

# Air Quality Baseline Assessment

Halsnead Masterplan SPD

January 2017

Knowsley Metropolitan Borough Council



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# 1 Introduction

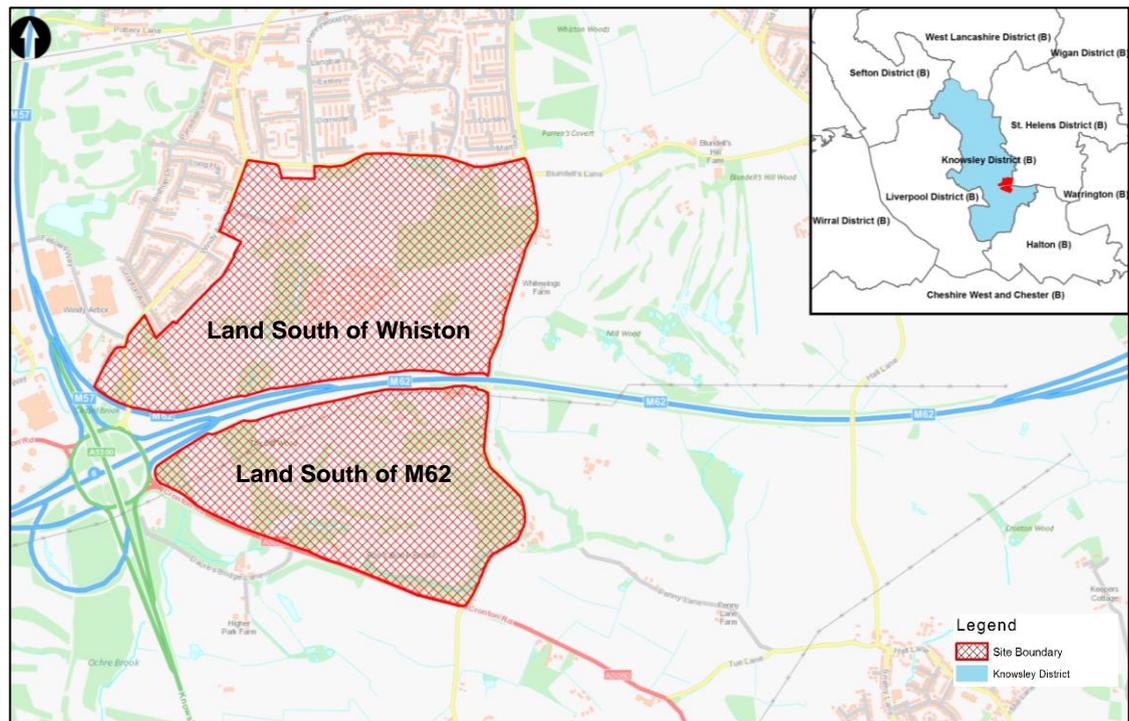
## 1.1 Background

- 1.1.1 Mott MacDonald and Turley have been commissioned by Knowsley Metropolitan Borough Council (KMBC) to produce a masterplan Supplementary Planning Document (SPD) to help guide delivery of a Sustainable Urban Extension (SUE), covering two sites formerly known as “Land south of Whiston” located to the north of the M62 as well as “Land south of the M62”. These two sites have collectively been termed ‘Halsnead’.
- 1.1.2 The SUE was until recently designated as Green Belt land however on adoption of the Local Plan Core Strategy (2016) it was allocated for development. The Local Plan Core Strategy (SUE2) identifies the largest SUE locations as needing additional planning guidance and the site under consideration in this report forms the largest and most complex SUE. The Local Plan identifies that this SUE has the capacity to accommodate upwards of 1,500 new homes, at least 22.5 hectares of employment land consisting primarily of B8 land-use, and a new country park.
- 1.1.3 The preparation of the masterplan is currently at baseline stage and a range of evidence has been collected from a number of different disciplines to inform an up to date evidence base for the study area. This evidence is presented within a series of coordinated studies which ensure the constraints and opportunities are fully understood to inform the development of a deliverable masterplan.

## 1.2 Site Location

- 1.2.1 The site consists of two parts, a northern part and a southern part, with the two separated by the M62. There are multiple land ownerships across the SUE making a comprehensive masterplan important to ensure that development expectations are managed and there is a common design framework to make best use of the site. The final masterplan will practically function as a planning instrument, both as a guide to developers and as a material planning consideration to help bring development proposals into conformity. Together the two parts of the site total 176 hectares of development land. The site can be seen in Figure 1.1 below.

Figure 1.1: Site Location



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1.2.2 The site is bounded by existing residential development to the west and north and by Fox's Bank Lane to the east, a rural road which provides an underpass under the M62. The south of the site is bordered by the A5080 Cronton Road, with the south eastern corner of the site being bounded by the former Cronton Colliery. Currently in the centre of the northern part of the site is Halsnead Park, a mobile home site. Adjacent to this is a medium sized pond and surrounding woodland.

### 1.3 Scope of Report

1.3.1 This report summarises the current baseline air quality conditions to assist with the preparation of the masterplan SPD. It also provides recommendation of what next steps should be undertaken. Identification of the existing baseline conditions is required to help inform mitigation measures in the masterplan. Development of the site has the potential to cause air quality impacts during

both the construction and operational phases. The suitability of the site for the introduction of new receptors also needs to be considered as if a site is likely to have poor air quality the design will need to account for this. The review of existing baseline information has been undertaken considering these potential impacts.

