Condition 4: Emissions Mitigation Statement

Wakefield Road, Barnsley

Gleeson Developments Limited

Prepared by:

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Basis of Report

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Tables in Text

1.0 Introduction

SLR Consulting Ltd (SLR) has been commissioned by Gleeson Developments Limited to prepare an Air Quality Emissions Mitigation Statement (EMS) to support discharge of a pre-commencement condition associated with a residential development (the 'Development') on land at Wakefield Road, Smithies, Barnsley (the 'Site').

The Development comprises 221 dwellings and associated works. The Development was approved in outline by Barnsley Metropolitan Borough Council (BMBC) in June 2019 under application reference: 2017/1451. The reserved matters application was granted approval under BMBC application reference: 2022/0633. The Development is described as:

> "*Residential development of 221no dwellings and associated works (Reserved matters of outline planning permission 2017/1451 seeking approval of the details of layout, scale, appearance and landscaping)*"

1.1 Background

Application reference: 2017/1451 was granted consent by BMBC, subject to a number of pre-commencement conditions, including Condition 4 which states:

> *"Upon commencement of the development, a detailed scheme shall be submitted for approval of the Local Planning Authority to show how it is proposed mitigate against the air quality impact of the proposed development, in accordance with requirements of the Barnsley MBC Air Quality and Emissions Good Practice Planning Guidance and the pollutant emission cost submitted with the air quality assessment. The scheme shall include details of the air quality impact of the proposed bus lane on the nearest proposed dwellings (receptors) to Wakefield Road and details of proposed mitigations against raised air pollution concentrations. The scheme shall also include a timetable for implementation. Thereafter the mitigations shall be implemented in accordance with the approved details.*
>
> *Reason: In the interests of minimising the impact of the proposal on local air quality in accordance with Core Strategy policy CSP 40."*

1.2 Scope of Assessment

This EMS is provided to discharge the above Condition 4 in relation to the Development. It has been prepared in accordance with BMBC's Air Quality and Emissions Good Practice Planning Guidance[1], supplemented by the Department for Environment, Food and Rural Affairs (Defra) Air Quality Appraisal: Damage Cost Guidance[2].

The scope of this assessment is as follows:

- Road Transport Emission Calculation – A calculation of pollutant monetary emission costs from additional operational phase traffic movements associated with the Development; and
- Mitigation Measures – Identification of air quality specific mitigation measures proposed and an itemised cost each measure.

[1] Barnsley Metropolitan Borough Council, Air Quality and Emissions Good Practice Planning Guidance, November 2021.

[2] Defra, Air Quality Appraisal: Damage Cost Guidance, (updated 2nd March 2023).

2.0 Background Context

2.1 Legislation

A dual set of regulations, applicable to National and Local Government separately are currently operable within the UK.

2.1.1 National Obligations

2.1.1.1 Air Quality Standards

The Air Quality Standards Regulations 2010[3] (AQSR) transpose both the EU Ambient Air Quality Directive (2008/50/EC), and the Fourth Daughter Directive (2004/107/EC) within UK legislation, in order to align and mirror European obligations. The AQSR includes Limit Values which are legally binding ambient concentration thresholds which, however, are only applicable at specific locations (Schedule 1: AQSR)[4]. Carriageways or central reservations of roads, and any location where the public do not have access (e.g. industrial sites), are exempt. On this basis, if a sampling point does not comply with the siting locations, then strict comparison to the AQSR Limit Values cannot be made.

Following the UK's withdrawal from the EU, the Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020[5] was introduced to mirror revisions to supporting EU legislation. As a result, the fine particulate matter (as $PM_{2.5}$) Limit Value is 20µg/m^3 (to be met by 2020).

The responsibility of achieving the AQSR (and European equivalent Directives) is a national obligation for Central Government who undertake assessments on an annual basis. Local Authorities have no statutory obligation to achieve the AQSR or the European equivalent Directives, unless otherwise instructed to assist Central Government under Ministerial Direction.

2.1.1.2 Environment Targets (Fine Particulate Matter) Regulations

The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023[6] introduced an annual mean concentration target of 10µg/m^3 to be met across England by 2040. Central Government and Devolved Administrations are responsible for meeting this target, however not until 2040. Local Authorities have no responsibility to achieve this target.

