

**GALLAGHER ESTATES
FORMER COPYHOLD WORKS
A25 NUTFIELD ROAD, REDHILL**

AIR QUALITY SCREENING

FEBRUARY 2018



the journey is the reward

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**Gallagher Estates
Former Copyhold Works
A25 Nutfield Road, Redhill
Air Quality Screening**

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1 Introduction

- 1.1 Mayer Brown has been appointed by Gallagher Estates to provide a review of air quality matters, in relation to the proposed residential development at the Former Copyhold Works, located to the north of A25 Nutfield Road to the east of Redhill.
- 1.2 The land is proposed to be allocated by Reigate and Banstead Borough Council in its Development Management Plan (DMP). Details of the relevant policy are set out in Chapter 2 of this report.
- 1.3 The site is identified as ERM2/ERM3, with capacity for new housing development comprising approximately 210 residential units and may include a new two-form entry primary school for children from this development and other surrounding areas and new housing schemes. Vehicular access would be taken directly from the A25 Nutfield Road.
- 1.4 Without the inclusion of a primary school, the site is being promoted on the basis of accommodating approximately 300 dwellings.
- 1.1 The following Air Quality Screening (AQS) aims at establishing whether the site's location is considered suitable for the proposed use and whether any significant air pollution effects are likely to be expected.

2 Legislation and Policy Content

The Air Quality Strategy

- 2.1 Part IV of the Environment Act 1995¹ requires local authorities to review and assess the air quality within their boundaries. As a result, the Air Quality Strategy (AQS) was adopted in 1997, with national health based standards and objectives set out for the then, key eight air pollutants of benzene, 1-3 butadiene, carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter and sulphur dioxide.
- 2.2 The purpose of the AQS was to identify areas where air quality was unlikely to meet the objectives prescribed in the regulations. The strategy was reviewed in 2000 and the amended AQS for England, Scotland, Wales and Northern Ireland (2000) was published. This was followed by an Addendum in February 2003 and in July 2007 an updated AQS was published².
- 2.3 The AQS sets standards and objectives for pollutants to protect human health, vegetation and ecosystems. The pollutant objectives are the future dates by which each standard is to be achieved, taking into account economic considerations, practical and technical feasibility.
- 2.4 The AQS also sets out a framework for Local Authorities to reduce adverse health effects from air pollution and ensures that international commitments are met (the Local Air Quality Management system).
- 2.5 Air quality objectives and limit values that currently apply in the United Kingdom can be divided into four groups:
- United Kingdom air quality objectives set down in regulations for the purpose of Local Air Quality Management (LAQM);
 - United Kingdom national air quality objectives not included in regulations;
 - European Union (EU) Limit Values transcribed into United Kingdom legislation; and
 - Guidelines: e.g. World Health Organization (WHO) guidelines.

¹ Department for Environment, Food and Rural Affairs (1995) The Environment Act. HMSO, London.

² Department of the Environment, Transport and the Regions (2007). The Air Quality Strategy for England, Scotland, Wales and Northern Island (Volume 2). HMSO, London.

- 2.6 The main air quality pollutants of concern with regards to new developments such as the one proposed at this Application Site are the traffic related pollutants of Nitrogen Dioxide (NO₂) and Particulate Matter of size 10 and 2.5 microns (PM₁₀ and PM_{2.5}).
- 2.7 The relevant air quality standards and objectives are presented in **Table 2.1** below.

