

Lower Falinge Regeneration Screening Request Pursuant to the Town and Country Planning (Environmental Impact Assessment) Regulations 2017

Rochdale Boroughwide Housing Ltd

26 August 2026

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1.0 Introduction

Purpose of the Report

- 1.1 On behalf of our client, Rochdale Boroughwide Housing Ltd [RBH], Nathaniel Lichfield & Partners [Lichfields] requests that Rochdale Borough Council [the Council] provides a formal screening opinion on the need or otherwise for an Environmental Impact Assessment [EIA] in respect of the proposed development on parts of the Lower Falinge Estate. This request is made in pursuance of Regulation 6 of the Town and Country Planning (EIA) Regulations 2017 (as amended) [the EIA Regulations]. We are also seeking confirmation that a Habitat Regulations Assessment [HRA] is not required.

Background to the Report

- 1.2 The regeneration of Lower Falinge is an ongoing strategic priority for the Council to improve housing offer and contribute to the regeneration of the town centre and surrounding areas. Since 2013, there have been a number of permissions in the Lower Falinge area which have resulted in the demolition of vacant RBH housing stock and commercial buildings and replacement with improved high-quality homes. A number of projects have been successfully delivered in 2013, 2016 and 2018 respectively, particularly in the area between Howard Street, Samuel Ashworth Street and Waterhouse Street.
- 1.3 In 2017 the Council instructed consultants to commence work on a Lower Falinge spatial strategy which was subsequently developed into a Lower Falinge Supplementary Planning Document [SPD]. This was adopted in 2021. The spatial strategy identified that Lower Falinge is in need of significant investment in order to provide existing and future residents with better-quality homes, more housing choice and a better quality of life and wellbeing. It is recognised in that document that there was a low level of satisfaction by residents living in the homes within Lower Falinge, and few people want to move into or remain within the area.
- 1.4 The scope of ‘the Project’ to which this EIA Screening relates is limited to the extent of works proposed within the red-line boundary submitted with this letter. It is RBH’s intention to submit a hybrid application comprising full planning permission for the demolition of existing buildings and structures, and outline planning permission for up to 270 affordable homes on the remaining land within Lower Falinge.
- 1.5 A request for pre-application advice was submitted in June 2026. The process is ongoing and will inform the final proposals. The overall parameters of development will not materially digress from those set out within this Screening which have been deliberately defined at the upper limit of what the application may propose, whilst still being representative of the likely development. An extensive programme of consultation with key stakeholders and local community has also taken place.

Structure of the Report

- 1.6 To enable your consideration of the issues, we set out the information in the following sections of this report:

- 1 Section 2.0 provides a description of the site and its surroundings;
- 2 Section 3.0 sets out the planning policy background;
- 3 Section 4.0 provides a description of the proposed development;
- 4 Section 5.0 details when a development is required to be accompanied by an EIA in accordance with the EIA Regulations;
- 5 Section 6.0 assesses the possible environmental effects of the proposed development by reference to a preliminary review of the site and its surroundings, and a consideration of the issues set out in the EIA Regulations; and,
- 6 Section 7.0 concludes the report by detailing how the effects of the scheme will not be significant and therefore there is no requirement for an EIA or HRA to be prepared to accompany the application(s).

2.0 Description of Site and Surroundings

Site Location

- 2.1 The extent of the Site is shown on the plan (ref. 1369-003 Rev A) at Appendix 1. It comprises two separate parcels (herein referred to as the eastern parcel and the western parcel), both located in the Lower Falinge area to the north of the town centre in Rochdale. The Western parcel is broadly bound by Falinge Road to the north, Lower Falinge Road to the east, Spotland Road to the south and Sheriff Street to the west. The Eastern parcel is broadly bound by High Street to the south, Oldmill Street to the east, Hope Street and Waterhouse Street to the north, and Toad Lane to the west. The distance between the two parcels at its closest point is approximately 85m.

Site Description

Western Parcel

- 2.2 The western parcel extends to 2.61 hectares [ha] and contains nine distinct residential blocks arranged amongst existing hardstanding including surface parking, footpaths and paved private amenity space as well as landscaping in the form of private and public open space. The existing built form and public realm present a poor-quality residential environment, characterised by extensive metal fencing, elevated concrete walkways, and enclosed, poorly overlooked entrances and corridors, which adversely affect legibility and permeability. However, there are a number of trees interspersed in the public amenity space within the western parcel which soften the environment.
- 2.3 To the east of Sheriff Street there is a rectangular expansive of hardstanding where three former garage blocks once stood. It is understood these garages were demolished between 2022 and 2023. The remnant hardstanding is used on an ad hoc basis for parking. The rectangle at the north of the western parcel formerly accommodated a further four residential blocks which were demolished at a similar time (see Appendix 2 for Planning history). That area now predominantly comprises poor quality, incidental grassland, which was installed following demolition, with some trees which are mainly focused on the Site's boundary with Sheriff Street.
- 2.4 At the south of the western parcel at the boundary with Spotland Road there is a large grassed verge on which there are a number of large established trees and smaller shrubs.
- 2.5 The western parcel contains nine four-storey residential buildings comprising a total of c.202 dwellings. The seven buildings out of these to be demolished comprise a total of c.150 units comprising a mix of approximately 50% 1-bedroom, 13.2% 2-bedroom and 36.8% 3-bedroom properties. The dwellings within this part of the Estate are in need of renewal. Significant investment would be required to ensure these properties meet future aspirations for energy conservation and efficiency, and to ensure a high standard of living is provided for existing and future residents.

Eastern Parcel

- 2.6 The eastern parcel extends to 2.14 ha. It primarily comprises a number of vacant parcels comprising hardstanding or a mix of hardstanding and grassland following demolition

several buildings within the last five years to make way for the redevelopment of the Site. There is one building within the eastern parcel, a three-storey commercial building off Waterhouse Street used as a clothing manufacturer, with a car sales yard with a temporary cabin office to its east. Public parking formed off High Street is located within the eastern parcel. Part of the parcel includes the site of the former Redcross Mill, south of Hope Street and east of Redcross Street which is comprised of various mounds of earth, with scrub and grassland now growing through.

Sustainability of the Site

Accessibility

- 2.7 The Site is accessible via public transport with the bus stops on Spotland Street (immediately adjacent to the western parcel) offering regular services to Rochdale Interchange, Bury and Whitworth. Rochdale interchange offers numerous services at regular intervals across Greater Manchester and is accessible via the bus on Spotland Street or via a c.10-minute walk. Rochdale train station is a c.20min walk south of the Site. St. Mary's Gate, which is immediately south of the eastern parcel, has recently benefitted from infrastructure upgrades including a new pedestrian crossing and the provision of a cycle lane to improve connectivity with the town centre.

Socio-economic

- 2.8 Deprivation is high across the Estate as evidenced by the Indices of Multiple Deprivation [IMD], a measure of relative deprivation for Lower Super Output Areas [LSOAs]. Based on the latest IMD data published in 2019, the LSOAs that cover the site fall within the most deprived 5% of LSOAs nationally in terms of Income Deprivation, Employment Deprivation, and Health and Disability Deprivation.

Site Constraints

- 2.9 The Site lies within Flood Zone 1 (in the present and with a 2070-2125 climate change scenario). The Flood Risk Map for Planning identifies some risk of surface water flooding. This is mainly concentrated around the area of hardstanding east of Sheriff Street, some parts of Lower Falinge Road, and some parts of Redcroft Street on the eastern parcel. These surface water issues appear to be issues with the existing drainage system rather than intrinsic issues of surface water flooding.
- 2.10 The Site is not located in an Area of Outstanding Natural Beauty [AONB], a Local or National Nature Reserve, a Ramsar or a Site of Special Scientific Interest [SSSI]. The Site is also not located within a Special Protection Area [SPA], a Special Area of Conservation [SAC] or a Site of Biological Importance [SBI].
- 2.11 A planning application to place trees under a Tree Preservation Order [TPO] was made in July 2021 (reference 21/00988/TPO). This relates to a group of trees on the grass verge north of Spotland Road within the western parcel.
- 2.12 There are no designated heritage assets within the Site. However, the western parcel is adjacent to St Edmunds Church Falinge Conservation Area. At its closest point the parcel's boundary is circa 12m from the Conservation Area, at the junction of Edmund Street and

Sheriff Street. The eastern parcel is c. 30m north of the Town Head Conservation Area. Grade II* Listed Hope Chapel and Parsons House Parson's House is circa 40m north-east of eastern parcel. Grade II Listed Registered Park and Garden Falinge Park is circa. 50m north of western parcel boundary.

- 2.13 We understand that there are no non-designated heritage assets within the Site. We have identified that the former mill on Toad Lane (Waljan Mill/Hanging Road Mill) is considered a non-designated heritage asset.
- 2.14 There is some slight overlap between the western parts of the western parcel and southern parts of the eastern parcel and the St Mary's Gate Air Quality Management Area [AQMA].

3.0 Planning Policy Background

National Planning Policy

- 3.1 The National Planning Policy Framework [the Framework] (published August 2026) sets out the Government's planning policies for England and how these should be applied. The overarching aim of the Framework is to proactively deliver sustainable development to support the Government's economic growth objectives. The Framework is a material consideration in the determination of any application.
- 3.2 Paragraph 125(c) states that planning policies and decisions should give substantial weight to the value of using suitable brownfield land within settlements for homes and other identified needs, proposals for which should be approved unless substantial harm would be caused.

Local Planning Policy

- 3.3 In this instance, the Development Plan comprises the following:
- Rochdale Core Strategy 2016 – 2028 (adopted 2016);
 - Saved Policies of the Unitary Development Plan (adopted 2006);
 - Places for Everyone Joint Plan 2022 – 2039 (adopted 2024);
 - Greater Manchester Joint Waste Development Plan Document (adopted 2012); and,
 - Greater Manchester Joint Minerals Plan (adopted 2013).
- 3.4 The Site does not fall within a Neighbourhood Plan area. Other material considerations applicable to any future planning submission include the National Planning Policy Framework [NPPF], Rochdale's Supplementary Planning Documents [SPDs], the National Design Guide and Planning Practice Guidance [PPG].
- 3.5 There does not appear to be a Policies Map for the Rochdale Core Strategy 2016-2018 however there is a UDP Map for the Site, which is shown below, with the Site annotated with a red edge. There are no relevant designations for the Site.



4.0 Proposed Development

Description of proposed development

- 4.1 As set out in Section 2.0 above, the Site comprises an area of the Lower Falinge estate within the urban area of Rochdale. The western parcel comprises a degree of existing housing stock which requires renewal. The eastern parcel is largely vacant following previous demolition of poor housing stock or redundant buildings. The proposal seeks to redevelop the Site with high quality scheme to improve the housing offer in the Borough. The following section describes the proposed development in greater detail.
- 4.2 For the purposes of this screening process, we have established the following maximum parameters for the proposed development on the basis that this is likely to represent an appropriate ‘worst case scenario’:
- “Hybrid planning permission for: (a) full planning permission for the demolition of existing buildings and (b) outline permission (with all matters reserved apart from access) for the erection of 270 dwellings; together with improved public realm, improvements to the retained open space, hard and soft landscape works, and other associated infrastructure and works.”*
- 4.3 It should be noted that this EIA Screening Request is part of an iterative process and the development proposals will evolve over time following further engagement with the community and other stakeholders including the Council.
- 4.4 The full element of the scheme seeks consent for demolition of some of the existing buildings on the Site. On the western parcel, the demolition of 7 four-storey apartment buildings is proposed, totalling 150 dwellings. Two apartment buildings, named Pershore and Stavordale which comprise c. 52 dwellings, are to be retained.
- 4.5 On the eastern parcel, the demolition of a commercial building on Waterhouse St / School St ‘School Street Works’, the site of ‘Wear Fine Ltd’, is proposed. The blocks to be demolished are shown on the Demolition Plan submitted with the EIA Screening Request.
- 4.6 The outline element of the scheme relates to the provision of 270 dwellings. The residential development will replace the majority of the existing 1970’s poor quality housing stock (c. 150 homes) with approximately c.270 high-quality homes across the two parcels, comprising houses and apartments that meet modern standards, Nationally Described Space Standards [NDSS] and the latest building regulations. The scheme will result in a net increase in residential dwellings across the site (approximately 120 new homes). However, it is noted that the Site (particularly the eastern parcel) has been subject to demolition to prepare for this project at the edge of the town centre.
- 4.7 The scheme will deliver a mix of 1, 2, 3 and 4-bedroom houses, 1 and 2-bedroom apartments. The proposed mix will comprise approximately 15.6% 1-bedroom dwellings, 53.5% 2 bedroom dwellings, 18.8% 3 bedroom dwellings and 12.1% 4 bedroom dwellings. The scheme will replace the existing housing stock comprising predominantly 1- and 3-bedroom dwellings. In terms of tenure, the proposals comprise 100% affordable rent.
- 4.8 The following sections set out the proposals in more detail for each parcel, covering access (which is sought in full).

Western Parcel

- 4.9 The latest illustrative plans propose 141 dwellings on the western parcel, across a mix of apartments and family housing ranging between 2-4 storeys.
- 4.10 The proposed development utilises the existing highway network. The principal vehicular access to the western development site will be provided via the existing priority-controlled junction on Sheriff Street. This access will serve as the primary point of entry and exit for residents, visitors. In addition, three vehicular access points are proposed from Lower Falinge along the eastern boundary of the site.
- 4.11 A network of low-speed residential streets and shared-surface environments has been incorporated to create a safe and attractive setting that prioritises pedestrian movement while maintaining appropriate vehicular access. Parking provision comprises a combination of in-curtilage spaces serving family housing and communal parking areas associated with apartment buildings. Accessible parking bays, electric vehicle charging infrastructure and secure cycle storage are integrated throughout the development to support a range of user needs and future travel demands.
- 4.12 The existing street internal street network has been largely retained and opened up. This allows pedestrian access through the parcel to the shopping parade at the south-east west of the parcel (outside of the Site). Parking spaces and a turning head of servicing has been included to support the operation of the existing shops.
- 4.13 The proposals are focussed on creating new active green travel routes to enhance pedestrian connectivity. This includes a Green Route from the south-east of the western parcel onto Spotland Road, northwards along the east of the parcel to Lower Falinge. At the north of a Site a shared surface runs east-west providing access to Falinge Park of the west. Further active travel improvements are focussed on Sheriff Street, with dwellings set back to facilitate the creation of a green pedestrian and cycle route.
- 4.14 The existing green space in the centre of the Site has been retained, with new apartments oriented towards it to promote natural surveillance and use. The open space at the south of the parcel bordering Spotland Road is also retained as part of the proposals.

Eastern Parcel

- 4.15 The latest illustrative plans show 115 dwellings on the eastern parcel, providing a mix of apartments and family housing, ranging between 2 and 4 storeys.
- 4.16 Taller buildings are positioned along prominent frontages and key junctions to create stronger enclosure and improve the identity of the area. The landmark 4-storey buildings are proposed along the High Street to establish a strong sense of arrival and reinforce the identity of the development.
- 4.17 Vehicular access within the eastern development site will primarily be achieved via the existing local highway network, including Redcross Street, High Street, Toad Lane and Old Mill Street. As part of the proposals, new priority controlled accesses will be provided on both sides of Redcross Street within the site boundary.
- 4.18 The proposals retain the existing highway network, with enhanced pedestrian crossings, active frontages and a more legible street network to strengthen connectivity throughout

the site and create safer and more attractive routes for residents and visitors. Parking is rationalised, with on street parking along High Street replaced with a landscaped area to improve pedestrian connectivity to the town centre and to Lidl. Resident parking provided via on-plot parking for family houses and communal parking for apartment buildings. The existing pedestrian subway is to remain in situ to support pedestrian connectivity.

Construction and Phasing

- 4.19 The development will be delivered in a phased manner.
- 4.20 It is anticipated that the western parcel will be delivered in three phases and the eastern parcel will be delivered in two phases. The full details of phasing will be submitted with the outline application and / or controlled by conditions attached to any future planning permission.
- 4.21 The phased approach allows development to progress efficiently while maintaining a cohesive long-term vision for the regeneration of Lower Falinge. No decanting of residents is required as the existing residential blocks are already vacant.
- 4.22 It is proposed to adopt normal construction techniques, with all noisy construction operations being undertaken during the normal working hours (i.e. not on Saturday afternoons, Sundays and Bank Holidays) to minimise disruption to existing and surrounding residents. The majority of the buildings will be set on normal foundations unless there are technical reasons which would require an alternative solution.
- 4.23 A Construction Environmental Management Plan [CEMP] will be prepared and agreed with the Council. It will address the need for environmental safeguards and will assist in facilitating the adoption of environmentally sensitive work practices. The aim of the CEMP will be to ensure that the effects of the construction phase are minimised and mitigated. It will ensure that there is compliance with any environmental mitigation and commitments identified as part of the development consenting process; and will reduce the risk of adverse impacts of construction and operation on sensitive environmental receptors and to minimise disturbances to local residents. The CEMP will also set out a scheme for recycling and reusing as much of the waste generated from the demolition of the existing buildings as possible during the construction phase.
- 4.24 During the construction period, construction compounds will be required. The construction compounds will be surrounded by a security fence and will comprise of the following elements:
- Storage of construction materials, construction vehicles and plant machinery;
 - Temporary port cabin type structure to be used as site offices; and,
 - Parking for construction staff and visitors.
- 4.25 The construction compounds will typically be located on areas which will be developed in the future. Where that is not possible the land will be reinstated or laid out for its intended purpose (e.g. open space) at the end of the construction period. The location of the construction compounds is yet to be determined but it will be located in a position where it will not have an adverse impact on the existing residents of the surrounding locality.

5.0 Requirement for EIA

5.1 The development is one to which the EIA Regulations may apply because it falls into Part 10(b) of Schedule 2 as a Project including more than 150 dwellings (i.e. it exceeds applicable threshold / criteria in the second column in Schedule 2). For Schedule 2 developments, the EIA Regulations require that an Environmental Statement [ES] be prepared where “the development is likely to have significant effects on the environment by virtue of factors such as its nature, size or location”.

5.2 Some guidance on the need for EIA is provided in the national Planning Practice Guidance [PPG] which confirms that the focus should be on those effects which are significant. It provides as an Annex a series of Indicative Screening Thresholds [IST] which include indicative criteria to assist in determining whether significant effects are likely, recognising that the location and sensitivity of an asset are important considerations.

5.3 In considering the screening of an EIA, it is important to consider paragraph 018 of the Practice Guidance. This states that:

“Only a very small proportion of Schedule 2 development will require an Environmental Impact Assessment. While it is not possible to formulate criteria or thresholds which will provide a universal test of whether or not an assessment is required, it is possible to offer a broad indication of the type or scale of development which is likely to require an assessment. It is also possible to provide an indication of the sort of development for which an assessment is unlikely to be necessary. To aid local planning authorities to determine whether a project is likely to have significant environmental effects, a set of indicative thresholds and criteria have been produced...”

5.4 The Indicative Screening Threshold [IST] in the PPG for projects that fall within Part 10(b) of Schedule 2 is as follows:

“Environmental Impact Assessment is unlikely to be required for the redevelopment of land unless the new development is on a significantly greater scale than the previous use, or the types of impact are of a markedly different nature or there is a high level of contamination.

Sites which have not previously been intensively developed:

(i) area of the scheme is more than 5 hectares; or

(ii) it would provide a total of more than 10,000 m² of new commercial floorspace; or

(iii) the development would have significant urbanising effects in a previously non-urbanised area (e.g. a new development of more than 1,000 dwellings).”

5.5 It is important to note that the PPG distinguishes between the redevelopment of land and land that has not previously been substantially developed. In this instance the proposals amount to the redevelopment of previously developed land. The proposals therefore fall within the first part of the IST. There are three considerations given in the IST which I address in brief below:

1 new development is on a significantly greater scale than the previous use; or

- 2 the types of impact are of a markedly different nature; or,
- 3 there is a high level of contamination.

5.6 Nevertheless, the IST in the PPG are only guidance and the requirement of the EIA Regulations is to consider Schedule 2 developments in accordance with the criteria in Schedule 3. This identifies three categories of criteria against which Schedule 2 development should be assessed. They can be summarised as follows:

- 1 Characteristics of the development (such as size, cumulative effects, use of natural resources, production of waste, pollution and nuisances, risk of accidents and risk to human health).
- 2 Location of the development (by reference to the environmental sensitivity of the area).
- 3 Characteristics of the potential impact (having regard in particular to the extent of the impact, its transfrontier nature, magnitude and complexity, probability and duration, frequency and reversibility).

5.7 These matters are addressed in turn below.

Development Characteristics

Size and Design of the Development

5.8 The proposed development site extends to approximately 4.65 hectares. However, the size of the development site does not in isolation determine the need for an EIA. The number of dwellings proposed (up to 270) is considerably lower than the PPG IST of more than 1,000.

5.9 The site is located in a built-up area of Rochdale, north of the town centre. The site currently contains approximately 150 dwellings. The scheme will result in the demolition of the existing 150 dwellings, and the provision of 270 new dwellings, comprising 1-, 2-, 3- and 4-bedroom houses, 1- and 2-bedroom apartments, ranging across 2-4 storeys. This will result in 118 net additional dwellings. The height of the buildings will not exceed that of buildings previously constructed (and since demolished) on the Site. The size and design of the development is considered to be appropriate within its context. The Proposed Development is not expected to give rise to significant environmental effects in relation to its size or design.

Cumulation with other development

5.10 The western parcel lies within an area of established residential use, and the eastern area has been largely demolished to make way for this development. There are no active applications at the Site. In terms of the surrounding area. The previous phases 1-3 of the Lower Falinge regeneration have taken place between 2013-2018 (ref. 12/56386/FUL; ref. 16/01007/FUL; and 18/00896/FUL). These developments have already been completed.

5.11 We are aware of the Station Road development (ref. 22/01119/FUL) which is to deliver 81 dwellings and 142 apartments near the train station. Construction has commenced this year. This Project is 750m south of the Site and was not subject to an EIA. By virtue of its scale and location, and the fact its effects will be managed by appropriate management plans, it is not considered that any significant effects when considered cumulatively with this scheme.

- 5.12 It is envisaged that all developments being brought forward within the area will be subject to appropriate management plans and embedded mitigation during their construction and operation to ensure that significant environmental effects do not arise. As a result, and considered cumulatively, it is not considered that any unusual or significant effects would arise when the Proposed Development is considered cumulatively with other schemes nearby that would give rise to a need for EIA.

Use of natural resources, in particular, soil, land, water, biodiversity

- 5.13 The Proposed Development seeks to replace the existing buildings on Site which are inefficient in terms of their energy use and no longer fit for purpose. The new buildings will comply with Part L 2026/FHS of the Building Regulations, and use the latest technologies to use water and energy efficiently. The new dwellings will also comply with the Future Homes Standard. The proposals do not make use of natural resources nor deplete those present on the Site in a way which would have the potential to give rise to significant environmental effects requiring EIA.

Production of waste

- 5.14 The Proposed Development will generate waste during the operation and construction periods, however this is not expected to be at a level that will give rise to significant adverse impacts on the environment due to the nature of the proposed industrial uses. Waste generated during the construction period will be minimised and recycled as appropriate. This is therefore not considered to have a significant impact that should give rise to the need for EIA.

Risk of major accidents and/or disasters

- 5.15 The Proposed Development is not considered likely to give rise to the potential for risks from accidents, pollution and nuisances or the significant use of natural resources which would give rise to the need for EIA. Access by and operation of HGVs is not expected to generate hazardous activity or loads during construction or operation.
- 5.16 The Site is deemed to be of a low risk of fluvial, groundwater, or surface flooding. To ensure that the Proposed Development will not increase the flood risk elsewhere, surface water discharge from the Site will be controlled.

Pollution and nuisances

- 5.17 During construction, traffic, dust or other emissions will be managed through standard best practice construction measures which can be considered to be embedded. However, there is a low to moderate risk of direct contact, ingestion and inhalation of dust and vapours by maintenance workers during any future sub-surface works at the Site; and of vertical and lateral migration of ground gases.
- 5.18 The operation of HGVs and other vehicles during the operation of the Site is not considered to have a significant impact in terms of noise or emissions on the area that should give rise to the need for EIA.

Risk to human health

- 5.19 There is considered to be a low level of risk to human health (for example, due to water contamination or air pollution) as a consequence of the Proposed Development. However, it is noted that there are low to moderate risks previously mentioned regarding dust and vapours which will be managed during the construction of the development through best practice measures.

Environmentally Sensitive Locations

- 5.20 The PPG highlights that, for any given development proposal, the more environmentally sensitive the location, the more likely it is that the effects on the environment will be significant and will require an Environmental Impact Assessment¹.
- 5.21 The PPG refers to sensitive areas as being Sites of Special Scientific Interest [SSSI], European sites, National Parks, the Broads, Areas of Outstanding Natural Beauty, World Heritage Sites and scheduled monuments. It also notes that in certain cases, local designations which are not included in the definition of “sensitive areas”, but which are nonetheless environmentally sensitive, may also be relevant in determining whether an assessment is required². The site is not situated within or immediately adjacent to a sensitive location in this context.
- 5.22 Whilst the site is not in or adjacent to a sensitive area, it is acknowledged that several statutory environmental designations are located within 5km of the site. The Preliminary Ecological Appraisal submitted with the pre-application request confirms that there are two statutory designated sites within 2.0km of the Site. Healey Dell is a Local Nature Reserve [LNR] 1.5km north-west of the Site. Rochdale Canal is a SSSI and Special Area of Conservation [SAC] 1.4km south-east of the Site. The report states that the development is unlikely to have a harmful effect on terrestrial SSSIs.
- 5.23 The distance between the protected sites (which are sensitive areas) and the proposed development limits the potential for effects. However, those sites may be sensitive to direct and indirect effects, such as water quality and pressure on recreation from future occupiers. Again, the uplift in the total number of dwellings that the site will accommodate is modest, indicating that the likelihood of such effects being significant in the context of the EIA Regulations is negligible.
- 5.24 To mitigate against any adverse harm to these sensitive areas, particularly to surface water quality, the scheme will utilise modern drainage systems and will consider sustainable urban drainage systems [SuDS] in accordance with the drainage hierarchy. By utilising these methods, it is considered that the scheme will not result in any significant effects to these environmental designations and instead, will have a minor beneficial effect on water quality compared to the existing development on the site.
- 5.25 Given the site’s proximity to these designated sites, it is necessary to consider any potential recreational disturbance impacts resulting from the residential element of the development on the environmental designations. The proposals seek to improve the open space within the Site, as well as provide better connections to existing green space in the locality, such as

¹ Practice Guidance ID: 4-032-20170728

² Practice Guidance ID: 4-032-20170728

Falinge Park. By delivering improved public open space and improving the usability of the remaining green space within the immediate vicinity of proposed and surrounding dwellings, it reduces pressure on the designated sites for meeting recreational needs. It is therefore considered that any recreational disturbance impacts caused to these environmental designations will not be significant.

- 5.26 To assess planning applications for likely impacts on nearby SSSIs, Special Areas of Conservation [SAC], SPAs and Ramsar sites, the Local Planning Authority [LPA] should consult Natural England on likely risks from any residential development of 50 or more houses outside existing settlements and urban areas. The scheme will result in an increase of around 120 homes. Given that the scheme is located within an existing urban area largely surrounded by built development, we consider that Natural England do not need to be consulted.
- 5.27 The PPG³ further specifies that in considering the sensitivity of a particular location, regard should also be had to whether any national or internationally agreed environmental standards (e.g. air quality) are already being approached or exceeded. The Site partially overlaps with the Rochdale AQMA. As such, air quality has been considered as a potentially sensitive environmental receptor. The scheme has been designed to promote sustainable travel patterns and minimise reliance on private vehicle use. In particular, the development would result in an overall reduction in on-site parking provision compared with the existing situation, while also incorporating electric vehicle [EV] charging infrastructure to support the transition towards lower-emission vehicles. Furthermore, the Site is located within an established urban area with access to public transport services and local amenities. It is anticipated that a proportion of future residents would travel by sustainable modes, including walking and public transport, reducing the potential for significant increases in vehicle movements. This is considered further in Section 6.o.
- 5.28 New buildings will be designed to adhere to the latest environmental standards and regulations and best practice techniques will be deployed within the scheme's design and construction to increase energy efficiency and reduce water usage, waste and pollution. Consequently, the existing buildings on-site will be replaced by a much-improved, environmentally sustainable development. Overall, the proposals will deliver a betterment when compared against the existing baseline position, by reducing the likelihood of any significant adverse effects caused by the development on environmentally sensitive locations. This is considered in further detail in Section 6.o.

³ Practice Guidance ID: 4-032-20170728

6.0 Potential Environmental Effects

Biodiversity

- 6.1 There are no statutory or non-statutory designated sites within the boundaries of the development site or within the site margins. However, there are two statutory designated sites within 2.0km of the Site. Healey Dell is a Local Nature Reserve [LNR] 1.5km north-west of the Site. Rochdale Canal is a Site of Special Scientific Interest [SSSI] and Special Area of Conservation [SAC] 1.4km south-east of the Site. There are no further designated sites within 5km of the Site.
- 6.2 As shown by the Multi Agency Geographic Information for the Countryside [MAGIC] map, no ancient woodland is present within or adjacent to the Site. There are also no priority hedgerows on the Site.
- 6.3 An Extended Phase One Habitat Survey (Preliminary Ecological Appraisal) has been prepared by Amenity Tree Care for the development site following CIEEM guidelines 'Guidelines for Preliminary Ecological Appraisal' (April 2013).
- 6.4 The report identifies a moderate roost suitability for the nine buildings on Site and recommends a dusk emergence survey for bats, which will be provided as part of the planning application submission. Two invasive non-native species were found on site which are recommended for eradication. The site is not host to any irreplaceable habitats.
- 6.5 Overall, the preliminary assessment suggests that there are no significant ecological constraints on the development proposals, subject to an appropriate site layout. Guidance from an ecologist and the findings from the Biodiversity Net Gain [BNG] Assessment will inform the preparation of the site layout and details such as landscaping. The site layout is likely to include the following:
- 1 Retention of hedgerows and mature trees, where possible;
 - 2 Accommodation of compensatory tree and hedgerow planting, as needed;
 - 3 Maximising green infrastructure and habitat connectivity across the site through green corridors and hedgerow planting;
 - 4 Maximising use of native species planting throughout the site in the landscape planting schedule, where appropriate;
 - 5 Incorporation of opportunities (boxes and access panels) for use by birds and bats within the built environment and areas of public open space, where possible.
- 6.6 Given the above, it is therefore considered that there are no ecological issues that would prevent the development of the site nor are there likely to be any significant environmental effects that require consideration as part of an EIA.

Trees

- 6.7 The application is supported by a Tree Survey report which was produced by Tyrer Ecological Consultants Ltd in March 2026. The report identifies 107 trees across the site, with 25 category B, 70 category C and 22 category U (unsuitable for retention). A Tree Constraints Plan accompanies this submission which shows the location of the trees on the

Site. The accompanying Arboricultural Opportunities and Constraints Assessment states that following demolition of the existing blocks, many trees will become 'new edge trees' under any meaningful demolition scenario. Therefore, they may require crown reduction, or possible removal depending on the design, due to the new wind load they will be subject to following demolition of the blocks. This will be confirmed as part of the Arboricultural Method Statement submitted as part of the hybrid application.

- 6.8 Further detail will be submitted as part of the planning application(s) in the form of an impact assessment that will evaluate the direct and indirect effects of any proposed design and will provide details of the necessary mitigation to ensure the scheme's impact on trees is negligible.

Landscape, Townscape and Visual Impact

- 6.9 The site is located within a well-established urban area and comprises previously developed and underutilised land. It is not situated within a Conservation Area, designated landscape or other location recognised for particular townscape sensitivity. In terms of landscape character, at a national level, the site lies within National Character Area [NCA] 54: Manchester Pennine Fringe. This NCA occupies the transitional zone between the open moorlands of the Dark Peak and Southern Pennines, and the densely populated urban conurbation of Manchester. The area wraps around Manchester from Bolton in the north-west to the edge of Hazel Grove in the east, and includes the industrial towns of Bury, Bolton, Rochdale, Oldham, Dukinfield and Glossop. The surrounding townscape is characterised by a mix of residential building types, varying building heights and urban infrastructure associated with its proximity to Rochdale Town Centre. As such, the site is considered to have a capacity to accommodate redevelopment without giving rise to significant adverse townscape effects.
- 6.10 The proposed development has been designed with regard to the existing urban form, building heights and character of the surrounding area. The scheme comprises a predominantly two and three-storey development, with some four-storey buildings located at key gateway locations across the site.
- 6.11 Within the western parcel, the proposed four-storey buildings represent a reduction in the number of four-storey buildings and a lower overall concentration of taller built form when compared with the existing baseline. The site currently accommodates seven four-storey residential blocks which are proposed for demolition. Under the proposed development, these are replaced by only three proposed four-storey buildings of comparable height, with the majority of the site comprising two and three-storey development. The proposals therefore do not introduce a new scale of development but instead represent an overall reduction in massing while retaining building heights that are already established within the existing baseline. The development would also sit comfortably alongside surrounding residential areas, including properties on Sheriff Street and adjacent streets where building heights are generally around two to two-and-a-half storeys. As such, the proposals would not appear incongruous or out of character within the local townscape.
- 6.12 The eastern parcel is currently predominantly vacant so the proposals do represent intensification to some degree. However, the proposed scale and massing of development has been informed by its sustainable location immediately adjacent to Rochdale Town Centre. Four-storey elements are likely to be concentrated along High Street and St Mary's

Gate, both of which are prominent arterial routes and key gateways into the town centre. In this context, the proposed height is considered appropriate, reinforcing the urban character of these routes and creating attractive frontages that contribute positively to the arrival experience into the town centre from St Mary's Gate. Away from these key frontages, the scale of development transitions to predominantly two-storey family housing on secondary streets creating a transition to the lower-scale suburban residential areas beyond. As a result, the development would be compatible with the surrounding residential context.

- 6.13 In visual terms, any effects would be largely localised in extent. The urbanised nature of the surrounding area, together with existing buildings and trees, limits opportunities for long-distance views of the development. Views of the scheme would generally be experienced within the immediate townscape context, where the proposed scale and form would be perceived alongside existing urban development. As such, any visual changes would be limited in extent and would not result in widespread effects on the wider townscape. During the construction phase, any visual effects associated with demolition and construction activities would be temporary, localised and reversible. Such effects are typical of urban regeneration projects and would not be unusual within the context of the existing urban environment.
- 6.14 Overall, the redevelopment would replace outdated built form and areas of vacant or underutilised land with a cohesive residential neighbourhood characterised by high-quality architecture, active street frontages, modern materials, in a largely outward-facing layout. The scheme would improve street definition, increase natural surveillance and create a more attractive, legible and distinctive urban environment.
- 6.15 For the reasons set out above, any townscape and visual effects would be localised and neutral to beneficial in nature and would fall below the threshold of likely significant effects for the purposes of the EIA Regulations.
- 6.16 It is therefore considered that there are no landscape or visual amenity issues that would prevent the development of the site nor are there likely to be any significant environmental effects that require consideration as part of an EIA.

Ground Conditions and Contamination

- 6.17 The site is not located in an area designated for its geological value. British Geological Survey [BGS] online mapping indicates that superficial geology is likely to comprise Devensian Till (Diamicton).
- 6.18 Phase I and Phase II Site Investigations have been undertaken by Sutcliffe for the Uplands Parcel and Local Centre Parcel, which have assessed the potential for contamination to be present. The Site Investigations have revealed Made Ground generally consisted of topsoil over bands of sand, clay and sands & gravel with fine to coarse brick (occasionally whole), concrete, rebar and plastic fragments. The underlying ground on-site has been noted to not pose a significant long-term risk to human health or the environment and no remedial works will be required prior to development commencing.
- 6.19 The Site Investigations have identified an elevated level of Lead above the assessment values in one location. It is considered that this indicates the presence of localised contamination in this area, which will require remediation prior to development of the Site. It is also noted that two samples (WS101 & WS102) identified Asbestos fibres and that

further delineation is recommended to ascertain the extent of asbestos contamination in this area. However the engineer has confirmed that no significant contamination is present. If any localised contamination is found either in the demolition materials or in the ground, then the proposals will remediate those elements and therefore result in a beneficial effect. The proposals will not result in additional contamination or changes to the potential receptors of existing contamination.

- 6.20 Overall, the Site Investigations did not identify any significant contamination on-site currently and the proposals will not give rise to contamination. Therefore, the development will not cause any significant harm or risk in relation to contamination pathways to sensitive receptors.

Noise and Vibration

- 6.21 This EIA Screening is accompanied by a Noise Impact Assessment, prepared by E3P (see Appendix 3). To inform the report, attended and unattended road traffic sound surveys were taken on surrounding streets to capture traffic noise, and at key locations to capture commercial sound (such as deliveries and plant noise associated with the Lidl store).
- 6.22 The assessment found that with minor mitigation measures in place, no adverse impact is predicted for the development, day or night at the receptors, due to commercial sound or road traffic sound.
- 6.23 The proposed development will give rise to noise during the construction period, associated with traffic movements to and from the site and the construction activities themselves.
- 6.24 This noise will be temporary in nature and best practice measures will be put in place to make sure the development does not have a significant impact on the identified receptors and the surrounding area, including through the preparation and accordance with a CEMP.
- 6.25 Once the development is in operation, noise will mainly be attributed to traffic noise generated on the local highway network as a result of the completed development. However, the increase in traffic resulting from the scheme is not considered to be significant when compared to the baseline. A Framework Travel Plan will also be implemented to reduce the need for vehicle trips and to help increase the uptake of sustainable modes of transport.
- 6.26 No vibration effects resulting from the development of the scheme are considered likely unless piled foundations are required on any part of the site. Whilst these are not expected, the CEMP will set out measures to mitigate the effects of vibration if piling is required. It will also include details of an appropriate monitoring regime to ensure that any unforeseen effects can be prevented and mitigated.
- 6.27 It is therefore considered that any noise and vibration impacts associated with the site's redevelopment will not be significant.

Archaeology and Heritage

- 6.28 There are no designated heritage assets within the site, and a desk-based review has not identified any surviving non-designated heritage assets within the site. Accordingly, the proposed development would not result in the demolition of, physical alteration to any

designated or non-designated heritage assets. As such, there would be no direct effects on the significance of any above-ground heritage assets.

