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AtkinsRéalis



MANCHESTER DIGITAL CAMPUS

Environmental Statement
Volume 2 - Chapter 14: Human Health

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Executive Summary

Human Health assessment is integral for a development in identifying potential health risks and identifying ways to enhance community well-being. It assesses the potential impacts of a development on a wide range of determinants of health to the local community, in particular focusing on sensitive/vulnerable groups. By addressing these health impacts, the Proposed Development can promote a healthier living environment, contributing to the long-term sustainability and quality of life.

This chapter reports on the range of impacts on determinants of human health and explains how these impacts may have effects on the wider population, as well as sensitive/vulnerable sub-groups within the study area. The assessment considers the construction phase and the operation phase separately. This assessment is based on the characteristics of the Proposed Development as a high quality design.

The method of assessment for Human Health within a defined study area involves:

- Identifying sensitive receptors – the receptors that have the potential to be affected by the Proposed Development (both positively or negatively) are identified, including the identification of sensitive/vulnerable sub-groups that could be more susceptible to effects arising from impacts of the Proposed Development;
- Identifying wider determinants of health - a diverse range of social, economic and environmental factors that influence people's mental and physical health considered relevant to the Proposed Development are described;
- Assessment criteria – the criteria for assessing the sensitivity of receptors, magnitude of impact and significance of effects (both positive and negative) of changes to the wider health determinants on sensitive receptors.

Human health receptors have been identified and clustered on the basis of shared physical characteristics and/or location. The impacts are assessed under following the topics:

- Ambient air quality – construction and operation.
- Ambient noise – construction and operation.
- Sources of pollution and environmental exposures – construction and operation.
- Townscape amenity – construction and operation.
- Risk of injuries and death - construction.
- Characteristics of the transport network - construction.
- Access to private property and housing - construction.
- Access to work and training– construction and operation.
- Community assets supporting health – construction and operation.
- Green space, open space, recreation, and leisure-time activities – construction and operation.
- Walking and cycling routes supporting human health – construction.

The construction phase mitigation relies on the commitments provided within the Outline Construction Environmental Management Plan, with additional mitigation including ongoing monitoring and the appointment of a Community Liaison Officer to keep the community informed and address complaints throughout the construction period. Operational additional mitigation is drawn from the contributing topic chapters and includes a commitment to using the detailed design stage to resolve specific issues through further technical analysis.

The residual effects assessment considers these mitigations and concludes that potential effects during construction and operation may range from minor adverse to minor beneficial, none of which are deemed significant.

14. Human Health

14.1. Introduction

14.1.1. This chapter of the Environmental Statement (ES) assesses the likely effects of the Proposed Development with respect to human health. It outlines the assessment methodology, describes the existing baseline conditions, identifies potential impacts and provides an assessment of effects. The chapter also details the mitigation measures necessary to prevent, reduce, or offset any significant adverse effects, and discusses the likely residual effects after these measures have been implemented.

14.1.2. This chapter reports on two different types of cumulative effects: intra-project cumulative effects, which are the combined effects of individual topic impacts on a particular sensitive receptor; and inter-project cumulative effects, which consider the way in which the Proposed Development may give rise to impacts in combination with other developments the study area, termed Reasonably Foreseeable Future Projects (RFFPs). The outlined cumulative effects are then used to inform the overall assessment of cross-topic cumulative effects, which is reported in ES (Volume 2) Chapter 22: Cumulative Effects.

14.1.3. This chapter is supported by and has been informed by figures contained within ES Volume 5, and also by a technical appendix contained within ES (Volume 4) Appendix 14, which includes the following:

- ES (Volume 4) Appendix 14.1 – Human Health Assessment Appendices
- ES (Volume 5) Figure 14.1 – Wards
- ES (Volume 5) Figure 14.2 – Human Health Baseline Context

Report Structure

14.1.4. The remaining sections of this chapter are structured as follows:

- Section 14.2 provides details of the competencies of the team that have produced the chapter.
- Section 14.3 summarises the relevant national, regional, and local policies and strategies associated with health and wellbeing. This is supported by ES (Volume 4) Appendix 14.1.
- Section 14.4 sets out the methodology used to undertake the assessment and details the determinants of health considered in the assessment.
- Section 14.5 sets out the study area and human health baseline conditions.
- Section 14.6 describes the potential impacts of the Proposed Development during both construction and operation.
- Section 14.7 identifies the likely significant environmental effects (beneficial and adverse) resulting from the Proposed Development (including embedded mitigation), during both construction and operation.
- Section 14.8 outlines the additional mitigation measures introduced for construction and operational stages measures, proposed to lessen the magnitude of significant adverse environmental effect.
- Section 14.9 identifies the residual effects (significant and non-significant) resulting from the Proposed Development after all mitigation measures (embedded and additional) have been implemented.

- Section 14.10 identifies the Intra-project and Inter-project cumulative effects from the perspective of the human health topics resulting from the Proposed Development, and the Proposed Development plus RFFPs, respectively.
- Section 14.11 provides a summary and the overall conclusions of the human health effects assessment.

14.2. Competent expert evidence

14.2.1. This assessment has been undertaken and reported by a team of competent population and human health practitioners.

14.2.2. The competent expert with overall responsibility for the assessment is an Associate Director, chartered member of the Royal Town Planning Institute (RTPI) who has an MA in Town and Country Planning and over 24 years of relevant experience, who has applied their knowledge and professional judgement to confirm the conclusions of this assessment. Relevant experience includes undertaking strategic environmental assessment (SEA), sustainability appraisal (EA), integrated impact assessment (IIA) and EIA work for strategic plan making and major infrastructure and linear projects, including highways, for which the processes of EIA or SA/SEA have been required, including consideration of social effects, encompassing equality and health.

14.3. Relevant legislation, policy and guidance

14.3.1. There is a range of legislation, policy and guidance on strategic approaches to health applicable to Human Health Assessment. The following documents are considered to be of particular relevance and summaries can be found in ES (Volume 4) Appendix 14.1 – Human Health Assessment Appendices:

National

- National Planning Policy Framework[1], December 2023
- Planning Practice Guidance (PPG)[2], with particular reference to Health and Safe Communities (2014)
- Fair Society, Healthy Lives (the Marmot Review) 2010 and Health Equity in England (the Marmot Review 10 Years On) 2020[3]
- Sustainable Communities Act 2007
- Equality Act 2010
- Public Health Outcomes Framework
- Public Health England (PHE) Strategy 2020-2025

Regional

[1] National Planning Policy Framework - Guidance - GOV.UK (www.gov.uk)

[2] Department for Levelling Up, Housing and Communities (2024). Planning Practice Guidance [Online]. Available from: Planning practice guidance - GOV.UK (www.gov.uk)

[3] Feb 2020 Health Equity in England: The Marmot Review 10 Years On - The Health Foundation

- Places for Everyone Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan 2022-2039 (2024)

Local

- Manchester's Core Strategy 2012 – 2027[4]
- Unitary Development Plan for the City of Manchester (the UDP) (1995)
- Former Central Retail Park regeneration framework (December 2022)
- Putting health at the heart of Greater Manchester: Improving health and care in Greater Manchester 2023-2028[5]
- Manchester Work and Skills Strategy 2022-2027
- Greater Manchester Strategy 2021-2031 – good lives for all
- Manchester Locality Plan – Our Healthier Manchester - 2021 Refresh
- Ancoats, Bradford and Clayton Integrated Neighbourhood Team Plan 2021 – 2022
- Manchester's Climate Change Action Plan 2020-2025
- Manchester's Children and Young People's Plan 2020-2024
- Family Poverty Strategy 2017-2022
- Manchester Population Health Plan (2018-2027)
- Manchester: a great place to grow older 2017-2021
- Eastlands Regeneration Framework – Draft for Consultation 2017
- Ancoats and New Islington Neighbourhood Development Framework 2016
- East Manchester Strategic Regeneration Framework 2008-2018

Technical standards and guidance

- Effective Scoping of Human Health in Environmental Impact Assessment 2022 [6]
- Determining Significance For Human Health In Environmental Impact Assessment 2022 [7]

14.4. Assessment methodology

Study area

14.4.1. By using professional judgement, industry best practice and knowledge gained in the assessment of similar schemes, the likely effects of the Proposed Development on human health will predominantly be

[4] Core Strategy 2012-2027 | Core Strategy 2012-2027 | Manchester City Council

[5] Greater Manchester Integrated Care Partnership. 2023. Improving health and care in Greater Manchester 2023-2028. Available at: gm-icp-strategy-190423.pdf (gmintegratedcare.org.uk)

[6] Pyper, R., Waples, H., Beard, C., Barratt, T., Hardy, K., Turton, P., Netherton, A., McDonald, J., Buroni, A., Bhatt, A., Phelan, E., Scott, I., Fisher, T., Christian, G., Ekermawi, R., Devine, K., McClenaghan, R., Fenech, B., Dunne, A., Hodgson, G., Purdy, J., Cave, B. (2022) IEMA Guide: Effective Scoping of Human Health in Environmental Impact Assessment.

[7] Pyper, R., Waples, H., Beard, C., Barratt, T., Hardy, K., Turton, P., Netherton, A., McDonald, J., Buroni, A., Bhatt, A., Phelan, E., Scott, I., Fisher, T., Christian, G., Ekermawi, R., Devine, K., McClenaghan, R., Fenech, B., Dunne, A., Hodgson, G., Purdy, J., Cave, B. (2022) IEMA Guide: Determining Significance for Human Health in Environmental Impact Assessment.

assessed within a study area encompassing the Proposed Development plus a 250m buffer extending outwards from the Proposed Development's Red Line Boundary.

14.4.2. Within this study area, the magnitude of impact on determinants of human health and the resultant effects on human health will generally, but not exclusively, be considered on the basis that the closer a sensitive receptor is to the Proposed Development, the greater the potential impact. However, the assessment also acknowledges that each population group, geographical group and individual has different susceptibilities, and some individuals or groups may experience changes to the baseline conditions in different ways.

14.4.3. The study areas defined in the assessment methodology sections for each of the other technical chapters that support the human health assessment in this EIA will also apply.

14.4.4. It is considered that these study areas will capture the most relevant human health effects likely to arise from the impacts of the Proposed Development on determinants of human health. As such, the assessment will provide an opportunity to identify ways in which health risks associated with the Proposed Development can be minimised and opportunities to improve health can be maximised.

Methodology

14.4.5. The assessment methodology has been developed in accordance with the requirements of the EIA Regulations 2017 and the IEMA guidance published in November 2022.

14.4.6. From a public health perspective, likely changes in, for example, air quality or noise levels are changes in determinants of health, not changes in health outcomes. Therefore, the consideration of potential impacts or effects on human health also requires a separate consideration of the way in which any change identified to the baseline conditions, including that identified in the other technical chapters of the EIA, can be expected to manifest itself in health and well-being outcomes. For example, a change in air quality can cause a change in respiratory health and noise or vibration can cause a change in social or mental wellbeing, and this can have particular impacts for the people who are more vulnerable or susceptible in the area. The assessment therefore considers the issue of attribution i.e. how the health outcomes in the current and future population could be affected (positively or negatively) as a result of impacts on determinants of human health caused by the Proposed Development.

14.4.7. Impacts on human heath can be influenced (both negatively and positively) individually or cumulatively by a range of wider health determinants and are further modified by local community circumstance such as living conditions and existing health profiles. Therefore, this human health assessment also considers the distribution of any potential impacts of the Proposed Development within the affected population, including potential impacts on the more vulnerable, sensitive, or disadvantaged population groups or individuals. The location and presence of these vulnerable groups within the study area and their profiles are described in more detail in Section 14.5 'Baseline Conditions' of this chapter.

14.4.8. The method of assessment for Human Health uses the following sequential steps:

- Study area – the study area relevant to human health is identified and summarised (set out above);
- Sensitive receptors – the receptors that have the potential to be affected by the Proposed Development (both positively or negatively) are identified, including the identification of sensitive/vulnerable groups that could be more susceptible to effects arising from impacts of the Proposed Development;

- Wider determinants of health – the wider determinants of health (i.e. a diverse range of social, economic and environmental factors that influence people's mental and physical health) considered relevant to the Proposed Development are identified and described;
- Sensitivity of receptors – the sensitivity of the receptors to changes to the wider health determinants are described, based on the criteria set out in the latest IEMA guidance; and
- Assessment criteria – the criteria for assessing the magnitude of impact and significance of effects (both positive and negative) of changes to the wider health determinants on sensitive receptors, as a result of the Proposed Development are described.

Identifying the Sensitive Receptors

14.4.9. The baseline data is used to identify specific groups, including the presence of vulnerable groups who are more susceptible to change, and their sensitivity to impacts predicted to arise from the Proposed Development. The sensitivity of an individual or population/ population sub-group varies depending on their ability to withstand exposures and the range of associated impacts or effects, and the physiological (e.g. co-morbidities or disabilities) and socio-economic factors that increase their susceptibility to the exposure. In broad terms, the population located within or closest to the Proposed Development would be most vulnerable or susceptible to changes occurring as a result of the activities associated with the Proposed Development. Although some of this population may not be 'vulnerable' in human health, social or other terms, they are likely to be more sensitive to any changes resulting from the Proposed Development.

14.4.10. The population groups identified as being more vulnerable or susceptible to impacts arising from the Proposed Development depends on the characteristics of the local population and the nature and proximity of the local population to the works and activities associated with the Proposed Development. The baseline study in Section 14.5 has identified the following vulnerable or sensitive population sub-groups as being present within the study area, and these vulnerable groups, along with the wider group, will form the basis of the assessment. The vulnerable groups listed below are not mutually exclusive e.g. an individual may fit into one or more of these vulnerable group categories:

- Families with children and adolescents (e.g. pregnant women, babies, children, and adolescents);
- People who are physically or mentally disadvantaged (e.g. elderly people, people with physical and/or disabilities, people with other health problems or impairments);
- People of certain ethnicity and/or gender; and
- People who are materially disadvantaged (e.g. people on low income, people without access to a car, unemployed people).

14.4.11. The general location, profile, and characteristics of these vulnerable or sensitive sub-groups, along with the wider group (e.g. characterised as residents, workers, contractors, users of local facilities etc.) is described in further detail in Table 14-7. This draws on information relating to the distribution of different types of land uses within the study area.

Wider determinants of health

14.4.12. In assessing how the activities associated with the Proposed Development are likely to give rise to effects on the health of people who use the Proposed Development and local communities, wider health determinants are used. Wider health determinants are a diverse range of social, economic, and environmental factors which have the potential to influence people's mental and physical health, and social wellbeing.

14.4.13. The IEMA guidance sets out indicative wider health determinants that should be considered in human health assessment (Table 5.1 of the guidance). The guidance also advocates providing an explanation of the relevant source (of a change to a health determinant), pathway (the way in which the change can affect health) and receptor (the way in which the change to the health determinant manifests, and to who), in order to provide details of the relationship between wider determinants of health and health outcomes.

14.4.14. By using the IEMA guidance and adapting this to the baseline conditions (see Section 14.5) and the location and nature of the Proposed Development, the following wider health determinants are considered relevant to the Proposed Development. Table 14-1 sets out the rationale for their inclusion within the assessment with reference to published materials and the baseline characteristics of the Site and study area (drawing on information presented in Section 14.5):

- Ambient air quality.
- Ambient noise.
- Sources of pollution and environmental exposures.
- Townscape amenity.
- Risk of injuries and death.
- Characteristics of the transport network.
- Access to private property and housing (also drawing on the relevant land use baseline).
- Access to work and training (also drawing on the relevant land use baseline).
- Community assets supporting health (also drawing on the relevant land use baseline).
- Green space, open space, recreation, and leisure-time activities (also drawing on the relevant land use baseline).
- Walking and cycling routes supporting human health (also drawing on the relevant land use baseline).

Table 14-1 - Overview of the Wider Determinants of Health identified for assessment (adapted from IEMA 2022)

Wider Determinant of Health	General description and relevance within the study area	Sensitivity to impacts arising from the Proposed Development
Ambient air quality	Air quality concerns in Manchester, including within the study area, are focused near to major roads and the heavily trafficked areas in Manchester city centre, including along the Inner Relief Road (Great Ancoats Street) which forms the southern boundary of the Site. The Proposed Development Red Line Boundary lies within the Greater Manchester Combined Authority (GMCA) Air Quality Management Area (AQMA), amended by MCC in 2016, for	Air pollution particularly affects the most vulnerable in society such as children and older people, and those with heart and lung conditions. There is also an important inequality dimension because areas with poor air quality are also often the less affluent areas[10], which is relevant to parts of the study area near the Site. Nitrogen oxides are harmful pollutants, which mostly come from road transport, particularly diesel vehicles. Short-term exposure is associated with exacerbation of asthma, effects on lung function,

[10] Public Health England – Guidance Health matters: air pollution (2018) (available at: Health matters: air pollution - GOV.UK)

Wider Determinant of Health	General description and relevance within the study area	Sensitivity to impacts arising from the Proposed Development
	exceedances of the annual mean NO_2 AQS objective[8]. Whilst predicted annual average data from the British Lung Foundation (2018) suggest that City Centre & Ancoats PCN practices are not located in areas which exceed WHO safe air pollution limits, it is acknowledged that actual PM2.5 levels may be greater in some areas when taking into consideration short-term exposure to high levels of fine particulate matter by the side of busy roads[9].	increases in hospital admissions and reduced life expectancy. Long-term exposure to air pollution reduces life expectancy by increasing deaths from lung, heart, and circulatory conditions[1112].
Ambient noise	Road traffic noise from the strategic roads in the study area, such as the Inner Relief Road (Great Ancoats Street) and Old Mill Street, is the dominant source of ambient noise in the study area. The Proposed Development site is located in a metropolitan area and as such external ambient noise levels are considered to be high. Noise Important Areas (NIA) are the areas where the top 1% of the population affected by the highest noise levels from major roads are located, according to the strategic noise mapping undertaken by Defra under the terms of the Environmental Noise (England) Regulations 2006, as amended. NIA 10962 falls within the limits of the Proposed Development Red Line Boundary, running westwards along the Inner Relief Road (Great Ancoats Street)[13]. NIA 10963 falls just outside the study area, approximately 475m to the east.	Noise is linked to potential negative effects on physical, social, and mental wellbeing[1415]. Potential health effects include hearing loss or loss of hearing sensitivity, sleep disturbance, cardiovascular and physiological effects, mental health effects and behavioural effects, including poor school performance by school children. The latter evidence is particularly relevant given the close proximity of the Site to Co-op Academy New Islington. With more people working from home in the aftermath of Covid-19 and changing working practices (which is relevant to the study area given the high density of nearby residential developments and presence of professional groups) some have discovered that the home office environment is not as quiet as they might have expected. A noisy background makes it difficult to concentrate on work, but it can also lead to issues such as stress and increase heart rate and blood pressure as well.
Sources of pollution and	Given the locality and historic use of the land, several potential sources of pollution	Pollutants and environmental exposures can have an adverse impact on the environment and

[8] Transport for Greater Manchester/ GMCA – Greater Manchester Air Quality Plan 2017-2021 (available at: Greater Manchester Air Quality Plan)

[9] Greater Manchester Primary Care Provider Board - Health Inequalities Data Report (April 2022) (available at: Mindful analytics (gmpcb.org.uk))

[11] Public Health England – Guidance Health matters: air pollution (2018) (available at: Health matters: air pollution - GOV.UK)

[12] WHO Ambient air pollution: Health impacts (https://www.who.int/airpollution/ambient/health-impacts/en/)

[13] Extrium – England Noise and Air Quality Reviewer (available at: Extrium > England Noise and Air Quality Viewer)

[14] WHO Noise (http://www.euro.who.int/en/health-topics/environment-and-health/noise/noise)

[15] WHO Noise (https://www.who.int/sustainable-development/transport/health-risks/noise/en/)

Wider Determinant of Health	General description and relevance within the study area	Sensitivity to impacts arising from the Proposed Development
environmental exposures	are likely to exist (e.g. from contaminated land or water) and a range of environmental exposures could occur.	human health. Therefore, development proposals need to be controlled to ensure that they do not expose existing and new receptors to levels/ impacts that are detrimental to healthy living or safety. Pollution can lead to public health impacts directly when people encounter polluted water and soil through recreation activities and/or indirectly through other activities.
Landscape amenity	The Proposed Development lies within the NCA Profile 55 'Manchester Conurbation'[16]. NCA55 is characterised by dense urban and industrial development, focused on the principal commercial, financial, retail, and cultural centre, with the many high-rise and landmark buildings giving the area a strong sense of identity.	The visible landscape is believed to affect people in many ways, including aesthetic appreciation and health and well-being. Good visible landscape is seen to reduce stress, improve attention capacity, assist with recovery from illness, aid physical well-being in elderly people, and improve mood and general well-being[17]. Bad visible landscape and adverse changes can have the opposite effect.
Risk of injuries and death	The study area includes a busy road network, including the Inner Relief Road (Great Ancoats Street) which can become heavily congested, and arterial roads such as Old Mills Street, alongside a busy WCH network and changing built environment where incidents and accidents can occur, including due to modal conflict.	Changes in traffic patterns and increases in road traffic, and the introduction of construction activities, construction sites and compounds, and traffic management can lead to incidents and accidents, potentially resulting in serious injury and fatalities. Evidence confirms that an individual's risk of injury may be affected by many social, personal, economic, and environmental factors. The physical environment such as infrastructure, land uses and built development can affect the rate of incidents, injuries, and death. Overall, children from the lowest social classes are five times more likely to die in road accidents than those from the highest social class[18][19]. Nationally, more than 1 in 4 child pedestrian casualties happen in the 10% most deprived wards[20]. Older people, particularly the frail

[16] Natural England - NCA Profile: 55 Manchester Conurbation (available at https://publications.naturalengland.org.uk/publication/)

[17] M.D.Velarde, G. Fry, M. Teveit (2007) Health effects of viewing landscapes – Landscape types in environmental psychology (accessed at https://www.sciencedirect.com/science/article/abs/pii/S1618866707000416)

[18] Natural England - NCA Profile: 55 Manchester Conurbation (available at https://publications.naturalengland.org.uk/publication/)

[19] Natural England - NCA Profile: 55 Manchester Conurbation (available at https://publications.naturalengland.org.uk/publication/)

[20] TheBMJ (2009) - Children in deprived areas at most risk of road injuries (available at: Children in deprived areas at most risk of road injuries | The BMJ)

Wider Determinant of Health	General description and relevance within the study area	Sensitivity to impacts arising from the Proposed Development
		elderly, and other vulnerable groups are also particularly susceptible. Trespass on construction sites can potentially result in serious injury and fatalities.
Characteristics of the transport network	Manchester forms a busy transport hub, interlinked with the surrounding areas by an extensive web of infrastructure into, out of, and around, the city centre. Roads, tramways, and railways all provide good connectivity to the area, whilst the Inner Relief Road, which forms the southern boundary of the Proposed Development serves to divert traffic around Manchester city centre.	Transport is vital as it allows access to family and friends, education, healthcare, community facilities, food, and jobs[21]. Well-designed sustainable transport systems support safe and community friendly streets and spaces, minimise harmful impacts on the environment and increase walking, cycling and public transport use. Efficient transport systems reduce socio-economic inequalities by allowing people access to jobs and health appointments, for example[22]. Conversely, over-reliance on the car impacts on air quality and noise and can foster inactive travel habits. As discussed in the section above, children living in deprived communities (such as Ancoats and Beswick ward) are much more likely to be casualties of a road traffic accident.
Access to work and training	Given the Proposed Development's edge of city centre location there are a large number of businesses nearby and in the study area. There are also pockets of unemployment, deprivation and poor health that can affect individuals and families and is a challenge to growth.	There is an association between economic activity, including local procurement, and health outcomes[23] [24]. Local patterns of employment can either increase or decrease the need for people to travel, and the greater the distances involved the more likely people are to rely on motorised transport and have complicated, expensive, and time-consuming journeys. Income and work are two of the most important determinants of health and wellbeing[25]. Employment and skills influence mental and physical health, with low education levels and

