

**Air Quality Assessment**  
**Watling Street, Hinckley**

**Client: CNG Fuels**

**Reference: 6333-1r1**

**Date: 19<sup>th</sup> February 2026**



**Report Issue**

Report Title:           Air Quality Assessment - Watling Street, Hinckley

Report Reference: 6333-1

| Report Version | Issue Date                     | Issued By      | Comments |
|----------------|--------------------------------|----------------|----------|
| 1              | 19 <sup>th</sup> February 2026 | Jethro Redmore | -        |
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## **Executive Summary**

Redmore Environmental Ltd was commissioned by CNG Fuels to undertake an Air Quality Assessment in support of a Section 73 application for a Bio-Compressed Natural Gas fuelling facility on land off Watling Street, Hinkley.

The proposed development has the potential to cause air quality impacts as a result of fugitive dust emissions during construction and road traffic exhaust emissions associated with vehicles travelling to and from the site during operation. As such, an Air Quality Assessment was undertaken in order to determine baseline conditions and consider potential effects as a result of the scheme.

Potential construction phase air quality impacts from fugitive dust emissions were assessed as a result of earthworks, construction and trackout activities. It is considered that the use of good practice control measures would provide suitable mitigation for a development of this size and nature and reduce potential impacts to an acceptable level.

During the operational phase of the development there is the potential for air quality impacts as a result of traffic exhaust emissions associated with vehicles travelling to and from the site. These were assessed using a standard screening method. Due to the low number of trips produced by the proposals, road traffic exhaust impacts were not predicted to be significant.

Based on the assessment results, air quality factors are not considered a constraint to planning consent for the proposals.

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## **7.0 ABBREVIATIONS**

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### **Appendix**

Appendix 1 - Curricula Vitae

## **1.0 INTRODUCTION**

### **1.1 Background**

1.1.1 Redmore Environmental Ltd was commissioned by CNG Fuels to undertake an Air Quality Assessment in support of a Section 73 application for a Bio-Compressed Natural Gas (Bio-CNG) fuelling facility on land off Watling Street, Hinckley.

1.1.2 The proposed development has the potential to cause air quality impacts as a result of fugitive dust emissions during construction and road traffic exhaust emissions associated with vehicles travelling to and from the site during operation. As such, an Air Quality Assessment was undertaken in order to determine baseline conditions and consider potential effects as a result of the scheme.

### **1.2 Site Location and Context**

1.2.1 The site is located on land off Watling Street, Hinckley, at approximate National Grid Reference (NGR): 440758, 292571. Reference should be made to Figure 1 for a map of the site and surrounding area.

1.2.2 Planning consent for the construction of a Bio-CNG fuelling facility at the site was granted by Hinckley and Bosworth Borough Council (HBBC) (reference: 23/00613/FUL) on 20<sup>th</sup> June 2023. Bio-CNG is a sustainable and renewable gas that has been produced from waste feedstocks such as food waste and sewage sludge. The target market for the development is the Heavy Goods Vehicle (HGV) fleet, where an increasing number of operators are looking to replace diesel fuelled vehicles with Bio-CNG. This reduces carbon dioxide (CO<sub>2</sub>) equivalent emissions by as much as 85%, oxides of nitrogen (NO<sub>x</sub>) emissions by as much as 75% and noise by approximately 50% when compared to a diesel vehicle.

1.2.3 The development includes the following:

- Fuel dispenser islands;
- A backup generator;
- Gas compressors;
- Gas storage banks;
- Two Light Duty Vehicle (LDV) parking spaces; and,

- Associated infrastructure.

1.2.4 The development has the potential to cause impacts at sensitive locations. These may include:

- Construction Phase - fugitive dust emissions; and,
- Operational Phase - road traffic exhaust emissions from vehicles travelling to and from the site.

1.2.5 An Air Quality Assessment<sup>1</sup> was therefore undertaken in support of the original planning application in order to determine baseline conditions and consider potential effects as a result of the proposals. It is now proposed to submit a Section 73 application to:

- Amend the vehicular access to the site to enable vehicles to access either via a right in/ left out or left-in/ right-out manoeuvre; and,
- Reduce the number of fuel dispensers to a total of ten.

1.2.6 An amended Air Quality Assessment has therefore been undertaken in order to address the amended development proposals, as well as updated baseline information, guidance and policy. This is provided in the following report.

1.2.7 It should be noted that the Bio-CNG compressing and delivery system is sealed. As such, there are no associated atmospheric emissions from this process under normal operation. Additionally, the backup generator will only be utilised when electricity is unavailable from the National Grid. It is anticipated this would be an extremely rare occurrence. As such, associated emissions were not considered further in the context of the assessment.

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<sup>1</sup> Air Quality Assessment - Watling Street, Hinckley, Redmore Environmental, 2023.

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## 2.0 **LEGISLATION AND POLICY**

### 2.1 **Legislation**

2.1.1 The Air Quality Standards Regulations (2010) and subsequent amendments include Air Quality Limit Values (AQLVs) for the following pollutants:

- Nitrogen dioxide (NO<sub>2</sub>);
- Sulphur dioxide;
- Lead;
- Particulate matter with an aerodynamic diameter of less than 10µm (PM<sub>10</sub>);
- Particulate matter with an aerodynamic diameter of less than 2.5µm (PM<sub>2.5</sub>);
- Benzene; and,
- Carbon monoxide.

2.1.1 Air Quality Target Values were also provided for several additional pollutants. It should be noted that the AQLV for PM<sub>2.5</sub> stated in the Air Quality Standards Regulations (2010) was amended in the Environment (Miscellaneous Amendments) (EU Exit) Regulations (2020).

2.1.2 The Air Quality Strategy (AQS) was produced by the Department for Environment, Food and Rural Affairs (DEFRA) and published on 28<sup>th</sup> April 2023<sup>2</sup>. The document contains standards, objectives and measures for improving ambient air quality, including a number of Air Quality Objectives (AQOs). These are maximum ambient pollutant concentrations that are not to be exceeded either without exception or with a permitted number of exceedences over a specified timescale. These are generally in line with the AQLVs, although the requirements for the determination of compliance vary.

2.1.3 The Environmental Improvement Plan 2025<sup>3</sup> was published in December 2025, providing long term and Interim Targets in order to reduce population exposure to PM<sub>2.5</sub>. The Concentration Target for 2040 was adopted in the Environmental Targets (Fine Particulate Matter) (England) Regulations (2023).

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<sup>2</sup> AQS: Framework for Local Authority Delivery, DEFRA, 2023.

<sup>3</sup> Environmental Improvement Plan 2025, DEFRA, 2025.

2.1.4 Table 1 presents the AQOs, Interim Target and Concentration Target for pollutants considered within this assessment.

**Table 1 Air Quality Objectives/ Interim Target/ Concentration Target**

| Pollutant         | Air Quality Objective/ Interim Target/ Concentration Target |                                                                      |
|-------------------|-------------------------------------------------------------|----------------------------------------------------------------------|
|                   | Concentration ( $\mu\text{g}/\text{m}^3$ )                  | Averaging Period                                                     |
| NO <sub>2</sub>   | 40                                                          | Annual mean                                                          |
|                   | 200                                                         | 1-hour mean, not to be exceeded on more than 18 occasions per annum  |
| PM <sub>10</sub>  | 40                                                          | Annual mean                                                          |
|                   | 50                                                          | 24-hour mean, not to be exceeded on more than 35 occasions per annum |
| PM <sub>2.5</sub> | 10 <sup>(a)</sup>                                           | Annual mean                                                          |
|                   | 10 <sup>(b)</sup>                                           | Annual mean                                                          |

Note: (a) Interim Target to be achieved by 2030.

