

**Transpennine Route Upgrade (TRU)
Fitzwilliam Street Temporary Staff Car Park
Air Quality Screening Assessment
Network Rail**

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1. INTRODUCTION

1.1. Background

- 1.1.1. This Noise Assessment supports the submission of an application for planning permission (under the Town and Country Planning Act 1990, as amended by the Levelling-up and Regeneration Act 2023) for temporary staff car park facilities for TRU and Train Operating Companies (TOC) staff, to facilitate the construction works for the W3 section of the TRU between Huddersfield and Westtown (Dewsbury) ('the Scheme').
- 1.1.2. The TransPennine Route Upgrade (TRU) is a programme of works to enhance/upgrade the existing railway infrastructure between Manchester and York.
- 1.1.3. The Network Rail (Huddersfield to Westtown (Dewsbury) Improvements) Order (a Transport and Works Act Order (TWAO), referred to subsequently in this planning statement as "the TWAO") was made by the Secretary of State in October 2022 and came into force on 3rd November 2022.
- 1.1.4. Network Rail is proposing to implement a temporary staff car park in Huddersfield (hereby referred to as "the Proposed Development") within the former Kirklees College site (herein referred to as "the former Kirklees College site"), which was granted planning permission for a mixed used development, in 2022 (ref 2018/92647).

1.2. The Proposed Development

- 1.2.1. The Proposed Development comprises the temporary use of the northern plots of the former Kirklees College site as a car park to support the TRU programme. The Proposed Development site has already been cleared and surfaced. The two north eastern plots within the site are currently surfaced with tarmac and the north western section is surfaced with compacted aggregates. Electric tower lighting will be provided to the temporary car park. No significant construction activity is anticipated to be associated with The Proposed Development, with activities limited to small amounts of surface repairs and white lining – all of which would be undertaken during daytime hours.
- 1.2.2. The temporary car park is anticipated to be operational from August 2025 until the end of April 2028 (i.e. approximately 32 months). Following this period, the Proposed Development will revert to a vacant lot, and the approved planning permission for these northern plots of the mixed-use development can then be implemented.
- 1.2.3. The Proposed Development will provide a total of 300 parking spaces, including three accessible bays and seven designated lorry bays. Of these, 35 spaces will be reserved for use by Train Operating Company (TOC) staff. The car park will operate a one-way traffic system, with entry via the existing access point on Fitzwilliam Street and exit via the existing egress onto the A629 New North Road. During periods of intensified activity, such as railway blockades, the car park will require 24-hour access. Parking demand will be actively monitored, and during peak operational periods, if the car park reaches capacity, staff and operatives will be redirected to alternative parking locations and transported by bus to HD1 construction compound to minimise congestion and prevent inappropriate parking in the surrounding area.

1.3. Scope

- 1.3.1. To support the planning application for the Proposed Development a qualitative air quality screening assessment considering the impact of planned activities on nearby sensitive

receptors has been undertaken. The scope of the assessment includes:

- Presentation of the existing baseline air quality at and around the Proposed Development (presented in the appendices);
- Assessment of the potential for significant effects associated with the construction and the operational phase at surrounding sensitive receptors; and
- Consideration of potential mitigation measures to reduce any potential adverse impacts from the continued operation of the Proposed Development, if needed.

1.4. SITE CONTEXT

- 1.4.1. The Proposed Development is located within the administrative area of Kirklees Council, within a mainly residential area of Huddersfield Town Centre. The Proposed Development is bordered by Fitzwilliam Street to the north, Portland Street to the west, the A629 New North Road to the east and part of the former Kirklees College site to the south. There are residential dwellings, a nursery school and commercial properties located within 50 m of the Proposed Development. The location and layout of the Proposed Development is shown in Figure 1 below.
- 1.4.2. There is one Air Quality Management Area (AQMA) adjacent and partially within the Proposed Development, which incorporates roads bordering and within the Huddersfield ring road and is named "*Kirklees AQMA 9*". This AQMA incorporates roads bordering and within the Huddersfield ring road including a boundary along New North Road and was declared by Kirklees Council in 2017 due to exceedances of the nitrogen dioxide (NO₂) annual mean Air Quality Strategy (AQS) objective. It should be noted that this AQMA is one of ten reported AQMAs within Kirklees Council's administrative area. Further information on the baseline conditions within 1 km of the Proposed Development is detailed in Appendix B.

Sensitive Receptors

- 1.4.3. The Proposed Development is located in Huddersfield, just outside the ring road and in proximity of several residential properties and a nursery which are classified as high sensitivity human health receptors.
- 1.4.4. There are two ecological designated habitats within 1 km of the Proposed Development, Gledholt Woods Local Nature Reserve (LNR) and Huddersfield Narrow Canal Local Wildlife Site (LWS), located more than 700 m to the west and to the south of the Proposed Development, respectively. Given the distance from the Proposed Development, it is unlikely that the designated ecological sites will be affected by the Proposed Development operation.

2. BASELINE CONDITIONS

2.1.1. Information on existing baseline air quality conditions was obtained from the following sources:

- Kirklees Council air quality review and assessment reports¹ ;
- Air quality background concentrations and Pollution Climate Mapping (PCM) model data from Defra's Air Information Resource (UK-AIR)²;
- AQMA mapping³; and
- Residential properties, designated ecological sites and other sensitive receptors in the vicinity of the Proposed Development have been identified from Ordnance Survey (OS) mapping (OpenStreetMap), Kirklees Council Local Plan⁴ and the Natural England Multi-Agency Geographic Information for the Countryside (MAGIC) website⁵.

2.1.2. A constraints map for air quality is shown in Appendix B - Figure 2 which shows the boundaries of AQMA, PCM model data, and Kirklees Council's air quality monitoring sites.

2.2. Construction Phase

2.2.1. No construction dust raising activities are expected with the Proposed Development. The Proposed Development has already been cleared and surfaced. The two north eastern plots within the site are currently surfaced with tarmac and the north western section is surfaced with compacted aggregates MOT Type 1, (Ministry of Transport standard stable sub-base for road surfaces and pathways), and electric lighting is being provided for the car park spaces. Further consideration of the construction dust and vehicle emissions for the Proposed Development is therefore not required.

2.3. Operational Phase

2.3.1. The Proposed Development will only be in use in support of the TRU works construction phase and will cease operation following completion of the local TRU works, planned in April 2028.