[21] The Health Foundation (2021) - How transport offers a route to better health (available at: https://www.health.org.uk/)

[22] Government Office for Science (2019) - Inequalities in Mobility and Access in the UK Transport System (accessed at: Future of mobility: inequalities in mobility and access in the UK Transport System)

[23] Avendano M, Berkman LF. Labor markets, employment policies, and health. In: Berkman LF, Kawachi I, Glymour MM, editors. Social Epidemiology. Oxford: Oxford University Press; 2014. p. 182–233 (synopsis available at: Avendano: Labor markets, employment policies, and health - Google Scholar)

[24] Bartley M, Ferrie J, Montgomery SM. Health and labour market disadvantage: unemployment, non-employment, and job insecurity. In: Marmot M, Wilkinson RG, editors. Social determinants of health. Oxford: Oxford University Press; 2006. p. 78–96 (synopsis available at: Bartley: Health and labour market disadvantage - Google Scholar)

[25] Public Health England (2017) - Research and analysis, Chapter 6: social determinants of health (available at: https://www.gov.uk/government/publications/health-profile-for-england/chapter-6-social-determinants-of-health)

Wider Determinant of Health	General description and relevance within the study area	Sensitivity to impacts arising from the Proposed Development
		unemployment linked with increased stress, lower self-confidence, increased rates of illness and premature death. Those on lower incomes due to low skills or unemployment are also less likely to be able to engage in healthy behaviours[26] such as paid classes, which impacts physical and mental health.
Community assets supporting human health	There are a number of community facilities within the study area, particularly Co-op Academy New Islington and New Islington Medical Practice, which lie adjacent to the Proposed Development, that provide a valuable service to the local community, community groups, or individuals.	Community assets covers a range of services and facilities that meet local and strategic needs and contribute towards a good quality of life. Education plays a major role in a person's overall health and wellbeing[27][28]. Education can affect us throughout our lifetime and has been shown to increase healthy behaviours and improve health outcomes, including obesity rates. Early education is particularly important because it sets the foundation for a healthy life. A skilled workforce enables businesses to compete regionally, nationally, and globally, which creates a stronger and more resilient economy. Skills are the biggest determinant of success for cities and are critical to achieving economic wellbeing[29]. The availability and use of healthcare services that prevent and treat disease, as well as other social infrastructure is important for promoting and maintaining health, preventing and treating disease, reducing unnecessary disability and premature death, and achieving health equality for the population. Groups more vulnerable to illness, such as the elderly and children, benefit disproportionately.
Green space, open space, recreation, and	There are several good quality open spaces and greenspaces and recreational activities (e.g. Cotton Fields Park and Marina) in the study area, which provide	Good quality open spaces and greenspaces, and recreational activities, close to where people live provide opportunities for quiet relaxation, sport, recreation, and play, providing enjoyment,

[26] Public Health England (2017) - Research and analysis, Chapter 6: social determinants of health (available at: https://www.gov.uk/government/publications/health-profile-for-england/chapter-6-social-determinants-of-health)

[27] Public Health England (2017) - Research and analysis, Chapter 6: social determinants of health (available at: https://www.gov.uk/government/publications/health-profile-for-england/chapter-6-social-determinants-of-health)

[28] Hahn RA, Truman BI (2015) - Education Improves Public Health and Promotes Health Equity (available at: Education Improves Public Health and Promotes Health Equity - PMC)

[29] Financial Times (2012) - Skills judged key to cities' success (available at: Skills judged key to cities' success)

Wider Determinant of Health	General description and relevance within the study area	Sensitivity to impacts arising from the Proposed Development
leisure-time activities	important opportunities for residents and others to enjoy the benefits of nature, the outdoors and physical activity.	encouraging healthy lifestyles, and benefiting mental well-being. They also form an essential component of local character providing visual amenity. Open space, greenspace and recreational activities are linked to higher levels of physical activity[30] [31] and mental wellbeing, reduced levels of obesity in children and others, and reduced numbers of long-term conditions such as heart disease, diabetes, cancer, and musculoskeletal conditions.
Walking and cycling routes supporting human health	There are several public transport modes and walking and cycling routes in the study area, including those in the immediate vicinity of the Site, which support the health and general well-being of residents and others. This includes ensuring access to employment and social infrastructure.	Active travel promotes mental and physical wellbeing by encouraging walking, running and cycling for purposeful journeys, all of which are modes that can improve health[32]. Communities with strong Active Travel links are generally more physically active, experience increased social interaction and better access to training and employment. Regular physical activity has many benefits to health[33]: it reduces the risk of chronic conditions such as cardiovascular disease, diabetes, cancer, obesity, musculoskeletal conditions, and mental health problems, helps to reduce anxiety/ stress and improves mood.

Defining Sensitivity

14.4.15. The potential impacts and effects (both positive and negative) of the Proposed Development on the physical and mental health, and social wellbeing of the local population depends on the sensitivity of receptors to changes to the wider health determinants brought about by the Proposed Development. The sensitivity of receptors depends on whether the receptor is likely to be directly or indirectly affected and whether the receptors are well placed or otherwise to deal with these changes. For example, whilst the average local health circumstance across the study area may be generally good, there may be groups of individuals within that defined population who are particularly sensitive and could experience disproportionate or differential effects. Where inequalities between areas or populations are wide (or at risk of widening), this indicates greater sensitivity.

[30] Kondo MC, Fleurh JM, McKEON T, Branas CC (2018) - Urban Green Space and Its Impact on Human Health (synopsis available at: Urban Green Space and Its Impact on Human Health)

[31] The Health Foundation (2024) - Relationship between access to green space and health (available at: https://www.health.org.uk/evidence-hub/our-surroundings/green-space/relationship-between-access-to-green-space-and-health)

[32] The Health Foundation (2021) - How transport offers a route to better health (available at: https://www.health.org.uk/publications/long-reads/how-transport-offers-a-route-to-better-health)

[33] WHO (2024) - Physical activity (available at: https://www.who.int/news-room/fact-sheets/detail/physical-activity)

14.4.16. The IEMA guidance includes indicative criteria for assigning health sensitivity, as reproduced (from Table 7.1 of the guidance) in Table 14-2 – Sensitivity.

Table 14-2 – Sensitivity of Receptors

Category/Level	Indicative criteria (judgement based on most relevant criteria, it is likely in any given analysis that some criteria will span categories)
High	high levels of deprivation (including pockets of deprivation); reliance on resources shared (between the population and the project); existing wide inequalities between the most and least healthy; a community whose outlook is predominantly anxiety or concern; people who are prevented from undertaking daily activities; dependants; people with very poor health status; and/or people with a very low capacity to adapt
Medium	moderate levels of deprivation; few alternatives to shared resources; existing widening inequalities between the most and least healthy; a community whose outlook is predominantly uncertainty with some concern; people who are highly limited from undertaking daily activities; people providing or requiring a lot of care; people with poor health status; and/or people with a limited capacity to adapt
Low	low levels of deprivation; many alternatives to shared resources; existing narrowing inequalities between the most and least healthy; a community whose outlook is predominantly ambivalence with some concern; people who are slightly limited from undertaking daily activities; people providing or requiring some care; people with fair health status; and/or people with a high capacity to adapt
Very Low	very low levels of deprivation; no shared resources; existing narrow inequalities between the most and least healthy; a community whose outlook is predominantly support with some concern; people who are not limited from undertaking daily activities; people who are independent (not a carer or dependant); people with good health status; and/or people with a very high capacity to adapt.

Source: Table 7.1 Heath sensitivity criteria, IEMA Framework 2022

Magnitude of Impact

14.4.17. Identifying and assessing the potential impacts of the Proposed Development (both positive and negative) depends on the sensitivity of the receptors to changes to the wider health determinants brought about by the Proposed Development (for example, from changes to air quality).

14.4.18. Where appropriate, the assessment is informed by the findings from the other technical chapters of the EIA (e.g. Air quality, Noise and vibration, landscape and townscape) and qualitatively considers, using professional judgement, how these findings can be expected to result in changes to human health, including the distribution of effects within the affected population.

14.4.19. However, some of the wider health determinants chosen for assessment such as ‘Access to private property and housing’ (also drawing on the relevant land use baseline), and ‘Community assets supporting health’, for example, are not covered by the other technical assessments. Therefore, professional judgement, industry best practice, and experience from the assessment of similar schemes is used to assess the impacts leading to resultant effects arising from the Proposed Development.

14.4.20. Using the criteria outlined within the IEMA guidance, the magnitude of impact for any changes to the wider health determinants on sensitive receptors is assessed as High/ Medium/ Low/ Negligible, as described in Table 14-3 below.

14.4.21. For consistency, the criteria will match, as closely as possible, that used in the technical assessments of the other environmental topics assessed in this EIA – bearing in mind that some of those assessments will identify things such as changes in concentrations and pollutants, and some will be based on quantitative outputs. No health effects are directly reported in the other chapters, although reference may be made in relation to health-based standards. Therefore, this Human Health chapter partly focuses on a qualitative assessment of the health consequences of the identified changes identified in each of the technical chapters.

Table 14-3 - Magnitude of Impact Criteria

Category/Level	Indicative criteria
High	high exposure or scale; long-term duration; continuous frequency; severity predominantly related to mortality or changes in morbidity (physical or mental health) for very severe illness/ injury outcomes; majority of population affected; permanent change; substantial service quality implications
Medium	low exposure or medium scale; medium-term duration; frequent events; severity predominantly related to moderate changes in morbidity or major change in quality-of-life; large minority of population affected; gradual reversal; small service quality implications
Low	very low exposure or small scale; short-term duration; occasional events; severity predominantly related to minor change in morbidity or moderate change in quality-of-life; small minority of population affected; rapid reversal; slight service quality implications
Negligible	negligible exposure or scale; very short-term duration; one-off frequency; severity predominantly relates to a minor change in quality-of-life; very few people affected; immediate reversal once activity complete; no service quality implication.

Source Table 7.2 IEMA 2022

Significance of Effects

14.4.22. The role of determining EIA levels of effect on health (including identifying significant effects) is not to set a threshold of 'no harm' from development, but to show where, at a population or sub-population level, the harm should weigh strongly in the balance alongside the development's benefits for health and other outcomes. In so doing, the population health significance conclusions reflect the potential for widening or narrowing health inequalities between defined populations and relevant sub-population(s).

14.4.23. The significance of effects is the product of combining the sensitivity of the receptors and magnitude of impact. The significance of effects within the assessment will be measured according to the Significance of Effect Matrix, set out in Table 14-4, by using professional judgement, best practice, and knowledge from the assessment of similar development types.

14.4.24. For the purposes of the assessment, short-term effects are predicted to last for several months up to a few years, medium-term effects are predicted to last beyond this, for a few more years, long-term effects are predicted to last beyond this, for several years.

Table 14-4 - Significance of effect matrix

		Sensitivity to change			
		High	**Medium**	**Low**	**Very Low**
Magnitude of impact	**High**	Major	Major/Moderate	Moderate/Minor	Minor
	Medium	Major/Moderate	Moderate	Minor	Minor/Negligible
	Low	Moderate/Minor	Minor	Minor	Negligible
	Negligible	Minor/Negligible	Minor/Negligible	Negligible	Negligible

14.4.25. For each judgement of significance made, a narrative is provided to explain which factors have been considered. The following considerations are covered, where relevant, as advocated by the IEMA guidance:

- Whether there would be a high level of exposure or widespread impact.
- Whether the population exposed to an impact is particularly sensitive due to pre-existing vulnerabilities or inequalities.
- The duration of effects and whether they would be reversible.
- The level of acceptability, including whether statutory thresholds for pollutants would be exceeded and/or whether the issue is a public health priority.
- The severity of the related health outcomes (i.e., whether it is related to a change in mortality or morbidity).
- The strength of evidence for an association between a change in a determinant and health outcomes.
- Whether a large proportion of the population would likely be affected.
- Whether the impact is likely to increase or tackle health inequalities at a population level.

14.4.26. Where two potential values of significance of effect are identified within the significance of effect matrix (Table 14-4), professional judgement is used to assign the value, based on understanding of details of both the magnitude of impact and sensitivity of the receptor. For the purposes of this assessment, major and moderate effects are considered to be significant, and minor and negligible effects are considered to be not significant.

Assumptions and limitations

14.4.27. The effects for human health will be assessed within the study area outlined in Section: Baseline conditions.

14.4.28. The human health baseline is informed by statistics available for the Ancoats and Beswick, and Piccadilly wards. Whilst these statistics are not exhaustive in the context of all aspects of human health, it is considered that the baseline information captures most human health characteristics where impacts may arise. These also represent the smallest data units for which reliable quantitative baseline data may

be accessed – the assessment is therefore limited by the need to use professional judgement to consider how the ward level characteristics may differ at the smaller scale of the study area.

14.4.29. The assessment of effects on human health is based on guidance and professional judgement and considers a proportionate assessment of both the positive and negative impacts that the Proposed Development could have on receptors.

14.4.30. Whilst the assessment identifies changes to some of the wider health determinants likely to arise from the Proposed Development, health outcomes are dependent on multiple factors, some of which rest with individuals and/or outside the powers or influence of physical infrastructure and/or planning decisions. Identifying health effects of the Proposed Development and their significance will therefore be a qualitative exercise. The findings are based upon a desk-based study of the area, along with consultants' professional judgement and knowledge based on previous similar schemes. Information, where relevant, is also used from other specialist topic assessments to help to assess the significance of effects of the Proposed Development on receptors.

14.4.31. The conclusions on significance reached for effects on human health may differ from the conclusions reached for outcomes discussed in other EIA technical chapters. For example, that there are a small number of significant effects on receptors in the noise assessment does not mean there would be a significant population level health effect. A negligible air quality assessment conclusion based on concentrations being below statutory air quality standards, does not exclude the possibility that there would be a minor adverse effect to population health to acknowledge, relating to the absolute change in an air pollutant's concentration and non-threshold nature of some air pollutants, even within regulatory limits.

14.4.32. This human health chapter is by nature an in-combination assessment, which considers the human health effects of all environmental impacts of the Proposed Development. Therefore, there is a degree of overlap between this chapter and the other technical chapters of the EIA (notably, Air Quality (ES (Volume 2) Chapter 6), Noise and Vibration (ES (Volume 2) Chapter 12), Daylight, Sunlight, Overshadowing and Solar Glare (ES (Volume 2) Chapter 11), Ground Conditions and Contamination (ES (Volume 2) Chapter 12), Materials and Waste (ES (Volume 2) Chapter 15), Water Resources and Flood Risk (ES (Volume 2) Chapter 19), and Wind Microclimate (ES (Volume 2) Chapter 20), which will also be considered in the overall Assessment of Cumulative Effects (ES (Volume 2) Chapter 22).

Consultation

14.4.33. The IEMA guidance advocates engagement with health stakeholders and communities to support or confirm the health scope, identify sensitive community groups and local health priorities and matters of concern.

14.4.34. In February 2024, the Project Team met with Counter Context, the consultant responsible for community consultation and engagement for this Project and wider engagement across Manchester. The purpose of the meeting was to explore local knowledge with a view to enhance the human health baseline description and inform decisions around what sort of impacts may manifest as effects.

14.4.35. The meeting focused on gathering information on key receptors and community activities existing in the study area, focusing on the profile of receptor users, the frequency of receptor use and pre-existing issues and concerns within the community. The meeting also highlighted the presence of community tensions as a result of new populations moving into the Ancoats area.

14.4.36. The information gathered from the meeting with Counter Context coupled with some verification through a site visit in August 2024 has supplemented the baseline set out within this Chapter.

14.5. Baseline conditions

14.5.1. This section provides a summary of the baseline conditions relevant to the human health assessment. The human health study area described in Section 14.4 comprises the Site and a 250m buffer extending outwards from the Proposed Development's Red Line Boundary. The baseline conditions describe relevant land use/ human health receptors within this study area; and a human health profile is presented, drawing on relevant data for the Ancoats and Beswick, and Piccadilly wards. This informs the identification of the key characteristics of two different categories of receptors – the land use description highlights the type and location of residential, business and other infrastructure directly supporting human health (e.g. schools, gyms and walking and cycling routes); and the human health profile characterises the health baseline of the wider population and sub-groups within it.

14.5.2. In policy terms, the Proposed Development falls within the Manchester City Boundary and East Manchester Regeneration Area, separated from the Manchester regeneration area by the Inner Relief Road (Great Ancoats Street). The human health study area for the Proposed Development falls within both East Manchester and the north-eastern fringe of Manchester City Centre.

Land Uses within the Study Area

14.5.3. Figure 14-2 in ES Volume 5 shows the locations of all of the relevant land uses described in this sub-section and their proximity and interrelationship with the Proposed Development Red Line Boundary. This is important spatial context to the identification and subsequent assessment of potential impacts of the Proposed Development on the land uses within the study area that are connected to determinants of human health.

Private property and housing

14.5.4. The Proposed Development is situated in Ancoats, New Islington, in the north-eastern fringe of Manchester city centre, within a mixed-use area that is predominantly commercial and residential in nature. The area has undergone substantial regeneration in recent years and new, high-density residential accommodation dominates the surrounding area, particularly to the north, east and south of the Proposed Development Red Line Boundary.

14.5.5. The private dwellings within the study area are detailed in ES (Volume 4) Appendix 14.1 – Human Health Assessment Appendices and the residential clusters that have been generated for assessment as specific receptors are presented in Table 14-7. There are no residential site allocations in relevant planning policy documents that have been identified within 250m of the Proposed Development (the study area); however, the planned developments anticipated to form receptors in the operation phase of the Proposed Development are included, as appropriate.

Community land and human health assets

14.5.6. There are several community and human health assets within the study area, as described in ES (Volume 4) Appendix 14.1 – Human Health Assessment Appendices. This includes a range of essential health services, which directly support and influence human health, such as New Islington Medical Practice and Urban Village Medical Practice, both located immediately to the north of the Proposed

Development Red Line Boundary. The Co-op Academy New Islington Primary School also lies immediately adjacent, to the north of the Site, and Cotton Field Park and New Islington Marina are both located within 50 metres of the Red Line Boundary. Other nearby community facilities include a variety of smaller greenspaces and open spaces (including those associated with the Rochdale Canal), and several private gyms. The land uses in this category that are assessed as specific receptors are presented in Table 14-7.

14.5.7. It is acknowledged that the Site is used, illegally, by a community of skateboarders who advertise their activities through social media under the name of 'Gooseside'. This group has periodically formed a skatepark for use by different age groups within the Site, gaining access through breaches in the security fences; and both skateboarders and cyclists have been observed using the skatepark. The 'Gooseside' group has previously hosted skating events/competitions, with the last documented competition in August 2023. The user group has stated that materials required to construct the skateboarding ramps have been funded from crowdfunding (2022)[34] and from the proceeds of the skating community, such as from selling merchandise at local skate shops (2024). Online listings of skating provision suggest that the skatepark has relatively high usage, with up to 100 people using the facility on weekends, and several hundreds of people accessing the skatepark overall[35] ; however, the accuracy of these figures is not assured.

14.5.8. The facility does not have formal consent to operate on the Site, and the skate ramps and other features have been cleared on a number of occasions as part of actions undertaken to re-secure the boundaries. On the basis that this is not a formal provision and that Gooseside and its members/ users have no rights to enter or occupy the Site, it cannot be said they actually occupy the Site. Given the above they are not considered as a relevant receptor.

14.5.9. There are no known places of worship within the study area. There are no educational facilities for children of secondary school age within the study area. Households within the study area fall within the catchment area of several secondary schools located in the wider area (i.e. beyond 250m from the Site), with the closest secondary schools being East Manchester Academy, Dean Trust Ardwick, Eden Girls Leadership Academy and Eden Boys Leadership Academy.

14.5.10. There are also several charities, specialist support and outreach centres in the study area that provide valuable support to vulnerable groups and individuals.

Development land and businesses

14.5.11. There is a range of local businesses located near to the Proposed Development, encompassing, amongst others, retail, entertainment, hospitality, warehouse/wholesale, and offices. ES (Volume 4) Appendix 14.1 – Human Health Assessment Appendices describes the existing businesses and business developments with consent (that would therefore form receptors in the operation phase of the Proposed Development), within the study area. Table 14-7 sets out the land uses of this type that form receptors for assessment.

[34] Gooseside.diy. 2024. Available at: Goose-Side u heard ! (@gooseside.diy) • Instagram photos and videos [Accessed: 07.08.2024]

[35] Reddit. 2022. Places to Skate – Manchester. Available at: Places to skate? (Adult beginner) : r/manchester (reddit.com) [Accessed: 07.08.2024]

Walking and cycling

14.5.12. No walking, cycling and horse riding (WCH) facilities are located within the Proposed Development Red Line Boundary.

14.5.13. Several footpaths and footways run along the boundary of the Site, including on Great Ancoats Street along the southern boundary, on Old Mill Street to the east, the Rochdale Canal Towpath and Redhill Street to the west, and the access to Co-op Academy New Islington to the north, and through the study area which provide connections directly or indirectly to the wider area.

14.5.14. The study area includes two promoted long-distance trails: the Medlock Valley Way and Rochdale Canal Towpath, which follow the course of the River Medlock and the Rochdale Canal, respectively. A section of the National Cycle Network Route 66 (NCN66) also runs along the Rochdale Canal Towpath.

14.5.15. Given the dense urban location, there are no known bridleways or horse-riding facilities within the study area.

14.5.16. ES (Volume 4) Appendix 14.1 – Human Health Assessment Appendices describes the WCH facilities within the study area. This that are included as receptors for assessment are set out in Table 14-7.

Human Health study area profiles

14.5.17. The baseline literature and data for the human health assessment is used for two key purposes – firstly, to identify relevant wider determinants of health and receptors within the human health study area, including the presence of any protected characteristics groups[36] that would be more vulnerable or susceptible to impacts arising from the Proposed Development; and secondly, to inform the assignment of sensitivity category for each receptor, using the criteria set out in IEMA guidance (2022)[37]. This includes a consideration of the following:

- Deprivation.
- Resource sharing (e.g. assets supporting human health).
- Existing inequalities (e.g. comparing local and national life expectancy).
- Outlook (e.g. considering responses received through consultation and engagement).
- Life stage, health status and daily activities (based on published data).
- Capacity of populations to adapt (a professional judgement based on an evaluation of the above).

14.5.18. The general health profile is informed by demographic profiles, demographic trends, socio-economics, deprivation, health and wellbeing characteristics, and general characteristics of the natural and built environment.

14.5.19. There is only one Local Authority of relevance to the Proposed Development – MCC. The wards that form the human health study area comprise Ancoats and Beswick ward, within which the Proposed

[36] Protected Characteristics Groups are defined in the Equality Act 2010

[37] Pyper, R., Waples, H., Beard, C., Barratt, T., Hardy, K., Turton, P., Netherton, A., McDonald, J., Buroni, A., Bhatt, A., Phelan, E., Scott, I., Fisher, T., Christian, G., Ekermawi, R., Devine, K., McClenaghan, R., Fenech, B., Dunne, A., Hodgson, G., Purdy, J., Cave, B. (2022) IEMA Guide: Determining Significance for Human Health in Environmental Impact Assessment

Development is located, and Piccadilly ward, whose boundary commences immediately to the south of the Proposed Development, on the opposite side of the Inner Relief Road (Great Ancoats Street). The location of these wards in relation to the Proposed Development are shown in ES (Volume 5) Figure 14.1.