- 6.29 Turning to indirect effects to above-ground assets, there are 38 listed buildings, two registered parks and gardens and five conservation areas within 500 metres of the site. However, due to separation distances and intervening development, the majority of these assets do not have a direct visual relationship with the site and are not considered to have the potential to be affected by the development. This includes the substantial grouping of listed buildings within Rochdale Town Centre to the south, together with the Rochdale Town Centre Conservation Area and Broadfield Park, a Registered Park and Garden situated to the south-west of the town centre.
- 6.30 The designated heritage assets which are considered to have the potential for their settings to be affected by the development, owing to their proximity to the site, include:
- St Edmunds Church Falinge Conservation Area including the Grade I Listed Church of St Edmund.
 - Town Head Conservation Area and the six Grade II Listed buildings located within it including Town Head House, the Ukrainian Catholic Church of St Mary, 170, 172 and 74 Yorkshire Street, 188A, 190 and 190A Yorkshire Street, 128 Yorkshire Street, and 1 and 3 Whitehall Street.
 - Toad Lane Conservation Area and the four listed buildings located within it including the Grade I Listed Church of St Mary, as well the Vicarage, 31 Toad Lane and adjacent Pillar Box (all Grade II Listed).
 - Grade II Registered Park and Garden at Falinge Park and the two Grade II listed structures within including the Falinge Park Façade and Pavilions, and Park Gateway.
 - The Grade II* Listed Hope Chapel and the associated Parson's House, located approximately 40m north-east of the eastern parcel.
- 6.31 The designated assets identified above have been grouped where appropriate in the interests of proportionality, and reflecting their proximity, interrelated and cumulative nature of their significance.
- 6.32 A full Heritage Impact Assessment will be undertaken to consider the significance of all heritage assets with the potential to be affected by the proposed development, and the impact on this significance. As an overarching principle, the Site is currently of an unkempt and poor visual quality, with its various components generally making a negative, or at best neutral, contribution to the setting of surrounding heritage assets. The scheme has been designed to respond sensitively to the surrounding townscape context and heritage environment and would introduce a high-quality residential-led development on a currently underutilised site. As a result it is anticipated that, in most cases, the proposed development would represent an improvement to the setting of nearby heritage assets through the enhancement of the visual and townscape quality of the area. In some cases, the effect may be neutral, depending on the visual relationship and the nature of the change. Initial consideration of the potential effects on each asset group is provided below.
- 6.33 As set out in Paragraph 2.12, the site sits immediately east of the boundary of the St Edmunds Church Falinge Conservation Area, but is set back from the Church which sits

centrally in this Conservation Area. Along this interface, development is limited to three storeys in height, providing a scale that is consistent with the prevailing streetscape where neighbouring properties are typically around 2.5 storeys. Further, the dwellings are to be set back behind a new green footpath/cycle path. The proposed buildings would therefore appear compatible with the established urban grain and would not dominate views within the conservation area or detract from its setting.

- 6.34 The eastern extremity of the site sits 30m north of the Town Head Conservation Area, separated by St. Mary's Gate which comprises a busy arterial route and provides a clear physical buffer. This part of the site comprises of vehicular parking and does not contribute positively to the setting of the Conservation Area. This part of the Conservation Area is of relatively low sensitivity, and the listed buildings are set back from the site. The proposed new buildings on the illustrative plans along High Street would create a high-quality frontage and improve the appearance of the streetscape, replacing the existing site condition with a more attractive and coherent urban edge.
- 6.35 Toad Lane Conservation Area sits approximately 50 m south of the site. Similar to the relationship with the Town Head Conservation Area, the Site is separated from the Toad Lane Conservation area by St. Mary's Gate which acts as a physical buffer. There is limited intervisibility between the western parcel and the Town Head Conservation Area due to the mature trees on the verge between St. Mary's Gate and High Street and on the western boundary of the Lidl Site. With the eastern parcel there is some invisibility from High Street however this part of the Site being vacant and used predominantly for vehicle parking does contribute positively to the setting of the Conservation Area. However as discussed in the paragraph above the new development along High Street is capable of enhancing the streetscape, quality of place and the relationship of the Site with the Conservation Area.
- 6.36 The Grade II Registered Park and Garden at Falinge Park lies approximately 50m north of the western parcel boundary and is separated from the proposed development by a substantial landscaped buffer along the site's north-western edge. This area incorporates on the illustrative plans new tree planting and a green pedestrian route which seeks to enhance connectivity between the development and the park whilst reinforcing the green character of the interface. The nearest proposed dwellings are limited to two and three storeys in height and are set back from the boundary behind parking courts, landscaping and trees, ensuring that the development integrates sensitively with its surroundings and does not appear overbearing in views from the park.
- 6.37 The Grade II* Listed Hope Chapel and the associated Parson's House are located approximately 40m north-east of the eastern parcel. The proposals are considered likely to result in an improvement to the wider setting of these buildings through the redevelopment of a currently vacant and unsightly site to be replaced with high-quality two-storey dwellings, landscaping and public realm enhancements, creating a more attractive and coherent townscape environment.
- 6.38 The only locally listed building within close proximity of the Site is the former Waljan Mill at Toad Lane. It is possible that further non-designated heritage assets withing proximity to the site will be identified through fieldwork and further research. However, non-designated assets are of lower sensitivity and are unlikely to give rise to significant adverse effects by virtue of indirect effects arising from changes to their setting.

- 6.39 In EIA terms, the absence of direct impacts on above-ground heritage assets, combined with the nature and scale of the proposed development, indicates that significant adverse effects on cultural heritage are unlikely to arise. Furthermore, the development presents opportunities for beneficial townscape and heritage outcomes. The proposals would enhance pedestrian permeability and connectivity across the site, improving access to nearby heritage assets and conservation areas and strengthening links between surrounding neighbourhoods. The scheme would also deliver improvements to the quality of the public realm and introduce a coherent, well-designed built form, contributing positively to local character and perceptions of the area.
- 6.40 In terms of archaeology, the sites are shown as developed on historic mapping from the mid-19th century comprising a combination of industrial and domestic buildings, primarily back-to-back terraced housing. The area was subject to clearance and redevelopment in the late 20th and early 21st centuries. This has likely affected archaeological survival across the sites. The Archaeological Data Service records the evidence of two previous archaeological evaluations adjacent to the site. In 2016 a watching brief undertaken by AOC Archaeology Group in Lidl carpark identified a number of structures probably associated with a former mill comprised part of a possible brick boiler base, the remains of two brick structures that may have been machinery bases and two walls. Trial trench evaluation undertaken off Toad Lane by Salford Archaeology in 2017 identified the remains of the early 19th-century block of workers' housing including the remains of four cellars while evaluation in 2020 at Lower Falinge encountered no significant archaeological remains suggesting that the groundworks during clearance and redevelopment had led to the truncation of remains associated with earlier development. This suggests that archaeological survival across the sites may vary and that there is potential for pockets of survival. Due to the developed nature of the site, it is anticipated that any surviving archaeological remains would relate to the mid-19th century and comprise evidence of industrial and domestic buildings and would be of regional or local interest.
- 6.41 The planning application for the redevelopment of the site will be supported by an Archaeological Desk-Based Assessment [DBA] which would provide a thorough assessment of the archaeological potential and significance of the site as informed by its historic development. The Desk Based Assessment would make recommendations for further evaluation and mitigation where appropriate to be agreed with the Greater Manchester Archaeology Advisory Service [GMAAS]. Given the nature of the site, the scale of the proposed development and the availability of established mitigation procedures through the planning process, there is no realistic potential for significant adverse effects on archaeological remains. Consequently, the proposed development is not considered likely to give rise to significant environmental effects in relation to archaeology.
- 6.42 Given the above, from an archaeological and heritage perspective, the proposed development is unlikely to give rise to significant environmental effects requiring consideration as part of an EIA.

Air Quality

- 6.43 There is some slight overlap between the eastern parcel and the St Mary's Gate AQMA. This has been acknowledged within and considered throughout the Air Quality Assessment submitted with this note and shown at Appendix 4.

- 6.44 The Assessment states that during the construction phase of the developments there is the potential for air quality impacts as a result of fugitive dust emissions from the site. These were assessed in accordance with the IAQM methodology in the report. Site-specific dust control measures were subsequently determined, and following implementation, the residual significance of potential air quality impacts from dust generated by demolition, earthworks, construction and trackout activities are predicted to be not significant.
- 6.45 Potential impacts during the operational phase of the proposals were assessed for the Western Parcel against the screening criteria provided within the IAQM guidance. Due to the reduction of vehicle movements generated by the Western Parcel, road traffic exhaust impacts were predicted to be not significant.
- 6.46 Dispersion modelling was undertaken to assess the potential to expose future residents to poor air quality. The results of the dispersion modelling assessment also indicated that predicted annual mean NO₂, PM₁₀ and PM_{2.5} concentrations were below the relevant AQOs and Concentration Target at the proposed building façades within both parcels. The assessment concludes that the sites are therefore considered suitable for the proposed use from an air quality perspective.
- 6.47 Air quality impacts from the proposed development could arise from vehicle emissions associated with the additional traffic on the local road network during construction works. Best practice measures will be utilised throughout the construction phase to minimise the impacts on nearby sensitive receptors and will be undertaken in accordance with the measures outlined in the CEMP.
- 6.48 The report concludes that impact on air quality across a range of activities are not significant and that overall, air quality factors are not considered a constraint to the development. It is considered therefore that the development will not give rise to significant environmental effects to warrant an EIA.

Water Resources

- 6.49 As set out in Section 2, The site is located in Flood Zone 1 (with and without climate change) and is identified by the Environment Agency as having a less than 1 in 1,000 annual probability of river or sea flooding. All uses of land, including housing, are appropriate in this zone.
- 6.50 As the development site extends to greater than 1ha, a Flood Risk Assessment [FRA] will accompany the planning application(s) to ensure that the proposed development does not increase the flood risk on the site or in the surrounding area. A drainage strategy will also accompany the application(s) and will provide details on surface and foul drainage. Best practice measures and modern drainage methods will also be identified where applicable in terms of building design and water efficiency.
- 6.51 Overall, there are no known flooding or drainage constraints on the site. The proposed development is unlikely to give rise to significant flood risk effects that would require consideration as part of an EIA.

Socio-Economic

- 6.52 As evidenced in paragraph 2.8, the IMD (2019) identifies the Estate to be within the 10% most deprived nationally. The proposals seek to deliver physical interventions to reduce the prevalence of deprivation, including replacing the existing outdated housing stock with a high-quality housing offer to attract a broader range of new residents to the area; reduce rates of unemployment in the area; encourage healthy lifestyles and support the financial sustainability of the local area.
- 6.53 The site is situated in a sustainable location, approximately 40m away at its closest from the designated town centre boundary and approximately 120m from Rochdale Exchange Shopping Centre. A range of retail and leisure facilities, including a Lidl supermarket, banks, cafes, shops, a post office, a gym, a pharmacy and a cinema, are located in close proximity of the site. A number of local amenities are also situated on the shopping parade on Spotland Street which is immediately adjacent the boundary of the western parcel.
- 6.54 Jobs will be created during the construction period and indirectly through the purchase of goods and services from the supply chain and expenditure of employee wages. There will be further employment opportunities and economic output generated during the operational phase of the proposed development.
- 6.55 The proposals are intended to give rise to socio-economic benefits through diversifying the tenure mix within the site. The proposals seek to increase the number of family units (2-3 beds) to support families in the borough. This will diversify the demographics of the population. The applicant has progressed with a detailed programme of resident engagement with a view to understanding the needs of existing RBH customers and local residents to ensure that they can be accommodated as best as possible.
- 6.56 The scheme seeks to improve socio-economic indicators by providing improved quality housing for a diverse range of needs within the estate. Given that the scheme seeks to redevelop the existing uses on site with a similar proposal, it is unlikely the scheme will have a significant environment effect (particularly not any detrimental) sufficient to warrant an EIA.

Transport and Highways

- 6.57 This EIA Screening is accompanied by a EIA Screening Transport Note prepared by Astute (Ref. A26077), shown at Appendix 5. The note is informed by discussions with the Council which agreed the scope and methodology of the assessment.
- 6.58 The Transport Note methodology has been agreed with Rochdale Borough Council Highways. The trip generation exercise recognises that the western parcel will replace existing residential accommodation and therefore already generates traffic movements. Taking this into account, the proposed development of up to 270 dwellings is forecast to generate a relatively modest net increase in vehicle trips, equating to approximately 56 two-way vehicle movements in the weekday AM peak hour and 31 two-way vehicle movements in the weekday PM peak hour.
- 6.59 The forecast traffic has been distributed across the local highway network and assessed at the key junctions agreed with the local highway authority. The preliminary findings indicate only minor increases in traffic flows, with no junction experiencing an increase equivalent

to more than one additional vehicle movement per minute during peak periods. On this basis, the development is not expected to materially affect the operation, capacity or performance of the surrounding highway network.

- 6.60 The proposed parking provision has been developed having regard to the site's sustainable location, local car ownership levels and the Council's parking standards. The level of parking proposed is below the maximum standards set by the Council and overprovides against anticipated demand for spaces, taking into account 2021 Census car ownership data. Therefore, the parking is considered appropriate to meet anticipated demand without giving rise to adverse effects on the surrounding highway network.
- 6.61 The following junctions were assessed for the anticipated traffic impact from the proposed development, as agreed with the Local Highways Authority:
- Spotland Road/ St. Mary's Gate/ Hunter's Lane signalised junction:
+ 38 vehicle movements in the AM peak, and +20 vehicle movements in the PM peak
 - Redcross Street/ St. Mary's Gate signalised junction:
+57 vehicle movements in the AM peak and +30 vehicle movements in the PM peak
 - Redcross Street/ Howard Street priority junction:
+4 vehicle movements in the AM peak and +1 vehicle movement in the PM peak
- 6.62 Accordingly, the Note concludes that the proposals are not predicted to result in any material traffic impacts upon the local highway network.
- 6.63 The Transport Note also includes a review of recorded Personal Injury Collisions for the period 1 January 2020 to 31 December 2024 and identifies a limited number of collisions across the surrounding local highway network, including incidents on Toad Lane, Redcross Street, High Street, Sheriff Street, St Mary's Gate and Spotland Road. The recorded collisions are distributed across the local network and do not demonstrate a clear pattern or concentration that would suggest an existing highway safety deficiency.
- 6.64 Construction traffic effects would be temporary in nature and can be appropriately managed through standard construction management measures secured through a Construction Traffic Management Plan. Overall, the evidence available at this stage indicates that the development would not result in significant effects on highway safety, traffic conditions, network capacity or transport infrastructure.
- 6.65 Overall, the Transport Note concludes that prepared to inform the proposed development demonstrates that there are no existing transport or highway constraints that would prevent the scheme from coming forward. Consequently, significant effects in relation to highways and transport are not anticipated and there is no requirement for these matters to be assessed further through the EIA process.

Sustainability and Climate Change

- 6.66 The proposed development will be designed and constructed in accordance with the relevant Building Regulations applicable at the time of implementation, including Approved Document Part L (Conservation of Fuel and Power) and the Government's Future Homes and Buildings Standards. The development will incorporate a fabric-first approach

to energy efficiency, minimising energy demand through high standards of insulation, airtightness and thermal performance, whilst also integrating low-carbon technologies where appropriate. These measures will ensure that the dwellings achieve high levels of operational energy efficiency and contribute towards national carbon reduction objectives.

- 6.67 Sustainability and climate change issues will be addressed in reports accompanying the planning application(s), including the Transport Assessment and FRA. Information will also be included in the Design and Access Statement.
- 6.68 Overall, the scheme will deliver a betterment in terms of environmental sustainability when compared against the baseline position.

Human Health

- 6.69 It is not considered that the proposed development would give rise to increased air/noise emissions, the production of waste, or impact on the use of natural resources that would significantly impact human health.
- 6.70 For construction, the control of emissions and waste will form part of the CEMP.
- 6.71 Given the above, it is considered that the proposals will not have significant environmental effects on human health which will give rise to the need for an EIA.

Risk of Major Accidents or Disasters

- 6.72 The site does not lie within or partially within the inner, middle or outer HSE consultation zones for a Hazardous Installation. Based on the site's existing uses, which will be largely retained as part of the site's redevelopment, and its location within a well-established urban area, it is considered that the scheme's impact on Hazardous Installations is unlikely to be significant.

Cumulative Effects

- 6.73 In accordance with Schedule 4 of the EIA Regulations, consideration has been given to the potential for cumulative effects arising from the proposed development in combination with other existing, permitted or reasonably foreseeable developments within the surrounding area. The assessment has been undertaken on the basis of information available at the time of preparing this EIA Screening Request and with regard to developments that may have the potential to interact with the proposed scheme.
- 6.74 The proposed development comprises the comprehensive regeneration of the site through the replacement of the majority of the existing housing stock which is in need of renewal. The development will deliver approximately 270 new homes together with associated landscaping, open space and infrastructure improvements. The net increase in dwellings is 120; whilst this represents a modest net increase in housing numbers, the principal effect of the scheme is the replacement of ageing housing stock with high-quality, energy-efficient homes and an enhanced public realm. The overall scale of development is therefore not materially greater than the existing baseline and does not represent a significant intensification of land use.

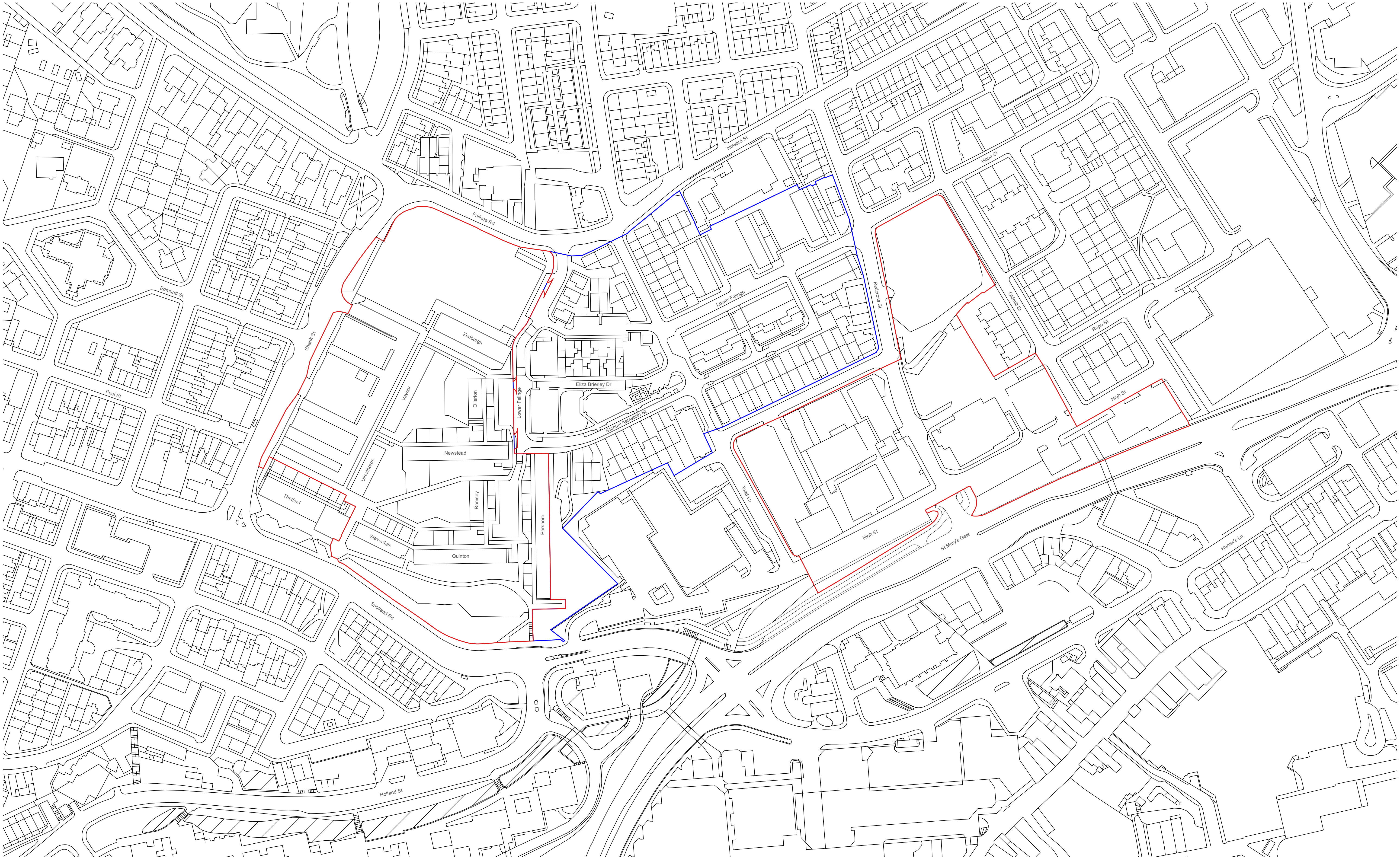
- 6.75 A review of the planning position in the surrounding area has not identified any major planning applications or permissions that would be likely to give rise to significant cumulative environmental effects when considered alongside the proposed development. The only notable scheme in the vicinity is the Station Road development (planning reference 22/01119/FUL), which proposes approximately 200 dwellings and is located around 750 metres from the application site. Given the separation distance between the two schemes, the relatively modest scale of the Station Road development, and the fact that any construction and operational effects are required to be managed through approved mitigation and management measures, no significant cumulative effects are anticipated. Furthermore, the Station Road development was not considered to constitute EIA development, which further indicates that the potential for cumulative environmental effects arising from the two schemes in combination is limited. Accordingly, it is concluded that the proposed development would not give rise to significant cumulative effects and that any cumulative impacts would be negligible within the context of the EIA Regulations.

7.0 Conclusion

- 7.1 The regeneration of Lower Falinge is an identified strategic priority for the Council to improve housing offer and contribute to the regeneration of the town centre and surrounding areas. The proposal seeks to redevelop the Site with a 100% affordable high-quality scheme to meet these objectives.
- 7.2 The development is one to which the EIA Regulations may apply because the Project falls into Part 10(b) of Schedule 2 as a scheme of more than 150 dwellings (i.e. it exceeds applicable threshold / criteria in the second column in Schedule 2). It therefore falls to consider whether or not the proposals are likely to give rise to significant effects having regard to Schedule 3 of the EIA Regulations. Also of relevance are the IST criteria. It is important to note that the IST indicates that the physical scale of such developments, potential increase in traffic, emissions and noise are key parts of the judgment to be made.
- 7.3 The application to which this EIA screening relates, proposes to demolish 150 dwellings and erect up to 270 new dwellings. The total number of dwellings post-development on-Site will be c. 322 dwellings (including those retained). This represents a net increase of 120 dwellings. As such, any post construction environmental effects generated from the proposal should be considered in the context of the net additional number of dwellings.
- 7.4 It is of note that the Site has previously been more intensely developed than it is currently. The planning history set out in Appendix 2 demonstrates the extent of demolition that has taken place (particular within the last four years). In 2022 the total dwelling numbers in the western parcel was 236. The proposal for the western parcel is for up to 150 dwellings on the western parcel. Accordingly, on the western parcel, the proposals represent de-intensification of the parcel from the pre-existing baseline in 2022.
- 7.5 The eastern parcel is now largely vacant but used to contain a number of various commercial and industrial buildings ranging between one and four storeys. It is estimated that there was over 6,000sqm of commercial floorspace prior to a programme of demolition which took place from 2002. The proposals for the eastern parcel include up to 120 dwellings ranging between 2-4 storeys.
- 7.6 Notwithstanding the baseline must relate to the existing extent of development on Site. The Site already contains c.202 dwellings a net increase of 120 dwellings is a modest increase, particular in the context of the Site's location on the edge of the town centre.
- 7.7 As detailed in section 4.0, the proposals seek to redevelop a previously developed site with a scheme of a similar nature and scale to the existing. Section 6.0 considers the potential impacts of the development amongst various potential environmental effects.
- 7.8 In terms of point 3 of the IST, further detail is provided in Section 6.0 however, the Site Investigations undertaken by Sutcliffe on the site found no significant contamination on-site.
- 7.9 From the analysis set out in Section 6 in the context of the EIA Regulations and relevant guidance set out in the PPG, it is considered that the proposed development does not meet or exceed the IST set out in the PPG nor will the scheme give rise to significant environmental effects which would require EIA.

- 7.10 We therefore consider that neither an EIA or HRA is required to support the future planning application(s) to redevelop the site.
- 7.11 In review of the above, we request that a negative screening opinion is issued by the Council without delay.

Appendix 1 – Site Location Plan



Appendix 2 – Planning History

Western Parcel

- A2.1 22/00420/DEM – approved October 2022- Prior approval for the demolition of a block of flats known as Waverley 445-460 was approved in October 2022 (ref.). (total circa 15 units)
- A2.2 21/01429/DEM – approved 3 March 2022 - Prior approval for the demolition of Abbeydale, Yarwell and Exbury apartment blocks (total circa 69 units).

Eastern Parcel

- A2.3 23/01059/DEM – approved 23 October 2023 – Pit Stop, High Street, Rochdale, OL12 0NS - prior approval to demolish three storey building.
- A2.4 12/56269/DEM – approved 4 December 2002 - Providence House, High Street, Rochdale, OL12 0NT - prior approval Part 11 Class B: Demolition of buildings – four storey building.
- A2.5 21/01428/DEM – approved 2 November 2021 - Premier Works, Toad Lane, Spotland, Rochdale OL12 0NU – Prior approval for the demolition and site clearance of the former ER Williams Premier Works and adjoining MoT Garage. – two storey industrial building.
- A2.6 22/01024/DEM – approved 19 August 2022 - Brickcroft Social Club, High Street, Rochdale OL12 0NS - Prior approval for the demolition of the Brickcroft Social Club and 9 no. garages to the rear. – single storey building.
- A2.7 25/00260/DEM – approved 14 April 2025 - Rspca 1 Redcross Street Rochdale OL12 0NZ - Application for prior approval for the demolition of the part single/two storey building – complex of attached single-storey and two-storey buildings.

Appendix 3 – Noise Impact Assessment

NOISE IMPACT ASSESSMENT

Site:	Lower Falinge
References:	52-228-R1
Date:	16 July 2026
Client:	Rochdale Boroughwide Housing





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QUALITY ASSURANCE

Report references

52-228-R1

REV REF	DESCRIPTION	DATE
01	First issue	16/07/2026
02		

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EXECUTIVE SUMMARY

Site Address	Land off Sheriff Street and Redcross Street, Rochdale
Grid Reference	E 389485, N 413761
Proposed Development	Proposed residential development across two parcels, East and West, along with associated access and landscaping.
Surveys Completed	E3P has undertaken attended and unattended road traffic sound surveys for Sheriff Street, Falinge Road/Howard Street, Hope Street, St Mary's Gate, Redcross Street and Spotland Road during typical weekday periods. Furthermore, attended measurements have been conducted at key locations to capture commercial sound. Here it was found that fixed plant noise was audible to the south on the western parcel and associated with the Lidl store, along with Heavy Goods Vehicle deliveries.
Assessments Completed	A 3D noise model has been constructed to assess roads traffic and commercial sound across the site and incident upon facades. Road traffic is assessed in accordance with the criterion, for day and night, given in BS 8233:2014+A1:2019. Commercial noise is assessed in accordance with BS 4142:2014+A1:2019 where applicable.
Mitigation Recommended	The assessment has found that higher specification glazing is required for certain plots with certain bedroom windows modelled as closed as part of any Approved Document Part O overheating assessment. Barriers are required for plots 102 in the eastern parcel to protect against road traffic sound. Furthermore, a barrier is required for plot 35 of the eastern parcel to protect against delivery noise from the Lidl store.
Conclusions and Discussions	With mitigation measures in place, this assessment has shown that no adverse impact is predicted day or night at the receptors due to commercial sound or road traffic sound.



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1. INTRODUCTION

1.1. BACKGROUND

E3P was commissioned by Rochdale Boroughwide Housing to undertake a Noise Impact Assessment for a proposed residential development across two parcels at Lower Falinge in Rochdale, to be referred to hereafter as 'the Site'.

This assessment looks to determine the key noise sources in the immediate vicinity of the Site and to assess their impact, if any, upon proposed residential receptors and to specify mitigation measures, where required.

1.2. REPORT OBJECTIVES

The objectives of this report are as follows:

- ✿ Establish and measure the existing sound levels across the site, day and night.
- ✿ Consider the potential sources of sound impacting the site and to measure source sound levels of all applicable sources.
- ✿ Assess internal and external noise levels associated with road traffic in accordance with criteria given in BS 8233.
- ✿ Assess the impact of commercial sound upon the proposed development in accordance with BS 4142
- ✿ Provide advice on mitigation measures, where required.

1.3. PROPOSED DEVELOPMENT

The client intends to develop the two parcels for residential usage with single storey and 4 storey buildings and a mixture of dwellings and apartments.

Figures 1A and 1B below show the western and eastern parcels respectively.



Figure 1A Western Parcel Site Layout





Figure 1B Eastern Parcel Site Layout





2. ASSESSMENT METHODOLOGY

2.1. NATIONAL PLANNING POLICY FRAMEWORK (2024)

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. In doing so they should:

- ✳ Mitigate and reduce to a minimum potential adverse impact resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life.
- ✳ identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

2.2. NATIONAL PLANNING PRACTICE GUIDANCE

Noise needs to be considered when new developments may create additional noise and when new developments would be sensitive to the prevailing acoustic environment. When preparing local or neighbourhood plans, or taking decisions about new development, there may also be opportunities to consider improvements to the acoustic environment.

Local planning authorities' plan-making and decision-making should take account of the acoustic environment and in doing so consider:

- ✳ Whether or not a significant adverse effect is occurring or is likely to occur.
- ✳ Whether or not an adverse effect is occurring or is likely to occur.
- ✳ Whether or not a good standard of amenity can be achieved.

In line with the explanatory note of the NPSE, this would include identifying whether the overall effect of the noise exposure (including the impact during the construction phase, where applicable) is, or would be, above or below the significant observed adverse effect level and the lowest observed adverse effect level for the given situation.

The “observed effect levels” are as follows:

- ✳ Significant observed adverse effect level: This is the level of noise exposure above which significant adverse effects on health and quality of life occur.
- ✳ Lowest observed adverse effect level: This is the level of noise exposure above which adverse effects on health and quality of life can be detected.
- ✳ No observed effect level: This is the level of noise exposure below which no effect at all on health or quality of life can be detected.

Table 2.1 summarises the noise exposure hierarchy, based on the likely average response.



Table 2.1 Noise Exposure Hierarchy

PERCEPTION	EXAMPLES OF OUTCOMES	INCREASING EFFECT LEVEL	ACTION
Not Applicable	No effect	No observed effect	No specific measures required.
Noticeable and Not Intrusive	Noise can be heard but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No observed adverse effect	No specific measures required
Lowest Observed Adverse Effect			
Noticeable and Intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television, speaking more loudly, or having to close windows for some of the time because of the noise where there is no alternative ventilation. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed adverse effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Noticeable and Disruptive	The noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion, having to keep windows closed most of the time because of the noise where there is no alternative ventilation. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant observed effect	Avoid
Noticeable and Very Disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening, loss of appetite, significant/medically definable harm (auditory and non-auditory).	Unacceptable adverse effect	Prevent

The subjective nature of noise means that there is not a simple relationship between noise levels and the impact on those affected. This will depend on how various factors combine in any situation. These factors include the following:



- ✳ The source and absolute level of the noise together with the time of day it occurs. Some types and level of noise will cause a greater adverse effect at night than if they occurred during the day. The adverse effect can also be greater simply because there is less background noise at night.
- ✳ For non-continuous sources of noise, the number of noise events, and the frequency and pattern of occurrence of the noise can be important.
- ✳ The spectral content of the noise and the general character of the noise. The local topology and topography should also be considered along with the existing and, where appropriate, the planned character of the area.

More specific factors to consider when relevant:

- ✳ Where applicable, the cumulative impacts of more than one source should be considered along with the extent to which the source of noise is intermittent and of limited duration.
- ✳ Consideration should also be given to whether adverse internal effects can be completely removed by closing windows and, in the case of new residential development, if the proposed mitigation relies on windows being kept closed most of the time. In both cases, a suitable alternative means of ventilation is likely to be necessary.
- ✳ If external amenity spaces are an intrinsic part of the overall design, then the acoustic environment of those spaces should be considered so that they can be enjoyed as intended.

2.3. BUILDING REGULATION: APPROVED DOCUMENT F – VOLUME 1: DWELLINGS (JUNE 2022)

Approved document F Volume 1: Dwellings (ADF) provides guidance set by the Department for Levelling Up, Housing and Communities, that relates to means of ventilation within dwellings. The ventilation strategy specified within the ADF are as follows.

1.9 The ventilation strategy in this approved document relies on a combination of all of the following.

a. Extract ventilation from rooms where water vapour or pollutants are likely to be released (e.g. bathrooms and kitchens), to minimise their spread to the rest of the building. Ventilation fans may be either intermittent operation or continuous operation.

b. Whole dwelling ventilation to provide fresh air to the building and to dilute, disperse and remove water vapour and pollutants not removed by extract ventilation.

c. Purge ventilation to remove high concentrations of pollutants and water vapour. Purge ventilation is used intermittently and required only for pollutants produced by occasional activities (e.g. fumes from painting).

1.10 Ventilation may be delivered through natural ventilation, mechanical ventilation or a combination of both.

1.11 The ventilation systems in this approved document are examples of systems that comply with Part F of the Building Regulations. Other ventilation systems may be acceptable if they can be shown to meet an equal level of performance.



Within the ADF there are three system specific ventilation systems that can be utilised to provide sufficient ventilation. These methods are as follow.

1. Natural ventilation with background ventilators and intermittent extract fans (guidance suitable only for less airtight dwellings) - Ventilation provided by thermal, wind or diffusion effects through doors, windows or other intentional openings without the use of mechanically driven equipment. For the purposes of this approved document, natural ventilation refers to a ventilation strategy using background ventilators and intermittent extract ventilation.

2. Continuous mechanical extract ventilation - Mechanically driven ventilation that continuously extracts indoor air and discharges it to the outside.

3. Mechanical ventilation with heat recovery - A mechanically driven ventilation system that both continuously supplies outdoor air to the inside of the dwelling and continuously extracts indoor air and discharges it to the outside. For the purposes of this approved document, the guidance for mechanical ventilation with heat recovery applies to centralised or decentralised supply and extract systems, with or without heat recovery.

2.4. BUILDING REGULATIONS: APPROVED DOCUMENT O – OVERHEATING (JUNE 2022)

Approved document O - Overheating (ADO) provides guidance set by the Department for Levelling Up, Housing and Communities, that relates to the mitigation of overheating. In relation to noise the ADO provides the following guidance.

3.2 In locations where external noise may be an issue (for example, where the local planning authority considered external noise to be an issue at the planning stage), the overheating mitigation strategy should take account of the likelihood that windows will be closed during sleeping hours (11pm to 7am).

3.3 Windows are likely to be closed during sleeping hours if noise within bedrooms exceeds the following limits.

a. 40dB LAeq,T, averaged over 8 hours (between 11pm and 7am).

b. 55dB LAFmax, more than 10 times a night (between 11pm and 7am).

3.4 Where in-situ noise measurements are used as evidence that these limits are not exceeded, measurements should be taken in accordance with the Association of Noise Consultants'

Measurement of Sound Levels in Buildings with the overheating mitigation strategy in use.

NOTE: Guidance on reducing the passage of external noise into buildings can be found in the National Model Design Code: Part 2 – Guidance Notes (MHCLG, 2021) and the Association of Noise Consultants' Acoustics, Ventilation and Overheating: Residential Design Guide (2020)

2.5. APPROVED DOCUMENT PART O NOISE GUIDE (2024)

This guide sets out a method to demonstrate compliance to the Building Control Body of the noise constraints in AD-O. This guide aims to provide clarity for practitioners and regulators so that assessments can be carried out consistently, and the outcome is repeatable and reliable.

Any assessment of overheating, in relation to noise, follows this guidance. Importantly, the guide, based on research and typical assumptions, provides the resulting outside-to-inside level difference for window openings necessary to satisfy the simplified method of AD-O which are expected to be:



- ✿ 5 dB for 'high risk' locations; and
- ✿ 10 dB for 'medium risk' locations.

With reference to paragraph 3.3 of AD-O, this implies the following limiting external free-field levels above which external noise precludes the use of the simplified method, and dynamic thermal modelling should be used to demonstrate compliance.

The guide also recommends that $L_{Amax,fast}$ measurement and assessment should be based on a sampling period of 2 minutes.

2.6. BRITISH STANDARD BS 4142:2014+A1: 2019 – METHODS FOR RATING AND ASSESSING INDUSTRIAL AND COMMERCIAL SOUND

This standard describes methods for rating and assessing sound of an industrial or commercial nature which includes:

- ✿ Sound from industrial and manufacturing processes.
- ✿ Sound from fixed installations which comprise mechanical and electrical plant and equipment.
- ✿ Sound from the loading and unloading of goods and materials at industrial and / or commercial premises; and
- ✿ Sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from processes or premises, such as that from forklift trucks, or that from train or ship movements on or around an industrial or commercial Site.

The procedure detailed in the standard compares the measured or predicted specific noise level from any of the above with the background sound level at a residential dwelling. The measured background sound level at a receptor should be reliable and should not necessarily ascertain a lowest measured background sound level, but rather to quantify what is typical.

The specific noise level also acknowledges the reference time intervals depending upon whether the noise source operates during daytime (1-hour) or night-time (15-minute) periods.

There are several 'penalties' which can be attributed to the specific sound level depending upon the 'acoustic features' of the sound level under investigation as follows:

TONALITY

- ✿ +2 dB: where the tonality is just perceptible.
- ✿ +4 dB: where the tonality is clearly perceptible; and
- ✿ +6 dB: where the tonality is highly perceptible.

IMPULSIVITY

- ✿ +3 dB: where the impulsivity is just perceptible.
- ✿ +6 dB: where the impulsivity is clearly perceptible; and



- ✿ +9 dB: where the impulsivity is highly perceptible.

INTERMITTENCY

- ✿ +3dB: where the intermittency is readily distinctive against the acoustic environment.

In addition to the above, there is a penalty for 'other sound characteristics' of +3 dB where a sound exhibits characteristics that are neither tonal nor impulsive, though are readily distinctive against the acoustic environment. BS 4142 goes on to state that the rating level is equal to the specific sound level if there are no such features present or expected to be present.

Assessment of the rating level relative to the background sound level can yield the following commentary:

- ✿ Typically, the greater this difference (between the rating level and the background sound level), the greater the magnitude of impact.
- ✿ A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- ✿ A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context; and
- ✿ The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact.

2.7. BRITISH STANDARD BS 8233:2014+A1:2019 – GUIDANCE OF SOUND INSULATION AND NOISE REDUCTION FOR BUILDINGS

The scope of this standard is the provision of recommendations for the control of noise in and around buildings including residential dwellings. It suggests appropriate criteria and limits for different situations, which are primarily intended to guide the design of new buildings or refurbished buildings undergoing a change of use, rather than to assess the effect of changes in the external noise climate.

The standard suggests suitable internal noise levels within different types of buildings, including residential dwellings, as shown in Table 2.2.

Table 2.2 BS 8233:2014 Recommended Internal Noise Level

CRITERION	TYPICAL SITUATION	DESIGN CRITERION $L_{Aeq,T}$ (dB)
Suitable resting and sleeping conditions	Living Room	35
	Bedroom	30

BS 8233 goes on to recommend noise levels for gardens:

It is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognised that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas



adjoining the strategic transport network, a compromise between elevated noise levels and other factors might be warranted.

BS 8233 goes on to say:

In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces but should not be prohibited.



3. SURVEY RESULTS

Due to the open nature of the site, full 24 hr measurements were not possible in all locations for road traffic. As such, wherever possible this was completed but where security was an issue, attended measurements in accordance with the shortened measurement procedure given in Calculation of Road Traffic Noise (CRTN) was conducted.

During the commercial sound surveys, the only sources were noted to be fixed plant sound for the retail aspect in the western parcel, as expected, and plant and HGV deliveries at the Lidl store. No other commercial sources or activity were noted and so prolonged surveys to capture such was not required.

Figure 2 details the Noise Measurement Positions for the western and eastern parcels.