(b) Concentration Target to be achieved by 2040.

2.1.5 Table 2 summarises the advice provided in DEFRA guidance<sup>4</sup> on where the AQOs for pollutants considered within this report apply.

**Table 2 Examples of Where the Air Quality Objectives Apply**

| Averaging Period | Objective Should Apply At                                                                                                                                          | Objective Should Not Apply At                                                                                                                                                                                                                                                                                                                                                    |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Annual mean      | <p>All locations where members of the public might be regularly exposed</p> <p>Building façades of residential properties, schools, hospitals, care homes etc.</p> | <p>Building façades of offices or other places of work where members of the public do not have regular access</p> <p>Hotels, unless people live there as their permanent residence</p> <p>Gardens of residential properties</p> <p>Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term</p> |

<sup>4</sup> Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

| Averaging Period | Objective Should Apply At                                                                                                                                                                                                                                                                                                                                                                                                                               | Objective Should Not Apply At                                                                                                             |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 24-hour mean     | All locations where the annual mean objective would apply, together with hotels<br><br>Gardens of residential properties                                                                                                                                                                                                                                                                                                                                | Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term |
| 1-hour mean      | All locations where the annual mean and 24 and 8-hour mean objectives apply. Kerbside sites (for example, pavements of busy shopping streets)<br><br>Those parts of car parks, bus stations and railway stations etc which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more<br><br>Any outdoor locations where members of the public might reasonably be expected to spend one hour or longer | Kerbside sites where the public would not be expected to have regular access                                                              |

## 2.2 Local Air Quality Management

2.2.1 Local Authorities (LAs) are required to periodically review and assess air quality within their area of jurisdiction under the system of Local Air Quality Management (LAQM). This review and assessment of air quality involves comparing present and likely future pollutant concentrations against the AQOs. If it is predicted that levels at locations of relevant exposure, as summarised in Table 2, are likely to be exceeded, the LA is required to declare an Air Quality Management Area (AQMA). For each AQMA the LA is required to produce an Air Quality Action Plan, the objective of which is to reduce pollutant concentrations in pursuit of the AQOs.

## 2.3 Dust

2.3.1 The main requirements with respect to dust control from industrial or trade premises not regulated under the Environmental Permitting (England and Wales) Regulations (2016) and subsequent amendments, such as construction sites, is that provided in Section 79 of Part III of the Environmental Protection Act (1990). The Act defines nuisance as:

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

2.3.2 Enforcement of the Act, in regard to nuisance, is currently under the jurisdiction of the local Environmental Health Department, whose officers are deemed to provide an independent evaluation of nuisance. If the LA is satisfied that a statutory nuisance exists, or is likely to occur or happen again, it must serve an Abatement Notice under Part III of the Environmental Protection Act (1990). The only defence is to show that the process to which the nuisance has been attributed and its operation are being controlled according to best practicable means.

## **2.4 National Planning Policy**

2.4.1 The revised National Planning Policy Framework<sup>5</sup> (NPPF) was published in December 2024 and updated in February 2025. The document sets out the Government's planning policies for England and how these are expected to be applied.

2.4.2 The purpose of the planning system is to contribute to the achievement of sustainable development. In order to ensure this, the NPPF recognises three overarching objectives including the following of relevance to air quality:

"c) an environmental objective - to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."

2.4.3 Chapter 15 of the NPPF details objectives in relation to conserving and enhancing the natural environment. It states that:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

[...]

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of

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<sup>5</sup> NPPF, Ministry of Housing, Communities and Local Government, 2024.

soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality [...]."

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

- 2.4.5 The implications of the NPPF have been considered throughout this assessment.

## 2.5 **National Planning Practice Guidance**

- 2.5.1 The National Planning Practice Guidance<sup>6</sup> (NPPG) web-based resource was launched by the Department for Communities and Local Government to support the NPPF and make it more accessible. The air quality pages are summarised under the following headings:

1. What air quality considerations does planning need to address?
2. What is the role of plan-making with regard to air quality?
3. Are air quality concerns relevant to neighbourhood planning?
4. What information is available about air quality?
5. When could air quality be relevant to the planning development management process?
6. What specific issues may need to be considered when assessing air quality impacts?

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<sup>6</sup> <https://www.gov.uk/guidance/air-quality--3>.

7. How detailed does an air quality assessment need to be?
8. How can an impact on air quality be mitigated?

2.5.2 These were reviewed and the relevant guidance considered as necessary throughout the undertaking of this assessment.

## **2.6 Local Planning Policy**

2.6.1 The Local Plan for HBBC is made up of a number of documents. These include the Core Strategy<sup>7</sup>, which was adopted in December 2009, and the Site Allocations and Development Management Policies Development Plan Document (DPD)<sup>8</sup>, which was adopted in July 2016.

2.6.2 Review of the Core Strategy did not indicate any policies of relevance to this assessment.

2.6.3 Review of the Site Allocations and Development Management Policies DPD indicated the following policies in relation to air quality of relevance to this assessment:

"DM7 Preventing Pollution and Flooding

Adverse impacts from pollution and flooding will be prevented by ensuring that development proposals demonstrate that:

[...]

f) It will not contribute to poor air quality;

[...]"

"DM10 Development and Design

Developments will be permitted providing that the following requirements are met:

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<sup>7</sup> Core Strategy, HBBC, 2009.

<sup>8</sup> Site Allocations and Development Management Policies DPD, HBBC, 2016.

a) It would not have a significant adverse effect on the privacy and amenity of nearby residents and occupiers of adjacent buildings, including matters of lighting, air quality (including odour), noise, vibration and visual intrusion;

[...]"

2.6.4 The above policies were taken into consideration throughout the undertaking of the assessment.

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## 3.0 **METHODOLOGY**

### 3.1 **Introduction**

3.1.1 The proposed development has the potential to cause adverse impacts as a result of construction phase dust emissions and exhaust emissions from vehicles travelling to and from the site during the operational phase. These were assessed in accordance with the following methodology.

### 3.2 **Construction Phase Assessment**

3.2.1 There is the potential for fugitive dust emissions to occur as a result of construction phase activities. These have been assessed in accordance with the methodology outlined within the IAQM document 'Guidance on the Assessment of Dust from Demolition and Construction V2.2'<sup>9</sup>.

3.2.2 Activities on the proposed construction site have been divided into three types to reflect their different potential impacts. These are:

- Earthworks;
- Construction; and,
- Trackout.

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

- Annoyance due to dust soiling;
- Harm to ecological receptors; and,
- The risk of health effects due to a significant increase in exposure to PM<sub>10</sub>.