2.3.2. The need for an assessment of operational impacts associated with the Proposed Development has been determined based on the screening criteria given in the EPUK/IAQM Guidance⁶. These screening criteria indicate an air quality assessment is required if the development comprises:

- 10 or more residential units or a site area of more than 0.5 ha; or

¹ Kirklees Council. 2024 Air Quality Annual Status Report (ASR). Available at: <https://www.kirklees.gov.uk/beta/crime-and-safety/pdf/kirklees-annual-status-report-2024.pdf> [Accessed July 2025]

² Defra UK-AIR 'Modelled background pollution data', Defra UK-AIR 'Air pollution forecast', Available at: <https://uk-air.defra.gov.uk/data/modelling-data> [Accessed July 2025]

³ Defra AQMA interactive map. Available at: <http://uk-air.defra.gov.uk/aqma/maps> [Accessed July 2025]

⁴ Kirklees Local Plan, Strategy and Policies, Adopted 27 February 2019. Available at: <https://www.kirklees.gov.uk/beta/planning-policy/pdf/local-plan-strategy-and-policies.pdf> [Accessed July 2025]

⁵ Defra Magic Map Application. Available at: <http://www.magic.defra.gov.uk/> [Accessed July 2025]

⁶ Environmental Protection UK and the Institute of Air Quality Management. (2017) Land-Use Planning & Development Control: Planning for Air Quality v1.2 [online]. London: IAQM. Available at: <http://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf> [Accessed July 2025]

- more than 1,000 m² of floor space for all other uses or a site area greater than 1 ha; and either:
 - more than 10 parking spaces; or
 - a centralised energy facility or other centralised combustion process.
- 2.3.3. Given that the Proposed Development comprises 300 parking spaces in total, further screening was undertaken using the indicative traffic change criteria in the EPUK/IAQM Guidance. The relevant traffic change criteria are:
- a change of light duty vehicles (LDV) of more than 500 Annual Average Daily Traffic (AADT) (or more than 100 AADT within or adjacent to an AQMA); or
 - a change of heavy duty vehicles (HDV) of more than 100 AADT (or more than 25 AADT within or adjacent to an AQMA).
- 2.3.4. The Proposed Development is adjacent and partially within one AQMA, so the lower change criteria apply.
- 2.3.5. Considering the temporary nature of the operation of the Proposed Development, the total vehicle movements generated and the background pollutant concentrations at the site location, a qualitative assessment of the operational impacts of the Proposed Development has been undertaken and provided in section 3.
- 2.3.6. Traffic data has been provided for a scenario reflecting normal use of the car park and a second scenario representing maximum use during railway blockades.
- 2.3.7. No use of any combustion plant (e.g. diesel generators) is required during both construction and operation of the Proposed Development, therefore, no assessment of the combustion product emissions is required.

3. POTENTIAL AIR QUALITY IMPACTS

3.1. Operational Phase

- 3.1.1. Traffic data used to assess the Proposed Development, including comparisons with the approved mixed-use development, are presented in Table D, within Appendix C. The analysis shows that traffic generated by the Proposed Development -during both normal operation and periods of intensified activity associated with railway blockades- is lower than that forecast for the approved mixed-used development on New North Road and Fitzwilliam Street. Specifically, during normal operation, traffic is reduced by -896 and -332 vehicles per day respectively, while during intensified work periods, reductions of -309 and -137 vehicles per day are observed. A minor increase of +25 AADT is expected on Trinity Street during both work phases, this is attributed solely to the operation of the Lidl store, currently under construction, as shown in the comparison with 2028 traffic forecasts without the approved mixed-use development in place.
- 3.1.2. Traffic changes resulting from the Proposed Development fall below the traffic change criteria outlined in the EPUK/IAQM traffic change criteria when compared to the approved mixed-use development, indicating no significant impact.
- 3.1.3. Baseline air quality conditions, as detailed in Appendix B, show that pollutant concentrations—both mapped and measured at background locations—are below the relevant Air Quality Strategy (AQS) objectives defined in Appendix A. Therefore, it is unlikely that the operational traffic would cause relevant air quality criteria to be exceeded.
- 3.1.4. The Proposed Development is expected to be operational for approximately 32 months, from August 2025 to April 2028. As such, any associated air quality impacts will be temporary in nature.
- 3.1.5. Given the limited duration, low traffic volumes, and compliance with air quality thresholds, the impact of operational traffic is considered negligible and not significant in terms of effects on nearby residential receptors or designated ecological sites.

4. MITIGATION

4.1. Construction

- 4.1.1. No construction activities are expected and therefore mitigation measures will not be required for the construction phase.

4.2. Operation

- 4.2.1. The additional traffic generated during the operational phase of the Proposed Development will be temporary and remain below the additional traffic permitted for the approved planning permission at the former Kirklees College. As such, no significant adverse impacts are anticipated, and specific mitigation measures for operational traffic are not required. However, low emission practices will be implemented, including the avoidance of diesel generators on-site to eliminate emissions from combustion sources. In addition, cycle storage and access via public transport have been provided at the main TRU compound hubs e.g. HD1.

5. CONCLUSION

- 5.1.1. To support the TRU West programme of works, a new temporary car park (i.e. the Proposed Development) will be provided in Huddersfield, for which planning permission is sought. The Proposed Development lies on the northern section of the former Kirklees College site, for which planning permission for a new mixed-use development has been granted. The Proposed Development will be operational on a temporary basis, between August 2025 to the end of April 2028.
- 5.1.2. This qualitative air quality screening assessment presents a review of the local existing air quality conditions. It also considers the potential air quality impacts during operation of the Proposed Development.
- 5.1.3. The Proposed Development is located in a mainly residential area within Huddersfield Town Centre. The Proposed Development is adjacent and partially within the Kirklees AQMA No.9, which incorporates roads bordering and within the Huddersfield ring road. Local authority air quality monitoring data and background mapping indicates that local air quality is acceptable with measured concentrations below the currently legislated AQS objectives for NO₂ and PM₁₀, and background mapping below AQS objectives and future targets for PM_{2.5}. Air quality in the vicinity of the Proposed Development is therefore not considered to be a concern.
- 5.1.4. The area surrounding the Proposed Development includes high sensitivity human health receptors. There are two designated ecological sites within 1 km of the Proposed Development, Gledholt Woods LNR and Huddersfield Narrow Canal LWS, both located over 700 m from the Proposed Development and therefore unlikely to be affected.
- 5.1.5. No construction activities are expected as part of the Proposed Development.
- 5.1.6. The traffic data shows that the temporary car park planned as part of the Proposed Development will not cause a noticeable increase in traffic compared to what was already approved for the site. In fact, in most cases, traffic levels will be lower than those expected from the previously approved mixed-use development. The only small increase is on Trinity Street, where traffic is expected to rise slightly (+25) due to the new Lidl store opening. Overall, the traffic from the Proposed Development is well within acceptable limits and won't have a significant impact on local air quality. Nonetheless, low-emission measures will be in place, including the exclusion of any combustion plant during operation to reduce emissions.
- 5.1.7. After the temporary car park use ends, the mixed-use development that already has planning permission is expected to go ahead. No lasting residual effects on nearby homes or businesses are expected.