Figure 2 Noise Measurement Positions



3.1. ROAD TRAFFIC SOUND MEASUREMENT – HOWARD STREET/FALINGE ROAD

E3P has conducted a Road Traffic Noise Survey to measure the level of noise generated by vehicles travelling along Howard Street/Falinge Road. The survey was carried out over the following time periods in accordance with Calculation of Road Traffic Noise (CRTN):

📅 11:21-14:21 Tuesday 7th July 2026.



The following noise measurement position was chosen for the Road Traffic Noise Survey:

- ✦ Noise Measurement Position 1 (NMP1): Located approximately 8 m from the nearside kerbstone of Falinge Road to the north of the Site. The microphone was located at a height of 1.5 m above ground level and in free-field conditions. The sound climate was dominated by road traffic sound.

A summary of the measured sound pressure levels from the Road Traffic Noise Survey are presented in Table 3.1.

Table 3.1 Attended Road Traffic Noise Levels

MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL (dB)			
	$L_{Aeq,T}$	10 th Highest $L_{Amax, fast}$	$L_{A90,T}$	$L_{A10,T}$
11:21	65.1	74.0	56.6	67.2
12:21	62.8		55.7	66.3
13:21	63.4		55.8	66.5

The above measured values are used to determine the daytime and night-time noise levels using the TRL Document and CRTN methodology. This results in a predicted level of 63.7 dB during the day and 55.3 dB during the night.

3.2. ROAD TRAFFIC SOUND MEASUREMENT – SHERIFF STREET

E3P has conducted a Road Traffic Noise Survey to measure the level of noise generated by vehicles travelling along Sheriff Street. The survey was carried out over the following time periods in accordance with CRTN:

- ✦ 10:33-13:33 Tuesday 7th July 2026.

The following noise measurement position was chosen for the Road Traffic Noise Survey:

- ✦ Noise Measurement Position 2 (NMP2): Located approximately 9 m from the nearside kerbstone of Sheriff Street to the west of the Site. The microphone was located at a height of 1.5 m above ground level and in free-field conditions. The sound climate was dominated by road traffic sound.

A summary of the measured sound pressure levels from the Road Traffic Noise Survey are presented in Table 3.2.



Table 3.2 Attended Road Traffic Noise Levels

MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL (dB)			
	$L_{Aeq,T}$	10 th Highest $L_{Amax, fast}$	$L_{A90,T}$	$L_{A10,T}$
10:33	63.5	76.1	57.6	64.4
11:33	62.5		57.2	63.9
12:33	61.7		57.1	63.6

The above measured values are used to determine the daytime and night-time noise levels using the TRL Document and CRTN methodology. This results in a predicted level of 61.0 dB during the day and 52.9 dB during the night.

3.3. COMMERCIAL SOUND MEASUREMENTS – LIDL DELIVERY AND PLANT

E3P has conducted attended commercial sound measurements for the Lidl store to capture HGV deliveries and operation of fixed plant. The survey was carried out over the following time periods when road traffic was at a lower level:

- 📍 06:19-06:39 and 07:39-07:59 Wednesday 8th July 2026.
- 📍 07:44-08:04 Thursday 9th July 2026.

During the above initial periods a HGV delivery and fixed plant measurements were captured. As such, no further daytime measurements were required.

The following noise measurement position was chosen for the Noise Survey:

- 📍 Noise Measurement Position 3 (NMP3): Located on the western boundary of the eastern parcel on Toad Lane in a position representative of the closest proposed facade. The microphone was located at a height of 1.5 m above ground level and in free-field conditions. The sound climate was dominated by road traffic sound, a HGV delivery and fixed plant at Lidl.

A summary of the measured sound pressure levels from the Noise Survey are presented in Table 3.3.



Table 3.3 Attended Commercial Sound Measurements

MEASUREMENT START TIME	SOURCE	MEASURED SOUND PRESSURE LEVEL $L_{Aeq,15mins}$ (dB)	SOURCE ON-TIME (mm:ss)
06:19 (08/07)	Road traffic – plant barely audible	52.1	-
07:39 (08/07)	HGV delivery and road traffic	60.1	15:00
07:44 (09/07)	Plant audible with lower road traffic levels	47.5*	60:00

*Given that road traffic was still intermittently audible, the L_{A90} was used to determine plant noise with 5 minute levels within 0.2 dB of each other which denotes a steady state source.

3.4. COMMERCIAL SOUND MEASUREMENTS - LIDL

In addition to the above, E3P has conducted attended commercial sound measurements for the Lidl store to the west of the store to determine whether the plant is audible at the western parcel. The survey was carried out over the following time periods when road traffic was at a lower level:

- 📍 06:41-07:01 Wednesday 8th July 2026.
- 📍 07:21-07:41 Thursday 9th July 2026.

During the above periods the only source was noted to be road traffic sound from St Mary's Way. Occasional vehicle movements were noted in the car park but given the existing building providing shielding to the site, car park usage is likely to be inaudible over road traffic sound.

The following noise measurement position was chosen for the Noise Survey:

- 📍 Noise Measurement Position 4 (NMP4): Located to the east of the western parcel boundary overlooking the Lidl store. The microphone was located at a height of 1.5 m above ground level and in free-field conditions. The sound climate was dominated by road traffic sound.

A summary of the measured sound pressure levels from the Noise Survey are presented in Table 3.4.



Table 3.4 Attended Commercial Sound Measurements

MEASUREMENT START TIME	SOURCE	MEASURED SOUND PRESSURE LEVEL $L_{Aeq,15mins}$ (dB)	SOURCE ON-TIME (mm:ss)
06:41 (08/07)	Road traffic	51.9	-
07:21 (09/07)	Road traffic	51.6	-

3.5. COMMERCIAL SOUND MEASUREMENTS - DUNELM

E3P has conducted attended commercial sound measurements for the Dunelm Store to the east of the eastern parcel to determine whether any commercial sound is audible.. The survey was carried out over the following time periods when road traffic was at a lower level:

- ✳ 07:05-07:35 Wednesday 8th July 2026.
- ✳ 06:55-07:15 Thursday 9th July 2026.

During the above periods, no fixed plant items were noted on the facades or in the service yard. Although HGV deliveries were noted to be active, these were taking place on the northern area of the store, completely shielded from the site and so was barely audible over road traffic sound. Given the operational periods, noise from deliveries here are not considered further given the dominance and masking of road traffic.

The following noise measurement position was chosen for the Noise Survey:

- ✳ Noise Measurement Position 5 (NMP5): Located on the eastern tip of the site adjacent to the Dunelm Store. The microphone was located at a height of 1.5 m above ground level and in free-field conditions. The sound climate was dominated by road traffic sound.

A summary of the measured sound pressure levels from the Noise Survey are presented in Table 3.5.

Table 3.5 Attended Commercial Sound Measurements

MEASUREMENT START TIME	SOURCE	MEASURED SOUND PRESSURE LEVEL $L_{Aeq,15mins}$ (dB)	SOURCE ON-TIME (mm:ss)
07:05 (08/07)	Road traffic – deliveries active	59.0	-
06:55 (09/07)	Road traffic	58.2	-

3.6. ROAD TRAFFIC SOUND MEASUREMENT – HOPE STREET

E3P has conducted a Road Traffic Noise Survey to measure the level of noise generated by vehicles travelling along Hope Street. The survey was carried out over the following time periods in accordance with CRTN:

- ✳ 10:00 Wednesday 8th July to 10:00 Thursday 9th July 2026.



The following noise measurement position was chosen for the Road Traffic Noise Survey:

- 📍 Noise Measurement Position 6 (NMP6): Located approximately 4.5 m from the nearside kerbstone of Hope Street. The microphone was located at a height of 1.5 m above ground level and in free-field conditions. The sound climate was dominated by road traffic sound.

A summary of the measured sound pressure levels from the Road Traffic Noise Survey are presented in Table 3.6.

Table 3.6 Unattended Road Traffic Noise Levels

MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL (dB)			
	L _{Aeq,T}	10 th Highest L _{Amax, fast}	L _{A10, T}	L _{A90, T}
08/07/2026 10:00	52.4	N/A	55.7	44.6
08/07/2026 11:00	51.0		54.8	43.4
08/07/2026 12:00	54.7		57.2	51.8
08/07/2026 13:00	52.0		55.3	46.7
08/07/2026 14:00	53.4		56.5	43.0
08/07/2026 15:00	54.8		59.3	45.0
08/07/2026 16:00	52.4		56.0	44.4
08/07/2026 17:00	55.1		57.2	44.7
08/07/2026 18:00	64.6		57.8	42.9
08/07/2026 19:00	54.0		56.1	42.5
08/07/2026 20:00	52.7		54.2	41.5
08/07/2026 21:00	50.3		53.5	41.6
08/07/2026 22:00	49.6		53.1	40.6
08/07/2026 23:00	47.5	70.1	50.8	39.6
09/07/2026 00:00	46.4		48.7	38.7
09/07/2026 01:00	46.2		48.5	39.6
09/07/2026 02:00	44.4		46.9	37.4
09/07/2026 03:00	42.9		45.6	37.8
09/07/2026 04:00	42.7		44.6	38.4
09/07/2026 05:00	47.1		49.6	41.5
09/07/2026 06:00	51.3	N/A	51.3	43.0
09/07/2026 07:00	50.5		52.0	44.0
09/07/2026 08:00	54.4		58.1	45.3
09/07/2026 09:00	55.4		59.3	46.1



From the above, the average noise levels are noted to be 55.7 dB during the day and 46.9 dB during the night.

3.7. ROAD TRAFFIC SOUND MEASUREMENT – ST MARY’S GATE

E3P has conducted a Road Traffic Noise Survey to measure the level of noise generated by vehicles travelling along St Mary’s Gate. The survey was carried out over the following time periods in accordance with CRTN:

🕒 10:07-13:07 Wednesday 8th July 2026.

The following noise measurement position was chosen for the Road Traffic Noise Survey:

📍 Noise Measurement Position 7 (NMP7): Located approximately 5 m from the nearside kerbstone of St Mary’s Gate to the south of the eastern parcel. The microphone was located at a height of 1.5 m above ground level and in free-field conditions. The sound climate was dominated by road traffic sound.

A summary of the measured sound pressure levels from the Road Traffic Noise Survey are presented in Table 3.7.

Table 3.7 Attended Road Traffic Noise Levels

MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL (dB)			
	$L_{Aeq,T}$	10 th Highest $L_{Amax, fast}$	$L_{A90,T}$	$L_{A10,T}$
10:07	68.6	80.1	57.9	70.9
11:07	68.1		56.4	70.7
12:07	67.1		57.0	70.4

The above measured values are used to determine the daytime and night-time noise levels using the TRL Document and CRTN methodology. This results in a predicted level of 67.7 dB during the day and 58.9 dB during the night.

3.8. COMMERCIAL SOUND MEASUREMENTS – SHERIFF STREET RETAIL

E3P has conducted attended fixed plant sound measurements for the plant item on Sheriff Street associated with the retail units to the south of the western parcel. The survey was carried out over the following time periods when road traffic was at a lower level:

🕒 06:02-06:23 Thursday 9th July 2026.

The following noise measurement position was chosen for the Noise Survey:



- ✦ Noise Measurement Position 8 (NMP8): Located 1 m from the plant item which is located on the western façade of the building at an approximate height of 2.5 m above ground level. The microphone was located at a height of 1.5 m above ground level and in free-field conditions. The sound climate was dominated by the fixed plant item with occasional road traffic pass-bys.

A summary of the measured sound pressure levels from the Noise Survey are presented in Table 3.8.

Table 3.8 Attended Commercial Sound Measurements

MEASUREMENT START TIME	SOURCE	MEASURED SOUND PRESSURE LEVEL $L_{Aeq,15mins}$ (dB)	SOURCE ON-TIME (mm:ss)
06:02 (09/07)	Fixed Plant	73.8	60:00

3.9. COMMERCIAL SOUND MEASUREMENTS – SPOTLAND ROAD RETAIL

E3P has conducted attended fixed plant sound measurements for the plant item on Spotland Road associated with the Hot Food Takeaway to the south of the western parcel. The survey was carried out over the following time periods when road traffic was at a lower level:

- ✦ 06:23-06:38 Thursday 9th July 2026.

The following noise measurement position was chosen for the Noise Survey:

- ✦ Noise Measurement Position 9 (NMP9): Located 1 m from the extract fans on the windows of the eastern elevation of the building at an approximate height of 1.5 m above ground level. The microphone was located at a height of 1.5 m above ground level and in free-field conditions. The sound climate was dominated by the fixed plant item with occasional road traffic pass-bys.

A summary of the measured sound pressure levels from the Noise Survey are presented in Table 3.9.

Table 3.9 Attended Commercial Sound Measurements

MEASUREMENT START TIME	SOURCE	MEASURED SOUND PRESSURE LEVEL $L_{Aeq,15mins}$ (dB)	SOURCE ON-TIME (mm:ss)
06:23 (09/07)	Fixed Plant	74.2	60:00

3.10. ROAD TRAFFIC SOUND MEASUREMENT – REDCROSS STREET

E3P has conducted a Road Traffic Noise Survey to measure the level of noise generated by vehicles travelling along Redcross Street. The survey was carried out over the following time periods in accordance with CRTN:

- ✦ 09:00 Thursday 9th July to 09:00 Friday 10th July 2026.



The following noise measurement position was chosen for the Road Traffic Noise Survey:

- 📍 Noise Measurement Position 10 (NMP10): Located approximately 8 m from the nearside kerbstone of Redcross Street. The microphone was located at a height of 1.5 m above ground level and in free-field conditions. The sound climate was dominated by road traffic sound.

A summary of the measured sound pressure levels from the Road Traffic Noise Survey are presented in Table 3.10.

Table 3.10 Unattended Road Traffic Noise Levels

MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL (dB)			
	$L_{Aeq,T}$	10 th Highest $L_{Amax, fast}$	$L_{A10,T}$	$L_{A90,T}$
09/07/2026 09:00	56.2	N/A	60.0	41.5
09/07/2026 10:00	54.8		59.0	41.0
09/07/2026 11:00	58.7		59.2	40.3
09/07/2026 12:00	55.5		59.8	42.2
09/07/2026 13:00	55.3		59.5	40.9
09/07/2026 14:00	54.8		59.5	41.4
09/07/2026 15:00	57.0		60.3	42.4
09/07/2026 16:00	55.3		59.6	41.8
09/07/2026 17:00	63.6		60.1	41.1
09/07/2026 18:00	55.4		60.1	41.1
09/07/2026 19:00	53.6		58.0	40.7
09/07/2026 20:00	53.1		57.3	40.7
09/07/2026 21:00	51.7		54.6	40.2
09/07/2026 22:00	50.4		51.4	40.0
09/07/2026 23:00	50.2	69.8	50.8	38.9
10/07/2026 00:00	47.3		45.0	35.9
10/07/2026 01:00	46.5		42.0	34.3
10/07/2026 02:00	44.5		41.6	35.5
10/07/2026 03:00	44.1		42.1	35.5
10/07/2026 04:00	43.7		42.6	36.7
10/07/2026 05:00	46.7		45.3	38.5
10/07/2026 06:00	50.8		49.9	42.1
10/07/2026 07:00	54.6	N/A	59.0	43.0
10/07/2026 08:00	56.1		60.7	44.2



From the above, the average noise levels are noted to be 56.6 dB during the day and 47.5 dB during the night.

3.11. ROAD TRAFFIC SOUND MEASUREMENT – SPOTLAND ROAD

E3P has conducted a Road Traffic Noise Survey to measure the level of noise generated by vehicles travelling along Spotland Road. The survey was carried out over the following time periods in accordance with CRTN:

📍 11:07-14:07 Thursday 9th July 2026.

The following noise measurement position was chosen for the Road Traffic Noise Survey:

📍 Noise Measurement Position 11 (NMP11): Located approximately 5.5 m from the nearside kerbstone of Spotland Road to the south of the western parcel. The microphone was located at a height of 1.5 m above ground level and in free-field conditions. The sound climate was dominated by road traffic sound.

A summary of the measured sound pressure levels from the Road Traffic Noise Survey are presented in Table 3.11.

Table 3.11 Attended Road Traffic Noise Levels

MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL (dB)			
	$L_{Aeq,T}$	10 th Highest $L_{Amax, fast}$	$L_{A90, T}$	$L_{A10, T}$
11:07	67.4	80.3	57.8	70.1
12:07	69.6		58.5	70.5
13:07	67.4		58.2	70.4

The above measured values are used to determine the daytime and night-time noise levels using the TRL Document and CRTN methodology. This results in a predicted level of 67.3 dB during the day and 58.6 dB during the night.

Weather conditions throughout were conducive to the measurement of environmental noise with calm and dry conditions.

The equipment outlined in Table 3.12 was used for the noise survey.



Table 3.12 Noise Measurement Equipment and Calibration Dates

MEASUREMENT POSITION	EQUIPMENT DESCRIPTION	MANUFACTURER AND TYPE NUMBER	SERIAL NUMBER	CALIBRATION DUE DATE
NMP10	Sound Meter Level	Fusion	12039	5th August 2027
	Pre-amplifier	Pre22	1805124	
	Microphone	40CE	330832	
	Calibrator	Cal31	87281	6th February 2027
NMP7	Sound Meter Level	Fusion	14226	17th December 2027
	Pre-amplifier	Pre22	2135072	
	Microphone	40CD	470570	
	Calibrator	CR 515	99204	13th August 2026
NMP2-NMP5, NMP8, NMP9, NMP11	Sound Meter Level	Fusion	14616	10th July 2026
	Pre-amplifier	Pre22	20951	
	Microphone	40CD	494264	
	Calibrator	CR 515	99206	5th August 2026
NMP1 and NMP6	Sound Meter Level	Svantek SV958A	97701	2nd August 2026

The sound level meters were field calibrated before and after measurements with no significant drift witnessed.



4. ROAD TRAFFIC NOISE IMPACT ASSESSMENT

For the purposes of this assessment, E3P has used noise modelling software, CadnaA 2026, to determine the impact of noise from road traffic sound.

The following inputs have been included in the model:

- ✳ The roads are calibrated to the corresponding NMP with a +1 dB correction applied to allow for uncertainty in the measurement.
- ✳ Site elevations have been taken as existing by way of a 2 m grid Digital Terrain Model (DTM) which contains public sector information licensed under the Open Government License v3.0.
- ✳ Existing buildings are included.
- ✳ A reflection order of 2 has been used in all calculations.
- ✳ Noise levels generated using ISO 9613-2:2024 "Acoustics – Attenuation of sound during propagation outdoors" and CRTN as incorporated into CadnaA software.

Figures 3 and 4 determine the noise levels across the Site during the daytime and night-time periods, respectively, due to road traffic sound for the western parcel. Figures 5 and 6 show the same for the eastern parcel.

4.1. EXTERNAL AMENITY AREA NOISE LEVEL ASSESSMENT

The noise model has been used to predict noise levels in rear garden areas to be used for relaxation. The predicted levels range between 44 dB and up to 59 dB.

As such, it is predicted that the No Observed Adverse Effect Level (NOAEL) is achieved in most rear garden areas with the following commentary:

Noise can be heard but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.

Accordingly, no action is required for these areas.

However, the garden areas of plots 100 to 102 in the eastern parcel are in exceedance of 55 dB. As such, barriers are required in order to control external noise. Section 6.0 details the locations and required heights.

4.2. INTERNAL NOISE LEVEL ASSESSMENT

With regards internal noise levels, E3P has assumed a standard glazing specification of 4 mm glass/20 mm air space/4 mm glass affords sound insulation performance in the order of 32 dB however this is for a pink noise spectrum. The same unit, weighted for road traffic noise, has a sound insulation performance value of approximately 28 dB and so this value has been used to calculate internal noise levels for noise break in.

The model has been used to predict façade noise levels at ground, first and second floors. In order to determine any requirements for mitigation, E3P has added the reduction provided by the glazing (25 dB) to the relevant criterion for day (35 dB) and for night (30 dB). As such, any facades subject to noise levels higher than 63 dB during the day and/or 58 dB during the night will require higher specification glazing.



As can be seen from the figures, southern most facades of plots on the eastern and western parcel are in exceedance of the daytime criterion. As such, these living rooms and bedrooms will require higher specification glazing. Standard double glazing is sufficient for the remainder of the site.

Consideration must also be given to maximum noise levels generated by road traffic. The 10th highest maximum noise level for each road has been used and distance corrected to the closest plot. Internal maximum noise levels of 45 dB LAmax should also not be exceeded. The sound insulation performance achieved by standard glazing (32 dB) has been added to the 45 dB maximum internal noise level limit. As, such facades subject to maximum noise levels above 77 dB will require higher specification glazing.

The maximum noise level at the worst affected facades is calculated to be:

- ✳ Howard Street/Falinge Road – 74 dB at 8 m – 67 dB at façade.
- ✳ Sheriff Street – 76 dB at 9 m – 74 dB at façade.
- ✳ Hope Street – 70 dB at 4.5 m – 66 dB at façade.
- ✳ St Mary's Gate – 80 dB at 5 m – 63 dB at façade.
- ✳ Redcross Street – 69 dB at 8 m – 68 dB at façade.
- ✳ Spotland Road – 80 dB at 5.5 m – 67 dB at façade.

Given the above, standard specification glazing is sufficient to mitigate against maximum noise levels generated by road traffic.

4.2.1. VENTILATION CONDITION

When considering a partially open window for ventilation purposes, E3P has assumed that a Building Regulations ADF compliant system would be installed as part of the development, in all plots, as it is unlikely the plots are suitable for natural ventilation.

Therefore, the only consideration in relation to noise will be the performance of any window mounted or through walls vents in relation to the passage of external to internal noise.

This is discussed in the mitigation section.

4.2.2. OVERHEATING CONDITION

E3P has considered the requirements of ADO in relation to opening windows at night to mitigate the potential for overheating, which at this stage is assumed to be required. Therefore, external noise levels at affected facades apply. Any plots that experience noise levels below these limits will be able to have openable windows to mitigate any overheating. Those that exceed these limits will be subject to an Overheating Assessment by a suitably qualified professional.

It is noted that the site is within a medium risk area and, as such, an outside-to-inside level difference for window openings for the simplified method is noted to be 10 dB (medium).

As such, the allowable façade noise levels are 50 dB averaged over the 8 hour night time period and 65 dB $L_{Amax,fast,2min}$ during the night.

Both parcels are shown on Figure 7, as can be seen certain facades of properties along the boundaries with the roads are subject to higher night-time noise levels than the limits above. As such, an overheating assessment in accordance with ADO is required. The exact facades and plots are highlighted in Section 6.0.



5. COMMERCIAL NOISE IMPACT ASSESSMENT

For the purposes of this assessment, E3P has used noise modelling software, CadnaA 2026, to determine the impact of noise from existing commercial sound.

The following inputs have been included in the model:

- ✳ Fixed plant items are calibrated to the sound levels noted in Section 3.
- ✳ Ground elevations have been taken as existing by way of a 2 m grid Digital Terrain Model (DTM) which contains public sector information licensed under the Open Government License v3.0.
- ✳ Existing buildings have been included in the model and assumed to have a structured façade.
- ✳ A reflection order of 2 has been used in all calculations.
- ✳ Noise levels generated using ISO 9613-2:2024 “Acoustics – Attenuation of sound during propagation outdoors” as incorporated into CadnaA software.

For the BS 4142:2014 assessments, penalties are applied to the specific sound level to provide the rating level. These penalties relate to the acoustic features of the sound source. Accordingly, the following objective and subjective features have been accounted for in the assessment, in accordance with the subjective method detailed in BS 4142:2014, for the Site as a whole operation.

For Lidl, deliveries are considered intermittent and the plant is considered readily distinct against the sound climate with no tonality noted. As such, a correction of 3 dB is applied to each source.

For fixed plant items on the western parcel, a 3 dB correction is applied as they are readily distinct against the sound climate with no tonality.

Figures 8 and 9 determine the rating levels across the Site during the daytime and night-time periods due to commercial/industrial sound at the western and eastern parcels respectively.

For background sound levels, those measured at NMP6 have been used which are considered worst-case, especially for the western parcel.

5.1. WESTERN PARCEL

The grid is calculated at 1.5 m height to show garden noise levels applicable for the daytime. However, apartment facades are considered where no garden areas exist.

Table 5.1 Calculation of Rating Level and Comparison with Background Sound Level – Daytime – Western Parcel

RECEPTOR	CALCULATED SPECIFIC NOISE LEVEL, $L_{Aeq,T}$ (dB)	CALCULATED RATING LEVEL $L_{A,r}$ (dB)	BACKGROUND SOUND LEVEL, $L_{A90,1hr}$ (dB)	DIFFERENCE +/- (dB)
Plots 1 to 7	34	37	44	-7
Plots 73-83	49	52		+8
Plots 84-112	43	46		+2
Plots 113-145	34	37		-7



From the above, there is potential for adverse impact at plots 73 to 112 but consideration to context is required.

Absolute levels at these facades are 49 dB. Considering standard glazing reduction of at least 25 dB, internal noise levels would be 24 dB, 6 dB below the 30 dB for night-time sleep conditions. The facades of plots 73-83 exposed to fixed plant noise are already marked to be modelled with windows closed and so a ventilation system will likely be required that does not require these windows to be open for ventilation and summer cooling. As such, the impact is considered low for these plots.

As such, no adverse impact is predicted during the daytime and night-time periods.

5.2. EASTERN PARCEL

Table 5.2 Calculation of Rating Level and Comparison with Background Sound Level – Daytime – Eastern Parcel

RECEPTOR	CALCULATED SPECIFIC NOISE LEVEL, $L_{Aeq,T}$ (dB)	CALCULATED RATING LEVEL $L_{A,r}$ (dB)	BACKGROUND SOUND LEVEL, $L_{A90,1hr}$ (dB)	DIFFERENCE +/- (dB)
Plots 31 to 35	46	49	44	+5
Plots 36 to 38	36	39		-5
Plots 39 and 40	30	33		-11
Plots 41 and 42	29	32		-12

Within rear garden areas, there is predicted to be an adverse impact at plots 31 to 35. As such, mitigation measures are required.

During the night-time period, noise levels are expected to be 49-50 dB for the worst affected plots. With windows closed, internal noise levels are expected to be no more than 27 dB. This is 3 dB below the night-time sleeping conditions.

As such, no adverse impact is predicted due to commercial sound associated with Lidl during the night-time period. However, daytime levels are unacceptable at plots 31 to 35 and require mitigation.



6. MITIGATION

6.1. EXTERNAL AMENITY AREA – BS 8233

As shown in Section 4.1, certain garden areas would experience an exceedance of the 55 dB criterion in rear garden areas. As such, an additional noise model has been run to determine the required barrier height needed to achieve levels of 55 dB and below.

As shown in Figure 10, barriers for the following plots are required:

- ✿ Plot 102 Eastern parcel - 2.1 m high barrier.

The barriers can be of wooden fence or brick wall construction but must be free from holes, be sealed at the base and have a minimum mass of 10kg/m².

6.2. EXTERNAL AMENITY AREA – BS4142

As shown in Section 5, certain garden areas would experience an exceedance of the background sound levels in rear garden areas. As such, an additional noise model has been run to determine the required barrier height needed to achieve levels of 44 dB and below.

This is shown in Figure 11. A barrier of 2.4 m height is required along the boundary with Plot 35.

Table 6.1 Calculation of Rating Level and Comparison with Background Sound Level – Daytime

RECEPTOR	CALCULATED SPECIFIC NOISE LEVEL, $L_{AEQ,T}$ (dB)	CALCULATED RATING LEVEL $L_{A,r}$ (dB)	BACKGROUND SOUND LEVEL, $L_{A90,1hr}$ (dB)	DIFFERENCE +/- (dB)
Plots 31 to 35	41	44	44	0
Plots 36 to 38	34	37		-7
Plots 39 and 40	29	32		-12
Plots 41 and 42	28	31		-13

The barriers can be of wooden fence or brick wall construction but must be free from holes, be sealed at the base and have a minimum mass of 10 kg/m².

6.3. FAÇADE INSULATION AND VENTILATION

The previous section assumed that a whole dwelling ventilation system in accordance with Part F would be installed across the site as it is assumed natural ventilation is not appropriate for these dwellings. Higher specification glazing will be required for across certain facades. Standard thermal double glazing being sufficient across the rest of the site.

Table 6.2 details the required glazing per façade. The worst-case required glazing is chosen per façade. For example, where a glazing needed due to night-time noise is higher than for daytime periods, the night-time requirements are recommended. Where maximum noise levels need mitigation the R_w value is provided.



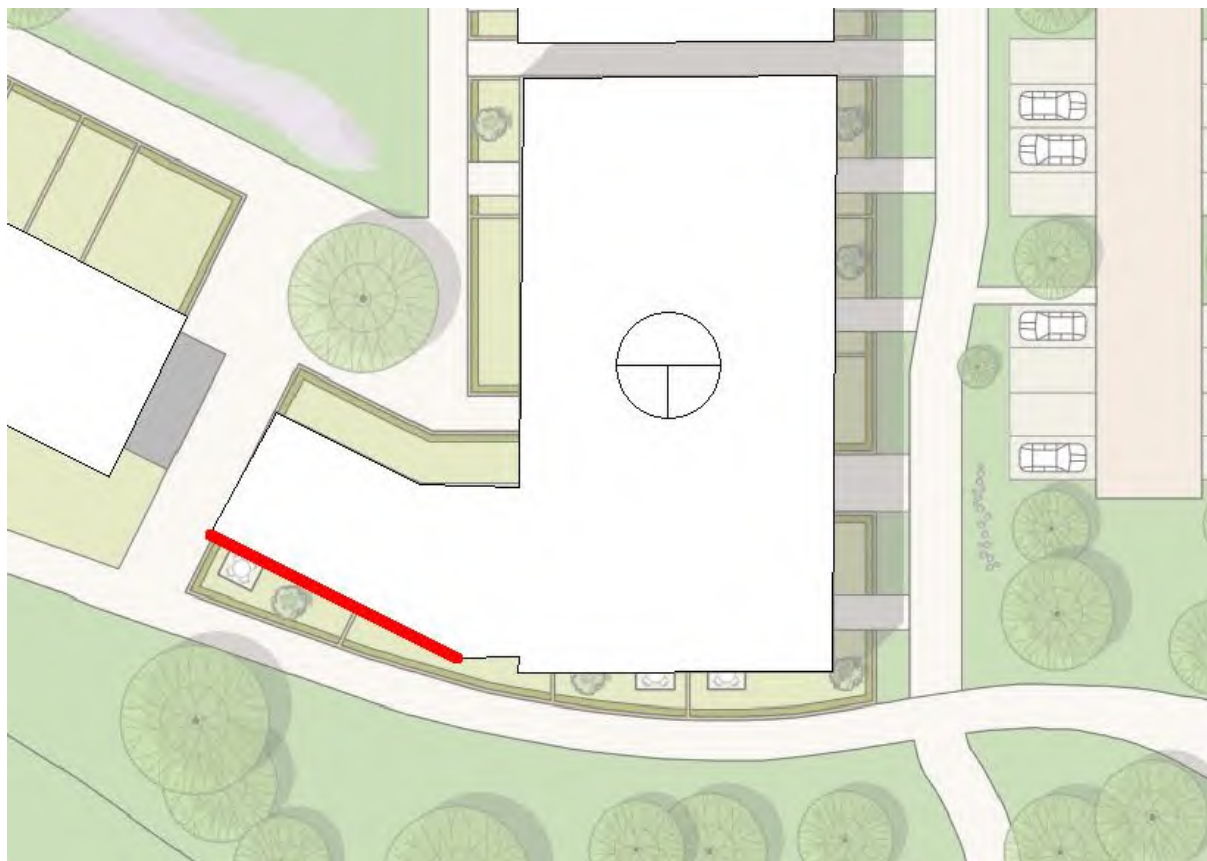
It is recommended that a glazier is consulted to ensure any system installed achieves the above reduction as a minimum. These specifications should be reviewed by an acoustician.

Table 6.2 Glazing Requirements – Dwellings

PLOT	REQUIRED GLAZING REDUCTION (dB)	EXAMPLE GLAZING (GLASS/AIR SPACE/GLASS) (mm)
Plots 102-115 – Eastern Parcel	34 dB $R_w + C_{tr}$	10 / 18 / 6
Plots 113-145 – Western Parcel	29 dB $R_w + C_{tr}$	4 / 16 / 6

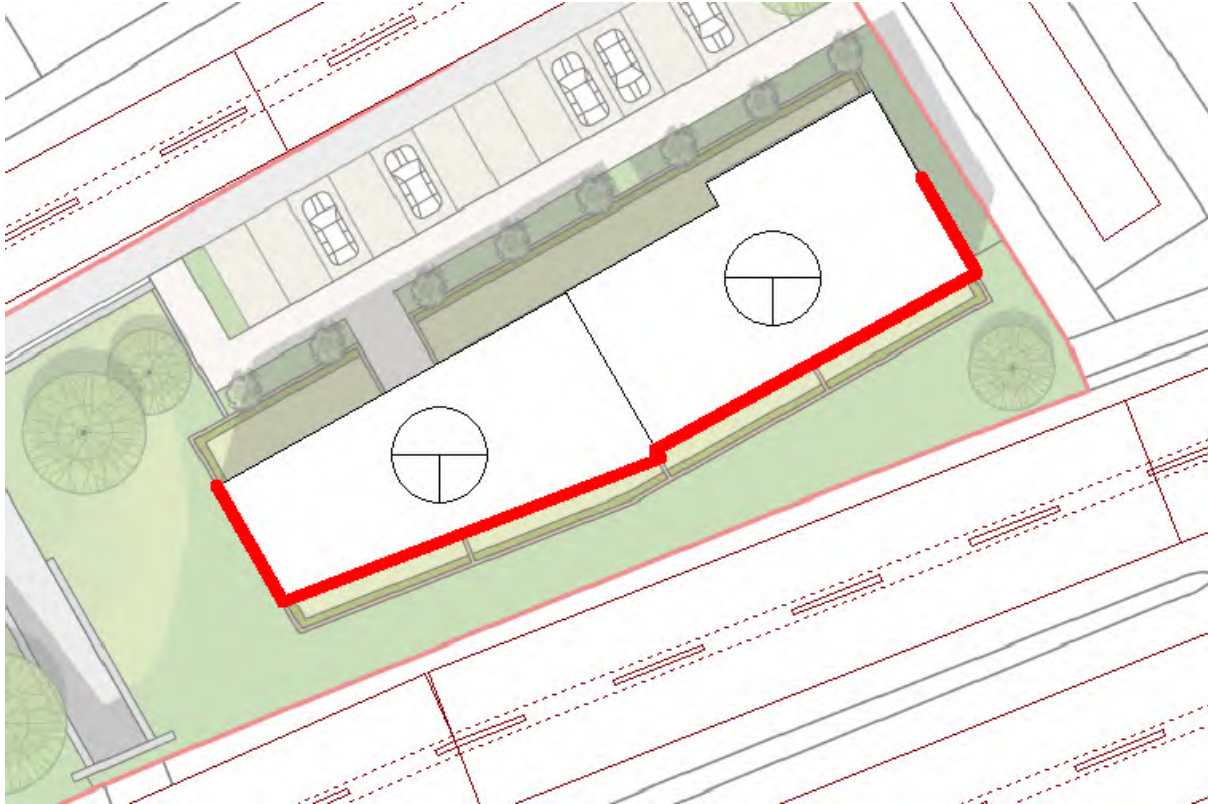
The graphics below show the affected facades.

Western Parcel – Plots 113-145 - 29 dB $R_w + C_{tr}$





Eastern Parcel – Plots 102-115 - 34 dB $R_w + C_{t,r}$





7. CONCLUSIONS AND DISCUSSION

E3P has undertaken attended and unattended road traffic sound surveys for Sheriff Street, Falinge Road/Howard Street, Hope Street, St Mary's Gate, Redcross Street and Spotland Road during typical weekday periods.

Furthermore, attended measurements have been conducted at key locations to capture commercial sound. Here it was found that fixed plant noise was audible to the south on the western parcel and associated with the Lidl store, along with Heavy Goods Vehicle deliveries.

A 3D noise model has been constructed to assess roads traffic and commercial sound across the site and incident upon facades.

Road traffic is assessed in accordance with the criterion, for day and night, given in BS 8233:2014+A1:2019.

Commercial noise is assessed in accordance with BS 4142:2014+A1:2019 where applicable.

The assessment has found that higher specification glazing is required for certain plots with certain bedroom windows modelled as closed as part of any Approved Document Part O overheating assessment.

Barriers are required for plots 102 in the eastern parcel to protect against road traffic sound. Furthermore, a barrier is required for plot 35 of the eastern parcel to protect against delivery noise from the Lidl store.

With mitigation measures in place, this assessment has shown that no adverse impact is predicted day or night at the receptors due to commercial sound or road traffic sound.

END OF REPORT

Appendix I: Limitations





GENERAL

1. This report and any associated works (together comprising the "Services") were compiled and carried out by E3P for the client (as present in Section 1) under the E3P "Terms of Business" or with those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed and outlined in the body of the report.
2. Unless explicitly agreed otherwise, in writing, this report has been prepared under E3P Standard Terms and Business as included within our proposal to the Client.
3. Project-specific appointment documents may be agreed upon at our discretion and a charge may be levied for both the time to review and finalise appointment documents and also for associated changes to the appointment terms. E3P reserves the right to amend the fee should any changes to the appointment terms create an increased risk to E3P.
4. The report needs to be considered in light of the proposal and associated limitations of scope. The report needs to be read in full and isolated sections cannot be used without full reference to other elements of the report and any previous works referenced within the report.

NOISE AND VIBRATION IMPACT ASSESSMENTS

5. Where a noise or vibration survey is required to inform an assessment, E3P will endeavour to ensure that all noise and vibration measurements taken are robust, representative and reliable in order to inform an accurate assessment.
6. Where mitigation measures are specified in this report, it should be noted that these measures are relative to a specific sound or vibration source, both in terms of the measured sound pressure and vibration level and the character of the sound source. Where either the sound pressure level or the character of the sound varies following completion of the sound survey, E3P cannot be held responsible for any subsequent variations in the proposed mitigation performance.
7. The works undertaken to prepare this report comprised a study of available and easily documented information from a variety of sources (including the Client), together with (where appropriate) a brief walkover inspection of the Site and correspondence with relevant authorities and other interested parties. Due to the short timescales associated with these projects responses may not have been received from all parties. E3P cannot be held responsible for any disclosures that are provided post-production of our report and will not automatically update our report.
8. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only for the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, E3P reserves the right to review such information and, if warranted, to modify the opinions accordingly.
9. E3P does not warrant work/data undertaken/provided by others.

Appendix II: Glossary





NOISE

Noise is defined as unwanted sound. Human ears are able to respond to sound in the frequency range 20 Hz (deep bass) to 20,000 Hz (high treble) and over the audible range of 0 dB (the threshold of perception) to 140 dB (the threshold of pain). The ear does not respond equally to different frequencies of the same magnitude but is more responsive to mid-frequencies than to lower or higher frequencies. To quantify noise in a manner that approximates the response of the human ear, a weighting mechanism is used. This reduces the importance of lower and higher frequencies, in a similar manner to the human ear.

Furthermore, the perception of noise may be determined by a number of other factors, which may not necessarily be acoustic. In general, the impact of noise depends upon its level, the margin by which it exceeds the background level, its character and its variation over a given period of time. In some cases, the time of day and other acoustic features such as tonality or impulsiveness may be important, as may the disposition of the affected individual. Any assessment of noise should give due consideration to all of these factors when assessing the significance of a noise source. The most widely used weighting mechanism that best corresponds to the response of the human ear is the "A"-weighting scale. This is widely used for environmental noise measurement, and the levels are denoted as dB(A) or LAeq, LA90 etc., according to the parameter being measured.