Pollutant	Air Quality Objectives		Date to be Achieved by
	Concentration	Measured As	
Nitrogen Dioxide (NO ₂)	200 µg m ⁻³	1-hour mean not to be exceeded more than 18 times per year	31/12/2005
	40 µg m ⁻³	Annual mean	31/12/2005
Particles (PM ₁₀)	50 µg m ⁻³	24-hour mean not to be exceeded more than 35 times per year	31/12/2004
	40 µg m ⁻³	Annual mean	31/12/2004
Particles (PM _{2.5})	25 µg m ⁻³	Annual mean (target)	2020
	15% cut in annual mean (urban background exposure)		2010 - 2020

Table 2.1: Air Quality Objectives (England)

- 2.8 The LAQM Technical Guidance (2016)³ outlines the review and assessment process to be followed by Local Authorities in relation to air quality, if when following a detailed assessment, a Local Authority considers that one or more of the air quality objectives is not being met, an Air Quality Management Area (AQMA) must be declared.
- 2.9 In response to the issuing of an AQMA, an Air Quality Action Plan (AQAP) must be submitted within 12 - 18 months by the Local Authority setting out the measures intended to reach the exceeded air quality objectives.

[Air Quality Standards Regulations, 2010](#)

- 2.10 The air quality limit values set out in EU Directive (2008/50/EC, 2008) are transposed in English law by the Air Quality Standards Regulations (2010).⁴ This imposes duties on the Secretary of State relating to achieving the limit values.

³ Department of Environment, Food and Rural Affairs (2016). Local Air Quality Management Technical Guidance, TG (16). HMSO, London.
⁴ UK Parliament (2010). The Air Quality Standards Regulations 2010, SI 2010/1001. HMSO, London.

[The National Planning Policy Framework \(2012\)](#)⁵

2.11 The purpose of the National Planning Policy Framework (NPPF) is to help achieve sustainable development within the planning sector. Section 11 of the policy refers to the conservation and enhancement of the natural environment and identifies air pollution as a development risk.

2.12 Section 11: Conserving and Enhancing the Natural Environment also states 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;’

2.13 The NPPF states that planning policies should take into account the presence of any AQMAs and the cumulative impact of individual sites whilst maintaining compliance with the LAQM procedure, and states that *‘Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan’*.

[Planning Policy Guidance \(2014\)](#)

2.14 The National Planning Policy Guidance (NPPG)⁶ details the circumstances when air quality would be relevant to a planning application. Considerations could include whether a development would:

- *‘Generate or increase traffic volumes or congestion, changing vehicle speeds;*
- *Introduce new sources of air pollution;*
- *Expose people to existing sources of air pollution;*
- *Give rise to unacceptable impacts during construction for sensitive receptors; and*
- *Affect biodiversity by deposition or concentration of pollutants.’*

2.15 The NPPG provides guidance for the completion of air quality assessments, stating the importance of an assessment to be location specific, and being:

⁵ Department of Communities and Local Government (2012). National Planning Policy Framework. HMSO, London.

⁶ Department for Communities and Local Government (2014). National Planning Policy Guidance. HMSO, <http://planningguidance.planningportal.ov.uk/>

‘proportionate to the nature and scale of development proposed and the level of concern about air quality.’

2.16 The mitigation measures necessary for a development are stated to be:

‘location specific, depend on the proposed development and should be proportionate to the likely impact.’

2.17 The NPPG states:

“Whether or not air quality is relevant to a planning decision will depend on the proposed development and its location. 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)”.

[Reigate and Banstead Local Plan: Core Strategy \(2014\)](#)

2.18 Part 1 of the Local Plan (the Core Strategy) was adopted by the Council in 2014. This sets out the overall scale and location of growth that will take place in the borough between 2012 and 2027.

2.19 Under Chapter 7 – Cross cutting policies, Policy CS10 – Sustainable development states the following:

“Development will:

...

8. Be designed to minimise pollution, including air, noise and light, and to safeguard water quality...”

[Reigate and Banstead Development Management Plan – Regulation 19 Consultation Document \(2016\)](#)

2.20 The Development Management Plan will be Part 2 of the Local Plan, currently under consultation and once finalised, will set out in more detail how the Core Strategy will be delivered.

2.21 Policy DES9 of the emerging draft Reigate and Banstead Development Management Plan (DMP) states the following:

“For all types of development, across the borough:...”

