



## **Air Quality Assessment**

Proposed conversion and extension of  
the former St Patrick Catholic Club to a hotel  
(OCTA Hub) with ground floor cafe and commercial unit

### **Site**

2 Trinity Street  
Huddersfield, HD1 4DA

### **Client**

Mr Mohammed Saleem

**Report No: VA-2026-709**

### Report Control

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| Report prepared by      | Divya Namdeo MSc                                                                                              |
| Report checked by       | Dr Anil Namdeo FIAQM<br>Chartered Environmentalist, Chartered Scientist<br>Scientific Adviser to Viridian-Air |



#### Viridian Air

**65 Kingsland Road  
London E2 8AG**

\*

**28 Ringlet Drive  
Newcastle upon Tyne  
NE13 9ES**

info@viridianair.co.uk

www.viridianair.co.uk

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## 1 Executive Summary

- 1.1.1 This report provides an assessment of the key air quality impacts associated with the construction and operational phases of the proposed mixed-use development at 2 Trinity Street, Huddersfield. The assessment covers:
- Relevance to national, regional, and local air quality and appropriate planning guidance.
  - Establishment of the baseline air quality at the site and comparison with the National Air Quality Objectives (AQOs).
  - Assessment of the risk of construction dust impacts including defining the potential dust emission magnitude and the sensitivity of the area.
  - Recommendations for dust and emission control measures during the demolition and construction phases.
  - Screening of operational traffic-related air quality impacts against EPUK/IAQM criteria to determine whether detailed dispersion modelling is required.
- 1.1.2 The baseline air quality data from local monitoring present a mixed picture at the Site, which lies within Kirklees AQMA 9. The Trinity Street and New North Parade frontages of the Site are compliant with the national Air Quality Objectives, but the Westgate frontage is not: the annual mean NO<sub>2</sub> objective (40 µg/m<sup>3</sup>) continued to be exceeded in 2024 at two diffusion tubes on Westgate (52 and 53.1 µg/m<sup>3</sup>). The diffusion tube (#146) on Trinity Street opposite the Site does not exceed the AQO with annual mean NO<sub>2</sub> of 37.9 µg/m<sup>3</sup> in 2024.
- 1.1.3 A qualitative assessment of construction and trackout dust effects has been undertaken for the proposed scheme. The dust risk assessment concluded that the impacts from disamenity dust and PM<sub>10</sub> from the earthworks, construction, and trackout phases are considered to be '**Low Risk**' with regard to dust soiling and '**Negligible**' with regard to human health. Provided that the recommended mitigation measures following IAQM guidance are implemented, the residual effects are judged to be not significant.
- 1.1.4 The site is located within a declared Air Quality Management Area (Kirklees AQMA 9). Given the development provides no additional on-site car parking (with only 4no spaces proposed, in a highly sustainable town-centre location), it is not expected to exceed the EPUK/IAQM screening thresholds that would trigger the need for detailed dispersion modelling.
- 1.1.5 The assessment has considered the potential for cumulative air quality impacts in combination with other committed developments in the vicinity of the Site. None of the identified schemes are expected to generate a material increase in vehicular trips within the town centre during the 2026/2027 assessment years. Taken together, the scale of committed development in the vicinity of the Site is not considered likely to combine with the proposed development to produce a significant cumulative effect on local air quality, particularly given the town centre, highly sustainable and public-transport-accessible location shared by all of the schemes identified.
- 1.1.6 To reduce the impact of NO<sub>x</sub> emissions from the building's heating and hot water systems, the proposed development will adhere to modern building standards. The provision of electric vehicle (EV) charging points and cycle storage will support the transition to low-emission transport.
- 1.1.7 In summary, it can be concluded that, subject to confirmation of the outstanding items flagged throughout this report, the proposed scheme is not expected to have a significant impact on local air quality or human health. If the recommended construction stage mitigation measures are implemented, the proposed development will not conflict with any national, regional, or local planning policy.



## 2 Introduction

### 2.1 Overview

- 2.1.1 Mr Mohammed Saleem have appointed Viridian Air to provide an air quality assessment (AQA) and dust management plan (DMP) with respect to a planning application for the proposed conversion and extension of the former St Patrick Catholic Club to a hotel (OCTA Hub), comprising a ground floor cafe, reception and commercial unit, hotel bedrooms across the first to third floors, and a fourth floor restaurant/bar, at 2 Trinity Street, Huddersfield, HD1 4DA (the Site).
- 2.1.2 The planning application is to be submitted to Kirklees Metropolitan Council.
- 2.1.3 The air quality assessment of the proposed development has been assessed using the latest planning guidance<sup>1</sup> from the Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM), and the Local Air Quality Management – Technical Guidance from the Department for Environment, Food and Rural Affairs (Defra)<sup>2</sup>.
- 2.1.4 Construction dust assessment and the development of the Dust Management Plan have been prepared based on the latest IAQM guidance on the assessment of dust from demolition and construction Version 2.2 updated in January 2024<sup>3</sup>.

### 2.2 Objectives

- 2.2.1 The main aim of this report is to develop an air quality assessment (AQA) including an appropriate dust management plan (DMP). This it to meet the planning requirement of Kirklees Council.
- 2.2.2 The AQA has the following objectives:
- Relevance to national, regional and local air quality and appropriate planning guidance
  - Establishment of the baseline air quality in the study area including the background air quality at the site and comparison with the National Air Quality Objectives (AQOs).
  - Identification of the sensitive receptors.
  - Assessment of the risk of construction dust impacts including defining the potential dust emission magnitude, defining the sensitivity of the area, and defining the risk of impacts.
  - Recommendations for dust and emission control measures during construction and operational phases.
  - Recommendation of the mitigation measures during operation phase of the development
- 2.2.3 The AQA will be based on the most recent air quality data from Council's website and its last published Air Quality Annual Status Report<sup>4</sup> (2025).

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<sup>1</sup> Land-Use Planning and Development Control: Planning for Air Quality (2017) Environmental Protection UK and Institute of Air Quality Management

<sup>2</sup> Defra (2022): 'Local Air Quality Management – Technical Guidance (TG22)' <https://iaqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf>

<sup>3</sup> IAQM (2024): 'Guidance on the Assessment of Dust from Demolition and Construction v2.2' <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf>

<sup>4</sup> Kirklees Council Air Quality Annual Status Report (2025)

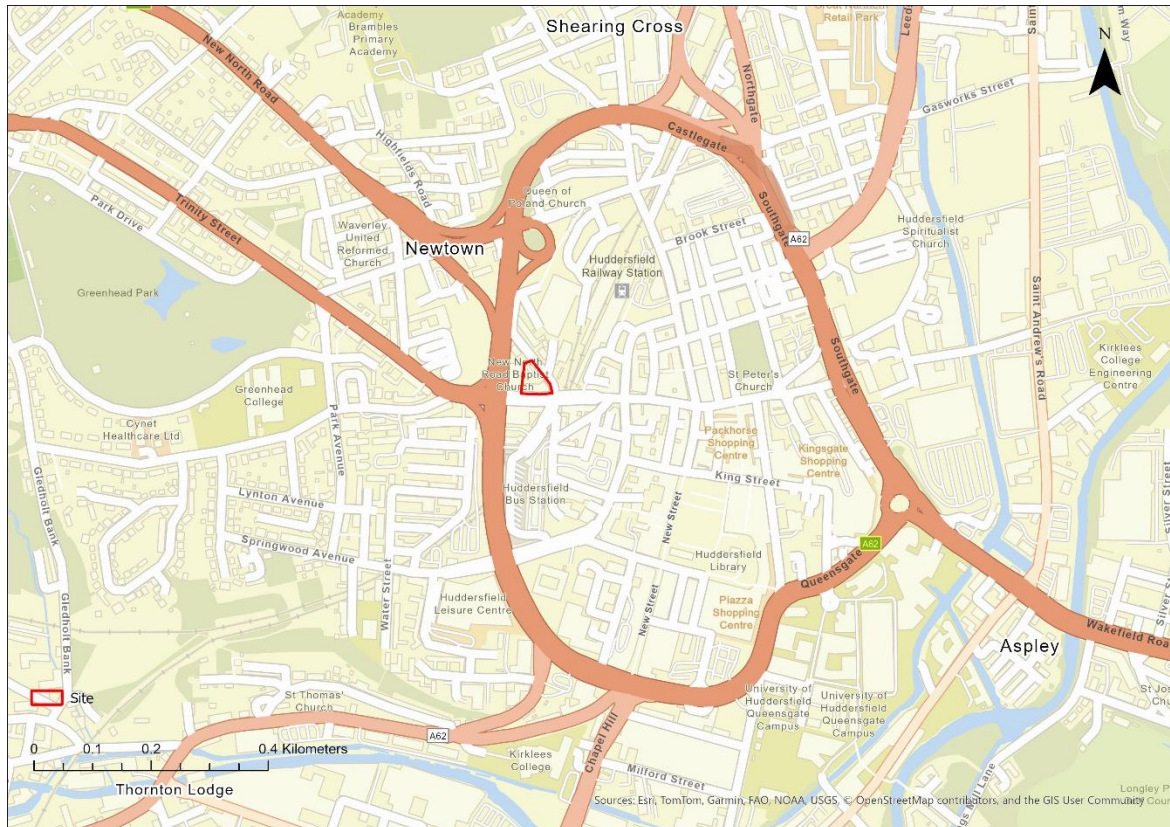


## 2.3 The Site Location

- 2.3.1 The Site is at 2 Trinity Street, Huddersfield, HD1 4DA, within Huddersfield town centre, on a corner plot bounded by Westgate/Trinity Street to the south and New North Parade to the east. The surrounding is mostly built-up urban area.
- 2.3.2 Vehicle access is understood to be from an existing garage/yard area to the rear of the Site, which is proposed either to be retained as a bin and cycle store or extended onto the site boundary to serve another commercial roof area.
- 2.3.3 The existing building is the former St Patrick Catholic Club, a multi-storey stone-built property with a distinctive octagonal corner turret under a pitched roof. The proposals retain the existing stone-coloured walls and turret, with an additional glazed floor added at roof level (anthracite grey RAL 7016 window frames), a new scenic lift, white render to infill areas, and roof-mounted photovoltaic panels.
- 2.3.4 Trinity Street lies within Huddersfield town centre, which has a mixture of buildings in various styles, with ground floor retail and offices or flats above at first floor level and beyond. The proposed development (known as "OCTA Hub") comprises a ground floor cafe, reception and commercial unit, hotel bedrooms across the first to third floors, and a fourth-floor restaurant/bar with external terrace.
- 2.3.5 As the site is within Huddersfield town centre, it benefits from excellent transport links, with Huddersfield rail station and the town's bus interchange both within easy walking distance. The town centre offers a wide range of shopping, leisure and other facilities.
- 2.3.6 The Site lies within Kirklees AQMA 9 (Huddersfield Town Centre)<sup>5</sup>, which was declared for nitrogen dioxide (NO<sub>2</sub>) annual mean and covers the roads bordering and within the Huddersfield Ring Road.
- 2.3.7 There are no Sites of Special Scientific Interest (SSSI) within 500 m of the Site. Distance from the edge of the Site to the nearest Site of Special Scientific Interest (SSSIs), Dark Peak is approximately 20 km.
- 2.3.8 The site setting in the local area is shown in Figure 2-1. Detailed site layout and floor plans, as provided by the client are shown in Appendix 2.