The decibel scale is logarithmic rather than linear, and hence a 3 dB increase in sound level represents a doubling of the sound energy present. Judgement of sound is subjective but, as a general guide, a 10 dB(A) increase can be taken to represent a doubling of loudness, whilst an increase in the order of 3 dB(A) is generally regarded as the minimum difference needed to perceive a change under normal listening conditions. An indication of the range of sound levels commonly found in the environment is given in the following table.

Table A Typical Sound Pressure Levels

SOUND PRESSURE LEVEL	LOCATIONS/EXAMPLE
0	Threshold of hearing
20-30	Quiet bedroom at night
30-40	Living room during the day
40-50	Typical office
50-60	Inside a car
60-70	Typical high street
70-90	Inside a factory
100-110	Burglar alarm at 1 m away
110-130	Jet aircraft on take off
140	Threshold of pain



ACOUSTIC TERMINOLOGY

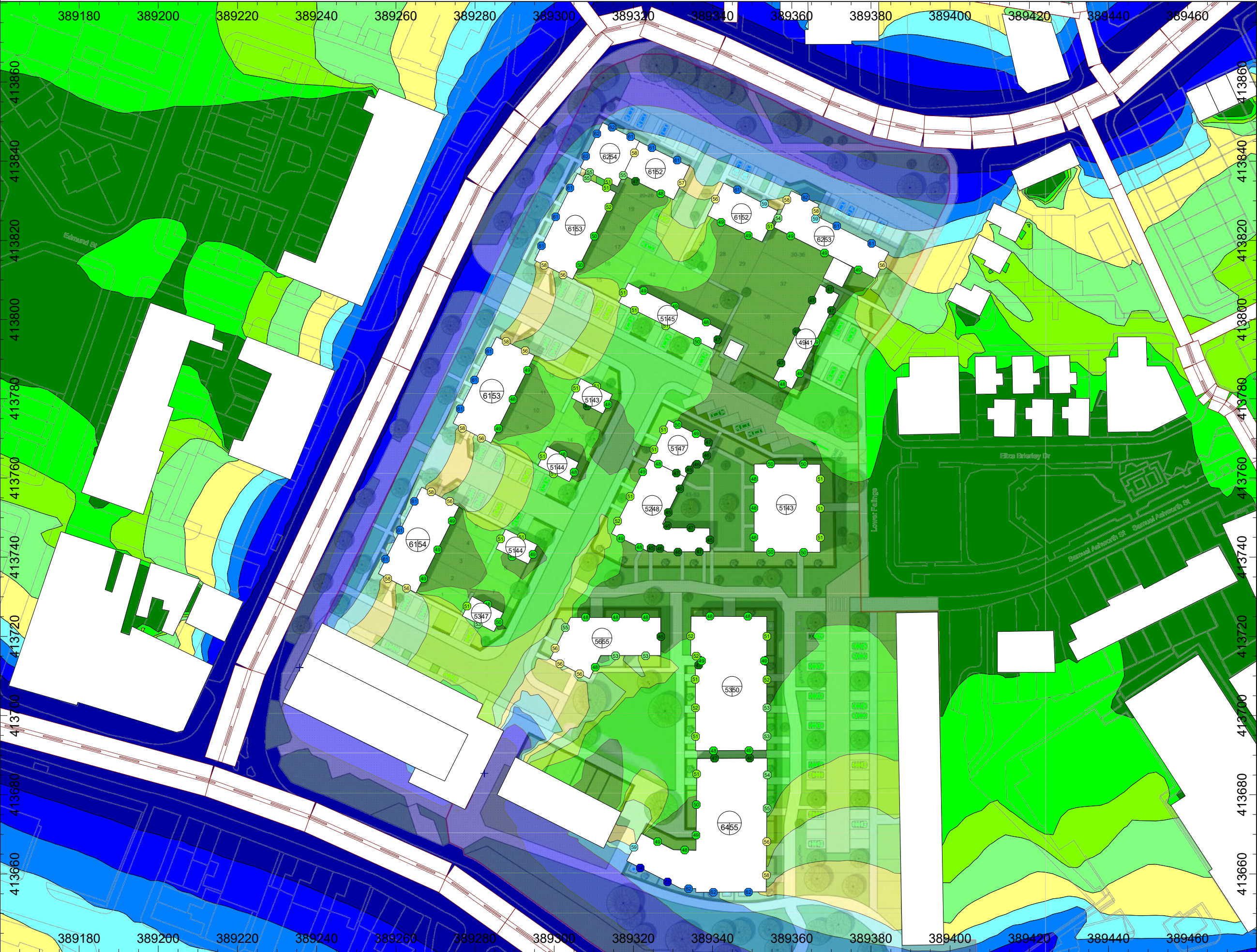
Table B Terminology

DESCRIPTOR	EXPLANATION
dB (decibel)	The scale on which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and a reference pressure (2E-05 Pa).
dB(A)	A-weighted decibel. This is a measure of the overall level of sound across the audible spectrum with a frequency weighting (i.e. "A" weighting) to compensate for the varying sensitivity of the human ear to sound at different frequencies.
LAeq, T	LAeq is defined as the notional steady sound level which, over a stated period of time (T), would contain the same amount of acoustical energy as the A-weighted fluctuating sound measured over that period.
LAmx	LAmx is the maximum A-weighted sound pressure level recorded over the period stated. LAmx is sometimes used in assessing environmental noise where occasional loud noises occur, which may have little effect on the overall Leq noise level but will still affect the noise environment. Unless described otherwise, it is measured using the "fast" sound level meter response.
L10 and L90	If a non-steady noise is to be described, it is necessary to know both its level and the degree of fluctuation. The Ln indices are used for this purpose, and the term refers to the level exceeded for n% of the time. Hence L10 is the level exceeded for 10% of the time and as such can be regarded as the "average maximum level". Similarly, L90 is the "average minimum level" and is often used to describe the background noise. It is common practice to use the L10 index to describe traffic noise.
Free-field Level	A sound field determined at a point away from reflective surfaces other than the ground with no significant contributions due to sound from other reflective surfaces. Generally, as measured outside and away from buildings.
Fast	A time weighting used in the root-mean-square section of a sound level meter with a 125-millisecond time constant.
Slow	A time weighting used in the root-mean-square section of a sound level meter with a 1000-millisecond time constant.
dB (decibel)	The scale on which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and a reference pressure (2E-05 Pa).
dB(A)	A-weighted decibel. This is a measure of the overall level of sound across the audible spectrum with a frequency weighting (i.e. "A" weighting) to compensate for the varying sensitivity of the human ear to sound at different frequencies.

Appendix III: Figures



Figure 3 - Daytime Grid Noise Map Western Parcel - Calculation at 1.5m above ground level



Project:
Lower Falinge

Project-No:
52-228

Client:
Rochdale Boroughwide
Housing

**Predicted Noise Level,
LAeq,T (dB)**

...	<= 48
48 < ...	<= 50
50 < ...	<= 52
52 < ...	<= 55
55 < ...	<= 58
58 < ...	<= 60
60 < ...	<= 62
62 < ...	<= 65
65 < ...	

Noise Map Objects

- Point Source
- Road
- Building
- Barrier
- Building Evaluation
- Calculation Area



Project Engineer: L Faulkner
Date: 16/07/2026

Figure 4 - Night-time Grid Noise Map Western Parcel - Calculation at 4 m above ground level



Project:
Lower Falinge

Project-No:
52-228

Client:
Rochdale Boroughwide
Housing

**Predicted Noise Level,
LAeq,T (dB)**

...	≤ 48
48 < ...	≤ 50
50 < ...	≤ 52
52 < ...	≤ 55
55 < ...	≤ 58
58 < ...	≤ 60
60 < ...	≤ 62
62 < ...	≤ 65
65 < ...	

Noise Map Objects

- Point Source
- Road
- Building
- Barrier
- Building Evaluation
- Calculation Area



Project Engineer: L Faulkner
Date: 16/07/2026

Figure 5 - Daytime Grid Noise Map Eastern Parcel - Calculation at 1.5 m above ground level



Project:
Lower Falinge

Project-No:
52-228

Client:
Rochdale Boroughwide
Housing

**Predicted Noise Level,
LAeq,T (dB)**

...	<= 48
48 < ...	<= 50
50 < ...	<= 52
52 < ...	<= 55
55 < ...	<= 58
58 < ...	<= 60
60 < ...	<= 62
62 < ...	<= 65
65 < ...	

Noise Map Objects

- Point Source
- Road
- Building
- Barrier
- Building Evaluation
- Calculation Area



Project Engineer: L Faulkner
Date: 16/07/2026

Figure 6 - Night-time Grid Noise Map Eastern Parcel - Calculation at 4 m above ground level

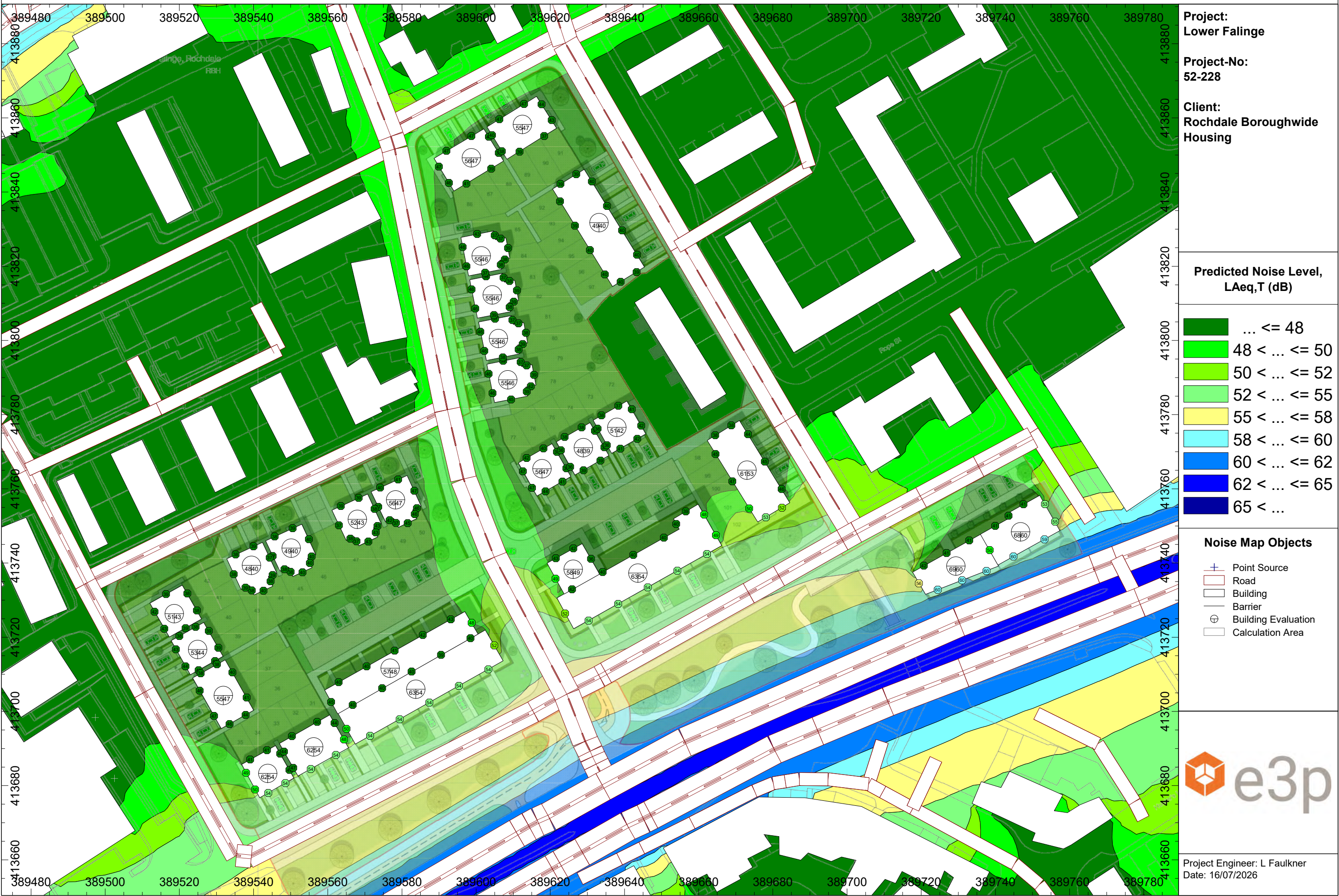
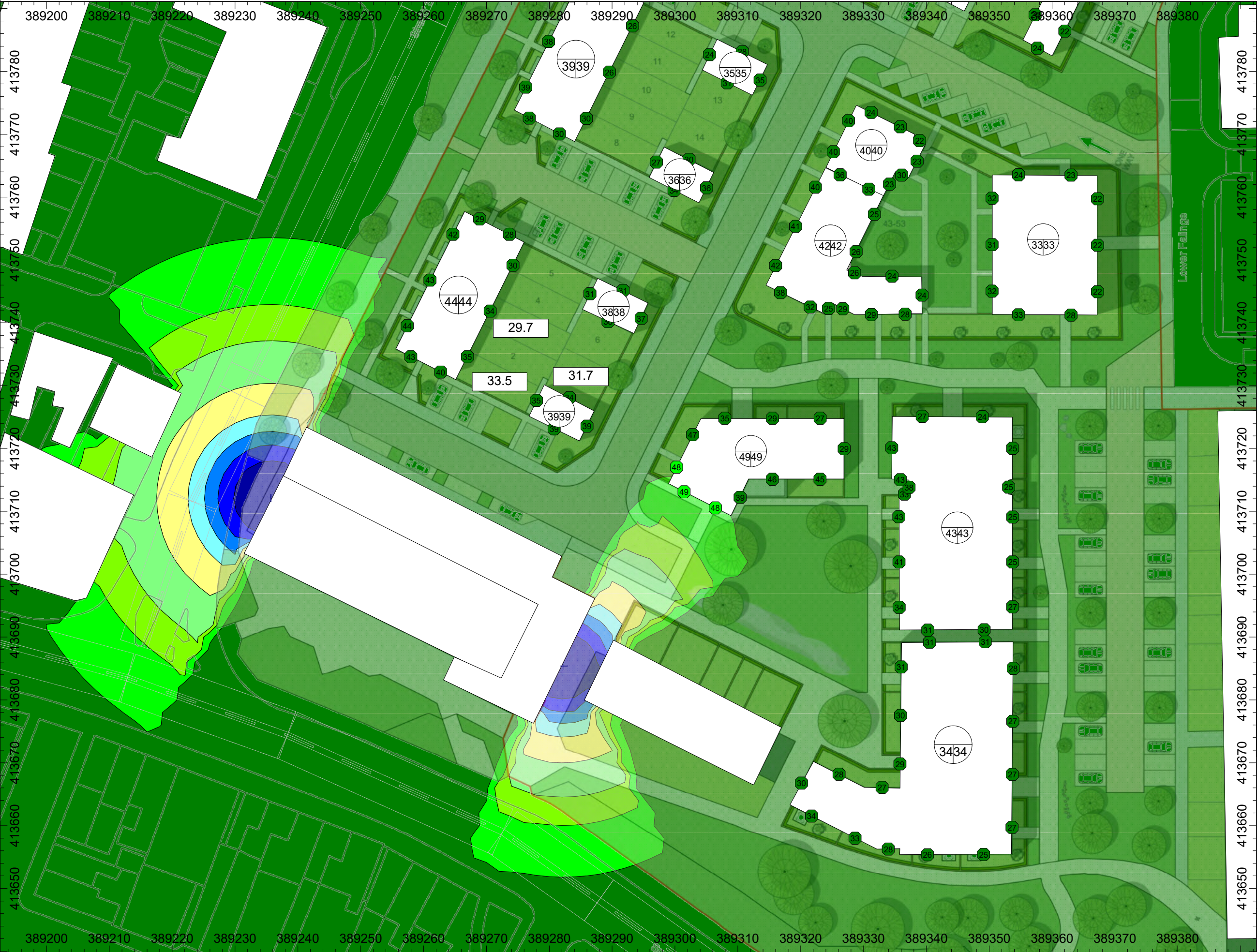


Figure 7 - Approved Dcoument Part O Night-time Exceedances with Windows Open



Figure 8 - Commercial Noise Grid Noise Map Western Parcel - Grid calculation at 1.5 m above ground level

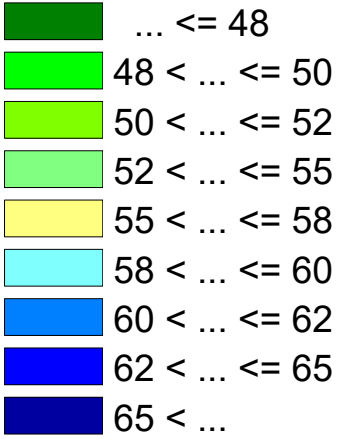


Project:
Lower Falinge

Project-No:
52-228

Client:
Rochdale Boroughwide
Housing

**Predicted Noise Level,
LAeq,T (dB)**



Noise Map Objects

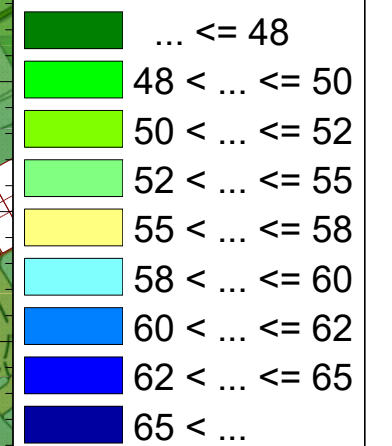
- Point Source
- Road
- Building
- Barrier
- Building Evaluation
- Calculation Area



Project Engineer: L Faulkner
Date: 16/07/2026

The map displays a site plan for a proposed development. The map is overlaid with a grid of coordinates. The easting coordinates (horizontal axis) range from 389440 to 389630. The northing coordinates (vertical axis) range from 413640 to 413770. The map shows several property lots, many of which are numbered. A large area on the left side of the map is highlighted with a color gradient from blue to yellow, indicating a proposed development or a specific land use. The map also shows a road labeled 'Samuel Ashworth St' and a railway line. The title 'Proposed Site Plan - Eastern Parcel' is located at the bottom left. A north arrow and a scale bar are also present.

Location	Predicted Noise Level, LAeq,T (dB)	
	Day	Night
1. Residential Area	65	55
2. Commercial Area	70	60
3. Industrial Area	75	65
4. Office Area	68	58
5. School Area	62	52
6. Hospital Area	60	50
7. Public Area	67	57
8. Residential Area	64	54
9. Commercial Area	69	59
10. Industrial Area	74	64
11. Office Area	66	56
12. School Area	61	51
13. Hospital Area	59	49
14. Public Area	66	56
15. Residential Area	63	53
16. Commercial Area	68	58
17. Industrial Area	73	63
18. Office Area	65	55
19. School Area	60	50
20. Hospital Area	58	48
21. Public Area	65	55
22. Residential Area	62	52
23. Commercial Area	67	57
24. Industrial Area	72	62
25. Office Area	64	54
26. School Area	59	49
27. Hospital Area	57	47
28. Public Area	64	54
29. Residential Area	61	51
30. Commercial Area	66	56
31. Industrial Area	71	61
32. Office Area	63	53
33. School Area	58	48
34. Hospital Area	56	46
35. Public Area	63	53
36. Residential Area	60	50
37. Commercial Area	65	55
38. Industrial Area	70	60
39. Office Area	62	52
40. School Area	57	47
41. Hospital Area	55	45
42. Public Area	62	52
43. Residential Area	59	49
44. Commercial Area	64	54
45. Industrial Area	69	59
46. Office Area	61	51
47. School Area	56	46
48. Hospital Area	54	44
49. Public Area	61	51
50. Residential Area	58	48
51. Commercial Area	63	53
52. Industrial Area	68	58
53. Office Area	60	50
54. School Area	55	45
55. Hospital Area	53	43
56. Public Area	60	50
57. Residential Area	57	47
58. Commercial Area	62	52
59. Industrial Area	67	57
60. Office Area	59	49
61. School Area	54	44
62. Hospital Area	52	42
63. Public Area	59	49
64. Residential Area	56	46
65. Commercial Area	61	51
66. Industrial Area	66	56
67. Office Area	58	48
68. School Area	53	43
69. Hospital Area	51	41
70. Public Area	58	48
71. Residential Area	55	45
72. Commercial Area	60	50
73. Industrial Area	65	55
74. Office Area	57	47
75. School Area	52	42
76. Hospital Area	50	40
77. Public Area	57	47
78. Residential Area	54	44
79. Commercial Area	59	49
80. Industrial Area	64	54
81. Office Area	56	46
82. School Area	51	41
83. Hospital Area	49	39
84. Public Area	56	46
85. Residential Area	53	43
86. Commercial Area	58	48
87. Industrial Area	63	53
88. Office Area	55	45
89. School Area	50	40
90. Hospital Area	48	38
91. Public Area	55	45
92. Residential Area	52	42
93. Commercial Area	57	47
94. Industrial Area	62	52
95. Office Area	54	44
96. School Area	49	39
97. Hospital Area	47	37
98. Public Area	54	44
99. Residential Area	51	41
100. Commercial Area	56	46
101. Industrial Area	61	51
102. Office Area	53	43
103. School Area	48	38
104. Hospital Area	46	36
105. Public Area	53	43
106. Residential Area	50	40
107. Commercial Area	55	45
108. Industrial Area	60	50
109. Office Area	52	42
110. School Area	47	37
111. Hospital Area	45	35
112. Public Area	52	42
113. Residential Area	49	39
114. Commercial Area	54	44
115. Industrial Area	59	49
116. Office Area	51	41
117. School Area	46	36
118. Hospital Area	44	34



-  Point Source
-  Road
-  Building
-  Barrier
-  Building Evaluation
-  Calculation Area



Swing Title: Proposed Sils Plan - Eastern Parcel
389440 389450 389460 389470

Figure 10 - Road Traffic Grid Noise Map with Mitigation Eastern Parcel - Grid calculation at 1.5 m above ground level

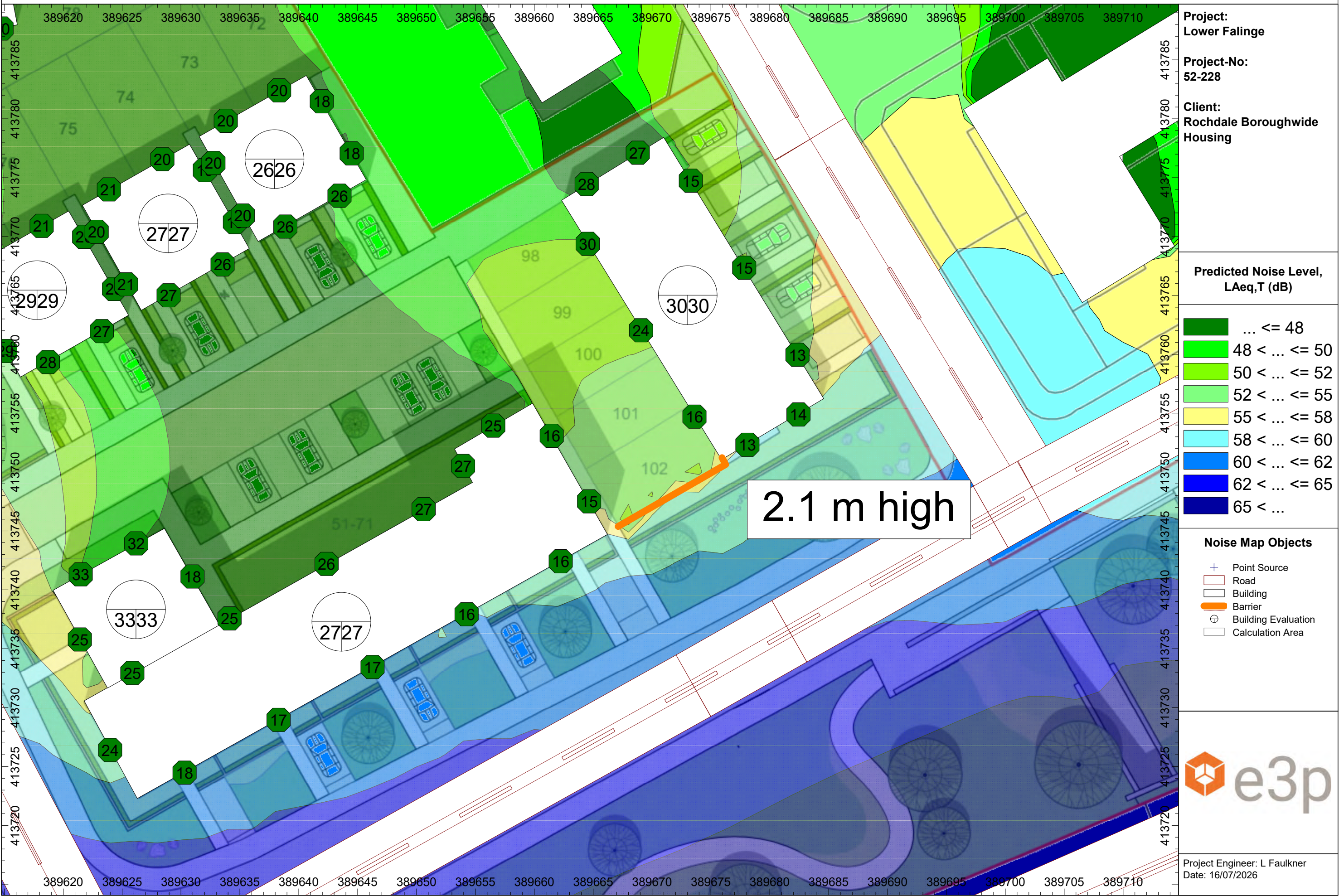
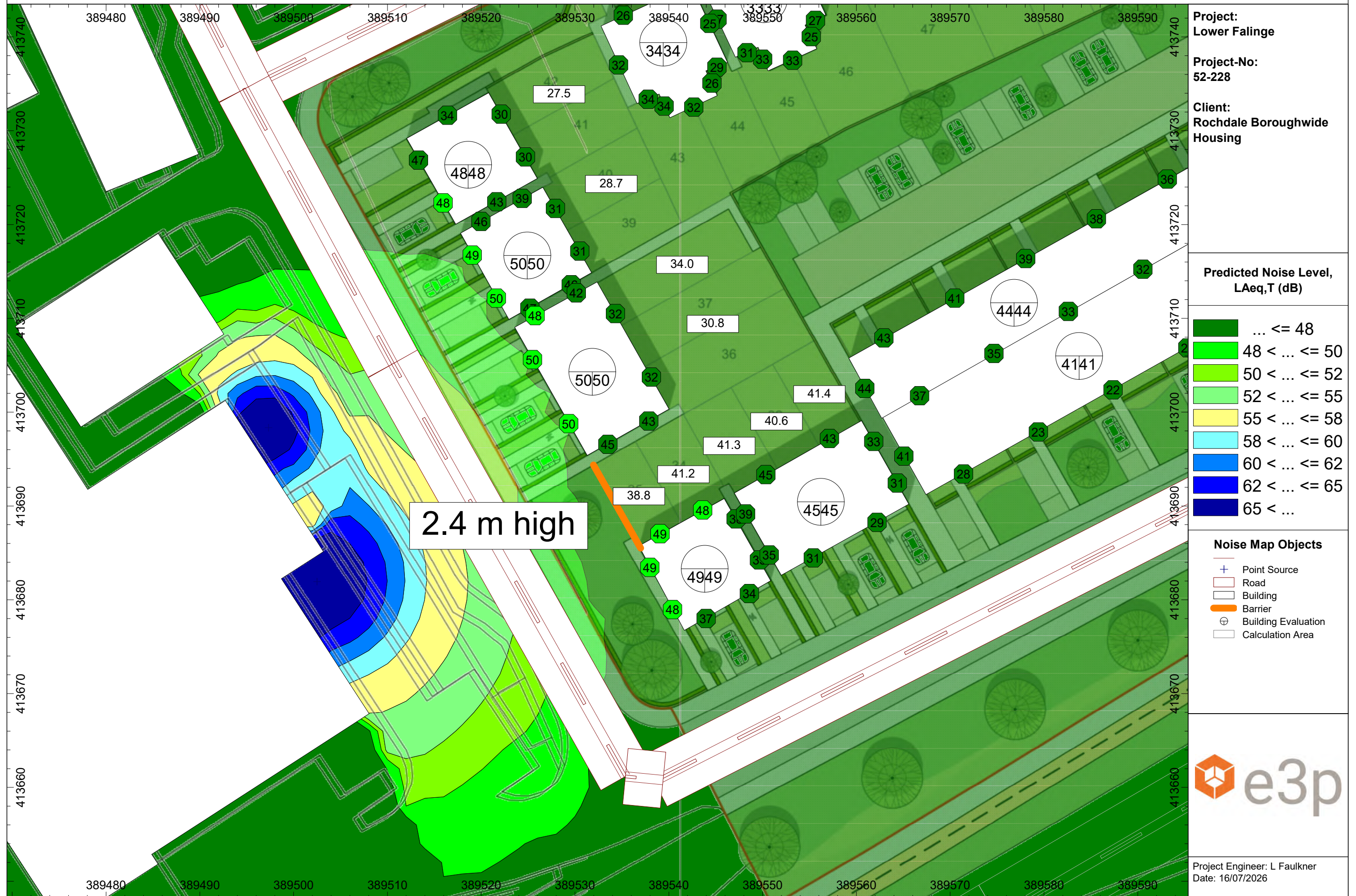


Figure 11 - Commercial Noise Grid Noise Map with Mitigaiton Eastern Parcel - Grid calculation at 1.5 m above ground level



Appendix 4 – Air Quality Assessment

Air Quality Assessment
Lower Falinge, Rochdale

Client: Rochdale Boroughwide Housing Limited

Reference: 11109r1

Date: 10th August 2026



Report Issue

Report Title: Air Quality Assessment - Lower Falinge, Rochdale

Report Reference: 11109

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	1	2	3	4
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Date of Issue	10 th August 2026			
Comment	-			

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This report has been prepared by Redmore Environmental Ltd in accordance with the agreed terms and conditions of appointment. Redmore Environmental Ltd cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

Executive Summary

Redmore Environmental Ltd was commissioned by Rochdale Boroughwide Housing Limited to undertake an Air Quality Assessment in support of residential developments at two land parcels in Lower Falinge, Rochdale.

An Air Quality Assessment was undertaken to:

- Assess potential impacts associated with fugitive dust emissions during the construction phase of the proposed developments;
- Assess potential impacts associated with road transport emissions during the operational phase of the proposed developments;
- Assess risk of future resident exposure to any existing air quality issues; and,
- Identify any requirement for relevant mitigation measures.

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

Potential impacts during the operational phase of the proposals may occur due to road traffic exhaust emissions associated with vehicles travelling to and from the developments. These were assessed for the Western Parcel using standard screening criteria. Due to the reduction of vehicle trips generated by the Western Parcel, road traffic exhaust emission impacts were not predicted to be significant.

For the Eastern Parcel, dispersion modelling was undertaken in order to predict pollutant concentrations at sensitive locations as a result of emissions from the local highway network both with and without the developments in place. Results were subsequently verified using local monitoring data.

Review of the dispersion modelling results indicated that air quality impacts as a result of traffic generated by the Eastern Parcel were not predicted to be significant at any sensitive location in the vicinity of the site.

During the operational phase there is also the potential for future residents to be exposed to any

existing air quality issues at the sites. This was assessed using dispersion modelling in order to quantify pollutant concentrations across the developments. The results of the assessment demonstrated that predicted pollution levels were below the relevant air quality standards at the proposed building façades within both Parcels. As such, the sites are considered suitable for the proposed use from an air quality perspective.

Based on the assessment results, air quality factors are not considered a constraint to the developments.

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Appendix 1 - Assessment Input Data

Appendix 2 - Curricula Vitae

1.0 INTRODUCTION

1.1 Instruction

- 1.1.1 Redmore Environmental Ltd was commissioned by Rochdale Boroughwide Housing Limited to undertake an Air Quality Assessment in support of residential developments at Lower Falinge, Rochdale.

1.2 Site Location and Context

- 1.2.1 The proposed developments are located at Lower Falinge, Rochdale and comprise two neighbouring land parcels. These are located at the following approximate National Grid References (NGRs):

- Western Parcel: 389340, 413690; and,
- Eastern Parcel: 389635, 413775.

- 1.2.2 The relevant Local Authority (LA) is Rochdale Borough Council (RBC). Reference should be made to Figure 1 for a map of the site and surrounding area.

- 1.2.3 The proposals comprise the demolition of 150 residential dwellings across seven blocks and the existing commercial building off Waterhouse Street. The subsequent developments will comprise 270 dwellings across two land parcels as follows:

- Western Parcel - provision of 141 units; and,
- Eastern Parcel - provision of up to 129 units.

1.3 Assessment Scope

- 1.3.1 The proposals have the potential to cause air quality impacts at sensitive locations. As such, an Air Quality Assessment was undertaken to:

- Assess potential impacts associated with fugitive dust emissions during the construction phase of the developments;
- Assess potential impacts associated with road transport emissions during the operational phase of the developments;

- Assess risk of future resident exposure to any existing air quality issues; and,
- Identify any requirement for relevant mitigation measures.

1.3.2 This is detailed in the following report.

2.0 LEGISLATION AND POLICY

2.1 Legislation

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

- Nitrogen dioxide (NO₂);
- Sulphur dioxide;
- Lead;
- Particulate matter with an aerodynamic diameter of less than 10µm (PM₁₀);
- Particulate matter with an aerodynamic diameter of less than 2.5µm (PM_{2.5});
- Benzene; and,
- Carbon monoxide.

2.1.2 Air Quality Target Values were also provided for several additional pollutants. It should be noted that the AQLV for PM_{2.5} stated in the Air Quality Standards Regulations (2010) was amended in the Environment (Miscellaneous Amendments) (EU Exit) Regulations (2020).

2.1.3 The Air Quality Strategy (AQS) was produced by the Department for Environment, Food and Rural Affairs (DEFRA) and published on 28th April 2023¹. The document contains standards, objectives and measures for improving ambient air quality, including a number of Air Quality Objectives (AQOs). These are maximum ambient pollutant concentrations that are not to be exceeded either without exception or with a permitted number of exceedences over a specified timescale. These are generally in line with the AQLVs, although the requirements for the determination of compliance vary.

2.1.4 The Environmental Improvement Plan 2025² was published in December 2025, providing long term and Interim Targets in order to reduce population exposure to PM_{2.5}. The Concentration Target for 2040 was adopted in the Environmental Targets (Fine Particulate Matter) (England) Regulations (2023).

¹ The AQS: Framework for Local Authority Delivery, DEFRA, 2023.

² Environmental Improvement Plan 2025, DEFRA, 2025.

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

Table 1 Air Quality Objectives/ Interim Target/ Concentration Target

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

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

(b) Concentration Target to be achieved by 2040.

2.1.6 Table 2 summarises the advice provided in DEFRA guidance³ on where the AQOs for pollutants considered within this report apply.

Table 2 Examples of Where the Air Quality Objectives Apply

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

³ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

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

2.2 Local Air Quality Management

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

2.3 Dust

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

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

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

2.4 National Planning Policy

2.4.1 The revised National Planning Policy Framework⁴ (NPPF) was published in December 2024 and amended in February 2025. It sets out the Government's planning policies for England and how these are expected to be applied.

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

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

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

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

[...]

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

⁴ NPPF, Ministry of Housing, Communities and Local Government, 2024.

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

- 2.4.4 The NPPF in paragraph 199 specifically recognises air quality as part of delivering sustainable development and states that:

"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan."

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

2.5 **National Planning Practice Guidance**

- 2.5.1 The National Planning Practice Guidance⁵ (NPPG) web-based resource was launched by the Department for Communities and Local Government to support the NPPF and make it more accessible. The air quality pages are summarised under the following headings:

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

⁵ <https://www.gov.uk/guidance/air-quality--3>.

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

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

2.6 Regional Planning Policy

2.6.1 The Places for Everyone Plan (PfEP)⁶ was produced by the Greater Manchester Combined Authority (GMCA) and became part of the statutory development plan for each of the relevant LAs on 21st March 2024.

2.6.2 A review of the PfEP indicated the following policies of relevance to air quality that have been considered throughout this assessment:

"Policy JP:S5: Clean Air

A comprehensive range of measures will be taken to support improvements in air quality, focusing particularly on locations where people live, where children learn and play, where there are impacts on the green infrastructure network and where air quality targets are not being met, including:

1. Locating and designing development, and focusing transport investment, so as to reduce reliance on forms of transport that generate air pollution;
2. Determining planning applications having regard to the most recent development and planning control guidance published jointly by the Institute of Air Quality Management (IAQM) and Environmental Protection UK (EPUK), and the most recent IAQM Guidance on the Assessment of Dust from Demolition and Construction, or relevant successor guidance, including the requirement for developers to submit construction management plans as appropriate;
3. Requiring applications for developments that could have an adverse impact on air quality to submit relevant air pollution data so that adverse impacts on air

⁶ PfEP, GMCA, 2024.

quality can be fully assessed and development only permitted where they are acceptable and/or suitable mitigation can be provided;

4. Restricting developments that would generate significant point source pollution such as some types of industrial activity and energy generation;

5. Significantly expanding the existing commercial network of electric vehicle charging points, both for public and private use, including as part of new developments;

6. Implementing the Clean Air Plan and associated measures;

7. Facilitating the more sustainable distribution of goods within the urban area, including through accommodating urban consolidation centres and urban distribution centres that use ultra-low-emission vehicles, and local delivery facilities to reduce repeat delivery attempts;

8. Designing streets to avoid trapping air pollution at ground level, including through the appropriate location and scale of buildings and trees;

9. Controlling traffic and parking within and around schools, early years sites and other locations that are particularly sensitive to air quality;

10. Promoting actions that help remove pollutants from the air, such as enhancing the green infrastructure network and using innovative building materials that capture air pollutants; and,

11. Development should be located in areas that maximise the use of sustainable travel modes and be designed to minimise exposure to high levels of air pollution, particularly for vulnerable users."

"Policy JP-P1 Sustainable Places

We aim to become one of the most liveable city regions in the world, consisting of a series of beautiful, healthy and varied places, each having the following key attributes that all development, wherever appropriate, should be consistent with:

[...]

15. Comfortable and inviting, with indoor and outdoor environments:

A. Offering a high level of amenity that minimises exposure to pollution; and,

[...]."

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

2.7 Local Planning Policy

2.7.1 The Core Strategy 2016 - 2028⁷ is a key document in the Rochdale Local Plan and was adopted by RBC in October 2016. It sets out the strategic planning framework for the borough's future development needs up to 2028. Review of the document indicated the following policies of relevance to the assessment:

"Policy G9 - Reducing the Impact of Pollution, Contamination and Land Instability

We will reduce all forms of pollution, contamination and land instability in the borough by:

- a) Focusing on measures that reduce air pollution in Air Quality Management Areas, and other areas where pollution levels are unacceptable, particularly around motorways and main roads;
- b) Requiring that development does not have impacts that lead to an unacceptable increase in air, water, noise, light or other pollution;
- c) Ensuring sensitive new developments such as housing, schools and hospitals are not adversely affected by existing sources of pollution such as roads and certain types of industry;
- d) Requiring a Low Emissions Strategy (LES) where development requires a Transport Assessment, and in other circumstances as appropriate;

⁷ Core Strategy 2016-2028, RBC, 2016.