APPENDICES

A. Legislation, Policy, and Guidance

Local Air Pollutants

The pollutants of concern in the context of the site include nitrogen dioxide, particulate matter and dust.

Nitrogen Dioxide

Nitrogen dioxide (NO₂) is a secondary pollutant produced by the oxidation of nitric oxide (NO) in ambient air. The pollutants NO and NO₂ are collectively termed oxides of nitrogen (NO_x). Road transport contributed 30 per cent of emissions of NO_x in 2023 and emissions of NO_x from non-road transport (aviation, rail, and shipping) contributed 16 per cent of total NO_x emissions in 2023⁷. The majority of NO_x emitted from vehicles is in the form of NO, which oxidises rapidly in the presence of ozone (O₃) to form NO₂. In high concentrations NO₂ can affect the respiratory system, whereas NO does not have any observable effect on human health at the range of concentrations found in ambient air. High concentrations of NO_x can have an adverse effect on vegetation, including leaf or needle damage and reduced growth. Deposition of pollutants derived from NO_x emissions contribute to acidification and/or eutrophication of sensitive habitats.

Particulate Matter

PM is a generic term used to describe a complex mixture of solid and liquid particles of varying size, shape, and composition. Some particles are emitted directly (primary PM); others are formed in the atmosphere through complex chemical reactions (secondary PM). The composition of PM varies greatly and depends on many factors, such as geographical location, emission sources and weather.

The main sources of man-made PM are the combustion of fuels (by vehicles, industry and domestic properties) and other physical processes such as tyre and brake wear. Natural sources include wind-blown soil and dust, sea spray particles, and fires involving burning vegetation.

There is an extensive body of evidence that long-term exposure to PM increases mortality and morbidity from cardiovascular and respiratory diseases. Outdoor air pollution, particularly PM, has also been classified by the International Agency for Research on Cancer (IARC) as carcinogenic to humans (a Group 1 carcinogen) and causing lung cancer. There is some experimental evidence, however, that ultrafine particles may also pass through the lungs into the bloodstream⁸.

PM is classified according to size. The UK currently focuses on estimating the fractions of PM emissions where particles are less than 10 micrometres in diameter (PM₁₀) and less than 2.5 micrometres in diameter (PM_{2.5}). This approach is based on scientific consensus and longstanding evidence regarding the extent to which different sizes of particles penetrate into the respiratory system and are absorbed by the lungs.

Road transport continues to be a major source of PM emissions, as it contributed 21 per cent of total PM_{2.5} emissions and contributed 18 per cent of total PM₁₀ emissions in 2023 Road transport emissions

⁷ Emissions of air pollutants in the UK – Nitrogen oxides (NO_x), Defra, updated March 2025. Available at <https://www.gov.uk/government/statistics/emissions-of-air-pollutants/emissions-of-air-pollutants-in-the-uk-nitrogen-oxides-nox> [Accessed August 2025]

⁸ Health matters: air pollution, Defra, updated November 2018, Available at <https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution> [Accessed August 2025]

are made up of both exhaust emissions and non-exhaust emissions (brake, tyre and road wear). Exhaust emissions have decreased markedly from 1996 to 2023 due to stricter emissions standards (decreased by 93 per cent for both PM_{2.5} and PM₁₀). However, non-exhaust emissions (brake, tyre and road wear) have increased by 18 per cent for PM_{2.5} and increased by 17 per cent for PM₁₀ between 1996 and 2023, as the overall number of kilometres travelled by vehicles each year in the UK has increased over this period. This means that most PM emissions from road transport derive from non-exhaust emissions⁹.

Dust

Dust is defined within the Institute of Air Quality Management (IAQM)'s "Guidance on the assessment of dust from demolition and construction"¹⁰ (IAQM Dust Guidance) as 'solid particles that are suspended in air or that have settled out onto a surface after having been suspended in air. The terms dust and particulate matter (PM) are often used interchangeably, although in some contexts one term tends to be used in preference to the other. In this guidance the term 'dust' has been used to include the particles that give rise to soiling, and to human health and ecological effects.

The IAQM Dust Guidance states that in terms of effects, construction sites may give rise to annoyance due to the soiling of surfaces by dust. Very high levels of soiling also have the potential to damage plants and affect the diversity of ecosystems. Additionally, there is evidence of major construction sites increasing long term particulate matter concentrations. Exposure to particulate matter has long been associated with a range of health effects, with an increasing focus on smaller particles such as PM_{2.5}.

Dust emissions from a construction site may be mechanically generated due to land preparation (e.g., demolition, land clearing and earth moving) or released from construction activities, site plant and from the movement of road vehicles on temporary roads, open ground and haul routes and tracking out mud onto the local road network.

Air Quality Legislation

Air quality regulations that apply in England include:

- The Air Quality Standards Regulations (Statutory Instrument (SI) 2010 No.1001¹¹ as amended (SI 2016 No 1184)¹²) which implemented the air quality limit values included in the EU Directive on ambient air quality and cleaner air for Europe (2008/50/EC), as amended by SI 2019 No.74¹³ and SI 2020 No.1313¹⁴ to account for EU withdrawal.