Ancoats and Beswick ward

14.5.20. Ancoats and Beswick ward covers an area that extends from the eastern fringe of Manchester city centre westwards towards Ancoats, eastwards through Beswick towards Openshaw, and north east towards Miles Platting. At the Census 2021, the population of the ward was 14,822, which according to 2022 data has since grown slightly to 14,960. In 2022, there were 8,741 households[38] in the ward.

14.5.21. The ward is densely populated and includes a mix of uses, including new, mainly high-rise developments, particularly near the Proposed Development and traditional older housing estates. These are interspersed with commercial uses, open spaces, greenspaces and canals, and further afield, Manchester city centre to the west and the large Etihad Campus - a key focus for football and other sports and regeneration in this eastern part of the city, to the east of the ward.

14.5.22. Ancoats and Beswick ward has a higher-than-average score relating to the barriers to housing and services domain within the index of multiple deprivation (IMD) data[39], meaning there are greater physical and financial issues in accessing housing and local services in the ward compared to other wards.

Piccadilly ward

14.5.23. Piccadilly ward comprises the eastern half of Manchester city centre, which principally includes NOMA, the Northern Quarter, and Piccadilly. At the Census 2021, the population of the ward was 11,663, although this has risen to 14,007 by 2022. In 2022, there were 8,266 households in the ward[40].

14.5.24. The majority of the ward's population is working age (aged between 16 and 65), with an extremely low percentage of younger and older age groups under the age of 16 and over 65, respectively.

14.5.25. As would be expected of a city centre ward, it is densely populated and this population is increasing. The ward comprises a mix of uses, including commercial, residential, and industrial. It also contains important hubs within the multi-modal transport network, including Metrolink, which provides services to and through the study area, and Manchester Piccadilly railway station.

14.5.26. Piccadilly ward is in the worst decile relating to the barriers to housing and services domain within the index of multiple deprivation (IMD), meaning there are greater physical and financial issues in accessing housing and local services compared to other wards.

Health characteristics and key issues

[38] MCC Area Profile (Intelligence Hub). Available at Area Profile (instantatlas.com) [Accessed on 13/08/2024]

[39] The Index of Multiple Deprivation uses road distance to the nearest post office; primary school; general store or supermarket; GP surgery in considering barriers to essential services. Barriers to housing is considered in the context of household overcrowding, homelessness and housing affordability.

[40] MCC Area Profile (Intelligence Hub). Available at Area Profile (instantatlas.com) [Accessed on 13/08/2024]

14.5.27. The last Census was carried out in 2021 and this data, alongside other information and more recent data and other sources e.g. published health and wellbeing plans and strategies, has been used to develop the baseline profiles for the wards. The following health characteristics have been identified for Ancoats and Beswick ward, with more detail provided in ES (Volume 4) Appendix 14.1:

- Higher than average income deprivation, including poverty affecting children and older people (ranked 7th out of the 32 Manchester wards).
- Higher than average risk of premature death and impairment of quality of life through poor physical or mental health (ranked 7th out of the 32 Manchester wards).
- High incidences of poor general health (4.4% of residents report bad or very bad health) or disabilities (6% of residents state that their day-to-day activities are limited a lot), although rates are slightly better than for Manchester and England.
- Life expectancy for both males (77.2 years) and females (80.2 years) below the national average (79.5 years and 83.2 years, respectively).
- Particular health issues such as respiratory disease, circulatory disease, and coronary heart disease, with substantially higher death rates than the national average (standard mortality rates of 172.8, 156.9 and 193.9 respectively, compared to 100 for each for England).
- Emergency hospital admissions for chronic obstructive pulmonary disease (COPD) (397.7) nearly four times higher than the national average (100) and higher than average emergency hospital admissions for hip fractures (132.4 compared to 100).

14.5.28. The following health characteristics have been identified for the Ancoats, Clayton and Bradford neighbourhood area with more detail provided in ES (Volume 4) Appendix 14.1:

- Fewer adults and older people in the 'Good Health' cohorts (30% and 3% respectively, compared to 37% and 10%) and more in the 'Adults with Wider Determinants of Need' cohort (57%, compared to 50%) than the Manchester average.
- The highest percentage (3%) of people in the 'Complex Lifestyles' cohort of all neighbourhoods in Manchester.
- The main Long-Term Conditions registered are smoking (20.2%), followed by hypertension (9%) and obesity (8%).
- Respiratory (£1.3m) is the third highest area of spend, 84% higher than the average per person in Manchester.

14.5.29. Piccadilly ward performs much better than Ancoats and Beswick ward, Manchester, and England across most health indicators, although emergency hospital admissions for COPD are higher than the national average.

Mental Health

14.5.30. In order to establish the nature and level of health and socio-economic inequalities across the City Centre & Ancoats Primary Care Network (PCN), data has been sought at GP Practice and PCN levels

where available. The following data covers Ancoats Urban Village Medical Practice, City Health Centre, and New Islington Medical Centre[41], with a summary provided.

Table 14-5 - Mental Health Prevalence

Practice prevalence	Ancoats Urban Village Medical Practice	City Health Centre	New Islington Medical Centre	Greater Manchester	England
Dementia	0.13%	0.02%	0.24%	0.65%	0.71%
Hypertension	8.1%	1.69%	7.67%	13.33%	13.93%
Learning disability	0.25%	0.03%	0.61%	0.60%	0.53%
Severe mental health	1.91%	0.34%	0.97%	1.05%	0.95%

Source: Published QOF data for 2020/21

- Prevalence of dementia and hypertension is lower for users of New Islington Medical Centre and UVMP than the Manchester and England average.
- Prevalence of severe mental health conditions is higher for users of New Islington Medical Centre and UVMP than the England average, with UVPM also higher than the Manchester average.
- Prevalence of a learning disability is slightly higher for users of New Islington Medical Centre and UVMP than the Manchester and England average, although UVPM is lower than average.
- Data regarding the number of adults who have a moderate or severe visual impairment has been sought but not found. Estimated numbers with projections to 2040 that are available on a Manchester footprint, suggest increasing prevalence attributed to ageing populations. Whilst some sight loss may be correctable, age-related macular degeneration is the most common cause of registrable sight loss in older people.
- Data regarding the number of adults who have hearing loss has been sought but not found. Estimated numbers with projections to 2040 available on a Manchester footprint suggest increasing prevalence attributed to an ageing population.

Table 14-6 - Substance Abuse Prevalence

Practice prevalence	City Centre & Ancoats PCN	Greater Manchester average
Alcohol related emergency hospital admissions	8.54 admissions per 1,000 patients	6.42 admissions per 1,000 patients
Drug related emergency hospital admissions	6.84 admissions per 1,000 patients	2.3 admissions per 1,000 patients

Source: GMHSCP PCN Dashboard Data Period: February 2021 to January 2022

- 11th highest alcohol admission rate out of the 67 Greater Manchester PCNs
- The highest drug admission rate out of 67 Greater Manchester PCNs

[41] Greater Manchester Primary Care Provider Board - Health Inequalities Data Report (April 2022) (available at: Mindful analytics (gmpcb.org.uk))

14.5.31. There is an overutilisation of unplanned services, such as, NHS 111 and ED, and underutilisation of preventative services in City Centre & Ancoats PCN, such as annual health reviews and checks.

Mosaic Groups

14.5.32. By comparing the Mosaic Groups present in the 'Ancoats, Clayton & Bradford Manchester' neighbourhood area versus the population registered with a Manchester GP[42], the data shows that people in the Ancoats, Clayton & Bradford neighbourhood are more likely to fall within the following Mosaic Groups:

- "Rental Hubs" (28.1%) – characterised predominantly by young, single people in their 20s and 30s who rent their homes from private landlords whilst in the early stages of their careers or pursuing studies.
- "Transient Renters" (23.2%) – defined as single people who pay modest rents for low-cost homes (mainly younger people who are transient, often living in a property for only a short length of time before moving) (typical age 18-25).
- "Family Basics" (26.9%) – families with children who have limited budgets and can struggle to make ends meet. Their homes tend to be low cost (typical age 31-35).
- "Municipal Challenge" (11.0%) – urban renters of social housing who face an array of challenges (typical age 56-60).

14.5.33. Conversely, Ancoats, Clayton & Bradford neighbourhood has a lower proportion of:

- "Aspiring Home Makers" – characterised by younger households settling down in housing priced within their means (typical age 31-35).
- "Urban Cohesion" groups – residents of settled urban communities with a strong sense of identity (typical age 56-60).

Protected characteristics groups

14.5.34. In broad terms, the population located in the vicinity of the Proposed Development will be the most vulnerable or susceptible to changes occurring because of the activities associated with the Proposed Development. Although some of this population may not be 'vulnerable' in human health, social or other terms (i.e. do not belong to a Protected Characteristics group as defined in the Equalities Act 2019), they are likely to be more sensitive to any impacts / changes due to greater exposure.

14.5.35. A key consideration in human health assessment is the distribution of effects (demographic, socio-economic, geographic) within the affected population. Therefore, the human health assessment will consider the potential effects of the Proposed Development on two types of population. The first is the general or wider population of the study area. The second is the vulnerable groups or individuals identified as sub-sets within the general or wider population belonging to Protected Characteristics groups (PCG), as defined in the Equality Act 2010, where evidence suggests members of these PCG could be more susceptible to changes to the baseline conditions and impacts/effects arising from the Proposed Development.

[42] Ancoats, Clayton & Bradford - Health & Social Care Cohort Profile December 2019. Available at Neighbourhood_Health_and_Care_Profile___Ancoats_Clayton_and_Bradford_Dec_19 (9).pdf. Accessed on 31/07/2023.

14.5.36. Using the baseline study, the following vulnerable groups have been identified based on PCG categories. These vulnerable groups are not mutually exclusive e.g. an individual may fit into one or more of these vulnerable group categories.

- Families with children and adolescents (e.g., pregnant women, babies, children, and adolescents);
- People who are physically or mentally disadvantaged (e.g., elderly people, people with physical and/or disabilities, people with other health problems or impairments);
- People of certain ethnicity and/or gender; and
- People who are materially disadvantaged (e.g., people on low income, people without access to a car, unemployed people).

14.5.37. Using the IEMA guidance on receptor groups and receptor sensitivity, three broad receptor group types have been identified for assessment:

- Study area wider population – this reflects the wider/ general population as a whole.
- Study area sub-populations – these groups are present as sub-sets of the wider population that share protected characteristics or form groups with particular sensitivities to changes to wider health determinants:
    - Families with children and adolescents (e.g., pregnant women, babies, children, and adolescents);
    - People who are physically or mentally disadvantaged (e.g., elderly people, people with physical and/or disabilities, people with other health problems or impairments);
    - People of certain ethnicity and/or gender; and
    - People who are materially disadvantaged (e.g., people on low income, people without access to a car, unemployed people).
- Geographic sub-populations – this reflects members of the study area's wider population that are likely to experience a specific set of impacts from changes to the wider health determinants, due to their location within the study area and proximity to the Proposed Development, focused on:
    - Residential receptors
    - Community assets
    - Employment and training assets (including the construction workforce, as a temporary group within the study area)

Table 14-7 - Receptor Groups and Sensitivity

Receptor Group	Sensitivity	Reason for sensitivity
Wider/ General population (Study area across two wards - Ancoats and Beswick ward, and Piccadilly ward)	Medium	**Deprivation:** Deprivation figures indicate that the Ancoats and Beswick ward generally has higher than average issues (compared to the other Manchester wards including the Piccadilly ward) relating to health and disability, income, crime, and the living environment (notably the outdoors living environment) and faces higher than average barriers to housing and services in terms of physical availability and accessibility, and affordability. In contrast, Piccadilly ward typically shows more favourable deprivation statistics although it does have the worst score relating to barriers to housing and services within the index of multiple deprivation (IMD), meaning there are greater physical and financial issues in accessing housing and local services compared to all of the other wards in Manchester. **Resource sharing:** Due to the central location of the wards within Manchester, there are a large number of amenities that are easily accessible across the wards. This includes retail facilities such as the Urban Exchange located in the Piccadilly Ward. The majority of identified health assets such as New Islington Medical Practice and Urban Village Medical Practice are located in the Ancoats and Beswick ward. **Existing inequalities:** No notable data. **Outlook:** No specific data is available. **Lifestage/health statistics/daily activities:** Residents in Piccadilly ward generally experience better health than those within the Ancoats and Beswick ward, Manchester and England despite having higher incidences of emergency hospital admissions for COPD, which are higher than the national average. Ancoats and Beswick ward has high incidences of poor general health but still performs slightly better than the Manchester and England average. **Capacity to adapt:** The wider population is in relatively good health in comparison to the national average. However, there are groups of those with higher poorer health such as those with disabilities present within the wider community as well as other sub-populations that are more susceptible to health concerns such as children.
Families with children and adolescents (pregnant and maternal women, babies, children and adolescents)	High	**Deprivation:** Manchester's Children and Young People JSNA (although based on 2015/16 data) reports that the neighbourhood with the highest proportion of children affected by income deprivation (LSOA 5133 (013D)) lies immediately to the north of the Proposed Development, where around two thirds of children (66.2%) are living in deprivation. Additionally, the Ancoats and Beswick ward has higher than the Manchester (27%), National (14.1%) and Piccadilly (14.3%) average income deprivation affecting children, with 31.4% of children in poverty. **Resource sharing:** Within the study area the following resources are likely to be used by families with children and adolescents in the Ancoats and Beswick ward: Hallé St Peter's, which offers opportunities for children and young people to engage with music projects for schools with school children from early years to secondary school, including Special Educational Needs and Disability (SEND); Cotton Field Park offers green space for recreation which is limited within the ward, and; specialist unit within the New Islington and Urban Village Medical Practice. In addition, Co-op Academy New Islington is a key asset located adjacent to the Site with only one other school within 500m of the study area (St Anne's Roman Catholic Primary School). **Existing inequalities**: 41.5% and 61.5% of pupils whose first language is not English live in Ancoats and Beswick and Piccadilly, respectively. **Outlook:** No specific data is available. **Lifestage/health statistics/daily activities:** No specific data is available on the health statistics of children; however, census statistics of children in poverty highlights there are greater health disparities when compared to other wards in Manchester. **Capacity to adapt:** Young children are more sensitive than adults to air pollution, noise, odour and other environmental factors and their bodies and mind are less able to deal with them. Particularly susceptible children are from low income and/or BME backgrounds.
People who are physically or mentally disadvantaged (elderly people, people with physical disabilities, people with mental disabilities, people with other health problems or impairments).	High	**Deprivation:** There is no specific data available. It is noted that members of this sub-population are less likely to be able to participate either at all, or fully within the labour market. This could contribute to deprivation either on a permanent or temporary basis. **Resource sharing:** The majority of identified health assets such as Ancoats Primary Care Centre and Urban Village Medical Practice are located in the Ancoats and Beswick ward. **Existing inequalities:** There is a relatively high proportion of older people (over 65) and those with health issues or disabilities in the study area with the number of children and young people with SEND growing in line with Manchester's population increase. There also evidence that there is a prevalence of a mental health disorder in pre-school children within the study area. **Outlook:** No specific data is available. **Lifestage/health statistics/daily activities:** No data available to make correlations. **Capacity to adapt:** Elderly people are more sensitive than young and middle-aged adults. Generally, the older people are, the poorer their health, the slower their movement and reactions, and the poorer their hearing. Elderly people are particularly susceptible to environmental impacts, including from construction works and exposures to pollutants. Chronically ill persons, for example, people with impaired lung function, can be more adversely affected by air pollution. The same is true of hypersensitive individuals such as asthmatics. People with existing physical and mental illnesses, including sleep disturbance, anxiety, and depression, noting that a high proportion of young professionals in the study area are likely to spend extended hours at home due to home working, are likely to be more sensitive to changes to the local environment.

Receptor Group	Sensitivity	Reason for sensitivity
People who are materially disadvantaged	High	**Deprivation:** Deprivation figures suggest that the Ancoats and Beswick ward has higher than average issues (compared to the other Manchester wards, including the Piccadilly ward) relating to health and disability, income, crime, and the living environment (notably the outdoors living environment) and faces higher than average barriers to housing and services in terms of physical availability and accessibility, and affordability. In contrast, Piccadilly ward typically shows more favourable deprivation statistics although it does have the worst score relating to barriers to housing and services within the index of multiple deprivation (IMD), meaning there are greater physical and financial issues in accessing housing and local services compared to all of the other wards in Manchester. **Resource sharing:** The Urban Village Medical Practice has delivered primary health care services for homeless people in Manchester for over 20 years. **Existing inequalities:** The Ancoats and Beswick ward is ranked the 17th most deprived out of 32 Manchester wards, although it also has a higher than national average of households that are not deprived in any dimension (59.3% compared with 48.9% for England as a whole). Whilst this is a favourably statistic, 40.7% of households in the area as a whole experience some form of deprivation in either 1, 2 or 3 dimensions. **Outlook:** No specific data is available. **Lifestage/health statistics/daily activities:** No data available to make correlations. **Capacity to adapt**: Households and individuals of lower socio-economic status are more likely to suffer from poorer health and have fewer resources to tackle the negative effects of poor health.
Residents from black and minority ethnic backgrounds	High	**Deprivation:** Both wards are considered ethnically diverse when compared to the national average, with lower proportions of white ethnic groups in Ancoats and Beswick ward (67.5%) and Piccadilly ward (69.6%) compared to England National average (81.%). **Resource sharing**: No specific data available **Existing inequalities:** There is a general consensus that inequalities exist in the health and healthcare experiences of ethnic minority groups in England. Access to primary health services is generally equitable for ethnic minority groups, but statistically this is less consistently so across other health services. **Outlook:** No data available **Lifestage/ health statistics/ daily activities:** No specific data available. While the incidence of cancer is highest in the white population, rates of infant mortality, cardiovascular disease (CVD) and diabetes are higher among black and south Asian groups. CVD and diabetes cause significant morbidity among these groups, much of which can be prevented by public health intervention aimed at tackling risk factors such as obesity, poor diet, inadequate physical activity and smoking. **Capacity to adapt:** Ethnic minority communities constitute a sensitive population group. Ethnic minority communities can face linguistic or cultural barriers which can limit their access to services and confidence to participate in social opportunities. In the UK, ethnic minorities also generally have a lower disability-free life expectancy at birth, higher unemployment, experience higher work stress and higher rates of poverty than white communities. This group also has a lower capacity to adapt due to the potential cost of travel because of changes to access. In addition, changes to access arrangements and routines may lower their confidence resulting in increased stress, anxiety and social exclusion.
Geographical Sub-Populations		
Residents of properties on Great Ancoats Street (Group A) (Ancoats and Beswick ward)	Medium	**Deprivation**: The Ancoats and Beswick ward is ranked the 17th most deprived out of 32 Manchester wards, although it also has a higher than national average of households that are not deprived in any dimension (59.3% compared with 48.9% for England as a whole). Whilst this is a favourably statistic, 40.7% of households in the area as a whole experience some form of deprivation in either 1, 2 or 3 dimensions. The proportion of primary and secondary school pupils in Ancoats and Beswick ward that receive free school meals (26.5%) is higher than the England average (15.7%) and educational attainment is lower than for Manchester and England. Properties on Great Ancoats Street, between the A62 Oldham Road and the Site, consist of a mixture of apartments and terraced housing. No publicly available data regarding the demographics of the inhabitants is available but the terraced housing type is often favoured by young families. Only 5.8% of the population of the Ancoats and Beswick Ward are aged 65 and over compared to 18.3% in England as a whole. **Resource sharing:** The properties between the A62 Oldham Road and the Site on Great Ancoats Street are a mix of terraced housing and high-density apartment development. Access to the wider area is provided by the A62. There are a number of amenities in the area such as restaurants and the Co-op Academy New Islington is within walking distance of the area. There is also an area of green space located within walking distance called Ancoats Green. **Existing inequalities:** There are a number of existing inequalities within Ancoats and Beswick ward. Respiratory disease, circulatory disease, and coronary heart disease are particular contributory factors. Death rates for all three conditions (172.8 standard mortality rate (SMR), 156.9 SMR and 193.9 SMR respectively) are significantly higher than the England average (100 SMR, 100 SMR, 100 SMR respectively), and higher than the Manchester average (161 SMR, 138.5 SMR and 174.9 SMR respectively). Emergency hospital admissions for COPD in the ward are nearly four-times higher than the national average. Other notable findings for Ancoats and Beswick ward shows higher than average income deprivation, including poverty affecting children and older people, although unemployment and long-term unemployment rates are slightly lower than the averages for Manchester and England.

Receptor Group	Sensitivity	Reason for sensitivity
		Outlook: No specific data is available. **Lifestage/health statistics/daily activities**: Ancoats and Beswick ward has a lower proportion of persons aged under 16 and over 65 than England and Manchester. Only 12.2% are under 16 and 5.85% are over 65 compared to 18.5% and 18.3% respectively for England and 20.6% and 9.5% for Manchester. Mosaic Analysis of 'Ancoats, Clayton & Bradford Manchester' neighbourhood versus the population registered with a Manchester GP' highlights that residents of Ancoats, Clayton & Bradford neighbourhood are more likely to fall within the following Mosaic Groups: ▪ Rental Hubs (predominantly young, single people in their 20s and 30s who rent their homes from private landlords whilst in the early stages of their careers or pursuing studies) ▪ Transient Renters (single people who pay modest rents for low-cost homes). ▪ Family Basics (families with children who have limited budgets and can struggle to make ends meet. Their homes tend to be low cost). ▪ Municipal Challenge (urban renters of social housing who face an array of challenges) **Capacity to adapt**: Ancoats and Beswick ward has higher than average issues (compared to the other Manchester wards) relating to health and disability, income, crime, and the living environment and faces higher than average barriers to housing and services in terms of physical availability and accessibility, and affordability. These factors reduce the ability of the vulnerable groups and individuals within the ward to adapt. Despite the census data, the mix of residents in the study area itself, including young professionals and families, along with proximity of resources within the area, means that usual residents who are in generally good health have greater capacity to adapt to any changes.
Residents of properties between Redhill Street and Jersey Street. (Group B) (Ancoats and Beswick ward)	Medium	**Deprivation:** The Ancoats and Beswick ward is ranked the 17th most deprived out of 32 Manchester wards, although it also has a higher than national average of households that are not deprived in any dimension (59.3% compared with 48.9% for England as a whole). Whilst this is a favourably statistic, 40.7% of households in the area as a whole experience some form of deprivation in either 1, 2 or 3 dimensions. The proportion of primary and secondary school pupils in Ancoats and Beswick ward that receive free school meals (26.5%) is higher than the England average (15.7%) and educational attainment is lower than for Manchester and England. Properties between Redhill Street and Jersey Street consist of apartments. No publicly available data regarding the demographics of the inhabitants is available but this type of housing is often favoured by young families and working professions. Only 5.8% of the population of the Ancoats and Beswick ward are aged 65 and over compared to 18.3% in England as a whole. **Resource sharing:** The properties between Redhill Street and Jersey Street are high density apartment development. Access to the wider area is provided by Great Ancoats Street which can be accessed from both Redhill Street and Jersey Street. There are a number of amenities in the area such as restaurants and Co-op Academy New Islington is within walking distance. **Existing inequalities:** There are a number of existing inequalities within Ancoats and Beswick ward. Respiratory disease, circulatory disease, and coronary heart disease are particular contributory factors. Death rates for all three conditions (172.8 standard mortality rate (SMR), 156.9 SMR and 193.9 SMR respectively) are significantly higher than the England average (100 SMR, 100 SMR, 100 SMR respectively), and higher than the Manchester average (161 SMR, 138.5 SMR and 174.9 SMR respectively). Emergency hospital admissions for COPD in the ward are nearly four-times higher than the national average. Other notable findings for Ancoats and Beswick ward shows higher than average income deprivation, including poverty affecting children and older people, although unemployment and long-term unemployment rates are slightly lower than the averages for Manchester and England. **Outlook:** No specific data is available. **Lifestage/health statistics/daily activities:** Ancoats and Beswick ward has a lower proportion of persons aged under 16 and over 65 than England and Manchester. Only 12.2% are under 16 and 5.85% are over 65 compared to 18.5% and 18.3% respectively for England and 20.6% and 9.5% for Manchester. Mosaic Analysis of the 'Ancoats, Clayton & Bradford Manchester' neighbourhood versus the population registered with a Manchester GP' highlights that residents of Ancoats, Clayton & Bradford neighbourhood are more likely to fall within the following Mosaic Groups: ▪ Rental Hubs (predominantly young, single people in their 20s and 30s who rent their homes from private landlords whilst in the early stages of their careers or pursuing studies) ▪ Transient Renters (single people who pay modest rents for low-cost homes). ▪ Family Basics (families with children who have limited budgets and can struggle to make ends meet. Their homes tend to be low cost). ▪ Municipal Challenge (urban renters of social housing who face an array of challenges) **Capacity to adapt:** Ancoats and Beswick ward has higher than average issues (compared to the other Manchester wards) relating to health and disability, income, crime, and the living environment and faces higher than average barriers to housing and services in terms of physical availability and accessibility, and affordability. These factors reduce the ability of the vulnerable groups and individuals within the ward to adapt. Despite the census data, the mix of residents in the study area itself, including young professionals and families, along with proximity of resources within the area, means that usual residents who are in generally good health have greater capacity to adapt to any changes.