## 2 Key Pollutants

2.1.1 The baseline review considers concentrations of NO<sub>2</sub> and fine particulates (PM<sub>10</sub> and PM<sub>2.5</sub>) only. These are the key pollutants of concern for the site as air quality will be heavily influenced by the presence of the M62 and the M57. In addition any development on the site will contribute to concentrations of these pollutants as it will increase traffic on the local road network. There are no additional pollution sources in the vicinity of the site which could potentially lead to an exceedance of air quality objectives for any other pollutant. As such, no additional pollutants will be considered further. A description of the key pollutants is provided below.

### 2.2 Oxides of nitrogen

2.2.1 Oxides of nitrogen is a term used to describe a mixture of nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>), referred to collectively as NO<sub>x</sub>. These are primarily formed from atmospheric and fuel nitrogen as a result of high temperature combustion. The main sources in the UK are road traffic and power generation.

2.2.2 During the process of combustion, atmospheric and fuel nitrogen is partially oxidised via a series of complex reactions to NO. The process is dependent on the temperature, pressure, oxygen concentration and residence time of the combustion gases in the combustion zone. Most NO<sub>x</sub> exhausting from a combustion process is in the form of NO, which is a colourless and tasteless gas. It is readily oxidised to NO<sub>2</sub>, a more harmful form of NO<sub>x</sub>, by chemical reaction with ozone and other chemicals in the atmosphere. NO<sub>2</sub> is a yellowish-orange to reddish-brown gas with a pungent, irritating odour and is a strong oxidant.

### 2.3 Particulates

2.3.1 Particulate matter is a complex mixture of organic and inorganic substances present in the atmosphere. Sources are numerous and include power stations, other industrial processes, road transport, domestic coal burning and trans-boundary pollution. Secondary particulates, in the form of aerosols, attrition of natural materials and, in coastal areas, the constituents of sea

spray, are significant contributors to the overall atmospheric loading of particulates. In urban areas, road traffic is generally the greatest source of fine particulate matter, although localised effects are also associated with construction and demolition activity.

## 3 Applicable Legislation and Policy

### 3.1 Introduction

3.1.1 This section summarises the relevant international and national legislation in relation to air quality which are relevant to this baseline review.

### 3.2 Legislation

#### **European Union**

3.2.1 Directive 2008/50/EC [Ref 1] on ambient air quality and cleaner air for Europe was adopted in May 2008. This Directive defines limit values and dates by which they are to be achieved for the purpose of protecting human health and the environment by avoiding, reducing or preventing harmful concentrations of air pollutants.

3.2.2 Directive 2008/50/EC [Ref 1] sets out that the Limit Values apply everywhere with the exception of:

- any locations situated within areas where members of the public do not have access and there is no fixed habitation;
- in accordance with Article 2(1), on factory premises or at industrial installations to which all relevant provisions concerning health and safety at work apply; and
- on the carriageway of roads; and on the central reservations of roads except where there is normally pedestrian access to the central reservation.

#### **England**

3.2.3 The Air Quality Standards Regulations 2010 [Ref 2] came into force in June 2010; they implement the EU's Directive 2008/50/EC on ambient air quality.

3.2.4 The air quality objectives specifically for use by local authorities in carrying out their air quality management duties are set out in the Air Quality (England) Regulations 2000 [Ref 3] and the Air Quality (England) (Amendment) Regulations 2002 [Ref 4].

- 3.2.5 The air quality objectives and limit values relevant to the assessment are summarised in Table 3.1. It should be noted that the objectives only apply at locations where members of the public might reasonably be exposed to pollutants for the respective averaging periods. Further details of this are provided in Table 3.2.
- 3.2.6 Part IV of the Environment Act 1995 [Ref 5] requires that every local authority shall periodically carry out a review of air quality within its area, including likely future air quality. As part of this review, the authority must assess whether air quality objectives are being achieved, or likely to be achieved within the relevant periods. Any parts of an authority’s area where the objectives are not being achieved, or are not likely to be achieved within the relevant period must be identified and declared as an Air Quality Management Area (AQMA). Once such a declaration has been made, Authorities are under a duty to prepare an Action Plan which sets out measures to pursue the achievement of the air quality objectives within the AQMA.

Table 3.1: Relevant Air Quality Standards

Pollutant	Averaging Period	Air Quality Standard		Attainment Date
		Concentration	Allowance	
Nitrogen Dioxide (NO <sub>2</sub> )	1-hour	200 µg/m <sup>3</sup>	18 per calendar year <sup>(d)</sup>	31 December 2005 <sup>(a)(b)</sup> 1 January 2010 <sup>(c)</sup>
	Annual	40 µg/m <sup>3</sup>	-	31 December 2005 <sup>(a)(b)</sup> 1 January 2010 <sup>(c)</sup>
Particulates (PM <sub>10</sub> )	24-hour	50 µg/m <sup>3</sup>	35 per calendar year <sup>(e)</sup>	31 December 2004 <sup>(a)(b)</sup> 1 January 2005 <sup>(c)</sup>
	Annual	40 µg/m <sup>3</sup>	-	31 December 2004 <sup>(a)(b)</sup> 1 January 2005 <sup>(c)</sup>
Particulates (PM <sub>2.5</sub> )	Annual	25 µg/m <sup>3</sup>	-	2020 <sup>(b)(f)</sup> 1st January 2010 <sup>(c)</sup>

Source: (a) Air Quality (England) Regulations 2000 as amended;  
(b) Air Quality Strategy 2007;

Notes: (c) EU Directive 2008/50/EEC on ambient air quality and cleaner air for Europe and The Air Quality Standards Regulations 2010. Derogations (time extensions) have been agreed by the EU for meeting the NO<sub>2</sub> limit values in some zones/agglomerations.