2.1.2 Local Obligations

Part IV of the Environment Act 1995 (as amended by the Environment Act 2021) requires the Secretary of State to review the national Air Quality Strategy (AQS) every five years and modify this, as necessary. It also established the system of Local Air Quality Management (LAQM) for Local Authorities to regularly review and assess air quality within its area.

The Air Quality (England) Regulations 2000 (as amended) ('the Regulations') provide the statutory basis for the Air Quality Objectives Local Authorities must adhere to under LAQM in

[3] The Air Quality Standards Regulations (England) 2010, Statutory Instrument No 1001, The Stationary Office Limited.

[4] Schedule 1 of the 2010 AQSR provides the locations of the sampling points where the AQSR Limits Values can be assessed.

[5] The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020, Statutory Instrument No. 1313, The Stationary Office Limited.

[6] The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023. UK Statutory Instruments 2023 No. 96.

England. $PM_{2.5}$ is not currently cited within the Regulations, however in line with AQS, Local Authorities are required to work towards reducing $PM_{2.5}$.

The Air Quality Objectives apply at locations where members of the public are regularly present and might reasonably be expected to be exposed to pollutant concentrations over the relevant averaging period (referred to as 'relevant exposure'). Table 2-2 provides an indication of those locations. Where any of the prescribed Air Quality Objectives are not likely to be achieved, the authority must designate an Air Quality Management Area (AQMA). For each AQMA, the local authority is required to prepare an Air Quality Action Plan (AQAP), which details measures the authority intends to introduce to deliver improvements in local air quality and achieve compliance.

The latest AQS for England was published in 2023[7]. The AQS provides the delivery framework for air quality management across England for local authorities and summarises the air quality standards and objectives operable within England for the protection of public health and the environment.

The ambient air quality standards of relevance this assessment (collectively termed Air Quality Assessment Levels (AQALs) throughout this report) are provided in Table 2-1. These are primarily based upon the Air Quality Objectives Local Authorities are responsible for achieving – reflective of the Local Planning Authority's duties. The $PM_{2.5}$ AQSR AQAL has, however, been included for completeness.

Table 2-1: Relevant Ambient AQALs

Pollutant	AQAL (µg/m^3)	Averaging Period
Nitrogen dioxide (NO_2)	40	Annual mean
	200	1-hour mean (not to be exceeded on more than 18 occasions per annum)
Particles (as PM_{10})	40	Annual mean
	50	24-hour mean (not to be exceeded on more than 35 occasions per annum)
Particles (as $PM_{2.5}$)	20	Annual mean
Table Note: The $PM_{2.5}$ AQAL is not prescribed within the Air Quality (England) Regulations 2000/2002 and there is no requirement for local authorities to meet it. Exceedences are only valid at the AQSR specific siting locations (Schedule 1: AQSR).		

Table 2-2: Human Health Relevant Exposure

AQAL Averaging Period	AQALs should apply at	AQALs should not apply at
Annual mean	Building facades of residential properties, schools, hospitals etc.	Facades of offices Hotels Gardens of residences Kerbside sites
24-hour mean	As above together with hotels and gardens of residential properties	Kerbside sites where public exposure is expected to be short term

[7] Defra, Air Quality Strategy: Framework for Local Authority Delivery, (2023).

AQAL Averaging Period	AQALs should apply at	AQALs should not apply at
1-hour mean	As above together with kerbside sites of regular access, car parks, bus stations etc.	Kerbside sites where public would not be expected to have regular access

2.2 Policy

2.2.1 National Policy

2.2.1.1 Clean Air Strategy

The 2019 Clean Air Strategy[8] sets out the Government's proposals aimed at delivering cleaner air in England and indicates how devolved administrations intend to make emissions reductions. It sets out the comprehensive action that is required from across all parts of government and society to deliver clean air.

2.2.1.2 Environmental Improvement Plan 2023

The 2023 Environmental Improvement Plan[9] is the first revision of the UK Government's 25 Year Environmental Plan (25YEP) – planned on a five-year rolling cycle. This document sets out the 5-year delivery plan to improve the natural environment. The 2023 Environmental Improvement Plan builds on the 2019 Clean Air Strategy by setting environmental targets and commitments to reduce air pollution. Goal 2 of the 25YEP is Clean Air – which relates to improving air quality.