Receptor Group	Sensitivity	Reason for sensitivity
Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade (Group C) Includes residents and visitor moorings at Islington. (Group D) (Ancoats and Beswick ward)	Medium	**Deprivation:** The Ancoats and Beswick ward is ranked the 17th most deprived out of 32 Manchester wards, although it also has a higher than national average of households that are not deprived in any dimension (59.3% compared with 48.9% for England as a whole). Whilst this is a favourably statistic, 40.7% of households in the area as a whole experience some form of deprivation in either 1, 2 or 3 dimensions. The proportion of primary and secondary school pupils in Ancoats and Beswick ward that receive free school meals (26.5%) is higher than the England average (15.7%) and educational attainment is lower than for Manchester and England. Properties located at/ near the Marina are predominantly modern terraced housing with some detached properties and apartment blocks. There is no specific publicly available data regarding the inhabitants, but terraced housing is often favoured by young families. Only 5.8% of the population of the Ancoats and Beswick ward are aged 65 and over compared to 18.3% in England as a whole. **Resource sharing:** The properties at/ near the Marina are terraced housing and high-density apartment blocks. Access to the wider area is provided by Great Ancoats Street via Redhill Street and Old Mill Street which can be accessed from New Union Street/New Islington/Weybridge Road. There are a number of amenities in the area such as restaurants, a bakery, Cotton Field Park and Co-op Academy New Islington, all within easy walking distance. **Existing inequalities:** There are a number of existing inequalities within Ancoats and Beswick ward. Respiratory disease, circulatory disease, and coronary heart disease are particular contributory factors. Death rates for all three conditions (172.8 standard mortality rate (SMR), 156.9 SMR and 193.9 SMR respectively) are significantly higher than the England average (100 SMR, 100 SMR, 100 SMR respectively), and higher than the Manchester average (161 SMR, 138.5 SMR and 174.9 SMR respectively). Emergency hospital admissions for COPD in the ward are nearly four-times higher than the national average. Other notable findings for Ancoats and Beswick ward shows higher than average income deprivation, including poverty affecting children and older people, although unemployment and long-term unemployment rates are slightly lower than the averages for Manchester and England. **Outlook:** No specific data is available. **Lifestage/health statistics/daily activities:** Ancoats and Beswick ward has a lower proportion of persons aged under 16 and over 65 than England and Manchester. Only 12.2% are under 16 and 5.85% are over 65 compared to 18.5% and 18.3% respectively for England and 20.6% and 9.5% for Manchester. Mosaic Analysis of 'Ancoats, Clayton & Bradford Manchester' neighbourhood versus the population registered with a Manchester GP' highlights that residents of Ancoats, Clayton & Bradford neighbourhood are more likely to fall within the following Mosaic Groups: ▪ Rental Hubs (predominantly young, single people in their 20s and 30s who rent their homes from private landlords whilst in the early stages of their careers or pursuing studies) ▪ Transient Renters (single people who pay modest rents for low-cost homes). ▪ Family Basics (families with children who have limited budgets and can struggle to make ends meet. Their homes tend to be low cost). ▪ Municipal Challenge (urban renters of social housing who face an array of challenges) **Capacity to adapt**: Ancoats and Beswick ward has higher than average issues (compared to the other Manchester wards) relating to health and disability, income, crime, and the living environment and faces higher than average barriers to housing and services in terms of physical availability and accessibility, and affordability. These factors reduce the ability of the vulnerable groups and individuals within the ward to adapt. However, as it is expected that these residents are likely to be a mix of young professionals and families of varied incomes the sensitivity of this group has been reduced. Despite the census data, the mix of residents in the study area itself, including young professionals and families, along with proximity of resources within the area, means that usual residents who are in generally good health have greater capacity to adapt to any changes.
Residents of properties south of Old Mill Street (Group E) (Ancoats and Beswick ward)	Medium	**Deprivation:** The Ancoats and Beswick ward is ranked the 17th most deprived out of 32 Manchester wards, although it also has a higher than national average of households that are not deprived in any dimension (59.3% compared with 48.9% for England as a whole). Whilst this is a favourably statistic, 40.7% of households in the area as a whole experience some form of deprivation in either 1, 2 or 3 dimensions. The proportion of primary and secondary school pupils in Ancoats and Beswick ward that receive free school meals (26.5%) is higher than the England average (15.7%) and educational attainment is lower than for Manchester and England. Properties on Old Mill Street and Store Street consist of a mixture of apartments and terraced housing. There is no specific publicly available data regarding the demographics of the inhabitants but the terraced housing type is often favoured by young families. Only 5.8% of the population of the Ancoats and Beswick ward are aged 65 and over compared to 18.3% in England as a whole. **Resource sharing:** The properties along Store Street consist of high-medium density apartment buildings within proximity of Manchester Piccadilly Station. Properties along Old Mill Street are a mix of high-density apartment buildings and terraced housing. Access to the wider area is provided by Great Ancoats Street which is accessible from Store Street and Old Mill Street. There are a number of amenities in the area such as small supermarket and other smaller businesses. **Existing inequalities:** There are a number of existing inequalities within Ancoats and Beswick ward. Respiratory disease, circulatory disease, and coronary heart disease are particular contributory factors. Death rates for all three conditions (172.8 standard mortality rate (SMR), 156.9 SMR and 193.9 SMR respectively) are significantly higher than the England average (100 SMR, 100 SMR, 100 SMR respectively), and higher than the Manchester average (161 SMR, 138.5 SMR and 174.9 SMR respectively). Emergency hospital

Receptor Group	Sensitivity	Reason for sensitivity
		admissions for COPD in the ward are nearly four-times higher than the national average. Other notable findings for Ancoats and Beswick ward shows higher than average income deprivation, including poverty affecting children and older people, although unemployment and long-term unemployment rates are slightly lower than the averages for Manchester and England. **Outlook:** No specific data is available. **Lifestage/health statistics/daily activities:** Ancoats and Beswick ward has a lower proportion of persons aged under 16 and over 65 than England and Manchester. Only 12.2% are under 16 and 5.85% are over 65 compared to 18.5% and 18.3% respectively for England and 20.6% and 9.5% for Manchester. Mosaic Analysis of 'Ancoats, Clayton & Bradford Manchester' neighbourhood versus the population registered with a Manchester GP' highlights that residents of Ancoats, Clayton & Bradford neighbourhood are more likely to fall within the following Mosaic Groups: ▪ Rental Hubs (predominantly young, single people in their 20s and 30s who rent their homes from private landlords whilst in the early stages of their careers or pursuing studies) ▪ Transient Renters (single people who pay modest rents for low-cost homes). ▪ Family Basics (families with children who have limited budgets and can struggle to make ends meet. Their homes tend to be low cost). ▪ Municipal Challenge (urban renters of social housing who face an array of challenges) **Capacity to adapt:** Ancoats and Beswick ward has higher than average issues (compared to the other Manchester wards) relating to health and disability, income, crime, and the living environment and faces higher than average barriers to housing and services in terms of physical availability and accessibility, and affordability. These factors reduce the ability of the vulnerable groups and individuals within the ward to adapt. Despite the census data, the mix of residents in the study area itself, including young professionals and families, along with proximity of resources within the area, means that usual residents who are in generally good health have greater capacity to adapt to any changes.
Residents of properties south of Store Street (Group F) (Piccadilly ward)	Medium	**Deprivation:** Compared to the Ancoats and Beswick ward, as well as Manchester as a whole, the Piccadilly ward has low levels of deprivation. However, the ward is ranked highest out of all 32 Manchester wards for barriers to housing and services, living environment and the third highest for crime suggesting that despite the ward having favourable conditions overall, there may be highly deprived populations within the ward. **Resource sharing:** Residential units south of Store Street are high density apartment developments. Access to the wider area is provided by Great Ancoats Street which can be accessed via Store Street as well as the nearby Manchester Piccadilly Station and adjacent roads. The immediate area consists of residential use; however, there are a number of amenities in the wider area accessed from Great Ancoats Street such as restaurants and retail. **Existing inequalities:** Piccadilly ward has the highest (worst) score relating to the barriers to housing and services domain within the index of multiple deprivation (IMD), meaning there are greater physical and financial issues in accessing housing and local services in the ward compared to all of the other wards in Manchester. **Outlook:** No specific data available. **Lifestage/health statistics/daily activities:** Piccadilly ward performs much better than Ancoats and Beswick ward, Manchester, and England across most health indicators, although emergency hospital admissions for COPD are higher than the national average. The majority of the population is working age (aged between 16 and 65), with an extremely low percentage of the population in the younger and older age groups (under the age of 16 and over the age of 65 respectively). **Capacity to adapt:** Despite the ward having mostly favourable deprivation statistics, there is likely to be vulnerable populations within the ward with reduced capacity to adapt.
Residential Units north of Store Street, south of Port Street and west of Great Ancoats Street (Group G). (Piccadilly Ward)	Medium	**Deprivation:** Compared to the Ancoats and Beswick ward, as well as Manchester as a whole, the Piccadilly ward has low levels of deprivation. However, the ward is ranked highest out of all 32 Manchester wards for barriers to housing and services, living environment and the third highest for crime suggesting that despite the ward having favourable conditions overall, there may be highly deprived populations within the ward. **Resource sharing:** Residential units in this area are high density apartment developments. Access to the wider area is provided by Great Ancoats Street. The immediate area consists of residential use; however, there are a number of amenities such as Aldi in the area with additional amenities in the wider area accessed from Great Ancoats Street such as restaurants and retail. **Existing inequalities:** Piccadilly ward has the highest (worst) score relating to the barriers to housing and services domain within the index of multiple deprivation (IMD), meaning there are greater physical and financial issues in accessing housing and local services in the ward compared to all of the other wards in Manchester. **Outlook:** No specific data available. **Lifestage/health statistics/daily activities:** Piccadilly ward performs much better than Ancoats and Beswick ward, Manchester, and England across most health indicators, although emergency hospital admissions for COPD are higher than the national average. The majority of the population is working age (aged between 16 and 65), with an extremely low percentage of the population in the younger and older age groups (under the age of 16 and over the age of 65 respectively). **Capacity to adapt:** Despite the ward having mostly favourable deprivation statistics, there is likely to be vulnerable populations within the ward with reduced capacity to adapt.

Receptor Group	Sensitivity	Reason for sensitivity
Community Assets		
Users of Cotton Field Park and New Islington Marina	Medium	**Deprivation:** No data available. **Resource sharing**: No data available. **Existing inequalities:** No data available. **Outlook:** No specific data available. However, the area is noted to be a high-quality and valuable green space asset in the ward. **Lifestage/health statistics/daily activities:** No data available. **Capacity to adapt:** No data available. Cotton Field Park and New Islington Marina offers a high-quality recreational facility for the local community. There are no equivalent alternative facilities in this locality and few areas of greenspace in the study area meaning that if users are deterred from using the facility, this could have impacts on physical and mental health, and wellbeing.
New Islington Medical Practice, and Urban Village Medical Practice (UVMP), Pharmacy (K's Chemist), and Ancoats Dental Practice	High	**Deprivation:** There are relatively high levels of deprivation in the catchment area for these key resources. **Resource sharing**: UVMP includes the only INFANTTS Clinic in Manchester, and the practice has delivered a primary health care service for homeless people in Manchester for over 20 years. **Existing inequalities:** No specific data available. **Outlook:** The medical practices have been supportive about the Proposed Development to date. **Lifestage/health statistics/daily activities**: Due to the nature of the receptors and the nature/ range of services that they provide, users of New Islington Medical Practice, UVMP and Ancoats Dental Practice are likely to be ill or sick, either on a short-term or long-term basis and therefore sensitive to change. A proportion of users are also likely to fall within the more vulnerable groups and have more serious and/or long-term health conditions. Individuals such as the homeless and those receiving primary health care are likely to be particularly susceptible to change, noting there is associated evidence including that witnessed during a site visit of associated drug and alcohol misuse which presents an added risk. **Capacity to adapt:** Whilst users of these receptors have higher sensitivity to change and present a risk on or near the site which needs to be carefully considered, the medical practices have not raised any specific concerns about potential impacts or impacts to service provision from the Proposed Development.
Users of the PROW/ WCH network	Medium	**Deprivation:** No specific data available. **Resource sharing:** Not applicable. **Existing inequalities:** No specific data available. **Outlook:** No specific data available. **Lifestage/health statistics/daily activities:** Walkers and cyclists and the Ancoats Run Club members using nearby WCH networks are at an elevated risk from the danger distributed by construction activities and construction vehicles. **Capacity to adapt:** The majority of WCH assets within the study area, including those in proximity of the Site, are anticipated to be used daily, both for recreation and commuting. Users will include the wider population who have a greater capacity to adapt to change and those from the vulnerable groups, including school children attending Co-op Academy and users of the nearby medical practices, who are more vulnerable to change and have less capacity to adapt.
Employment and Training Assets		
Construction Workers	Medium	**Deprivation:** There is no specific data available, The average annual income of a construction worker is estimated to be between £21K - £35K[43]. **Resource sharing:** No specific data available. **Outlook:** No specific data available. **Lifestage/ health statistics/ daily activities**: There have been big improvements over recent years in reducing the number and rate of injuries to construction workers. Despite this, construction remains a high-risk industry and accounts for a high percentage of fatal and major injuries. There are many reasons why construction workers have a high risk of developing occupational disease. This includes: the construction site environment, with different sites presenting a range of health risks; the dynamic nature of the work – construction sites are constantly changing, and a large number of trades may all be carrying out tasks potentially dangerous to their health and that of others, and at the same time; risk appreciation; employment – many workers are either self-employed, work for small companies, or frequently change employers, and others work away from home. These situations can make it problematical for workers to easily look after their own health and they often have little or no contact with occupational health professionals.

[43] Glassdoor estimate, last updated 29 August 2024. Available at: https://www.glassdoor.co.uk/Salaries/construction-worker-salary-SRCH_KO0,19.htm

Receptor Group	Sensitivity	Reason for sensitivity
		Capacity to adapt: Due to the nature of their occupation, construction workers constitute a sensitive group. Construction workers are more at risk from workplace accidents than the general workforce/ population and their ability to adapt will vary, depending on things like the location and type of work involved, and the nature and severity of any incident.
Co-op Academy New Islington Primary School	High	**Deprivation:** The school's indicator of deprivation places it within the 20% of areas of highest deprivation in the country. The Primary School is located within the Ancoats and Beswick ward, which has a higher-than-average income deprivation, including poverty affecting children (ranked 7th of the 32 Manchester wards). **Resource sharing:** The primary school, for pupils aged 4 to 11, is located on the northern boundary of the Site, and separated by a private road which provides vehicular access to the school. Information taken from the school's website indicates there are currently 353 pupils that attend the school, which has capacity for 420. **Existing inequalities:** No specific data available. However, over three-quarters of the pupils in the last Ofsted Report (2015) were from ethnic minority backgrounds and it is assumed that there are higher levels of children from low-income backgrounds based on census data in this ward (Ancoats and Beswick). **Outlook:** The Primary School has expressed concerns throughout the consultation about potential overlooking and shadowing from future buildings on the Site, and safeguarding issues, in addition to access and air quality concerns during construction. **Lifestage/health statistics/daily activities:** The primary school is for pupils aged 4 to 11. No specific data is available on the health statistics of children that attend the school; however, census statistics of children in poverty highlights there are health disparities in the Ancoats and Beswick ward when compared to other wards in Manchester. **Capacity to adapt:** The primary school is adjacent to the Site. Whilst access points into the primary school grounds are to remain open, school children are at elevated risk of accidents and incidents and are more sensitive than adults to air pollution, noise, odour and other environmental factors and their bodies and mind are less able to deal with them. Particularly susceptible children are those from low income and/or BME backgrounds.
Businesses located on Great Ancoats Street (Group A, includes PureGym Manchester)	Low	**Deprivation:** No data available – employment status indicates that these employees are relatively less deprived. **Resource sharing:** Data not available. Existing inequalities: Data not available. **Outlook:** There may be some level of stress/anxiety for these businesses as there will be some reliance on the A665/Great Ancoats Street for employees and customers to access the business premises. However, this is already a busy arterial route that suffers from congestion and alternative access routes are available. **Lifestage/health statistics/daily activities:** Trips to and from the businesses are likely to be undertaken on a frequent and daily basis – a range of transport mode options are available, with Manchester Piccadilly Railway Station within walking distance (less than 10 minutes). **Capacity to adapt:** The A665/ Great Ancoats Street is a key transport corridor for accessing the Urban Exchange Retail Outlet, Residence Inn Manchester and the Diecast events space. However, businesses can be accessed via alternative roads and are within walking distance from Manchester City Centre and Manchester Piccadilly railway station. Therefore, employees may experience limited challenges in adapting to daily working schedules. The location of these businesses and proximity to the Proposed Development means they will be subject to impacts, both positive and negative, arising from the Proposed Development.
Businesses at New Islington Marina (Group C, includes Pollen Bakery, Cask Bar and Flawd Wine Bar) (Group C)	Low	**Deprivation:** No data available. **Resource sharing:** Data not available. **Existing inequalities:** Data not available. **Outlook:** There may be some level of stress/anxiety for these businesses as they rely on employees and customers being able to easily access the premises. **Lifestage/health statistics/daily activities:** Trips to and from the businesses are likely to be undertaken on a frequent and daily basis – a range of transport mode options are available within walking distance. **Capacity to adapt:** Customers are likely to be office workers and residents of residential development within the study area. The main access to these businesses is via Marina Promenade.
Businesses between Redhill Street & Jersey Street (Group B)	Low	**Deprivation:** No data available. **Resource sharing:** Data not available. **Existing inequalities:** Data not available. **Outlook:** There may be some level of stress/anxiety for these businesses as there will be some reliance on the A665/Great Ancoats Street for employees and customers to access the business premises. However, alternative access routes are available. Businesses on this street are within proximity to the Proposed Development and may be effected by noise as well visual effects from the development. **Lifestage/ health statistics/ daily activities:** Trips to and from the businesses are likely to be undertaken on a frequent and daily basis – a range of transport mode options are available. Businesses in the area include coffeehouse, retail and creative industries. Creative industry jobs such as graphic design etc are likely to offer flexible working.

Receptor Group	Sensitivity	Reason for sensitivity
		Capacity to adapt: Customers of the retail and hospitality businesses are likely to be office workers and residents of residential development within the study area and reduced access will have a direct impact on these businesses. However, creative industries in the area are more able to adapt due to the ability to work flexibly.
Businesses north of Store Street, south of Port Street and west of Great Ancoats Street.(Group G)	Low	**Deprivation:** No data available. **Resource sharing:** Data not available. **Existing inequalities**: Data not available. **Outlook:** There may be some level of stress/anxiety for these businesses as there will be some reliance on the A665/Great Ancoats Street for employees and customers to access the business premises. However, alternative access routes are available. Businesses on this street are within proximity to the Proposed Development and may be effected by noise as well visual effects from the development. **Lifestage/ health statistics/ daily activities:** Trips to and from the businesses are likely to be undertaken on a frequent and daily basis – a range of transport mode options are available. Businesses in the area include bars, coffee shops, offices and hotels. **Capacity to adapt:** Customers of the retail and hospitality businesses are likely to be office workers and residents of residential development within the study area and reduced access will have a direct impact on these businesses. Additionally, hotels are more sensitive to noise as it affects the experience of their customers at the hotel. Evening usage of some of the businesses will be less susceptible to disturbance impacts from construction activities as timings are less likely to overlap.

14.6. Potential impacts

Construction phase

14.6.1. During construction, there is potential for the receptor groups and determinants of human health to be affected by the impacts of the Proposed Development without mitigation. This sub-section highlights the potential impacts without mitigation, taking each of the categories in turn.

Affected communities (wards) - receptors

14.6.2. Residents, community groups and neighbourhood associations, schools (particularly Co-op Academy New Islington), medical centres (principally New Islington Medical Centre and Urban Village Medical Practice), community facilities such as Cotton Field Park, New Islington Marina and Green, could be affected by changes to the neighbourhood, severance and/or disruptions to access, changes to environmental conditions, and/or safety.

Affected protected characteristics groups - receptors

14.6.3. Vulnerable groups identified in the baseline would be more susceptible to disruptions and changes to the baseline conditions as a result of the Proposed Development. For example, a change in air pollutants can cause a change in respiratory health, noise or vibration can cause a change in social or mental wellbeing, disruptions in access to schools and community facilities can cause stress and anxiety, and this can have particular impacts for the many vulnerable groups in the study area.

Ambient air quality – determinant of human health

14.6.4. Impacts from construction activities, such as the release of dust and pollutants, and changes in emissions from increased vehicle movements on the highways network, including construction vehicles and queuing traffic, will potentially affect exposure to pollutants that could impact human health and the AQMA. The key pollutants are nitrogen dioxide (NO2) and particulate matter (PM). Air quality effects predominantly relate to physical health outcomes that can change mortality rates and the burden of disease within the exposed population. This includes the onset of new health conditions or health related states, changes in existing health conditions and changes to day-to-day functioning. Poor environmental quality and increased exposure to traffic derived pollutants could increase the risk to physical health, including respiratory and gastrointestinal problems, and lower mental health outcomes. Those with existing issues would be more susceptible, noting the high incidence of existing conditions such as respiratory diseases within the study area.

14.6.5. The potential impacts on human health are informed by the findings of ES (Volume 2) Chapter 7 Air Quality.

Ambient noise – determinant of human health

14.6.6. The construction phase for the Proposed Development has the potential to result in health impacts from changes in exposures to noise and vibration. Noise and vibration (unwanted sound and movement) from construction vehicles, construction plant, machinery and construction processes is a pathway for health effects relating to annoyance, sleep disturbance, cardiovascular and physiological effects, mental health and behavioural effects, including poor school performance by school children. This is particularly relevant to the study area given the proximity of the Proposed Development to Co-op Academy New Islington, New Islington Medical Practice and Urban Village Medical Practice. The large resident

population, which includes vulnerable groups and young professionals working from home, could also lead to an elevated risk of impacts arising from the Proposed Development. Vibration impacts have the potential to give rise to increased stress and anxiety and sleep disturbance also.

14.6.7. Noise and vibration effects are assessed in the ES (Volume 2) chapter 16 Noise and vibration, with effects that influence health reported in the human health chapter.