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<sup>5</sup> Defra, Kirklees AQMA 9 (Huddersfield Town Centre) - Air Quality Management Area  
[https://uk-air.defra.gov.uk/aqma/details?aqma\\_ref=1720](https://uk-air.defra.gov.uk/aqma/details?aqma_ref=1720)



(Note: Site boundary is for representation only)

**Figure 2-1 Location Plan**

## 2.4 Pollutants

The key pollutants associated with the operational phase of the proposed development will be construction emissions, and road traffic emissions including nitrogen dioxide (NO<sub>2</sub>) and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) from the surrounding road network. These pollutants are therefore considered as part of this assessment.

## 2.5 Sensitive Receptors

- 2.5.1 Hotel guests and staff within the proposed development, and the occupiers of existing nearby residential and commercial units, will be considered as sensitive receptors.



### 3 Legislation and Policy Context

#### 3.1 National Level

##### 3.1.1 National Air Quality Objectives

Part IV of the 1995 Environment Act<sup>6</sup> sets guidelines for protecting air quality in the UK and forms the basis of the local air quality management. The Environment Act requires local authorities in the UK to review air quality in their area periodically and designate 'Air Quality Management Area' (AQMA) if improvements are necessary. Where an AQMA is designated, local authorities are also required to produce an 'Air Quality Action Plan' detailing the pollution reduction measures that need to be adopted to achieve the relevant air quality objectives within an AQMA.

As part of the Environment Act 1995, the UK Government was required to publish a National Air Quality Strategy to establish the system of 'local air quality management' (LAQM) for the designation of AQMAs. The latest update, the Air Quality Strategy for England (2023), aims to provide a common framework to protect human health and the environment by achieving ambient air quality improvements. This builds upon the 2019 Clean Air Strategy, which set out broader goals for reducing emissions across all sectors. Additionally, the 2008 EU ambient air quality directive 2008/50/EC was transposed into English law through the Air Quality (Standards) Regulations 2010. These frameworks cover a range of pollutants relevant to this study: particulate matter (as both PM<sub>10</sub> and PM<sub>2.5</sub>), carbon monoxide, sulphur dioxide, nitrogen dioxide, and benzene.

A summary of the relevant Air Quality Objectives (AQO) and the types of receptors that are relevant to this assessment are presented in Table 3-1. The AQO listed in Table 3-1 applies only at locations with relevant exposure where a member of the public could be exposed to a level of pollution concentration for the specific averaging periods for that pollutant.

**Table 3-1: AQO Relevant to the Proposed Development**

| Pollutant                               | Air Quality Objectives |             | Concentration measured as | Note                        |
|-----------------------------------------|------------------------|-------------|---------------------------|-----------------------------|
|                                         | Concentration          | Allowance   |                           |                             |
| Nitrogen Dioxide (NO <sub>2</sub> )     | 200 µg/m <sup>3</sup>  | 18 per year | 1-hour mean               | Air Quality Objective (AQO) |
|                                         | 40 µg/m <sup>3</sup>   |             | Annual mean               | AQO                         |
| Particulate Matter (PM <sub>10</sub> )  | 50 µg/m <sup>3</sup>   | 35 per year | 24-hour mean              | AQO                         |
|                                         | 40 µg/m <sup>3</sup>   |             | Annual mean               | AQO                         |
| Particulate Matter (PM <sub>2.5</sub> ) | 25 µg/m <sup>3</sup>   |             | Annual mean               | AQO                         |

<sup>6</sup> Parliament of the United Kingdom. (1990), 'Environmental Protection Act', Chapter 43. Queen's Printer of Acts of Parliament.



### 3.1.2 National Planning Policy Framework

The primary national guidance for the proposed development is the **National Planning Policy Framework (NPPF)**<sup>7</sup>, last updated in **December 2023**. It outlines the government's planning policies for England and their application.

**Section 180** (formerly 174) mandates that the planning system should enhance the natural environment by preventing new and existing developments from contributing to, or being put at unacceptable risk from, air pollution. **Section 192** (formerly 186) specifies that:

*"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... Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision."*

### 3.1.3 Planning Practice Guidance (PPG)

3.1.4 The Department for Levelling Up, Housing and Communities (DLUHC) provides web-based Planning Practice Guidance (PPG<sup>8</sup>) to supplement the NPPF. The PPG clarifies that air quality is a relevant planning consideration if a development could lead to a breach of national objectives, conflict with local air quality strategies, or introduce sensitive receptors into areas of poor air quality.

3.1.5 Proposals must demonstrate that they will not result in unacceptable impacts on health or amenity for those living or working nearby. This applies to all stages, including construction-related dust and vibration, particularly near sensitive receptors like schools and hospitals.

### 3.1.6 Statutory Nuisance

While the planning system protects amenity via conditions, the **Environmental Protection Act 1990 (Part III)** remains a primary regulatory tool. Local authorities have a statutory duty to investigate complaints regarding "prejudicial to health" or "nuisance" emissions, including smoke, fumes, gases, dust, or odours.

If a statutory nuisance is established, the authority will serve an **Abatement Notice**. Failure to comply can lead to prosecution, though demonstrating the use of "best practicable means" to counteract the nuisance is a recognised legal defence.

## 3.2 Local – Kirklees Council

### 3.2.1 Kirklees Local Plan

The **Kirklees Local Plan**<sup>9</sup>, formally adopted in **March 2024**, provides the statutory framework for land-use decisions. It replaces the previous 2006 Core Strategy and 2002 Local Plan. For Air Quality Assessments (AQA), the following policy is of primary relevance:

- **Policy LP 46 (Pollution and Hazards):** This is the principal policy for air quality. It mandates that development will only be permitted if it does not generate unacceptable levels of pollution or expose sensitive receptors (such as schools or housing) to poor air quality. Proposals must demonstrate they will not hinder the achievement of national air quality objectives.

<sup>7</sup> National Planning Policy Framework. Accessible at:

<https://www.gov.uk/government/publications/national-planning-policy-framework--2>

<sup>8</sup> DLUHC, Planning Practice Guidance: Air Quality. [Online] Available at:

<https://www.gov.uk/guidance/air-quality-->

<sup>9</sup> Kirklees Council. Kirklees Local Plan - Strategies and Policies, Policy LP51 (Protection and improvement of local air quality). Accessible at:

[https://kirklees.objective.co.uk/portal/pp/local\\_plan\\_1/pdlp/pdlp\\_pol?pointId=s1475080551890](https://kirklees.objective.co.uk/portal/pp/local_plan_1/pdlp/pdlp_pol?pointId=s1475080551890)



### 3.2.2 Sustainable Transport and Emissions

The Local Plan aligns with the Council's strategy to reduce traffic-related emissions:

**Policy LP 41 (Sustainable Transport):** Supports developments in locations that minimize the need to travel and provide high-quality access to active travel and public transport.

**Climate Change:** The plan supports Kirklees Council's commitment to becoming a **carbon-neutral borough by 2050**<sup>10</sup>, emphasizing green infrastructure and electric vehicle (EV) charging integration.

### 3.2.3 Air Quality Management Areas (AQMAs)

The Local Plan operates alongside the Council's LAQM duties. Following sustained improvements in Nitrogen Dioxide (NO<sub>2</sub>) levels, the Council **revoked three AQMAs and amended three others** in early 2024.

As of the **2025 Air Quality Annual Status Report**<sup>11</sup>, the Council maintains **ten declared AQMAs, including AQMA 9 (Huddersfield Town Centre) which is directly relevant to the Site**. Any development within or affecting this area must demonstrate that it will not adversely impact the Council's ability to meet the objectives set out in its **Air Quality Action Plan (AQAP)**.

### 3.2.4 Kirklees Air Quality Action Plan

The AQAP<sup>12</sup> provides the framework for reducing NO<sub>2</sub> levels, specifically focusing on AQMA 9 (Huddersfield Town Centre). Updated alongside the 2024 ASR, the plan prioritises:

**Traffic Management:** Optimizing flow to reduce idling and congestion.

**Active Travel:** Enhancing cycling and walking corridors to reduce private vehicle reliance.

**Infrastructure:** Expanding the local EV charging network to support the transition to zero-emission vehicles.

These measures ensure that development contributes to a trend of improving air quality while protecting public health across the borough.

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<sup>10</sup> Kirklees Council (2022). Climate Change Action Plan. Accessible at:

<https://www.kirklees.gov.uk/beta/climate-emergency/pdf/kirklees-climate-change-action-plan.pdf>

<sup>11</sup> Kirklees Council (2025). Air Quality Annual Status Report (ASR) 2025. Accessible at:

<https://www.kirklees.gov.uk/beta/crime-and-safety/pdf/kirklees-annual-status-report-2025.pdf>

<sup>12</sup> Kirklees Council. Air Quality Action Plan for Kirklees Council, Version 1.4 (published September 2019; under revision). Note: progress against the AQAP is updated annually within the ASR.

Accessible at: <https://www.kirklees.gov.uk/air-quality>



## 4 Assessment Methodology

### 4.1 Overview

- 4.1.1 This section provides the details of the methodological approach and the criteria that have been used to assess the significance of risk associated with the proposed development.

The following key information sources have been used in this air quality assessment.

**Table 4-1 Source of Information used for AQA**

| Information Source                                                                         | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Department for Environment, Food and Rural Affairs (Defra)</b>                          | <ul style="list-style-type: none"><li>• Defra (2021). LAQM Background Maps - 1 x 1 km grid background maps for NOx, NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub></li><li>• The Local Air Quality Management Tools contain information pertaining to monitoring networks across the UK and provides tools, which aid in the estimation of pollutant concentrations with reference to the year of study.</li><li>• Defra (2022): 'Local Air Quality Management – Technical Guidance (TG22)</li></ul> |
| <b>The National Atmospheric Emissions Inventory (NAEI)</b>                                 | <ul style="list-style-type: none"><li>• Emission data relating to various activities including vehicle fleet composition for the study year</li></ul>                                                                                                                                                                                                                                                                                                                                                      |
| <b>Environmental Protection UK (EPUK) &amp; Institute of Air Quality Management (IAQM)</b> | <ul style="list-style-type: none"><li>• The EPUK &amp; IAQM Land-Use Planning &amp; Development Control: Planning for Air Quality (2017) provides advice and guidance on how an air quality assessment should be undertaken.</li></ul>                                                                                                                                                                                                                                                                     |
| <b>IAQM</b>                                                                                | <ul style="list-style-type: none"><li>• The Control of Dust and Emissions During Construction and Demolition (2024)</li></ul>                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Kirklees Council</b>                                                                    | <ul style="list-style-type: none"><li>• Local Development Plan</li><li>• Air Quality Action Plan</li><li>• Air Quality Annual Status Report</li></ul>                                                                                                                                                                                                                                                                                                                                                      |



## 4.2 Scope of Air Quality Assessment

- 4.2.1 This Air Quality Assessment considers the suitability of the site for the proposed development and assesses whether any significant air quality impacts are anticipated as a result of the construction and/or the operation of the proposed development.
- 4.2.2 A staged assessment approach has been adopted. This ensures that the approach taken for the assessment of risk is proportional to the risk of an unacceptable impact being caused. Where a simple review of the likely impacts associated with the proposed development clearly demonstrates that the risk of a health/annoyance impact is negligible, this will be sufficient to conclude that no further or detailed assessment is necessary. In cases where the risk involved cannot be regarded as negligible, a more detailed and quantitative assessment will be undertaken.