⁹ Emissions of air pollutants in the UK – Particulate matter (PM10 and PM2.5), Defra, updated March 2025. Available at <https://www.gov.uk/government/statistics/emissions-of-air-pollutants/emissions-of-air-pollutants-in-the-uk-particulate-matter-pm10-and-pm25> [Accessed August 2025]

¹⁰ IAQM (2024 v2.2). Guidance on the assessment of dust from demolition and construction. Available at: <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf> [Accessed August 2025]

¹¹ The Air Quality Standards Regulations 2010. Available at: <http://www.legislation.gov.uk/uksi/2010/1001/contents/made> [Accessed August 2025]

¹² The Air Quality Standards (Amendment) Regulations 2016. Available at: <https://www.legislation.gov.uk/uksi/2016/1184/contents/made> [Accessed August 2025]

¹³ The Air Quality (Amendment of Domestic Regulations) (EU Exit) Regulations 2019. Available at: <https://www.legislation.gov.uk/uksi/2019/74/made> [Accessed August 2025]

¹⁴ The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020 (SI 2020 No. 1313) Available at: <https://www.legislation.gov.uk/uksi/2020/1313/made> [Accessed August 2025]

- Regulations implementing national air quality objectives: Air Quality (England) Regulations 2000 (SI 2000 No. 928), Air Quality (England) (Amendment) Regulations 2002 (SI 2002 No. 3043)^{15,16} and
- The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 (SI 2023 No.96)¹⁷.

Limit Values

The air quality limit values included in the EU Directive on ambient air quality and cleaner air for Europe (2008/50/EC) and are included in air quality regulations (SI 2010 No.1001)¹¹ as amended (SI 2016 No. 1184)¹², which have been further amended by SI 2019 No.74¹³ and SI 2020 No.1313¹⁴ to account for EU withdrawal.

The UK Government's air quality plan for nitrogen dioxide in the UK¹⁸ sets out how local authorities should contribute to the achievement of air quality criteria through targeted feasibility studies¹⁹, including clean air zones (CAZ) where appropriate.

Air Quality Objectives

The Air Quality Strategy (AQS) for England 2023²⁰ replaces the previous Air Quality Strategy for England, Scotland, Wales and Northern Ireland published in 2007. The new strategy sets out the national air quality objectives and targets for a number of local air pollutants and provides a strategic framework for local authorities and other partners in England.

The air quality objectives were set by expert organisations with regard to scientific and medical evidence on the effects of the particular pollutant on health and define the level of pollution below which health effects are expected to be minimum or low risk even for the most sensitive members of the population. The criteria set air pollution levels to be achieved by a specified timescale, which take account of the costs and benefits of achieving the standard, either without exception or, for certain short-term averaging period standards, with a permitted number of exceedances.

Local authorities have a responsibility (under Part IV of the Environment Act 1995, and as updated by the Environment Act 2021) to review and assess local pollution levels against these objectives.

It should be noted that the AQS objectives only apply in locations likely to have 'relevant exposure' i.e., where members of the public are exposed for periods equal to or exceeding the averaging periods set for the standards. For this assessment, locations of relevant exposure include building façades of residential premises, schools, public buildings and medical facilities; places of work (other than certain community facilities) are excluded.

Air Quality Targets

In January 2019, the UK Government published its Clean Air Strategy²¹, which set out actions proposed by the Government to improve air quality by reducing pollution from a wide range of sources and

¹⁵ The Air Quality (England) Regulations 2000. Available at: <http://www.legislation.gov.uk/uksi/2000/928/contents/made> [Accessed August 2025]

¹⁶ The Air Quality (England) (Amendment) Regulations 2002. Available at: <http://www.legislation.gov.uk/uksi/2002/3043/contents/made> [Accessed August 2025]

¹⁷ Environmental Targets (Fine Particulate Matter) (England) Regulations 2023. Available at: <https://www.legislation.gov.uk/uksi/2023/96/made?view=plain> [Accessed August 2025]

¹⁸ Defra (2017) UK plan for tackling roadside nitrogen dioxide concentrations, July 2017, Available at: <https://uk-air.defra.gov.uk/library/no2ten/index> [Accessed August 2025]

¹⁹ Defra (2018) Supplement to the UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations: Local Authorities Feasibility Studies - Defra, UK. [online] Available at: <https://uk-air.defra.gov.uk/library/no2ten/2018-la-tfs-documents> [Accessed August 2025]

²⁰ Defra (2023) Air quality strategy: framework for local authority delivery, August 2023 Available at: <https://www.gov.uk/government/publications/the-air-quality-strategy-for-england> [Accessed August 2025]

²¹ A Clean Air Strategy 2019, Defra, January 2019, Available at <https://www.gov.uk/government/publications/clean-air-strategy-2019> [Accessed August 2025]

including requiring new targets for PM_{2.5}. Targets have now been set in legislation²², as required by the Environment Act 2021. Interim targets have also been introduced in Defra’s Environmental Improvement Plan 2023²³ to be achieved by the end of January 2028. Regulation SI 2023 No.96 sets out that the targets for PM_{2.5} are to apply at relevant monitoring locations which are considered to be fixed monitoring locations within the national monitoring network. However, for this air quality assessment these targets have been applied at all locations on a precautionary basis.

Relevant air quality criteria for the protection of human health are presented in Table A.

Table A - Statutory air quality criteria for relevant air pollutants

Pollutant	Criteria	
PM ₁₀	Limit value and objective	24-hour mean concentration should not exceed 50 µg/m ³ more than 35 times a year.
		Annual mean concentration should not exceed 40 µg/m ³ .
PM _{2.5}	Limit value	Annual mean concentration should not exceed 20 µg/m ³ by 2020 (Stage 2 Limit).
		Exposure reduction: target of 20% reduction in concentrations at urban background between 2010 and 2020.
	Objective	UK (Except Scotland) annual mean concentration should not exceed 20 µg/m ³ by 2020.
		Exposure reduction (UK urban areas): target of 15% reduction in concentrations at urban background between 2010 and 2020.
	Target	Annual mean concentration target – a maximum of 10 µg/m ³ to be met across England by 2040, with an interim target of 12 µg/m ³ by the end of January 2028.
		Population exposure reduction target – a 35% reduction in population exposure by 2040 (compared to a base year of 2018), with an interim target to reduce by 22% by the end of January 2028.
NO ₂	Limit value and objective	1-hour mean 200 µg/m ³ not to be exceeded more than 18 times a year.
		Annual mean concentration should not exceed 40µg/m ³ .

Responsibility for achieving the national air quality criteria lies with the Government, although local authorities should contribute to this through local action plans designed to reduce pollution levels in Air Quality Management Areas (AQMA).