4) Within areas of poor air quality (as defined by the presence of AQMAs) development must be designed to minimise the occupants' or users exposure to air pollution. This should include consideration of the following mitigation measures:

a) The provision of trees

b) The siting of development away from the street frontage and the source of pollution..."

[DMP: Sustainable Urban Extensions Allocations](#)

2.22 ERM2/ERM3 that:

"... the site is close to a major road and a landfill site, leading to potential air and noise pollution issues."

[DMP: Sustainability Appraisal Report](#)

2.23 The development land forms part of site references ERM2 "Land west of Copyhold Works" and ERM3 "Former Copyhold Works" within Reigate and Banstead Borough Council's Development Management Plan Regulation 19 Evidence Base, with the two sites combined into one (ERM2/ERM3) within the Development Management Plan. The Sustainability Appraisal Report (October 2017) includes a review of the sites in respect of air quality under Objective 14.

2.24 To ensure air quality continues to improve and noise and light pollution are reduced. A score of "-" for both sites and the following is identified:

"The site may suffer from various forms of pollution. Proximity to a landfill site and to the A25 may affect air quality and noise pollution for residents on the site. Care must be taken during construction to avoid light or noise pollution impacts on nearby residential properties, and air quality may also be slightly impacted by an increase in traffic.

Development on this site should explore mitigation options to reduce the impact of noise, light, and air pollution, both on the development itself and on nearby residential properties. A construction statement could be used to set out how construction impacts will be mitigated."

- 2.25 Objective 14 combines three environmental disciplines; light, noise and air quality. In consideration of air quality there are two aspects to this. First, the potential of the scheme to impact on existing receptors in the vicinity of the site as a result of additional traffic that would be generated. Second, the potential impact of the existing landfill on the suitability of the site for residential development, most specifically in relation to 'odour'.
- 2.26 With regard to off-site impacts, it is clear that the development will generate a quantum of additional traffic that will require detailed assessment to determine the significance of any adverse impacts, most specifically in relation to any declared AQMA's. If adverse impacts are predicted, then appropriate mitigation will need to be considered to off-set any "harm". On this basis, the development would clearly seek to have an overall neutral impact. As such, we consider that the score for this element could reasonably be assessed to score '0'.
- 2.27 With regard to odour, Air Spectrum Environmental Ltd (ASE), incorporating Spectrum Environmental Support (SES) have undertaken an odour assessment, using existing odour data, in order to try and establish whether the proposed development at Nutfield Road, is likely to be considered suitable for the proposed residential and educational use.
- 2.28 The odour assessment concludes that, whilst further detailed assessment would need to be undertaken, initial modelling undertaken reveals that odour levels within the site would be at a tolerable level. On this basis, it is considered that a score of '0' would be appropriate.

3 Significance Criteria

Construction Dust Emissions

- 3.1 Potential dust impacts associated with construction activities have been screened and suitable mitigation measures, in accordance with guidance from the IAQM and the GLA best practice documents, has been provided in Section 6 below.

Traffic Exhaust Emissions

- 3.2 The screening of traffic impacts will be carried out in accordance with guidance prepared by EPUK and IAQM in order to help establish indicative criteria, which may trigger the requirement for an air quality assessment.