## 4.3 Dust Risk Assessment

- 4.3.1 The Institute of Air Quality Management (2024): 'Guidance on the Assessment of Dust from Demolition and Construction' provides a methodology to evaluate potential risk of dust generation for a development and the level of mitigation required. The impact of the development is described using one of the following three categories: 'Low Risk', 'Medium Risk' and 'High Risk'. Based on the risk level, appropriate mitigation measures can be considered to minimise any effects of dust from the construction phase.
- 4.3.2 The IAQM Guidance recommend that the assessment procedure follows the following framework:
- Screen the requirement for a more detailed assessment
  - Assess the risk of dust impacts of the four phases of construction (demolition, earthworks, construction and trackout), taking into account:
    - the scale and nature of the works, which determines the potential Dust Emission Magnitude; and
    - the sensitivity of the area.
  - Determine the site-specific mitigation for the potential activities
  - Examine the residual effects and determine whether or not these are significant; and
  - Prepare the Construction Dust Assessment
- 4.3.3 This follows a sequence of steps. Step 1 is a basic screening stage, to determine whether a more detailed assessment is required. Step 2A determines the potential for dust to be emitted or re-suspended from on-site works and by vehicles leaving the site. Step 2B defines the sensitivity of the area to any dust that may be emitted or resuspended. Step 2C combines the information from Steps 2A and 2B to determine the risk of dust impacts without appropriate mitigation. Step 3 uses this information to determine the appropriate level of mitigation required to ensure that there should be no significant impacts.

### Step 1 – Identify the Need for a Detailed Assessment

- 4.3.4 In the process of screening the need for a detailed assessment, the following criteria is used:
- "An assessment will normally be required where there is:
- a 'human receptor' within:
    - 350m of the boundary of the site; or
    - 50m of the route(s) used by construction vehicles on the public highway, up to 500m from the site entrance(s).
  - an 'ecological receptor' within:
    - 50m of the boundary of the site; or
    - 50m of the route(s) used by construction vehicles on the public highway, up to 500m from the site entrance(s)."



## Step 2 – Assessment of the Risk of Dust Impacts

- 4.3.5 A site is allocated a risk category on the basis of the scale and nature of the works (Step 2A) and the sensitivity of the area to dust impacts (Step 2B). These two factors are combined in Step 2C to determine the risk of dust impacts before the allocation of mitigation. An assessment would normally be required where there is:
- 4.3.6 A human receptor within 350 metres of the proposed scheme; and/or within 50 metres of the access route(s) used by the demolition vehicles on the public highway up to 500 metres from the study area site entrance(s); and/or
- 4.3.7 An ecological receptor within 50 metres of the proposed scheme and/or within 50 metres of the access route(s) used by demolition vehicles on the public highway up to 500 metres from the site entrance(s).
- 4.3.8 A human receptor refers to any location where a person or property may experience the adverse effects of airborne dust or dust-soiling, or exposure to particulate matter (PM10) over a period relevant to the ambient air quality objectives.
- 4.3.9 An ecological receptor refers to any sensitive habitat affected by dust soiling. For locations with a statutory designation, such as a National Nature Reserve (NNR), Ramsar site, Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC) or Special Protection Areas (SPA), consideration should be given as to whether the particular site is sensitive to dust. Some non-statutory sites may also be considered if appropriate, such as a Site of Importance for Nature Conservation (SINC).
- 4.3.10 Where the need for a more detailed assessment is screened out, it can be concluded that the level of risk is 'negligible', and any effects would be 'not significant'.
- 4.3.11 Risks are described as low, medium or high for each of the four separate activities (demolition, construction, earthworks and trackout). Site-specific mitigation is required, proportionate to the level of risk.
- 4.3.12 Step 2A – Defining the Potential Dust Emission Magnitude  
The dust emission magnitude is based on the scale of the anticipated works and is classified as Small, Medium, or Large (Table 4-2).



**Table 4-2 Dust Emission Magnitude**

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

A: A vehicle movement is a one-way journey. i.e., from A to B and excludes the return journey.

B: HDV movements during a construction project vary over its lifetime, and the number of movements is the maximum not the average.

#### 4.3.13 Step 2B – Defining 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 PM<sub>10</sub>, the local background concentration; and
- Site-specific factors, such as whether there are natural shelters, such as trees or other vegetation, to reduce the risk of wind-blown dust.

Table 2 of the IAQM Guidance describes the sensitivity of the area to dust and soiling effects on people and property.

Table 3 of the IAQM Guidance describes the matrix for determining sensitivity of the area to human health impacts.

Table 4 of the IAQM Guidance describes the matrix for determining sensitivity of the area to ecological impacts.



#### 4.3.14 Step 2C – Defining the Risk of Impacts

The dust emission magnitude determined in STEP 2A is combined with the sensitivity of the area determined in STEP 2B to determine the risk of impacts with no mitigation applied.

The matrices in the IAQM Guidance Tables 6, 7 8 and 9 provide a method of assigning the level of risk for each activity. These is used to determine the level of site-specific mitigation that must be applied.

#### 4.3.15 Step 3: Site-specific mitigation

Step three of the IAQM Guidance identifies appropriate site-specific mitigation. These measures are related to whether the site is a low-, medium- or high-risk site. The highest risk category of a site (of all activities being undertaken) is recommended when considering appropriate mitigation measures for the site. Where risk is assigned as 'negligible', no mitigation measures beyond those required by legislation are required. However, additional mitigation measures may be applied as good practice.

A selection of these measures is specified as suitable to mitigate dust emissions from activities, based on professional judgement.

#### 4.3.16 Step 4: Determine significant effects

Following Step 2 (definition of the proposed scheme and the surroundings and identification of the risk of dust effects occurring for each activity), and Step 3 (identification of appropriate site-specific mitigation), the significance of the potential dust effects can be determined. The recommended mitigation measures should normally be sufficient to reduce construction dust impacts to a not significant effect.

Step 4 of IAQM guidance recognises that the key to the above approach is that it assumes that the regulators ensure that the proposed mitigation measures are implemented. The management plan would include the necessary systems and procedures to facilitate on-going checking by the regulators to ensure that mitigation is being delivered, and that it is effective in reducing any residual effect to 'not significant' in line with the guidance

### 4.4 Transport Emissions

4.4.1 The EPUK & IAQM 2017 Guidance – 'Land Use Planning & Development Controls - Planning For Air Quality' has been used to assess potential traffic impacts associated with the development.

4.4.2 Table below provides the criteria used for screening the need for an Air Quality Assessment.

**Table 4-3 EPUK/IAQM Criteria for Screening the Need for AQA**

| The Development will:                                                                                                                                                | Indicative Criteria to Proceed to an Air Quality Assessment                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cause a significant change in Light Duty Vehicle (LDV) traffic flows on local roads with relevant receptors. (LDV = cars and small vans <3.5t gross vehicle weight). | A change of LDV flows of: <ul style="list-style-type: none"><li>- more than 100 AADT within or adjacent to an AQMA</li><li>- more than 500 AADT elsewhere.</li></ul>       |
| Cause a significant change in Heavy Duty Vehicle (HDV) flows on local roads with relevant receptors. (HDV = goods vehicles + buses >3.5t gross vehicle weight).      | A change of HDV flows of: <ul style="list-style-type: none"><li>- more than 25 AADT within or adjacent to an AQMA</li><li>- more than 100 AADT elsewhere.</li></ul>        |
| Realign roads, i.e. changing the proximity of receptors to traffic lanes                                                                                             | Where the change is 5m or more and the road is within an AQMA                                                                                                              |
| Introduce a new junction or remove an existing junction near to relevant receptors                                                                                   | Applies to junctions that cause traffic to significantly change vehicle accelerate/decelerate, e.g. traffic lights, or roundabouts.                                        |
| Introduce or change a bus station                                                                                                                                    | Where bus flows will change by: <ul style="list-style-type: none"><li>- more than 25 AADT within or adjacent to an AQMA</li><li>- more than 100 AADT elsewhere</li></ul>   |
| Have an underground car park with extraction system                                                                                                                  | The ventilation extract for the car park will be within 20m of a relevant receptor.<br>Coupled with the car park having more than 100 movements per day (total in and out) |

## 4.5 Air Quality Assessment

### Impact Criteria

- 4.5.1 If the initial screening indicates that there is a potential risk of impact, guidance is provided also by EPUK & IAQM on how to determine the magnitude and the significance of any changes in air pollutant concentrations and/or exposure as a result of a proposed development.
- 4.5.2 This consists of the following steps:
- the magnitude of the change (% change of annual mean concentration);
  - the concentration relative to the Air Quality Strategy (AQS) objective (above or below the objective); and
  - the direction of change (adverse or beneficial).
- 4.5.3 The **magnitude of Impact** is described as shown below. This is based on the change in pollutant concentration resulting from the proposed development as a percentage of the Air Quality Action Level (AQAL) which in this case is NO<sub>2</sub> and PM<sub>10</sub> annual mean objective levels of 40 µg/m<sup>3</sup>.



**Table 4-4 Impact Magnitude - Changes in NO<sub>2</sub> and PM<sub>10</sub> Concentrations**

| Change Magnitude     | NO <sub>2</sub> / PM <sub>10</sub><br>Annual Mean    | No. Days PM <sub>10</sub> >µg/m <sup>3</sup> |
|----------------------|------------------------------------------------------|----------------------------------------------|
| <b>Large</b>         | Increase/decrease >10% (>4 µg/m <sup>3</sup> )       | Increase/decrease >4 days                    |
| <b>Medium</b>        | Increase/decrease 6-10% (2.4 – 4 µg/m <sup>3</sup> ) | Increase/decrease 2-4 days                   |
| <b>Small</b>         | Increase/decrease 2-5% (0.8-2 µg/m <sup>3</sup> )    | Increase/decrease 1-2 days                   |
| <b>Imperceptible</b> | Increase/decrease <1% (<0.4 µg/m <sup>3</sup> )      | Increase/decrease <1 day                     |

- 4.5.4 The **significance of Impact** is dependent on the magnitude of change in relation to the relevant Air Quality Assessment Level (AQAL) as shown below.