2.2.1.3 National Planning Policy Framework

The December 2024 update to the National Planning Policy Framework[10] (NPPF) sets out planning policy for England. The NPPF states that the planning system should contribute to and enhance the natural and local environment, by preventing new development from contributing to or being adversely affected by unacceptable concentrations of air pollution and development should, wherever possible, help to improve local environmental conditions such as air quality. In specific relation to air quality policy, the document states:

> *"**Chapter 15. Conserving and Enhancing the Natural Environment***
>
> *Paragraph 187: 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 […] air […] pollution […]. Development should, wherever possible, help to improve local environmental conditions such as air […] quality […]"*
>
> *"Paragraph 198: Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development."*

[8] Defra, The Clean Air Strategy, (2019).

[9] Defra, Environmental Improvement Plan 2023, (2023).

[10] Ministry of Housing, Communities & Local Government, National Planning Policy Framework, (2024).

> *Paragraph 199: Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, considering 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."*

The NPPF is accompanied by web based supporting Planning Practice Guidance (PPG)[11] which includes guiding principles on how planning can take account of the impacts of new development on air quality. In regard to air quality, the PPG states:

> *"The Department for Environment, Food and Rural Affairs carries out an annual national assessment of air quality using modelling and monitoring to determine compliance with relevant limit values. It is important that the potential impact of new development on air quality is taken into account where the national assessment indicates that relevant limits have been exceeded or are near the limit, or where the need for emissions reductions has been identified."*
>
> *"Whether 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 have an adverse effect on air quality in areas where it is already known to be poor, particularly if it could affect the implementation of air quality strategies and action plans and/or breach legal obligations (including those relating to the conservation of habitats and species)."*

The PPG sets out the information that may be required within the context of a supporting air quality assessment, stating that "*Assessments need to be proportionate to the nature and scale of development proposed and the potential impacts (taking into account existing air quality conditions), and because of this are likely to be locationally specific* […] *Mitigation options will need to be locationally specific, will depend on the proposed development and need to be proportionate to the likely impact".*

The policies within the NPPF and accompanying PPG in relation to air pollution are considered within this EMS.

2.2.2 Local Policy

The original outline application includes reference to '*Core Strategy policy CSP40'* as justification for Condition 4. Since the original outline application (2017/1451) was granted consent, the Core Strategy has been replaced by the Barnsley Local Plan[12].

The Barnsley Local Plan was adopted by BMBC in 2019, which sets out local planning policy for the future development of Barnsley up to the year 2033. The following relevant policies within the Local Plan relate to this EMS:

> "***Policy Poll1 Pollution Control and Protection***[13]
>
> *Development will be expected to demonstrate that it is not likely to result, directly or indirectly, in an increase in air, surface water and groundwater, noise, smell, dust,*

[11] Ministry of Housing, Communities and Local Government, Planning Practice Guidance Air Quality, (2019).

[12] Barnsley Metropolitan Borough Council, Barnsley Local Plan, adopted January 2019.

[13] Policy Poll1 supersedes the Core Strategy policy CSP40.

vibration, light or other pollution which would unacceptably affect or cause a nuisance to the natural and built environment or to people.

We will not allow development of new housing or other environmentally sensitive development where existing air pollution, noise, smell, dust, vibration, light or other pollution levels are unacceptable and there is no reasonable prospect that these can be mitigated against.

Developers will be expected to minimise the effects of any possible pollution and provide mitigation measures where appropriate."

"***Policy AQ1: Development in Air Quality Management Areas***

Development which impacts on areas sensitive to air pollution[14] in air quality management areas will be expected to demonstrate that it will not have a harmful effect on the health or living conditions of any future users of the development in terms of air quality (including residents, employees, visitors and customers), taking into account any suitable and proportionate mitigation required for the development.

We will only allow residential development which impacts on areas sensitive to air pollution, where the developer provides an assessment that shows living conditions will be acceptable for future residents, subject to any required mitigation.

We will only allow development which impacts on areas sensitive to air pollution which could cause more air pollution, where the developer provides an assessment that shows there will not be a significantly harmful effect on air quality, subject to any required mitigation.

Furthermore, development which impacts on areas sensitive to air pollution due to traffic emissions will be expected to demonstrate suitable and proportionate mitigation relative to the increased traffic emissions generated by the development."

2.3 Assessment Guidance

This assessment has been carried out in accordance with and following the principles contained within the guidance documents below.