(d) Can be expressed as the 99.79th percentile of 1 hour means.

(e) Can be expressed as the 90.41st percentile of 24 hour means.

(f) Also a 'Target' of 15% reduction in annual mean concentrations at urban background between 2010 and 2020.

Table 3.2: Locations Where the Air Quality Objectives Apply

Averaging period	Objectives should apply at:	Objectives should not apply at:
Annual	All locations where members of the public might be regularly exposed. Building façades of residential properties, schools, hospitals, care homes etc.	Building façades of offices or other places of work where members of the public do not have regular access. Hotels, unless people live there as their permanent residence. 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.
24 Hour	All locations where the annual mean objective would apply, together with hotels. 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	All locations where the annual mean and 24 and 8-hour mean objectives apply. Kerbside sites (for example, pavements of busy shopping streets).	Kerbside sites where the public would not be expected to have regular access.

Averaging period	Objectives should apply at:	Objectives should not apply at:
	<p>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.</p> <p>Any outdoor locations where members of the public might reasonably be expected to spend one hour or longer.</p>	

Source: [Ref 6]

### 3.3 Policy

#### UK Air Quality Strategy

- 3.3.1 The Environment Act 1995 requires the UK Government to produce a national Air Quality Strategy (AQS)<sup>1</sup>. The AQS establishes the UK framework for air quality improvements. Measures agreed at the national and international level are the foundations on which the strategy is based. The first Air Quality Strategy was adopted in 1997 and replaced by the Air Quality Strategy for England, Scotland, Wales and Northern Ireland published in January 2000. The 2000 Strategy has subsequently been replaced by the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007.
- 3.3.2 The air quality objectives in the AQS are a statement of policy intentions and policy targets. As such, there is no legal requirement to meet these objectives

<sup>1</sup> Air Quality Strategy, 2007

except in as far as they mirror any equivalent legally binding limit values in EU Directives or English Regulations.

### **National Planning Policy Framework**

- 3.3.3 The National Planning Policy Framework<sup>2</sup> sets out the government's planning policies for England. With regard to air quality the Policy states at paragraph 109 that:

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

- 3.3.4 And at paragraph 124 that:

*“Planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative effects on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan.”*

- 3.3.5 On 6 March 2014, the Department for Communities and Local Government (DCLG) published a national planning practice guidance web-based resource. The National Planning Guidance includes a dedicated section on 'Air Quality'. It notes that, for new planning applications, the local planning authority may want to know about:

*“the 'baseline' local air quality;*

- whether the proposed development could significantly change air quality during the construction and operational phases; and/or*

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<sup>2</sup> Communities and Local Government (2012), National Planning Policy Framework

- *whether there is likely to be a significant increase in the number of people exposed to a problem with air quality, such as when new residential properties are proposed in an area known to experience poor air quality."*

3.3.6 It also states the following in relation to determining whether air quality is relevant to a planning decision:

*"Concerns could arise if the development is likely to generate air quality impact in an area where air quality is known to be poor. They could also arise where the development is likely to adversely impact upon the implementation of air quality strategies and action plans and/or, in particular, lead to a breach of EU legislation (including that applicable to wildlife)."*

### **Local Planning Policy**

3.3.7 KMBC adopted the Local Plan Core Strategy<sup>3</sup> in January 2016 which sets out their vision, objectives and policies which will guide development within Knowsley until 2028.

3.3.8 Policy "CS2 – Development Principles" is relevant to air quality and states:

*"Recognise environmental limits, protect and enhance environmental assets, enhance local character and promote quality of place by:*

*e) Mitigating potential negative impacts of traffic growth and road traffic on highway safety, air quality, noise and health*

*j) Minimising negative impact upon flood risk, air quality, water quality land quality, soil quality and noise and vibration levels and ensuring any negative impacts are appropriately mitigated*

*Development that will have an unacceptable impact upon any of the above will only be permitted where the benefits of the proposal clearly outweigh the harm."*

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<sup>3</sup> Knowsley Metropolitan Borough Council Local Plan Core Strategy, 2016.

## 4 Baseline Information

### 4.1 Overview

4.1.1 Information on air quality in the UK can be obtained from a variety of sources including Local Authorities, national network monitoring sites and other published sources. The site is located within KMBC, on the border of St Helens Metropolitan Borough Council (SHMBC). For the purposes of this assessment, data has been obtained from Department for Environment, Food and Rural Affairs (Defra) Air Information Resource (AIR) website [Ref 7], KMBC's latest review and assessment report [Ref 8] and SHMBC's Review and Assessment [Ref 9]. The most recent full year of monitoring data available from KMBC and SHMBC is for 2015.

### 4.2 Baseline data with respect to EU Limit Values

4.2.1 DEFRA uses the Pollution Climate Mapping (PCM) model to report compliance with the EU limit values. The PCM model provides NO<sub>2</sub> concentrations for a number of roads across the UK for a number of future years. The PCM model data, released by DEFRA in 2015, has modelled concentrations incorporating the DEFRA action plan measures for 2013 (reference year), 2020 and 2025, with projected concentrations decreasing year on year in response to anticipated improvements in vehicle emissions. PCM data for the year 2014 and previous years can also be obtained from the DEFRA website.