The Development Will:	Indicative Criteria to proceed to an Air Quality Assessment
1. Cause a significant change in Light Duty Vehicle (LDV) traffic flows on roads with relevant receptors.	A change of LDV flows of: <ul style="list-style-type: none"> • more than 100 vehicles per day (vpd) within or adjacent to an AQMA or within 100m of an internationally or nationally designated habitat; and • more than 500 vpd elsewhere. Coupled with relevant receptors within: <ul style="list-style-type: none"> • 10m of roads with AADT flows 5,000 to 10,000 vpd; • 20m of roads with AADT flows 10,000 to 30,000 vpd; and • 30m of roads with AADT flows > 30,000 vpd.
2. Cause a significant change in Heavy Duty Vehicles (HDV) flows on local roads with relevant receptors.	A change of HDV flows of: <ul style="list-style-type: none"> • more than 25 vpd within or adjacent to an AQMA or within 100m of an internationally or nationally designated habitat; and • more than 100 vpd elsewhere. Coupled with relevant receptors within: <ul style="list-style-type: none"> • 10m of roads with AADT flows 5,000 to 10,000 vpd; • 20m of roads with AADT flows 10,000 to 30,000 vpd; and • 30m of roads with AADT flows > 30,000 vpd.
3. Cause a significant change in road alignment bringing roads closer to relevant receptors.	Where relevant receptors will be within: <ul style="list-style-type: none"> • 10m of roads with AADT flows 5,000 to 10,000 vpd; • 20m of roads with AADT flows 10,000 to 30,000 vpd; and • 30m of roads with AADT flows > 30,000 vpd.
4. Introduce a new junction near to relevant receptors.	The junction will cause vehicles to slow down and accelerate, e.g. traffic lights. Coupled with relevant receptors within 50m of the junction.
5. Introduce or change a bus station.	Where bus flows will be: <ul style="list-style-type: none"> • more than 25 vpd within or adjacent to an AQMA; and • more than 100 vpd elsewhere. Coupled with relevant receptors within: <ul style="list-style-type: none"> • 50m of the buses within the bus station.
6. Have an underground car park with extraction system.	The ventilation extract for the car park will be within 20m of a relevant receptor. Coupled with the car park having more than 100 movements per day (total in and out).
7. Have one or more substantial combustion processes.	Where the combustion unit is: <ul style="list-style-type: none"> • any centralised plant using biomass fuel; • a CHP unit > 15kWe; • any other combustion plant with thermal input > 400kWth; and • a standby emergency generator associated with a centralised energy centre.

Note – Where distances from the road are presented, they are from the edge of the nearest carriageway to the nearest relevant receptor, taking account of vertical and horizontal dimensions. Where traffic flows are presented they are Annual Average Daily Traffic (AADT) in vehicles per day (vpd). Where HDV flows are specified, they include lorries and buses. Where LDV's are specified they include cars and vans (with a gross vehicle weight \leq 3.5 tonnes).

Table 3.1: EPUK & IAQM Indicative Criteria for Proceeding to an Air Quality Assessment

3.3 If any of the above criteria are met, then the significance of air pollution impacts must be assessed. This may be either a Simple or a Detailed Assessment. In accordance with the EPUK and IAQM guidance, a Simple Assessment is one relying on already published information and without quantification of impacts, in contrast to a Detailed Assessment that must be completed with the aid of a dispersion model.

Exposure Criteria

3.4 When determining both the significance of exposure to air pollution and the levels of mitigation required, consideration should be given to the following Air Pollution Exposure Criteria (APEC) specified within the London Councils Air Quality and Planning Guidance⁷.

3.5 Whilst this guidance has been developed for London it is consistently adopted for urban areas across the UK. The guidance takes into account the now superseded Planning Policy Statement 23: Planning and Pollution Control, with a view of reducing exposure to air pollution across the whole of London and is considered relevant for this Development Site. The APEC criteria is set out in **Table 3.2** below.

	Applicable Range Nitrogen Dioxide Annual Mean	Applicable Range PM ₁₀	Recommendation
APEC – A	> 5% below national objective	Annual Mean: > 5% below national objective 24 hr: > 1-day less than national objective	No air quality grounds for refusal; however mitigation of any emissions should be considered.