- BMBC: Air Quality and Emissions Good Practice Planning Guidance[1];
- Defra: Air Quality Appraisal: Damage Cost Guidance[2];
- Design Manual for Roads and Bridges (DMRB) LA 105 (Vertical Barriers)[15]; and
- Environmental Policy Implementation Community (EPIC) (formerly EPUK) and Institute of Air Quality Management (IAQM): Land-Use Planning and Development Control: Planning for Air Quality[16].

[14] "*Areas sensitive to air pollution include (but are not limited to) the Borough's air quality management areas; "exceedence" areas within the Borough derived from the national assessment of air pollution by defra and reported to the European Union; and housing within 20 metres of roads > 10k AADT (as defined within the Barnsley MBC Air Quality and Emissions Technical Planning Guidance document)*"

[15] DMRB, LA 105-Air Quality (Vertical Barriers), Highways England, June 2024.

[16] EPIC (formerly EPUK) and IAQM, Land-Use Planning and Development Control: Planning for Air Quality, v1.2 2017.

3.0 Emissions Mitigation Assessment

3.1 Emissions Mitigation Calculation

In line with the requirements of BMBC's Air Quality and Emissions Good Practice Planning Guidance for major developments, a calculation to estimate the likely financial operational emission impact of the Development (Damage Cost Calculation) has been undertaken.

The Damage Cost Calculation has utilised the most up to date version of the Emissions Factors Toolkit (EFT), presently EFT v12.1[17], has been used to determine vehicle emission factors as input.

Pollutant emissions costs associated with the Development's operational phase trip generation over a 5-year period (from the first year of occupation – i.e. 2026 to 2030) have been calculated to indicate potential mitigation requirements.

Due to the phased construction of the Development, the expected build rate schedule of the Development has been calculated, with the first dwellings expected to be completed in 2026 and all dwellings expected to be completed by 2029 (as provided by Gleeson).

For the damage cost calculation, it has therefore been assumed that all 221 dwellings will have been built by the end of 2029 and 100% of the development trips will occur in 2029 and 2030. The annual build rate and associated incremental increase in operational trips are assumed to be consistent over the construction phase. The following traffic inputs, as presented in Table 3-1, are used within the damage cost calculation.

Table 3-1: Calculation of Traffic Inputs for Damage Costs

Year	Number of Dwellings in Occupation	Adjusted Number of Daily Trips
2026	55	263
2027	110	526
2028	166	789
2029	221	1,052
2030	221	1,052

Table 3-2 and Table 3-3 present the damage cost calculation inputs and outputs, respectively.

Table 3-2: Damage Cost Calculation – Inputs

Input Parameter		Inputs
Total Trips (AADT)	LDVs	As above in Table 3-1
Average trip length (km)		10
Speed (kph)		50
2022 Base Damage cost NOx (£ per tonne) (A)		£11,682
2022 Base Damage cost $PM_{2.5}$ (£ per tonne) (A)		£84,548
Table notes: (A) As provided in the Defra damage costs guidance for the Road Transport pollutant sector.		

[17] Defra, EFT v12.1, (2024). Available at: https://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html.

Table 3-3: Damage Cost Calculation – Outputs

Output Parameter	Year					5-year Total
	2026	2027	2028	2029	2030	
Annual NOx Emissions (tonnes/year)	0.15	0.26	0.34	0.39	0.34	1.49
Annual PM_{10} Emissions (tonnes/year)	0.03	0.06	0.10	0.13	0.13	0.44
Annual $PM_{2.5}$ Emissions (tonnes/year) (A)	0.02	0.04	0.06	0.08	0.08	0.28
NOx contribution (£) (rounded up) (B)	£1,941	£3,364	£4,329	£4,903	£4,136	£18,672
$PM_{2.5}$ contribution (£) (rounded up) (B)	£1,889	£3,688	£5,408	£7,053	£6,901	£24,939
Total contribution (£) (rounded up)						***£43,612***

Table notes:

(A) Converted utilising the Road Transport PM_{10} to $PM_{2.5}$ factor of 0.622 as provided in the Defra damage costs guidance.

(B) Discounted benefits across the period of appraisal.

In summary, over a 5-year period (commencing from 2026 – the anticipated occupation of the first dwelling), an emission cost has been calculated at ***£43,612.***

The above damage cost provides an indicator of the financial commitment required to offset emissions and is used to determine the level of appropriate mitigation required.

4.0 Mitigation Measures

This section presents any proportionate mitigation measures required during the operational phase in order to be commensurate with the damage cost calculation.