[...]

g) Using planning conditions or obligations to control pollution from new development, or the impact of pollution on new development"

"Policy DM1 - General Development Requirements

All development proposals, including changes of use of land and buildings, extensions and alterations, will be expected to demonstrate that they:

[...]

d. Mitigate against any impacts due to noise, air, dust, light and odour pollution, traffic generation or inadequate access, where such mitigation is identified as being necessary:

[...]

f. Do not have an adverse impact on health, through its impact or the effect of existing problems (e.g. land contamination, or poor air quality;

[...]."

"DM2 - Delivering Planning Contributions and Infrastructure

1. General approach

[...]

3. All types of development

For all types of development, including housing, we will seek contributions for any infrastructure or other measures necessary to mitigate any on site or off-site impacts from the development.

These contributions may cover, dependent on need:

[...]

Mitigation or compensation against environmental impacts e.g. noise, air quality (particularly in Air Quality Management Areas);

[...]."

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

2.8 Greater Manchester Clean Air Plan

2.8.1 The UK Government has instructed a number of LAs to take rapid action to reduce harmful roadside levels of NO₂ within their areas of jurisdiction in the quickest possible timeframe. The GMCA and Transport for Greater Manchester (TfGM) have collaborated to develop a Clean Air Plan (CAP) to ensure Greater Manchester achieves compliance with the relevant AQOs for NO₂ by 2026 at the latest. The initial CAP proposal included implementation of a Class C charging Clean Air Zone. The GMCA has subsequently updated the CAP proposals⁸ to comprise an investment-led, non-charging approach. This was approved by the UK Government on 23rd January 2025. The implications of the CAP were taken into account during the undertaking of this assessment.

⁸ Case for a New GM Clean Air Plan, GMCA and TfGM, 2022.

3.0 METHODOLOGY

3.1 Introduction

3.1.1 The proposed developments have the potential to cause air quality impacts during the construction and operational phases, as well as expose future residents to any existing air quality issues. These factors have been assessed in accordance with the following methodology.

3.2 Construction Phase Assessment

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

3.2.2 Construction activities have been divided into four types to reflect their different potential impacts. These are:

- Demolition;
- Earthworks;
- Construction; and,
- Trackout.

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

- Annoyance due to dust soiling;
- Harm to ecological receptors; and,
- The risk of health effects due to a significant increase in exposure to PM₁₀.

3.2.4 The assessment steps are detailed below.

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

Step 1 - Screen the Need for an Assessment

3.2.5 Step 1 screens the requirement for a more detailed assessment. Should human receptors be identified within 250m from the boundary or 50m from the construction vehicle route up to 250m from the site entrance, in accordance with the IAQM guidance¹⁰ then the assessment proceeds to Step 2. Additionally, should ecological receptors be identified within 50m of the site or the construction vehicle route up to 250m from the site entrance, then the assessment also proceeds to Step 2.

3.2.6 Should sensitive receptors not be present within the relevant distances then **negligible** impacts would be expected and further assessment is not necessary.

Step 2 - Assess the Risk of Dust Impacts

3.2.7 Step 2 assesses the risk of potential dust impacts. A site is allocated a risk category based on two factors:

- The scale and nature of the works, which determines the magnitude of dust arising as: small, medium or large (Step 2A); and,
- The sensitivity of the area to dust impacts, which can be defined as low, medium or high sensitivity (Step 2B).

3.2.8 The two factors are combined in Step 2C to determine the risk of dust impacts without mitigation applied.

3.2.9 Step 2A defines the potential magnitude of dust emission through the construction phase. The relevant criteria are summarised in Table 3.

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

Table 3 Construction Dust - Magnitude of Emission

Magnitude	Activity	Criteria
Large	Demolition	- Total building volume greater than 75,000m³ - Potentially dusty construction material (e.g. concrete) - On site crushing and screening - Demolition activities greater than 12m above ground level
	Earthworks	- Total site area greater than 110,000m² - Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size) - More than 10 heavy earth moving vehicles active at any one time - Formation of bunds greater than 6m in height
	Construction	- Total building volume greater than 75,000m³ - On site concrete batching - Sandblasting
	Trackout	- More than 50 Heavy Duty Vehicle (HDV) trips per day - Potentially dusty surface material (e.g. high clay content) - Unpaved road length greater than 100m
Medium	Demolition	- Total building volume 12,000m³ to 75,000m³ - Potentially dusty construction material - Demolition activities 6m to 12m above ground level
	Earthworks	- Total site area 18,000m² to 110,000m² - Moderately dusty soil type (e.g. silt) 5 to 10 heavy earth moving vehicles active at any one time - Formation of bunds 3m to 6m in height
	Construction	- Total building volume 12,000m³ to 75,000m³ - Potentially dusty construction material (e.g. concrete) - On site concrete batching
	Trackout	20 to 50 HDV trips per day - Moderately dusty surface material (e.g. high clay content) - Unpaved road length 50m to 100m
Small	Demolition	- Total building volume less than 12,000m³ - Construction material with low potential for dust release (e.g. metal cladding or timber) - Demolition activities less than 6m above ground levels - Demolition during wetter months

Magnitude	Activity	Criteria
	Earthworks	- Total site area less than 18,000m² - Soil type with large grain size (e.g. sand) - Less than 5 heavy earth moving vehicles active at any one time - Formation of bunds less than 3m in height
	Construction	- Total building volume less than 12,000m³ - Construction material with low potential for dust release (e.g. metal cladding or timber)
	Trackout	- Less than 20 HDV trips per day - Surface material with low potential for dust release - Unpaved road length less than 50m

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

Table 4 Construction Dust - Sensitivities of People and Ecological Receptors

Receptor Sensitivity	Examples	
	Human Receptors	Ecological Receptors
High	- Users expect high levels of amenity - High aesthetic or value property - People expected to be present continuously for extended periods of time - Locations where members of the public are exposed over a time period relevant to the AQO for PM₁₀. e.g. residential properties, hospitals, schools and residential care homes	Internationally or nationally designated site e.g. Special Area of Conservation
Medium	- Users would expect to enjoy a reasonable level of amenity - Aesthetics or value of their property could be diminished by soiling - People or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land e.g. parks and places of work	Nationally designated site e.g. Sites of Special Scientific Interest

Receptor Sensitivity	Examples	
	Human Receptors	Ecological Receptors
Low	• Enjoyment of amenity would not reasonably be expected • Property would not be expected to be diminished in appearance • Transient exposure, where people would only be expected to be present for limited periods. e.g. public footpaths, playing fields, shopping streets, farmland, short term car parks and roads	• Locally designated site e.g. Local Nature Reserve (LNR)

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

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

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

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

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

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

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

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

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

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

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

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

3.2.15 Table 8 outlines the risk category from demolition activities.

Table 8 Construction Dust - Dust Risk Category from Demolition Activities

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

3.2.16 Table 9 outlines the risk category from earthworks, construction and trackout activities.

Table 9 Construction Dust - Dust Risk Category from Earthworks, Construction and Trackout Activities

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

Step 3 - Site-specific Mitigation

3.2.17 Step 3 requires the identification of site-specific mitigation measures within the IAQM

guidance¹¹ to reduce potential dust impacts based upon the relevant risk categories identified in Step 2. For sites with **negligible** risk, mitigation measures beyond those required by legislation are not required. However, additional controls may be applied as part of good practice.

Step 4 - Determine Significant Effects

- 3.2.18 Once the risk of dust impacts has been determined and the appropriate mitigation measures identified, the final step is to determine the significance of any residual impacts. For almost all construction activity, the aim should be to control effects through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be **not significant**.
- 3.2.19 The determination of significance relies on professional judgement and reasoning should be provided as far as practicable. The IAQM guidance suggests the provision of details of the assessor's qualifications and experience. These are provided in Appendix 2.

3.3 Operational Phase Assessment

- 3.3.1 The developments have the potential to affect existing air quality as a result of road traffic exhaust emissions associated with vehicles travelling to and from the sites, as well as expose future residents to any existing air quality issues during the operational phase. These have been assessed for each Parcel using the approaches outlined in the following Sections.

Western Parcel

- 3.3.2 An assessment for the Western Parcel was undertaken using the criteria contained within the IAQM 'Land-Use Planning & Development Control: Planning for Air Quality'¹² guidance to determine the potential for trips generated by the development to affect local air quality.

¹¹ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

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

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

- The development leads to a change of Light Duty Vehicle (LDV) flows of:
 - More than 100 Annual Average Daily Traffic (AADT) within an AQMA;
 - More than 500 AADT outside of an AQMA;
- The development leads to a change of HDV flows of:
 - More than 25 AADT within an AQMA;
 - More than 100 AADT outside of an AQMA;
- Introduce a new junction that would cause traffic flow to change behaviour with respect to acceleration/deceleration or introduce queueing traffic where there previously wasn't any (such as a roundabout or traffic lights); and,
- Introduce one or more significant combustion processes where there is a risk of impact to relevant receptors.

3.3.4 Should these criteria not be met, then the IAQM guidance¹³ considers air quality impacts associated with a scheme to be **not significant** and no further assessment is required.

Eastern Parcel

3.3.5 Potential operational phase impacts for the Eastern Parcel have been defined by predicting pollutant concentrations at sensitive locations using dispersion modelling for the following scenarios:

- 2025 - Verification;
- Opening year Do-Minimum (DM) (predicted traffic flows in 2030 should the proposals not proceed); and,
- Opening year Do-Something (DS) (predicted traffic flows in 2030 should the proposals be completed).

3.3.6 Reference should be made to Appendix 1 for assessment input data and details of the verification process.

3.3.7 Locations sensitive to potential changes in off-site pollutant concentrations were identified within 200m of the highway network in accordance with National Highways

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

guidance¹⁴ on the likely limits of pollutant dispersion from road sources. The criteria provided within DEFRA guidance¹⁵ on where the AQOs apply, as summarised in Table 2, was utilised to determine worst-case receptor positions in the vicinity of links likely to be affected by changes in traffic flows as a result of the Eastern Parcel.

- 3.3.8 The significance of predicted air quality impacts was determined in accordance with the guidance provided within the IAQM document 'Land-Use Planning & Development Control: Planning for Air Quality'¹⁶. Using this methodology impacts were defined based on the interaction between the predicted pollutant concentration from the DS scenario and the magnitude of change between the DM and DS scenarios, as outlined in Table 10.

Table 10 Significance of Operational Phase Road Vehicle Exhaust Emissions Impact

Concentration at Receptor in Assessment Year	Predicted Concentration Change as Proportion of AQO/ Concentration Target (%)			
	1	2 - 5	6 - 10	> 10
75% or less of AQO/ Concentration Target	Negligible	Negligible	Slight	Moderate
76 - 94% of AQO/ Concentration Target	Negligible	Slight	Moderate	Moderate
95 - 102% of AQO/ Concentration Target	Slight	Moderate	Moderate	Substantial
103 - 109% of AQO/ Concentration Target	Moderate	Moderate	Substantial	Substantial
110% or more of AQO/ Concentration Target	Moderate	Substantial	Substantial	Substantial

- 3.3.9 The matrix shown in Table 10 is intended to be used by rounding the change in percentage pollutant concentration to whole numbers, which makes it clearer which cell the impact falls within. It should be noted that changes of 0%, i.e. less than 0.5%, are described as **negligible**.

- 3.3.10 Following the prediction of impacts at discrete receptor locations, the IAQM document¹⁷

¹⁴ LA 105: Air Quality, National Highways, 2024.

¹⁵ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

¹⁶ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

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

provides guidance on determining the overall air quality impact significance of the operation of a development. The following factors are identified for consideration by the assessor:

- The existing and future air quality in the absence of the development;
- The extent of current and future population exposure to the impacts; and,
- The influence and validity of any assumptions adopted when undertaking the prediction of impacts.

3.3.11 The IAQM guidance states that an assessment must reach a conclusion on the likely significance of the predicted impact. Where the overall effect is **moderate** or **substantial**, the effect is likely to be considered **significant**, whilst if the impact is **slight** or **negligible**, the impact is likely to be considered **not significant**. It should be noted that this is a binary judgement of either it is **significant** or it is **not significant**.

Potential Future Exposure

3.3.12 The proposals have the potential to expose future residents of the developments to any existing air quality issues. In order to assess NO₂, PM₁₀ and PM_{2.5} concentrations across the sites, detailed dispersion modelling was undertaken. The results were subsequently compared with the relevant AQOs and Concentration Target to determine any potential areas of exceedence and associated constraints to the proposed land use. Reference should be made to Appendix 1 for a full description of the assessment input data.

4.0 BASELINE

4.1 Introduction

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

4.2 Local Air Quality Management

- 4.2.1 As required by the Environment Act (1995), as amended by the Environment Act (2021), RBC has undertaken Review and Assessment of air quality within its area of jurisdiction. This process has indicated that annual mean concentrations of NO₂ are above the AQO within the borough. As such, a number of roads within Rochdale have been included within the GMCA AQMA. This is described as follows:

" This is the part of the Greater Manchester Combined Authority AQMA located within the Rochdale Borough Council area."

- 4.2.2 Both sites are partially located within the AQMA. As such, there is the potential for vehicles travelling to and from the site to increase pollution levels in this sensitive area, as well as future residents to be exposed to poor air quality. This has been considered throughout the assessment.
- 4.2.3 RBC has concluded that concentrations of all other pollutants considered within the AQS are currently below the relevant AQOs. As such, no further AQMA's have been designated.

4.3 Air Quality Monitoring

- 4.3.1 Monitoring of pollutant levels is undertaken by RBC within its area of jurisdiction. Data has also been collected by the GMCA to inform the CAP. Recent annual mean NO₂ concentrations recorded in the vicinity of the developments, as provided in the 'Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results 2011-2025'¹⁸ spreadsheet are shown in Table 11.

¹⁸ Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results 2011-2025, GMCA, 2026.

Table 11 Monitoring Results

Monitoring Site		Monitored Annual Mean NO ₂ Concentration (µg/m ³)		
		2023	2024	2025
RO18ANO	Penn Street	18.1	15.3	13.6
RO26ANO ^(a)	Whitworth Road	27.6	-	27.1
CAP_ROCH_005	A680 - Spotland Road	31.1	26.9	24.2
CAP_ROCH_008	A58 - St Mary's Gate	29.0	25.7	24.2

Note: (a) No monitoring data available for 2024.

4.3.2 As shown in Table 11, annual mean NO₂ concentrations were below the AQO of 40µg/m³ at all monitoring locations in recent years. Reference should be made to Figure 2 for a map of the survey positions.

4.3.3 RBC does not undertake monitoring of PM₁₀ or PM_{2.5} concentrations in the vicinity of the site.

4.4 **Background Pollutant Concentrations**

4.4.1 Predictions of background pollutant concentrations on a 1km by 1km grid basis have been produced by DEFRA for the entire of the UK to assist LAs in their Review and Assessment of air quality. Both sites are located in grid square NGR: 389500, 413500. Data for this location was downloaded from the DEFRA website¹⁹ for the purpose of the assessment and is summarised in Table 12.

Table 12 Background Pollutant Concentration Predictions

Pollutant	Predicted Background Pollutant Concentration (µg/m ³)		
	2025	2026	2030
NO ₂	12.54	12.07	10.04
PM ₁₀	11.56	11.51	11.31
PM _{2.5}	6.87	6.82	6.62

¹⁹ <http://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021>.

4.4.2 As shown in Table 12, predicted background NO₂, PM₁₀ and PM_{2.5} concentrations are below the relevant AQOs and Concentration Target at the development sites.

4.5 **Sensitive Receptors**

4.5.1 A sensitive receptor is defined as any location which may be affected by changes in air quality as a result of a development. These have been defined for construction dust and road vehicle exhaust emission impacts in the following Sections.

Construction Phase Sensitive Receptors

4.5.2 Receptors sensitive to potential dust impacts during demolition, earthworks and construction were identified from a desk-top study of the area up to 250m from the boundary of the sites. These are summarised in Table 13.

Table 13 Demolition, Earthworks and Construction Dust Sensitive Receptors

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

4.5.3 Receptors sensitive to potential dust impacts from trackout were identified from a desk-top study of the area up to 50m from the road network within 250m of the site accesses of the sites. These are summarised in Table 14.

Table 14 Trackout Dust Sensitive Receptors

Distance from Site Access Route (m)	Approximate Number of Human Receptors			Approximate Number of Ecological Receptors
	Low Sensitivity Receptors	Medium Sensitivity Receptors	High Sensitivity Receptors	
Up to 20	More than 1	More than 10	More than 100	0

Distance from Site Access Route (m)	Approximate Number of Human Receptors			Approximate Number of Ecological Receptors
	Low Sensitivity Receptors	Medium Sensitivity Receptors	High Sensitivity Receptors	
Up to 50	More than 1	More than 10	More than 100	0

- 4.5.4 There are no ecological receptors within 50m of the development boundaries or the access routes within 250m of the site entrances. As such, ecological impacts have not been assessed further within this report.

Operational Phase Sensitive Receptors

- 4.5.5 Locations sensitive to potential operational phase road vehicle exhaust emission impacts associated with the Eastern Parcel were identified from a desk-top study and are summarised in Table 15. Receptor heights were selected based on the location of residential units to allow for less sensitive land uses, such as retail, at ground level.

Table 15 Operational Phase Road Vehicle Exhaust Emission Sensitive Receptor Locations

Receptor		NGR (m)		Height (m)
		X	Y	
R1	Residential - Upper Banks	389998.4	413591.1	1.5
R2	Residential - Whitworth Road	389815.9	414099.7	4.5
R3	Residential - Howard Street	389673.6	413986.8	1.5
R4	Residential - Howard Street	389563.2	413941.3	1.5
R5	Educational - Howard Street Nursery School	389515.5	413899.6	1.5
R6	Residential - Howard Street	389430.4	413841.9	1.5
R7	Residential - Howard Street	389307.6	413892.5	1.5
R8	Residential - B6377 Falinge Road	389282.3	413880.9	1.5
R9	Residential - B6377 Falinge Road	389165.5	413957.0	1.5
R10	Residential - Sheriff Street	389252.3	413805.6	1.5
R11	Residential - Sheriff Street	389232.8	413699.8	4.5
R12	Medical - Ashworth Street Surgery	389147.9	413687.6	1.5

Receptor		NGR (m)		Height (m)
		X	Y	
R13	Residential - Spotland Road	388990.2	413741.9	1.5
R14	Residential - Spotland Road	389335.4	413598.9	1.5
R15	Residential - Holland Rise	389412.6	413525.9	1.5
R16	Residential - Tentercroft	389392.3	413446.6	1.5
R17	Educational - Hopwood Hall College	389356.4	413332.3	1.5
R18	Residential - Red Cross Street	389582.0	413783.8	1.5
R19	Residential - Red Cross Street	389559.6	413875.7	1.5

4.5.6 Reference should be made to Figure 3 for a graphical representation of road vehicle exhaust emission sensitive receptor locations.

5.0 **CONSTRUCTION PHASE ASSESSMENT**

5.1 **Introduction**

- 5.1.1 There is the potential for air quality impacts as a result of the construction of the proposed developments. These are assessed in the following Sections.
- 5.1.2 For the purposes of this assessment, construction activities associated with the sites have been considered cumulatively.

5.2 **Step 1 - Screen the Need for an Assessment**

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

5.3 **Step 2a - Define the Potential Dust Emission Magnitude**

Demolition

- 5.3.1 Demolition will be undertaken at the start of the construction phase and will involve clearance of the existing residential and community buildings within the sites. The total building volume to be demolished is between 12,000m³ and 75,000m³. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from demolition is therefore **medium**.

Earthworks

- 5.3.2 Earthworks will primarily involve excavating material, haulage, tipping and stockpiling, as well as site levelling and landscaping. The combined area of the proposed sites is between 18,000m² and 110,000m². In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from earthworks is therefore **medium**.

Construction

- 5.3.3 Due to the size of the developments, the total building volume is likely to be greater than 75,000m³. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from construction is therefore **large**.

Trackout

- 5.3.4 Based on the site areas, the unpaved road lengths will be greater than 100m. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from trackout is therefore **large**.

5.4 Step 2b - Define the Sensitivity of the Area

Dust Soiling

- 5.4.1 The sensitivity of the area with respect to dust soiling from demolition, earthworks and construction was defined based on the number of receptors shown in Table 13 using the criteria summarised in Table 5. This indicated a sensitivity classification of **high**.
- 5.4.2 The sensitivity of the area with respect to dust soiling from trackout was defined based on the number of receptors shown in Table 14 using the criteria summarised in Table 5. This indicated a sensitivity classification of **high**.

Human Health

- 5.4.3 As shown in Table 12, the 2026 annual mean PM₁₀ background concentration at the site is 11.51µg/m³. Using the criteria in Table 6 and the number of receptors shown in Table 13,

the sensitivity of the area with respect to human health from demolition, earthworks and construction was classified as **medium**.

- 5.4.4 Using the criteria in Table 6 and the number of receptors shown in Table 14, the sensitivity of the area with respect to human health from trackout was classified as **medium**.

5.5 **Step 2c - Define the Risk of Dust Impacts**

- 5.5.1 The derived dust emission magnitude for each activity has been combined with the sensitivity of the area to determine the risk of unmitigated impacts in line with the methodology set out in Table 8 and Table 9. A summary of the risk from each dust generating activity is provided in Table 16.

Table 16 Summary of Potential Unmitigated Dust Risks

Potential Impact	Activity	Step 2A - Dust Emission Magnitude	Step 2B - Sensitivity of the Area	Step 2C - Risk
Dust Soiling	Demolition	Medium	High	Medium
	Earthworks	Medium	High	Medium
	Construction	Large	High	High
	Trackout	Large	High	High
Human Health	Demolition	Medium	Medium	Medium
	Earthworks	Medium	Medium	Medium
	Construction	Large	Medium	Medium
	Trackout	Large	Medium	Medium

- 5.5.2 As indicated in Table 16, the potential risk of dust soiling is **high** from construction and trackout and **medium** from demolition and earthworks. The potential risk of human health impacts is **medium** from demolition, earthworks, construction and trackout.
- 5.5.3 It should be noted that the potential for impacts depends significantly on the distance between the dust generating activity and receptor location. Risk was predicted based on a worst-case scenario of works being undertaken at the site boundary closest to each

sensitive area. Therefore, actual risk is likely to be lower than that predicted during the majority of the construction phase.

5.6 **Step 3 - Site-specific Mitigation**

5.6.1 The IAQM guidance²⁰ provides potential mitigation measures to reduce impacts as a result of fugitive dust emissions during the construction phase. These have been adapted for the development site as summarised in Table 17. These may be reviewed prior to the commencement of construction works and incorporated into a Construction Environmental Management Plan or similar if required by the LA.

Table 17 Fugitive Dust Emission Mitigation Measures

Issue	Control Measure
Communications	• Develop and implement a stakeholder communications plan that includes community engagement before work commences on site • Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager • Display the head or regional office contact information • Develop and implement a DMP, which may include measures to control other emissions, approved by the LA
Site management	• Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken • Make the complaints log available to the LA upon request • Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book • Hold regular liaison meetings with other high risk construction sites within 250m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised

²⁰ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

Issue	Control Measure
Monitoring	• Undertake daily on-site and off-site inspection to monitor dust, record inspection results, and make the log available to the LA upon request • Carry out regular site inspections, record inspection results, and make an inspection log available to the LA upon request • Increase the frequency of site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions • Agree dust deposition, dust flux, or real-time PM₁₀ continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it is a large site, before work on a phase commences
Site preparation	• Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible • Erect solid screens or barriers around dusty activities or the site • Fully enclose site or specific operations where there is a high potential for dust production and they are active for an extensive period • Avoid site runoff of water or mud • Keep site fencing, barriers and scaffolding clean using wet methods • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used • Cover, seed or fence stockpiles to prevent wind whipping
Operating vehicle/machinery and sustainable travel	• Ensure all vehicles switch off engines when stationary - no idling vehicles • Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable • Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas • Produce a Construction Logistics Plan to manage the sustainable delivery of goods
Operations	• Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques • Ensure an adequate water supply on the site for effective dust suppression, using non-potable water where possible and appropriate • Use enclosed chutes and conveyors and covered skips • Minimise drop heights and use fine water sprays wherever appropriate • Ensure equipment is available to clean any dry spillages, and clean up spillages as soon as reasonably practicable using wet cleaning methods
Waste management	• Avoid bonfires or burning of waste materials

Issue	Control Measure
Demolition	• Ensure effective water suppression is used during demolition operations • Avoid explosive blasting, using appropriate manual or mechanical alternatives • Bag and remove any biological debris or damp down such material before demolition
Construction	• Avoid scabbling, if possible • Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos • Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out
Trackout	• Use water-assisted dust sweeper on access and local roads, if required • Avoid dry sweeping of large areas • Ensure vehicles entering and leaving site are covered to prevent escape of materials • Implement a wheel washing system, if required • Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits • Access gates to be located at least 10m from receptors where possible

5.7 **Step 4 - Determine Significant Effects**

5.7.1 Assuming the relevant mitigation measures outlined in Table 17 are implemented, the residual impacts from all dust generating activities is predicted to be **not significant**, in accordance with the IAQM guidance²¹.

²¹ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

6.0 OPERATIONAL PHASE ASSESSMENT

6.1 Introduction

- 6.1.1 There is the potential for air quality impacts as a result of the operation of the proposed developments. These are assessed in the following Sections.

6.2 Potential Development Impacts

- 6.2.1 The developments have the potential to increase concentrations of NO₂, PM₁₀ and PM_{2.5} as a result of road traffic exhaust emissions associated with vehicles travelling to and from the sites during the operational phase.

Western Parcel

- 6.2.2 The Western Parcel comprises the demolition of seven residential blocks containing 150 residential units and the re-provision of 141 residential units, representing a net reduction of nine residential units.
- 6.2.3 The proposals have been assessed against the IAQM²² screening criteria detailed in Section 3.3. Information provided by Astute, the Transport Consultants for the scheme, indicated that the net reduction in residential dwellings will result in a reduction in associated vehicle trips.
- 6.2.4 Based on the above, the Western Parcel is not predicted to result in an increase of AADT flows of more than 100 on any individual road link, as vehicle trips associated with the existing residential units are present on the existing road network. Additionally, there will not be any significant highway realignment or the introduction of a junction and there will not be more than 25 HDV movements per day. As such, potential air quality impacts associated with the operational phase road vehicle exhaust emissions are predicted to be not significant, in accordance with the IAQM guidance²³.

²² Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

²³ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

Eastern Parcel

6.2.5 An assessment of the Eastern Parcel was undertaken using dispersion modelling in order to quantify potential changes in pollutant concentrations at sensitive locations in the vicinity of the site.

6.2.6 The assessment considered the following scenarios:

- 2025 - Verification;
- 2030 - DM; and,
- 2030 - DS.

6.2.7 The DM scenario (i.e. without development) included baseline traffic data, inclusive of anticipated growth for the relevant assessment year. The DS scenario (i.e. with development) included baseline traffic data, inclusive of anticipated growth for the relevant assessment year, in addition to predicted vehicle trips associated with the operation of the proposals.

6.2.8 Reference should be made to Appendix 1 for full assessment input details.

Predicted Concentrations

6.2.9 Annual mean NO₂ concentrations were predicted at the sensitive receptor locations for the DM and DS scenarios. These are summarised in Table 18.

Table 18 Predicted Annual Mean NO₂ Concentrations

Receptor		Predicted Annual Mean NO ₂ Concentration (µg/m ³)		
		DM	DS	Change
R1	Residential - Upper Banks	13.39	13.40	0.01
R2	Residential - Whitworth Road	13.63	13.63	0.00
R3	Residential - Howard Street	15.74	15.75	0.01
R4	Residential - Howard Street	19.59	19.62	0.03
R5	Educational - Howard Street Nursery School	15.91	15.93	0.02

Receptor		Predicted Annual Mean NO ₂ Concentration (µg/m ³)		
		DM	DS	Change
R6	Residential - Howard Street	15.02	15.03	0.01
R7	Residential - Howard Street	19.17	19.18	0.01
R8	Residential - B6377 Falinge Road	16.31	16.32	0.01
R9	Residential - B6377 Falinge Road	13.62	13.62	0.00
R10	Residential - Sheriff Street	16.74	16.75	0.01
R11	Residential - Sheriff Street	14.25	14.26	0.01
R12	Medical - Ashworth Street Surgery	14.20	14.22	0.02
R13	Residential - Spotland Road	13.06	13.07	0.01
R14	Residential - Spotland Road	13.56	13.58	0.02
R15	Residential - Holland Rise	15.32	15.35	0.03
R16	Residential - Tentercroft	16.91	16.95	0.04
R17	Educational - Hopwood Hall College	17.33	17.37	0.04
R18	Residential - Red Cross Street	12.95	13.04	0.09
R19	Residential - Red Cross Street	13.03	13.13	0.10

6.2.10 As indicated in Table 18, predicted annual mean NO₂ concentrations were below the AQO of 40µg/m³ at all receptor locations in both scenarios.

6.2.11 Reference should be made to Figure 4 and 5 for graphical representations of annual mean NO₂ concentrations across the assessment area for the DM and DS scenarios, respectively.

6.2.12 Annual mean PM₁₀ concentrations were predicted at the sensitive receptor locations for the DM and DS scenarios. These are summarised in Table 19.

Table 19 Predicted Annual Mean PM₁₀ Concentrations

Receptor		Predicted Annual Mean PM ₁₀ Concentration (µg/m ³)		
		DM	DS	Change
R1	Residential - Upper Banks	13.40	13.41	0.01
R2	Residential - Whitworth Road	13.40	13.41	0.01
R3	Residential - Howard Street	14.89	14.90	0.01
R4	Residential - Howard Street	17.48	17.50	0.02
R5	Educational - Howard Street Nursery School	14.98	15.00	0.01
R6	Residential - Howard Street	14.40	14.41	0.01
R7	Residential - Howard Street	17.06	17.07	0.01
R8	Residential - B6377 Falinge Road	15.15	15.16	0.01
R9	Residential - B6377 Falinge Road	13.45	13.45	0.00
R10	Residential - Sheriff Street	15.48	15.49	0.01
R11	Residential - Sheriff Street	13.44	13.45	0.01
R12	Medical - Ashworth Street Surgery	13.61	13.62	0.01
R13	Residential - Spotland Road	13.17	13.18	0.01
R14	Residential - Spotland Road	13.42	13.43	0.01
R15	Residential - Holland Rise	14.31	14.33	0.02
R16	Residential - Tentercroft	15.47	15.50	0.03
R17	Educational - Hopwood Hall College	15.75	15.78	0.03
R18	Residential - Red Cross Street	13.03	13.09	0.06
R19	Residential - Red Cross Street	13.11	13.17	0.06

6.2.13 As indicated in Table 19, predicted annual mean PM₁₀ concentrations were below the AQO of 40µg/m³ at all receptor locations in both scenarios.

6.2.14 Reference should be made to Figure 6 and 7 for graphical representations of annual mean PM₁₀ concentrations across the assessment area for the DM and DS scenarios, respectively.

6.2.15 Annual mean PM_{2.5} concentrations were predicted at the sensitive receptor locations for the DM and DS scenarios. These are summarised in Table 20.

Table 20 Predicted Annual Mean PM_{2.5} Concentrations

Receptor		Predicted Annual Mean PM _{2.5} Concentration (µg/m ³)		
		DM	DS	Change
R1	Residential - Upper Banks	7.96	7.97	0.00
R2	Residential - Whitworth Road	7.96	7.97	0.00
R3	Residential - Howard Street	8.92	8.92	0.00
R4	Residential - Howard Street	10.58	10.59	0.01
R5	Educational - Howard Street Nursery School	8.98	8.99	0.01
R6	Residential - Howard Street	8.61	8.61	0.00
R7	Residential - Howard Street	10.31	10.32	0.01
R8	Residential - B6377 Falinge Road	9.09	9.09	0.00
R9	Residential - B6377 Falinge Road	7.99	8.00	0.00
R10	Residential - Sheriff Street	9.30	9.31	0.01
R11	Residential - Sheriff Street	7.99	8.00	0.00
R12	Medical - Ashworth Street Surgery	8.10	8.10	0.00
R13	Residential - Spotland Road	7.82	7.82	0.00
R14	Residential - Spotland Road	7.97	7.98	0.01
R15	Residential - Holland Rise	8.54	8.55	0.01
R16	Residential - Tentercroft	9.28	9.30	0.02
R17	Educational - Hopwood Hall College	9.46	9.48	0.02
R18	Residential - Red Cross Street	7.72	7.76	0.04
R19	Residential - Red Cross Street	7.78	7.82	0.04

6.2.16 As indicated in Table 20, predicted annual mean PM_{2.5} concentrations were above the Concentration Target of 10µg/m³ at two receptors and below at the remaining locations in both scenarios. It should be noted that there were no new exceedences in the DS scenario when compared with the DM scenario.

6.2.17 Reference should be made to Figure 8 and 9 for graphical representations of annual mean PM_{2.5} concentrations across the assessment area for the DM and DS scenarios, respectively.

Predicted Impacts

6.2.18 Predicted impacts on annual mean NO₂ concentrations at the sensitive receptor locations are summarised in Table 21.

Table 21 Predicted Impacts - NO₂

Receptor		Predicted Annual Mean NO ₂ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R1	Residential - Upper Banks	75% or less of AQO	0	Negligible
R2	Residential - Whitworth Road	75% or less of AQO	0	Negligible
R3	Residential - Howard Street	75% or less of AQO	0	Negligible
R4	Residential - Howard Street	75% or less of AQO	0	Negligible
R5	Educational - Howard Street Nursery School	75% or less of AQO	0	Negligible
R6	Residential - Howard Street	75% or less of AQO	0	Negligible
R7	Residential - Howard Street	75% or less of AQO	0	Negligible
R8	Residential - B6377 Falinge Road	75% or less of AQO	0	Negligible
R9	Residential - B6377 Falinge Road	75% or less of AQO	0	Negligible
R10	Residential - Sheriff Street	75% or less of AQO	0	Negligible
R11	Residential - Sheriff Street	75% or less of AQO	0	Negligible
R12	Medical - Ashworth Street Surgery	75% or less of AQO	0	Negligible
R13	Residential - Spotland Road	75% or less of AQO	0	Negligible
R14	Residential - Spotland Road	75% or less of AQO	0	Negligible
R15	Residential - Holland Rise	75% or less of AQO	0	Negligible
R16	Residential - Tentercroft	75% or less of AQO	0	Negligible

Receptor		Predicted Annual Mean NO ₂ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R17	Educational - Hopwood Hall College	75% or less of AQO	0	Negligible
R18	Residential - Red Cross Street	75% or less of AQO	0	Negligible
R19	Residential - Red Cross Street	75% or less of AQO	0	Negligible

6.2.19 As indicated in Table 21, impacts on annual mean NO₂ concentrations as a result of the proposed development were predicted to be **negligible** at all receptors.

6.2.20 Predicted impacts on annual mean PM₁₀ concentrations at the sensitive receptor locations are summarised in Table 22.

Table 22 Predicted Impacts - PM₁₀

Receptor		Predicted Annual Mean PM ₁₀ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R1	Residential - Upper Banks	75% or less of AQO	0	Negligible
R2	Residential - Whitworth Road	75% or less of AQO	0	Negligible
R3	Residential - Howard Street	75% or less of AQO	0	Negligible
R4	Residential - Howard Street	75% or less of AQO	0	Negligible
R5	Educational - Howard Street Nursery School	75% or less of AQO	0	Negligible
R6	Residential - Howard Street	75% or less of AQO	0	Negligible
R7	Residential - Howard Street	75% or less of AQO	0	Negligible
R8	Residential - B6377 Falinge Road	75% or less of AQO	0	Negligible
R9	Residential - B6377 Falinge Road	75% or less of AQO	0	Negligible
R10	Residential - Sheriff Street	75% or less of AQO	0	Negligible
R11	Residential - Sheriff Street	75% or less of AQO	0	Negligible
R12	Medical - Ashworth Street Surgery	75% or less of AQO	0	Negligible

Receptor		Predicted Annual Mean PM ₁₀ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R13	Residential - Spotland Road	75% or less of AQO	0	Negligible
R14	Residential - Spotland Road	75% or less of AQO	0	Negligible
R15	Residential - Holland Rise	75% or less of AQO	0	Negligible
R16	Residential - Tentercroft	75% or less of AQO	0	Negligible
R17	Educational - Hopwood Hall College	75% or less of AQO	0	Negligible
R18	Residential - Red Cross Street	75% or less of AQO	0	Negligible
R19	Residential - Red Cross Street	75% or less of AQO	0	Negligible

6.2.21 As indicated in Table 22, impacts on annual mean PM₁₀ concentrations as a result of the proposed development were predicted to be **negligible** at all receptors.

6.2.22 Predicted impacts on annual mean PM_{2.5} concentrations at the sensitive receptor locations are summarised in Table 23.

Table 23 Predicted Impacts - PM_{2.5}

Receptor		Predicted Annual Mean PM _{2.5} Concentration	Predicted Concentration Change as Proportion of Interim Target (%)	Impact Significance
R1	Residential - Upper Banks	76 - 94% of Concentration Target	0	Negligible
R2	Residential - Whitworth Road	76 - 94% of Concentration Target	0	Negligible
R3	Residential - Howard Street	76 - 94% of Concentration Target	0	Negligible
R4	Residential - Howard Street	103 - 109% of Concentration Target	0	Negligible
R5	Educational - Howard Street Nursery School	76 - 94% of Concentration Target	0	Negligible

Receptor		Predicted Annual Mean PM _{2.5} Concentration	Predicted Concentration Change as Proportion of Interim Target (%)	Impact Significance
R6	Residential - Howard Street	76 - 94% of Concentration Target	0	Negligible
R7	Residential - Howard Street	103 - 109% of Concentration Target	0	Negligible
R8	Residential - B6377 Falinge Road	76 - 94% of Concentration Target	0	Negligible
R9	Residential - B6377 Falinge Road	76 - 94% of Concentration Target	0	Negligible
R10	Residential - Sheriff Street	76 - 94% of Concentration Target	0	Negligible
R11	Residential - Sheriff Street	76 - 94% of Concentration Target	0	Negligible
R12	Medical - Ashworth Street Surgery	76 - 94% of Concentration Target	0	Negligible
R13	Residential - Spotland Road	76 - 94% of Concentration Target	0	Negligible
R14	Residential - Spotland Road	76 - 94% of Concentration Target	0	Negligible
R15	Residential - Holland Rise	76 - 94% of Concentration Target	0	Negligible
R16	Residential - Tentercroft	76 - 94% of Concentration Target	0	Negligible
R17	Educational - Hopwood Hall College	95 - 102% of Concentration Target	0	Negligible
R18	Residential - Red Cross Street	76 - 94% of Concentration Target	0	Negligible
R19	Residential - Red Cross Street	76 - 94% of Concentration Target	0	Negligible

6.2.23 As indicated in Table 23, impacts on annual mean PM_{2.5} concentrations as a result of the proposed development were predicted to be **negligible** at all receptors.