4.2.2 There are no PCM links adjacent to the site, in addition PCM links in the surrounding area are currently below the limit values. As these are predicted to reduce further in future years it would not be expected that additional mitigation in relation to exceedences of the limit values would be required. However this should be reviewed again at the assessment stage to confirm this when additional traffic generation is known.

### 4.3 Baseline data with respect to air quality objectives

#### **Overview of Air Quality Management Areas**

4.3.1 Currently within KMBC there are no AQMAs declared for exceedences of the NO<sub>2</sub> or PM<sub>10</sub> air quality objectives. In addition all pollutants required to be

assessed as part of the Environment Act within KMBC have met all relevant air quality objectives since the first round of Review and Assessment carried out between 2000 and 2002.

- 4.3.2 Figure 4.1 presents current AQMAs that have been declared in the surrounding Local Authorities in relation to the site. The figure demonstrates that the site is within close proximity to three existing AQMAs (located in Halton Borough Council (HBC), St Helens Metropolitan Borough Council (SHMBC) and Liverpool City Council (LCC)).
- 4.3.3 Figure 4.2 demonstrates that there are no ecologically designated sites within close proximity of the masterplan area and no additional mitigation with respect to air quality impacts in ecologically designated sites will be required.

Figure 4.1: Air Quality Management Areas near to the Proposed Site

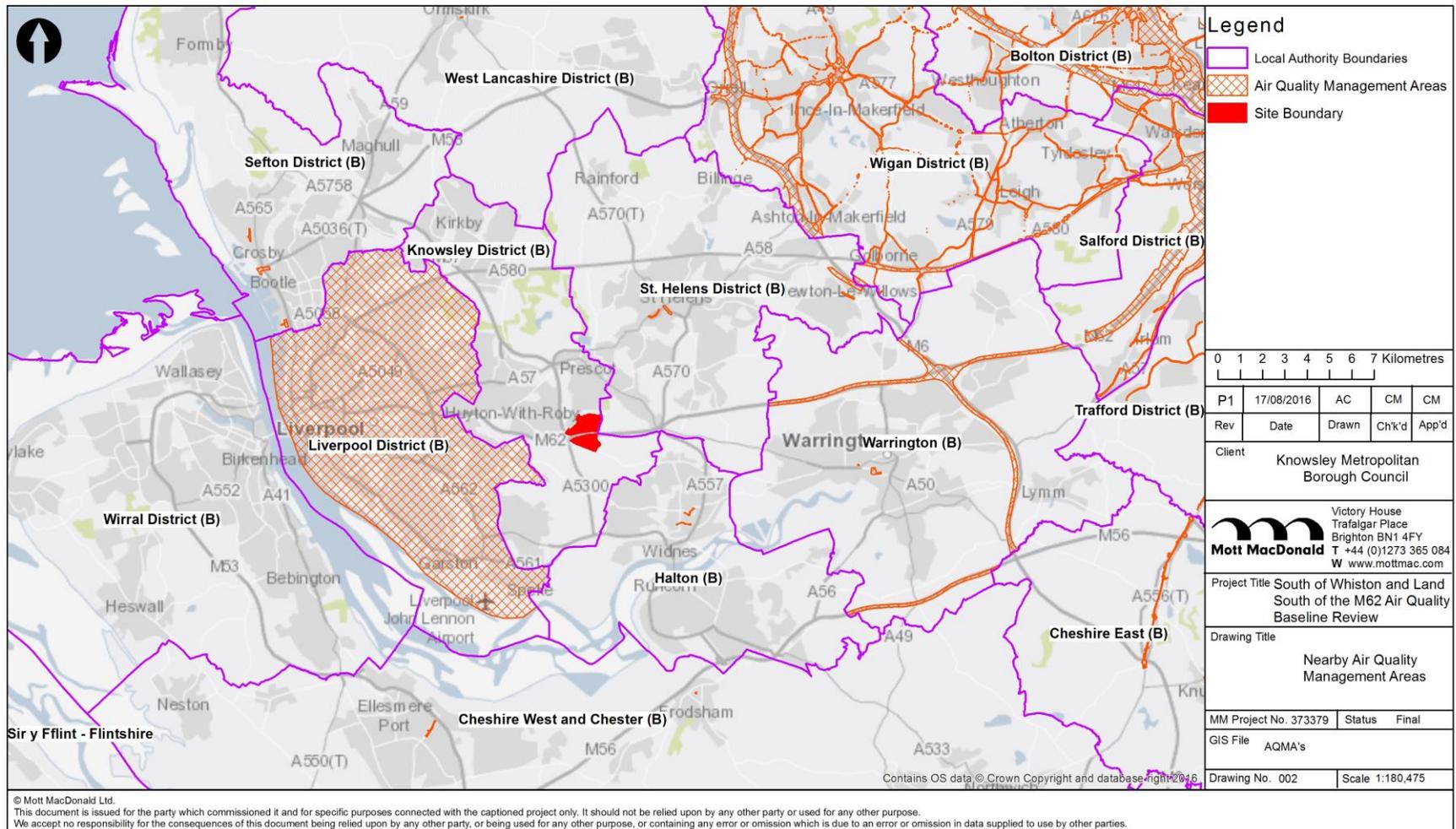
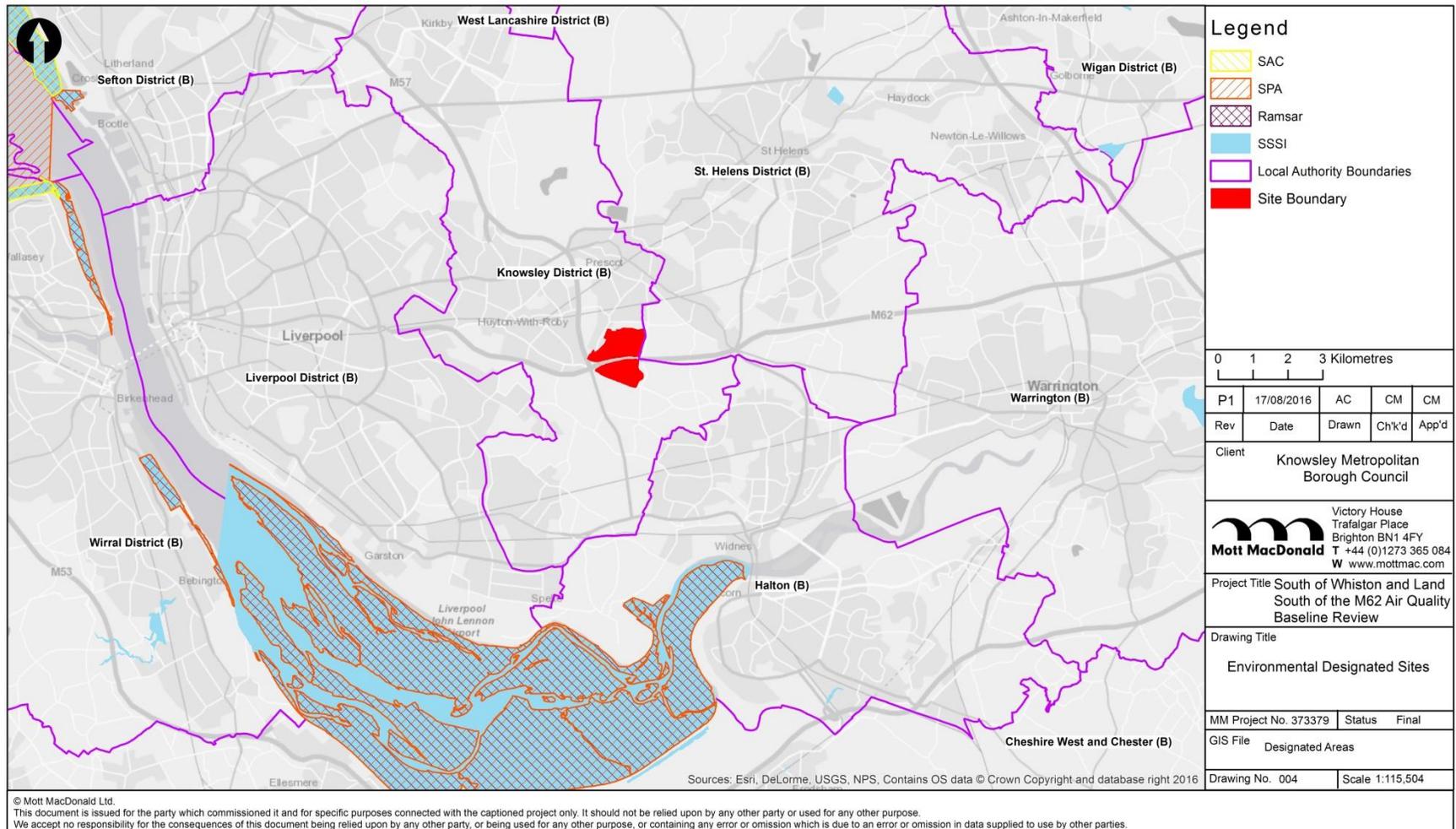