3.2.4 The assessment steps are detailed below.

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<sup>9</sup> Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

## Step 1 - Screen the Need for an Assessment

- 3.2.5 Step 1 screens the requirement for a more detailed assessment. Should human receptors be identified within 250m from the boundary or 50m from the construction vehicle route up to 250m from the site entrance, then the assessment proceeds to Step 2. Additionally, should ecological receptors be identified within 50m of the site or the construction vehicle route up to 250m from the site entrance, then the assessment also proceeds to Step 2.
- 3.2.6 Should sensitive receptors not be present within the relevant distances then **negligible** impacts would be expected and further assessment is not necessary.

## Step 2 - Assess the Risk of Dust Impacts

- 3.2.7 Step 2 assesses the risk of potential dust impacts. A site is allocated a risk category based on two factors:
- The scale and nature of the works, which determines the magnitude of dust arising as: small, medium or large (Step 2A); and,
  - The sensitivity of the area to dust impacts, which can be defined as low, medium or high sensitivity (Step 2B).
- 3.2.8 The two factors are combined in Step 2C to determine the risk of dust impacts without mitigation applied.
- 3.2.9 Step 2A defines the potential magnitude of dust emission during the construction phase. The relevant criteria are summarised in Table 3.

**Table 3 Construction Dust - Magnitude of Emission**

| Magnitude | Activity   | Criteria                                                                                                                                                                                                                                                                                                                                                      |
|-----------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Large     | Earthworks | <ul style="list-style-type: none"><li>• Total site area greater than 110,000m<sup>2</sup></li><li>• Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size)</li><li>• More than 10 heavy earth moving vehicles active at any one time</li><li>• Formation of bunds greater than 6m in height</li></ul> |

| Magnitude | Activity     | Criteria                                                                                                                                                                                                                                                                         |
|-----------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | Construction | <ul style="list-style-type: none"> <li>Total building volume greater than 75,000m<sup>3</sup></li> <li>On site concrete batching</li> <li>Sandblasting</li> </ul>                                                                                                                |
|           | Trackout     | <ul style="list-style-type: none"> <li>More than 50 Heavy Duty Vehicle (HDV) trips per day</li> <li>Potentially dusty surface material (e.g. high clay content)</li> <li>Unpaved road length greater than 100m</li> </ul>                                                        |
| Medium    | Earthworks   | <ul style="list-style-type: none"> <li>Total site area 18,000m<sup>2</sup> to 110,000m<sup>2</sup></li> <li>Moderately dusty soil type (e.g. silt)</li> <li>5 to 10 heavy earth moving vehicles active at any one time</li> <li>Formation of bunds 3m to 6m in height</li> </ul> |
|           | Construction | <ul style="list-style-type: none"> <li>Total building volume 12,000m<sup>3</sup> to 75,000m<sup>3</sup></li> <li>Potentially dusty construction material (e.g. concrete)</li> <li>On site concrete batching</li> </ul>                                                           |
|           | Trackout     | <ul style="list-style-type: none"> <li>20 to 50 HDV trips per day</li> <li>Moderately dusty surface material (e.g. high clay content)</li> <li>Unpaved road length 50m to 100m</li> </ul>                                                                                        |
| Small     | Earthworks   | <ul style="list-style-type: none"> <li>Total site area less than 18,000m<sup>2</sup></li> <li>Soil type with large grain size (e.g. sand)</li> <li>Less than 5 heavy earth moving vehicles active at any one time</li> <li>Formation of bunds less than 3m in height</li> </ul>  |
|           | Construction | <ul style="list-style-type: none"> <li>Total building volume less than 12,000m<sup>3</sup></li> <li>Construction material with low potential for dust release (e.g. metal cladding or timber)</li> </ul>                                                                         |
|           | Trackout     | <ul style="list-style-type: none"> <li>Less than 20 HDV trips per day</li> <li>Surface material with low potential for dust release</li> <li>Unpaved road length less than 50m</li> </ul>                                                                                        |

3.2.10 Step 2B defines the sensitivity of the area around the development to potential dust impacts. The sensitivities of specific receptors are shown in Table 4.

**Table 4 Construction Dust - Sensitivities of Human and Ecological Receptors**

| Receptor Sensitivity | Examples                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                     |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|                      | Human Receptors                                                                                                                                                                                                                                                                                                                                                                                                           | Ecological Receptors                                                                                                                |
| High                 | <ul style="list-style-type: none"> <li>• Users expect high levels of amenity</li> <li>• High aesthetic or value property</li> <li>• People expected to be present continuously for extended periods of time</li> <li>• Locations where members of the public are exposed over a time period relevant to the AQO for PM<sub>10</sub> e.g. residential properties, hospitals, schools and residential care homes</li> </ul> | <ul style="list-style-type: none"> <li>• Internationally or nationally designated site e.g. Special Area of Conservation</li> </ul> |
| Medium               | <ul style="list-style-type: none"> <li>• Users would expect to enjoy a reasonable level of amenity</li> <li>• Aesthetics or value of their property could be diminished by soiling</li> <li>• People or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land e.g. parks and places of work</li> </ul>              | <ul style="list-style-type: none"> <li>• Nationally designated site e.g. Sites of Special Scientific Interest</li> </ul>            |
| Low                  | <ul style="list-style-type: none"> <li>• Enjoyment of amenity would not reasonably be expected</li> <li>• Property would not be expected to be diminished in appearance</li> <li>• Transient exposure, where people would only be expected to be present for limited periods. e.g. public footpaths, playing fields, shopping streets, farmland, short term car parks and roads</li> </ul>                                | <ul style="list-style-type: none"> <li>• Locally designated site e.g. Local Nature Reserve</li> </ul>                               |

3.2.11 The criteria for determining the sensitivity of the area to dust soiling effects on people and property is summarised in Table 5.

**Table 5 Construction Dust - Sensitivity of the Area to Dust Soiling Effects on People and Property**

| Receptor Sensitivity | Number of Receptors | Distance from the Source (m) |              |               |               |
|----------------------|---------------------|------------------------------|--------------|---------------|---------------|
|                      |                     | Less than 20                 | Less than 50 | Less than 100 | Less than 250 |
| High                 | More than 100       | High                         | High         | Medium        | Low           |
|                      | 10 - 100            | High                         | Medium       | Low           | Low           |

| Receptor Sensitivity | Number of Receptors | Distance from the Source (m) |              |               |               |
|----------------------|---------------------|------------------------------|--------------|---------------|---------------|
|                      |                     | Less than 20                 | Less than 50 | Less than 100 | Less than 250 |
|                      | 1 - 10              | Medium                       | Low          | Low           | Low           |
| Medium               | More than 1         | Medium                       | Low          | Low           | Low           |
| Low                  | More than 1         | Low                          | Low          | Low           | Low           |