Sources of pollution and environmental exposures – determinant of human health

14.6.8. The construction activities of the Proposed Development may give rise to a range of other environmental exposures such as those relating to ground conditions, the water environment, odour, lighting, changes to views, wind and microclimate. Exposure effects are strongly linked to proximity, with the greatest potential for impacts expected for those close to the construction activities. Construction effects arising from impacts are considered as a single health issue due to the interrelated nature of both the exposures and the potential physical and mental health outcomes.

14.6.9. Whilst some of these impacts will be reported in the other technical chapters (for example, ES (Volume 2) Chapter 11: Daylight, Sunlight, Overshadowing and Solar Glare; ES (Volume 2) Chapter 12: Ground Conditions and Contamination; ES (Volume 2) Chapter 20: Wind and Microclimate), the human health assessment will focus on a qualitative discussion of the health consequences of the combined construction experience (excluding Air quality and Noise and vibration, which will be considered separately) related to exposures, visual and other disturbance associated with the construction activities for residents, communities, and other persons near the Proposed Development.

Townscape amenity – determinant of human health

14.6.10. The introduction of temporary site compound and temporary storage areas, general construction activities, introduction of construction vehicles, machinery, plant and lighting, traffic management measures, and new building activities all have the potential to adversely affect visual amenity and townscape quality through introducing features and activities that are incongruent with the existing uses. This is particularly important because there is an increasing recognition in public policy that townscape and associated features, views, and outlook contribute towards better public health. Exposure effects are strongly linked to proximity, with the greatest magnitude of impacts expected for those close to the construction activities and construction traffic routes. The human health assessment will be informed by the findings of the Townscape and Visual Assessment, ES (Volume 3).

Risk of injuries and death - determinant of human health

14.6.11. The introduction of construction activities and the introduction of construction compounds and construction sites will increase the risk of injuries and death, principally for construction workers, although accident risk may also increase for residents and the general public. The introduction of construction traffic, changes to traffic levels, increased potential for conflict between different modes, and an unawareness of altered traffic movements will increase the risk of injury and death, particularly given the presence of particularly vulnerable groups in the study area such as children and adolescents, older people, people in poor health, and people with physical and/or mental impairments. In addition, unfamiliar layouts, and changes to surfacing, and impacts on water flow paths could increase the risk of injury from slips and trips. The nature of the health effects (injury or death) means that a single accident or incident has the potential to influence health across short, medium and long-term timescales.

Characteristics of the transport network – determinant of human health

14.6.12. The Proposed Development may affect people's health through changes in access and accessibility, road conditions and vehicle numbers. For example, the introduction of construction traffic and traffic management measures have the potential to cause temporary disruptions, changes to access, changes to travel patterns, journey quality and reliability, and/or result in inconvenience, particularly given the Site's busy central location, situated adjacent to the Inner Relief Road (Great Ancoats Street) and important arterial roads such as Old Mill Street and Redhill Street which provide through routes and access to homes, businesses, community assets and the wider area. This could have particular impacts on school children and parents, the elderly and mobility impaired residents, and the other vulnerable groups identified in the baseline, who require safe and easy access. Effects are most likely to arise from impacts that cause disruption or changes to day-to-day functioning rather than increasing levels of illness.

Access to private property and housing – determinant of human health

14.6.13. No private dwellings will need to be demolished to accommodate the Proposed Development and access to private properties and housing would be expected to be maintained at all times (at least on foot), however access (including on foot) to residential properties may become restricted or disrupted. There may be temporary severance and/or short periods of disruptions in access to private dwellings such as nearby properties on Old Mill Street, Redhill Street, New Union Street, New Islington Road, and Coppersmith Road, principally due to the presence of construction activities and traffic management on and in the vicinity of the Site as a consequence of construction activities e.g. whilst large construction materials or equipment is moved onto the Site– depending on available access and alternative access routes for these receptors.

Access to work and training – determinant of human health

14.6.14. The land requirements of the Proposed Development do not require demolition or relocation of any existing businesses.

14.6.15. The local procurement of goods and services during the construction phase (including to meet the on-site needs of the construction workforce) could affect the health of local people who may directly or indirectly benefit through employment or expenditure in the local economy.

14.6.16. The Proposed Development will also require a sizeable construction workforce over a prolonged period of time. Local people may benefit directly or indirectly through employment. This could provide financial security and contribute to self-esteem, particularly for low-income groups. Whilst the construction period would be temporary, access to skills and training for new workers, would have long-term benefits. Interactions between the construction workforce and local community could result in impacts, noting that in this busy edge-of-city-centre location, workers and construction workers are commonplace, however residents may express concerns about factors such as worker conduct on and off-shift. Conversely, there could be some adverse economic and employment impacts within the study area should there be changes or disruptions to business activity and accessibility and disruptions to or increases in commuter times during the construction period.

14.6.17. There will be wider induced economic impacts expected from the Proposed Development, which will be reported in ES (Volume 2) Chapter 17 'Socio-economics'. The human health assessment focuses on a qualitative discussion of the potential impacts for human health during construction.

Community assets supporting human health – determinant of human health

14.6.18. For nearby services and facilities there will be a continuity of services, however construction activities and traffic management associated with the Proposed Development is likely to result in temporary disruptions in the way in which services will be accessed, particularly by vulnerable groups.

14.6.19. The introduction of a non-home-based construction workforce into an area can increase demand for public services and the ability of service providers to respond. Any resultant effects tend to be greatest at the peak of the construction workforce. The majority of the construction workforce is expected to be primarily based in the wider Greater Manchester areas and across the North-West. The non-home-based workforce for the Proposed Development is expected to be relatively small in comparison.

Green space, open space, recreation, and leisure-time activities – determinant of human health

14.6.20. The Proposed Development may lead to some local and wider disruptions and/or reduced access to open spaces, greenspaces, recreation, and leisure-time facilities. This could adversely impact health and wellbeing and accessibility/ participation in physical activity, with availability, good access and participation linked to both physical and mental health, such as through social interaction, reduction in isolation and stress.

Walking and cycling routes supporting human health – determinant of human health

14.6.21. The busy location and land requirements of the Proposed Development and construction activities may lead to temporary disruptions to roads and routes and changes to traffic conditions, including the introduction of construction traffic. This may affect the health of residents and others through temporary disruptions to, and/or the quality and safety of, active travel routes and wider network of footpath and cycleways in the area. This could reduce the prevalence of physical activity, contribute to changes to journey distance and time, and severance between communities located around the Proposed Development. Such impacts are reported within the category of 'access' to the relevant facilities, where appropriate.

Operation phase

14.6.22. Once operational, there is potential for the receptor groups and determinants of human health to be affected by the impacts of the Proposed Development, including accessing the commercial opportunities that it will provide and using the public realm that will surround the building. This sub-section highlights the potential impacts, taking each of the categories in turn.

Affected communities (wards) - receptors

14.6.23. Residents, community groups and neighbourhood associations, and community facilities (particularly Co-op Academy New Islington, New Islington Medical Centre and Urban Village Medical Practice) could be affected by changes to the urban environment and changes to environmental conditions, as they adjust and become familiarised with the Proposed Development/ new surroundings, including new connections into parts of the Site and through the study area.

14.6.24. Community cohesion is also likely to be affected, noting tensions generally within the study area about the wider gentrification of this part of Manchester. The Proposed Development will cater for a large new working population that are likely to seek services and facilities during the working day; however, it is unclear how many of these workers will decide to live in the study area. If community cohesion decreases and individuals or groups in the indigenous population decide to relocate, this could result in negative effects and loss, particularly if those moving out of the area were influential in social networks. Whilst a shared identity for those remaining may support community cohesion, it also has the potential

to reduce the speed at which new community members (who have not experienced the change over time) integrate.

Affected protected characteristics groups - receptors

14.6.25. Vulnerable groups identified in the baseline would be more susceptible to changes to the baseline conditions as a result of the Proposed Development. For example, a change to views or microclimate can cause a change (adverse or positive) in social or mental wellbeing, and this could have particular impacts for the various vulnerable groups in the study area. Any negative effects arising from the impacts of the Proposed Development are expected to be greatest in the short-term as this period encompasses the greatest disruption, change and adaptation, with effects expected to lessen over time.

Ambient air quality – determinant of human health

14.6.26. Changes in emissions from vehicles on site and on the public highways in the vicinity of the Proposed Development has the potential to affect exposures to pollutants that could affect human health. The key pollutants are nitrogen dioxide (NO_2) and particulate matter (PM). Poor environmental quality and increased exposure to traffic derived pollutants could increase the risk to physical health, including respiratory and gastrointestinal problems, and lower mental health outcomes. Those with existing issues would be more susceptible.

14.6.27. The potential impacts on human health will be informed by the findings of ES (Volume 2) Chapter 7 Air quality.

Ambient noise – determinant of human health

14.6.28. The Proposed Development has the potential to result in health effects from changes in exposure to noise from the development itself and additional traffic, that could affect residents and users of the study area. This can include the onset of health-related states or stresses, changes in existing conditions, and changes to day-to-day activities or functioning. Whilst the influence on the population can be characterised as continuous, the potential for permanent, progressive or irreversible effects is unlikely.

14.6.29. The potential impacts on human health will be informed by the findings of ES (Volume 2) Chapter 15 Noise and Vibration.

Sources of pollution and environmental exposures – determinant of human health

14.6.30. The operation of the Proposed Development will give rise to a range of environmental exposures e.g. changes to views, lighting, wind, and microclimate, that have similar spatial and temporal extents. These effects will be experienced most by residents and others at receptors closest to the Proposed Development. Operation effects are considered as a single health issue due to the interrelated nature of the exposures and of the potential physical and mental health outcomes.

14.6.31. ES (Volume 2) Chapter 11: Daylight, Sunlight, Overshadowing and Solar Glare; ES (Volume 2) Chapter 12: Ground Conditions and Contamination; ES (Volume 2) Chapter 19: Wind and Microclimate) identify the potential for adverse operational effects relevant to human health.

Townscape amenity – determinant of human health

14.6.32. The Proposed Development has the potential to affect (adversely or positively) visual amenity and townscape quality. Exposure effects are strongly linked to proximity, with the greatest effects expected for those close to the Proposed Development. The human health assessment will be informed by the findings of the Townscape and Visual (ES Volume 3).

Access to work and training – determinant of human health

14.6.33. The Proposed Development will support economic growth and create a new digital campus and office space that will accommodate a sizeable workforce (estimated 7,000 new and existing civil service roles), plus the new retail units will provide employment for local residents. Local people may benefit directly or indirectly through employment or expenditure in the local economy. Interactions between workers and the local community is likely to be generally positive, particularly in this busy edge-of-city-centre location, however some residents may express concerns.

14.6.34. There will be wider induced economic impacts expected from the Proposed Development, which will be reported in ES (Volume 2) Chapter 17 'Socio-economics'. The human health assessment focuses on a qualitative discussion of the potential impacts for human health during operation.

Access to Community assets supporting human health – determinant of human health

14.6.35. The Proposed Development may alter access (negatively or positively) to, or the viability of, public services or amenities.

14.6.36. For public services and healthcare, social care, and education there will be a continuity of services, however an increased workforce and potential increase in population (because at least some of this workforce is expected to look for accommodation nearby) has the potential to increase demand for services in the study area – this could support enhanced viability and/or place pressure on services. The assessment of effects arising from impacts will be rooted in an acknowledgement that the numbers of workers in the area is very high already and the local population is fluid in any event as some residents leave and new residents arrive with a general increase. The advance knowledge of change means that service planning can take place to appropriately adapt services to accommodate the changes. In the longer term it is likely that changing community needs will establish new service access norms. There may be short-term effects linked to the relocations and longer-term effects relating to the cumulative consequence of such change on the viability of existing services and the potential need for new service provision.

Access to Green space, open space, recreation, and leisure-time activities – determinant of human health

14.6.37. The permanent land use change due to the Proposed Development may affect the health of workers at the Proposed Development, those that live in the nearby communities, and those that work in or visit the area through improved access to, and the availability and/or quality of, new public spaces and enhanced biodiversity value. The Proposed Development envisages a vastly improved and more usable landscape, including open spaces and greenspaces and a gateway through to Cotton Field Park and nearby greenspaces, open spaces and leisure.

14.7. Assessment of effects

Construction phase

14.7.1. The construction phase assessment of effects on human health takes account of the design for the Proposed Development (see ES (Volume 2) Chapter 2 Description of the Site and Proposed Development) and embedded mitigation that is considered relevant to managing potential impacts on determinants of human health and sensitive receptors. This sub-section sets out the embedded mitigation that has been influential in the construction assessment, prior to presenting the assessment tables that report on predicted human health effects in the construction phase. The assessment of likely significant effects of the Proposed Development assumes that embedded mitigation measures are in place.

Embedded mitigation

14.7.2. Embedded mitigation measures comprise legal requirements or standard practices that will be implemented as part of the Proposed Development. These are measures that would be implemented regardless of the assessment outcomes, for example, as a result of legislative requirements and/or standard best practice. In addition, the assessment assumes that all the environmental design mitigation from the other topics, notably Townscape and Landscape, Air Quality and Noise and Vibration, which are linked to this topic, would be implemented to protect the characteristic features of the study area and control the magnitude of impacts on environmental determinants of health.

14.7.3. An Outline CEMP (OCEMP) has been prepared to effectively control/minimise adverse impacts on human health for the duration of Proposed Development construction. The other chapters of this environmental statement make recommendations for the types of environmental management that would be required during construction and these are incorporated in the OCEMP. Of particular importance to human health, the OCEMP includes (not restricted to) the following elements:

- The appointment by the Principal Contractor of a Community Liaison Officer (CLO) with prescribed responsibilities, which include the development and implementation of a Community Engagement Plan (CEP). The CEP should ensure that the community is kept informed during construction, notably with enhanced involvement of the CLO with Co-op Academy New Islington and New Islington Medical Practice. It is assumed that the CEP will acknowledge differing perspectives and issues of each stakeholder. The communication methods must seek to meet the different inclusivity/ accessibility needs of stakeholders identified in the study area.
- 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.
- Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority
- Construction works to take place during normal working hours (or otherwise agreed) weekdays and Saturdays, with agreement from MCC ideally being secured through a Section 61 consent. Construction works outside of these hours shall be minimised as far as possible. If necessary, advance notification of construction works outside these hours would be given through the Community Engagement process.
- Commitment to prepare and implement a Noise Monitoring and Management Plan, which will ideally be connected to thresholds to be agreed with MCC through a Section 61 consent.

- Plan Site layout so that machinery and dust causing activities are located away from sensitive receptors, as far as is possible.
- Erect solid screens or barriers around dusty activities or the Site boundary that are at least as high as any stockpiles on Site.
- Ensure all vehicles switch off engines when stationary - no idling vehicles.
- For demolition/clearance activities, avoid explosive blasting, using appropriate manual or mechanical alternatives.
- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the Site. This may require the sweeper being continuously in use.
- Access gates to be located at least 10 m from receptors where possible.
- Health and safety risk assessments, method statements (RAMS) and appropriate Personal Protective Equipment (PPE) for the protection of construction workers in accordance with the Control of Substances Hazardous to Health (COSHH) Regulations.
- Implement appropriate pollution incident control e.g. plant drip trays and spill kits.
- Prepare a Pollution Prevention and Control Management Plan, and implement appropriate and safe storage of fuel, oils and equipment during construction.
- If soil and / or groundwater contamination is identified which poses a risk to sensitive receptors during any future phases of ground investigation or the construction works, appropriate remediation would be undertaken.
- Develop and implement a Soil Handling Management Plan

14.7.4. Development and implementation of a CTMP to define measures to reduce impacts from construction traffic, particularly on the Inner Relief Road (Great Ancoats Street), Old Mill Street and Redhill Street: signage, Site access and egress, coordination of road closures/diversions and timing/ volume restrictions. Of particular importance to assessing impacts on population and human health, the CTMP will include the following elements:

- Access routes to compounds for people, plant and material to be designated by contractor, in consultation with WCC as highway authority, to ensure movements restricted to appropriate routes to minimise local disruption.
- Signed diversion routes, for all modes with advanced notifications of planned diversions and closures for Non-Motorised Users.
- Providing a continuity of access and egress to existing private properties, community and recreational facilities, business and retail destinations, to be maintained at all times during construction. Any temporary arrangements will be agreed with the private owners.

Construction effects

14.7.5. Table 14-8 describes the effects from impacts arising from the Proposed Development during construction on the human health receptors, noting the relevant mitigation that has informed the assessment.