Local Air Quality Management

Under Part IV of the Environment Act 1995, as amended by Schedule 11 of the Environment Act 2021²⁴, all local authorities are responsible for Local Air Quality Management (LAQM), the mechanism by which the Government’s AQS objectives are to be achieved. As part of this LAQM role, local authorities are required to periodically review air quality in their area and to assess present and likely future air quality

²² Environment Act 2021, Available at <https://www.legislation.gov.uk/ukpga/2021/30/contents> [Accessed August 2025]

²³ Environmental Improvement Plan 2023, Defra, January 2023, Available at <https://www.gov.uk/government/publications/environmental-improvement-plan> [Accessed August 2025]

²⁴ Schedule 11 Environment Act 2021. Available from: <https://www.legislation.gov.uk/ukpga/2021/30/schedule/11/enacted> [Accessed August 2025]

against the objectives defined in Regulations. Where a local authority anticipates an objective is expected to be breached within their area, they must designate an AQMA and develop an action plan to improve pollution levels and work towards achieving the AQS objectives. Under the current LAQM regime, a local authority is responsible for regular review and assessment of local air quality, reports on which are published following public consultation and review by the Department for Environment, Food and Rural Affairs (Defra).

Statutory responsibility for achieving air quality limit values rests with the Government and local authorities have no responsibility for achieving the national air quality criteria, although they should contribute to this through local action plans designed to reduce pollution levels in AQMAs, and through the targeted feasibility studies¹⁸, including clean air zones where appropriate, to supplement the government's air quality plan for nitrogen dioxide in the UK¹⁹.

Dust

There are no national standards or guidelines for dust deposition currently set in the UK, nor by any international organisations. This is due mainly to the difficulty that any standard set would need to relate to dust being a perceptual problem rather than being specifically related to health effects. Typically, there is a 'likelihood of complaint' in residential areas when measured dust levels (as measured using a passive deposit gauge) are 200 mg/m²/day or greater. This threshold is recommended as a level for action by IAQM²⁵.

Planning Policy

National Planning Policy

National Planning Policy Framework

The Government's planning guidance of general relevance to air quality is found within the NPPF²⁶. It provides guidance for local authorities on incorporating air quality considerations into planning decisions and aims to protect the environment and to promote sustainable growth.

Paragraph 110 states that development should be focused on locations which are or can be made sustainable, as this can help to reduce congestion and emissions, and improve air quality and public health.

Paragraph 199 concerns the need to take into account the presence of AQMAs and Clean Air Zones (CAZs) and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified. The paragraph goes on to state that any new development in AQMAs and CAZs should be consistent with the local air quality action plan.

Planning Practice Guidance

Planning Practice Guidance (PPG)²⁷ is intended to support the NPPF and provide further detail to its policies. PPG indicates at paragraph 005 that information relating to air quality could be important to

²⁵ IAQM (2018) Guidance on Air Quality Monitoring in the Vicinity of Demolition and Construction Sites. Available at: https://iaqm.co.uk/text/guidance/guidance_monitoring_dust_2018.pdf [Accessed August 2025]

²⁶ Ministry of Housing, Communities and Local Government (2024) 'National Planning Policy Framework (NPPF)', December 2024. Available at: <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf> [Accessed August 2025]

²⁷ Ministry of Housing, Communities and Local Government (2019) National Planning Portal-Planning Practice Guidance-Air Quality, published November 2019, Available at <http://planningguidance.planningportal.gov.uk/blog/guidance/air-quality/> [Accessed August 2025]

decision makers, and when there are concerns about air quality, 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 the consequences of this for public health and biodiversity); and
- whether occupiers or users of the development could experience poor living conditions or health due to poor air quality.”

PPG also advocates, at paragraph 005, early engagement with the local planning and environmental health departments to establish the need and scope of any assessment. Guidance is also given on the level of detail required in an air quality assessment, and measures which could be employed to mitigate adverse effects.

Local Planning Policy

Kirklees Local Plan Strategy and Policies

Kirklees Local Plan Strategy and Policies⁴ was adopted in February 2019 and contains policies to manage development within Kirklees up to 2031.

Policy LP51 – Protection and improvement of local air quality specifies:

1. *“Development will be expected to demonstrate that it is not likely to result, directly or indirectly, in an increase in air pollution which would have an unacceptable impact on the natural and built environment or to people.”*
2. *“Proposals that have the potential to increase local air pollution either individually or cumulatively must be accompanied by evidence to show that the impact of the development has been assessed in accordance with the relevant guidance. Development which has the potential to cause levels of local air pollution to increase must incorporate sustainable mitigation measures that reduce the level of this impact. If sustainable measures cannot be introduced the development will not be permitted.”*
3. *“Where the development introduces new receptors into Air Quality Management Areas or Areas of Concern or near other areas of relatively poor air quality, for example near roads or junctions, the development must incorporate sustainable mitigation measures that protect the new receptors from unacceptable levels of air pollution. Where sustainable mitigation measures cannot be introduced which prevent receptors from being exposed to unsafe levels of air pollution, development will not be permitted.”*

Kirklees Local Air Quality Strategy

The Kirklees Local Air Quality Strategy²⁸ was launched in 2007. This strategy outlines the approach Kirklees takes to improve air quality.

²⁸ Kirklees Council (2007) The Kirklees Local Air Quality Strategy. Available online at: <https://www.kirklees.gov.uk/beta/crime-and-safety/pdf/AirQualityStrategy.pdf> [Accessed August 2025]

- It is the Vision of Kirklees Council to ensure that children have the best start in life, people are as well as possible for as long as possible and experience a high quality, clean, sustainable and green environment through our shared outcomes.
- Kirklees Council will consider the impact of Air Quality in all decision making and make decisions which improve air quality.
- Kirklees Council is committed to supporting the increase in active travel (walking and cycling) to improve air quality and the health and wellbeing of the public.
- Kirklees Council will work to accelerate the uptake of ultra-low emission vehicles, reduce emissions from all vehicles and increase low emission public transport use.
- Kirklees Council has declared a Climate Emergency and is committed to reducing carbon emissions. Action to reduce carbon emissions will also reduce emissions of other air pollution and improve local air quality.

Kirklees Air Quality Action Plan 2019-2024

Kirklees Air Quality Action Plan²⁹ was adopted in 2019 and outlines actions to improve air quality between 2019 and 2024. The plan outlines 11 broad topics where actions have been identified to reduce emissions associated with vehicles working with local businesses, homeowners and developers to reduce the impact from their emissions.