6.3 Potential Future Exposure

- 6.3.1 Both sites have the potential to expose future residents to elevated pollution levels as a result of road vehicle exhaust emissions in the vicinity of the site. Dispersion modelling was therefore undertaken with the inputs described in Appendix 1 to quantify air quality conditions at both parcels. Reference should be made to Figures 4 to 9 for graphical representations of annual mean NO₂, PM₁₀ and PM_{2.5} concentrations.
- 6.3.2 As shown in Figure 5, annual mean NO₂ concentrations were predicted to be below the AQO of 40µg/m³ at the building façades proposed within the sites. The maximum level was 15.12µg/m³ at the Western Parcel and 16.84µg/m³ at the Eastern Parcel.
- 6.3.3 As shown in Figure 7, annual mean PM₁₀ concentrations were predicted to be below the AQO of 40µg/m³ at the building façades proposed within the sites. The maximum level was 14.41µg/m³ at the Western Parcel and 15.37µg/m³ at the Eastern Parcel.
- 6.3.4 As shown in Figure 9, annual mean PM_{2.5} concentrations were predicted to be below the Concentration Target of 10µg/m³ at the building façades proposed within the sites. The maximum level was 8.61µg/m³ at the Western Parcel and 9.23µg/m³ at the Eastern Parcel.
- 6.3.5 Based on the assessment results, future residents are not predicted to be exposed to pollutant concentrations above the AQOs and Concentration Target. The sites are therefore considered to be suitable for residential use from an air quality perspective.

6.4 Overall Impact Significance

- 6.4.1 The overall significance of operational phase road traffic emission impacts was determined as negligible. This was based on the predicted impacts at the discrete receptor locations and the considerations outlined previously. Further justification is provided in Table 24.

Table 24 Overall Impact Significance of Operational Phase Road Vehicle Exhaust Emissions

Guidance	Comment
The existing and future air quality in the absence of the development	Predicted annual mean NO₂ and PM₁₀ concentrations were below the relevant AQOs at all locations in the DM and DS scenario. Predicted annual mean PM_{2.5} concentrations were above the Concentration Target at two receptors. However, there were no new exceedences in the DS scenario when compared with the DM The predicted concentrations are considered unlikely to change significantly in the absence of the proposals given the established nature of the area. This is supported by the results of the assessment as detailed in Section 6.2
The extent of current and future population exposure to the impacts	The developments are not predicted to affect the population exposed to exceedences of the AQOs and Concentration Target
The influence and validity of any assumptions adopted when undertaking the prediction of impacts	The assessment assumed that vehicle exhaust emission rates and pollutant background concentrations will reduce in accordance with DEFRA predictions. This approach provides the most realistic prediction of pollution levels at sensitive receptors in future year scenarios and is supported by DEFRA and IAQM

6.4.2 The IAQM guidance²⁴ states that only if the impact is greater than **slight**, the effect is considered **significant**. As impacts were predicted to be **negligible**, overall effects are considered **not significant**, in accordance with the stated methodology.

6.5 Interim Planning Guidance for PM_{2.5}

6.5.1 Interim Planning Guidance²⁵ on the consideration of the PM_{2.5} targets identified in the Environment Act (2021) in planning decisions has been produced by DEFRA. This requires evidence that the key sources of air pollution within a development have been identified and appropriate action to minimise emissions of PM_{2.5} and its precursors as far as is reasonably practicable be provided in support of planning applications. To assist the process, two questions and associated considerations are provided. These are summarised in Table 25, along with the development response.

²⁴ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

²⁵ <https://uk-air.defra.gov.uk/pm25targets/planning>.

Table 25 Interim Planning Guidance

Question	Response
How has exposure to PM_{2.5} been considered when selecting the development site? Factors to consider include: • Site proximity to people (particularly large populations and/or vulnerable groups, e.g. schools, hospitals, care homes, areas of deprivation) and the impact of the development on these • Site proximity to pollution sources and the impact of these on users of the development • Exposure and emissions during both construction and in-use	The site is located in a mixed-use commercial and residential setting in Rochdale. As such, the site is in close proximity to a large population comprising local residents, schools and medical centres. However, the results of the assessment indicated that air quality impacts associated with the developments are predicted to be not significant. This is supported by the results outlined in Section 6.2 The main pollution sources of concern are the A58 and A680. The A58 is adjacent to the southern boundary of the Eastern Parcel and the A680 is adjacent to the southern boundary of the Western Parcel. Road vehicle exhaust emissions associated with traffic on the road network have the potential to expose future residents to elevated concentrations. However, the results of the assessment, as outlined in Section 6.3, indicated that predicted PM_{2.5} levels were below the Concentration Target of 10µg/m³ at the proposed building façades within the sites As outlined in Table 17, a number of mitigation measures will be used throughout the construction phase in order to reduce fugitive dust emissions as far as practicable. This will control potential exposure at off-site locations
What actions and/or mitigations have been considered to reduce PM_{2.5} exposure for development users and nearby receptors and to reduce emissions of PM_{2.5} and its precursors? Factors to consider include: • Site layout • The development's design • Technology used in the construction or installed for use in the development • Construction and future use of the development	The developments have been designed with proposed residential areas set back from the adjacent A58 St Mary's Gate, Spotland Road and associated road emissions in order to minimise PM_{2.5} exposure across the site A number of measures have also been incorporated into the design of the scheme in order to reduce PM_{2.5} emissions. These include the following: • The sites are located in close proximity to public transport links, including bus stops at Spotland Road and Sheriff Street. This will encourage the sustainable modes of travel for residents; • Provision of secure cycle storage; and, • Provision of Electric Vehicle Charging points Further to the above, in order to reduce emissions during the construction phase, a number of mitigation measures will be used to minimise dust generation from associated activities

6.5.2 Based on the responses provided in Table 25 and the results of the assessment, as outlined in Sections 5.0 and 6.0, it is considered that the developments have identified key sources of air pollution and taken appropriate action to minimise emissions of PM_{2.5}.

7.0 CONCLUSION

- 7.1.1 Redmore Environmental Ltd was commissioned by of Rochdale Boroughwide Housing Limited to undertake an Air Quality Assessment in support of residential development at two land parcels at Lower Falinge, Rochdale.
- 7.1.2 The developments have the potential to cause air quality impacts at sensitive locations during the construction and operational phases, as well as expose future residents to any existing air quality issues at the site. As such, an Air Quality Assessment was undertaken in order to determine baseline conditions and assess potential effects as a result of the construction and operation of the proposals.
- 7.1.3 During the construction phase of the developments there is the potential for air quality impacts as a result of fugitive dust emissions from the site. These were assessed in accordance with the IAQM methodology. Site-specific dust control measures were subsequently determined. Following implementation, the residual significance of potential air quality impacts from dust generated by demolition, earthworks, construction and trackout activities are predicted to be **not significant**.
- 7.1.4 Potential impacts during the operational phase of the proposals may occur due to road traffic exhaust emissions associated with vehicles travelling to and from the developments. These were assessed for the Western Parcel against the screening criteria provided within the IAQM guidance. Due to the reduction of vehicle movements generated by the Western Parcel, road traffic exhaust impacts were predicted to be **not significant**.
- 7.1.5 For the Eastern Parcel, dispersion modelling was undertaken to predict pollutant concentrations at sensitive locations as a result of emissions from the local highway network both with and without the development in place. Results were subsequently verified using local monitoring data.
- 7.1.6 Review of the dispersion modelling results indicated that impacts on annual mean NO₂, PM₁₀ and PM_{2.5} concentrations as a result of traffic generated by the development were predicted to be **negligible** at all sensitive receptor locations. Following consideration of the relevant issues, impacts as a result of the operation of the development were considered to be **not significant**, in accordance with the IAQM guidance.

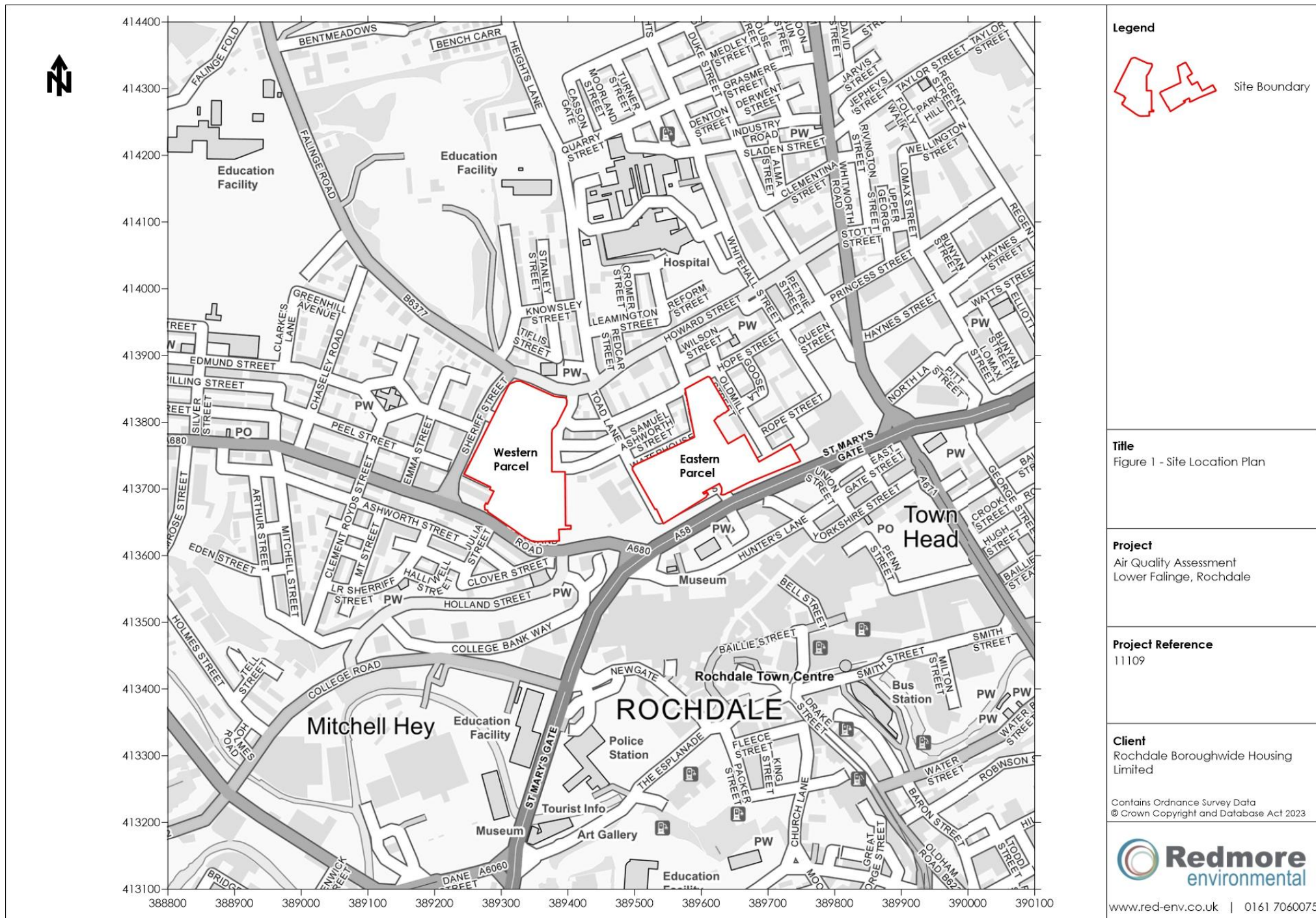
- 7.1.7 The developments also have the potential to expose future residents to areas of poor air quality. This was assessed using dispersion modelling in order to quantify pollutant concentrations across the developments.
- 7.1.8 The results of the dispersion modelling assessment also indicated that predicted annual mean NO₂, PM₁₀ and PM_{2.5} concentrations were below the relevant AQOs and Concentration Target at the proposed building façades within both parcels. As such, the sites are therefore considered suitable for the proposed use from an air quality perspective.
- 7.1.9 Based on the assessment results, air quality factors are not considered a constraint to the developments.

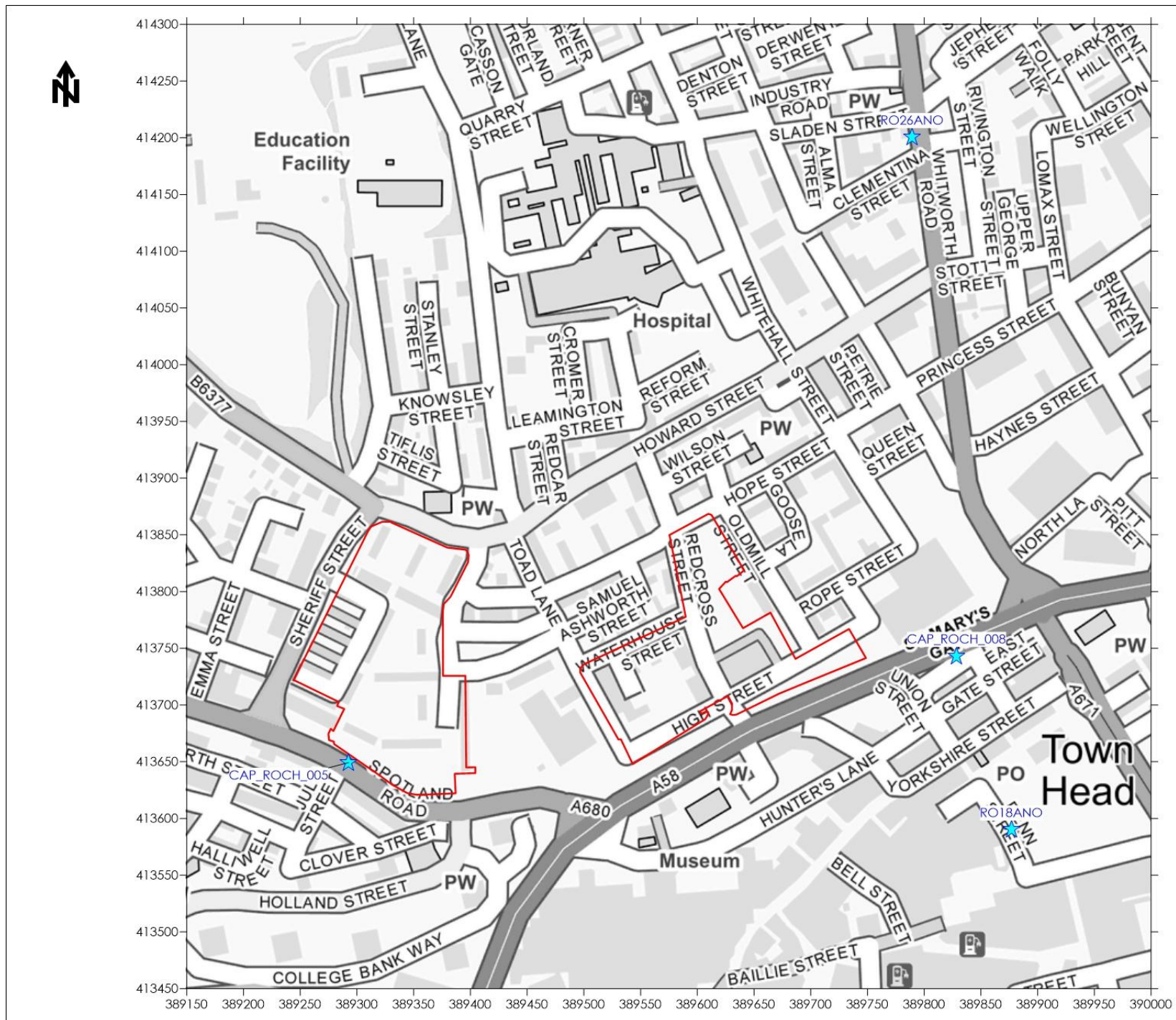
8.0 **ABBREVIATIONS**

AADT	Annual Average Daily Traffic
ADM	Atmospheric Dispersion Modelling
AQMA	Air Quality Management Area
AQLV	Air Quality Limit Value
AQO	Air Quality Objective
AQS	Air Quality Strategy
CAP	Clean Air Plan
CERC	Cambridge Environmental Research Consultants
DEFRA	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
DM	Do-Minimum
DS	Do-Something
EB	Eastbound
HDV	Heavy Duty Vehicle
GMCA	Greater Manchester Combined Authority
IAQM	Institute of Air Quality Management
LA	Local Authority
LAQM	Local Air Quality Management
LES	Low Emission Strategy
LDV	Light Duty Vehicle
NGR	National Grid Reference
NO ₂	Nitrogen dioxide
NB	Northbound
NO _x	Oxides of nitrogen
NPPF	National Planning Policy Framework
NPPG	National Planning Practice Guidance
PfEP	Places for Everyone Plan
PM ₁₀	Particulate matter with an aerodynamic diameter of less than 10µm
PM _{2.5}	Particulate matter with an aerodynamic diameter of less than 2.5µm
RBC	Rochdale Borough Council
SP	Slow Phase
SB	Southbound
TfGM	Transport for Greater Manchester
WB	Westbound

Z ₀	Roughness length
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Figures





Legend



Title

Figure 2 - Monitoring Locations

Project

Air Quality Assessment
Lower Falinge, Rochdale

Project Reference

11109

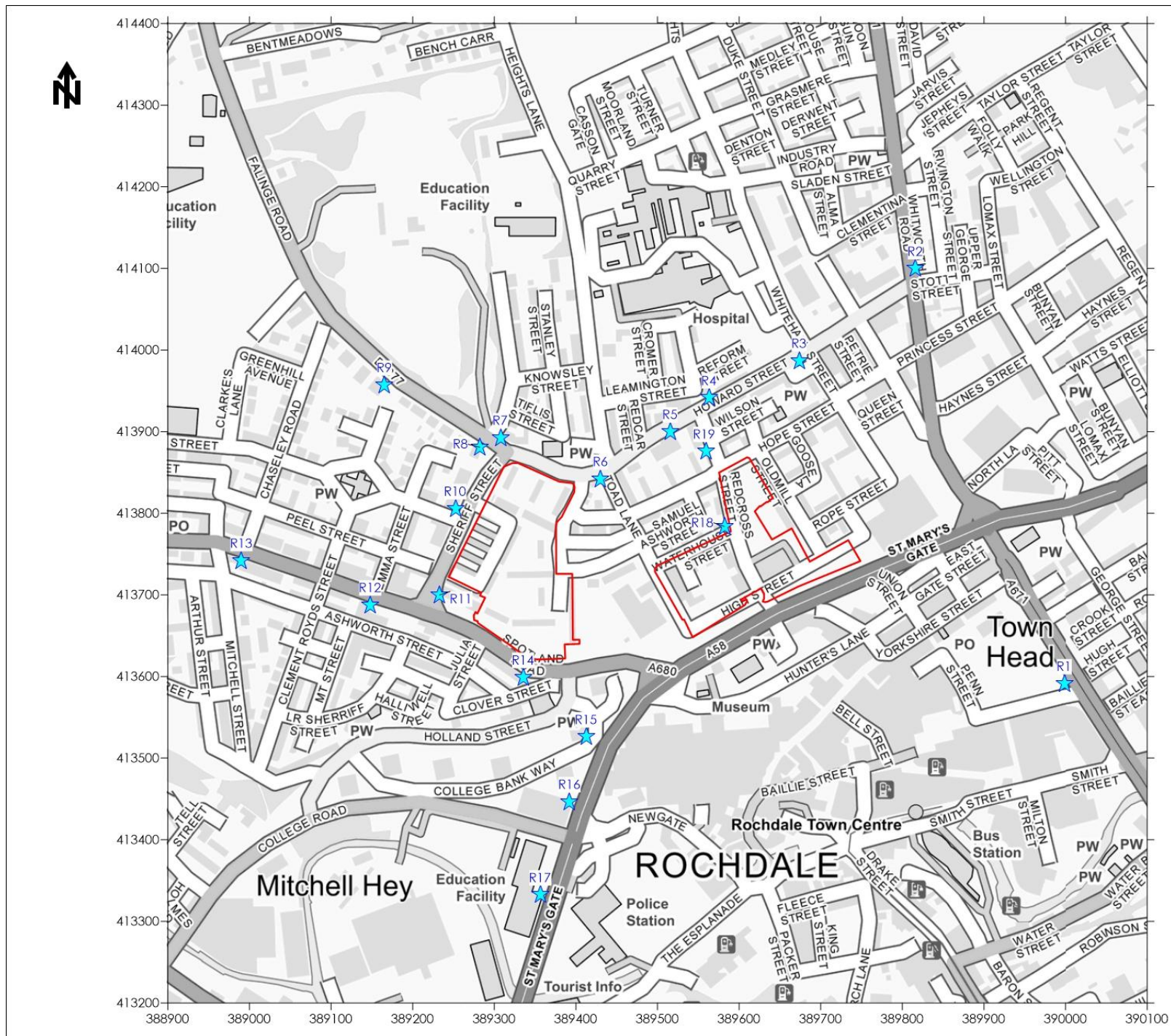
Client

Rochdale Boroughwide Housing
Limited

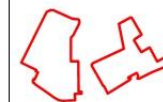
Contains Ordnance Survey Data
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Legend



Site Boundary



Receptor

Title

Figure 3 - Road Vehicle Exhaust Emissions Sensitive Receptor Locations

Project

Air Quality Assessment
Lower Falinge, Rochdale

Project Reference

11109

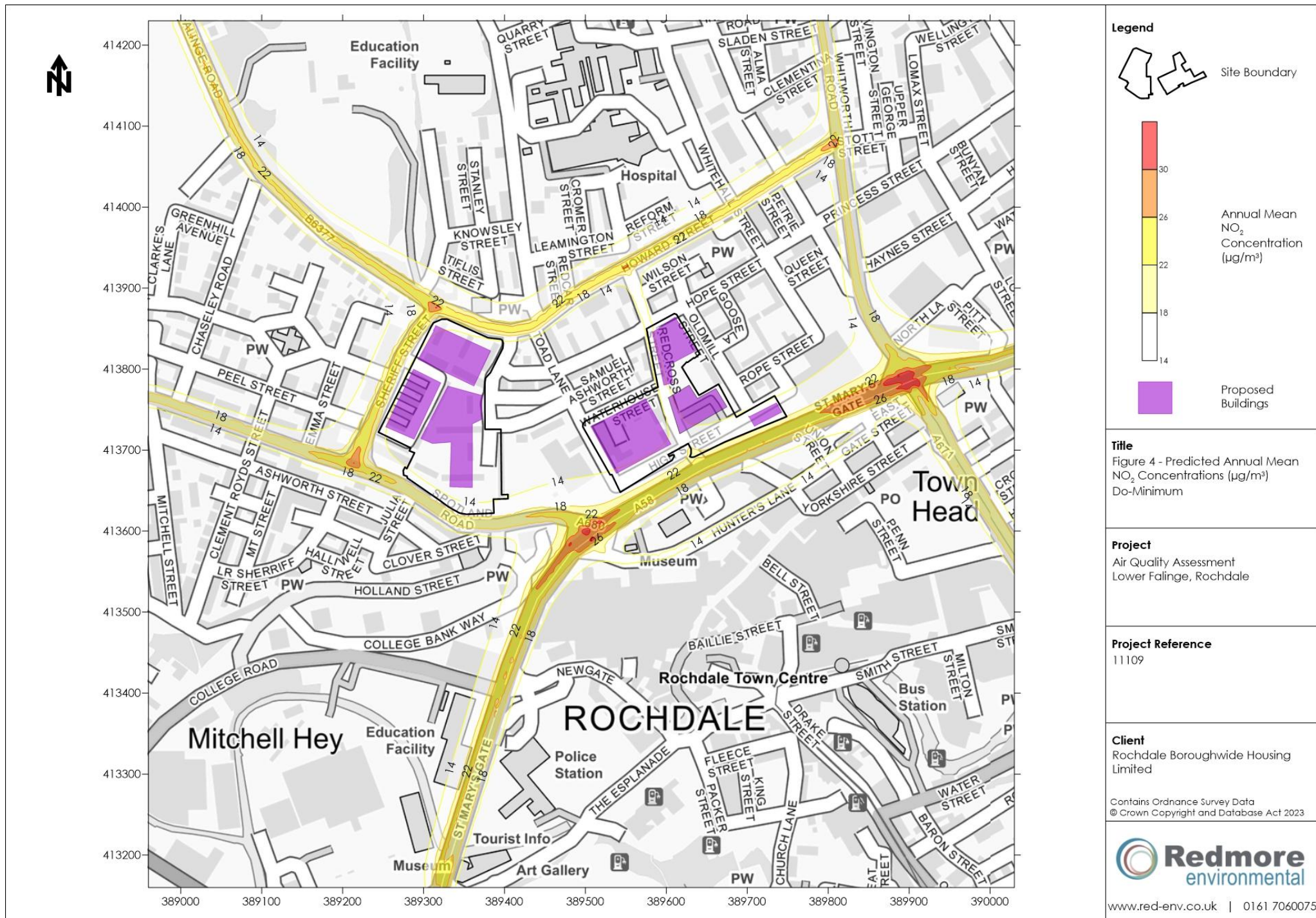
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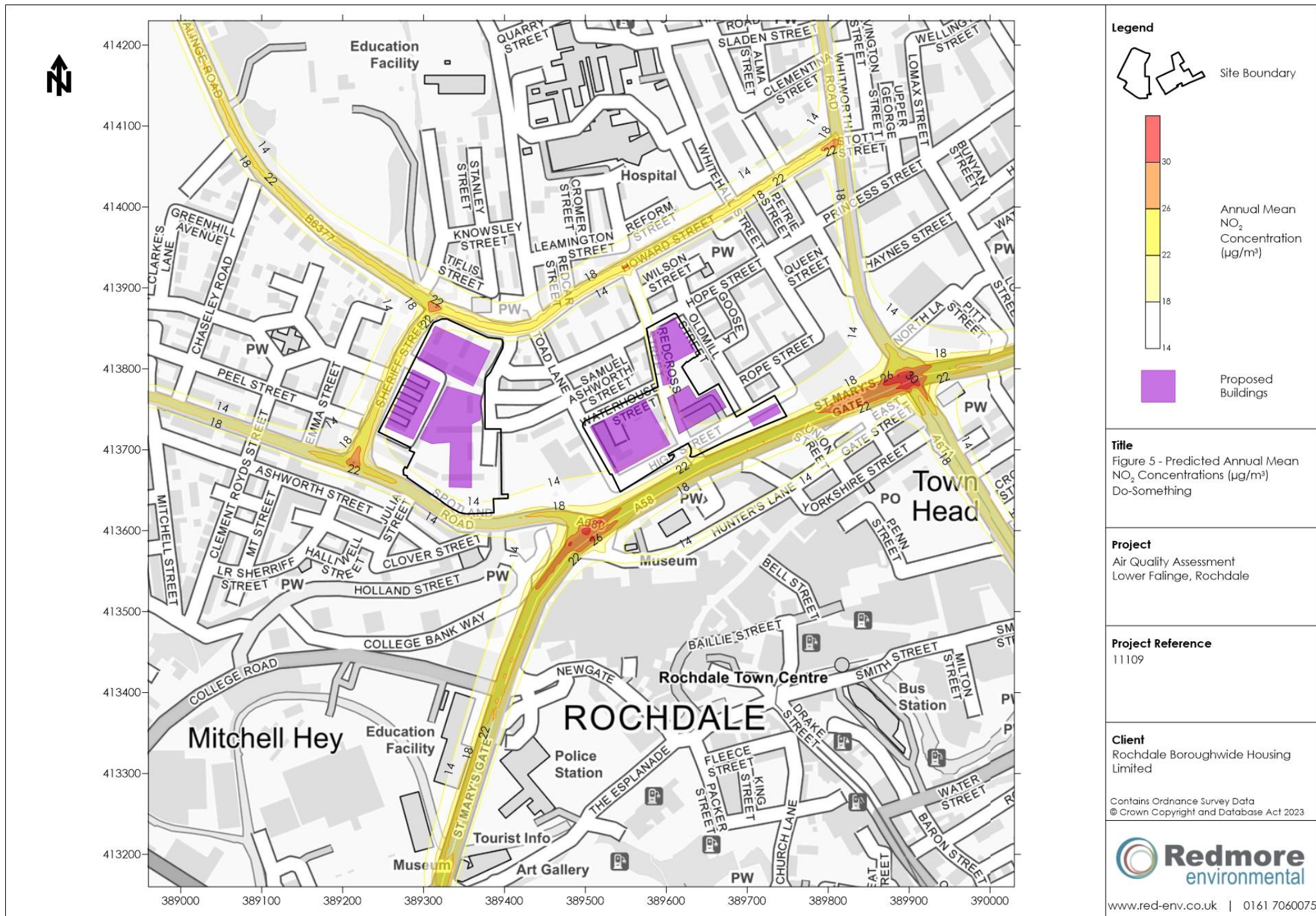
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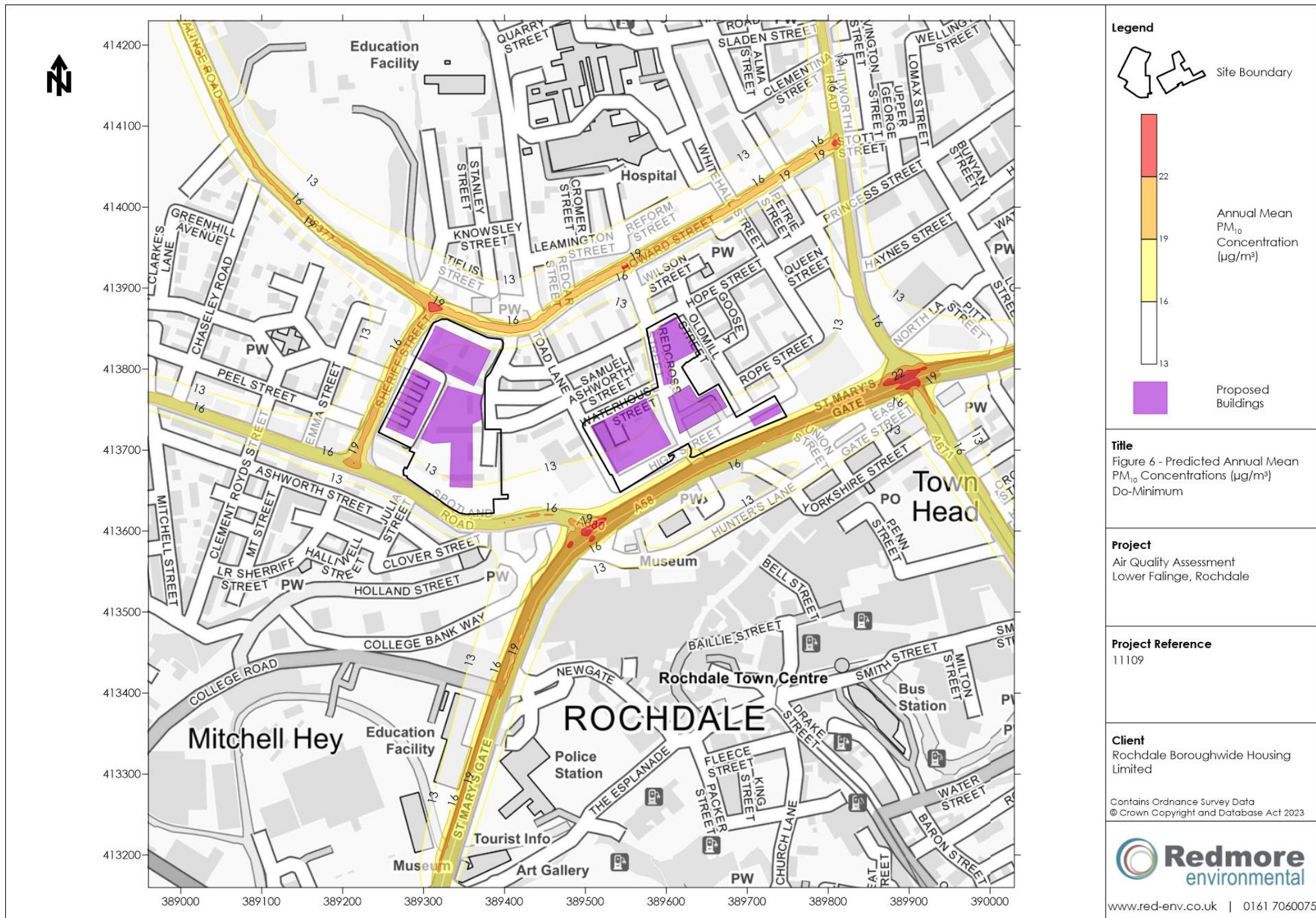
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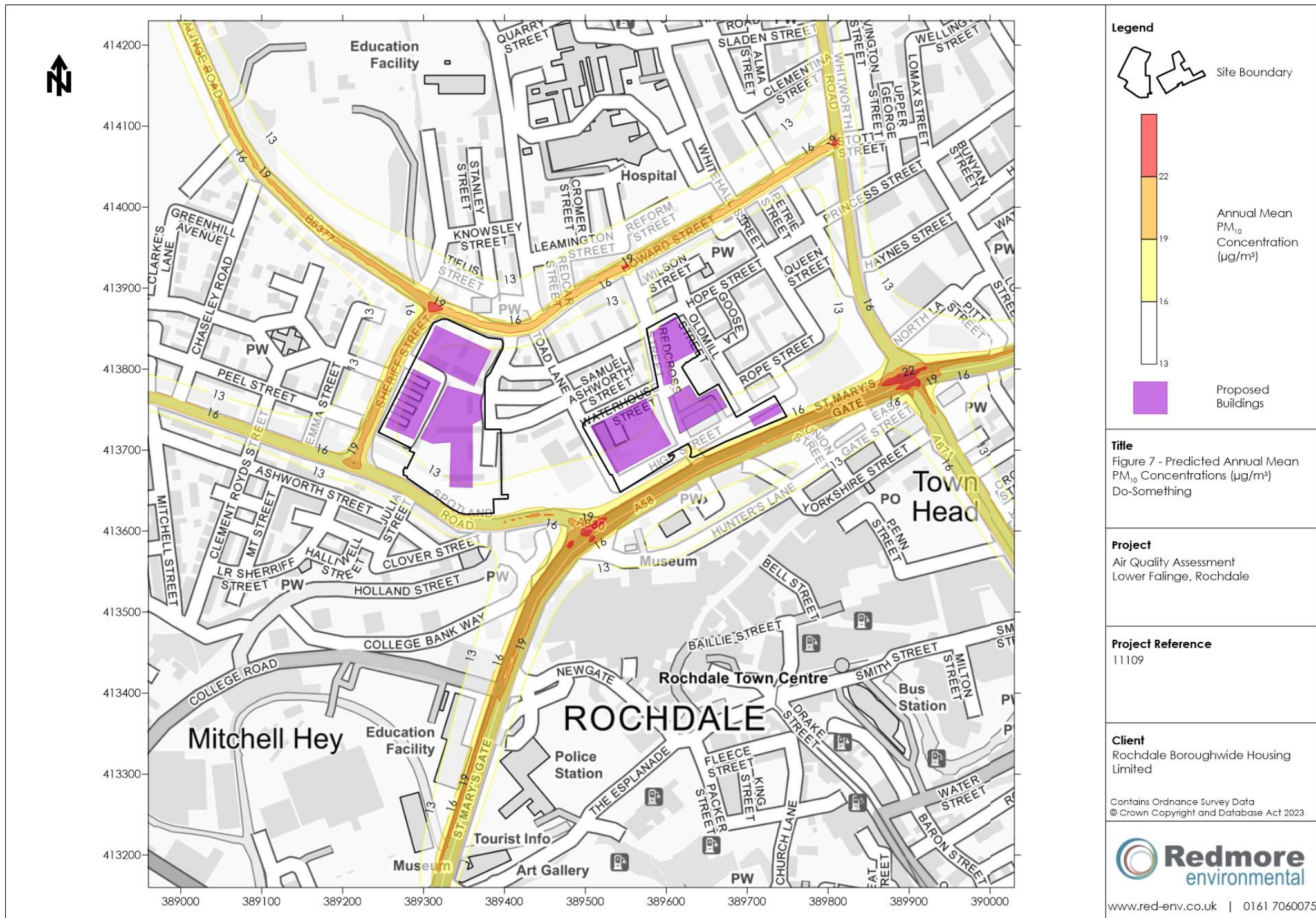