4.1 Mitigation Hierarchy

An IAQM position statement[18] recommends basic hierarchy principles for determining appropriate mitigation measures for a development scheme. These are as follows:

1. Preventing and Avoiding – the initial step should be to, if possible, prevent or avoid exposure to the pollutant by isolating or removing potential sources. The design process should take air quality into account.
2. Reduction and Minimisation – all options for avoiding exposure and preventing exposure should be implemented. Preference should be given to measures which are close to the potential source, then those which act on the pathway and finally measures close to the point of exposure.
3. Off-setting – compensating for impacts associated with the new development by contributing to air quality improvements elsewhere.

These hierarchy principles have been considered when suggesting appropriate measures for the development.

4.2 BMBC Air Quality and Emissions Good Practice Planning Guidance

In line with the BMBC Air Quality and Emissions Good Practice Planning Guidance, 'major' developments should include Type 1, Type 2 and Type 3 mitigation measures. Table 4-1 displays the mitigation measures which are relevant to the Development.

Table 4-1: Type 1, 2 and 3 Mitigation Measures

Mitigation Measure	
Residential Use	
Type 1	1 charging point per unit (dwelling with dedicated parking) or 1 charging point per 10 spaces (unallocated parking).
Type 2	Travel Plan, including an agreed mechanism for discouraging high emission vehicle use and encouraging modal shift (i.e. to public transport, cycling and walking), as well as uptake of low emission fuels and technologies.
	Improved pedestrian access to public transport.
	New or improved bus stop infrastructure including shelters; raised kerbing; information displays.
	Provision of subsidised or free public transport ticketing.
	Site layout designed to encourage walking; Cycle paths to link to local cycle network.
	Improved, convenient and segregated cycle paths to link to local cycle network.
Type 3	**Support measures to reduce the need to travel:**

[18] Institute of Air Quality Management, Position Statement - Mitigation of Development Air Quality Impacts, 2015.

Mitigation Measure	
	• Alternative working practices – flexitime, teleworking, homeworking, videoconferencing, compressed work periods. • Local sourcing of staff, products and raw materials. • Development and use of hub distribution centres employing low emission deliveries. • Provision of discounted on-site shopping, eating, child-care, banking facilities. **Support measures to reduce polluting motorised vehicle use:** • Development of car clubs and car sharing with financial incentive and promotion. • Use of pooled low emission vehicles – car, vans, taxis, bicycles. • Support smart driving training schemes. • Provision of dedicated low emission shuttle bus including managed pick-up and drop-off. • Contribution to the emerging low emission vehicle refuelling infrastructure. • Contribution to site low emission waste collection services. • Incentives for the take-up of low emission vehicle technologies and fuels. **Measures to support improved public transport:** • Provision of new or enhance public transport services to the site. • Shuttle services to public transport interchange, rail station or park and ride facilities. • Support improving information systems for public transport. • Supporting city free bus expansion schemes. • Promoting low emission bus service provision. • Support air quality monitoring programmes. **Further measures to promote walking and cycling:** • Improvements to district walking and cycling networks including lighting, shelters, and information points and timetables. • Support cycling training and awareness schemes. • Bike/e-bike hiring schemes. • Guaranteed ride home in emergencies. • Support secure and safe cycling parking facilities. **Measures to promote sustainable travel plans:** • Support local travel to school and school travel plans initiatives. • Marketing aimed at persuading a switch to sustainable modes with incentives. • Promotion of subsidised/sponsored travel plan measures through social and other media. • Supporting community / local organisation groups to promote sustainable travel.

4.3 Proposed Mitigation to be Implemented

4.3.1 Type 1

In line with the BMBC Air Quality and Emissions Good Practice Planning, EV charging will be provided for the Development, with a 100% provision rate for all dwellings, based upon a 7.2kW nominal rated output.

4.3.2 Type 2

Type 2 mitigation measures have also proposed to be implemented as part of the Development, including:

- A Travel Plan[19], as required by Condition 10 to BMBC application reference: 2022/0633
- Appointing a Travel Plan Co-ordinator (TPC) to oversee, implement and manage the Travel Plan; and
- Disbursement of flyers to all residents at the site upon occupation.

Reference should be made to the submitted Travel Plan for further details.