**Table 4-5 Impact Descriptors for Individual Receptors**

| Long term average concentration at receptor in assessment year | % Change in concentration relative to Air Quality Assessment Level (AQAL) |             |             |             |
|----------------------------------------------------------------|---------------------------------------------------------------------------|-------------|-------------|-------------|
|                                                                | 1%                                                                        | 2-5%        | 6-10%       | >10%        |
| 75% or less of AQAL                                            | Negligible                                                                | Negligible  | Slight      | Moderate    |
| 76-94% of AQAL                                                 | Negligible                                                                | Slight      | Moderate    | Moderate    |
| 95-102% of AQAL                                                | Slight                                                                    | Moderate    | Moderate    | Substantial |
| 103-109% of AQAL                                               | Moderate                                                                  | Moderate    | Substantial | Substantial |
| 110% or more of AQAL                                           | Moderate                                                                  | Substantial | Substantial | Substantial |

- 4.5.5 Once the magnitude and the significance of the change has been established, the impact at each relevant receptor can be described. The impact magnitude at each receptor location can be described using the changes stated above as being of Imperceptible, Small, Medium or Large magnitude, or Negligible, Slight Moderate or Substantial significance and also as being either Temporary or Permanent.
- 4.5.6 The overall significance should be described separately for both the impact of emissions related to the proposed development on existing receptors, and for the impacts of emissions from existing source(s) on new exposure being introduced from the proposed development.

#### Exposure Criteria

- 4.5.7 To determine the significance of exposure to air pollution and the level of mitigation required, consideration is given to the Air Pollution Exposure Criteria as set out in Table 4-6 below. Please note that it is developed by London Councils but use here to provide an additional check.
- 4.5.8 Both the impact and exposure criteria will be applied to the findings of this assessment, where required.



**Table 4-6 Air Pollution Exposure Criteria**

|                 | <b>Applicable Range</b>                      | <b>Applicable Range</b>                                                                                                    | <b>Recommendation</b>                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <b>Nitrogen Dioxide Annual Mean</b>          | <b>PM<sub>10</sub> Annual Mean</b>                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>APEC – A</b> | > 5% below national objective                | Annual Mean:<br>> 5% below national objective<br>24 hr:<br>> 1-day less than national objective                            | No air quality grounds for refusal; however, mitigation of any emissions should be considered.                                                                                                                                                                                                                                                                                                           |
| <b>APEC – B</b> | Between 5% below or above national objective | Annual Mean:<br>Between 5% above or below national objective<br>24 hr:<br>Between 1-day above or below national objective. | May not be sufficient air quality grounds for refusal, however appropriate mitigation must be considered e.g., Maximise distance from pollutant source, proven ventilation systems, parking considerations, winter gardens, internal layout considered, and internal pollutant emissions minimised.                                                                                                      |
| <b>APEC – C</b> | > 5% above national objective                | Annual Mean:<br>> 5% above national objective<br>24 hr:<br>> 1-day more than national objective.                           | Refusal on air quality grounds should be anticipated, unless the Local Authority has a specific policy enabling such land use and ensure best endeavours to reduce exposure are incorporated. Worker exposure in commercial/industrial land uses should be considered further. Mitigation measures must be presented with air quality assessment, detailing anticipated outcomes of mitigation measures. |

Source: <https://www.londoncouncils.gov.uk/node/25533>



## 5 Baseline Conditions

### 5.1 Background Concentrations

- 5.1.1 Defra provides background pollution concentration estimates to assist local authorities undertake their 'Review and Assessment' work. This data is available to download from Defra air quality resource website<sup>13</sup> for NO<sub>x</sub>, NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> for every 1 km X 1 km grid square for all local authorities. The current dataset is based on Defra's 2021-based background maps. The background dataset provides breakdown of pollution concentrations by different sources (both road and non-road sources). Table 5-1 presents the background concentrations for the study area for the year 2026 (assumed year of construction) and 2027 (assumed year of occupation).

**Table 5-1 Defra Background Concentrations (for all receptors)**

| Pollutant         | 2026 Concentration (µg/m <sup>3</sup> ) | 2027 Concentration (µg/m <sup>3</sup> ) |
|-------------------|-----------------------------------------|-----------------------------------------|
| NO <sub>x</sub>   | 20.13                                   | 19.44                                   |
| NO <sub>2</sub>   | 14.75                                   | 14.30                                   |
| PM <sub>10</sub>  | 11.72                                   | 11.66                                   |
| PM <sub>2.5</sub> | 6.86                                    | 6.80                                    |

Note: Data presented within the table are derived from Defra's 2021-based background maps for the following Ordnance Survey grid square (centred on the Site, OS Grid Reference SE142167): 414500, 416500.

- 5.1.2 Defra (<https://uk-air.defra.gov.uk/data/gis-mapping/>) produces modelled background air quality concentrations at a resolution of 1km x 1km. NO<sub>2</sub> concentrations for the latest modelled year 2024 for the surrounding area near the project site are shown in Figure 5-1.



**Figure 5-1 Annual NO<sub>2</sub> Concentrations for 2024 in the Project Area**

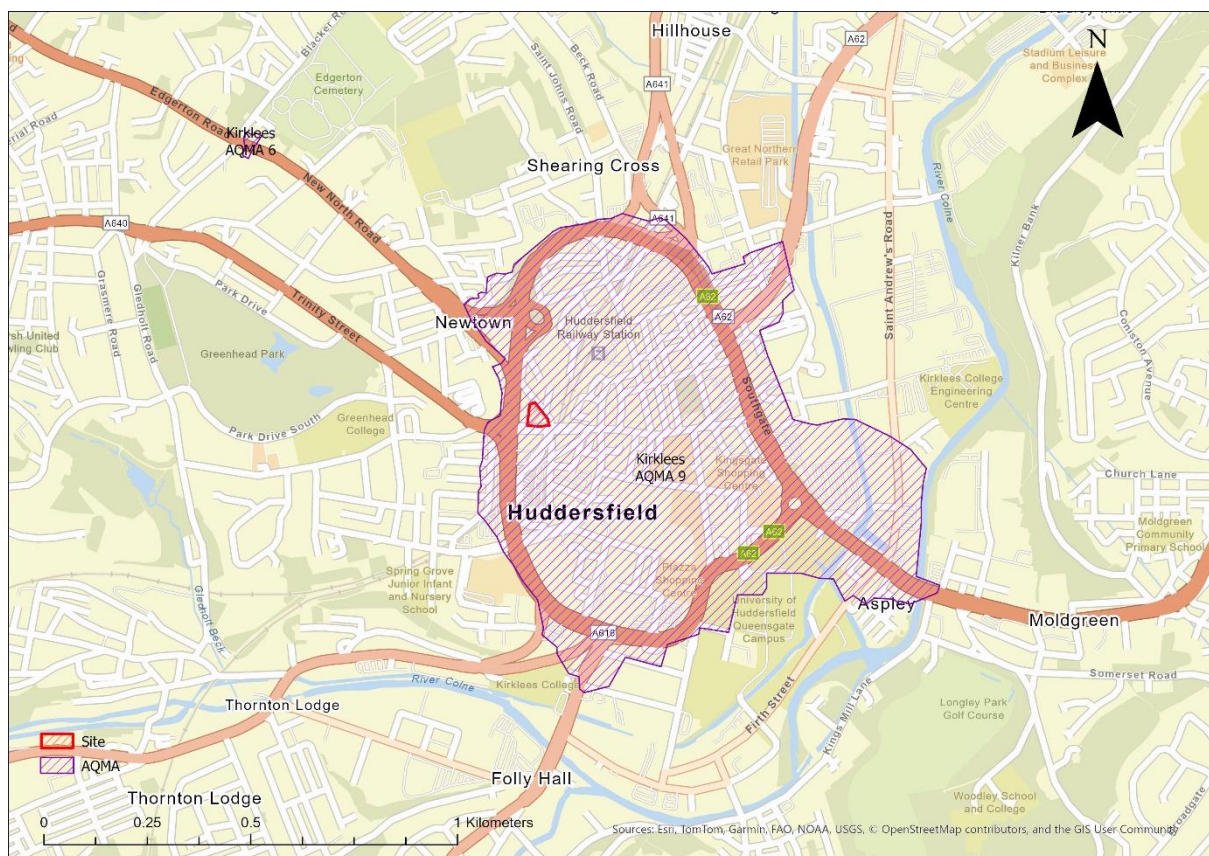
<sup>13</sup> <https://laqm.defra.gov.uk/review-and-assessment/tools/background-maps.html>

## 5.2 Existing Air Quality

5.2.1 The following sections set out the baseline conditions in relation to air quality for the proposed development. Baseline air quality information is available from a number of sources including local and national monitoring data reports and websites. For the purpose of this assessment, data has been obtained from Kirklees Council's most recently published Air Quality Annual Status Report (2025)<sup>14</sup> and its air quality webpages (<https://www.kirklees.gov.uk/air-quality>).

### 5.2.2 Air Quality Management Areas (AQMA)

5.2.3 The site is within Kirklees AQMA 9 ([https://uk-air.defra.gov.uk/aqma/details?aqma\\_ref=1720](https://uk-air.defra.gov.uk/aqma/details?aqma_ref=1720)). This AQMA (Figure 5-2) was declared for Nitrogen dioxide (NO<sub>2</sub>) - Annual Mean in 2017 and covers the roads bordering and within the Huddersfield Ring Road. The annual mean NO<sub>2</sub> objective was exceeded within this AQMA in 2024 (49.2 µg/m<sup>3</sup> against the 40 µg/m<sup>3</sup> objective), so the AQMA remains declared. The site's setting with respect to the AQMA is also shown in Figure 5-2.



(Source: [https://uk-air.defra.gov.uk/aqma/details?aqma\\_ref=1720](https://uk-air.defra.gov.uk/aqma/details?aqma_ref=1720))

**Figure 5-2 The Site and the Kirklees AQMA 9 (Huddersfield Town Centre)**

<sup>14</sup> Air Quality Annual Status Report (2025) <https://www.kirklees.gov.uk/beta/crime-and-safety/pdf/kirklees-annual-status-report-2025.pdf>



#### 5.2.4 Automatic Air Quality Monitoring Stations

5.2.5 Kirklees Council undertook automatic (continuous) monitoring at Dewsbury Ashworth Grange (CM1) during 2024, monitoring NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and O<sub>3</sub>. CM1 is approximately 11 km from the Site.