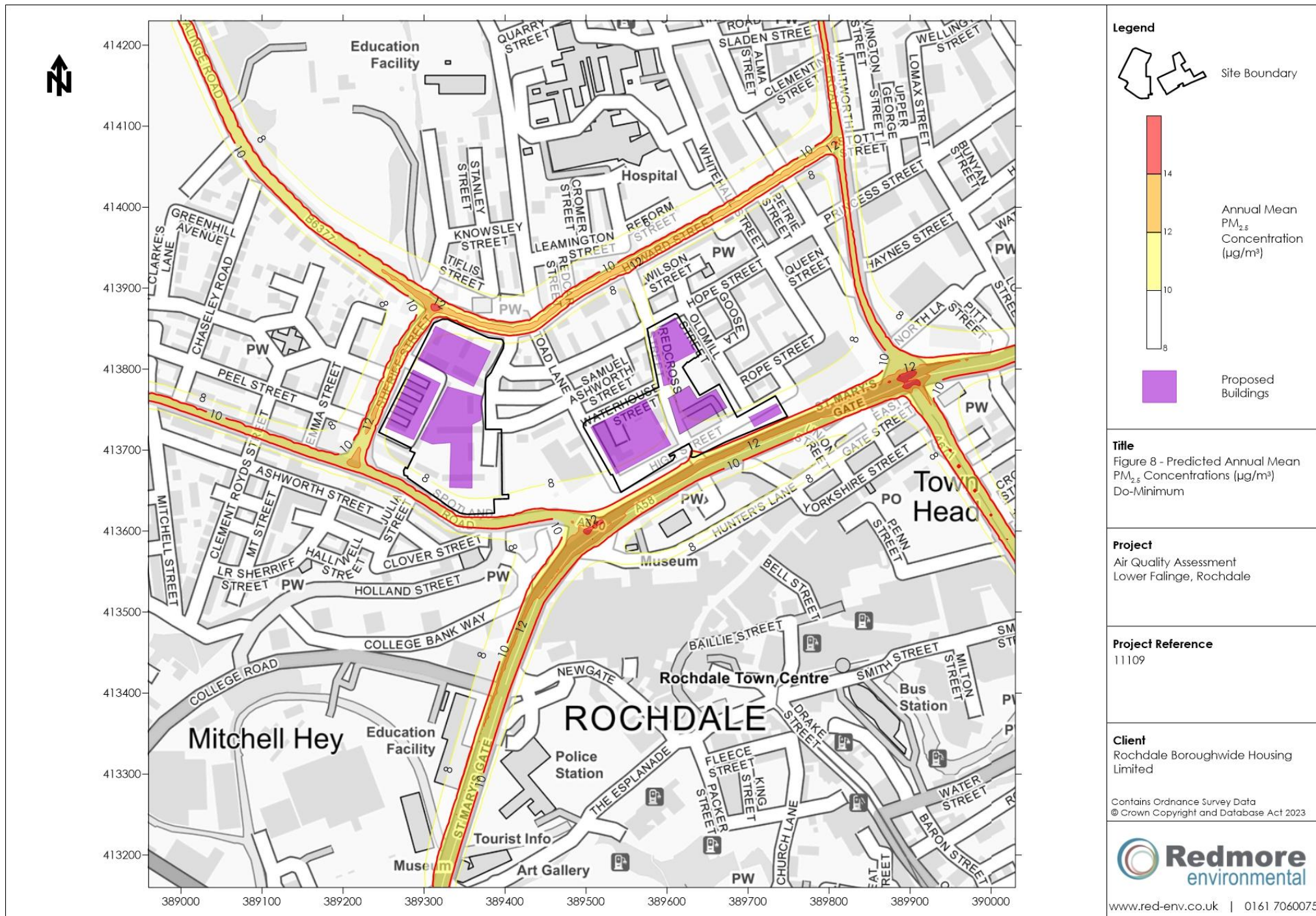
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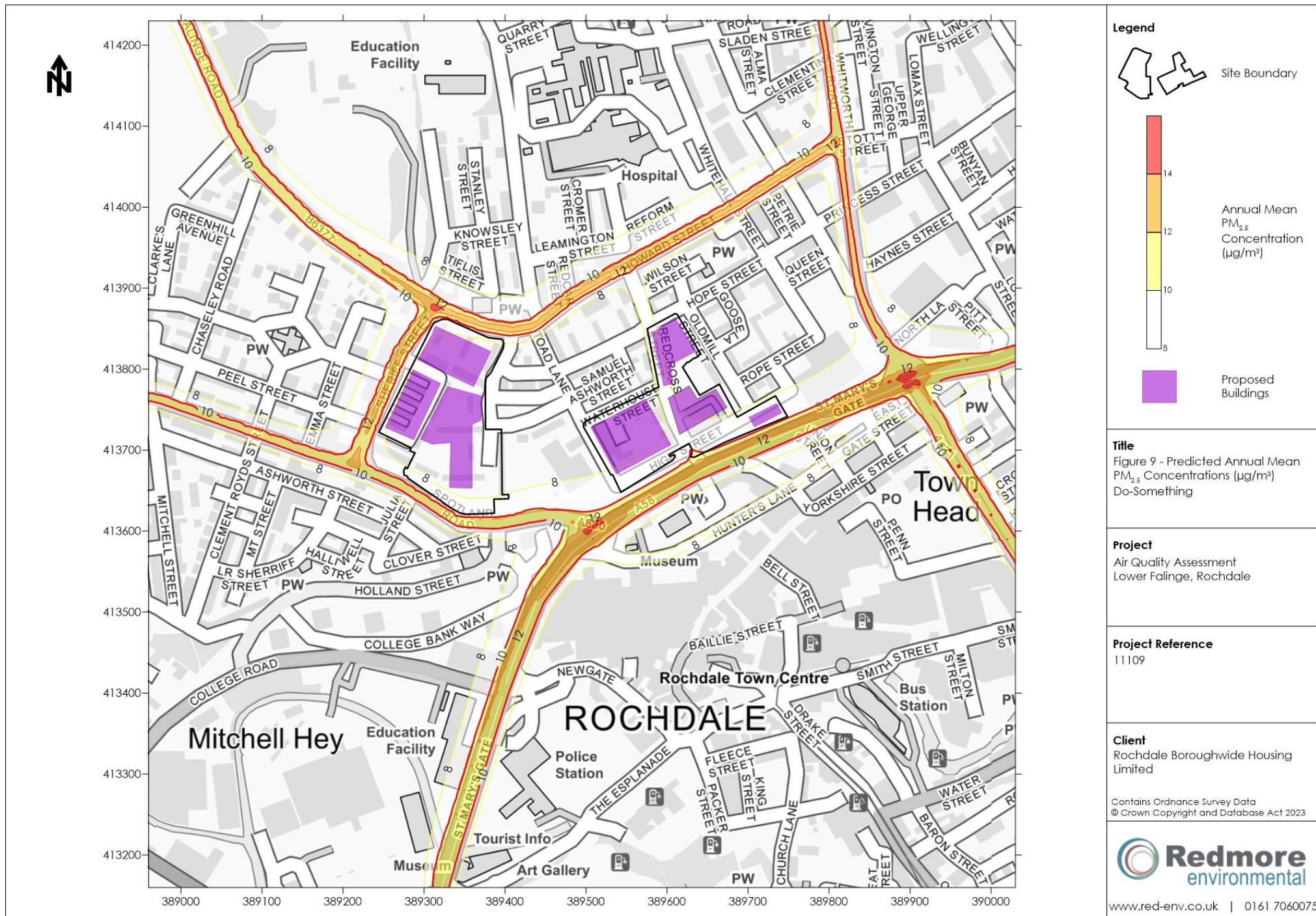


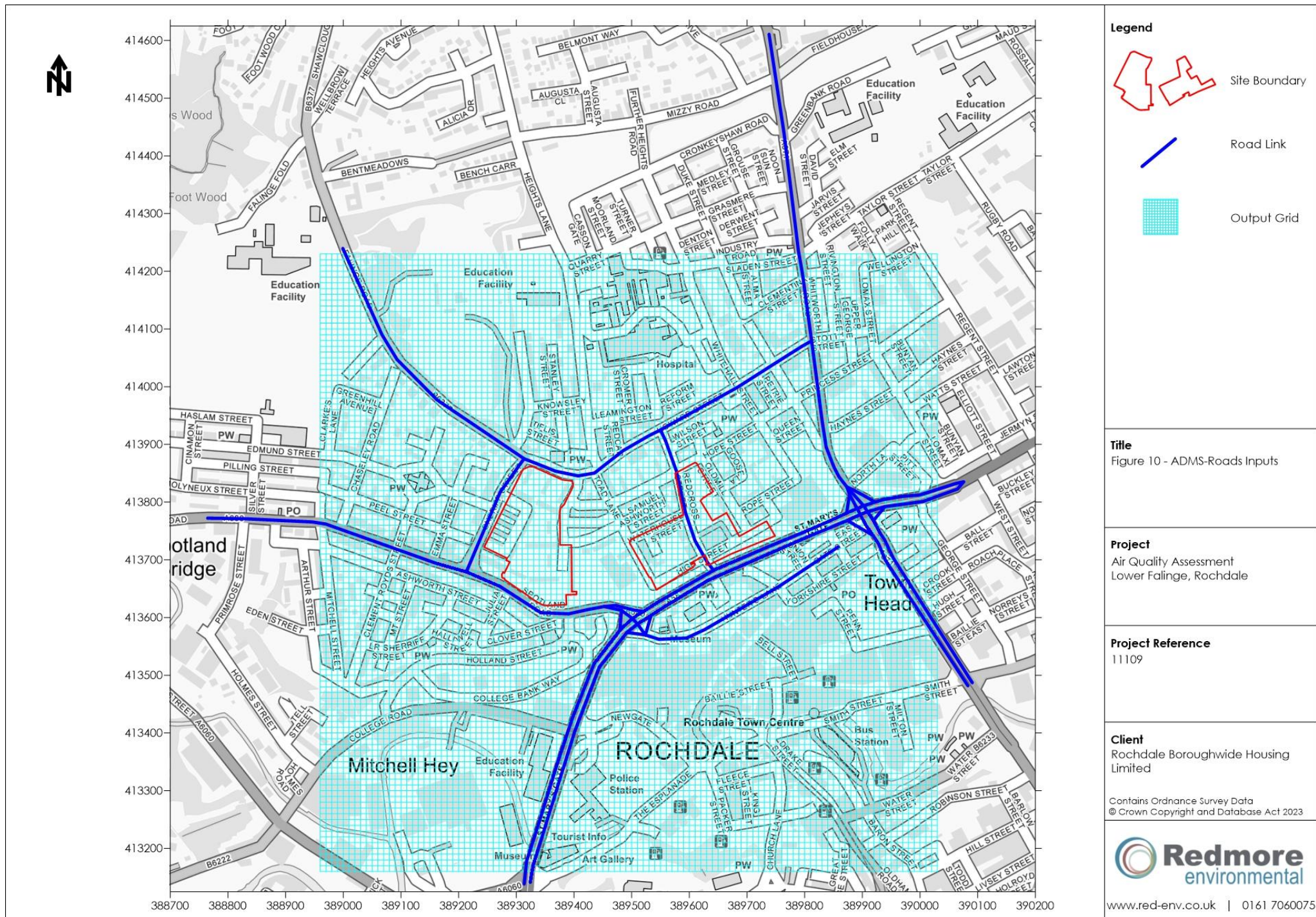


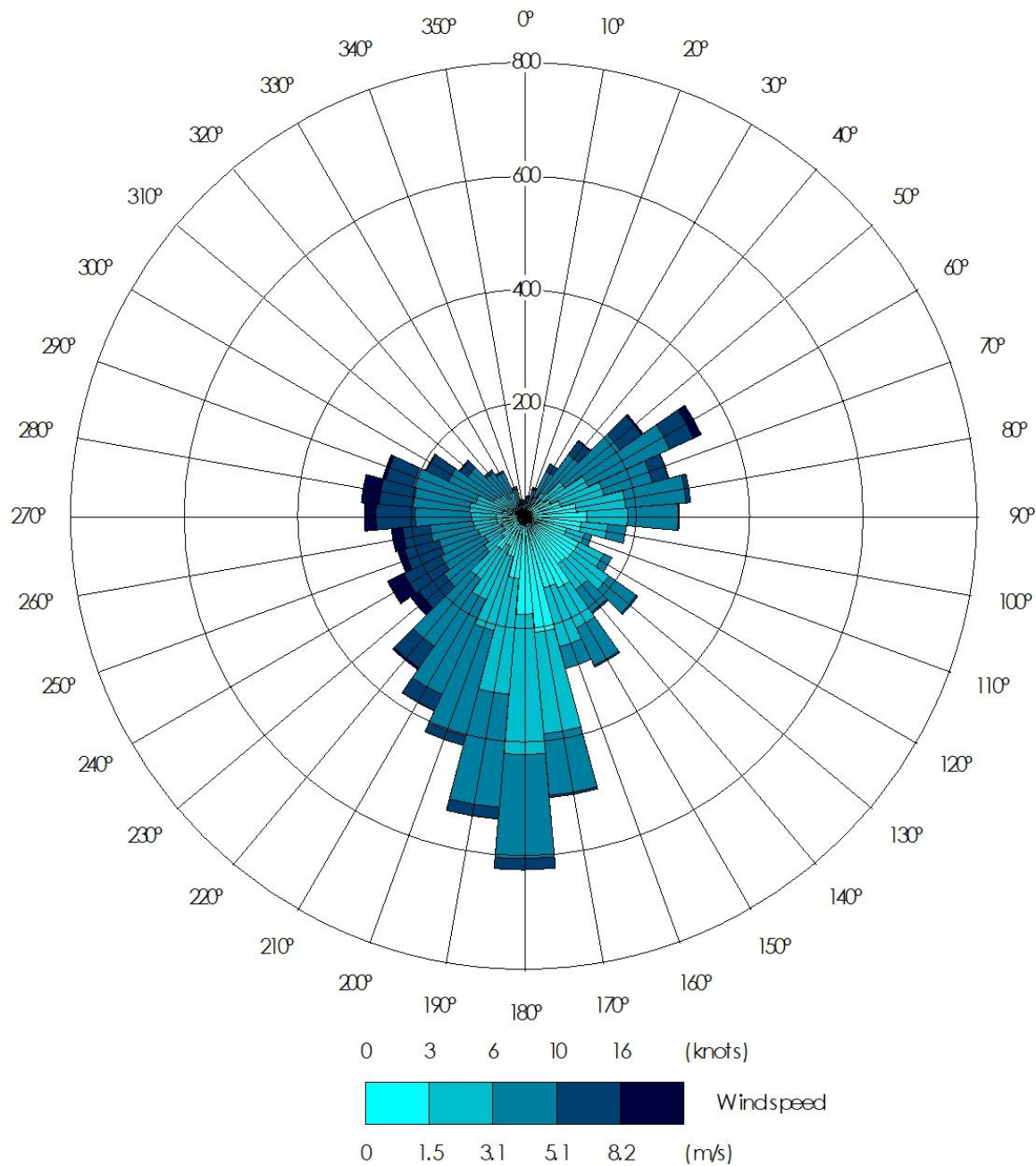












Legend

Title

Figure 11 - Wind Rose of 2025
Manchester Airport
Meteorological Data

Project

Air Quality Assessment
Lower Falinge, Rochdale

Project Reference

11109

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Appendix 1 - Assessment Input Data

Introduction

The proposed developments have the potential to cause air quality impacts as a result of emissions associated with vehicles travelling to and from the developments, as well as expose future residents to any existing air quality issues at the site. In order to assess NO₂, PM₁₀ and PM_{2.5} concentrations at sensitive locations, detailed dispersion modelling was undertaken in accordance with the following methodology.

Modelling was undertaken for 2025 to allow verification against recent monitoring results and 2030 to represent likely conditions in the opening year of the scheme.

It should be noted that dispersion modelling used to assess potential impacts was undertaken only for the Eastern Parcel, as impacts associated with the Western Parcel were screened out using the IAQM criteria²⁶. However, dispersion modelling to assess potential future exposure was undertaken for both parcels.

Dispersion Model

Dispersion modelling was undertaken using the ADMS-Roads dispersion model (version 5.1.0.2). ADMS-Roads is developed by Cambridge Environmental Research Consultants (CERC) and is routinely used throughout the world for the prediction of pollutant dispersion from road sources. Modelling predictions from this software package are accepted within the UK by the Environment Agency and DEFRA.

The model requires input data that details the following parameters:

- Assessment area;
- Traffic flow data;
- Vehicle emission factors;
- Spatial co-ordinates of emissions;
- Street width;
- Meteorological data;
- Roughness length (z_0); and,
- Monin-Obukhov length.

²⁶ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

The relevant inputs are detailed in the following Sections.

Assessment Area

Ambient concentrations were predicted over the area NGR: 388960, 413160 to 390030, 414230. One Cartesian grid was included within the model to produce data suitable for contour plotting using the Surfer software package.

Receptors potentially sensitive to changes in pollutant concentrations were included in the assessment as outlined in the main report text.

Reference should be made to Figure 10 for a graphical representation of the assessment grid extents.

Traffic Flow Data

Baseline traffic data for use in the assessment, including 24-hour Annual Average Daily Traffic (AADT) flows and fleet composition as HDV proportion, was obtained from the Department for Transport (DfT)²⁷. The DfT web tools enables the user to view and download traffic flows on every link of the 'A' road and motorway network, as well as selected minor roads, in Great Britain for the years 2000 to 2025. It should be noted that the DfT web tool is referenced in DEFRA guidance²⁸ as being a suitable source of data for air quality assessments and it is therefore considered to provide reasonable estimate of traffic flows in the vicinity of the site.

The baseline traffic data was converted to the site opening year utilising a factor obtained from TEMPro (version 8.1). This software package has been developed by the DfT to calculate future traffic growth throughout the UK.

Vehicle movements associated with the developments were provided by Astute, the Transport Consultants for the project. These were added to the relevant links in order to determine future flows with the developments in place.

²⁷ <https://roadtraffic.dft.gov.uk/#6/55.254/-11.107/basemap-regions-countpoints>.

²⁸ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

It should be noted that the reduction in vehicle movements as a result of the development of the Western Parcel was not considered within the traffic flows to provide a conservative assessment.

Road parameters for input into the model were based on the following:

- Road widths were estimated from aerial photography and UK highway design standards;
- Vehicle speeds were estimated as an average for the relevant road link over the course of a 24-hour period;
- Vehicle speeds were determined following review of speed limits within the study extents, as well as congestion data available from GoogleMaps;
- Vehicle speeds specific to slow phases (SP) were determined using the methodology outlined in DEFRA guidance²⁹;
- Necessary adjustments to slow phase vehicle speeds were based upon congestion data available from GoogleMaps; and,
- The length for slow phases were derived using the approaching distance of 25m outlined in DEFRA guidance³⁰, and adjusted accordingly based on aerial photography and congestion data available from GoogleMaps.

A summary of the traffic data and link parameters used in the assessment is provided in Table A1.1.

Table A1.1 Traffic Data

Link		24-hour AADT Flow			HDV Prop. of Fleet (%)	Road Width (m)	Avg. Vehicle Speed (km/h)
		2025 Verif.	2030 DM	2030 DS			
L01	A680 Spotland Road, west of Sheriff Street	15,753	16,375	16,412	1.40%	8.0	40
L02	A680 Spotland Road Slow Phase (SP)	15,753	16,375	16,412	1.40%	11.2	15
L03	A680 Spotland Road	15,753	16,375	16,412	1.40%	10.7	40
L04	A680 Spotland Road, approach to Holland Street	15,753	16,375	16,412	1.40%	9.5	40
L05	A680 Spotland Road, approach to St Mary's Gate SP	5,198	5,404	5,416	1.40%	5.6	15

²⁹ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

³⁰ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

Link		24-hour AADT Flow			HDV Prop. of Fleet (%)	Road Width (m)	Avg. Vehicle Speed (km/h)
		2025 Verif.	2030 DM	2030 DS			
L06	A680 Spotland Road, eastbound (EB) to A58 St Mary's Gate, SP	5,198	5,404	5,416	1.40%	4.0	15
L07	A58 St Mary's Gate EB, east of A680 Spotland Road	16,723	17,384	17,520	2.06%	7.2	55
L08	A58 St Mary's Gate EB, west of Redcross Street	16,723	17,384	17,520	2.06%	10.6	55
L09	A58 St Mary's Gate EB, east of Redcross Street	16,723	17,384	17,452	2.06%	11.4	55
L10	A58 St Mary's Gate EB	16,723	17,384	17,452	2.06%	7.0	55
L11	A58 St Mary's Gate EB, SP, west of Whitworth Road	16,723	17,384	17,452	2.06%	10.7	15
L12	A671 Whitworth Road, SP approach to A58 St Mary's Gate	3,127	3,251	3,259	1.78%	6.3	15
L13	A58 St Mary's Gate, approach to A671 Whitworth Road SP	3,127	3,251	3,259	1.78%	7.5	15
L14	A671 Whitworth Road, south of Howard Street	12,508	13,002	13,036	1.78%	9.1	40
L15	A671 Whitworth Road, north of Howard Street	12,508	13,002	13,036	1.78%	8.0	40
L16	A671 Whitworth Road, EB, SP	3,127	3,251	3,259	1.78%	4.7	15
L17	A58 St Mary's Gate EB, east of Whitworth Road	13,006	13,520	13,551	1.46%	7.4	40
L18	A58 St Mary's Gate WB, east of Whitworth Road, SP	9,970	10,364	10,395	2.08%	8.8	15
L19	A58 St Mary's Gate WB, west of Whitworth Road, SP	15,098	15,694	15,763	1.99%	7.2	15
L20	A58 St Mary's Gate WB	15,098	15,694	15,763	1.99%	10.5	55
L21	A58 St Mary's Gate WB SP approach to A680 Spotland Road	15,098	15,694	15,831	1.99%	10.8	15
L22	A58 St Mary's Gate EB, approach to A671 Whitworth Road, SP	3,127	3,251	3,319	1.78%	5.9	15
L23	A58 St Mary's Gate WB SP	15,236	15,838	15,957	1.62%	7.0	15
L24	A58 St Mary's Gate WB	15,236	15,838	15,957	1.62%	8.2	55

Link		24-hour AADT Flow			HDV Prop. of Fleet (%)	Road Width (m)	Avg. Vehicle Speed (km/h)
		2025 Verif.	2030 DM	2030 DS			
L25	A58 St Mary's Gate WB, SP approach to A6060 Dane Street	15,236	15,838	15,957	1.62%	10.2	15
L26	A58 St Mary's Gate EB approach to A680 Spotland Road Junction	14,941	15,531	15,650	1.72%	6.9	55
L27	A58 St Mary's Gate towards A680 Spotland Road SP	5,198	5,404	5,416	1.40%	6.2	15
L28	Sheriff Street, approach to A680 Spotland Road, SP	19,594	20,368	20,405	1.24%	13.6	15
L29	Sheriff Street	19,594	20,368	20,405	1.24%	9.0	40
L30	Sheriff Street, northbound (NB) approach to the B6377 Falinge Road roundabout junction	19,594	20,368	20,405	1.24%	9.1	35
L31	A671 John Street southbound (SB), SP	11,003	11,438	11,465	0.99%	4.0	15
L32	A671 John Street, SB	11,003	11,438	11,465	0.99%	7.2	40
L33	A671 John Street NB	9,467	9,841	9,868	1.19%	6.7	40
L34	A671 John Street NB, SP	9,467	9,841	9,868	1.19%	7.2	15
L35	A671 John Street westbound onto A58 St Mary's Gate, SP	2,367	2,460	2,474	1.19%	5.5	15
L36	A58 St Mary's Gate onto A671 John Street, SP	2,751	2,859	2,873	0.99%	5.6	15
L37	A58 St Mary's Gate WB, SP	9,970	10,364	10,395	2.08%	10.2	15
L38	A58 St Mary's Gate WB, junction of A671 John Street and A671 Whitworth Road, SP	15,098	15,694	15,725	1.99%	7.3	15
L39	A58 St Mary's Gate EB, junction of A671 John Street and A671 Whitworth Road, SP	16,723	17,384	17,452	2.06%	10.5	15
L40	A58 St Mary's Gate, SP approaching A680 Spotland Road Junction	14,941	15,531	15,650	1.72%	10.8	15
L41	Hunter's Lane, SP, WB to A58 St Mary's Gate	1,118	1,162	1,162	0.87%	5.2	15
L42	A58 St Mary's Gate, SP, WB towards Hunter's Lane	1,118	1,162	1,162	0.87%	5.8	15
L43	Hunter's Lane, SP, approach to St Mary's Gate	4,471	4,648	4,648	0.87%	11.4	15

Link		24-hour AADT Flow			HDV Prop. of Fleet (%)	Road Width (m)	Avg. Vehicle Speed (km/h)
		2025 Verif.	2030 DM	2030 DS			
L44	Hunter's Lane	4,471	4,648	4,648	0.87%	7.8	40
L45	Redcross Street, SP, towards A58 St Mary's Gate	4,471	4,648	5,042	0.87%	9.5	15
L46	Redcross Street	4,471	4,648	5,042	0.87%	7.3	40
L47	Redcross Street, SP, towards Howard Street	4,471	4,648	4,664	0.87%	6.6	15
L48	Howard Street, SP, towards Whitworth Road	19,594	20,368	20,384	1.24%	8.5	15
L49	Howard Street	19,594	20,368	20,384	1.24%	6.5	40

Reference should be made to Figure 10 for a graphical representation of the road link locations.

Emission Factors

The emission factors were calculated using the relevant traffic flows and the Emissions Factor Toolkit (version 14.1). This has been produced by DEFRA and incorporates COPERT 5.9.1 vehicle emission factors.

Meteorological Data

Meteorological data used in the assessment was taken from Manchester Airport meteorological station over the period 1st January 2025 to 31st December 2025 (inclusive). Manchester Airport is located at NGR: 381792, 384116, which is approximately 30.3km south-west of the site. It is anticipated that conditions would be reasonably similar over a distance of this magnitude. The data was therefore considered suitable for an assessment of this nature.

All meteorological records used in the assessment were provided by Atmospheric Dispersion Modelling (ADM) Ltd, which is an established distributor of data within the UK. Reference should be made to Figure 11 for a wind rose of utilised meteorological data.

Roughness Length

The z_0 is a modelling parameter applied to allow consideration of surface height roughness elements. A z_0 of 0.5m was used to describe the modelling extents. This value is considered appropriate for the morphology of the area and is suggested within ADMS-Roads as being suitable for 'parklands, open suburbia'.

A z_0 of 0.2m was used to describe the meteorological site. This value is considered appropriate for the morphology of the area due to the large expanse of surrounding flat land use, such as runways and grassland, and is suggested within ADMS-Roads as being suitable for 'agricultural areas (min)'.

Monin-Obukhov Length

The Monin-Obukhov length provides a measure of the stability of the atmosphere. A minimum Monin-Obukhov length of 30m was used to describe the modelling extents and meteorological site. This is considered appropriate for the morphology of both areas and is suggested within ADMS-Roads as being suitable for 'cities and large towns'.

Background Concentrations

Verification Model

A review of the DEFRA mapping tool³¹ and local monitoring results, as outlined in the 'Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results 2011-2025'³² spreadsheet, was undertaken in order to identify an appropriate background value for use in the assessment. This indicated that the annual mean NO₂ concentration recorded at the RO18ANO urban background monitor during 2025 was 13.6µg/m³, higher than the DEFRA background for the grid square containing the sites, as shown in Table 12. Annual mean NO₂ concentrations recorded at the RO18ANO urban background monitor were also higher than the grid square containing the monitors utilised within the verification model, NGR: 389500, 413500 and 389500, 414500. As such, the RO18ANO

³¹ <https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021>

³² Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results 2011-2025, GMCA, 2026.

monitoring result was used in order to provide conservative predictions.

Assessment Model

NO₂, PM₁₀ and PM_{2.5} background concentrations for the assessment year were taken from the grid square containing the RO18ANO urban background monitor, NGR: 389500, 413500, to provide continuity throughout the assessment. These are shown in Table A1.2.

Table A1.2 Background Pollutant Concentrations – Assessment Year

Pollutant	Predicted Annual Mean 2030 Background Concentration (µg/m ³)
NO ₂	10.04
PM ₁₀	11.31
PM _{2.5}	6.62

NO_x to NO₂ Conversion

Predicted annual mean NO_x concentrations were converted to NO₂ concentrations using the spreadsheet (version 9.1) provided by DEFRA, which is the method detailed within DEFRA guidance³³.

Verification

The results from a dispersion model may differ from measured concentrations for a large number of reasons, including.

- Estimates of background concentrations;
- Uncertainties in source activity data such as traffic flows and emission factors;
- Variations in meteorological conditions;
- Overall model limitations; and,
- Uncertainties associated with monitoring data, including locations.

³³ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

Model verification is the process by which these and other uncertainties are investigated and where possible minimised. In reality, the differences between modelled and monitored results are likely to be a combination of all of these aspects.

For the purpose of the assessment, model verification was undertaken for 2025 using traffic data, meteorological data and monitoring results from this year.

Monitoring of NO₂ concentrations was undertaken at three locations within the vicinity of roads included within the model during 2025. The results were obtained and the road contributions to total NO_x concentrations calculated following the methodology contained within DEFRA guidance³⁴. The monitored annual mean NO₂ concentrations and calculated road NO_x concentrations are summarised in Table A1.3.

Table A1.3 NO_x Verification - Monitoring Results

Monitoring Location		Monitored NO ₂ Concentration (µg/m ³)	Calculated Road NO _x Concentration (µg/m ³)
RO26ANO	Whitworth Road	27.10	31.28
CAP_ROCH_005	A680 - Spotland Road	24.20	23.96
CAP_ROCH_008	A58 - St Mary's Gate	24.20	23.96

The annual mean road NO_x concentrations predicted from the dispersion model and the 2025 road NO_x concentrations calculated from the monitoring results are summarised in Table A1.4.

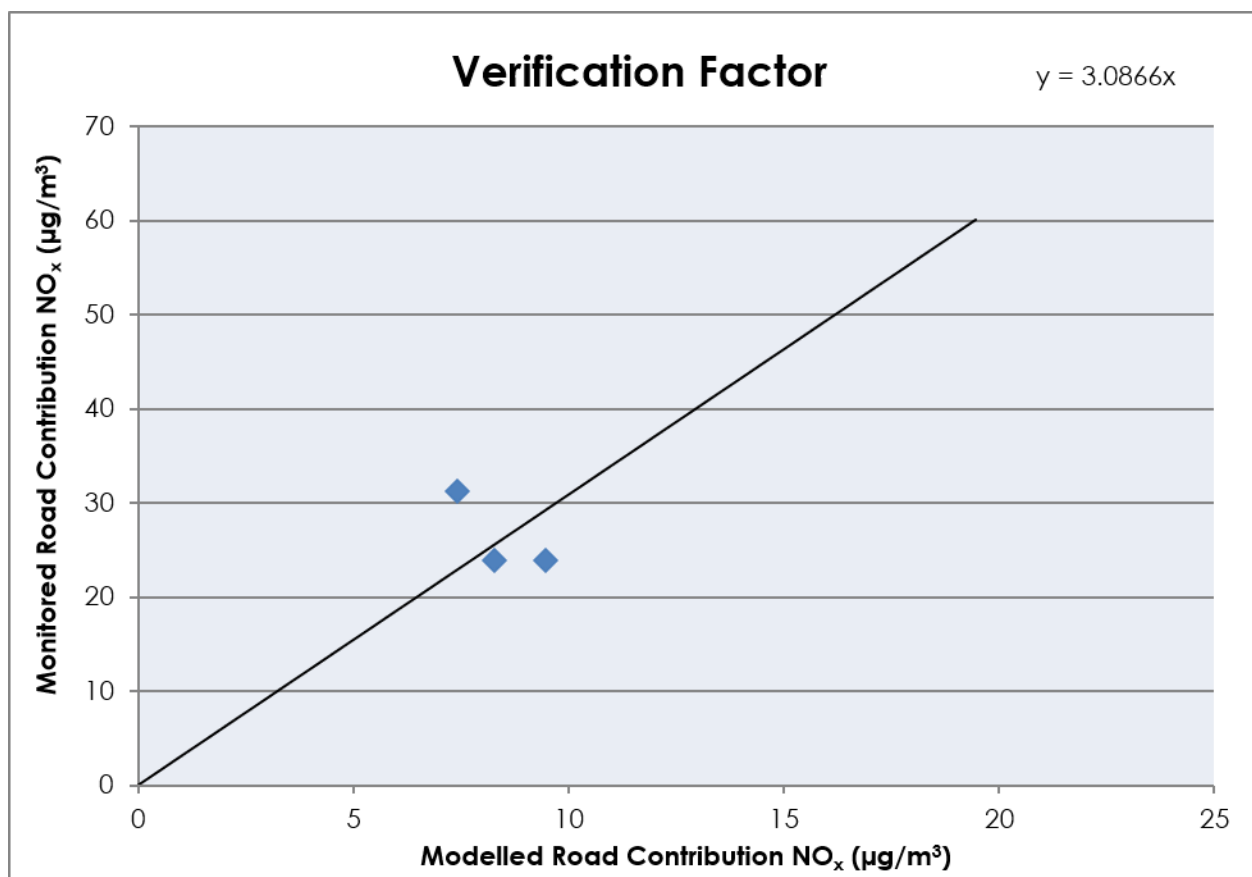
Table A1.4 NO_x Verification - Modelling Results

Monitoring Location		Calculated Road NO _x Concentration (µg/m ³)	Modelled Road NO _x Concentration (µg/m ³)
RO26ANO	Whitworth Road	31.28	7.40
CAP_ROCH_005	A680 - Spotland Road	23.96	8.27
CAP_ROCH_008	A58 - St Mary's Gate	23.96	9.46

³⁴ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

The monitored and modelled road NO_x concentrations were graphed and the equation of the trendline based on linear progression through zero calculated. This indicated that a verification factor of 3.0866 was required to be applied to all modelling results, as shown in Graph 1.

Graph 1 NO_x Verification Factor



Monitoring of PM₁₀ and PM_{2.5} concentrations is not undertaken within the assessment extents. The NO_x verification factor was therefore used to adjust model predictions of these species in lieu of more accurate data in accordance with DEFRA guidance³⁵.

³⁵ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

Date: 10th August 2026

Ref: 11109

Appendix 2 - Curricula Vitae

KEY EXPERIENCE:

Claire is a Director with specialist experience in the air quality sector

Her key capabilities include:

- Production and management of Air Quality, Dust and Odour Assessments for a wide range of clients from the residential, retail, commercial, leisure and industrial and infrastructure sectors.
- Detailed dispersion modelling of road vehicle and industrial emissions using ADMS-Roads, ADMS-6 and AERMOD. Studies have included impact assessment of ground level pollutant and odour concentrations and assessment of suitability of development sites for proposed end-use.
- Project management and co-ordination of Environmental Impact Assessments and scoping reports for developments throughout the UK.
- Assessment of fugitive dust impacts from a range of waste and industrial developments.
- Co-ordination and management of large-scale multi-disciplinary projects and submissions.
- Undertaken and overseeing pollutant monitoring campaigns.
- Provision of expert advice and attendance at DCO examination process.

SELECT PROJECTS SUMMARY:

Residential and Educational

Air Quality Assessments for a large number of proposed residential and educational developments across the UK. The assessments included consideration of construction phase dust emissions and mitigation was recommended to minimise fugitive dust emissions accordingly. The suitability of the sites for the proposed residential and educational uses was also assessed. The assessment utilised a range of assessment tools including relevant screening criteria, air dispersion modelling using ADMS-Roads, local air quality monitoring and Defra published assessment tools. Where required for sites in London, Air Quality Neutral assessments were also undertaken utilised the Greater London Authority guidance.

Air Quality Monitoring

Air Quality Assessments and overseeing air quality monitoring campaigns for a number of sites within Birmingham. Air dispersion modelling was undertaken and air quality monitoring utilising NO₂ diffusion tubes was carried out for use in verification of the dispersion model. Mitigation was recommended where appropriate to reduced the exposure of future uses of the sites to elevated pollutant concentrations.

Odour Assessments

Undertaken to support developments in the UK, including consideration of the impact of existing odour sources on proposed developments or to assess proposed odour releases. A combination of field odour surveys, risk assessments and detailed dispersion modelling were undertaken, with mitigation measures recommended where required.

Commercial and Retail

Foodstores across the UK - Air quality assessments for a number of proposed foodstores across the UK. Consideration was given to construction phase dust emissions and vehicle emissions generated by the foodstore operations. Relevant screening criteria and detailed air dispersion modelling were utilised in the assessment. Mitigation was recommended as required to minimise construction phase dust emissions.

Commercial development,

Workshop - Air quality assessment and input into the EIA for a proposed large scale commercial development near Workshop. Assessments of construction phase dust and operational phase road traffic emissions were undertaken and consideration was given to both human and ecological receptors.

Industrial and Infrastructure

Greater Manchester Waste PFI

Contract - Air Quality and Odour Assessments were undertaken as part of the Planning Applications and Environmental Permit applications for a number of proposed waste facilities in Greater Manchester.

Energy from Waste Development,

Scotland - Air Quality Assessment and coordination of the EIA and Environmental Permit Application for a proposed Energy from Waste development in Scotland. Considered industrial emissions from flue stacks as well as additional road traffic movements generated by the development

Strategic Rail Freight Interchange,

Hinckley - oversaw the Air Quality Assessment for the proposed Rail Freight Interchange and acted as expert witness as part of the Development Consent Order (DCO) examination process.

KEY EXPERIENCE:

Natasha is a Senior Environmental Consultant with specialist experience in the air quality sector. Her key capabilities include:

- Production of Air Quality Assessments in accordance with Department for Environment, Food and Rural Affairs (DEFRA) methodologies for a range of residential, commercial and industrial sectors.
- Detailed dispersion modelling of road vehicle exhaust emissions using ADMS-Roads. Studies have included impact assessments on sensitive receptors and exposure of new residents to poor air quality.
- Dispersion modelling of odour from Wastewater Treatment Works to predict the odour footprint and likely effects on amenity of nearby sensitive receptors
- Odour surveys to assess amenity and suitability of sites for potential future development for residential use.
- Production of Air Quality Neutral Assessments in accordance with The London Plan.
- Advanced canyon modelling to evaluate the impact of altered urban topography on air quality in built up areas.
- Assessment of construction dust impacts from a range of development sizes.
- Production of Air Quality Chapters for Environmental Impact Assessments.

SELECT PROJECTS SUMMARY:

Redbeck Motel, Crofton

Air Quality Assessment in support of a residential development comprising demolition of the existing motel and construction of up to 90 dwellings on land off Doncaster Road, Crofton. The development had the potential to expose future occupants to any existing air quality issues and cause impacts at sensitive locations. Dispersion modelling was undertaken using ADMS-Roads due to the number of vehicle movements expected to be generated by the development. A construction dust assessment was also performed to provide mitigation for proposed dust generating activities. Results of the study indicated that air quality impacts and fugitive dust emissions were not significant.

Arundel Road, Tangemere

Air Quality Assessment in support of a residential development at Cassons Restaurant, Tangemere. Following concerns from the Local Authority regarding the potential exposure of future residents to poor air quality, dispersion modelling was undertaken in order to predicted air quality conditions across the site. Results indicated concentrations did not represent a constraint to planning consent.

Hespin Wood, Carlisle

Monitoring and assessment of Ambient Bioaerosols in support of Environmental Permit compliance for an Open Windrow Compost. The facility has the potential to impact nearby receptors to bioaerosols. As such, monitoring was undertaken to determine conditions in the vicinity of the site. Results indicated both species were below the EA benchmark levels at all positions.

Land off Hayward Gardens, Ashburton South Estate, Putney

Air Quality Neutral Assessment in support of demolition of existing structures and construction of two new buildings to provide 43 dwellings, with a community room. The assessment was carried out in accordance with the London Plan requirements to ensure proposals did not lead to further deterioration of existing air quality. Following discussions and implementation of the identified strategies, compliance with the London Plan was achieved.

Arcade Street, Wigan

Odour Assessment in support of a conversion from existing offices to provide seven apartments. The proposals were located in close proximity to a number of hot food takeaways. As such, the Local Authority raised concerns that odour emissions may cause loss of amenity to future residents. A programme of Field Odour Surveys was undertaken to assess odour impacts from said premises. Results indicated odour effects at the site were not considered significant.

Placefirst, Exchange Quay

Workplace Air Quality Monitoring to investigate concerns that employees may be at risk of exposure to poor air quality as a result of the existing ventilation. Following a previous programme of monitoring, relative humidity levels (RH) were below the Health and Safety Executive guidelines (HSE). As such, an additional programme of monitoring was undertaken. This included monitoring of inhalable and respirable dusts, Volatile Organic Compounds, Carbon dioxide, RH and temperature. Results indicated all parameters were below the relevant WELs and within HSE guidelines.

Appendix 5 –Transport Scoping Note

Proposed Residential Development (Affordable Living) at Lower Falinge, Rochdale

Highways Pre-Application Scoping Note

A26077

1. Introduction

- 1.1. Astute have provided this Highways Scoping Note (HSN) on behalf of Rochdale Borough Council Housing (RBCH) in relation to a proposed residential affordable living development at Lower Falinge, Rochdale.
- 1.2. The development proposals include providing new affordable living housing (up to 270 units) on two parcels of land (referenced in this HSN as eastern and western development sites), noting:
 - Western Development Site: Demolition of seven residential blocks consisting of 150 residential units to re-provide 141 residential units (net change minus nine residential units).
 - Eastern Development Site: up to 129 new residential units.
- 1.3. The development would therefore result in the provision of an additional 120 dwellings across the application sites. More details on the development proposals are provided in **Section 3**. Indicative site boundaries are shown in **Figure 2.1**, with current scheme plans included in **Appendix A**.
- 1.4. This HSN seeks to outline the proposals and agree the Transport Assessment (TA) methodology for the outline planning application, as required by Rochdale Borough Council (RBC) as the Local Highway Authority (LHA).

2. Site and Surrounding Planning History

- 2.1. The proposed development sites are situated within Lower Falinge and consist primarily of existing affordable housing, vacant land and landscaping. Indicative site boundaries of both development sites are shown in **Figure 2.1**.

Figure 2.1: Indicative Development Site Boundaries (Basemap Source: CartoDB)



- 2.2. Both sites are situated close to the A58, which is a main arterial road through Rochdale, providing connectivity towards Halifax to the northeast and Oldham, Bury and Manchester to the southwest. Both sites currently take access from surrounding residential roads, such as Redcross Street and Sheriff Street.
- 2.3. Both development sites are in close proximity to Rochdale Town Centre, which is situated approximately 500m to the southeast, providing access to a range of employment, retail and leisure uses.
- 2.4. There is no notable planning history for the development sites or surrounding area, with most current planning applications consisting of alterations to existing residential properties.