3.2.12 Table 6 outlines the criteria for determining the sensitivity of the area to human health impacts.

**Table 6 Construction Dust - Sensitivity of the Area to Human Health Impacts**

| Receptor Sensitivity | Background Annual Mean PM <sub>10</sub> Concentration | Number of Receptors | Distance from the Source (m) |              |               |               |
|----------------------|-------------------------------------------------------|---------------------|------------------------------|--------------|---------------|---------------|
|                      |                                                       |                     | Less than 20                 | Less than 50 | Less than 100 | Less than 250 |
| High                 | Greater than 32µg/m <sup>3</sup>                      | More than 100       | High                         | High         | High          | Medium        |
|                      |                                                       | 10 - 100            | High                         | High         | Medium        | Low           |
|                      |                                                       | 1 - 10              | High                         | Medium       | Low           | Low           |
|                      | 28 - 32µg/m <sup>3</sup>                              | More than 100       | High                         | High         | Medium        | Low           |
|                      |                                                       | 10 - 100            | High                         | Medium       | Low           | Low           |
|                      |                                                       | 1 - 10              | High                         | Medium       | Low           | Low           |
|                      | 24 - 28µg/m <sup>3</sup>                              | More than 100       | High                         | Medium       | Low           | Low           |
|                      |                                                       | 10 - 100            | High                         | Medium       | Low           | Low           |
|                      |                                                       | 1 - 10              | Medium                       | Low          | Low           | Low           |
|                      | Less than 24µg/m <sup>3</sup>                         | More than 100       | Medium                       | Low          | Low           | Low           |
|                      |                                                       | 10 - 100            | Low                          | Low          | Low           | Low           |
|                      |                                                       | 1 - 10              | Low                          | Low          | Low           | Low           |
| Medium               | Greater than 32µg/m <sup>3</sup>                      | More than 10        | High                         | Medium       | Low           | Low           |
|                      |                                                       | 1 - 10              | Medium                       | Low          | Low           | Low           |
|                      | 28 - 32µg/m <sup>3</sup>                              | More than 10        | Medium                       | Low          | Low           | Low           |
|                      |                                                       | 1 - 10              | Low                          | Low          | Low           | Low           |

| Receptor Sensitivity | Background Annual Mean PM <sub>10</sub> Concentration | Number of Receptors | Distance from the Source (m) |              |               |               |
|----------------------|-------------------------------------------------------|---------------------|------------------------------|--------------|---------------|---------------|
|                      |                                                       |                     | Less than 20                 | Less than 50 | Less than 100 | Less than 250 |
|                      | 24 - 28µg/m <sup>3</sup>                              | More than 10        | Low                          | Low          | Low           | Low           |
|                      |                                                       | 1 - 10              | Low                          | Low          | Low           | Low           |
|                      | Less than 24µg/m <sup>3</sup>                         | More than 10        | Low                          | Low          | Low           | Low           |
|                      |                                                       | 1 - 10              | Low                          | Low          | Low           | Low           |
| Low                  | -                                                     | 1 or more           | Low                          | Low          | Low           | Low           |

3.2.13 Table 7 outlines the criteria for determining the sensitivity of the area to ecological impacts.

**Table 7 Construction Dust - Sensitivity of the Area to Ecological Impacts**

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

3.2.14 Step 2C combines the dust emission magnitude with the sensitivity of the area to determine the risk of unmitigated impacts.

3.2.15 Table 8 outlines the risk category from earthworks, construction and trackout activities.

**Table 8 Construction Dust - Dust Risk Category from Earthworks, Construction and Trackout Activities**

| Receptor Sensitivity | Dust Emission Magnitude |        |            |
|----------------------|-------------------------|--------|------------|
|                      | Large                   | Medium | Small      |
| High                 | High                    | Medium | Low        |
| Medium               | Medium                  | Medium | Low        |
| Low                  | Low                     | Low    | Negligible |

### Step 3 - Site-specific Mitigation

3.2.16 Step 3 requires the identification of site-specific mitigation measures within the IAQM guidance<sup>10</sup> to reduce potential dust impacts based upon the relevant risk categories identified in Step 2. For sites with **negligible** risk, mitigation measures beyond those required by legislation are not required. However, additional controls may be applied as part of good practice.

### Step 4 - Determine Significance

3.2.17 Once the risk of dust impacts has been determined and the appropriate mitigation measures identified, the final step is to determine the significance of any residual impacts. For almost all construction activity, the aim should be to control effects through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be **not significant**.

3.2.18 The determination of significance relies on professional judgement and reasoning should be provided as far as practicable. The IAQM guidance suggests the provision of details of the assessor's qualifications and experience. These are provided in Appendix 1.

## 3.3 Operational Phase Assessment

3.3.1 The development has the potential to increase concentrations of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> as a result of road traffic exhaust emissions associated with vehicles travelling to and from the site during the operational phase. A screening assessment was therefore undertaken using the criteria contained within the IAQM 'Land-Use Planning & Development Control: Planning for Air Quality'<sup>11</sup> guidance to determine the potential for trips generated by the development to affect local air quality.

3.3.2 The following criteria are provided to help establish when an assessment of potential road traffic impacts on the local area is likely to be considered necessary:

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<sup>10</sup> Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

<sup>11</sup> Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

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- If the development causes a significant change, as defined below, in LDV traffic flows on local roads with relevant receptors:
  - A change of LDV flows of more than 100 Annual Average Daily Traffic (AADT) within or adjacent to an AQMA; or,
  - More than 500 AADT elsewhere;
- If the development causes a significant change, as defined below, in HDV traffic flows on local roads with relevant receptors:
  - A change of HDV flows of more than 25 AADT within or adjacent to an AQMA; or,
  - More than 100 AADT elsewhere;
- Realignment of roads where the change is 5m or more and the road is within an AQMA; or,
- Introduction of a new junction or removal of an existing junction near to relevant receptors.

3.3.3 Should these criteria not be met, then the IAQM guidance<sup>12</sup> considers air quality impacts associated with a scheme to be **not significant** and no further assessment is required.

3.3.4 Should screening of the relevant data indicate that any of the above criteria are met, then potential impacts at sensitive receptor locations can be assessed by calculating the change in pollutant concentrations as a result of the proposed development. The significance of predicted impacts can then be determined in accordance with the methodology outlined in the IAQM guidance<sup>13</sup>.

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<sup>12</sup> Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

<sup>13</sup> Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

## 4.0 **BASELINE**

### 4.1 **Introduction**

4.1.1 Existing air quality conditions in the vicinity of the proposed development site were identified in order to provide a baseline for assessment. These are detailed in the following Sections.

### 4.2 **Local Air Quality Management**

4.2.1 As required by the Environment Act (1995), as amended by the Environment Act (2021), HBBC has undertaken Review and Assessment of air quality within their area of jurisdiction. This process has indicated that concentrations of all pollutants considered within the AQS are currently below the relevant AQOs. As such, no AQMA's have been designated within the borough.

### 4.3 **Air Quality Monitoring**

4.3.1 Monitoring of pollutant concentrations is undertaken by HBBC throughout their area of jurisdiction. Recent NO<sub>2</sub> results recorded in the vicinity of the development are shown in Table 9.

**Table 9 Monitoring Results**

| Monitoring Site |                   | Monitored NO <sub>2</sub> Concentration (µg/m <sup>3</sup> ) |      |      |
|-----------------|-------------------|--------------------------------------------------------------|------|------|
|                 |                   | 2022                                                         | 2023 | 2024 |
| 3               | 562 Coventry Road | 18.2                                                         | 16.7 | 15.8 |
| 5               | Weldon A5         | 12.4                                                         | 11.4 | 9.5  |

4.3.2 As shown in Table 9, annual mean NO<sub>2</sub> concentrations were below the AQO of 40µg/m<sup>3</sup> at both monitoring locations in recent years. Reference should be made to Figure 2 for a map of the survey positions.