⁷ London Councils. (2007) Air Quality and Planning Guidance, The London Air Pollution Planning and the Local Environment (APPLE) working group, London

APEC – B	Between 5% below or above national objective	<p>Annual Mean: Between 5% above or below national objective</p> <p>24 hr: Between 1-day above or below national objective.</p>	<p>May not be sufficient air quality grounds for refusal, however appropriate mitigation must be considered e.g., Maximise distance from pollutant source, proven ventilation systems, parking considerations, winter gardens, internal layout considered and internal pollutant emissions minimised.</p>
APEC – C	> 5% above national objective	<p>Annual Mean: > 5% above national objective</p> <p>24 hr: > 1-day more than national objective.</p>	<p>Refusal on air quality grounds should be anticipated, unless the Local Authority has a specific policy enabling such land use and ensure best endeavours to reduce exposure are incorporated. Worker exposure in commercial/industrial land uses should be considered further. Mitigation measures must be presented with air quality assessment, detailing anticipated outcomes of mitigation measures.</p>

Table 3.2: Air Pollution Exposure Criteria

3.6 It should be noted that air quality is not well suited to the rigid application of a generic significance matrix to determine the overall significance of a development and individual receptor sensitivity should also be taken into account. Therefore, professional judgement should always be employed throughout, and the assessment should take into account site specific considerations.

4 Baseline Conditions

Local Air Quality Management

- 4.1 The proposed development site falls within the jurisdiction of the Reigate & Banstead Borough Council (R&BBC).
- 4.2 Under the Air Quality Strategy, there is a duty on all Local Authorities to consider the air quality within their boundaries and prepare an annual update report.
- 4.3 Having undertaken a borough wide review and assessment of their air quality, R&BBC found that air pollution in most areas of the borough is well below the government limits for all pollutants. However, following computer modelling and further monitoring, NO₂ has been identified as a potential problem and nine Air Quality Management Areas have been subsequently declared.
- 4.4 The proposed development site is not located within any of the declared AQMAs. However, AQMA12 is located less than 500m to the west.
- 4.5 The declared AQMA is in the Redhill town centre area and covers either partially or entirely Cromwell Road, Queensway, A25 Redstone Hill between the junction with the A23 and the junction with Hillfield Road, A23 between the junction of Hooley Lane and Mill St and the A23 junction with Gloucester Road. This is illustrated in **Figure 4.1** below.

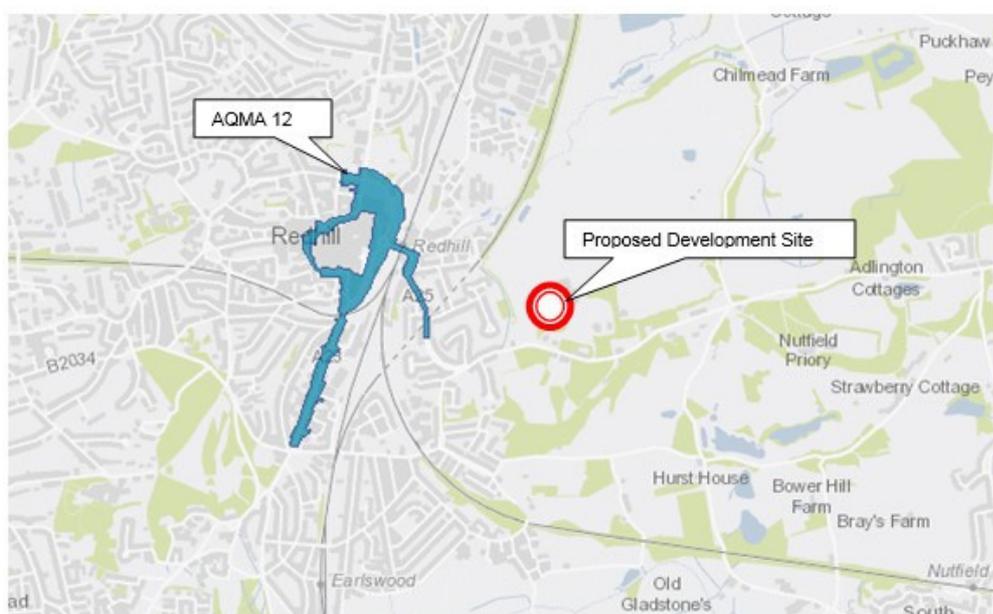


Figure 4.1: Site Location in Relation to AQMA 12

- 4.6 However, the location of AQMA12 and the conditions experienced in the vicinity i.e. town centre congestion, are not representative of the conditions expected at the proposed development site which is much more rural.