Kirklees Health and Wellbeing Strategy 2022 – 2027

The Kirklees Health and Wellbeing Strategy³⁰ is a high-level strategy delivered by the Health and Wellbeing Board and their partners to:

- Children have the best start in life
- People in Kirklees are as well as possible for as long as possible
- People in Kirklees live independently and have control over their lives

West Yorkshire Low Emission Strategy - Air Quality and Emissions – Technical Planning Guidance³¹

This technical guidance, developed by the West Yorkshire Low Emission Strategy (WYLES) group, which has membership from each of the five West Yorkshire local authorities, including Kirklees Council, forms part of the development of an overarching low emissions strategy to reduce road transport emissions in West Yorkshire. The technical guidance has been developed in support of planning applications to integrate air quality considerations into land-use planning and development management policies. The guidance provides advice on how to classify development by size and risk, quantify impacts, formulate damage costs, identify mitigation measures and tackle cumulative impacts.

²⁹ Kirklees Council (2019) Kirklees Air quality Action Plan 2019-2024. Available online at: <https://www.kirklees.gov.uk/beta/crime-and-safety/pdf/air-quality-action-plan.pdf> [Accessed August 2025]

³⁰ Kirklees Council (2022) [Kirklees Health and Wellbeing Strategy 2022 – 2027](https://www.kirklees.gov.uk/beta/delivering-services/health-and-wellbeing-strategy.aspx). Available at <https://www.kirklees.gov.uk/beta/delivering-services/health-and-wellbeing-strategy.aspx> [Accessed August 2025]

³¹ West Yorkshire Low Emissions Strategy Group (2016), West Yorkshire Low Emission Strategy - Air Quality and Emissions – Technical Planning Guidance Available at <https://www.kirklees.gov.uk/beta/crime-and-safety/pdf/WYLES-air-quality-and-emissions-planning-technical-guide.pdf> [Accessed August 2025]

Rail Specific Policy

Department for Transport

The Department for Transport's (DfT) Rail Environment Policy Statement³² aims to:

“achieve a cleaner, greener railway that is fit for the future”.

The policy statement includes the following priorities in relation to air quality:

- Set targets for levels of PM_{2.5}, PM₁₀ and NO₂ for all parts of the network that the public can access in 2022, with the ambition of meeting these targets by the end of 2030;
- The rail industry will be required to produce air quality improvement plans for stations identified as having poor air quality;
- Remove all diesel-only trains from the network by 2040; and
- For 100% of Network Rail's cars and vans to be zero emission vehicles by 2027.

In addition, the Government's Transport Decarbonisation Plan³³ includes as a strategic priority the need to:

- “accelerate modal shift to public and active transport”

With a commitment to:

- “improve rail journey connectivity with walking, cycling and other modes of transport”

Clean Air Strategy

The Department for Environment, Food and Rural Affairs (Defra)'s Clean Air Strategy²¹ has also identified actions to reduce emissions from rail transport, including to:

“reduce emissions from rail and reduce passenger and worker exposure to air pollution.”

Network Rail

Network Rail has set up its own decarbonisation strategy³⁴, which aims to:

“set science based targets to the most ambitious target of limiting emissions from our own operations to a 1.5°C warming scenario.” By limiting emissions within their direct control as well as optimising both its upstream and downstream emissions.

Rail Safety & Standards Board

The Rail Safety & Standards Board (RSSB)'s Air Quality Strategy Framework³⁵ has a vision to achieve ‘A rail network with a positive impact on local air quality’. The Strategy covers all pollutant emissions resulting from the GB rail industry which have proven to impact human health.

Network Rail Environmental and Social Policy

The Environment and Social Minimum Requirements for Projects – Design and Construction, published by Network Rail in 2021 sets out Network Rail's minimum requirements for the management of

³² DfT (2021) Rail Environment Policy Statement on Track for a Cleaner, Greener Railway. Available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1002166/rail-environment-policy-statement.pdf [Accessed August 2025]

³³ DfT (2021) Decarbonising Transport. A Better, Greener Britain. Available at : <https://www.gov.uk/government/publications/transport-decarbonisation-plan> [Accessed August 2025]

³⁴ Network Rail (2022) Traction Decarbonisation Network Strategy – Executive Summary: <https://www.networkrail.co.uk/sustainability/a-low-emission-railway/> [Accessed August 2025]

³⁵ GB Rail Industry supported by RSSB (May 2022 update) Air Quality Strategic Framework. Available at: <https://www.rssb.co.uk/sustainability/clean-air/air-quality-strategic-framework> [Accessed August 2025]

environment and social risks and opportunities during design and/or construction activities. The document describes environmental requirements with respect to air quality and dust and social performance requirements.

Non-Statutory Guidance

Development Control

The EPUK/IAQM Guidance sets out to ensure that air quality is adequately considered in the land-use planning and development control processes. It comprises an initial screening stage to determine the need for an air quality assessment. If further assessment is required, a number of more stringent criteria are provided to help establish the need for further work, which may be either qualitative or quantitative, simple or detailed, depending on the impact of the development on, for instance, traffic flow. It also provides a framework for describing the magnitude of changes in local air pollutant concentrations at individual receptors (the impact) and gives advice on how overall significance may be assessed using professional judgement (the effect).

Construction Dust Assessment

The IAQM 'Guidance on the assessment of dust from demolition and construction.' (IAQM Construction Dust Guidance)³⁶ provides a framework for a risk-based approach to the assessment of dust emissions from demolition and construction land development schemes and outlines options for mitigation depending on the level of 'dust risk' identified for a site through the assessment process.

³⁶ Institute of Air Quality Management. (2024) Guidance on the assessment of dust from demolition and construction v2.2 [online]. London: IAQM. Available at: <https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf> [Accessed August 2025]

B. Baseline Conditions

Local Air Quality Management

The Proposed Development is located within the administrative area of Kirklees Council, within a mainly residential area of Huddersfield Town Centre. The site is bordered by Fitzwilliam Street to the north, Portland Street to the west, the A629 New North Road to the east and part of the former Kirklees College site to the south. There are residential dwellings, a nursery school and commercial properties located within 50 m of the site. The location and layout of the site is shown in Figure 2 below.

There is one Air Quality Management Area (AQMA) adjacent and partially within the site, which incorporates roads bordering and within the Huddersfield ring road and is named “Kirklees AQMA 9”. This AQMA incorporates roads bordering and within the Huddersfield ring road including a boundary along New North Road and was declared by Kirklees Council in 2017 due to exceedances of the nitrogen dioxide (NO₂) annual mean Air Quality Strategy (AQS) objective. It should be noted that this AQMA is one of ten reported AQMAs within Kirklees Council’s administrative area.