4.3.3 HBBC do not undertake PM<sub>10</sub> or PM<sub>2.5</sub> monitoring within the vicinity of the site.

#### 4.4 **Background Pollutant Concentrations**

4.4.1 Predictions of background pollutant concentrations on a 1km by 1km grid basis have been produced by DEFRA for the entire of the UK to assist LAs in their Review and Assessment of air quality. The proposed development site is located in grid square NGR: 440500, 292500. Data for this location was downloaded from the DEFRA website<sup>14</sup> for the purpose of the assessment and is summarised in Table 10.

**Table 10 Background Pollutant Concentration Predictions**

| Pollutant         | Predicted 2026 Background Pollutant Concentration (µg/m <sup>3</sup> ) |
|-------------------|------------------------------------------------------------------------|
| NO <sub>2</sub>   | 10.33                                                                  |
| PM <sub>10</sub>  | 13.04                                                                  |
| PM <sub>2.5</sub> | 7.08                                                                   |

4.4.2 As shown in Table 10, predicted background NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations are below the relevant AQOs and Concentration Target at the development site.

#### 4.5 **Sensitive Receptors**

4.5.1 A sensitive receptor is defined as any location which may be affected by changes in air quality as a result of a development. Receptors sensitive to potential dust impacts during earthworks and construction were identified from a desk-top study of the area up to 250m from the development boundary. These are summarised in Table 11.

**Table 11 Earthworks and Construction Dust Sensitive Receptors**

| Distance from Site Boundary (m) | Approximate Number of Human Receptors | Approximate Number of Ecological Receptors |
|---------------------------------|---------------------------------------|--------------------------------------------|
| Up to 20                        | 1 - 10                                | 0                                          |
| Up to 50                        | 10 - 100                              | 0                                          |
| Up to 100                       | 10 - 100                              | -                                          |
| Up to 250                       | More than 100                         | -                                          |

<sup>14</sup> <http://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021>.

- 4.5.2 Receptors sensitive to potential dust impacts from trackout were identified from a desk-top study of the area up to 50m from the road network within 250m of the site access. These are summarised in Table 12.

**Table 12 Trackout Dust Sensitive Receptors**

| Distance from Site Access Route (m) | Approximate Number of Human Receptors | Approximate Number of Ecological Receptors |
|-------------------------------------|---------------------------------------|--------------------------------------------|
| Up to 20                            | 10 - 100                              | 0                                          |
| Up to 50                            | More than 100                         | 0                                          |

- 4.5.3 There are no ecological receptors within 50m of the development boundary or the access route within 250m of the site entrance. As such, ecological impacts have not been assessed further within this report.
- 4.5.4 Dust sensitive receptors within 250m of the development site include places of work and residential dwellings. These are considered to be of **medium** and **high** sensitivity, respectively. It should be noted that only receptors of **medium** sensitivity are present within 20m of the boundary.
- 4.5.5 The sensitivity of the receiving environment to specific potential dust impacts, based on the criteria shown in Section 3.2, is shown in Table 13.

**Table 13 Sensitivity of the Surrounding Area to Potential Dust Impacts**

| Potential Impact | Sensitivity of the Surrounding Area |              |          |
|------------------|-------------------------------------|--------------|----------|
|                  | Earthworks                          | Construction | Trackout |
| Dust Soiling     | Medium                              | Medium       | Medium   |
| Human Health     | Low                                 | Low          | Low      |

## 5.0 **ASSESSMENT**

### 5.1 **Introduction**

- 5.1.1 There is the potential for air quality impacts as a result of the construction and operation of the proposed development. These are assessed in the following Sections.

### 5.2 **Construction Phase Assessment**

#### **Step 1**

- 5.2.1 The undertaking of activities such as excavation, ground works, cutting, construction and storage of materials has the potential to result in fugitive dust emissions throughout the construction phase. Vehicle movements on the local road network also have the potential to result in the re-suspension of dust from highway surfaces.
- 5.2.2 The potential for impacts at sensitive locations depends significantly on local meteorology during the undertaking of dust generating activities, with the most significant effects likely to occur during dry and windy conditions.
- 5.2.3 The desk-study undertaken to inform the baseline identified a number of sensitive receptors within 250m of the site boundary. As such, a detailed assessment of potential dust impacts was required.

#### **Step 2**

##### **Earthworks**

- 5.2.4 Earthworks will primarily involve excavating material, haulage, tipping and stockpiling, as well as site levelling and landscaping. The site area is less than 18,000m<sup>2</sup>. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from earthworks is therefore **small**.
- 5.2.5 Table 13 indicates the sensitivity of the area to dust soiling effects on people and property is **medium**. In accordance with the criteria outlined in Table 8, the development is considered to be a **low** risk site for dust soiling as a result of earthworks.

- 5.2.6 Table 13 indicates the sensitivity of the area to human health impacts is **low**. In accordance with the criteria outlined in Table 8, the development is considered to be a **negligible** risk site for human health impacts as a result of earthworks.

#### Construction

- 5.2.7 Due to the size of the development, the total building volume is likely to be less than 12,000m<sup>3</sup>. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from construction is therefore **small**.
- 5.2.8 Table 13 indicates the sensitivity of the area to dust soiling effects on people and property is **medium**. In accordance with the criteria outlined in Table 8, the development is considered to be a **low** risk site for dust soiling as a result of construction activities.
- 5.2.9 Table 13 indicates the sensitivity of the area to human health impacts is **low**. In accordance with the criteria outlined in Table 8, the development is considered to be a **negligible** risk site for human health impacts as a result of construction activities.

#### Trackout

- 5.2.10 Based on the total site area, it is anticipated that the unpaved road length will be less than 50m. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from trackout is therefore **small**.
- 5.2.11 Table 13 indicates the sensitivity of the area to dust soiling effects on people and property is **medium**. In accordance with the criteria outlined in Table 8, the development is considered to be a **negligible** risk site for dust soiling as a result of trackout activities.
- 5.2.12 Table 13 indicates the sensitivity of the area to human health impacts is **low**. In accordance with the criteria outlined in Table 8, the development is considered to be a **negligible** risk site for human health impacts as a result of trackout activities.

#### Summary of the Risk of Dust Effects

- 5.2.13 A summary of the risk from each dust generating activity is provided in Table 14.

**Table 14 Summary of Potential Unmitigated Dust Risks**

| Potential Impact | Risk       |              |            |
|------------------|------------|--------------|------------|
|                  | Earthworks | Construction | Trackout   |
| Dust Soiling     | Low        | Low          | Low        |
| Human Health     | Negligible | Negligible   | Negligible |

5.2.14 As indicated in Table 14, the potential risk of dust soiling is **low** from all activities. The potential risk of human health impacts is **negligible** from all activities.

5.2.15 It should be noted that the potential for impacts depends significantly on the distance between the dust generating activity and receptor location. Risk was predicted based on a worst-case scenario of works being undertaken at the site boundary closest to each sensitive area. Therefore, actual risk is likely to be lower than that predicted during the majority of the construction phase.