Monitoring

- 4.7 R&BBC undertakes automatic and non-automatic monitoring at various locations in Redhill.
- 4.8 The site location is typical of an urban background location, (not roadside). Therefore, in the absence of annual mean monitored values adjacent to the site, the closest urban background locations RB8, RB9, RB17 and RB18 have been used as the best representation of the conditions expected at the proposed site.
- 4.9 The latest published data for all the urban background locations within Reigate and Banstead, considered most representative of the conditions experienced at the proposed development site (not roadside) identify monitored NO₂ annual mean concentrations for 2015 which are > 5% below national objective (40 µg/m³).
- 4.10 In accordance with the exposure criteria in **Table 3.2**, the site would usually fall within APEC – A which states the following:
- “No air quality grounds for refusal; however mitigation of any emissions should be considered.”*

5 Evaluation of Potential Effects

- 5.1 The following section sets out the potential sources of air quality impact that could be applied to the proposed development site. It also assesses site suitability with regards to residential exposure.

Construction

Construction Dust

- 5.2 During the demolition and construction phases, there is the potential for emissions of dust to cause annoyance, nuisance and health effects to sensitive receptors, located close to the site.

- 5.3 The construction activities associated with the proposed development can be separated into three stages:

- Earthworks;
- Construction; and
- Trackout.

- 5.4 There are a number of human receptors within 350m of the site boundary therefore suitable mitigation measures, in accordance with guidance from the IAQM and the GLA best practice documents, has been provided in Section 6 below.

Construction Traffic and Plant

- 5.5 It is anticipated that, throughout the construction period, there will be a number of construction vehicles, stationary plant and vehicles used by the construction workforce. These may potentially present an additional source of air pollutants in the vicinity of the proposed development site.

- 5.6 The type and number of construction vehicles and plant have not yet been confirmed at this stage. Any likely pollutant impacts should be addressed through Best Available Techniques (BAT) mitigation measures. Likely BAT are provided in section 6.

Completed Development

Development Traffic

- 5.1 The site is being promoted on the basis of accommodating approximately 300 dwellings.
- 5.2 As previously identified, the land is proposed to be allocated by Reigate and Banstead Borough Council in its Development Management Plan (DMP). The site, which is referred to as ERM2/ERM3, is identified as providing capacity for approximately 210 residential units and a new two-form entry primary school.
- 5.3 Mayer Brown Limited have undertaken a Transport Technical Report which provides estimated trip generation associated with 300 residential dwellings, 210 residential dwellings and a two-form entry primary school. This is replicated within **Tables 5.1** and **5.3** below.

Time Period	Vehicular trip Rate (Per Dwelling)			Traffic Generations (300 Dwellings)		
	In	Out	Total	In	Out	Total
Weekday AM Peak (08.00-09.00)	0.110	0.285	0.395	33	86	119
Weekday PM Peak (17.00-18.00)	0.240	0.141	0.381	72	42	114
Weekday (12 Hours) (07.00-19.00)	2.071	2.093	4.164	621	628	1249

Table 5.1: Trip generation for residential development of 300 dwellings

Time Period	Vehicular trip Rate (Per Dwelling)			Traffic Generations (210 Dwellings)		
	In	Out	Total	In	Out	Total
Weekday AM Peak (08.00-09.00)	0.110	0.285	0.395	23	60	83
Weekday PM Peak (17.00-18.00)	0.240	0.141	0.381	50	30	80
Weekday (12 Hours) (07.00-19.00)	2.071	2.093	4.164	435	440	874