Figure 2 below shows the location of AQMA and air quality monitoring near the Proposed Development.

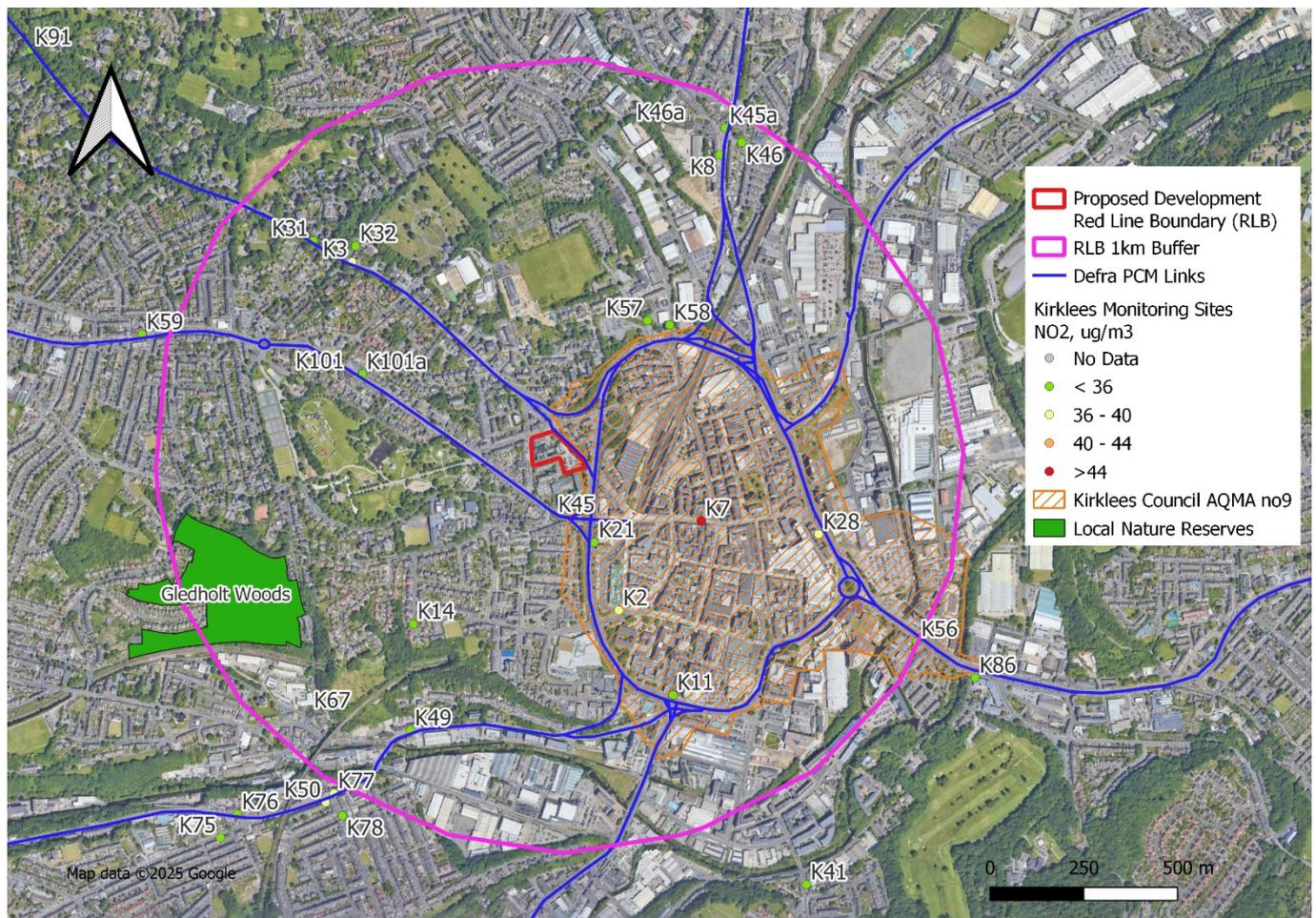


Figure 2 Proposed Development Location and Air Quality Monitoring Locations

Air Quality Monitoring

Continuous Monitoring

Continuous monitoring is undertaken at one Automatic Urban and Rural Network (AURN) site within the Kirklees Council administrative area. The urban background site (CM1) is located in Dewsbury approximately 11 km northeast of the site and is not considered to be representative of the study area.

Passive Monitoring

Kirklees Council also undertakes passive monitoring of NO₂ using diffusion tubes. There are 21 diffusion tube sites located within a 1 km study area around the Proposed Development, as shown in Table B below. The closest diffusion tube to the Proposed Development with monitoring data available over the last five years is a roadside site (K21), approximately 198 m to the south on the A62 Castlegate, which reported an annual mean NO₂ concentration of 35.7 µg/m³ in 2023. The highest 2023 monitored NO₂ concentrations within 1 km of the Proposed Development was 44.9 µg/m³ at site K7 along Westgate, approximately 338 m to the east of the Proposed Development, the only diffusion tube where the annual average concentration in 2023 exceeded 40 µg/m³, as shown in Table B below. This diffusion tube is located on a street characterised by street canyons, and bus routes and the location is not representative of exposure with regard to the annual mean objective, as advised in Kirklees ASR.

Table B - Annual mean NO₂ concentrations of diffusion tubes within 1 km of the site (µg/m³)

Site ID	Site Name	Site type	X	Y	2019	2020	2021	2022	2023
K2	Bus Station - Huddersfield	Other	414214	416504	38.5	34.2	42.4	36.9	36.7
K3	Edgerton Road	Roadside	413504	417439	42.7	36.3	40.3	41.5	37.2
K7	Westgate Huddersfield	Urban Centre	414434	416744	40.8	28.9	36.7	40.0	44.9
K8	Bradford Road Fartown 1- Charmaines	Roadside	414483	417726	36.0	30.5	33.4	32.7	30.7
K11	Chapel Hill Huddersfield	Roadside	414359	416277	35.0	27.7	31.3	32.0	27.9
K14	Oastler Avenue	Urban Background	413667	416467	17.7	13.9	14.5	13.0	12.1
K21	Castlegate Huddersfield	Roadside	414149	416686	34.7	33.4	39.3	37.8	35.7
K28	Ring Road Huddersfield-Southgate	Roadside	414747	416708	46.4	37.6	41.4	41.0	38.1
K31	Blacker Road 1	Roadside	413400	417495	30.5	17.1	25.0	24.6	21.6