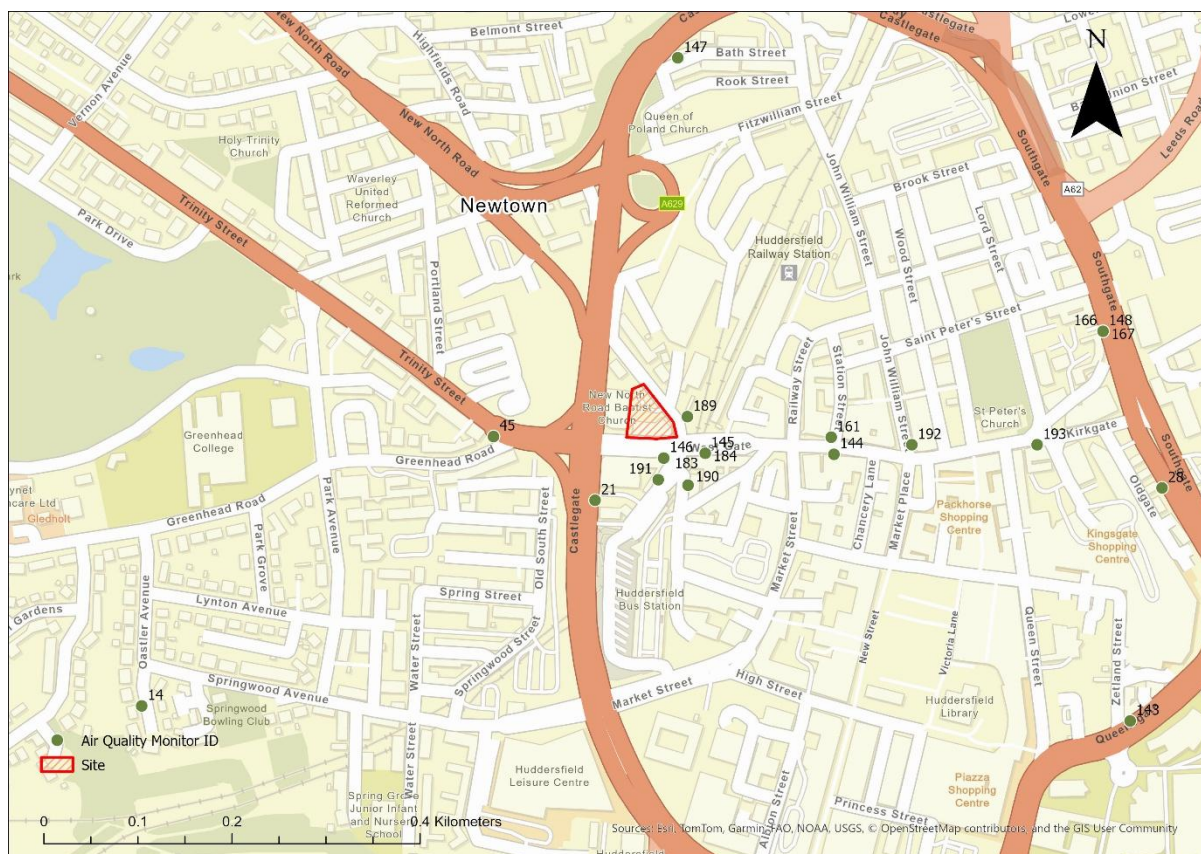
#### 5.2.6 Non-automatic Monitoring (Diffusion Tubes)

5.2.7 Kirklees Council undertook non-automatic (passive) monitoring of NO<sub>2</sub> at 101 locations during 2024. Details and locations of other monitors can be seen at the Air Quality Annual Status Report.

#### 5.2.8 Air Quality Monitoring Near the Site

Locations of air quality monitoring stations (AQMS) (all non-automatic) near the Site are shown in (Source: Kirklees Council Air Quality Annual Status Report, 2025)

5.2.9 Figure 5-3 (drawn from the Kirklees ASR monitoring map for AQMA 9.). The nearest diffusion tube is #146, 31 m from to the Site. The data from this AQMS will be used to ascertain air quality at the Site. The other AQMS with distances within the brackets are #145 (49 m), #21 (107 m), #161 (175 m), #144 (180 m) and #45 (184 m). These are the stations with some data in in the last five years.



(Source: Kirklees Council Air Quality Annual Status Report, 2025)

**Figure 5-3 Location of Air Quality Monitoring Stations (AQMS) near the Site**



### 5.2.10 Annual Statistics for 2024 (NO<sub>2</sub>)

5.2.11 No exceedances of the annual mean objective were observed at CM1 from 2020 to 2024, as shown in Table 5-2. The most recent annual mean NO<sub>2</sub> at this station was 15.4 µg/m<sup>3</sup>.

5.2.12 Table 5-3 shows annual mean NO<sub>2</sub> concentrations at the non-automatic air quality monitoring stations near the Site.

**Table 5-2 Annual Mean NO<sub>2</sub> at the Nearest Automatic Monitoring Site**

| Site ID | Name                     | Site Type        | Monitoring Type  | 2020 | 2021 | 2022 | 2023 | 2024 |
|---------|--------------------------|------------------|------------------|------|------|------|------|------|
| CM1     | Dewsbury Ashworth Grange | Urban Background | Chemiluminescent | 15.7 | 17.1 | 17.8 | 16.0 | 15.4 |

(Source Kirklees Council Air Quality Annual Status Report, 2025)

5.2.13 Annual mean NO<sub>2</sub> statistics at selected non-automatic monitoring sites within AQMA 9 (Huddersfield Town Centre) are shown in Table 5-3. It indicates that in the five years reporting period (2020-2024) the annual mean objective for NO<sub>2</sub> was exceeded at two of the AQMS with the AQMA including the Diffusion Tubes #145 and # 144. The diffusion tube nearest to the Site had annual mean NO<sub>2</sub> of 37.9 µg/m<sup>3</sup> in 2024. All other monitoring sites including the AURN site CM1 meet the Annual Mean AQO for NO<sub>2</sub> (40 µg/m<sup>3</sup>). The data suggest that the air quality at the Site is likely to meet the annual mean AQO for NO<sub>2</sub>. Figure 5-4 shows annual mean NO<sub>2</sub> concentrations at the diffusion tubes near the Site.

**Table 5-3 Annual Mean NO<sub>2</sub> at Non-automatic Monitoring Stations near the Site**

| Diffusion Tube ID | X OS Grid Ref (Easting) | Y OS Grid Ref (Northing) | Name                                               | 2020 | 2021 | 2022 | 2023 | 2024        |
|-------------------|-------------------------|--------------------------|----------------------------------------------------|------|------|------|------|-------------|
| 146               | 414222                  | 416731                   | The Olde Hatte PH - Trinity Street                 | -    | -    | -    | -    | 37.9        |
| 145               | 414266                  | 416736                   | Triplicate 1 - The Crown PH - Westgate             | -    | -    | -    | -    | <b>52</b>   |
| 21                | 414149                  | 416686                   | Castlegate (Ringroad) - Huddersfield               | 33.4 | 39.3 | 37.8 | 35.7 | 38.4        |
| 161               | 414400                  | 416753                   | 22 Westgate - Junction Station street and Westgate | -    | -    | -    | -    | 32          |
| 144               | 414403                  | 416735                   | Outside the Jules Verne PH - Westgate              | -    | -    | -    | -    | <b>53.1</b> |
| 45                | 414041                  | 416754                   | Trinity Street outside Chiiwala                    | -    | -    | -    | -    | 29.3        |

Note: Exceedances are shown in **bold**

(Source: Kirklees Council Air Quality Annual Status Report, 2025)

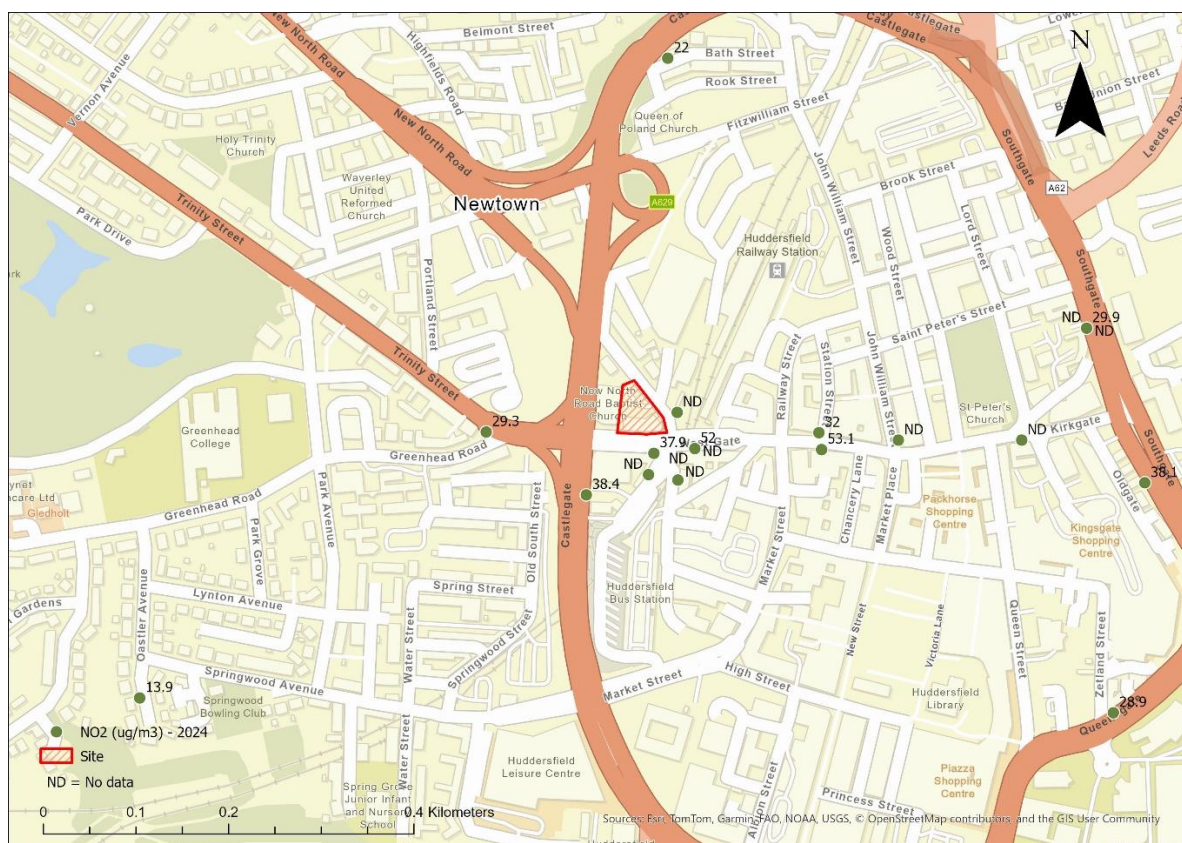


**Figure 5-4 Annual Mean NO<sub>2</sub> (µg/m<sup>3</sup>) in 2024 at Diffusion Tubes near the Site**

(Source: Kirklees Council Air Quality Annual Status Report, 2025)

5.2.14 The annual mean NO<sub>2</sub> objective (40 µg/m<sup>3</sup>) was exceeded in 2024 at two of the six diffusion tubes closest to the Site, both on the Westgate frontage: Tube 144 (outside the Jules Verne PH, Westgate: 53.1 µg/m<sup>3</sup>) and Tube 145 (The Crown PH, Westgate: 52.0 µg/m<sup>3</sup>). Tube 21 (Castlegate, on the Huddersfield Ring Road) has also been consistently close to the objective over the 2020-2024 period (33.4 to 39.3 µg/m<sup>3</sup>), most recently 38.4 µg/m<sup>3</sup> in 2024. The two diffusion tubes on the Trinity Street frontage of the Site were compliant (Tube 146: 37.9 µg/m<sup>3</sup>; Tube 45: 29.3 µg/m<sup>3</sup>), as was Tube 161 at the Station Street/Westgate junction (32.0 µg/m<sup>3</sup>). This indicates that air quality in the immediate vicinity of the Site is variable and depends on which street frontage is considered, with the busier Westgate frontage experiencing exceedances of the annual mean NO<sub>2</sub> objective, consistent with the AQMA 9 declaration.