Table 5.2: Trip generation for residential development of 210 dwellings

Time Period	Vehicular trip Rate (Per Pupil)			Traffic Generations (370 Pupils)		
	In	Out	Total	In	Out	Total
Weekday AM Peak (08.00-09.00)	0.265	0.176	0.441	98	65	163
Weekday PM Peak (17.00-18.00)	0.016	0.018	0.034	6	7	13
Weekday (12 Hours) (07.00-19.00)	0.703	0.681	1.384	260	252	512

Table 5.3: Trip generation for primary school

- 5.4 Therefore, in line with the criteria specified in **Table 3.1** above. Traffic related impacts meet some of the criteria specified for requiring that an air quality assessment is undertaken.
- 5.5 The level of assessment required may be either a Simple or a Detailed Assessment. This is usually discussed and agreed in detail with the relevant Environmental Health Officer.
- 5.6 If a Detailed Assessment is required, this is usually undertaken with the aid of a dispersion model in order to adequately quantify traffic related impacts as a result of the operation of the proposed development.
- 5.7 This is likely to require detailed traffic input, such as existing survey data (24hrs), take into account committed development in the local area and provide daily predictions for all the main/affected roads in the vicinity of the site and upon the neighbouring AQMA.
- 5.8 However, it is important to note that due to the site's favourable location in relation to the town centre and rail station, it is likely that a high proportion of residents might naturally opt for non-car modes. Also, the school is to provide places for local pupils and provide greater opportunity for walking and cycling.
- 5.9 Also, if the proposed scheme was to come forward without the need for a primary school, the proposed trip rates would be comparable, as demonstrated above.
- 5.10 Therefore, significant traffic related impacts upon the town centre AQMA are not anticipated at this stage.

6 Suggested Mitigation Measures and Conclusions

Construction

Construction Dust

5.11 The mitigation measures outlined below could make up part of a Construction Environmental Management Plan (CEMP) that would be implemented to minimise the potential of adverse construction dust impacts throughout all the relevant construction stages.

Earthworks:

- Avoid carrying out any earthworks during dry weather if reasonably practicable having regard to programme and contracting arrangements for the relevant works or provide and ensure appropriate use of water to control dust; and
- Re-vegetate any earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.

Construction:

- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out unless required for a particular process;
- Mix large quantities of cement, grouts and other similar materials in enclosed areas remote from site boundaries and potential receptors;
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery; and
- For small supplies of fine powder ensure bags are sealed after use and are stored appropriately to prevent dust.

Trackout:

- Ensure any vehicles arriving and leaving site are securely covered to prevent escape of materials during transport;
- Routinely clean public roads and any access routes using wet sweeping methods; and
- Avoid dry sweeping.

General Mitigation Measures:

- Ensure regular cleaning of hardstanding surfaces using wet sweeping methods;
- Display the head or regional office contact information, and the name and contact details of person(s) accountable for air quality on the site boundary;
- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site;
- Log all air quality complaints, identify the cause(s), take appropriate measures to reduce emissions in a timely manner and record all measures taken. Make the complaints log available to the Local Authority when requested;
- Carry out regular on-site and off-site inspections to monitor dust soiling effects, with cleaning to be provided if necessary. Increase the frequency of inspections when activities with a high potential to produce dust are being carried out;
- Erect barriers around the site, any dusty activities and stockpiles (the last of which should be covered);
- Screen areas of the building, where dust producing activities are taking place, with debris screens or sheeting;
- Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period;
- Remove materials that have a potential to produce dust as soon as possible, unless they are being re-used. If they are to be re-used, on site covers should be used;
- Ensure all vehicles switch off engines when stationary, so that there are no idling vehicles;
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine sprays on such equipment wherever possible; and
- Avoid bonfires and the burning of waste materials.