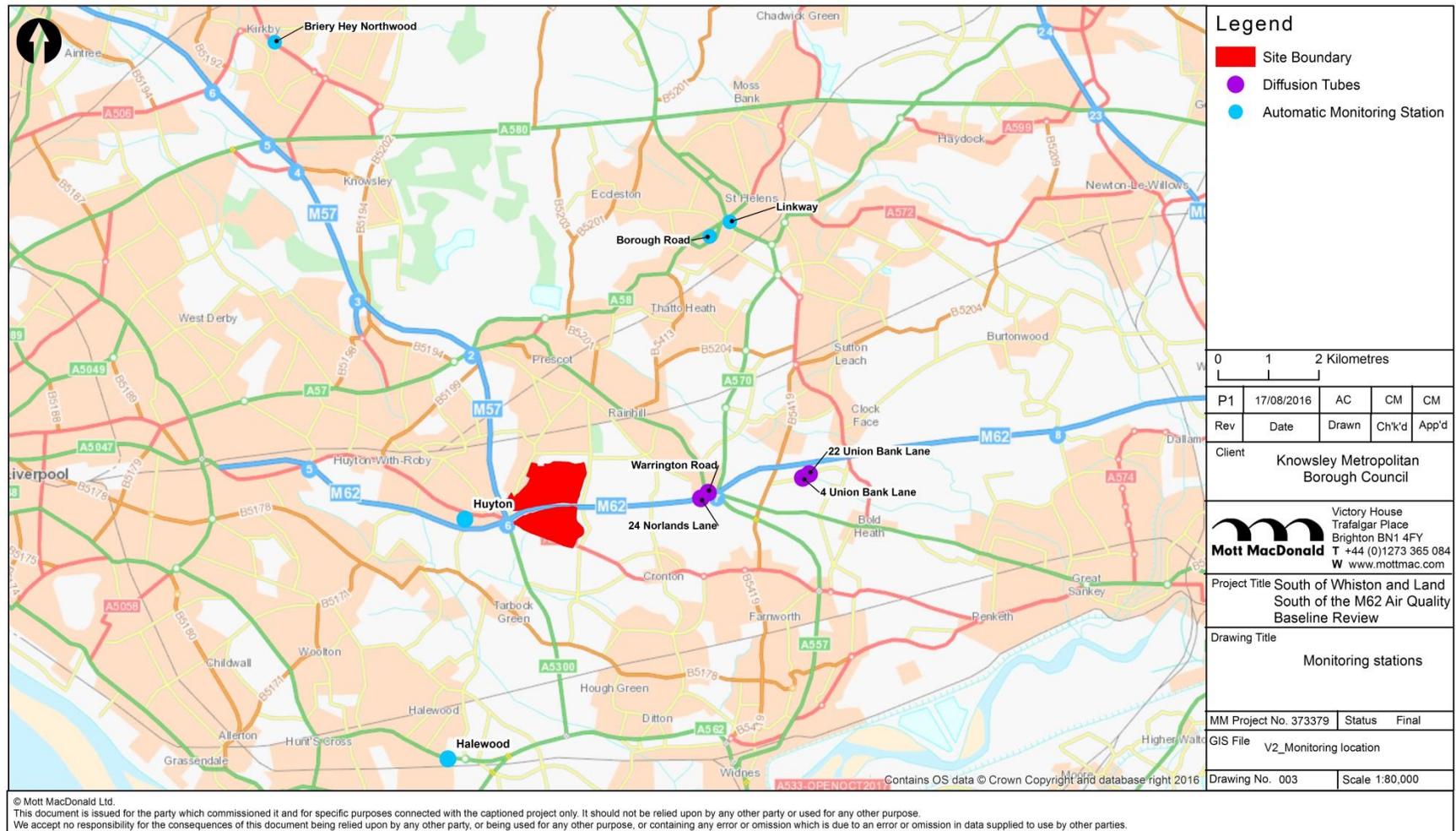
Figure 4.2: Environmental Designated Sites