- 5.2.19 Annual mean PM<sub>2.5</sub> concentrations at CM1 were 8.3, 7.4 and 8.0 µg/m<sup>3</sup> in the years 2022, 2023 and 2024 respectively. These levels are below the AQO of 25 µg/m<sup>3</sup>.

### 5.3 Air Pollution Exposure Criteria and Mitigation

- 5.3.1 It is clear from the air quality data in the previous section that the annual mean NO<sub>2</sub> levels reported in the previous section were exceeded in 2024 at two of the six non-automatic monitoring locations closest to the Site, both on the Westgate frontage of the Site (Diffusion Tube 144, outside the Jules Verne PH, Westgate: 53.1 µg/m<sup>3</sup>; Diffusion Tube 145, The Crown PH, Westgate: 52.0 µg/m<sup>3</sup>). Concentrations at the remaining nearby locations, including both diffusion tubes on the Trinity Street frontage of the Site (Tube 146: 37.9 µg/m<sup>3</sup>; Tube 45: 29.3 µg/m<sup>3</sup>) and the automatic monitoring station (CM1: 15.4 µg/m<sup>3</sup>), were below the objective.
- 5.3.2 Based on this information, the Trinity Street frontage of the Site is expected to meet the annual mean and 1-hour mean AQOs for NO<sub>2</sub>, but the Westgate frontage cannot currently be assumed to comply, based on the two nearest diffusion tubes (see above). It is expected to meet the annual mean and 24-h air quality objectives for PM<sub>10</sub>.
- 5.3.3 ***Considering the likelihood of NO<sub>2</sub> and PM<sub>10</sub> levels at the site being below the Air Quality Objective, the site is likely to fall within Air Pollution Exposure Criteria APEC-A for site suitability***, in accordance with the exposure criteria set out in Table 4-6.
- 5.3.4 This APEC-A classification applies to the Trinity Street frontage of the Site, where monitored concentrations are compliant. Given the exceedances recorded on the Westgate frontage, this classification may not be applied to the building as a whole without further consideration against Table 4-6, and the implications for the ventilation strategy of any Westgate-facing hotel bedrooms or habitable rooms could be considered.
- 5.3.5 APEC-A recommendation is: ***"No air quality grounds for refusal; however, mitigation of any emissions should be considered"***. These relate to the construction stage emissions and are addressed in the mitigation measures set out later in this report.
- 5.3.6 On this basis, and given the Site's likely trip generation relative to the EPUK/IAQM screening criteria set out in Table 4-3, detailed dispersion modelling of operational traffic emissions has not been considered necessary for this assessment.

## 6 Potential Impacts

### 6.1 Construction Phase Impacts - Air Quality Dust Risk Assessment

Air Quality Dust Risk Assessment (AQDRA) includes:

Risk assessment for each phase of works (earthworks, construction and trackout), incorporating the risk evaluation process set out below, and identifies suitable mitigation measures for the relevant level of risk.

- 6.1.1 The development comprises the conversion and refurbishment of the former St Patrick Catholic Club, retaining the existing stone-built envelope and octagonal corner turret, with an additional glazed floor added at roof level, a new scenic lift, external terraces, and roof-mounted photovoltaic panels. No demolition of the principal structure is proposed.
- 6.1.2 AQDRA also identifies whether each phase of activity on-site represents a low, medium or high risk by following the IAQM Guidance<sup>15</sup>.
- 6.1.3 Step 1 – Need for a Detailed Assessment

Detailed assessment of the effects on 'ecological receptors' is not required as there are no ecological receptors within 50m of the boundary of the Site or within 50m of the routes used by the construction vehicles on the public highway up to 500m from the Site entrance.

Figure 6-1 shows the construction dust assessment study area based on the recommended distances by IAQM. Figure 6-1 shows buffer zones of 20m, 50m, 100m, 250m and 350m from the edge of the Site.

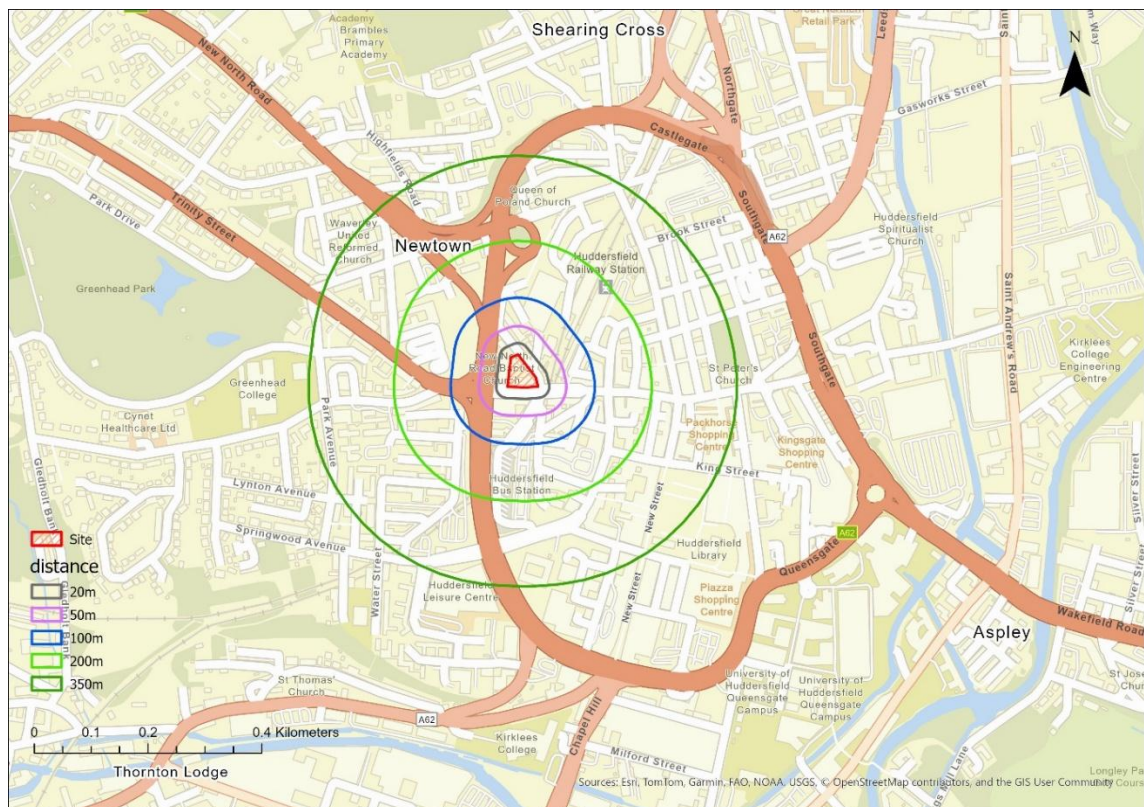


**Figure 6-1 Construction Dust Risk Assessment Buffers**

<sup>15</sup> The Institute of Air Quality Management (2016): 'Guidance on the Assessment of Dust from Demolition and Construction v1.1'



#### 6.1.4 Construction Phase

6.1.5 For the purpose of this assessment, the earliest construction period is assumed to be in 2026.

6.1.6 It is understood that no demolition work is involved, hence the demolition stage dust emission assessment has not been included in this report. Some internal walls and possibly part of the existing single-story garage will be demolished, the estimated demolition volume is 600 m<sup>3</sup>. Against IAQM demolition magnitude table this is well within “Low” - arguably low enough to describe as negligible/minimal demolition activity.

6.1.7 The impacts from earthwork, construction and track-out have been considered.

6.1.8 Due to the scale of the construction activities, it is unlikely that there will be a significant amount of HDV movements involved. In order to assess the worst-case scenario, it has been assumed that all activities will be carried out for the duration of the construction period. As an estimate there will not be more than ten HGV vehicle trips per day Monday to Friday.

Following sections describe various stages of the AQDRA for the proposed development.

#### 6.1.9 Step 2 – Assessment of the Risk of Dust Impacts

This step considers the AQDRA for the construction and trackout phases of the development. It considers the potential effects of each development phase on the nearest receptors including:

- the risk of health effects from an increase in exposure to PM<sub>10</sub> and PM<sub>2.5</sub>
- annoyance due to the deposition of dust; and
- harm to the natural environment.

#### 6.1.10 Step 2A – Defining the Potential Dust Emission Magnitude

The dust emission magnitude is based on the scale of the anticipated works and is classified as Small, Medium, or Large.

Table 6-1 presents the potential dust emission magnitude based on project specific construction activities and is based on the IAQM Guidance criteria. As indicated earlier, the assessment does not include any demolition work; therefore, this has not been considered here.

**Table 6-1 Dust Emission Magnitude**

| Activity Phase                                               | Dust Emission Magnitude                               |
|--------------------------------------------------------------|-------------------------------------------------------|
| <b>Demolition</b>                                            | Small (~600 m <sup>3</sup> )                          |
| <b>Earthworks</b>                                            | Small                                                 |
| <b>Construction</b>                                          | Small (Total building volume <25,000 m <sup>3</sup> ) |
| <b>Trackout: Outward Construction Traffic (&gt;3.5t HDV)</b> | Small (<10 HDV movements per day)                     |

#### 6.1.11 Step 2B – Defining 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 PM<sub>10</sub>, the local background concentration; and



- Site-specific factors, such as whether there are natural shelters, such as trees or other vegetation, to reduce the risk of wind-blown dust.
- 6.1.12 Type of receptors at different distances from the boundary of the Site has been considered and is based on a rough estimation using the Figure 6-1. The IAQM Guidance indicates that “*exact counting of ‘human receptors’ is not required. Instead, it is recommended that judgement is used to determine the receptors (a residential unit is one receptor) within each distance band*”.
- 6.1.13 Table 6-2 presents the sensitivity of receptors to effects caused by construction activities and is based on the criteria presented Tables 2, 3 and 4 of the IAQM Guidance.
- 6.1.14 For dust soiling effects on property and people (earthworks and construction) it is estimated that the number of human receptors up to 100m from the side boundary is considered to be >100.
- 6.1.15 For dust soiling effects on property and people (trackout) it is estimated that the number of human receptors up to 50 m from site exit (<20m distance from road centre line of trackout route) is considered to be 10-100.
- 6.1.16 For human health impacts (earthworks and construction) it is estimated that the number of human receptors up to 100m from the side boundary is considered to be >100.
- 6.1.17 For human health impacts (trackout) it is estimated that the number of human receptors up to 50 m from site exit (<20m distance from road centre line of trackout route) are considered to be >100.
- 6.1.18 As indicated in Section 5.1 and Table 5-1, the annual mean PM<sub>10</sub> concentrations in the relevant grid square (414500, 416500) is 11.72 µg/m<sup>3</sup>. This has been used to determine the sensitivity of the area to human health effects (Table 3 of the IAQM Guidance).