6.2 It is important that attention is paid to any construction activity that takes place in close proximity to the site boundary, especially at the closest location to sensitive receptors.

6.3 The implementation of the specific mitigation measures given above within a CEMP will usually ensure that any potential adverse impacts from construction dust during all construction stages are avoided. It is noted by the IAQM that, through the use of effective mitigation, the effects of dust from construction activity will normally not be considered significant.

Construction Traffic and Plant

6.4 As previously stated, there is potential for air pollutant impacts to arise from construction plant and vehicles associated with the scheme. The type and number of construction vehicles and plant have not yet been confirmed at this stage. However, the following BAT should be implemented during the construction phase.

- All vehicles should switch off engines when stationary, no idling vehicles;
- All Non- Road Mobile Machinery to use ultra-low sulphur diesel (ULSD) where available;
- Minimise the movement of construction traffic around the site;
- Maximising efficiency (this may include alternative modes of transport, maximising vehicle utilisation by ensuring full loading and efficient routing);
- Vehicles should be well maintained and kept in a high standard of working order;
- Avoid the use of diesel or petrol-powered generators by using mains electricity or battery powered equipment where possible; and
- Locate plant away from boundaries close to residential areas.

Completed Development

Operational Traffic

6.5 This statement has demonstrated that following the initial trip generation analysis, traffic related impacts are likely to meet some of the criteria for requiring furthermore detailed assessment.

6.6 A detailed assessment, using dispersion modelling software such as ADMS is likely to be required in order to adequately quantify traffic related impacts as a result of the operation of the proposed development and establish the extent of any mitigation measures required, if any.

Conclusions

- 6.7 There are 2 main air quality considerations, i) the suitability of the site for the proposed use and ii) any possible impacts upon the local area and the neighbouring AQMA, as a result of the construction and operation of the proposed development.
- 6.8 The above screening has identified that the latest published data for all the urban background locations within Reigate and Banstead, considered most representative of the conditions experienced at the proposed development site (not roadside) identify monitored NO₂ annual mean concentrations for 2015 which are > 5% below national objective (40 µg/m³), meaning that, in accordance to latest guidance:
- “No air quality grounds for refusal; however mitigation of any emissions should be considered.”*
- 6.9 Dust impacts associated with construction activities have been screened in accordance with guidance from the IAQM and the GLA best practice documents.
- 6.10 It has been identified that the implementation of the specific mitigation measures given above within a CEMP will usually ensure that any potential adverse impacts from construction dust during all construction stages are avoided. It is noted by the IAQM that, through the use of effective mitigation, the effects of dust from construction activity will normally not be considered significant. As such, we consider that any score associated with construction impacts should be assessed as neutral (score ‘0’).
- 6.11 With regard to traffic related impacts, locally and off site. It is concluded that the development will naturally generate a quantum of additional traffic that will require detailed assessment to determine the significance of any adverse impacts.
- 6.12 However, due to the site’s favourable location in relation to the town centre and rail station, it is likely that a high proportion of residents might naturally opt for non-car modes. Also, the school is to provide places for local pupils and provide greater opportunity for walking and cycling.

- 6.13 Also, if the proposed scheme was to come forward without the need for a primary school, the proposed trip rates would be comparable.
- 6.14 Therefore, significant traffic related impacts upon the town centre AQMA are not anticipated at this stage.
- 6.15 Where any adverse impacts are identified, appropriate mitigation will need to be considered and implemented to off-set these. On this basis, the development would strive to have an overall neutral impact. As such, we consider that the score for this element could reasonably also be assessed to score '0'.
- 2.29 With regard to odour, Air Spectrum Environmental Ltd (ASE), incorporating Spectrum Environmental Support (SES) have undertaken an odour assessment, using existing odour data available. It is concluded that whilst further detailed assessment would need to be undertaken, initial modelling reveals that odour levels within the site would be at a tolerable level. On this basis, it is considered that a score of '0' would be appropriate.

