as young children are not normally workers.*
- There are no standards that apply to short-term exposure, e.g. one or two hours, but there is still a risk of health impacts, albeit less certain.*

Ecological Receptors: The advice of an ecologist should be sought to determine the need for an assessment of dust impacts on sensitive habitats and plants. A Habitat Regulation Assessment of the Site may be required as part of the planning process, if the Site lies close to an internationally designated Site i.e. Special Conservation Areas (SACs), Special Protection Areas (SPAs) designated under the Habitats Directive (92/43/EEC) and RAMSAR Sites.

Table A2: Sensitivity of Different Types of Receptors

The guidance also provides the following additional factors to consider when determining the sensitivity of an area:

- Any history of dust generating activities in the area;
- The likelihood of concurrent dust generating activity on nearby Sites;
- Any pre-existing screening between the source and the receptors;
- Any conclusions drawn from analysing local meteorological data which accurately represent the area; and if relevant
- The season during which the works will take place;
- Any conclusions drawn from local topography;
- Duration of the potential impact, as a receptor may become more sensitive over time; and
- Any known specific receptor sensitivities which go beyond the classifications given in this document.

The sensitivity of the area to dust soiling effects on people and property is shown in Table A3.

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		Less than 20	Less than 50	Less than 100	Less than 250
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

Table A3: Sensitivity of the Area to Dust Soiling Effects on People and Property

Table A4 outlines the sensitivity of the area to human health impacts.

Receptor Sensitivity	Annual Mean PM ₁₀ Concentration	Number of Receptors	Distance from the Source (m)			
			> 20	> 50	> 100	> 250
High	>32 µg/m ³ (>18 µg/m ³ in Scotland)	>100	High	High	High	Medium
		10 – 100	High	High	Medium	Low
		1 – 10	High	Medium	Low	Low
	28 – 32 µg/m ³ (16 – 18 µg/m ³ in Scotland)	>100	High	High	Medium	Low
		10 – 100	High	Medium	Low	Low
		1 – 10	High	Medium	Low	Low
	24 – 28 µg/m ³ (14 – 16 µg/m ³ in Scotland)	>100	High	Medium	Low	Low
		10 – 100	High	Medium	Low	Low
		1 – 10	Medium	Low	Low	Low
	<24 µg/m ³ (>18 µg/m ³ in Scotland)	>100	Medium	Low	Low	Low
		10 – 100	Low	Low	Low	Low
		1 – 10	Low	Low	Low	Low
Medium	>32 µg/m ³ (>18 µg/m ³ in Scotland)	>10	High	Medium	Low	Low
		1 – 10	Medium	Low	Low	Low

Receptor Sensitivity	Annual Mean PM ₁₀ Concentration	Number of Receptors	Distance from the Source (m)			
			> 20	> 50	> 100	> 250
Low	28 – 32 µg/m ³	>10	Medium	Low	Low	Low
	(16 – 18 µg/m ³ in Scotland)	1 – 10	Low	Low	Low	Low
	24 – 28 µg/m ³	>10	Low	Low	Low	Low
	(14 – 16 µg/m ³ in Scotland)	1 – 10	Low	Low	Low	Low
	<24 µg/m ³	>10	Low	Low	Low	Low
	(>18 µg/m ³ in Scotland)	1 – 10	Low	Low	Low	Low
Low	–	>1	Low	Low	Low	Low

Table A4: Sensitivity of the Area to Human Health Impacts

Table A5 outlines the sensitivity of the area to ecological impacts.

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

Table A5: Sensitivity of the Area to Ecological Impacts

STEP 2C combines the dust emission magnitude (STEP 2A) with the sensitivity of the area (STEP 2B) to determine the risk of unmitigated impacts. Tables A6 to A9 provide a method of assigning the level of risk for each activity. This is used to determine the level of mitigation that must be applied. Where the risk category is 'negligible', no mitigation measures beyond those required by legislation will be required.

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

Table A6: Risk of Dust Impacts from Demolition

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

Table A7: Risk of Dust Impacts from Earthworks

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

Table A8: Risk of Dust Impacts from Construction

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

Table A9: Risk of Dust Impacts from Trackout

STEP 3

The dust risk categories for each of the four activities determined in STEP 2C should be used to define the appropriate, Site-specific, mitigation measures to be adopted. For those mitigation measures that are general, the highest risk category should be applied.

For those cases where the risk is assigned as 'negligible', no mitigation measures beyond those required by legislation are required, however, additional mitigation measures may be applied as part of good practice. Where a local authority has issued guidance on measures to be adopted at demolition/ construction Sites, these should also be taken into account.

STEP 4

Once the appropriate dust mitigation measures have been identified in STEP 3, the final step is to determine whether there are significant effects arising from the construction phase of a Proposed Development.

For almost all construction activity, the aim should be to prevent significant effects on receptors through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be 'not significant'.

There may be cases where, for example, there is inadequate access to water for dust suppression to be effective, and even with other mitigation measures in place there may be a significant effect. Therefore, it is important to consider the specific characteristics of the Site and the surrounding area to ensure that the conclusion of no significant effect is robust.

APPENDIX B

ULEZ Vehicle Compliance Form

APPENDIX C

NRMM Compliance Form

Contractor	Machine Type	Plant ID	KW	Engine Manufacturer	Type Approval Number	EU Stage	Retrofit Info	Date Checked	Exemption Applied For	Date of Exemption Application

Table C1: NRMM Compliance Form

APPENDIX D

Dust, Exceedance, Trigger, Incident and Complaint
Form

Dust, Trigger Exceedance, Incident and Complaint From					
Ref No.		Date		Time	
YES/NO		Noise			
		Monitor Location:			
		Trigger:		Amber Red:	
		Level of Exceedance:			
YES/NO		Vibration			
		Monitor Location:			
		Trigger:		Working Day:	
				15- Minute Average:	
		Level of Exceedance:			
YES/NO		Dust			
		Monitor Location:			
		Trigger:		15- Minute Average:	
		Level of Exceedance:			
COMPLAINT NOTIFICATION (YES/NO)					
Contract Project Name:				Contract Project Number:	
Date:		Time:		Received By:	
Complainants Name:					
Telephone Number:					
Address:					
Weather Conditions:					
Type of Complain (Tick Appropriate Box)					
Noise		Vibration		Dust	
Other		Trigger Alert			
Description of complaint/incident:					
Investigation Action Taken:					

Details of BP Mitigation in Place:					
Remedial Action Taken:					
Preventative Measures Implemented to Prevent Further Complaints/Incidents/Exceedances:					
The Complaint is Considered (Please Tick):					
Justified		Unsubstantiated		Unfounded	

Table D1: Dust, Trigger Exceedance, Incident and Complaint From

APPENDIX E

Daily Dust Monitoring Form

Date	Time	Monitoring Location	Weather Conditions	Investigative Action Taken (to include on-and-off-Site observations)	Dust Mitigation in Place	Additional Remedial Measures Undertaken to Ensure Compliance with the DMP/CMP	Preventative Measures Implemented to Prevent Further Dust Exceedances	Name and Position of Assessor	Signed By

Table E1: Daily Dust Monitoring Form

APPENDIX F

Weekly Dust Monitoring Form

Week Commencing:							
Inspected Items	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Person Completing the Checklist (Initials)							
Dust Being Controlled Correctly By Personnel							
Visual Inspection of Dust Soiling on Local Streets, Cars and Windowsills							
Visual Observation of Dust Generation From Earthworks and Construction							
Wind Direction							
Wind Speed							
Weather Forecast							