#### **4.4 Overview of monitoring data**

- 4.4.1 There is one KMBC air quality monitor within close proximity to the site, located in Huyton on the junction of Cronton Road and Whitefield Lane approximately 800m west of the site. Monitoring commenced at this location in April 2016 and therefore this site does not currently have suitable data available for consideration in the baseline review at this stage.
- 4.4.2 An additional automatic monitor has been commissioned in 2016 by KMBC in Halewood, located approximately 5km south west of the site and an existing continuous monitor is located approximately 9.5km to the north. Due to the distance between these two monitors and the site, they are not considered representative of air quality concentrations at the site location.
- 4.4.3 The neighbouring authority, SHMBC has number of monitoring stations which are all located within approximately 5 km of the site. The locations of these are presented in Figure 4.3.
- 4.4.4 Data from all of these sites have been reviewed and presented to provide an indication of baseline concentrations in the area surrounding the site.

Figure 4.3: Relevant air quality monitoring sites



4.4.5 Table 4.1 presents monitored annual mean concentrations at the existing continuous monitoring station in KMBC and the two closest continuous monitoring stations in SHMBC.

4.4.6 The NO<sub>2</sub> monitoring result presented in Table 4.1 and Table 4.2 shows the KMBC Northwood urban background monitor and the St Helens Borough Road roadside monitor both have been meeting the relevant annual mean and hourly mean air quality objectives for NO<sub>2</sub>. The data shows that the St Helens Linkway monitoring site has recorded concentration of NO<sub>2</sub> above the annual mean objective in 2013. It should be noted that this monitoring location is adjacent to a city centre car park and within close proximity to a busy junction on the A58 and as such, is not likely to be representative of pollutant concentrations at the site.

Site Name	Site Type	National Grid Reference		Pollutant	Distance from Masterplan Site (km)	Annual Concentration (2013)
		X	Y			
Briery Hey Northwood	Urban background	341774	398802	NO <sub>2</sub>	9.5	20
				PM <sub>10</sub>		23
Linkway	Roadside	350815	395265	NO <sub>2</sub>	5.5	38
				PM <sub>10</sub>		21
Borough Road	Roadside	350415	394976	NO <sub>2</sub>	5	NA

4.4.7 Table 4.1 and

4.4.8

4.4.9

4.4.10 Table 4.2 show that the PM<sub>10</sub> results for all the monitoring sites are well below the relevant 24 hour and annual mean PM<sub>10</sub> objectives.

- 4.4.11 This monitoring data indicates that pollutant concentrations away from busy roads are likely to be below the air quality objectives while concentrations near busy roads or in the urban areas have the potential to be above the air quality objectives.

Table 4.1: KMBC and St Helens Automatic Monitoring Data for annual mean NO<sub>2</sub> and PM<sub>10</sub>

Site Name	Site Type	National Grid Reference		Pollutant	Distance from Masterplan Site (km)	Annual Mean Concentration (µg/m <sup>3</sup> )			
		X	Y			2012	2013	2014	2015
Briery Hey Northwood	Urban background	341774	398802	NO <sub>2</sub>	9.5	20	21	27	19
				PM <sub>10</sub>		23	25	18	17
Linkway	Roadside	350815	395265	NO <sub>2</sub>	5.5	38	41	37	38
				PM <sub>10</sub>		21.4	24	21	19
Borough Road	Roadside	350415	394976	NO <sub>2</sub>	5	NA	35.5	35	38

Source: KMBC and St Helens Review and Assessment. Note: Bold indicates exceedance of annual mean objective.