### Step 3

5.2.16 The IAQM guidance<sup>15</sup> provides potential mitigation measures to reduce impacts as a result of fugitive dust emissions during the construction phase. These have been adapted for the development site as summarised in Table 15. These may be reviewed prior to the commencement of construction works and incorporated into a Construction Environmental Management Plan or similar if required by the LA.

**Table 15 Fugitive Dust Emission Mitigation Measures**

| Issue          | Control Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Communications | <ul style="list-style-type: none"> <li>Develop and implement a stakeholder communications plan that includes community engagement before work commences on site</li> <li>Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager</li> <li>Display the head or regional office contact information</li> <li>Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the LA</li> </ul> |

<sup>15</sup> Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

| Issue                                              | Control Measure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site management                                    | <ul style="list-style-type: none"> <li>Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken</li> <li>Make the complaints log available to the LA upon request</li> <li>Record any exceptional incidents that cause dust and/or air emissions, either on- or off- site, and the action taken to resolve the situation in the log book</li> </ul>                                                                                                                                                                                                                                                                                                                          |
| Monitoring                                         | <ul style="list-style-type: none"> <li>Undertake daily on-site and off-site inspection to monitor dust, record inspection results, and make the log available to the LA upon request</li> <li>Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the LA upon request</li> <li>Increase the frequency of site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions</li> </ul>                                                                                                                                                                                                                                |
| Site preparation                                   | <ul style="list-style-type: none"> <li>Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible</li> <li>Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site</li> <li>Fully enclose site or specific operations where there is a high potential for dust production and they are active for an extensive period</li> <li>Avoid site runoff of water or mud</li> <li>Keep site fencing, barriers and scaffolding clean using wet methods</li> <li>Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used</li> <li>Cover, seed or fence stockpiles to prevent wind whipping</li> </ul> |
| Operating vehicle/machinery and sustainable travel | <ul style="list-style-type: none"> <li>Ensure all vehicles switch off engines when stationary - no idling vehicles</li> <li>Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable</li> <li>Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                      |
| Operations                                         | <ul style="list-style-type: none"> <li>Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques</li> <li>Ensure an adequate water supply on the site for effective dust suppression, using non-potable water where possible and appropriate</li> <li>Use enclosed chutes and conveyors and covered skips</li> <li>Minimise drop heights and use fine water sprays wherever appropriate</li> <li>Ensure equipment is available to clean any dry spillages, and clean up spillages as soon as reasonably practicable using wet cleaning methods</li> </ul>                                                                                                                                                                  |
| Waste management                                   | <ul style="list-style-type: none"> <li>Avoid bonfires and burning of waste materials</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Issue        | Control Measure                                                                                                                                                                                                                                                                                                                        |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Earthworks   | <ul style="list-style-type: none"> <li>Revegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as possible</li> <li>Use Hessian, mulches or tackifiers where it is not possible to re-vegetate or cover topsoil, as soon as practicable</li> </ul>                                                       |
| Construction | <ul style="list-style-type: none"> <li>Avoid scabbling (roughening of concrete surfaces), if possible</li> <li>Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out</li> <li>Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos</li> </ul> |
| Trackout     | <ul style="list-style-type: none"> <li>Use water-assisted dust sweeper on access and local roads, if required</li> <li>Avoid dry sweeping of large areas</li> <li>Ensure vehicles entering and leaving site are covered to prevent escape of materials</li> <li>Implement a wheel washing system, if required</li> </ul>               |

#### Step 4

5.2.17 Assuming the relevant mitigation measures outlined in Table 15 are implemented, the residual impact from all dust generating activities is predicted to be **not significant**, in accordance with the IAQM guidance<sup>16</sup>.

### 5.3 Operational Phase Assessment

5.3.1 Any vehicle movements associated with the development will generate exhaust emissions on the local and regional road networks. Information provided by Odyssey, the Transport Consultants for the project, indicated the proposals are predicted to generate 140 HDV trips per day. Distribution on the local network is as follows:

- 50% east along the A5; and,
- 50% west along the A5.

5.3.2 As traffic associated with the development will be distributed in two directions, the number of additional daily vehicle movements on any individual link is not anticipated to exceed 100.

<sup>16</sup> Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

5.3.3 It should be noted that all vehicle movements are expected to be pass by trips already existing on the A5. As such, the change outlined above is purely theoretical.

5.3.4 Based on the above information, the proposal is not predicted to result in an increase of HDV flows of more than 100 AADT on any individual road link. As such, potential air quality impacts associated with operational phase road vehicle exhaust emissions are predicted to be **not significant**, in accordance with the IAQM<sup>17</sup> screening criteria shown in Section 3.3.

#### 5.4 Interim Planning Guidance for PM<sub>2.5</sub>

5.4.1 Interim Planning Guidance<sup>18</sup> on the consideration of the PM<sub>2.5</sub> targets identified in the Environment Act (2021) in planning decisions has been produced by DEFRA. This requires evidence that the key sources of air pollution within a development have been identified and appropriate action to minimise emissions of PM<sub>2.5</sub> and its precursors as far as is reasonably practicable be provided in support of planning applications. To assist the process, two questions and associated considerations are provided. These are summarised in Table 16, along with the development response.

**Table 16 Interim Planning Guidance Questions**

| Question                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>How has exposure to PM<sub>2.5</sub> been considered when selecting the development site?</p> <p>Factors to consider include:</p> <ul style="list-style-type: none"> <li>• Site proximity to people (particularly large populations and/or vulnerable groups, e.g. schools, hospitals, care homes, areas of deprivation) and the impact of the development on these</li> <li>• Site proximity to pollution sources and the impact of these on users of the development</li> <li>• Exposure and emissions during both construction and in-use</li> </ul> | <p>The site is distanced from large populations. Additionally, the findings of the assessment, as previously summarised, indicate that impacts on PM<sub>2.5</sub> concentrations are predicted to be <b>not significant</b></p> <p>The proposed land use is not considered sensitive to long term pollutant exposure</p> <p>As outlined in Table 15, a number of mitigation measures will be used throughout the construction phase in order to reduce fugitive dust emissions as far as practicable. This will control potential exposure at off-site locations</p> |

<sup>17</sup> Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

<sup>18</sup> <https://uk-air.defra.gov.uk/pm25targets/planning>.

| Question                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>What actions and/or mitigations have been considered to reduce PM<sub>2.5</sub> exposure for development users and nearby receptors and to reduce emissions of PM<sub>2.5</sub> and its precursors?</p> <p>Factors to consider include:</p> <ul style="list-style-type: none"> <li>• Site layout</li> <li>• The development's design</li> <li>• Technology used in the construction or installed for use in the development</li> <li>• Construction and future use of the development</li> </ul> | <p>In order to reduce emissions of PM<sub>2.5</sub> with associated impacts at nearby receptors, the following measures have been included in the proposals:</p> <ul style="list-style-type: none"> <li>• Provision of Electric Vehicle (EV) charging points for servicing and maintenance vehicles</li> </ul> <p>It should be noted that emissions from CNG fuelled vehicles are lower than diesel. As such, the proposals will inherently reduce PM<sub>2.5</sub> from transport during operation</p> <p>Further to the above, in order to reduce emissions during the construction phase, a number of mitigation measures will be used to minimise dust generation from associated activities</p> |

5.4.2 Based on the responses provided in Table 16 and the results of the assessment, as outlined in Sections 5.6, 6.2 and 6.3, it is considered that the development has identified key sources of air pollution and taken appropriate action to minimise emissions of PM<sub>2.5</sub>.