4.3.3 Type 3

Type 3 mitigation measures have also been proposed to be implemented as part of the Development, including:

- As stated in the reserved matters application (2022/0633) the development includes the '*carrying out of work on the adopted highway'*. The works carried out will be proportionate with the '*Type 3*' mitigation measure requirements outlined within Table 4-1; and
- Installation of overlap timber bike store units, or similar, at dwellings where garages are not provided.

4.4 Mitigation Costings

Table 4-2 provides an extract of the operational mitigation measures to be implemented into the Development. Associated costs have been included for each measure to enable comparison with the derived Damage Cost and to indicate any additional requirements.

[19] Optima Intelligent Highways Solutions, Wakefield Road, Athersley Proposed Residential Development Travel Plan, February 2025 (Initial Issue).

Table 4-2: Operational Phase Mitigation Measures – Costing

Mitigation Measures	Mitigation Measure Type	Costs (£)
EV charging points: 7.2kW per plot.	Type 1	£550 per unit (including installation). 221 dwellings = £121,550
Travel Plan Coordinator	Type 2	£13,075 across 5 years
Disbursement of flyers	Type 2	£600
Production of Travel Plan	Type 2	£1,050
Measures contained within Travel Plan	Type 2	TBC
Highway Improvements	Type 3	TBC
Overlap timber bike store units, or similar	Type 3	£300 per unit (including installation) 148 dwellings = £44,400
Total		**£180,675**

The monetary cost of confirmed mitigation is calculated to be **£180,675** in total. This is in excess of the Damage Cost figure (£43,612), even without inclusion of the Final Travel Plan measures (beyond those considered). The cost of the overlap timber bike store units alone, are in excess of the Damage Cost figure. Therefore, no further mitigation is required, as the design of the Development is considered to go above and beyond its likely financial emission impact. This meets the requirements of BMBC's Air Quality and Emissions Good Practice Planning Guidance.

5.0 Consideration of Proposed Bus Lane / Highway Works

As required by Condition 4, consideration has been given to the potential road traffic emission contribution and associated impact on air quality at the Site, including the nearest proposed dwellings, arising from the proposed bus lane (BMBC application reference: 2021/1690). The proposed bus lane would be located on the A61 Wakefield Road; its location relative to the Development is illustrated in Figure 5-1.

The DMRB[15] states that impacts from a road source should be considered when relevant exposure is located within 200m of kerbside. As shown in Figure 5-1, the Development is approximately 400m north of the proposed bus lane works and therefore road traffic emission impacts from the proposed bus lane can be considered negligible, with the associated effect ‘insignificant’ and screen out of requiring any further assessment.

The EPIC (formerly EPUK) and IAQM guidance states ‘changing the proximity of receptors to traffic lanes’ requires and air quality assessment ‘where the change is 5m or more and the road is within an Air Quality Management Area’. As illustrated in Figure 5-1 the proposed bus lane works >5m from the Development. In addition, there are existing residential receptors in closer proximity to the proposed bus lane works than the Development.

Consideration has also been given to the highway works to be carried out under Section 278 (S.278), located to the north and east of the Development, along the A61 Wakefield Road. The S.278 works consist of the installation of two pedestrian islands, a ghost island for cyclists and a shared footway/cycleway. The limited extent of the works and the presence of existing receptors is closer proximity than the Development, associated air quality effects can be considered insignificant.

Similarly, in line with the EPIC (formerly EPUK) and IAQM guidance, the Development dwellings, as seen in the reserved matters approved layout (2022/0633), are >5m from the S.278 highway works, the associated air quality effects can be considered insignificant. Further, these highway works are associated with the Development and therefore likely to be in place / completed prior to occupation of the Site.