Table 4.2: KMBC Automatic Monitoring Data for the number of exceedences of the one hour NO<sub>2</sub> and 24 hour PM<sub>10</sub> threshold value

Site Name	Site Type	National Grid Reference		Pollutant	Distance from Masterplan Site(km)	Annual Mean Concentration (µg/m <sup>3</sup> )			
		X	Y			2012	2013	2014	2015
Briery Hey Northwood	Urban background	341774	398802	NO <sub>2</sub>	9.5	0	0	0	0
				PM <sub>10</sub>		14	8	4	0
Linkway	Roadside	350815	395265	NO <sub>2</sub>	5.5	9	2	0	0
				PM <sub>10</sub>		3	2	5	8
Borough Road	Roadside	350415	394976	NO <sub>2</sub>	5	NA	0	0	0

Source: KMBC and St Helens Review and Assessment

- 4.4.12 KMBC ceased the use of diffusion tubes to monitor NO<sub>2</sub> concentrations at all sites in 2013; this decision was supported by Defra and justified on the basis that air quality within the borough was generally good as indicated by having no AQMAs.
- 4.4.13 SHMBC carries out diffusion tube monitoring at a number of locations within their boundary. There are four monitoring locations that are considered to represent similar conditions to the masterplan area as they are located close to the M62 motorway and therefore provide an indication of air quality for the site. Table 4.3 presents the most recent published monitoring data for these locations.
- 4.4.14 The monitoring data shows that concentrations are generally well below the annual mean NO<sub>2</sub> objective except for the Warrington Road diffusion tube. The Warrington Road diffusion tube has recorded elevated concentrations which are above or just below the annual mean objective. The difference in monitored values is likely to be due to the relative locations to the M62. The Warrington Road tube is located very close to the motorway and only 4.8 metres from the M62 whilst the other diffusion tubes are located further away from the M62.
- 4.4.15 This data indicates that the annual mean NO<sub>2</sub> concentrations at the site are likely to be close to or above the annual mean objectives close to the M62 and M57 but are likely to reduce with distance from these roads to levels below the objectives.

Table 4.3: Relevant NO<sub>2</sub> Diffusion Tube Data

Site ID and Name	Site Type	National Grid Reference		Distance from Masterplan Site (km)	Bias Adjusted Annual Mean Concentration µg/m <sup>3</sup>		
		X	Y		2013 (0.80)	2014 (0.80)	2015 (0.81)
24 Norlands Lane	Motorway	350239	389824	2.4	23.9	28.2	24.1
22 Union Bank Lane	Motorway	352391	390301	4.6	27.9	26.7	26.1
4 Union Bank Lane	Roadside/ Motorway	352262	390226	4.5	26.6	26.0	23.5
Warrington Road	Roadside/ Motorway	350386	389936	2.6	39.9	<b>40.7</b>	36.7

Source: St Helens Review and Assessment

Note: Bold indicates exceedance of annual mean objective  
Bias Adjustment Factor shown in brackets below year  
Data Capture at all sites above 75% for all years

### Defra Projected Background Concentrations

- 4.4.16 Defra provides estimates of background pollution concentrations for NO<sub>x</sub>, NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> across the UK for each one kilometre grid square for every year from 2013 to 2030. Future year projections have been developed from the base year for the background maps which is currently 2013. The maps include a breakdown of background concentrations by emission source, including road and industrial sources which have been calibrated against 2013 UK monitoring data.
- 4.4.17 Table 4.4 and Figure 4.4. present the predicted background concentrations across the site for 2016. The data shows that background concentration for all pollutants at the site are well below the relevant air quality objectives. This indicates that the main sources of pollution for the site will be local roads, particularly the M62 and the M57.