14.7.6. The mitigations listed in Table 14-8 pertain exclusively to embedded mitigations, unless otherwise stated.

Table 14-8 - Construction Effects Assessment

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
Ambient air quality	Wider population	Medium	Low	Minor Adverse (not significant)	Impacts from construction activities including demolition, earthworks, construction and trackout, and changes in emissions from construction vehicles will increase exposure to dust and pollutants that could adversely affect human health. This issue has been informed by the findings in Chapter 7: Air quality. The Air quality chapter identifies low risk to human health of dust pollution from demolition and trackout activities and medium risk from construction activities and earthworks. Information on the number of construction vehicles required for the Proposed Development is not currently available, therefore no quantitative air quality assessment has been undertaken. However, it is considered unlikely in Chapter 7 that the criteria requiring an assessment would be exceeded and embedded mitigation would ensure that this criterion would not be exceeded. The Air quality chapter concludes that no significant health effects in relation to air quality are likely to occur. This human health chapter focuses on a qualitative discussion of the health consequences of the changes identified in Chapter 7 for air quality.	Specific mitigation measures have been set out in the air quality assessment in Chapter 7, which in general terms will be covered by the CEMP. Measures include site management and monitoring, dust suppression techniques particularly during ground-breaking, use of wheel wash facilities, regular maintenance and cleaning of site access roads etc. Construction traffic will not exceed 100 AADT LDV or 25 AADT HDV (within the AQMA) averaged over a year.	Chapter 7: Air quality identifies that the Proposed Development may result in changes to air quality within the Greater Manchester AQMA. Monitoring data shows that annual mean NO2 AQS objectives have been exceeded at several roadside locations in the study area, however these sites are not considered to be representative of relevant exposure. DEFRA mapped background concentrations for 2022 and 2030 indicate background concentrations are below the NO2 and PM10 AQS objectives and PM2.5 AQS objective and targets. The annual mean NO2 concentrations at the DEFRA PCM links in the study area show that there is no risk of exceeding the air quality limit value. During construction, there is the potential for increased emissions of dust and particulate matter, however with the application of appropriate mitigation measures, significant effects at nearby receptors would be unlikely. Additional traffic during the construction phase is considered unlikely to significantly adversely affect air quality. The focus for managing air quality is the embedded environmental measures set out in Chapter 7: Air quality and column 6 of this assessment, which is generally covered in the CEMP. Using the findings from the Air quality chapter and professional judgement, the wider population effect in the short-term is predicted to be minor adverse (not significant). This is based on the changes in dust exposures and changes in air pollution to which Site users and the local population, particularly at receptors in the vicinity of the Site will be exposed. The vulnerable (sub-population) group effect (a judgement of the greatest expected effect due to characteristics that increase sensitivity) will be minor adverse (not significant). Groups representing the
	All sub-population/ vulnerable groups	High	Low	Minor Adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Low	Minor Adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Low	Minor Adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Low	Minor Adverse (not significant)			
	Residents of properties south on Store Street	Medium	Low	Minor Adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Low	Minor Adverse (not significant)			
	Residential Units north of Store Street, south of Port Street and west of Great Ancoats Street.	Medium	Low	Minor Adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Low	Minor Adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor Adverse (not significant)			
	Users of PROW and WCH routes	Medium	Low	Minor Adverse (not significant)			
	Construction workers	Medium	Low	Minor Adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor Adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Low	Minor Adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Low	Minor Adverse (not significant)			younger age are particularly sensitive to air quality impacts, especially at locations where prolonged exposure rather than transitory exposure may be experienced such as at the nearby Co-op Academy. People of older age and particularly those with existing respiratory or cardiovascular conditions are also particularly sensitive. Where existing health conditions relate to existing respiratory conditions such as asthma, it is likely to be the peaks in air pollution that pose the greatest risk to health. The effect on all receptor groups will be minor adverse (not significant). Overall, there will not be a population level effect (even at the community level) that is significant in EIA terms.
	Businesses at Redhill Street	Low	Low	Minor Adverse (not significant)			
	Businesses north of Store Street, south of Port Street and west of Great Ancoats Street.	Low	Low	Minor Adverse (not significant)			
Ambient noise	Wider population	Medium	Low	Minor adverse (not significant)	Construction activities and construction vehicle movements will result in changes to noise and vibration levels. The noise and vibration chapter (Chapter 16) notes particular concerns with piling activities which are estimated to produce 1db of change in background noise levels, and the height of noise associated with constructing the tall building. This human health chapter focuses on a qualitative discussion of the health consequences of the identified changes in noise and vibration reported in Chapter 16.	Specific mitigation measures have been set out in the noise and vibration assessment in Chapter 16, which in general terms will be covered by the CEMP, including a Noise and Vibration Management Plan and temporary traffic diversions. Mitigation measures include noise limits and checks on plant, use of silencers, careful selection of construction methods, use of acoustic barriers and other containment measures, restrictions on deliveries, neighbourhood liaison and liaison with the Local Authority, and avoiding night-time working where practicable.	The Noise and vibration assessment (Chapter 16) finds that with the application of appropriate Best Practical Means, the residual effects would still have the potential to cause noise impacts during all construction phases. However, although noise levels from construction activities could be high during certain periods, it is considered unlikely that the temporal threshold would be exceeded. For reference, the temporal thresholds for noise are defined as either 10 or more days or nights in any 15 consecutive days or nights or a total number of days exceeding 40 in any 6 consecutive months due to the mobile and temporary nature of the works. Further assessment is recommended to be undertaken by the Contractor when detailed phasing is available and should form part of the CEMP. Minor adverse impacts from piling are identified for Co-op Academy, Royal Mills, MM2 Apartments, Brownsfield, Residence Inn, and 83 Ducie Street. At all locations it is anticipated that vibration levels will be below the 10mm/s significant impact threshold, defined in Table 16-6 of Chapter 16, where vibration is likely to be intolerable for any more than a very brief exposure to this level in most building environments.
	All sub-population/ vulnerable groups	High	Low	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties south on Store Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Low	Minor adverse (not significant)			
	Residential Units north of Store Street, south of Port Street and west of Great Ancoats Street.	Medium	Low	Minor adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Low	Minor adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Users of PROW and WCH routes	Medium	Low	Minor adverse (not significant)			No adverse or significant adverse effects are predicted due to additional construction traffic on local roads. With embedded mitigation measures in place, the human health effect for the wider population near to the construction activities will be minor adverse (not significant), principally linked to proximity and sensitivity. This conclusion reflects that whilst the Proposed Development's embedded measures in the CEMP, alongside BPM, will reduce construction related exposures, for many the introduction of construction activities and change will affect wellbeing to varying degrees. This is likely to occur incrementally and, in some cases, intermittently which will increase existing exposure to noise pollutants. Effects may be particularly influential where people spend extended periods of time at home, for example those working from home which has increased since Covid-19. The effect for the vulnerable group will be minor adverse (not significant). Again, exposure effects are strongly linked to proximity, with the greatest effects expected for those close to the construction activities that would experience change. The negative effect is driven by vulnerable group sensitivity to noise and vibration effects such as anxiety and stress, or sleep disturbance, particularly in relation to groups such as children, older people, and those with existing poor health. Effects may be particularly influential where people spend extended periods of time at home, for example due to being in poor health, unemployed, retired, shift workers or providing care. For those people who already experience deprivation or social disadvantage the construction related effects may exacerbate or perpetuate such trends, for example by making the neighbourhood less conducive to social gathering and leisure. However, with appropriate measures set out in the CEMP, significant effects in this respect will be avoided. In the longer term, the completion of
	Construction workers	Medium	Low	Minor adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Low	Minor adverse (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Low	Minor adverse (not significant)			
	Businesses at Redhill Street	Low	Low	Minor adverse (not significant)			
	Businesses north of Store Street, south of Port Street and west of Great Ancoats Street.	Low	Low	Minor adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
							construction effects and implementation of environmental measures will reduce the overall effects. The effect on all receptors groups will be minor adverse (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
Sources of pollution and environmental exposures (excluding Air quality, Noise and vibration, and Townscape amenity which are assessed separately)	Wider population	Medium	Low	Minor adverse (not significant)	Construction activities, namely the creation and use of construction working areas, movement of plant, machinery and vehicles, introduction of earthworks, material stockpiles and other features will introduce disruptive elements that could generate pollution, mobilise any contamination and change environmental exposures during construction. The Proposed Development will also alter ground and water conditions, visual and environmental amenity, wind and microclimate. This issue informs and has been informed by Chapter 12: Ground Conditions and Contamination, Chapter 15: Materials and waste; Chapter 19: Water Resources and Flood Risk, and Chapter 20: Wind Microclimate. This section of the human health chapter focuses on a qualitative discussion of the health consequences of the combined construction experience from construction related exposures and disturbance for receptors near the Proposed Development and construction workers. Townscape amenity is considered as a separate topic in the following section of this human health chapter.	Specific mitigation is included in Chapters 11, 12, 15, 19 and 20. Whilst these chapters include specific mitigation measures, in general terms this will be covered by the CEMP and pollution prevention and incident control. Measures include dust suppression techniques, piling risk assessments, working methods to manage groundwater and surface water, reducing material use and waste generation, on-site management of materials and waste, treatment and disposal, safe storage and use of fuel and oil, pollution incident control, achieving high recycling and recovery rates, preparation of a Site Waste Management Plan, Soil Handling Management Plan, Pollution Prevention and Control Management Plan, adherence to Pollution Prevention and Construction Industry Research and Information Association (CIRIA) guidelines, use of temporary protective fencing to delineate the working areas, site boundaries and protect sensitive features from disturbance, and restrict access.	Chapters 11, 12, 15, 19 and 20 identify the potential for adverse construction related effects relevant to health. For example, the Ground Conditions and Contamination chapter (Chapter 12) identifies negligible adverse effects on soils erosion and land contamination and minor adverse effects for soils re-use; the Materials and waste chapter (Chapter 15) predicts slight adverse effects from the excavation of materials and waste; the Water Resources and Flood Risk chapter (Chapter 19) notes slight adverse effects on water quality and groundwater, flood risk and surface water run-off, and; the Wind Microclimate chapter (Chapter 20) reports negligible adverse effects for residents, passers-by and construction works. The effect for the wider population across the study area in the short term is minor adverse (not significant). This conclusion reflects that whilst the Proposed Development's embedded mitigation measures will reduce construction related exposures, for many the range of environmental exposures and duration of change will affect wellbeing to some degree and will incrementally increase existing exposure. In the longer-term effects would be expected to reduce. Using professional judgement, the effect for the vulnerable group is likely to be minor adverse (not significant), although some individuals may have greater susceptibility to localised impacts. The embedded mitigation measures, such as BPM and those set out in the CEMP, mean that significant effects would be avoided. Exposure effects are strongly linked to proximity, with the greatest effects
	All sub-population/ vulnerable groups	High	Low	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties south on Store Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Low	Minor adverse (not significant)			
	Residential Units north of Store Street, south of Port Street and west of Great Ancoats Street.	Medium	Low	Minor adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Low	Minor adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor adverse (not significant)			
	Users of PROW and WCH routes	Medium	Low	Minor adverse (not significant)			
	Construction workers	Medium	Low	Minor adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Low	Minor adverse (not significant)			expected for those near to the construction activities. The negative effect considers the greater sensitivity of the vulnerable groups to pollutant, amenity, and environmental impacts, which is particularly relevant for groups such as children, older people, and those with existing poor health. In the longer term, a reduction in construction activities, as well as a degree of adaptive behaviour to change and other amenity or disruption effects, is expected to reduce the effects for most people. However, this would not necessarily alleviate all effects on health outcomes. The effect on all receptor groups will be minor adverse (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Low	Minor adverse (not significant)			
	Businesses at Redhill Street	Low	Low	Minor adverse (not significant)			
	Businesses north of Store Street, south of Port Street and west of Great Ancoats Street.	Low	Low	Minor adverse (not significant)			
Townscape amenity	Wider population	Medium	Low	Minor adverse (not significant)	Construction activities such as the introduction of noise, dust, vibrations, visual impacts from hoardings, construction equipment/machinery and scaffolding, and increased levels of construction traffic at the Site and moving through the local area will introduce disruptive elements during construction and affect townscape amenity. This issue informs and has been informed by the Townscape and Visual Impact Assessment. This section of the health chapter focuses on a qualitative discussion of the health consequences of the reported townscape exposures and disturbance, associated with construction activities for receptors closest to the Proposed Development.	Mitigation is provided in the CEMP which will seek to reduce the magnitude of impacts of the in-combination disruptive impacts of the construction works of the Proposed Development on the character, appearance and functionality of the surrounding townscape. Comprehensive Construction Method Statements prepared by appointed contractors should be submitted alongside the planning application to mitigate against the direct and indirect impacts of the construction phase of the Proposed Development	The Townscape and Visual Impact Assessment (TVIA) identifies that construction activities will temporarily affect the character, appearance and functionality of several Townscape Character Areas (TCAs) in the study area. The greatest magnitude of impact will be experienced within TCA 1 (Great Ancoats Street), where the Proposed Development is located. Impacts relate to the environmental impact of the works during the construction phase, including noise, dust, vibrations, visual impacts from hoardings, construction equipment/machinery and scaffolding, and increased levels of construction traffic on the Site and in the local area. The TVIA also identifies adverse effects in a number of views in the construction phase, particularly those closest to the Site where the visual intrusion and consequence from construction works are more likely to negatively impact the ability
	All sub-population/ vulnerable groups	High	Low	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties south on Store Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Low	Minor adverse (not significant)			
	Residential Units north of Store Street, south of Port	Medium	Low	Minor adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Street and west of Great Ancoats Street.						to enjoy and appreciate the townscape in localised views.
	Users of Cotton Field Park and New Islington Marina	Medium	Low	Minor adverse (not significant)			The views most affected are considered to be View 3 (Looking south-east directly into the Site from the junction of Henry Street and Redhill Street), View 12 (Looking east into the Site from the south pavement of Great Ancoats Street, adjacent to entry to Binns Place) and View 13 (Looking north-west into Site from junction of Great Ancoats Street and Old Mill Street) where the construction works will wholly diminish the amenity value of the view. However, these impacts are temporary in nature and the construction program will be short-term.
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor adverse (not significant)			
	Users of PROW and WCH routes	Medium	Low	Minor adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Low	Minor adverse (not significant)			Having considered these findings, the construction effect for the wider population across the study area in the short term will be minor adverse (not significant). This conclusion reflects that whilst the Proposed Development's embedded mitigation measures will reduce construction related exposures, minor adverse impacts will remain.
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Low	Minor adverse (not significant)			
	Businesses at Redhill Street	Low	Low	Minor adverse (not significant)			Using professional judgement, the effect for the vulnerable group is likely to be minor adverse (not significant), although some individuals may have greater susceptibility to change and visual impacts. The embedded mitigation measures, such as those set out in the CEMP, mean that significant effects would be avoided. Exposure effects are linked to proximity, with the greatest effects expected for those closest, with views of the construction activities and associated infrastructure. The negative effect also considers the greater sensitivity of the vulnerable groups to change, particularly older people and those with existing poor health.
	Businesses north of Store Street, south of Port Street and west of Great Ancoats Street.	Low	Low	Minor adverse (not significant)			In the longer term, a reduction in construction activities, as well as a degree of adaptive behaviour to visual change is expected to reduce the effects for most people. However, this would not necessarily alleviate all effects on health outcomes.
							The effect on all receptor groups will be minor adverse (not significant). Overall,

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
							there would not be a population level effect (even at the community level) that was significant in EIA terms.
Risk of injuries and death	Wider population	Medium	Negligible	Negligible adverse (not significant)	The introduction of construction activities and a construction site/ compounds, added to an increase in vehicle movements associated with construction vehicles, will introduce new risks of injuries and death for residents, the general public and construction workers. The Traffic and transport assessment (Chapter 18) has identified the overall impact of the Proposed Development on accidents and safety as negligible. This human health chapter focuses on a qualitative discussion of the health consequences of changes in the risk of injuries and death, including those identified in Chapter 18: Transport.	Mitigation is included in the Traffic and transport chapter (Chapter 18), which is covered by the CEMP and CTMP. In general terms this includes measures to ensure that construction traffic travels on the strategic road network whenever possible, and also travels outside of the AM and PM peak traffic hours, in addition to general construction practices. Additional requirements will be determined based on the risks arising from construction activities. Measures will be employed to ensure that construction sites are kept secure, with controls on the people and materials entering and leaving the Site. General mitigation will form part of the standard Health and Safety process, and the CEMP will include occupational healthcare for all construction workers during working hours. Outside of working hours, contact details will be provided to direct to appropriate healthcare/ social care providers. A Stakeholder Management Plan will be developed to inform relevant parties of the timings of the works and manage impacts on community safety, with a focus on prevention where practicable. A process for the local community to register public concerns, with contact details provided will be made available.	During construction there is likely to be a small increase in the risk of accidents due to the introduction of a large construction workforce, a large resident population including the presence of vulnerable groups, construction activities, and the projections and nature of traffic movements in the vicinity of the Proposed Development. Through the CEMP, proposed vehicle routes will be discussed and agreed with the Local Authority. Where possible site traffic will be directed to utilise pre-approved routes. The wider population effect from the Proposed Development will be minor adverse (not significant). However, the consequences of being involved in a serious accident or incident, or serious road traffic incident depends on the nature of the injury sustained and distinguishing between short, medium, or longer-term effects with any certainty is not possible. In addition, accidents or incidents could be fatal and serious injuries have consequences across all these timescales. The vulnerable group effect is predicted to be minor adverse (not significant) which is influenced by the relevant vulnerable group and individual characteristics. Whilst killed and seriously injured (KSI) rates do not distinguish between population types, evidence indicates that any change in KSI is likely to be proportionately more significant for the following vulnerable groups identified in the local area, also noting the close proximity of receptors such as Co-op Academy and the medical practices: children and adolescents, older people, people in poor health, people with physical and/or mental impairments and those susceptible from the adverse effects
	All sub-population/ vulnerable groups	High	Low	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties south on Store Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Low	Minor adverse (not significant)			
	Residential Units north of Store Street, south of Port Street and west of Great Ancoats Street.	Medium	Low	Minor adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Low	Minor adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor adverse (not significant)			
	Users of PROW and WCH routes	Medium	Low	Minor adverse (not significant)			
	Construction workers	Medium	Low	Minor adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Negligible	Negligible adverse (not significant)			of deprivation who are statistically more likely to be involved in incidents and accidents. The effect for most receptor groups is minor adverse (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Low	Minor adverse (not significant)			
	Businesses at Redhill Street	Low	Low	Minor adverse (not significant)			
	Businesses north of Store Street, south of Port Street and west of Great Ancoats Street.	Low	Low	Minor adverse (not significant)			
Characteristics of the transport network	Wider population	Medium	Negligible	Negligible adverse (not significant)	Changes in access and accessibility across a range of modes, road conditions and vehicle numbers will result in short term health impacts. Such impacts could be direct in terms of disruption to the use of existing routes, and indirect in terms of disruption to established access routes between residences, employment and key services and facilities. This issue has been informed by Chapter 18: Traffic and Transport, notably the impact on the local transport network and vehicular trip generation. This human health chapter focuses on a qualitative discussion of the health consequences of the changes identified in Chapter 18: Traffic and Transport.	Specific mitigation is included in the Transport chapter (Chapter 18) and covered by the CEMP. Measures include ensuring that construction traffic travels on the strategic road network whenever possible and also travels outside of the AM and PM peak traffic hours, in addition to general construction practices. A Construction Traffic Management Plan (CTMP) will set out a framework to be taken forward by the appointed construction contractor to mitigate any potential impacts. This will consider construction traffic volumes, movements and timings, and management, including how best to accommodate construction staff traffic from a sustainable movement point of view. The CEMP will also require measures to secure continuity of access to residents, businesses and key services throughout construction activities, to be developed in detail through the CTMP.	The effect for the wider population will be negligible adverse (not significant) in the short term, acknowledging that the greatest health effects would occur following the introduction of construction traffic and activities, and disruptions or changes in accessibility. The effect for the vulnerable groups will be minor adverse (not significant). The Proposed Development is not anticipated to result in disruptions to travel or actual or perceived change in access to the extent that this results in decreased access to opportunities for connecting with friends and family, which can have particular impacts on certain groups such as people who may be experiencing social isolation, discrimination, or social disadvantage. The effect on all receptor groups will be minor or negligible adverse (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	All sub-population/ vulnerable groups	High	Low	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south on Store Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Negligible	Negligible adverse (not significant)			
	Residential Units north of Store Street, south of Port Street and west of Great Ancoats Street.	Medium	Negligible	Negligible adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Negligible	Negligible adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor adverse (not significant)			
	Users of PROW and WCH routes	Medium	Low	Minor adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Negligible	Negligible adverse (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Negligible	Negligible adverse (not significant)			
	Businesses at Redhill Street	Low	Negligible	Negligible adverse (not significant)			
	Businesses north of Store Street, south of Port Street and west of Great Ancoats Street.	Low	Negligible	Negligible adverse (not significant)			
Access to private property and housing	Wider population	Medium	Negligible	Negligible adverse (not significant)	No private dwellings will be demolished or require land take to construct or accommodate the Proposed Development. During construction, there will be temporary disruptions to access to nearby dwellings from construction activities and construction traffic. This issue has been partly informed by Chapter 18: Traffic and Transport.	General mitigation will be incorporated to minimise effects on access to private dwellings, with details provided in the CEMP. General mitigation includes the appointment of a Community Liaison Officer (CLO) to keep residents up to date and minimise effects and maintaining access to private property and housing as much as possible. The CTMP will also be required to maintain access to residences throughout construction.	In the short-term, the effect for the wider population who access private property and housing in the vicinity of the Proposed Development will be negligible adverse (not significant). This effect is driven by negligible disruptions to access which influences levels of physical activity and is a key determinant of physical and mental health and wellbeing. The effect for the vulnerable group will be minor adverse (not significant). Sensitivities within this group includes living near to the Site and potential disruptions and having an existing health condition that is or can be improved by physical activity. However, disruptions will be minimised, and access maintained as much as possible, meaning that negative effects will not be significant.
	All sub-population/ vulnerable groups	High	Low	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south on Store Street	Medium	Negligible	Negligible adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Negligible	Negligible adverse (not significant)			The effect on all receptor groups will be minor or negligible adverse (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Residential Units north of Store Street, south of Port Street and west of Great Ancoats Street.	Medium	Negligible	Negligible adverse (not significant)			
Access to work and training	Wider population	Medium	Low	Minor adverse (not significant) to Minor beneficial (not significant)	No businesses will be demolished or require land take to construct or accommodate the Proposed Development. During construction there will be adverse impacts from disruptions to business activity and accessibility and change to commuter times. This could have particular impacts for people living, working or attending resources near the Proposed Development. Other impacts include the local procurement of goods and services, opportunities for local employment, and the presence of a transient construction workforce. These issues have been partly informed by Chapter 17: Socio-economics.	Mitigation, involving early planning and rules and monitoring to reduce disruption severity, will be used to reduce effects. General mitigation will ensure that any temporary disruptions to local businesses and access to work and training is minimised, with details provided in the CEMP and CTMP. Measures include liaison with local businesses throughout the construction phase, minimising disruptions and maintaining access for residents and local business as much as practicable. The approach to managing the construction workforce will be underpinned by several key objectives: reducing the number of workers on site by increasing off site manufacturing and pre-fabrication and efficient on-site execution, achieving optimum staff productivity by providing high quality staff and site-wide workforce facilities and services, providing a healthy and safe working environment whilst ensuring that people can move to where they need to be in the right numbers and at the right time, and avoiding or mitigating potential impacts on the local community.	Using the findings from Chapter 17: Socio-economics, the effect for the wider population across the study area during construction will be as follows: Temporary disruptions to businesses – minor adverse (not significant); Local employment, and the procurement of goods and services – minor beneficial (not significant). The positive ranking reflects the potential for some local people to benefit from employment and expenditure in the local area; Introduction of a construction workforce – minor adverse (not significant). The negative ranking reflects potential concerns about the conduct and behaviour of construction workers in the host communities (based upon evidence of how construction workers integrate into host communities, albeit it is less relevant in this locality where construction and large numbers of construction workers is commonplace) and impacts on demand for local services and housing. As the construction workforce integrates into the local communities, these effects are likely to reduce for most people, though for some any ongoing concerns may sustain a minor adverse effect. The effect for the vulnerable group is as follows: Temporary disruptions to businesses – minor adverse (not significant). Local employment, and the procurement of goods and services – minor beneficial (not significant). The positive ranking reflects the potential for local people, particularly from vulnerable groups, to benefit from
	All sub-population/ vulnerable groups	High	Low	Minor adverse (not significant) to Minor beneficial (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties south on Store Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Low	Minor adverse (not significant)			
	Residential Units north of Store Street, south of Port Street and west of Great Ancoats Street.	Medium	Low	Minor adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor adverse (not significant)			
	Construction workers	Medium	Low	Minor beneficial (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Low	Minor adverse (not significant) to Minor beneficial (not significant)			employment and expenditure in the local area. Low-income groups would benefit most from any new employment opportunities. Whilst the construction period would be temporary, access to skills and training for new workers would have long-term benefits. In such circumstances (which is unknown at this stage), the benefits may be greater. Introduction of a construction workforce – minor adverse (not significant). The potential for effects from worker behaviour and demand for services and housing, is considered greater for people who live closest to the Proposed Development and the accommodation areas for the non-home-based workforce. The score reflects that whilst the potential for isolated incidents exists, the expectation is that only a very few people (if any) would be affected in this way. The effect on the receptor groups will be minor beneficial or minor adverse (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Low	Minor adverse (not significant) to Minor beneficial (not significant)			
	Businesses at Redhill Street	Low	Low	Minor adverse (not significant) to Minor beneficial (not significant)			
	Businesses north of Store Street, south of Port Street and west of Great Ancoats Street.	Low	Low	Minor adverse (not significant) to Minor beneficial (not significant)			
Community assets supporting health	Wider population	Medium	Negligible	Negligible adverse (not significant)	No formal (i.e. consented) community facilities will be demolished or require land take to construct or accommodate the Proposed Development. During construction there will be adverse impacts from disruptions to activity at community assets and accessibility of those assets. This could have particular impacts for people living closest to the Proposed Development. During construction, there will be temporary disruptions and amenity effects to nearby community receptors from the introduction of construction activities and construction traffic.	General mitigation will be incorporated to minimise effects on community assets, with details provided in the CEMP. This includes the appointment of a Community Liaison Officer (CLO) to keep the local community up to date and minimise effects and maintaining access to community assets as much as possible.	The effect for the wider population in the study area and across the services and healthcare catchment area during construction will be negligible adverse (not significant). Impacts would be greatest during temporary disruptions in access to community facilities and any increased demand for healthcare and other services, including from construction workers. However, this will be short-term and not significant. The effect for the vulnerable groups will be minor adverse (not significant), linked to the construction timeframes and susceptibilities and characteristics of the vulnerable groups or individuals. The most vulnerable groups will be older people, people with existing poor health, people less able to afford travel and those who may experience existing or new barriers in accessing services or healthcare.
	All sub-population/ vulnerable groups	High	Low	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south on Store Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge	Medium	Negligible	Negligible adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Road and New Islington Marina Promenade.						Barring any short-term disruptions to community assets and increased demand for healthcare services, the health benefits derived from public services and healthcare will continue to be accessible and available. Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Residential Units north of Store Street, south of Port Street and west of Great Ancoats Street.	Medium	Negligible	Negligible adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Low	Minor adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor adverse (not significant)			
	Users of PROW and WCH routes	Medium	Low	Minor adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Negligible	Negligible adverse (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Negligible	Negligible adverse (not significant)			
	Businesses at Redhill Street	Low	Negligible	Negligible adverse (not significant)			
	Businesses north of Store Street, south of Port Street and west of Great Ancoats Street.	Low	Negligible	Negligible adverse (not significant)			
Green space, open space, recreation and leisure-time activities	Wider population	Medium	Negligible	Negligible adverse (not significant)	Construction activities may result in adverse amenity impacts to open space, recreation and leisure-time facilities and amenity impacts, which could impact health and wellbeing and accessibility/ participation in physical activity.	General mitigation will be incorporated to limit the magnitude of impacts on green and open spaces, recreation and leisure-time activities, with details provided in the CEMP. Access for residents and communities to open space, green space and recreation and leisure activities will be maintained as far as is reasonably practicable to do so, and the duration of any severance or loss of access to	In the short-term, the effect for the wider population who use open spaces, green spaces, recreation and leisure-time activities on the Site and in the vicinity of the Site, will be negligible adverse (not significant). The negative effect is driven by disruptions to access and changes in amenity. This considers the role that open space, recreation and leisure plays in active lifestyles. The effect for the vulnerable will be minor adverse (not significant), particularly for
	All sub-population/ vulnerable groups	High	Low	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Negligible	Negligible adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Residents of properties south of Old Mill Street	Medium	Negligible	Negligible adverse (not significant)		these areas will be minimised, including during the establishment of new open space or greenspace.	those with an existing health condition that is or can be improved by physical activity and having low income or access barriers that restrict access to alternative facilities that lie further afield. Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Residents of properties south on Store Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Negligible	Negligible adverse (not significant)			
	Residential Units north of Store Street, south of Port Street and west of Great Ancoats Street.	Medium	Negligible	Negligible adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Low	Minor adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Negligible	Negligible adverse (not significant)			
	Users of PROW and WCH routes	Medium	Negligible	Negligible adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Negligible	Negligible adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Negligible	Negligible adverse (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Negligible	Negligible adverse (not significant)			
	Businesses at Redhill Street	Low	Negligible	Negligible adverse (not significant)			
	Businesses north of Store Street, south of Port Street and west of Great Ancoats Street.	Low	Negligible	Negligible adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
Walking and cycling routes supporting human health	Wider population	Medium	Negligible	Negligible adverse (not significant)	Construction activities and increased vehicle movements will result in temporary disruptions and amenity affects. This has the potential to impact health and wellbeing and accessibility/ participation in physical activity. This issue has been informed by Chapter 18: Traffic and Transport, which considers impacts on pedestrians and cyclists, including severance.	General mitigation will be incorporated to minimise disruptions to local communities and users of walking and cycling routes, with details provided in the CEMP. Measures include keeping NMU routes open at all times where practicable, use of diversion routes where applicable where construction prevents access and maintaining resident and other access at all times where possible.	In the short-term, the effect for the wider population who use NMU routes in the vicinity of the Proposed Development will be negligible adverse (not significant). This negative effect is driven by the level of temporary disruptions to access and changes in amenity. The conclusion for the wider population has also considered the role that NMU routes play in active lifestyles. Easy access influences levels of physical activity, which is a key determinant of physical and mental health, and wellbeing. The effect for the vulnerable group is predicted to be minor adverse (not significant), noting the particular sensitivities within this group including those living or using assets near the Proposed Development such as Co-op Academy and the medical practices, that could be temporarily disrupted and having an existing health condition that is or can be improved by physical activity. The effect on the receptor groups will be negligible or minor adverse (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	All sub-population/ vulnerable groups	High	Low	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south on Store Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Negligible	Negligible adverse (not significant)			
	Residential Units north of Store Street, south of Port Street and west of Great Ancoats Street.	Medium	Negligible	Negligible adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Negligible	Negligible adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor adverse (not significant)			
	Users of PROW and WCH routes	Medium	Negligible	Negligible adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Negligible	Negligible adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Negligible	Negligible adverse (not significant)			
	Businesses at Redhill Street	Low	Negligible	Negligible adverse (not significant)			
	Businesses north of Store Street, south of Port Street and west of Great Ancoats Street.	Low	Negligible	Negligible adverse (not significant)			

Operation phase

14.7.7. The operation phase assessment of effects on human health takes account of the design for the Proposed Development (see ES (Volume 2) Chapter 2 Description of the Site and Proposed Development) and embedded mitigation that is considered relevant to managing potential impacts on determinants of human health and sensitive receptors once operational. This sub-section sets out the embedded mitigation that has been influential in the operational assessment, prior to presenting the assessment tables that report on predicted human health effects in the operation phase. The assessment of likely significant effects of the Proposed Development assumes that embedded mitigation measures are in place.