**Table 6-2 Sensitivity of Study Area to Dust and Soiling Effects on People and Property**

| Potential Impact    | Sensitivity of the surrounding area |            |              |          |
|---------------------|-------------------------------------|------------|--------------|----------|
|                     | Demolition                          | Earthworks | Construction | Trackout |
| <b>Dust Soiling</b> | Medium                              | Medium     | Medium       | Medium   |
| <b>Human Health</b> | Medium                              | Medium     | Low          | Low      |
| <b>Ecological</b>   | N/A                                 | N/A        | N/A          | N/A      |

- 6.1.19 Step 2C – Defining the Risk of Impacts
- 6.1.20 The dust emission magnitude determined in STEP 2A is combined with the sensitivity of the area determined in STEP 2B to determine the risk of impacts with no mitigation applied.
- 6.1.21 Tables 6, 7, 8 and 9 of the IAQM Guidance have been used to determine the risk of each activity for this project. Table 6-3 provides the summary of the risk of construction and trackout phases of the development. The final risks presented in Table 6-3 have been used in the next section to determine the level of site-specific mitigation measures that will be applied to this development.

**Table 6-3 Summary of the Risk of Construction Effects**

| Potential Impact    | Risk       |            |              |            |
|---------------------|------------|------------|--------------|------------|
|                     | Demolition | Earthworks | Construction | Trackout   |
| <b>Dust Soiling</b> | Low Risk   | Low Risk   | Low Risk     | Low Risk   |
| <b>Human Health</b> | Negligible | Negligible | Negligible   | Negligible |
| <b>Ecological</b>   | N/A        | N/A        | N/A          | N/A        |



- 6.1.22 Based on the above, the largest risk associated with demolition, earthwork, construction and trackout activities is 'Low' with regard to dust soiling, and 'Negligible' with regard to human health.
- 6.1.23 Overall, the impacts from disamenity dust and PM<sub>10</sub> from the earthwork, construction and trackout phases of the proposed development are considered to be '**Low**' with regard to dust soiling and '**Negligible**' with regard to human health.

## 6.2 Cumulative Impacts

- 6.2.1 In accordance with IAQM and EPUK guidance, the assessment considers the potential for cumulative impacts arising from the proposed development in combination with other committed or planned developments in the vicinity of the Site. Cumulative impacts generally occur when multiple projects increase traffic volumes on the same road links or introduce new sensitive receptors into an area of poor air quality.

### 6.2.2 Notable New Developments

A number of significant committed developments are identified within Huddersfield town centre, in the vicinity of the Site, which are relevant to the future baseline traffic and air quality environment during the assessment years (2026 and 2027):

- **Our Cultural Heart (circa £210 million):** Kirklees Council's flagship town centre regeneration scheme, comprising a new library hub, food hall, public square and (in a later phase) a museum and art gallery, on the former Queensgate Market site. Phase One is under construction and due to open in summer 2026, with Phase Two (museum and gallery) to follow. As a cultural/leisure destination rather than a car-trip generator, and given its town centre, sustainable-transport location, this scheme is expected to increase pedestrian footfall rather than significantly increase vehicular trips on the local road network.
- **The George Hotel, St George's Square (circa £20-30 million):** Restoration of the Grade II\* listed former George Hotel to become a Radisson RED hotel. As a directly comparable town centre hospitality use, this scheme's committed trip generation is of a broadly similar nature (though not necessarily scale) to that of the proposed development, and has been considered alongside it in this cumulative assessment.
- **Estate Buildings, Westgate:** Conversion of the Grade II\* listed Estate Buildings (near the railway station and George Hotel) to residential use, currently at an enabling-works stage under a council-secured grant, with a target to be in contract to deliver homes by March 2028. Given its early stage, this scheme is not expected to be trip-generating within the 2026/2027 assessment years but is noted for completeness.
- **Huddersfield Bus Station and Railway Station upgrades:** A circa £20 million redevelopment of the bus station (substantially complete by late 2025) and ongoing Transpennine Route Upgrade works at the railway station. Both schemes support and improve sustainable transport infrastructure in the town centre rather than generating additional vehicular trips, and if anything support a modal shift away from private car use, consistent with the proposed development's own sustainable, town centre location.

### 6.2.3 Impact of the Proposed Development (2 Trinity Street)

The proposed development at **2 Trinity Street** involves the conversion and extension of the former St Patrick Catholic Club to provide a hotel (OCTA Hub) with a ground floor cafe, reception and commercial unit, hotel bedrooms, and a fourth-floor restaurant/bar.

**Overall Conclusion:** The Site lies within Kirklees AQMA 9, where the annual mean NO<sub>2</sub> objective continued to be exceeded in 2024 (49.2 µg/m<sup>3</sup> against the 40 µg/m<sup>3</sup> objective), and the committed developments identified above are therefore a relevant consideration. However,



none of the identified schemes are expected to generate a material increase in vehicular trips within the town centre during the 2026/2027 assessment years: Our Cultural Heart and the bus/rail station upgrades are cultural, leisure and public transport infrastructure projects that are expected to support walking, cycling and public transport use rather than private car trips, and the Estate Buildings scheme remains at an early enabling-works stage. The George Hotel is of a broadly comparable hospitality nature to the proposed development and has been considered alongside it; taken together, the scale of committed development in the vicinity of the Site is not considered likely to combine with the proposed development to produce a significant cumulative effect on local air quality, particularly given the town centre, highly sustainable and public-transport-accessible location shared by all of the schemes identified.



## 7 Mitigation Plan (Construction Dust Management)

### 7.1 Introduction

This document sets out the recommended construction-phase and operation-phase mitigation measures for the proposed redevelopment of the former St Patrick Catholic Club, 2 Trinity Street, Huddersfield, HD1 4DA (“the Site”), reproduced as a standalone extract of Section 7 of the Air Quality Assessment (Report No: VA-2026-709). It follows the dust risk screening set out below, which was undertaken in accordance with the Institute of Air Quality Management (IAQM) guidance on the assessment of dust from demolition and construction.

The Site lies within Huddersfield town centre, within Kirklees AQMA 9 (Huddersfield Town Centre) and within the designated town centre Conservation Area. While the scale of construction activity has been assessed as Low risk (see Section 7.2), the sensitivity of the surrounding area means that good-practice mitigation should still be applied in full.

### 7.2 Summary of Dust Risk Assessment

The table below summarises the risk classification for each dust-generating activity, based on information available in the architect's Design and Access Statement (Jade3 Architecture Ltd, 12 June 2026) at the time of writing. These are scoping-level estimates and should be confirmed once a contractor's Construction Method Statement and Logistics Plan are available.

| Dust-Generating Activity | Risk (IAQM)               | Category | Basis / Note                                                                                                                                                                                                                                                            |
|--------------------------|---------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Demolition               | Low                       |          | No demolition of the principal masonry structure or retained octagonal tower. Works are limited to removal of the existing pitched roof and minor internal walls, estimated at well under the IAQM Low threshold (<20,000 m <sup>3</sup> ).                             |
| Earthworks               | Negligible / Low          |          | No substantial groundworks identified in the Design & Access Statement. Any shallow foundation works for the ground-floor extensions (circa 207 sqm) and lift core are well under the IAQM Low threshold (<2,500 sqm site area).                                        |
| Construction             | Low                       |          | New floor area of circa 848 sqm gross internal (two additional storeys plus minor ground floor extensions) equates to an estimated construction volume of circa 3,140 m <sup>3</sup> , within the IAQM Low threshold (<25,000 m <sup>3</sup> and site area <2,500 sqm). |
| Trackout                 | Low (Low/Medium boundary) |          | Estimated at 5-12 HGV movements per day at peak, tapering during fit-out, based on the scale and nature of the works (refurbishment plus two new floors, no substantial muck-away). To be confirmed by the appointed contractor's Construction Logistics Plan.          |



### 7.3 Site Sensitivity Context

| Factor               | Consideration                                                                                                                                                                                                                                                            |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Location             | The Site lies within Huddersfield town centre, within (or immediately adjacent to) the designated Conservation Area, and within Kirklees AQMA 9 (Huddersfield Town Centre).                                                                                              |
| Receptor sensitivity | Nearby commercial premises, residential units above shops, pedestrians on Trinity Street / Westgate / New North Parade, and future hotel guests and staff on site during later construction phases.                                                                      |
| Implication          | Although the dust-generating activities are classified as Low risk, the surrounding area is highly sensitive (town centre, AQMA, Conservation Area). Standard IAQM good-practice mitigation should therefore still be applied in full, proportionate to a Low risk site. |

### 7.4 Recommended Mitigation Measures - Low Risk Site

As all four dust-generating activities (demolition, earthworks, construction and trackout) have been classified as Low risk, the following measures represent the standard “good practice” level of mitigation recommended by IAQM guidance for a Low risk site. Given the Site's location within an AQMA and Conservation Area, it is recommended that these measures are applied in full and not reduced further, notwithstanding the Low risk classification.

#### Communications

- Display the name and contact details of the site manager, and the local authority's environmental health contact, on the site boundary/hoarding.
- Display the Considerate Constructors Scheme (or equivalent) banner if the contractor is registered.
- Develop and implement a stakeholder communications plan, including notification to neighbouring occupiers (commercial units, upper-floor residents) prior to commencement of demolition/construction works.
- Record and respond to all dust and air quality complaints, and take appropriate measures to reduce emissions within 24 hours; keep a log of any complaints and actions taken available for inspection.

#### Site Management

- Prepare and implement a Dust Management Plan (DMP) as a live document, which may be secured by planning condition.
- Include measures to control other emissions arising from the works, such as bonfires and burning of waste materials (which will not be permitted).

#### Monitoring

- Undertake daily on-site and off-site inspections where dust-generating activities are being carried out, to record dust and air quality complaints, visible dust plumes, and to check the effectiveness of mitigation measures on days when a dust risk exists.
- Increase the frequency of site inspections during any high-risk activities and periods of dry or windy weather.



### **Preparing and Maintaining the Site**

- Erect solid screens or barriers around dust-generating activities and stockpiles, particularly given the constrained town-centre plot and proximity of the public footway.
- Fully enclose specific high-dust activities (e.g. cutting, grinding) where they cannot be avoided.
- Avoid site runoff of water and mud onto Trinity Street, Westgate and New North Parade.
- Use water-assisted dust extraction for any cutting, grinding or sawing activities.
- Sheet and secure any material being transported to, from and around the site to prevent escape of materials during transport.
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, where practicable.
- Avoid the use of cutting, grinding and sawing equipment without suitable dust suppression techniques.