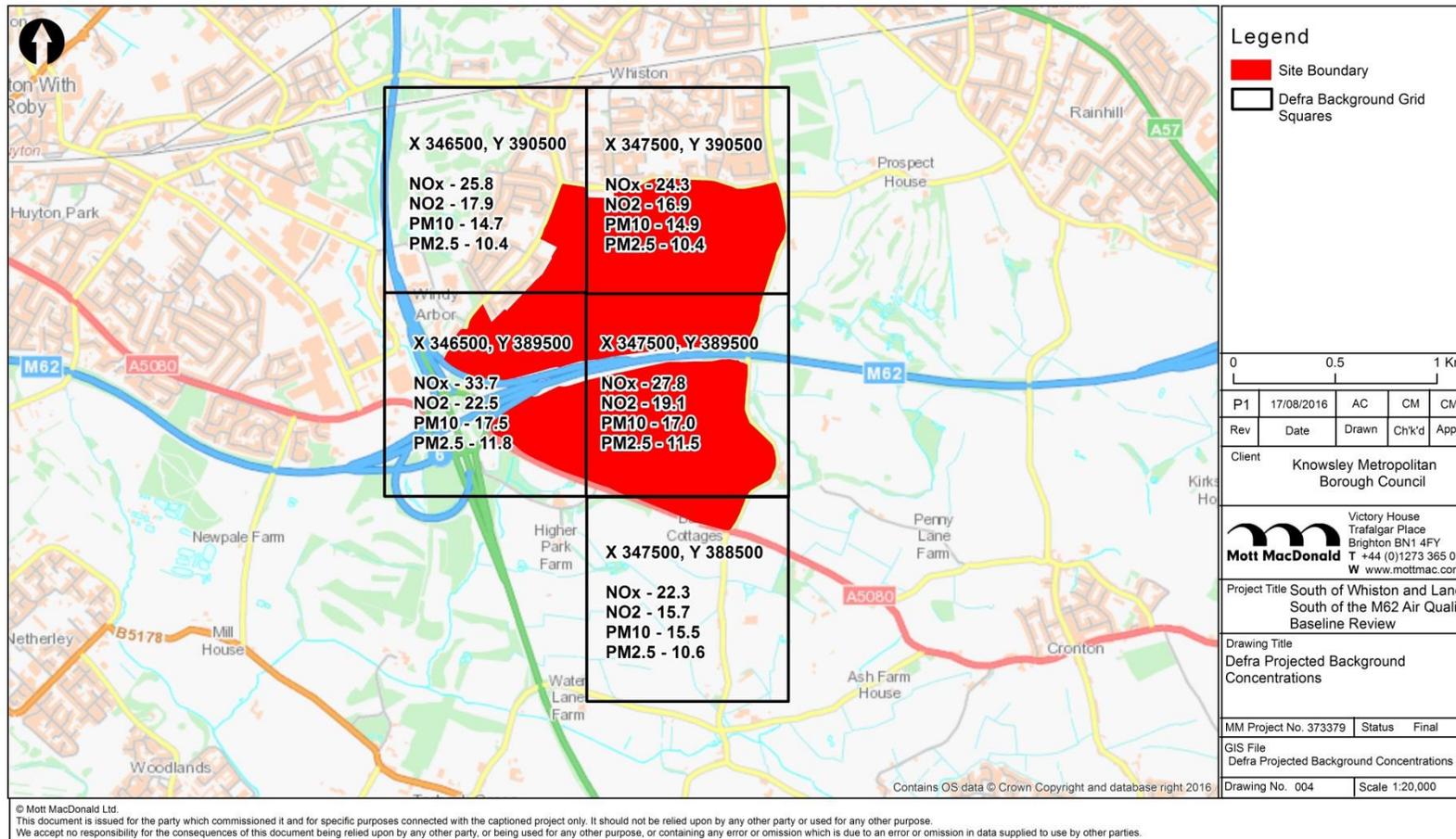
Table 4.4: Defra Projected Background Concentrations for 2016 ( $\mu\text{g}/\text{m}^3$ )

Grid Square	NO <sub>x</sub>	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Annual Mean AQO	N/A	40 $\mu\text{g}/\text{m}^3$	40 $\mu\text{g}/\text{m}^3$	25 $\mu\text{g}/\text{m}^3$
X 346500, Y 390500	25.8	17.9	14.7	10.4
X 346500, Y 389500	33.7	22.5	17.5	11.8
X 347500, Y 390500	24.3	16.9	14.9	10.4
X 347500, Y 389500	27.8	19.1	17.0	11.5
X 347500, Y 388500	22.3	15.7	15.5	10.6

Source: [Ref 7]

Note: Derived from data relating to Ordinance Survey relevant Grid Squares.

Figure 4.4: Defra Projected Background Concentrations



### **Proposed Mitigation**

- 4.4.18 To mitigate against potential exposure of new residents to elevated pollutant concentrations, it is recommended that development should begin at a minimum distance of 80-100m from the motorway. This distance is an interim measure and will need to be confirmed following detailed air quality modelling.
- 4.4.19 The design, specification and layout of the properties should be considered in relation to air quality to minimise exposure to air pollutants – for example having outside spaces facing away from highways.

## 5 Summary

- 5.1.1 A review of available reports from KMBC concludes that air quality around the site is generally good as no AQMAs have been declared.
- 5.1.2 A review of background data indicates that the main sources of pollution for the site will be local roads, particularly the M62 and the M57.
- 5.1.3 Based on the monitoring data available it is likely that annual mean NO<sub>2</sub> concentrations at the site have the potential to be close to or above the annual mean objectives for NO<sub>2</sub> at locations close to the M62 and M57. These concentrations are likely to reduce with distance from these roads and be below the objectives across the majority of the site.
- 5.1.4 It is recommended that a more detailed air quality assessment using air quality modelling is undertaken to determine NO<sub>2</sub> concentrations across the site to inform the planning application. This would ensure that residential houses are located at a suitable distances from the M62 and M57 where there is no likelihood of exceedences of air quality standards.
- 5.1.5 Given the size of the site it is recommended that the assessment quantifies the impacts of the additional road traffic generated on local air quality and determines suitable mitigation measures to reduce this impact where relevant. In particular this should look at impacts on nearby AQMAs.
- 5.1.6 There is also the potential for emissions associated with possible processes undertaken within the proposed employment area. It is expected that this will predominantly consist of B8 properties which are unlikely to generate emissions to air. This will be confirmed within the detailed air quality assessment and the impact of any emission sources will be assessed at both existing and proposed receptor locations.
- 5.1.7 Additionally, given the large scale and duration of the development site, there is the potential for elevated PM<sub>10</sub> and dust emissions during the construction phase. It is therefore recommended that a construction dust assessment is undertaken to assess potential construction phase impacts.