3. Development Proposals

Development Quantum

- 3.1. As mentioned, the proposals at this stage include providing new affordable living housing (up to 270 units) on two parcels of land, consisting of:
- Western Development Site: Demolition of seven residential blocks consisting of 150 residential units to re-provide 141 residential units (net change minus nine residential units).
 - Eastern Development Site: up to 129 new residential units.
- 3.2. The internal layout will be developed in accordance with national and local guidance and standards, in relation to street and junction design, parking requirements and servicing arrangements.

Access Arrangements

- 3.3. Access arrangements for both development sites will utilise the existing local road network as outlined below.
- 3.4. The proposed access strategy seeks to make efficient use of the existing highway infrastructure, minimising the extent of new highway works required whilst maintaining suitable access for residents, visitors, servicing and emergency vehicles.
- 3.5. Pedestrian and cycle movements will continue to be accommodated via the surrounding network of streets and footways, providing connectivity between the development, Rochdale Town Centre and nearby services, facilities and public transport connections.

Western Development Site

- 3.6. The principal vehicular access to the western development site will be provided via the existing priority controlled junction on Sheriff Street. This access will serve as the primary point of entry and exit for residents, visitors and servicing vehicles associated with the development.
- 3.7. In addition, three vehicular access points are proposed from Lower Falinge along the eastern boundary of the site. These comprise:
- Two accesses serving a resident parking courtyards/ forecourts, providing direct access to associated residential parking spaces.
 - A one-way vehicular access connecting Lower Falinge to the internal site road network. This access will serve a number of parking spaces and provide a secondary route through the site, with vehicles able to continue towards and exit via Sheriff Street.
- 3.8. The proposed access arrangement has been designed to distribute vehicular movements across the surrounding highway network, whilst providing convenient access to the proposed residential units and associated parking facilities.

- 3.9. The access strategy also promotes permeability throughout the site, ensuring suitable access for residents, visitors, servicing vehicles and emergency vehicles, whilst maintaining integration with the surrounding street network.

Eastern Development Site

- 3.10. Vehicular access within the eastern development site will primarily be achieved via the existing local highway network, including Redcross Street, High Street, Toad Lane and Old Mill Street. These routes currently provide access to the surrounding urban area and will continue to serve the proposed development.
- 3.11. As part of the proposals, new priority controlled accesses will be provided on both sides of Redcross Street within the site boundary. These junctions will facilitate access to some proposed residential units and have been designed to integrate with the existing highway network while maintaining appropriate levels of accessibility and connectivity.
- 3.12. Existing servicing arrangements for the Lidl food store will be retained, with all servicing and delivery vehicles continuing to access the site via High Street. The proposed development will therefore not affect the established servicing operation of the food store.

4. Assessment Methodology

- 4.1. We note Transport Planning documentation will be provided in line with RBC's adopted Core Strategy document¹, noting residential developments of over 80 units or more will require a Transport Assessment (TA) and Travel Plan (TP).
- 4.2. To support the outline planning application, for the proposals outlined, the following will be provided for approval by RBC.

Transport Assessment (TA)

- 4.3. As part of the TA, the following matters will be considered:
- A review of pertinent national and local planning policy guidance and relevant planning background for the proposed site.
 - A review of the baseline highway conditions in the vicinity of the proposed site to include:
 - A description of the highway network local to the proposed development site.
 - Details of existing traffic conditions, with a focus on the weekday AM and PM peak periods.
 - A review of injury accident trends on the local highway network to establish whether there are any existing highway safety issues in the vicinity of the proposed site that might be impacted by the proposals, using Crashmap or STATS19 data.
 - Consideration of committed developments in the area.

¹ <https://www.rochdale.gov.uk/downloads/file/405/core-strategy>

- An audit of the accessibility of the proposed site by sustainable modes of transport, including walking, cycling and public transport.
- A description of the proposed development including the access strategy. This will include presentation of general arrangement drawings of the proposed site access junctions, including suitable visibility splays and vehicle swept path analysis.
- Undertake a traffic impact assessment to support the proposed development, including discussion surrounding servicing, emergency vehicle access and car parking.

Trip Generation Methodology

Understanding Resident Mode Split

- 4.4. The Greater Manchester Travel Diary Survey 2024 (TRADS) provides a robust evidence base on travel behaviour across Greater Manchester (GM).
- 4.5. The Rochdale specific TRADS 2024² dataset includes detailed travel information for all household members aged five years and above, capturing the characteristics of travellers and their trips, including journey purpose, travel mode and trip length.
- 4.6. The mode share profile for Rochdale residents, across all journey purposes, has been derived from TRADS 2024. This has been benchmarked against GM TRADS 2024 data and 2011 Census (Rochdale 010 MSOA) journey to work mode share data to provide an understanding of local travel behaviour within a wider context, as shown in **Table 4.1**.
- 4.7. It should be noted that the Census data relates solely to journeys to work, whereas TRADS captures travel behaviour across all journey purposes and therefore provides a more comprehensive representation of overall travel patterns.

Table 4.1: Local Mode Share

Mode of Travel	Rochdale TRADS 2024	Rochdale 010 MSOA (Census 2011)	GM Wide TRADS 2024
Walk	32%	21%	30%
Bicycle	2%	1%	3%
Motorcycle, Scooter, Moped	0%	0%	0%
Car or Van Driver	37%	48%	38%
Passenger	22%	8%	20%
Train	1%	3%	1%
Metrolink	0%	0%	1%
Bus, Minibus, Coach	3%	13%	5%
Taxi	2%	4%	2%
Other	0%	1%	0%

- 4.8. As shown, the comparison between the Rochdale TRADS 2024 and Census 2011 journey to work data indicates several changes in travel behaviour, most notably a reduction in the proportion of trips undertaken by private car. Whilst the Census 2011 data recorded a higher proportion of vehicle based trips, the TRADS 2024 survey suggests a greater uptake of sustainable travel modes, including walking and cycling.

- 4.9. Given the thirteen year period between the two datasets, these changes are not unexpected. During this time, Rochdale has benefited from significant investment in sustainable transport infrastructure and services, including the expansion of the Bee Network, improvements to public transport provision and the delivery of active travel measures within Rochdale Town Centre and the wider borough. These interventions are likely to have influenced travel choices and contributed to changes in mode share.
- 4.10. The comparison between Rochdale and GM wide TRADS datasets also shows there is comparable mode share across the region.
- 4.11. On this basis, it is considered appropriate to utilise the Rochdale TRADS 2024 dataset as the primary source of mode share information for this assessment, as it provides the most recent and locally representative evidence of travel behaviour within the study area.

Trip Generation

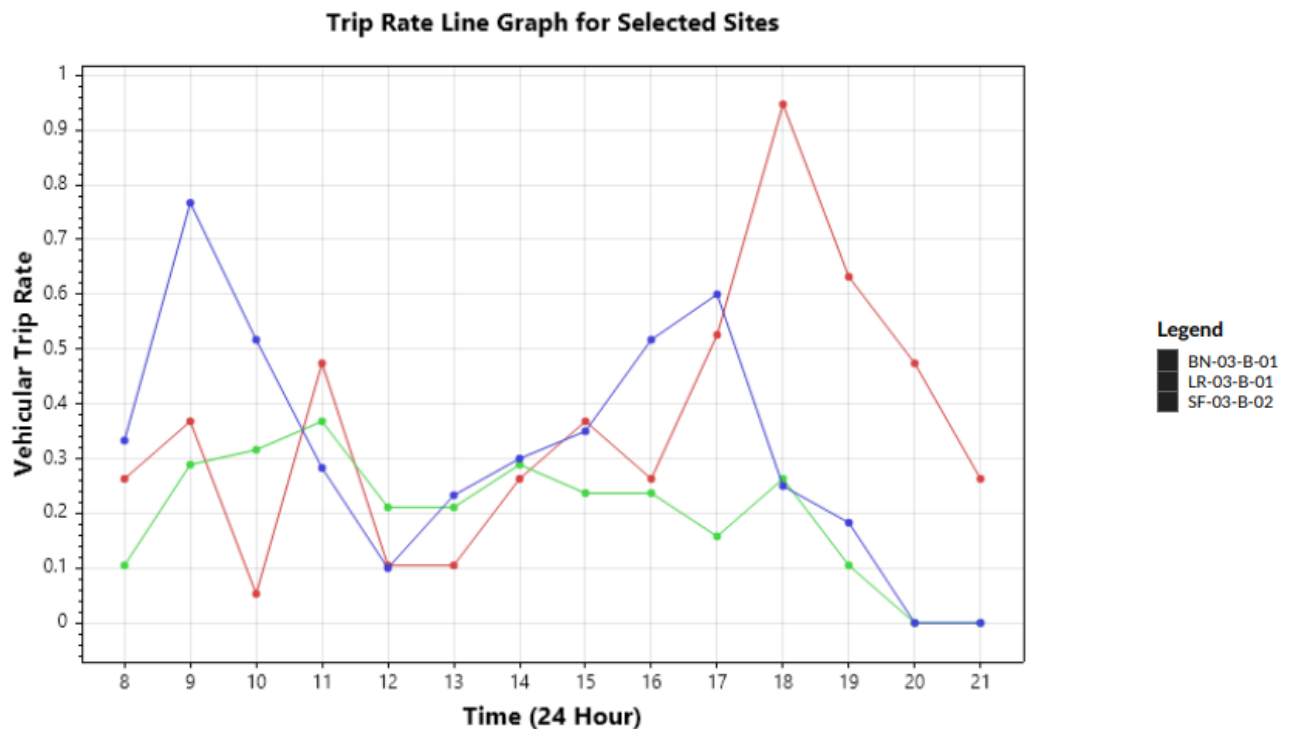
- 4.12. As discussed, the western development site will involve the demolition of seven residential blocks comprising 150 residential units, which will be replaced with 141 residential units. This represents a net reduction of nine residential units. As a result, a corresponding reduction in both resident population and associated person and vehicle trips is anticipated at this site.
- 4.13. Therefore, the eastern development site is expected to be the primary source of new trip generation, as the proposed development will introduce additional residential units to the area and local highway network.
- 4.14. For clarity, the trip generation associated with both development sites is presented below.
- 4.15. To establish development trip generation, the industry-standard Trip Rate Information Computer System (TRICS) database (Version 8.26.3) has been interrogated to identify suitable survey sites from which representative trip rates can be derived. Given the proposed development comprises affordable residential accommodation, the following TRICS selection parameters were applied to identify comparable sites:
- Multi-modal surveys only.
 - Land Use: Residential – Affordable / Local Authority Houses.
 - Survey date range: 2020–2025.
- 4.16. A review of the TRICS database identified a limited number of suitable multi-modal survey sites within the selected land use category, with only three surveys available within the most recent five-year period (2020–2025). This reflects the relatively small sample size available nationally for this specific residential classification.

Figure 4.1: Available Multi-Modal TRICS Sites – Affordable/ Local Authority Houses

Reference	Description	Map	Area	Town/City	Location Type	Site Area
 BN-03-B-01	SEMI-DETACHED & TERRACED		BARNET, GREATER LONDON	EDGWARE	Edge of Town	0.56
 LR-03-B-01	SEMI-DETACHED & TERRACED		LEICESTER, EAST MIDLANDS	LEICESTER	Suburban Area	1.21
 SF-03-B-02	MIXED HOUSES & FLATS		SUFFOLK, EAST ANGLIA	IPSWICH	Edge of Town	2.07

4.17. The hourly vehicular trip rates recorded at the selected survey sites are presented in **Figure 4.2**.

Figure 4.2: Available Multi-Modal TRICS Sites – Vehicular Trip Rates



4.18. As shown in **Figure 4.2**, the selected survey sites exhibit broadly comparable trip generation characteristics throughout the day, with similar patterns of travel demand observed during the AM, inter-peak and PM periods.

4.19. Whilst some variation exists in the magnitude and timing of peak hour movements, particularly during the PM period, the overall trip making profiles are considered consistent with the expected travel characteristics of affordable residential developments.

4.20. It is therefore considered that the selected TRICS surveys provide a robust and representative evidence base from which development trip rates can be derived for the proposed development.

4.21. The total people trip generation for both development sites as shown in **Table 4.2** and **Table 4.3**, with the resultant trip rates shown in brackets. **Table 4.4** shows the combined total people trip generation for both development sites.

Table 4.2: Total People Trip Generation - Eastern Development Site (129 Units)

Time	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)		
	Arr	Dep	Total	Arr	Dep	Total
Total People	22 (0.171)	142 (1.103)	164 (1.274)	62 (0.479)	26 (0.205)	88 (0.684)

Table 4.3: Total People Trip Generation - Western Development Site (141 Units)

Time	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)		
	Arr	Dep	Total	Arr	Dep	Total
Total People	24 (0.171)	156 (1.103)	180 (1.274)	68 (0.479)	29 (0.205)	96 (0.684)

Table 4.3: Total People Trip Generation - Both Development Sites (270 Units)

Time	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)		
	Arr	Dep	Total	Arr	Dep	Total
Total People	46	298	344	129	55	185

4.22. Applying the Rochdale TRADS 2024 vehicle (car, van and motorcycle) mode share to the above total people trip generation, anticipated vehicle movements to and from the site are shown in **Table 4.4** and **Table 4.5** for each development site, including net change when compared to the existing land uses.

4.23. **Table 4.6** shows the anticipated total vehicle generation for both development sites combined.

Table 4.4: Vehicle Trip Generation - Eastern Development Site (129 Units)

Time	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)		
	Arr	Dep	Total	Arr	Dep	Total
Existing: 0 Units	0	0	0	0	0	0
Proposed: 129 Units	8	53	61	23	10	33
Net change (+/-)	+8	+53	+61	+23	+10	+33

Table 4.5: Vehicle Trip Generation - Western Development Site (141 Units)

Time	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)		
	Arr	Dep	Total	Arr	Dep	Total
Existing: 150 Units	9	61	71	27	11	38
Proposed: 141 Units	9	58	66	25	11	36
Net change (+/-)	0	-4*	-4*	-2	0	-2

*Rounding error

Table 4.6: Total Vehicle Trip Generation - Both Development Sites (256 Units)

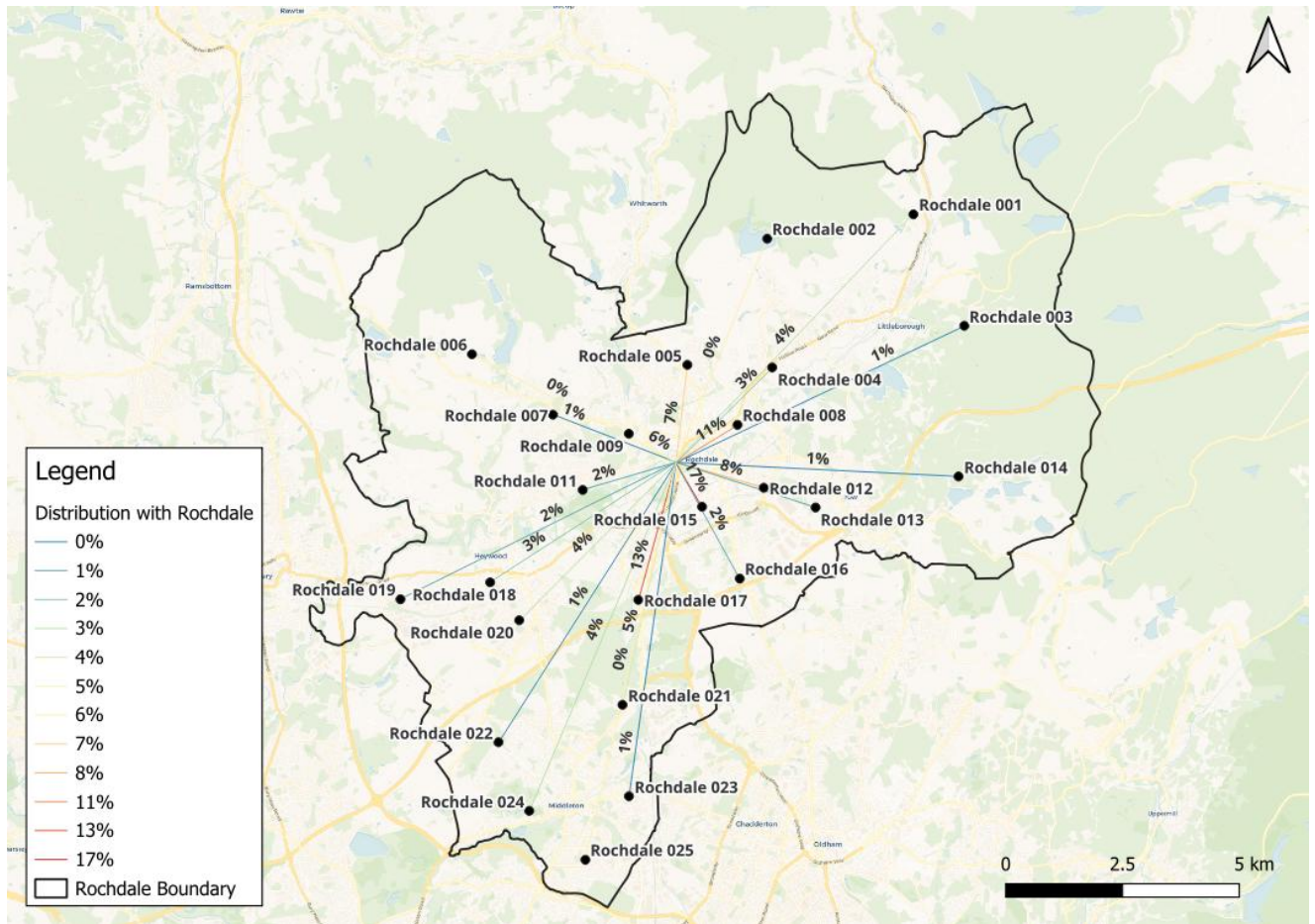
Time	AM Peak (08:00 - 09:00)			PM Peak (17:00 - 18:00)		
	Arr	Dep	Total	Arr	Dep	Total
Vehicles	8	49	57	21	10	31

- 4.24. As shown, taking into consideration the replacement of existing residential units associated with the western development site, which already generates traffic, the development proposals are anticipated to generate a modest level of additional vehicle trips, with 57 and 31 two-way trips in the AM and PM peaks, respectively.

Trip Distribution

- 4.25. To inform vehicle trip distribution on the network, the Rochdale specific TRADS 2024 dataset has been examined, which provides, all-purpose trip destinations, noting:
- Rochdale: 82%.
 - Oldham: 5%.
 - Manchester: 5%.
 - Bury: 5%.
 - Bolton: 1%.
 - Salford: 1%.
- 4.26. As shown, most all-purpose trips take place within Rochdale. To inform this further, the Census 2011 location of usual residence and place of work dataset has been examined at MOSA level. The local distribution within Rochdale is shown in **Figure 4.3**, with most people travelling to local areas such as Rochdale Town Centre, Deeplish, Castleton and Wardleworth.

Figure 4.3: Local Distribution within Rochdale



4.27. Based on the above analysis, traffic will be distributed:

- 7% north on Whitworth Road.
- 31% east on the A58.
- 54% south on the A58.
- 8% west on Splotland Road.

Development Impact Assessment

Traffic Surveys

4.28. Traffic surveys will be undertaken during the following hours:

- 07:00 and 10:00 in the morning and;
- 16:00 and 19:00 in the evening.

4.29. As discussed, the western development site is anticipated to have a negligible impact on the local highway network, reflecting the net reduction of nine residential units compared with the existing situation. As the residents of these existing dwellings are already present on the site, their associated vehicle movements will be captured within the baseline traffic surveys and are therefore reflected in the observed traffic conditions.

- 4.30. Consequently, any material change in traffic conditions is expected to arise primarily from the eastern development site, resulting in an overall net increase of 120 additional residential units. This is forecast to result in a modest increase of approximately 57 and 31 two-way vehicle trips during the AM and PM peak hours, respectively.
- 4.31. On this basis, and having regard to the previously agreed development traffic distribution, the following junctions are proposed for assessment and survey (subject to agreement with RBC):
- Spotland Road/ St. Mary's Gate/ Hunter's Lane signalised junction.
 - Redcross Street/ St. Mary's Gate signalised junction; and
 - Redcross Street/ Howard Street priority junction.
- 4.32. Assessment Year Scenarios
- 4.33. The TA will assess the proposed development against future year assessment scenario of 2031 (+five years). These years are considered appropriate to reflect anticipated build out and future operational conditions.
- 4.34. The following assessment scenarios are proposed:
- 2031 'Without Development' scenarios, including committed development traffic and background traffic growth where appropriate.
 - 2031 'With Development' scenarios, including forecast development traffic associated with the proposals.
- 4.35. The above approach reflects established practice and enables the relative impact of the proposals to be assessed and quantified.

TA Confirmation

- 4.36. Confirmation and agreement from RBC, in its capacity as LHA in relation to the scope and methodology of the TA is appreciated, specifically in respect of the following matters:
- Any specific national, regional or local transport related policies and guidance that should be considered as part of the TA.
 - Any committed or allocated developments within the surrounding area that should be included within the assessment scenarios or cumulative impact assessment.
 - Confirmation that the proposed review of personal injury collision data, using either Crashmap or STATS19 data covering the most recent available five-year period, is acceptable.
 - Confirmation that the proposed accessibility audit methodology is appropriate, including any specific matters or destinations that the audit should address.
 - Confirmation that the proposed vision-led TA methodology is acceptable, including the approach to trip generation, mode share assumptions, distribution, assessment scenarios and junction assessment requirements.

- Confirmation as to whether there are any additional matters or sensitivities that the LHA expect to be considered as part of the TA process.

Framework Travel Plan (FTP)

4.37. In line with RBC Travel Plan guidance, the outline planning application will be supported by an FTP document which will identify a range of measures that can be implemented at the proposed site to meet various sustainable transport targets and objectives along with a programme for monitoring the FTP's progress.

4.38. The FTP will include:

- Consider the national and local transport related policy documentation.
- Undertake an assessment of the accessibility of the proposed site by sustainable modes, to include an assessment of cycling and public transport surrounding the proposed site.
- Provide details of the development proposals.
- Outline a range of initiatives for inclusion within the travel plan, to encourage travel by sustainable modes including car sharing, by public transport, bicycle and on foot, and to reduce the need to travel.
- Provide details of how the travel plan will be managed, outlining the role of the Travel Plan Coordinator (TPC), steering group and stakeholders.
- Outline the aim, objectives and targets for the FTP.
- Provide an action plan and marketing strategy to support the implementation of the travel plan at the proposed site.
- Outline the monitoring strategy for the FTP.

FTP Confirmation

4.39. Confirmation from RBC as the LHA in relation to the FTP is appreciated:

- Any recent TP guidance that should be referred to.
- Any specific national and local transport related policy to be considered in the TP.
- Any specific measures that should be progressed in relation to the TP.

Appendix A

Drawings



Drawing Title: Proposed Site Plan - Eastern Parcel
Date: 26.05.26
Drawing no: 1369-011
Scale: 1:500 @ A1
Drawn: GH

revision: A
revision notes: A 04/06/2026 High Street on-street parking removed as discussed with RBH.



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Drawing Title: Proposed Site Plan - Western Parcel
Date: 26.05.26
Drawing no: 1369-006
Scale: 1:500 @ A1
Drawn: GH

revision:
revision notes:



Appendix B

TRICS Outputs



Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 03 - RESIDENTIAL
Category: B - AFFORDABLE/LOCAL AUTHORITY HOUSES
Selected Vehicle Type: Total People

Selected regions and areas:			
01	GREATER LONDON		
	BN	BARNET	1 day
04	EAST ANGLIA		
	SF	SUFFOLK	1 day
05	EAST MIDLANDS		
	LR	LEICESTER	1 day

This section displays the number of survey days per TRICS® sub-region in the selected set.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Primary Filtering Selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter:	DWELLS
Actual Range:	19 to 60 (units:DWELLS)
Range Selected by User:	19 to 60 (units:DWELLS)
Parking Spaces Range:	24 - 104

Public Transport Provision:

Selection by:	All Surveys Included
Date Range:	22/03/20 to 30/04/25

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Friday	2 days
Thursday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	3
Direction ATC Count	0

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines

Selected Locations:

Edge of Town	2 days
Suburban Area	1 days

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	3 days
------------------	--------

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicle Counts:

Servicing vehicles Included	1 days
Servicing vehicles Unknown	2 days

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Secondary Filtering Selection:

Use Class:

C3

3 surveys

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

284 - 5495

Population within 1 mile:

20,001 to 25,000	1 surveys
25,001 to 50,000	1 surveys
50,001 to 100,000	1 surveys

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

125,001 to 250,000	1 surveys
250,001 to 500,000	1 surveys
500,001 or More	1 surveys

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	2 surveys
1.1 to 1.5	1 surveys

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Petrol filling station:		
This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.		
Travel Plan:		
No		3 surveys
This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.		
PTAL Rating:		
No PTAL Present		2 surveys
None		1 surveys
This data displays the number of surveys within the selected set by PTAL rating category.		
COVID-19 Restrictions:		
No		

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

1	BN-03-B-01	SEMI-DETACHED & TERRACED	BARNET
LUTHER CLOSE EDGWARE Edge of Town Residential Zone Number of dwellings: 19.00 DWELLS Survey date: Thursday 04/11/2021			
		Survey Type: Manual	
2	LR-03-B-01	SEMI-DETACHED & TERRACED	LEICESTER
COLEMAN ROAD LEICESTER Suburban Area Residential Zone Number of dwellings: 38.00 DWELLS Survey date: Friday 22/10/2021			
		Survey Type: Manual	
3	SF-03-B-02	MIXED HOUSES & FLATS	SUFFOLK
OLD NORWICH ROAD IPSWICH WHITTON Edge of Town Residential Zone Number of dwellings: 60.00 DWELLS Survey date: Friday 08/11/2024			
		Survey Type: Manual	

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

Total Vehicles

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.034	0.214	0.248
08:00-09:00	3	39	0.145	0.402	0.547
09:00-10:00	3	39	0.179	0.197	0.376
10:00-11:00	3	39	0.145	0.197	0.342
11:00-12:00	3	39	0.077	0.060	0.137
12:00-13:00	3	39	0.111	0.094	0.205
13:00-14:00	3	39	0.154	0.137	0.291
14:00-15:00	3	39	0.171	0.145	0.316
15:00-16:00	3	39	0.248	0.137	0.385
16:00-17:00	3	39	0.291	0.154	0.445
17:00-18:00	3	39	0.248	0.120	0.368
18:00-19:00	3	39	0.137	0.094	0.231
19:00-20:00	1	19	0.316	0.158	0.474
20:00-21:00	1	19	0.158	0.105	0.263
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			2.414	2.214	4.628

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	22/10/2021 - 08/11/2024
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

Total People

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.043	0.444	0.487
08:00-09:00	3	39	0.171	1.103	1.274
09:00-10:00	3	39	0.256	0.444	0.700
10:00-11:00	3	39	0.231	0.299	0.530
11:00-12:00	3	39	0.171	0.162	0.333
12:00-13:00	3	39	0.256	0.239	0.495
13:00-14:00	3	39	0.265	0.239	0.504
14:00-15:00	3	39	0.496	0.274	0.770
15:00-16:00	3	39	0.786	0.316	1.102
16:00-17:00	3	39	0.641	0.265	0.906
17:00-18:00	3	39	0.479	0.205	0.684
18:00-19:00	3	39	0.256	0.162	0.418
19:00-20:00	1	19	0.474	0.158	0.632
20:00-21:00	1	19	0.263	0.105	0.368
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			4.788	4.415	9.203

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	22/10/2021 - 08/11/2024
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

Cyclists

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.000	0.009	0.009
08:00-09:00	3	39	0.000	0.060	0.060
09:00-10:00	3	39	0.017	0.026	0.043
10:00-11:00	3	39	0.009	0.009	0.018
11:00-12:00	3	39	0.017	0.026	0.043
12:00-13:00	3	39	0.026	0.026	0.052
13:00-14:00	3	39	0.000	0.000	0.000
14:00-15:00	3	39	0.034	0.009	0.043
15:00-16:00	3	39	0.026	0.000	0.026
16:00-17:00	3	39	0.034	0.000	0.034
17:00-18:00	3	39	0.034	0.026	0.060
18:00-19:00	3	39	0.017	0.009	0.026
19:00-20:00	1	19	0.000	0.000	0.000
20:00-21:00	1	19	0.000	0.000	0.000
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.214	0.200	0.414

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	22/10/2021 - 08/11/2024
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

PSVs

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.000	0.000	0.000
08:00-09:00	3	39	0.000	0.000	0.000
09:00-10:00	3	39	0.000	0.000	0.000
10:00-11:00	3	39	0.000	0.000	0.000
11:00-12:00	3	39	0.000	0.000	0.000
12:00-13:00	3	39	0.000	0.000	0.000
13:00-14:00	3	39	0.000	0.000	0.000
14:00-15:00	3	39	0.000	0.000	0.000
15:00-16:00	3	39	0.000	0.000	0.000
16:00-17:00	3	39	0.000	0.000	0.000
17:00-18:00	3	39	0.000	0.000	0.000
18:00-19:00	3	39	0.000	0.000	0.000
19:00-20:00	1	19	0.000	0.000	0.000
20:00-21:00	1	19	0.000	0.000	0.000
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.000	0.000	0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	N/A - N/A
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

OGVs

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.000	0.000	0.000
08:00-09:00	3	39	0.009	0.009	0.018
09:00-10:00	3	39	0.009	0.000	0.009
10:00-11:00	3	39	0.017	0.017	0.034
11:00-12:00	3	39	0.000	0.009	0.009
12:00-13:00	3	39	0.000	0.000	0.000
13:00-14:00	3	39	0.009	0.000	0.009
14:00-15:00	3	39	0.000	0.009	0.009
15:00-16:00	3	39	0.000	0.000	0.000
16:00-17:00	3	39	0.000	0.000	0.000
17:00-18:00	3	39	0.000	0.000	0.000
18:00-19:00	3	39	0.000	0.000	0.000
19:00-20:00	1	19	0.000	0.000	0.000
20:00-21:00	1	19	0.000	0.000	0.000
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.044	0.044	0.088

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	22/10/2021 - 08/11/2024
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

Taxis

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.009	0.009	0.018
08:00-09:00	3	39	0.034	0.034	0.068
09:00-10:00	3	39	0.026	0.026	0.052
10:00-11:00	3	39	0.017	0.017	0.034
11:00-12:00	3	39	0.000	0.000	0.000
12:00-13:00	3	39	0.000	0.000	0.000
13:00-14:00	3	39	0.026	0.026	0.052
14:00-15:00	3	39	0.017	0.017	0.034
15:00-16:00	3	39	0.009	0.009	0.018
16:00-17:00	3	39	0.009	0.009	0.018
17:00-18:00	3	39	0.009	0.009	0.018
18:00-19:00	3	39	0.009	0.009	0.018
19:00-20:00	1	19	0.000	0.000	0.000
20:00-21:00	1	19	0.000	0.000	0.000
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.165	0.165	0.330

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	22/10/2021 - 08/11/2024
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

Cars

Calculation factor: 1 DWELLS

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.026	0.197	0.223
08:00-09:00	3	39	0.085	0.359	0.444
09:00-10:00	3	39	0.103	0.145	0.248
10:00-11:00	3	39	0.077	0.094	0.171
11:00-12:00	3	39	0.060	0.043	0.103
12:00-13:00	3	39	0.103	0.085	0.188
13:00-14:00	3	39	0.085	0.094	0.179
14:00-15:00	3	39	0.128	0.077	0.205
15:00-16:00	3	39	0.205	0.094	0.299
16:00-17:00	3	39	0.265	0.120	0.385
17:00-18:00	3	39	0.214	0.111	0.325
18:00-19:00	3	39	0.103	0.051	0.154
19:00-20:00	1	19	0.316	0.158	0.474
20:00-21:00	1	19	0.158	0.105	0.263
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			1.928	1.733	3.661

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	22/10/2021 - 08/11/2024
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

LGVs

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.000	0.009	0.009
08:00-09:00	3	39	0.017	0.000	0.017
09:00-10:00	3	39	0.034	0.026	0.060
10:00-11:00	3	39	0.034	0.060	0.094
11:00-12:00	3	39	0.017	0.009	0.026
12:00-13:00	3	39	0.009	0.009	0.018
13:00-14:00	3	39	0.034	0.017	0.051
14:00-15:00	3	39	0.026	0.043	0.069
15:00-16:00	3	39	0.026	0.026	0.052
16:00-17:00	3	39	0.009	0.017	0.026
17:00-18:00	3	39	0.009	0.000	0.009
18:00-19:00	3	39	0.000	0.000	0.000
19:00-20:00	1	19	0.000	0.000	0.000
20:00-21:00	1	19	0.000	0.000	0.000
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.215	0.216	0.431

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	22/10/2021 - 08/11/2024
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

Motorcycles

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.000	0.000	0.000
08:00-09:00	3	39	0.000	0.000	0.000
09:00-10:00	3	39	0.009	0.000	0.009
10:00-11:00	3	39	0.000	0.009	0.009
11:00-12:00	3	39	0.000	0.000	0.000
12:00-13:00	3	39	0.000	0.000	0.000
13:00-14:00	3	39	0.000	0.000	0.000
14:00-15:00	3	39	0.000	0.000	0.000
15:00-16:00	3	39	0.009	0.009	0.018
16:00-17:00	3	39	0.009	0.009	0.018
17:00-18:00	3	39	0.017	0.000	0.017
18:00-19:00	3	39	0.026	0.034	0.060
19:00-20:00	1	19	0.000	0.000	0.000
20:00-21:00	1	19	0.000	0.000	0.000
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.070	0.061	0.131

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	04/11/2021 - 08/11/2024
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

Vehicle Occupants

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.034	0.291	0.325
08:00-09:00	3	39	0.128	0.581	0.709
09:00-10:00	3	39	0.179	0.274	0.453
10:00-11:00	3	39	0.137	0.231	0.368
11:00-12:00	3	39	0.085	0.068	0.153
12:00-13:00	3	39	0.145	0.111	0.256
13:00-14:00	3	39	0.145	0.145	0.290
14:00-15:00	3	39	0.231	0.154	0.385
15:00-16:00	3	39	0.350	0.162	0.512
16:00-17:00	3	39	0.436	0.214	0.650
17:00-18:00	3	39	0.333	0.154	0.487
18:00-19:00	3	39	0.197	0.120	0.317
19:00-20:00	1	19	0.421	0.158	0.579
20:00-21:00	1	19	0.211	0.105	0.316
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			3.032	2.768	5.800

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	22/10/2021 - 08/11/2024
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

Pedestrians

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.009	0.085	0.094
08:00-09:00	3	39	0.043	0.239	0.282
09:00-10:00	3	39	0.051	0.085	0.136
10:00-11:00	3	39	0.085	0.051	0.136
11:00-12:00	3	39	0.043	0.051	0.094
12:00-13:00	3	39	0.060	0.077	0.137
13:00-14:00	3	39	0.085	0.068	0.153
14:00-15:00	3	39	0.154	0.077	0.231
15:00-16:00	3	39	0.231	0.128	0.359
16:00-17:00	3	39	0.094	0.043	0.137
17:00-18:00	3	39	0.060	0.017	0.077
18:00-19:00	3	39	0.026	0.034	0.060
19:00-20:00	1	19	0.053	0.000	0.053
20:00-21:00	1	19	0.053	0.000	0.053
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			1.047	0.955	2.002

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP \times FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	22/10/2021 - 08/11/2024
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

Public Transport Users

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.000	0.060	0.060
08:00-09:00	3	39	0.000	0.222	0.222
09:00-10:00	3	39	0.009	0.060	0.069
10:00-11:00	3	39	0.000	0.009	0.009
11:00-12:00	3	39	0.026	0.017	0.043
12:00-13:00	3	39	0.026	0.026	0.052
13:00-14:00	3	39	0.034	0.026	0.060
14:00-15:00	3	39	0.077	0.034	0.111
15:00-16:00	3	39	0.179	0.026	0.205
16:00-17:00	3	39	0.077	0.009	0.086
17:00-18:00	3	39	0.051	0.009	0.060
18:00-19:00	3	39	0.017	0.000	0.017
19:00-20:00	1	19	0.000	0.000	0.000
20:00-21:00	1	19	0.000	0.000	0.000
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.496	0.498	0.994

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	22/10/2021 - 08/11/2024
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

Bus/Tram Passengers

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.000	0.051	0.051
08:00-09:00	3	39	0.000	0.145	0.145
09:00-10:00	3	39	0.009	0.051	0.060
10:00-11:00	3	39	0.000	0.009	0.009
11:00-12:00	3	39	0.017	0.017	0.034
12:00-13:00	3	39	0.017	0.026	0.043
13:00-14:00	3	39	0.034	0.017	0.051
14:00-15:00	3	39	0.060	0.034	0.094
15:00-16:00	3	39	0.137	0.026	0.163
16:00-17:00	3	39	0.051	0.009	0.060
17:00-18:00	3	39	0.051	0.009	0.060
18:00-19:00	3	39	0.017	0.000	0.017
19:00-20:00	1	19	0.000	0.000	0.000
20:00-21:00	1	19	0.000	0.000	0.000
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.393	0.394	0.787

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	22/10/2021 - 08/11/2024
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

Coach Passengers

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.000	0.000	0.000
08:00-09:00	3	39	0.000	0.000	0.000
09:00-10:00	3	39	0.000	0.000	0.000
10:00-11:00	3	39	0.000	0.000	0.000
11:00-12:00	3	39	0.000	0.000	0.000
12:00-13:00	3	39	0.000	0.000	0.000
13:00-14:00	3	39	0.000	0.000	0.000
14:00-15:00	3	39	0.000	0.000	0.000
15:00-16:00	3	39	0.000	0.000	0.000
16:00-17:00	3	39	0.000	0.000	0.000
17:00-18:00	3	39	0.000	0.000	0.000
18:00-19:00	3	39	0.000	0.000	0.000
19:00-20:00	1	19	0.000	0.000	0.000
20:00-21:00	1	19	0.000	0.000	0.000
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.000	0.000	0.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	N/A - N/A
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

Total Rail Passengers

Calculation factor: 1 DWELLS

*BOLD print indicates peak (busiest) period

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	3	39	0.000	0.009	0.009
08:00-09:00	3	39	0.000	0.077	0.077
09:00-10:00	3	39	0.000	0.009	0.009
10:00-11:00	3	39	0.000	0.000	0.000
11:00-12:00	3	39	0.009	0.000	0.009
12:00-13:00	3	39	0.009	0.000	0.009
13:00-14:00	3	39	0.000	0.009	0.009
14:00-15:00	3	39	0.017	0.000	0.017
15:00-16:00	3	39	0.043	0.000	0.043
16:00-17:00	3	39	0.026	0.000	0.026
17:00-18:00	3	39	0.000	0.000	0.000
18:00-19:00	3	39	0.000	0.000	0.000
19:00-20:00	1	19	0.000	0.000	0.000
20:00-21:00	1	19	0.000	0.000	0.000
21:00-22:00					
22:00-23:00					
23:00-00:00					
Total Rates:			0.104	0.104	0.208

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Audit Code: 09953eb8-245f-4c4b-bc10-22b5ff9674ac

Parameter Summary:

Trip rate parameter range selected:	19 - 60 (units: DWELLS)
Survey date date range:	22/10/2021 - 08/11/2024
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

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