### **Operating Vehicle/Machinery and Sustainable Travel**

- Ensure all vehicles switch off engines when stationary - no idling vehicles.
- Impose and signpost a maximum site speed limit of 10-15 mph on any on-site haul routes or temporary access.
- Produce a Construction Logistics Plan to manage the impact of construction vehicles, including a delivery/collection schedule that avoids peak pedestrian and traffic periods on this constrained town-centre corner site.
- Regularly maintain all plant and equipment used on site.

### **Operations**

- Minimise the drop height from any conveyors, loading shovels, hoppers or other loading/unloading equipment.
- Ensure equipment is readily available on site to clean any dry spillages, and to suppress dust when a spillage occurs.
- Where reasonably practicable, avoid scabbling (roughening of concrete) or other similarly dusty processes for large volumes of material; where unavoidable, use appropriate dust suppression techniques.

### **Waste Management**

- Avoid bonfires and the burning of waste materials on site.
- Cover, seed or fence stockpiles/waste to prevent wind whipping, where reasonably practicable.
- Remove materials that have a potential to produce dust from the site as soon as reasonably practicable, using appropriate covered/sealed skips.

### **Trackout-Specific Measures**

Given the estimated peak HGV movement rate (5-12 vehicles/day) sits close to the Low/Medium threshold, and given the Site fronts directly onto Trinity Street, Westgate and New North Parade with no dedicated construction compound, the following additional measures are recommended as a precaution:

- Provide a hard-surfaced area at the site exit to prevent the transfer of mud and other material onto the public highway.
- Implement a wheel washing system (rumble grids as a minimum, or a wheel wash unit if trackout is more frequent than anticipated) prior to vehicles leaving the site.
- Ensure any road sweeper used is compliant with the appropriate standard (e.g. EN12234) and available at short notice, with a plan for regular sweeping of the site frontage and adjacent public highway if required.
- Avoid queuing of delivery vehicles on the public highway; schedule deliveries to avoid town centre peak pedestrian/traffic periods.



These figures are scoping-level estimates based on the Design and Access Statement and should be reviewed and confirmed once the contractor's Construction Logistics Plan and Construction Method Statement are available.

## 7.5 Operation Phase Mitigation Measures

On the basis of the screening assessment and baseline air quality data set out elsewhere in this report, no specific atmospheric mitigation or mechanical filtration is considered necessary for the protection of future occupants and guests during operation. However, to support local and national sustainability goals, the development will include:

- Car parking and EV charging: given the Site's highly sustainable town-centre location, no on-site car parking is required to comply with local and national parking policy. Notwithstanding this, 4no car parking spaces (1no dedicated accessible space and 3no standard spaces) are proposed within the ownership curtilage. Passive provision for Electric Vehicle (EV) charging (i.e. ducting and capacity to allow future active charge points to be installed) is recommended in the rear yard, to be confirmed against current Building Regulations requirements at the detailed design stage.
- Secure, covered cycle storage to encourage sustainable modes of travel, reducing reliance on private car use given the Site's town-centre location.
- Low-carbon heating and hot water systems (e.g. air-source heat pumps), reducing NOx emissions compared to gas-fired plant.
- Roof-mounted photovoltaic (PV) panels to reduce grid electricity demand.

## 7.6 Residual Risk

With the mitigation measures set out above implemented and secured (for example by planning condition and/or a Construction Environmental Management Plan), the residual risk of significant dust and air quality effects during construction is considered Low. This conclusion should be revisited if the scale, duration or method of construction changes materially from that described in the Design and Access Statement (Jade3 Architecture Ltd, 12 June 2026), or once a Construction Logistics Plan confirms actual HGV movement rates.



## 8 Conclusions

- 8.1.1 This report provides an assessment of the following key impacts associated with the construction and operational phases of the proposed development:
- Relevance to national, regional, and local air quality and appropriate planning guidance.
  - Establishment of the baseline air quality at the site and comparison with the National Air Quality Objectives (AQOs).
  - Assessment of the risk of construction dust impacts, including defining the potential dust emission magnitude, the sensitivity of the area, and the risk of impacts.
  - Recommendations for dust and emission control measures during the construction phase.
  - Screening of operational traffic-related air quality impacts against EPUK/IAQM criteria to determine whether detailed dispersion modelling is required.
- 8.1.2 The baseline air quality data from local monitoring present a mixed picture at the Site, which lies within Kirklees AQMA 9. The Trinity Street frontage of the Site is compliant with the national Air Quality Objectives, but the Westgate frontage is not: the annual mean NO<sub>2</sub> objective (40 µg/m<sup>3</sup>) continued to be exceeded in 2024 at two diffusion tubes on Westgate (52 and 53.1 µg/m<sup>3</sup>). However, the diffusion tube on Trinity Street opposite the Site does not exceed the AQO with annual mean NO<sub>2</sub> of 37.9 µg/m<sup>3</sup> in 2024.
- 8.1.3 A qualitative assessment of construction and trackout dust effects has been undertaken for the proposed scheme. The dust risk assessment concluded that the impacts from disamenity dust and PM<sub>10</sub> from the earthworks, construction, and trackout phases are considered to be 'Low Risk' with regard to dust soiling and 'Negligible' with regard to human health. Provided that the recommended mitigation measures following IAQM guidance are implemented, the residual effects are judged to be not significant.
- 8.1.4 The site is located within a declared Air Quality Management Area (Kirklees AQMA 9). Given the development provides no additional on-site car parking (with only 4no spaces proposed for a hotel of this scale, in a highly sustainable town-centre location), it is not expected to exceed the EPUK/IAQM screening thresholds set out in Table 4-3 that would trigger the need for detailed dispersion modelling; this professional judgement should be confirmed once the development's trip generation has been formally estimated.
- 8.1.5 Cumulative Impacts
- The assessment has considered the potential for cumulative air quality impacts in combination with other committed developments in the vicinity of the Site. None of the identified schemes are expected to generate a material increase in vehicular trips within the town centre during the 2026/2027 assessment years. Taken together, the scale of committed development in the vicinity of the Site is not considered likely to combine with the proposed development to produce a significant cumulative effect on local air quality, particularly given the town centre, highly sustainable and public-transport-accessible location shared by all of the schemes identified
- 8.1.6 In summary, it can be concluded that the proposed scheme will not have a significant impact on local air quality or human health. The site is suitable for its proposed uses.
- 8.1.7 If the recommended construction stage mitigation measures are implemented, this report concludes that the proposed development will not conflict with any national, regional, or local planning policy, including the National Planning Policy Framework (NPPF).



## 9 Appendices

### 9.1 Appendix 1: Operational Impact Assessment Methodology

The EPUK & IAQM guidance refers to the Town and Country Planning (Development Management Procedure) Order (England) 2010 [(Wales) 2012] for a definition of a 'major' development when scoping assessments required for the planning process. Based on the guidance, a 'major' development is such development where:

- The number of dwellings is 10 or above;
- The residential development is carried out of a site of more than 0.5ha where the number of dwellings is unknown;
- The provision of more than 1,000 m<sup>2</sup> commercial floorspace; or,
- Development carried out on land of 1ha or more.

It is recommended that consideration should be given to reduce impacts from any 'major' developments by considering:

- The impact of existing sources in the local area on the proposed development; and
- The impacts of the proposed development on the local area.

The assessment process involves two stages where:

**Stage 1** scope out the need for an air quality assessment and **Stage 2** provide guidance of determining the level of assessment required for a project.

Table A1 sets out the Stage 1 criteria to determine the need to assess impacts arising from small developments and Table A2 provides more specific guidance as to when an air quality assessment is likely to be required to assess the impacts of the proposed development on the local area.

Table A1: Stage 1 Criteria to proceed to Stage 2

| Criteria to Proceed to Stage 2 |                                                                                                                                                                                                                                                              |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b>                       | <p>If any of the following apply:</p> <ul style="list-style-type: none"><li>• or more residential units of a site area of more than 0.5ha</li><li>• More than 1,000m<sup>2</sup> of floor space for all other uses or a site area greater than 1ha</li></ul> |
| <b>B</b>                       | <p>Coupled with any of the following:</p> <ul style="list-style-type: none"><li>• The development has more than 10 parking spaces</li><li>• The development will have a centralised energy facility or other centralised combustion process</li></ul>        |



**Table A2: Indicative Criteria for Requiring an Air Quality Assessment**

| The development will                                                                                                                                                                                                                                                                    | Indicative Criteria to Proceed to an Air Quality Assessment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Cause a significant change in Light Duty Vehicle (LDV) traffic flows on local roads with relevant receptors. (LDV = cars and small vans &lt;3.5t gross vehicle weight).</b>                                                                                                       | A change of LDV flows of:<br>more than 100 AADT within or adjacent to an AQMA<br>more than 500 AADT elsewhere.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>2. Cause a significant change in Heavy Duty Vehicle (HDV) flows on local roads with relevant receptors. (HDV = goods vehicles + buses &gt;3.5t gross vehicle weight).</b>                                                                                                            | A change of HDV flows of:<br>more than 25 AADT within or adjacent to an AQMA<br>more than 100 AADT elsewhere.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>3. Realign roads, i.e. changing the proximity of</b>                                                                                                                                                                                                                                 | Where the change is 5m or more and the road is within an AQMA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>4. Introduce a new junction or remove an existing junction near to relevant receptors.</b>                                                                                                                                                                                           | Applies to junctions that cause traffic to significantly change vehicle accelerate/decelerate, e.g. traffic lights, or roundabouts.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>5. Introduce or change a bus station.</b>                                                                                                                                                                                                                                            | Where bus flows will change by:<br>more than 25 AADT within or adjacent to an AQMA<br>more than 100 AADT elsewhere.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>6. Have an underground car park with extraction system.</b>                                                                                                                                                                                                                          | The ventilation extract for the car park will be within 20 m of a relevant receptor.<br><br>Coupled with the car park having more than 100 movements per day (total in and out).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>7. Have one or more substantial combustion processes, where there is a risk of impacts at relevant receptors.</b><br><br><b>NB. This includes combustion plant associated with standby emergency generators (typically associated with centralised energy centres) and shipping.</b> | Typically, any combustion plant where the single or combined NO <sub>x</sub> emission rate is less than 5 mg/sec is unlikely to give rise to impacts, provided that the emissions are released from a vent or stack in a location and at a height that provides adequate dispersion.<br><br>In situations where the emissions are released close to buildings with relevant receptors, or where the dispersion of the plume may be adversely affected by the size and/or height of adjacent buildings (including situations where the stack height is lower than the receptor) then consideration will need to be given to potential impacts at much lower emission rates.<br><br>Conversely, where existing nitrogen dioxide concentrations are low, and where the dispersion conditions are favourable, a much higher emission rate may be acceptable. |



## 9.2 Appendix 2: Site Drawings



Figure 9-1 Proposed Floor Plans



Figure 9-2 Proposed Elevations



Figure 9-3 Proposed 3D Views