Embedded mitigation

14.7.8. Embedded mitigation measures comprise legal requirements or standard practices that will be implemented as part of the Proposed Development. These are measures that would be implemented regardless of the assessment outcomes, for example, as a result of legislative requirements and/or standard best practice. The assessment assumes that all the environmental design mitigation from the other topics, notably Townscape and Landscape, Air Quality and Noise and Vibration, which are linked to this topic, would be implemented to protect the characteristic features of the study area and control impacts on environmental determinants of health. During the operation phase, embedded mitigation for each topic are generally based upon seeking to achieve the highest standard of sustainable design.

Operation Effects

14.7.9. Table 14-9 describes the predicted effects from impacts arising from the Proposed Development during construction on the human health receptors, and the mitigation proposed.

14.7.10. The mitigations listed in Table 14-9 pertain exclusively to embedded mitigations unless otherwise stated.

Table 14-9 - Operation Effects Assessment

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
Ambient air quality	Wider population	Medium	Negligible	Negligible adverse (not significant)	Changes in emissions from vehicles and operational sources associated with the Proposed Development will increase exposure to pollutants that could adversely affect human health. The Air quality chapter (Chapter 7) identifies the quantitative change in air quality during operation and reports that changes in air quality during the operation phase will be negligible at all human health receptors. This human health chapter focuses on a qualitative discussion of the health consequences of the identified changes in air quality.	The focus for managing air quality is the embedded environmental measures set out in the design, layout and operation of the Proposed Development. Measures include achieving the highest standard of sustainable design, reduced on-site car parking and promotion of active travel sustainable transport options. There is no project specific embedded mitigation in regard to operational vehicle emissions.	During operation, with the application of embedded mitigation measures related to good design and layout, reduced car parking on site and sustainable travel options, the effects on the wider population at nearby receptors from changes to air quality will be negligible adverse (not significant). The vulnerable group effect is predicted to be minor adverse (not significant). Overall, the scale of change is predicted to be small, and the number of people affected may also be small. The effect on all receptor groups will be negligible or minor adverse (not significant). Overall, there will not be a population level effect (even at the community level) that is significant in EIA terms.
	All sub-population/ vulnerable groups	High	Negligible	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south on Store Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Negligible	Negligible adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Negligible	Negligible adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Negligible	Minor adverse (not significant)			
	Users of PROW and WCH routes	Medium	Negligible	Negligible adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Negligible	Minor adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Negligible	Negligible adverse (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Negligible	Negligible adverse (not significant)			
	Businesses at Redhill Street	Low	Negligible	Negligible adverse (not significant)			
Ambient noise	Wider population	Medium	Negligible	Negligible adverse (not significant)	New mechanical plant and vehicle movements associated with the Proposed Development will result in changes to noise levels. Night-time will be a sensitive period for residential receptors due to potential sleep disturbance effects. At Co-op Academy New Islington school, daytime will be the most sensitive period due to operation times. The Noise and vibration chapter (Chapter 16) identifies the quantitative change in noise levels (including extent) during operation. This human health chapter focuses on a qualitative discussion of the health consequences of the identified changes in noise.	The focus for managing noise is the embedded environmental measures set out in the design, layout and operation of the Proposed Development. Measures to reduce noise impacts include achieving the highest standard of sustainable design, the location and position of the proposed plant on the roof of the buildings to maximise the distance between the source and receptors, and orientation of the buildings to provide an element of shielding to nearby sensitive receptors from road noise along Great Ancoats Street, in particular in relation to Co-op Academy.	Chapter 16: Noise and vibration identifies the potential for adverse effects relevant to health. The effect for the wider population during operation is negligible adverse (not significant). This conclusion reflects the fact that no significant effects are predicted from road traffic noise, parking, mechanical ventilation, and plant. The effect for the vulnerable group will be minor adverse (not significant) which considers this groups increased sensitivity. Exposure effects are strongly linked to proximity, with the greatest effects expected for those nearest to the Proposed Development that would experience increases in noise, such as at Co-op Academy. The adverse effect is driven by the sensitivity of particular groups such as children, older people, and those with existing poor health. Over time, a degree of adaptive behaviour to noise effects would be expected for most people. However, this would not necessarily alleviate all effects on health outcomes. The effect on all receptor groups will be negligible or minor adverse (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	All sub-population/ vulnerable groups	High	Negligible	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south on Store Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Negligible	Negligible adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Negligible	Negligible adverse (not significant)			
	Employers, employees and users of New Islington	High	Negligible	Negligible adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice						
	Users of PROW and WCH routes	Medium	Negligible	Negligible adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Negligible (but Minor for Residence Inn)	Negligible adverse (not significant) Minor adverse (not significant) – for Residence Inn			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Negligible	Negligible adverse (not significant)			
	Businesses at Redhill Street	Low	Negligible	Negligible adverse (not significant)			
Sources of pollution and environmental exposures (excluding air quality, noise and vibration, and townscape amenity which are assessed separately)	Wider population	Medium	Low	Minor adverse (not significant)	Operation of the Proposed Development will give rise to a range of environmental exposures. Operation effects are considered as a single health issue due to the interrelated nature of both the exposures and of the potential physical and mental health outcomes. This issue informs and has been informed by Chapter 11: Daylight, Sunlight, Overshadowing and Solar Glare, Chapter 12: Ground Conditions and Contamination, and Chapter 15: Materials and waste; Chapter 19: Water Resources and Flood Risk, and Chapter 20: Wind Microclimate. This section of the human health chapter focuses on a qualitative discussion of the health	The focus for managing combined environmental and amenity impacts is the embedded environmental measures set out in the design, layout and operation of the Proposed Development. It is assumed that the Proposed Development will be operated in accordance with the relevant regulations, best practice guidance and pollution prevention. Mitigation measures include achieving the highest standard of sustainable design, optimal massing that balances the amount of accommodation provided against the impact on surrounding neighbours, including robustly testing against the impacts from wind, daylight and sunlight, solar glare etc., buildings lower in height in certain locations to respect sensitive receptors, ensuring that access to neighbouring assets, such as Co-op Academy	Chapters 11, 12. 15, 19 and 20 identify the potential for operational effects relevant to health. For example, the Daylight, Sunlight, Overshadowing and Solar Glare chapter (Chapter 11) identifies adverse effects on daylight, sunlight, overshadowing, and solar glare to some surrounding buildings, notably Co-op Academy; the Ground Conditions and Contamination chapter (Chapter 12) identifies limited effects from soil erosion, land contamination and waste; the Materials and waste chapter (Chapter 15) predicts negligible material and waste production; the Water Resources and Flood Risk chapter (Chapter 19) notes slight adverse effects on surface water and groundwater and neutral/ slight adverse flood risk, and; the Wind Microclimate
	All sub-population/ vulnerable groups	High	Low	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties south on Store Street	Medium	Low	Minor adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Low	Minor adverse (not significant)	consequences of the combined exposures and disturbance for receptors closest to the Proposed Development during operation.	remains secure, appropriate lighting that avoids light spill and glare; soft landscaping to minimise environmental impacts such as from wind, consideration of flood risk and drainage including the use of Sustainable Drainage Systems (SuDS) to control surface run off, minimise materials use and waste generation etc.	chapter (Chapter 20) reports negligible impact on local wind conditions and microclimate. The effect for the wider population from the range of exposures reported is minor adverse (not significant). This conclusion reflects that the Proposed Development's embedded measures will reduce the related exposures. The effect for the vulnerable group is predicted to be minor adverse (not significant), however some vulnerable groups or individuals may be disproportionately affected. Exposure effects are linked to proximity, with the greatest effects expected for those close to the Proposed Development, such as at Co-op Academy. The adverse effects are driven by the sensitivity of particular groups such as children, older people and those with existing poor health. Over time, a degree of adaptive behaviour to change would be expected for most people. The effect on all receptor groups will be minor adverse (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Users of Cotton Field Park and New Islington Marina	Medium	Low	Minor adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor adverse (not significant)			
	Users of PROW and WCH routes	Medium	Low	Minor adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Low	Minor adverse (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Low	Minor adverse (not significant)			
	Businesses at Redhill Street	Low	Low	Minor adverse (not significant)			
Townscape amenity	Wider population	Medium	Neutral	Negligible adverse (not significant)	The design and operation of the Proposed Development will result in the introduction of new premises and landscaped areas, also associated with operational activities, which will	The focus for managing impacts on townscape amenity is set out in the design and layout of the Proposed Development. It is considered that any adverse impacts judged to result from the height, scale and massing of	The Townscape and Visual Impact Assessment (TVIA) identifies the generally positive effect that the Proposed Development will have on the surrounding area although there will be some localised adverse effects.
	All sub-population/ vulnerable groups	High	Neutral	Negligible adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
					deliver permanent changes to townscape amenity. This issue has been informed by the Townscape and Landscape Impact Assessment. This section of the human health chapter focuses on a qualitative discussion of the health consequences of the changes to townscape amenity.	the Proposed Development on surrounding townscape receptors is balanced by the Proposed Development's embedded design mitigation, particularly the new public realm, landscaping and the activation of the Great Ancoats Street frontage.	Townscape Character Area 1 (TCA1) (Great Ancoats Street) will experience the greatest level of change as the Site is located within it. The TVIA finds the Proposed Development will have a transformative effect on the character, appearance and function of the Site, bringing an unutilised and low-quality plot on a key thoroughfare back into active use and aiding the repair of a sizeable gap in the local townscape. The Proposed Development will provide a greater level of connectivity between TCA 1 and TCA 3 (New Islington Marina) to the north, as well as enhancing the boundary between TCAs 1 and 2 (Historic Ancoats) through landscaping and public realm. Neutral effects are reported for views at 6 of the 13 visual receptors (view no's. 1, 4, 6, 9, 10 and 11), minor beneficial effects for view 2 (Looking south-west along Redhill Street at its junction with Bengal Street, taking in the historic street elevations), minor to moderate beneficial for view 3 (Looking south-east directly into the Site from the junction of Henry Street and Redhill Street) and view 12, and minor adverse for view 5 (Looking south-west towards the Site from open area of public realm in Cotton Field Park), view 7 (Looking north-west across the Site from the south-east corner along Great Ancoats Street), view 8 (Looking north-east towards the Site at the junction of Tariff Street and Brewer Street) and view 13 (Looking north-west into Site from junction of Great Ancoats Street and Old Mill Street). The operational impacts for the wider population across the study area is neutral. This conclusion reflects the fact that taken overall, the general negligible and minor beneficial and adverse townscape and visual effects will not adversely affect human health. Using professional judgement, the impact for the vulnerable group will also be neutral, although some individuals may have greater susceptibility to visual impacts. Exposure effects are strongly linked to proximity, with the greatest effects expected for those closest to the Proposed Development, such as at Co-op Academy and Cotton Fields Park.
	Residents of properties between Redhill Street and Jersey Street	Medium	Neutral	Negligible adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Neutral	Negligible adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Neutral	Negligible adverse (not significant)			
	Residents of properties south on Store Street	Medium	Neutral	Negligible adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Neutral	Negligible adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Negligible	Negligible adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Neutral	Negligible adverse (not significant)			
	Users of PROW and WCH routes	Medium	Neutral	Negligible adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Negligible	Minor adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast	Low	Neutral	Negligible adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	multi-purpose event space)						In the longer term, a degree of adaptive behaviour to visual change would be expected to further reduce any negative effects for most people. However, this would not necessarily alleviate all effects on health outcomes. The assessment adopts a precautionary approach recognising the transformational scale of the changes and the presence of vulnerable sub-populations throughout the study area, therefore reporting non-significant adverse effects, albeit that it is acknowledged some receptors may view the changes as beneficial. Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Neutral	Negligible adverse (not significant)			
	Businesses at Redhill Street	Low	Neutral	Negligible adverse (not significant)			
Access to work and training	Wider population	Medium	Low	Minor beneficial (not significant)	The Proposed Development is expected to bring jobs to the study area through the provision of 58,000 sqm of office floorspace and 1,000 sqm of retail floorspace. It is estimated that the office space will provide 7,000 full-time equivalent roles (FTEs) with the retail space expected to support 50 FTEs. The Proposed Development will improve the local and Greater Manchester economy. Connectivity to nearby local businesses will improve and there will be increased footfall and linked visitor trips. This issue has been informed by Chapter 17: Socio-economics.	The specific operational requirements of the Proposed Development have been carefully considered to ensure the proposed design provides the best and most efficient layout required, resulting in the socio-economic benefits identified. One of the key planning considerations of the Proposed Development is to boost the local economy and employment. This includes social value and opportunities for local communities during operation of the Proposed Development. There is an expectation that new additional jobs will be created in the Piccadilly and Ancoats and Beswick wards, as well as safeguarded jobs already in GMCA's Government Estate. In addition, the majority of the economic benefits of the retail jobs will be felt by those inside the two wards, with the focus on local people currently unemployed or with poor labour market contributions.	The operational effect for the wider group will be as follows: • Improved connectivity to businesses/ work and training – minor beneficial (not significant); • Local employment – minor beneficial (not significant). The positive ranking reflects the significant injection of permanent jobs into the local economy and the potential for local people to benefit from employment and expenditure in the local area, balanced against the current profile of the area. The effect for the vulnerable group is as follows: • Improved connectivity to businesses/ work and training – minor beneficial (not significant); • Local employment – minor beneficial (not significant). The positive ranking reflects the potential for local people from vulnerable groups to benefit through employment and expenditure in the local area. Unemployed and low-income groups would benefit most from new employment opportunities and the impacts on individuals may be greater. The effect on all receptor groups will be minor beneficial (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	All sub-population/ vulnerable groups	High	Low	Minor beneficial (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Low	Minor beneficial (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Low	Minor beneficial (not significant)			
	Residents of properties south of Old Mill Street	Medium	Low	Minor beneficial (not significant)			
	Residents of properties south on Store Street	Medium	Low	Minor beneficial (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Low	Minor beneficial (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor beneficial (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor beneficial (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Low	Minor beneficial (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Low	Minor beneficial (not significant)			
	Businesses at Redhill Street	Low	Low	Minor beneficial (not significant)			
Community assets supporting health	Wider population	Medium	Low	Minor beneficial and minor adverse (not significant)	The Proposed Development includes public realm works that will enhance WCH connectivity to community assets. Impacts to public services may occur directly and indirectly through an increase in the number of people working in the area leading potentially to changes to the population profile if workers move into the study area. This could increase demand for healthcare services, public services, and other community facilities in the locality.	The focus for community assets is the embedded measures set out in the design, layout and operation of the Proposed Development. This includes much improved permeability and connectivity to the surrounding area.	The effect for the wider population across the study area during operation is expected to range from minor beneficial to minor adverse (not significant). The influences on health for this wider population are likely to be generated by improved connectivity to community assets but increased demand for healthcare and other services. Any effects are mostly likely to be in the short-term as the services, staff, and users, will adapt to the changes. This takes account of routine service planning in response to changing conditions, numbers, and resources. The advance knowledge of change means that service planning can take place to appropriately adapt services to accommodate the changes. In the longer term it is likely that changing community needs will establish new service access norms. The effect for the vulnerable groups will generally range from minor beneficial to minor adverse (not significant) although some individuals could be more affected. The groups most likely to experience the effects are those that are less able to adapt to change, such as older people, people with existing poor health and those who may
	All sub-population/ vulnerable groups	High	Low	Minor beneficial and minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Low	Minor beneficial and minor adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Low	Minor beneficial and minor adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Low	Minor beneficial and minor adverse (not significant)			
	Residents of properties south on Store Street	Medium	Low	Minor beneficial and minor adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Low	Minor beneficial and minor adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Users of Cotton Field Park and New Islington Marina	Medium	Low	Minor beneficial and minor adverse (not significant)			experience existing or new barriers in accessing services or healthcare. However, barring any short-term disruption, the health benefits derived from public services and healthcare will continue to be accessible and available. On this basis many of those with increased sensitivity will only experience short term negative effects, with improving or neutral effects thereafter. The effect on all receptor groups will be minor beneficial to minor adverse (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor beneficial and minor adverse (not significant)			
	Users of PROW and WCH routes	Medium	Low	Minor beneficial (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor beneficial and minor adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Low	Minor beneficial and minor adverse (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Low	Minor beneficial and minor adverse (not significant)			
	Businesses at Redhill Street	Low	Low	Minor beneficial and minor adverse (not significant)			
Green space, open space, recreation, and leisure-time activities	Wider population	Medium	Low	Minor beneficial (not significant)	The Proposed Development envisages the creation of a high-quality, sustainable development that includes an attractive public realm. The new space, and improved connectivity to nearby greenspaces, will provide an appealing recreational facility for local residents, new office workers, employees and visitors. Increased numbers of employees and visitors will provide a greater sense of confidence and security, compared to	The design and layout of this space has been designed to enhance amenity value, usability and accessibility, with the potential to create a useable, permeable space for all demographic groups.	The Proposed Development offers a vastly improved and more usable area for workers and the local community, and much greater permeability. The effect for the wider group will be minor beneficial (not significant) through the replacement of the brown field site with a more attractive permeable area. In the longer term, new or sustained use of the new space and improved access to activities could have greater benefits. This conclusion for the wider population reflects the important role that
	All sub-population/ vulnerable groups	High	Low	Minor beneficial (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Negligible	Negligible beneficial (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Negligible	Negligible beneficial (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Residents of properties south of Old Mill Street	Medium	Negligible	Negligible beneficial (not significant)	the site, however this could also lead to increased demand for the locality and adjoining recreational areas/ facilities.		public realm and permeability of space plays in active lifestyles. The effect for the vulnerable group will be minor beneficial (not significant). Sensitivities within this group includes the availability, proximity, and ease of access to the open space and greenspace such as Cotton Field Park, having an existing health condition that is or can be improved by physical activity, and having low income or access barriers that restrict access to alternative open spaces or greenspaces that lie further afield. An increase in opportunities to be physically active may particularly benefit the medium to longer-term health of some groups, such as children and young people, and older people. The effect on all receptor groups will be negligible or minor beneficial (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Residents of properties south on Store Street	Medium	Negligible	Negligible beneficial (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Negligible	Negligible beneficial (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Low	Minor beneficial (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor beneficial (not significant)			
	Users of PROW and WCH routes	Medium	Low	Minor beneficial (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor beneficial (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Negligible	Negligible beneficial (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Negligible	Negligible beneficial (not significant)			
	Businesses at Redhill Street	Low	Negligible	Negligible beneficial (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
Ambient air quality	Wider population	Medium	Negligible	Negligible adverse (not significant)	Changes in emissions from vehicles and operational sources associated with the Proposed Development will increase exposure to pollutants that could adversely affect human health. The Air quality chapter (Chapter 7) identifies the quantitative change in air quality during operation and reports that changes in air quality during the operation phase will be negligible at all human health receptors. This human health chapter focuses on a qualitative discussion of the health consequences of the identified changes in air quality.	The focus for managing air quality is the embedded environmental measures set out in the design, layout and operation of the Proposed Development. Measures include achieving the highest standard of sustainable design, reduced on-site car parking and promotion of active travel sustainable transport options. There is no project specific embedded mitigation in regard to operational vehicle emissions.	During operation, with the application of embedded mitigation measures related to good design and layout, reduced car parking on site and sustainable travel options, the effects on the wider population at nearby receptors from changes to air quality will be negligible adverse (not significant). The vulnerable group effect is predicted to be minor adverse (not significant). Overall, the scale of change is predicted to be small, and the number of people affected may also be small. The effect on all receptor groups will be negligible or minor adverse (not significant). Overall, there will not be a population level effect (even at the community level) that is significant in EIA terms.
	All sub-population/ vulnerable groups	High	Negligible	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south on Store Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Negligible	Negligible adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Negligible	Negligible adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Negligible	Minor adverse (not significant)			
	Users of PROW and WCH routes	Medium	Negligible	Negligible adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Negligible	Minor adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Negligible	Negligible adverse (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Negligible	Negligible adverse (not significant)			
	Businesses at Redhill Street	Low	Negligible	Negligible adverse (not significant)			
Ambient noise	Wider population	Medium	Negligible	Negligible adverse (not significant)	New mechanical plant and vehicle movements associated with the Proposed Development will result in changes to noise levels. Night-time will be a sensitive period for residential receptors due to potential sleep disturbance effects. At Co-op Academy New Islington school, daytime will be the most sensitive period due to operation times. The Noise and vibration chapter (Chapter 16) identifies the quantitative change in noise levels (including extent) during operation. This human health chapter focuses on a qualitative discussion of the health consequences of the identified changes in noise.	The focus for managing noise is the embedded environmental measures set out in the design, layout and operation of the Proposed Development. Measures to reduce noise impacts include achieving the highest standard of sustainable design, the location and position of the proposed plant on the roof of the buildings to maximise the distance between the source and receptors, and orientation of the buildings to provide an element of shielding to nearby sensitive receptors from road noise along Great Ancoats Street, in particular in relation to Co-op Academy.	Chapter 16: Noise and vibration identifies the potential for adverse effects relevant to health. The effect for the wider population during operation is negligible adverse (not significant). This conclusion reflects the fact that no significant effects are predicted from road traffic noise, parking, mechanical ventilation, and plant. The effect for the vulnerable group will be minor adverse (not significant) which considers this groups increased sensitivity. Exposure effects are strongly linked to proximity, with the greatest effects expected for those nearest to the Proposed Development that would experience increases in noise, such as at Co-op Academy. The adverse effect is driven by the sensitivity of particular groups such as children, older people, and those with existing poor health. Over time, a degree of adaptive behaviour to noise effects would be expected for most people. However, this would not necessarily alleviate all effects on health outcomes. The effect on all receptor groups will be negligible or minor adverse (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	All sub-population/ vulnerable groups	High	Negligible	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties south on Store Street	Medium	Negligible	Negligible adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Negligible	Negligible adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Negligible	Negligible adverse (not significant)			
	Employers, employees and users of New Islington	High	Negligible	Negligible adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice						
	Users of PROW and WCH routes	Medium	Negligible	Negligible adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Negligible (but Minor for Residence Inn)	Negligible adverse (not significant) Minor adverse (not significant) – for Residence Inn			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Negligible	Negligible adverse (not significant)			
	Businesses at Redhill Street	Low	Negligible	Negligible adverse (not significant)			
Sources of pollution and environmental exposures (excluding air quality, noise and vibration, and townscape amenity which are assessed separately)	Wider population	Medium	Low	Minor adverse (not significant)	Operation of the Proposed Development will give rise to a range of environmental exposures. Operation effects are considered as a single health issue due to the interrelated nature of both the exposures and of the potential physical and mental health outcomes. This issue informs and has been informed by Chapter 11: Daylight, Sunlight, Overshadowing and Solar Glare, Chapter 12: Ground Conditions and Contamination, and Chapter 15: Materials and waste; Chapter 19: Water Resources and Flood Risk, and Chapter 20: Wind Microclimate.	The focus for managing combined environmental and amenity impacts is the embedded environmental measures set out in the design, layout and operation of the Proposed Development. It is assumed that the Proposed Development will be operated in accordance with the relevant regulations, best practice guidance and pollution prevention. Mitigation measures include achieving the highest standard of sustainable design, optimal massing that balances the amount of accommodation provided against the impact on surrounding neighbours, including robustly testing against the impacts from wind, daylight and sunlight, solar glare etc., buildings lower in height in certain locations to respect sensitive receptors, ensuring that access to neighbouring assets, such as Co-op Academy	Chapters 11, 12. 15, 19 and 20 identify the potential for operational effects relevant to health. For example, the Daylight, Sunlight, Overshadowing and Solar Glare chapter (Chapter 11) identifies adverse effects on daylight, sunlight, overshadowing, and solar glare to some surrounding buildings, notably Co-op Academy; the Ground Conditions and Contamination chapter (Chapter 12) identifies limited effects from soil erosion, land contamination and waste; the Materials and waste chapter (Chapter 15) predicts negligible material and waste production; the Water Resources and Flood Risk chapter (Chapter 19) notes slight adverse effects on surface water and groundwater and neutral/ slight adverse flood risk, and; the Wind Microclimate chapter (Chapter 20) reports
	All sub-population/ vulnerable groups	High	Low	Minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Low	Minor adverse (not significant)			
	Residents of properties south on Store Street	Medium	Low	Minor adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Low	Minor adverse (not significant)	This section of the human health chapter focuses on a qualitative discussion of the health consequences of the combined exposures and disturbance for receptors closest to the Proposed Development during operation.	remains secure, appropriate lighting that avoids light spill and glare; soft landscaping to minimise environmental impacts such as from wind, consideration of flood risk and drainage including the use of Sustainable Drainage Systems (SuDS) to control surface run off, minimise materials use and waste generation etc.	negligible impact on local wind conditions and microclimate. The effect for the wider population from the range of exposures reported is minor adverse (not significant). This conclusion reflects that the Proposed Development's embedded measures will reduce the related exposures. The effect for the vulnerable group is predicted to be minor adverse (not significant), however some vulnerable groups or individuals may be disproportionately affected. Exposure effects are linked to proximity, with the greatest effects expected for those close to the Proposed Development, such as at Co-op Academy. The adverse effects are driven by the sensitivity of particular groups such as children, older people and those with existing poor health. Over time, a degree of adaptive behaviour to change would be expected for most people. The effect on all receptor groups will be minor adverse (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Users of Cotton Field Park and New Islington Marina	Medium	Low	Minor adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor adverse (not significant)			
	Users of PROW and WCH routes	Medium	Low	Minor adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Low	Minor adverse (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Low	Minor adverse (not significant)			
	Businesses at Redhill Street	Low	Low	Minor adverse (not significant)			
Townscape amenity	Wider population	Medium	Neutral	Negligible adverse (not significant)	The design and operation of the Proposed Development will result in the introduction of new premises and landscaped areas, also associated with operational activities, which will	The focus for managing impacts on townscape amenity is set out in the design and layout of the Proposed Development. It is considered that any adverse impacts judged to result from the height, scale and massing of the Proposed	The Townscape and Visual Impact Assessment (TVIA) identifies the generally positive effect that the Proposed Development will have on the surrounding
	All sub-population/ vulnerable groups	High	Neutral	Negligible adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
					deliver permanent changes to townscape amenity. This issue has been informed by the Townscape and Landscape Impact Assessment. This section of the human health chapter focuses on a qualitative discussion of the health consequences of the changes to townscape amenity.	Development on surrounding townscape receptors is balanced by the Proposed Development's embedded design mitigation, particularly the new public realm, landscaping and the activation of the Great Ancoats Street frontage.	area although there will be some localised adverse effects. Townscape Character Area 1 (TCA1) (Great Ancoats Street) will experience the greatest level of change as the Site is located within it. The TVIA finds the Proposed Development will have a transformative effect on the character, appearance and function of the Site, bringing an unutilised and low-quality plot on a key thoroughfare back into active use and aiding the repair of a sizeable gap in the local townscape. The Proposed Development will provide a greater level of connectivity between TCA 1 and TCA 3 (New Islington Marina) to the north, as well as enhancing the boundary between TCAs 1 and 2 (Historic Ancoats) through landscaping and public realm. Neutral effects are reported for views at 6 of the 13 visual receptors (view no's. 1, 4, 6, 9, 10 and 11), minor beneficial effects for view 2 (Looking south-west along Redhill Street at its junction with Bengal Street, taking in the historic street elevations), minor to moderate beneficial for view 3 (Looking south-east directly into the Site from the junction of Henry Street and Redhill Street) and view 12, and minor adverse for view 5 (Looking south-west towards the Site from open area of public realm in Cotton Field Park), view 7 (Looking north-west across the Site from the south-east corner along Great Ancoats Street), view 8 (Looking north-east towards the Site at the junction of Tariff Street and Brewer Street) and view 13 (Looking north-west into Site from junction of Great Ancoats Street and Old Mill Street). The operational impacts for the wider population across the study area is neutral. This conclusion reflects the fact that taken overall, the general negligible and minor beneficial and adverse townscape and visual effects will not adversely affect human health. Using professional judgement, the impact for the vulnerable group will also be neutral, although some individuals may have greater susceptibility to visual impacts. Exposure effects are strongly linked to proximity, with the greatest effects expected for those closest to the Proposed
	Residents of properties between Redhill Street and Jersey Street	Medium	Neutral	Negligible adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Neutral	Negligible adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Neutral	Negligible adverse (not significant)			
	Residents of properties south on Store Street	Medium	Neutral	Negligible adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Neutral	Negligible adverse (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Negligible	Negligible adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Neutral	Negligible adverse (not significant)			
	Users of PROW and WCH routes	Medium	Neutral	Negligible adverse (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Negligible	Minor adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast	Low	Neutral	Negligible adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	multi-purpose event space)						Development, such as at Co-op Academy and Cotton Fields Park. In the longer term, a degree of adaptive behaviour to visual change would be expected to further reduce any negative effects for most people. However, this would not necessarily alleviate all effects on health outcomes. The assessment adopts a precautionary approach recognising the transformational scale of the changes and the presence of vulnerable sub-populations throughout the study area, therefore reporting non-significant adverse effects, albeit that it is acknowledged some receptors may view the changes as beneficial. Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Neutral	Negligible adverse (not significant)			
	Businesses at Redhill Street	Low	Neutral	Negligible adverse (not significant)			
Access to work and training	Wider population	Medium	Low	Minor beneficial (not significant)	The Proposed Development is expected to bring jobs to the study area through the provision of 58,000 sqm of office floorspace and 1,000 sqm of retail floorspace. It is estimated that the office space will provide 7,000 full-time equivalent roles (FTEs) with the retail space expected to support 50 FTEs. The Proposed Development will improve the local and Greater Manchester economy. Connectivity to nearby local businesses will improve and there will be increased footfall and linked visitor trips. This issue has been informed by Chapter 17: Socio-economics.	The specific operational requirements of the Proposed Development have been carefully considered to ensure the proposed design provides the best and most efficient layout required, resulting in the socio-economic benefits identified. One of the key planning considerations of the Proposed Development is to boost the local economy and employment. This includes social value and opportunities for local communities during operation of the Proposed Development. There is an expectation that new additional jobs will be created in the Piccadilly and Ancoats and Beswick wards, as well as safeguarded jobs already in GMCA's Government Estate. In addition, the majority of the economic benefits of the retail jobs will be felt by those inside the two wards, with the focus on local people currently unemployed or with poor labour market contributions.	The operational effect for the wider group will be as follows: • Improved connectivity to businesses/ work and training – minor beneficial (not significant); • Local employment – minor beneficial (not significant). The positive ranking reflects the significant injection of permanent jobs into the local economy and the potential for local people to benefit from employment and expenditure in the local area, balanced against the current profile of the area. The effect for the vulnerable group is as follows: • Improved connectivity to businesses/ work and training – minor beneficial (not significant); • Local employment – minor beneficial (not significant). The positive ranking reflects the potential for local people from vulnerable groups to benefit through employment and expenditure in the local area. Unemployed and low-income groups would benefit most from new employment opportunities and the impacts on individuals may be greater. The effect on all receptor groups will be minor beneficial (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	All sub-population/ vulnerable groups	High	Low	Minor beneficial (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Low	Minor beneficial (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Low	Minor beneficial (not significant)			
	Residents of properties south of Old Mill Street	Medium	Low	Minor beneficial (not significant)			
	Residents of properties south on Store Street	Medium	Low	Minor beneficial (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Low	Minor beneficial (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy	High	Low	Minor beneficial (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	and Ancoats Dental Practice						
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor beneficial (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Low	Minor beneficial (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Low	Minor beneficial (not significant)			
	Businesses at Redhill Street	Low	Low	Minor beneficial (not significant)			
Community assets supporting health	Wider population	Medium	Low	Minor beneficial and minor adverse (not significant)	The Proposed Development includes public realm works that will enhance WCH connectivity to community assets. Impacts to public services may occur directly and indirectly through an increase in the number of people working in the area leading potentially to changes to the population profile if workers move into the study area. This could increase demand for healthcare services, public services, and other community facilities in the locality.	The focus for community assets is the embedded measures set out in the design, layout and operation of the Proposed Development. This includes much improved permeability and connectivity to the surrounding area.	The effect for the wider population across the study area during operation is expected to range from minor beneficial to minor adverse (not significant). The influences on health for this wider population are likely to be generated by improved connectivity to community assets but increased demand for healthcare and other services. Any effects are mostly likely to be in the short-term as the services, staff, and users, will adapt to the changes. This takes account of routine service planning in response to changing conditions, numbers, and resources. The advance knowledge of change means that service planning can take place to appropriately adapt services to accommodate the changes. In the longer term it is likely that changing community needs will establish new service access norms. The effect for the vulnerable groups will generally range from minor beneficial to minor adverse (not significant) although some individuals could be more affected. The groups most likely to experience the effects are those that are less able to adapt to change, such as older people, people with
	All sub-population/ vulnerable groups	High	Low	Minor beneficial and minor adverse (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Low	Minor beneficial and minor adverse (not significant)			
	Residents of properties on Great Ancoats Street	Medium	Low	Minor beneficial and minor adverse (not significant)			
	Residents of properties south of Old Mill Street	Medium	Low	Minor beneficial and minor adverse (not significant)			
	Residents of properties south on Store Street	Medium	Low	Minor beneficial and minor adverse (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and	Medium	Low	Minor beneficial and minor adverse (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	New Islington Marina Promenade.						existing poor health and those who may experience existing or new barriers in accessing services or healthcare. However, barring any short-term disruption, the health benefits derived from public services and healthcare will continue to be accessible and available. On this basis many of those with increased sensitivity will only experience short term negative effects, with improving or neutral effects thereafter. The effect on all receptor groups will be minor beneficial to minor adverse (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Users of Cotton Field Park and New Islington Marina	Medium	Low	Minor beneficial and minor adverse (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor beneficial and minor adverse (not significant)			
	Users of PROW and WCH routes	Medium	Low	Minor beneficial (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor beneficial and minor adverse (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Low	Minor beneficial and minor adverse (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Low	Minor beneficial and minor adverse (not significant)			
	Businesses at Redhill Street	Low	Low	Minor beneficial and minor adverse (not significant)			
Green space, open space, recreation, and leisure-time activities	Wider population	Medium	Low	Minor beneficial (not significant)	The Proposed Development envisages the creation of a high-quality, sustainable development that includes an attractive public realm. The new space, and improved connectivity to nearby greenspaces, will provide an appealing recreational facility for local residents, new office workers, employees and visitors.	The design and layout of this space has been designed to enhance amenity value, usability and accessibility, with the potential to create a useable, permeable space for all demographic groups.	The Proposed Development offers a vastly improved and more usable area for workers and the local community, and much greater permeability. The effect for the wider group will be minor beneficial (not significant) through the replacement of the brown field site with a more attractive permeable area. In the longer term, new or sustained use of the new space
	All sub-population/ vulnerable groups	High	Low	Minor beneficial (not significant)			
	Residents of properties between Redhill Street and Jersey Street	Medium	Negligible	Negligible beneficial (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Residents of properties on Great Ancoats Street	Medium	Negligible	Negligible beneficial (not significant)	Increased numbers of employees and visitors will provide a greater sense of confidence and security, compared to the site, however this could also lead to increased demand for the locality and adjoining recreational areas/ facilities.		and improved access to activities could have greater benefits. This conclusion for the wider population reflects the important role that public realm and permeability of space plays in active lifestyles. The effect for the vulnerable group will be minor beneficial (not significant). Sensitivities within this group includes the availability, proximity, and ease of access to the open space and greenspace such as Cotton Field Park, having an existing health condition that is or can be improved by physical activity, and having low income or access barriers that restrict access to alternative open spaces or greenspaces that lie further afield. An increase in opportunities to be physically active may particularly benefit the medium to longer-term health of some groups, such as children and young people, and older people. The effect on all receptor groups will be negligible or minor beneficial (not significant). Overall, there would not be a population level effect (even at the community level) that was significant in EIA terms.
	Residents of properties south of Old Mill Street	Medium	Negligible	Negligible beneficial (not significant)			
	Residents of properties south on Store Street	Medium	Negligible	Negligible beneficial (not significant)			
	Residents of properties between New Union Street, New Islington, Weybridge Road and New Islington Marina Promenade.	Medium	Negligible	Negligible beneficial (not significant)			
	Users of Cotton Field Park and New Islington Marina	Medium	Low	Minor beneficial (not significant)			
	Employers, employees and users of New Islington Medical Practice, UVMP, Pharmacy and Ancoats Dental Practice	High	Low	Minor beneficial (not significant)			
	Users of PROW and WCH routes	Medium	Low	Minor beneficial (not significant)			
	Employees and pupils at Co-op Academy New Islington Primary School	High	Low	Minor beneficial (not significant)			
	Businesses located on the Great Ancoats Street (Urban Exchange Retail Outlet, Residence Inn Manchester, Diecast multi-purpose event space)	Low	Negligible	Negligible beneficial (not significant)			
	Businesses at New Islington Marina (Pollen Bakery, Cask Bar and Flawd Wine Bar)	Low	Negligible	Negligible beneficial (not significant)			