## 6.0 CONCLUSION

- 6.1.1 Redmore Environmental Ltd was commissioned by CNG Fuels to undertake an Air Quality Assessment in support of a Section 73 application for a Bio-CNG fuelling a facility on land off Watling Street, Hinkley.
- 6.1.2 The proposed development has the potential to cause air quality impacts as a result of fugitive dust emissions during construction and road traffic exhaust emissions associated with vehicles travelling to and from the site during operation. As such, an Air Quality Assessment was undertaken in order to determine baseline conditions and consider potential effects as a result of the scheme.
- 6.1.3 During the construction phase of the development there is the potential for air quality impacts as a result of fugitive dust emissions from the site. These were assessed in accordance with the IAQM methodology. Assuming good practice dust control measures are implemented, the residual significance of potential air quality impacts from dust generated by earthworks, construction and trackout activities was predicted to be **not significant**.
- 6.1.4 Potential impacts during the operational phase of the proposed development may occur due to road traffic exhaust emissions associated with vehicles travelling to and from the site. These were assessed against screening criteria provided within the IAQM<sup>19</sup> guidance document. Due to the anticipated origin of trips to be produced by the proposals, road traffic exhaust impacts were predicted to be **not significant**.
- 6.1.5 Based on the assessment results, air quality factors are not considered a constraint to planning consent for the development.

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<sup>19</sup> Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

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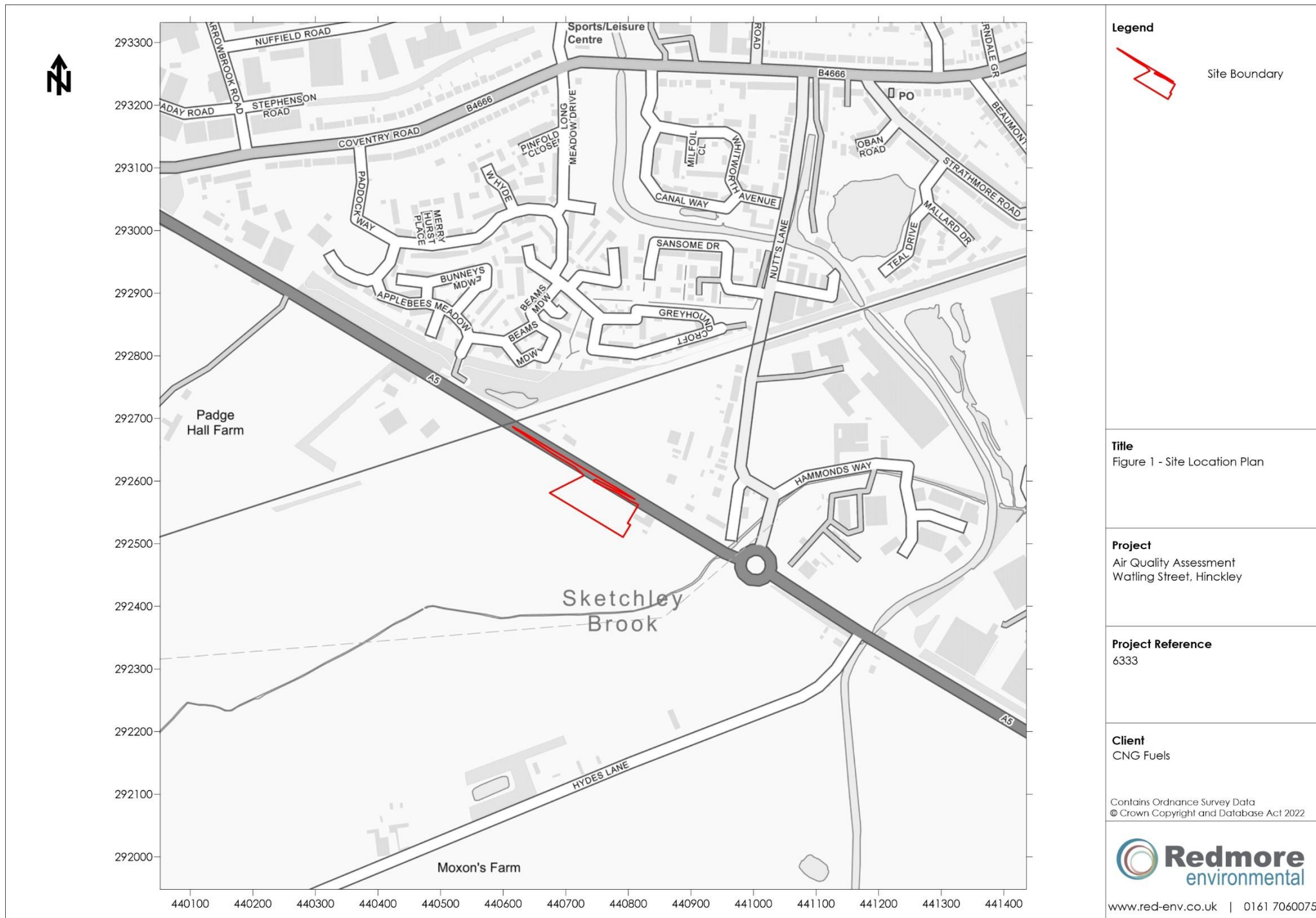
## 7.0 **ABBREVIATIONS**