Figure 5-1: Site Surroundings

6.0 Conclusion

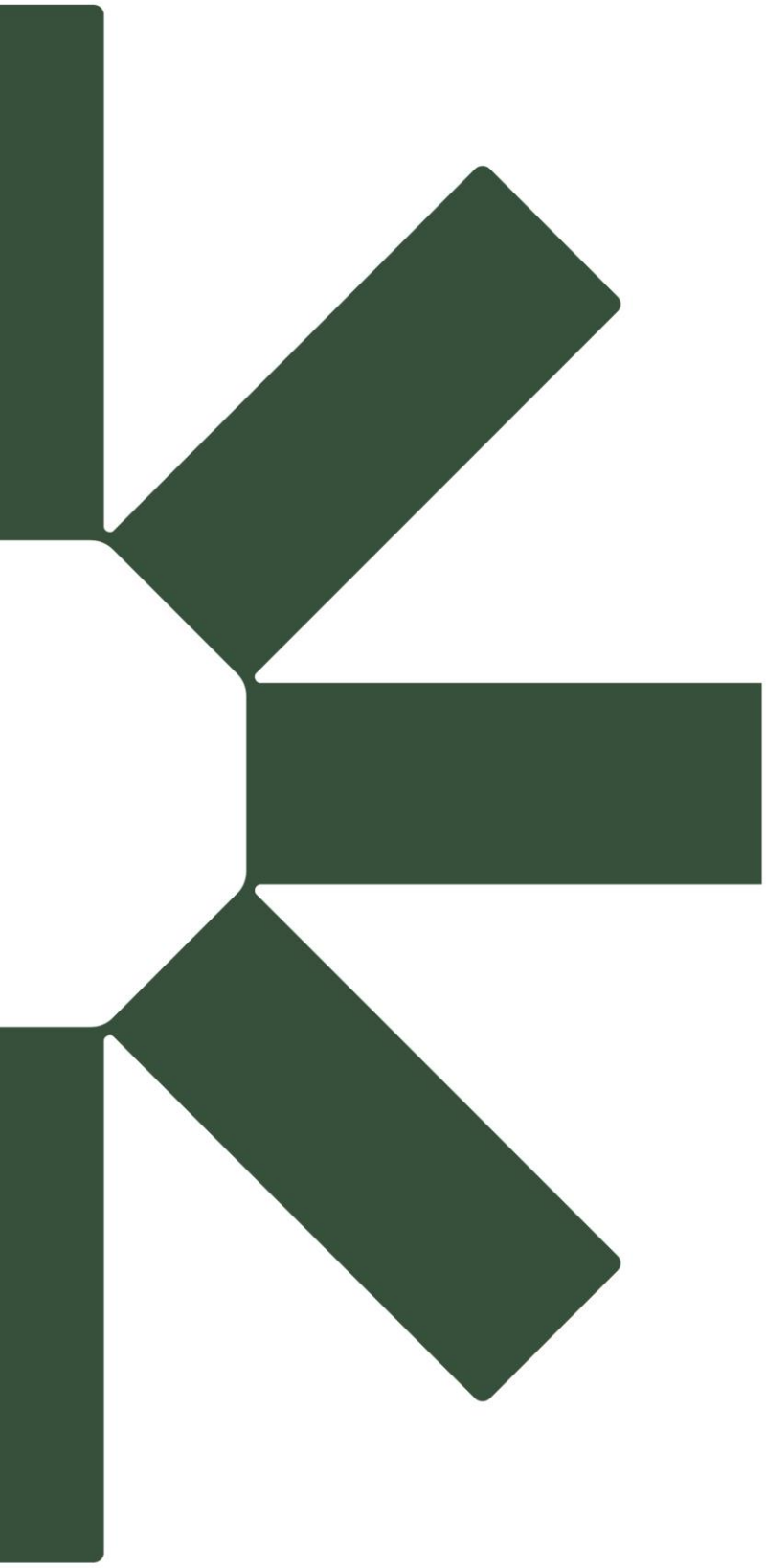
SLR Consulting has been commissioned by Gleeson Developments Limited to undertake an Air Quality EMS to discharge a pre-commencement condition for the residential development on land at Wakefield Road, Smithies, Barnsley.

A ‘damage cost calculation’ following the approach outlined within the Defra ‘Air Quality Appraisal: Damage Cost Guidance’ has been undertaken to determine the level of mitigation compensation required to negate the predicted emissions impact associated the Development.

The damage cost calculation reflected the build-rate schedule, associated commencement and completion dates and operational vehicle trips. The 5-year calculated damage cost is £43,612.

Mitigation measures have been identified in accordance with BMBC’s Air Quality and Emissions Good Practice Planning Guidance. The total value of the Development’s mitigation is over and above the calculated emissions damage cost and therefore no further mitigation is considered to be required.

A qualitative assessment of the proposed bus lane (BMBC application reference: 2021/1690) and the S.278 highway works has been carried out to determine the associated emissions impacts on the Development. Emission impacts from both the proposed bus lane and highway works can be considered negligible, with the associated effects ‘insignificant’ and screened out of requiring any further assessment.



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