Site ID	Site Name	Site type	X	Y	2019	2020	2021	2022	2023
K32	Blacker Road 2	Roadside	413513	417481	35.5	-	36.1	38.1	35.2
K45*	LC 008 Trinity Street outside Chiiwala	Roadside	414041	416754	-	-	-	-	-
K45a	Bradford Road Fartown 2 - opposite Khan Mather	Roadside	414498	417798	36.4	25.1	33.2	34.3	34.3
K46	1 Willow Lane East, Fartown (LC002)	Roadside	414542	417759	34.8	29.2	22.5	21.3	30.5
K46a*	Willow Lane Fartown- lamppost 03 opposite Perrys	Roadside	414402	417806	-	-	-	-	-
K49	Manchester Road Thornton Lodge 2	Roadside	413659	416182	33.1	33.1	36.4	33.6	32.4
K56	Wakefield Road Huddersfield	Roadside	415009	416420	34.9	30.3	37.4	36.1	34.8
K57	Cambridge Road 1	Roadside	414291	417281	22.2	18.5	20.1	20.7	21.8
K58	St John's Road	Roadside	414350	417270	39.6	34.9	37.4	35.9	32.5
K67*	Longroyd bridge, lamppost 007, outside 5 market st, Triangle	Roadside	413390	416229	-	-	-	-	-
K101*	LC30 outside 159 Trinity Street	Roadside	413495	417139	-	-	-	-	-
K101a	Trinity Street, Huddersfield	Roadside	413531	417137	-	22.8	27.1	25.6	25.7

Exceedances to the AQS objective are reported in **bold**. *Data unavailable

Defra Mapped Background Concentrations

Estimates of current and future year background pollutant concentrations in the UK are available on the Defra UK-AIR website². The background estimates, which are a combination of measured and modelled data, are available for each one-kilometre grid square throughout the UK based for a reference year of 2021 and future year estimates up to 2030. These background estimates include contributions from all source sectors, e.g. road transport, industry and domestic and commercial heating systems.

Estimated annual mean background concentrations for the one-kilometre grid squares that cover the Proposed Development for 2025 are presented in Table C for the pollutants NO₂, PM₁₀ and PM_{2.5}. The

mapped concentrations of these pollutants indicate that background concentrations in the vicinity of the Scheme are expected to be well below ^{Error! Bookmark not defined.} relevant AQS objectives and PM_{2.5} targets.

Table C - 2025 Defra mapped background annual mean concentrations

Grid Square		Background Concentration (µg/m ³)			
X	Y	NOx	NO ₂	PM ₁₀	PM _{2.5}
413500	416500	14.6	11.0	10.9	6.7
414500	416500	20.8	15.2	11.8	6.9

Pollution Climate Mapping (PCM)

Defra’s PCM model² provides estimates of roadside concentrations of annual mean NO₂, which are used in reporting regarding compliance with limit values. The most recent model outputs provide projected roadside concentrations for 2023. There are 17 PCM links within 1 km of the Scheme, including the ring road and the adjacent A629 New North Road. None of the links have a projected roadside NO₂ concentrations over 40 µg/m³, with all projected roadside NO₂ concentrations being below 30 µg/m³. Therefore, PCM links are not at risk of exceeding the annual mean NO₂ limit value in the study area.

Baseline Summary

The review of existing baseline air quality conditions has shown that the Proposed Development site is located partially within and adjacent to Kirklees AQMA 9, designated due to exceedances of the annual mean NO₂ AQS objective. Review of monitoring data indicated that there was one exceedance of the annual mean AQS objective for NO₂ in 2023, the most recent year of available monitoring data, at a passive monitoring site within 1 km of the site, however, this site is in a location characterised by street canyons and bus routes, and it is not considered as representative of sensitive exposures. Defra mapped background concentrations at the site and Defra PCM roadside concentrations, indicate there are not expected to be exceedances of the relevant AQS objectives and targets for pollutants NO₂, PM₁₀ and PM_{2.5} in the current year 2025.

C. Traffic Data

The two-way AADT flows for New North Road, Fitzwilliam Street and Trinity Street, provided by AtkinsRéalis Transportation, are presented in Table D below. The table presents estimated AADT values for the Proposed Development, alongside the corresponding changes compared to the approved mixed-use development, indicated in brackets.

Six traffic scenarios have been provided:

1. Existing traffic (2025)
2. Forecast traffic (2028)
3. Approved mixed-use development (2028)
4. Partial development with only Lidl in operation (2028)
5. Normal operation of the temporary car park and operation of Lidl (2028)
6. Maximum car park uses during railway blockades and operation of Lidl (2028)

Scenario 4 serves as a conservative baseline, representing the forecasted traffic levels in 2028 with only the Lidle store operational out of the approved mixed-use development. Traffic from the Proposed Development traffic is added to this baseline for scenarios 5 and 6.

The comparison in Table D demonstrates that, under both normal and intensified use, traffic generated by the Proposed Development remains below that the levels associated with the approved mixed-use development. The only increase observed is a modest rise of +25 AADT on Trinity Street, attributed to the operation of the Lidl store. This is evident when comparing traffic forecasts with and without the Lidl in place.

Overall, the traffic associated with the Proposed Development does not exceed the traffic change criteria detailed in the EPUK/IAQM Guidance. As the projected traffic levels are generally lower than those forecast for the approved mixed-use scheme, no further air quality impact assessment is required.

Table D – Estimated AADT for roads adjacent to the Proposed Development

Scenario	Existing traffic	Forecast	Approved mixed use development	Approved Lidl	Proposed TRU use including Lidl	
		Total AADT Without any mixed-used development	Total AADT including traffic generated by the mixed-use development	Total AADT including traffic generated by the Lidl store currently in construction (change from approved development)	Total AADT including traffic generated by LIDL and the Proposed Development (change from approved development)	Total AADT including traffic generated by LIDL and the Proposed Development during railway blockades (change from approved development)
Year	2025	2028	2028	2028	2028	2028
New North Road	4,873	4,977	5,982	4977 (-1005)	5,086 (-896)	5,673 (-309)
Fitzwilliam Street	4,315	4,407	4,775	4407 (-368)	4,443 (-332)	4,638 (-137)
Trinity Street	17,927	18,310	19,076	19100 (+25)	19,100 (+25)	19,100 (+25)

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