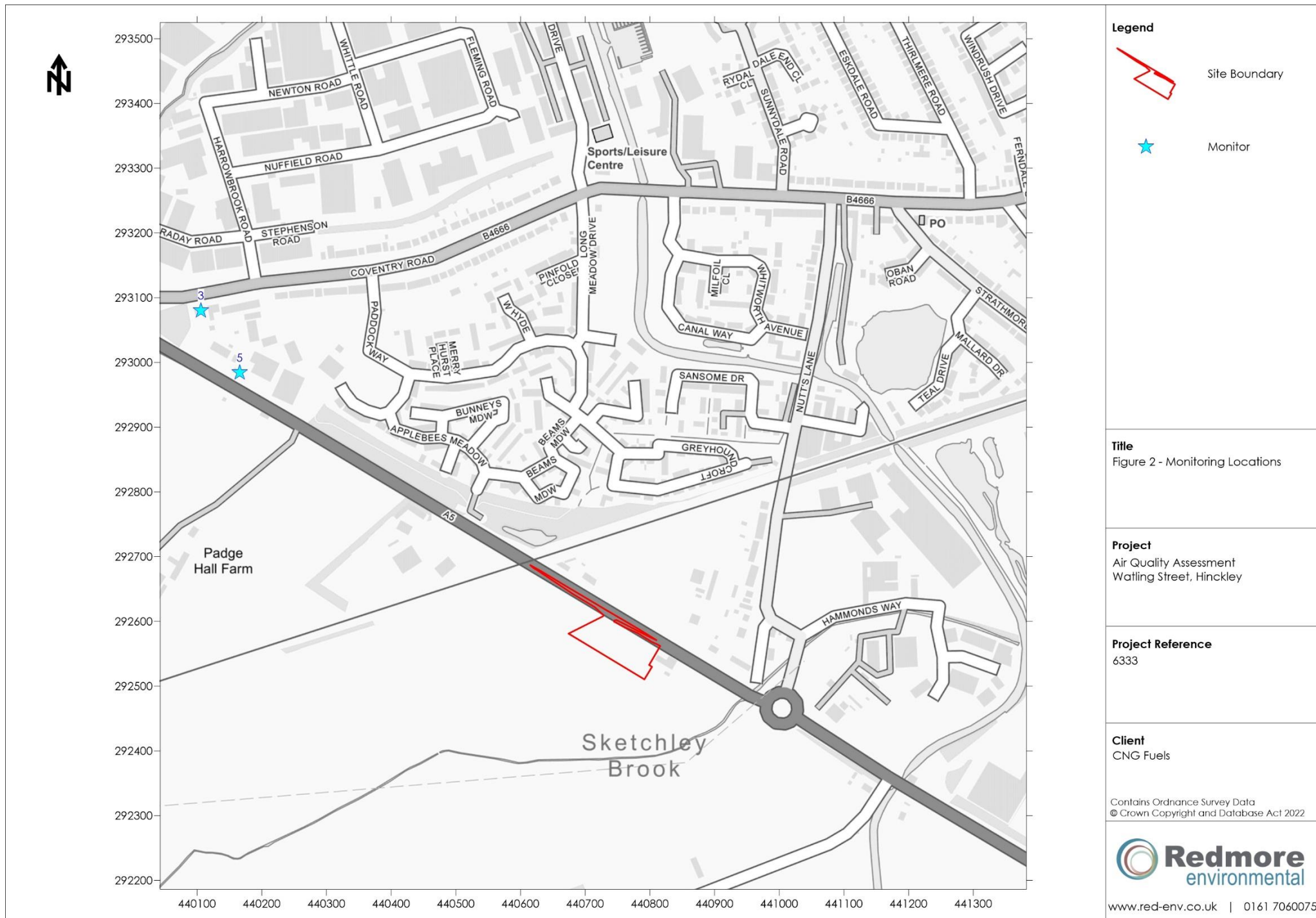
|                   |                                                                    |
|-------------------|--------------------------------------------------------------------|
| AADT              | Annual Average Daily Traffic                                       |
| AQLV              | Air Quality Limit Value                                            |
| AQMA              | Air Quality Management Area                                        |
| AQO               | Air Quality Objective                                              |
| AQS               | Air Quality Strategy                                               |
| Bio-CNG           | Bio-Compressed Natural Gas                                         |
| CO <sub>2</sub>   | Carbon dioxide                                                     |
| DEFRA             | Department for Environment, Food and Rural Affairs                 |
| DMP               | Dust Management Plan                                               |
| DPD               | Development Plan Document                                          |
| HBBC              | Hinckley and Bosworth Borough Council                              |
| HDV               | Heavy Duty Vehicle                                                 |
| HGV               | Heavy Goods Vehicle                                                |
| IAQM              | Institute of Air Quality Management                                |
| LA                | Local Authority                                                    |
| LAQM              | Local Air Quality Management                                       |
| LDV               | Light Duty Vehicles                                                |
| NGR               | National Grid Reference                                            |
| NO <sub>2</sub>   | Nitrogen dioxide                                                   |
| NO <sub>x</sub>   | Oxides of nitrogen                                                 |
| NPPF              | National Planning Policy Framework                                 |
| NPPG              | National Planning Practice Guidance                                |
| PM <sub>10</sub>  | Particulate matter with an aerodynamic diameter of less than 10µm  |
| PM <sub>2.5</sub> | Particulate matter with an aerodynamic diameter of less than 2.5µm |

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**Figures**

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**Appendix 1 - Curricula Vitae**

### KEY EXPERIENCE:

Jethro is a Chartered Environmentalist and Director of Redmore Environmental with specialist experience in the air quality and odour sectors. His key capabilities include:

- Production and management of Air Quality, Dust and Odour Assessments for a wide-range of clients from the retail, residential, infrastructure, commercial and industrial sectors.
- Production and co-ordination of Environmental Permit applications for a variety of industrial sectors.
- Detailed dispersion modelling of road vehicle and industrial emissions using ADMS-Roads, ADMS-6, AERMOD-PRIME and BREEZE-ROADS. Studies have included impact assessment of ground level pollutant and odour concentrations and assessment of suitability of development sites for proposed end-use.
- Project management and co-ordination of Environmental Impact Assessments and scoping reports for developments throughout the UK.
- Provision of expert witness services at Planning Inquiries.
- Design and project management of pollutant monitoring campaigns.
- Co-ordination and management of large-scale multi-disciplinary projects and submissions.
- Provision of expert advice to local government and international environmental bodies, as well as involvement in production of industry guidance.

### SELECT PROJECTS SUMMARY:

#### Industrial

Shanks Waste Management - Odour Assessments of two waste management facilities to support Environmental Permit Applications.

Tatweer Petroleum - dispersion modelling of Bahrain oil field.

Doha South Sewage Treatment Works - AQA for works extension in Qatar.

IRIS Environmental Appraisal Report Reviews, Isle of Man Government - odour assessment reviews.

Lankem, Greater Manchester - Environmental Permit Application for chemical manufacturing plant.

Newport Docks Bulk Drying, Pelleting and CHP Facility - air quality EIA for gas CHP.

Springshades, Leicester - Environmental Permit Variation Application for textile manufacturing plant.

Valspar, Chester - Odour Assessment and production of Odour Management Plan for a paint manufacturing plant in response to neighbour complaints.

Agrivert - dispersion modelling of odour and CHP emissions from numerous AD plants.

James Cropper Paper Mill, Cumbria - air quality EIA, Environmental Permit Variation and Human Health Risk Assessment for new biomass boiler adjacent to SSSI.

Rigg Approach, Leyton - Air Quality Assessment in support of waste transfer site.

Lynchford Lane Waste Transfer Station - biomass facility energy recovery plant.

Barnes Wallis Heat and Power, Cobham - biomass facility adjacent to AQMA.

#### Residential

Wood St Mill, Bury - residential development adjacent to scrap metal yard.

Hyams Lane, Holbrook - Odour Assessment to support residential development adjacent to sewage works.

North Wharf Gardens, London - peer review of EIA undertaken for large residential development.

Loxford Road, Alford - Air Quality EIA for residential development, included consideration of impacts from associated package sewage works

Elephant and Castle Leisure Centre - baseline AQA for redevelopment.

Carr Lodge, Doncaster - EIA for large residential development.

Queensland Road, Highbury - residential scheme including CHP.

Bicester Ecotown - dispersion modelling of energy centre.

Castleford Growth Delivery Plan - baseline air quality constraints assessment for town redevelopment.

York St, Bury - residential development adjacent to AQMA.

Temple Point Leeds - residential development adjacent to M1.

#### Commercial and Retail

Etihad Stadium - Air Quality EIA for the extension to the capacity of the Etihad Stadium, Manchester.

Wakefield College - redevelopment of city centre campus in AQMA.

Manchester Airport Cargo Shed - commercial development.

Manchester Airport Apron Extension - EIA including aircraft emission modelling.

National Youth Theatre, Islington - redevelopment to provide new arts space and accommodation.