Health Determinant	Receptor	Sensitivity	Impact magnitude	Effect	Impact/ Nature of change	Embedded mitigation	Health outcomes
	Businesses at Redhill Street	Low	Negligible	Negligible beneficial (not significant)			

14.8. Additional mitigation and enhancement measures

14.8.1. Embedded mitigation measures, which have been accounted for as part of the impact assessment are summarised in Section 14.7. This section describes the additional mitigation measures that are considered influential in managing the magnitude of impacts that could result in significant adverse effects for human health, all of which are relevant to the construction phase only:

- Reactive process to instigate additional mitigation measures for individual receptors should specific unforeseen issues arise during construction, to be managed by the contractor through the work of the CLO. This should include a connection to actions that will be set out in the Noise Monitoring and Management Plan, as appropriate.
- Opportunities for recruitment of construction jobs and procurement of goods and services would start at the local and regional level to ensure that the employment and economic benefits for the construction are realised here. GPA is already committed to supporting the provision of construction apprenticeships; and the detailed proposals for this would form additional mitigation, once agreed.
- The approach to managing the construction workforce would be underpinned by several key objectives: reducing the number of workers on site by increasing off site manufacturing and pre-fabrication and efficient on-site execution; achieving optimum staff productivity by providing high quality staff and site-wide workforce facilities and services; provide a healthy and safe working environment, whilst ensuring that people can move to where they need to be in the right numbers and at the right time; and avoid or mitigate potential impacts on the local community.

14.9. Residual effects

14.9.1. This section summarises the significant residual effects resulting from the Proposed Development after all mitigation measures (embedded and additional) have been implemented. A full summary of all residual effects is provided in ES (Volume 4) Appendix 14.1 – Human Health Assessment Appendices ES.

Construction

14.9.2. The Proposed Development requires the clearance of the Site, including the cessation and removal of any unlawful skating activities in so far as is necessary. This will be done in an appropriate and safe manner. It is acknowledged that the Gooseside DIY Skate Park is currently occupying part of the Site. On the basis that this is not a formal provision and that Gooseside and its members/users have no rights to enter or occupy the Site, the group is considered a 'low' sensitivity receptor. Although the magnitude of impact would be 'high' (as the site would be permanently lost), it is considered that this loss would result in a minor adverse effect (which is not significant). As the activity is illegal, the effects have not been reported above and are not discussed further within this assessment.

14.9.3. The main assessment identifies a range of impacts to determinants of human health and sensitive receptors that result in effects that range from minor adverse to minor beneficial. None of these are considered significant in EIA terms. The additional mitigation reflects ongoing monitoring and reactive processes that would continue for the duration of construction works. These are necessary to ensure that the conclusions of the main assessment remain unchanged as construction work progresses.

14.9.4. No significant residual construction effects on human health are predicted.

Operation

14.9.5. The main assessment identifies a range of impacts to determinants of human health and sensitive receptors that result in a range of effects from minor adverse to minor beneficial, with a greater proportion of beneficial effects. None of these are considered significant in EIA terms. No additional mitigation is considered necessary.

14.9.6. No significant residual operation effects on human health are predicted.

14.10. Cumulative effects

14.10.1. This section considers the cumulative effects of the Proposed Development (intra-project cumulative effects) and the Proposed Development interacting with other RFFPs (inter-project cumulative effects) from the perspective of impacts within the scope of the Human Health topic.

Cumulative effects assessment

14.10.2. The further consideration of cross-topic intra-project and inter-project cumulative effects is reported in Chapter 22: Cumulative Effects.

Intra-project in-combination cumulative effects assessment (single project impacts) within topic

14.10.3. The focus of intra-project CEA is understanding how receptors may experience a number of different types of impacts from the Proposed Development at the same time. Within this topic, Intra-project cumulative effects are an inherent part of the human health assessment methodology. The assessment examines receptors in relation to a number of impacts that enables an understanding of the way in which receptors may experience effects from two or more impacts within the scope of the human health topic. As such, there are no additional cumulative intra-project effects to report and no significant cumulative intra-project effects are anticipated.

Inter-project cumulative effects assessment (different project impacts) within topic

14.10.4. The inter-project cumulative effects assessment ‘within topic’ element for the human health assessment has been completed with reference to the shortlist list of RFFPs that has been developed for the Proposed Development. The list is based on a review of all developments known to the planning system using the methodology described in Chapter 22: Cumulative Effects.

14.10.5. The RFFP short list has been screened to identify projects that are considered to have a realistic prospect of interacting with the Proposed Development from the perspective of the human health. The sift from the short-list to identify RFFPs that should be scoped into the inter-project CEA for human health took into consideration;

- Proximity of the RFFP to the Proposed Development (i.e. focusing on within 250 m of the Site red line boundary).

- Locations where the size or composition of the population could alter as a result of the proposed development.
- Development that may change the way people move through or use a place (e.g. new destination or new infrastructure).

14.10.6. This process identified potential for inter-project impacts as a result of the Proposed Development in combination with all of the shortlisted RFFPs. These RFFPs are:

- 128191/FO/2020 - Development comprising of five office buildings with flexible ground floor use at land between Ashton Canal and Pollard Street.
- 132574/FO/2021 - Development comprising 4 townhouses at Paradise Wharf.
- 126608/FO/2020 - Development of 66 residential units between Store Street and Ashton Canal.
- 135662/FO/2022 - Development of 154 Bedroom Hotel with ancillary café / bar / restaurant and gym adjacent to Great Ancoats Street and south of Laystall Street.
- 135675/FO/2022 - Development of two apartment buildings comprising 267 dwellings at Tariff Street.
- 137346/FO/2023 - Mixed use development comprising commercial floorspace and 256 residential units adjacent to Poland Street and between Naval Street and Jersey Street.
- 122598/FO/2019 - Mixed use development comprising 94 residential units consisting of townhouses and apartments as well as commercial floorspace at New Islington Marina.
- 128911/FO/2020 - Mixed use development consisting of office space and 89 residential units at Laystall Street.

14.10.7. The section that follows sets out the potential inter-project impacts that may arise and provides a qualitative analysis leading to a conclusion about whether there are likely to be significant inter-project cumulative effects that arise.

Potential inter-project impacts

Construction

14.10.8. Cumulative inter-project impacts on human health could occur in conjunction with the RFFPs identified as relevant to the Proposed Development. Table 14-10 presents a qualitative assessment of inter-project cumulative effects with the RFFPs that may arise during construction of the Proposed Development.

Table 14-10 - Inter-project cumulative construction effects

RFFP	Nature of Impact	Construction Effect
128191/FO/2020	There is potential for construction impacts of the Proposed Development to interact with those of the construction stages of the RFFP to generate additive cumulative adverse effects upon nearby receptors. The construction period specific impacts that are likely to occur include noise and vibration impacts, traffic impacts and air quality impacts.	It is assumed that the development will be built in accordance with the RFFP's own OCMP. There may be a minor adverse additive cumulative effect, which is not significant.

RFFP	Nature of Impact	Construction Effect
	However, the RFFP is accompanied by an Outline Construction Management Plan (OCMP) which details mitigation for these impacts.	
132574/FO/2021	There is potential for construction impacts of the Proposed Development to interact with those of the construction stages of the RFFP to generate additive cumulative adverse effects upon nearby receptors. Specific impacts that are likely to occur include noise and vibration impacts, traffic impacts and air quality impacts. However, there a Construction Management Plan (CMP) which submitted to support discharge application CDN/23/0784 for condition 5. The CMP details mitigation for these impacts associated with the RFFP.	It is assumed that the development will be built in accordance with the RFFP's own CMP. As the construction timeframe is estimated to be 12 months, there may be a negligible adverse additive cumulative effect, which is not significant.
126608/FO/2020	There is potential for construction impacts of the Proposed Development to interact with those of the construction stages of the RFFP to generate additive cumulative adverse effects upon nearby receptors. The construction period specific impacts that are likely to occur include noise and vibration impacts, traffic impacts and air quality impacts However, Discharge application CDN/21/0072 is accompanied by an Outline Construction CMP which details mitigation for these impacts associated with the RFFP.	It is assumed that the development will be built in accordance with the RFFP's own OCMP. There may be a minor adverse additive cumulative effect, which is not significant.
135662/FO/2022	It is anticipated that construction works will commence in October 2024 and complete in January 2027. There is potential for construction impacts of the RFFP to interact with the Proposed Development. Specific impacts that are likely to occur include noise and vibration impacts, traffic impacts and air quality impacts. However, the RFFP application is accompanied by	It is assumed that the development will be built in accordance with their own CMP. There may be a minor adverse additive cumulative effect, which is not significant.

RFFP	Nature of Impact	Construction Effect
	CMP which details mitigation for these impacts.	
135675/FO/2022	There is potential for construction impacts of the Scheme to interact with those of the construction stages of the RFFP to generate additive cumulative adverse effects upon nearby receptors. Specific impacts that are likely to occur include noise and vibration impacts, traffic impacts and air quality impacts. However, discharge application CDN/23/0497 is accompanied by a CMP which details mitigation for these impacts for the RFFP.	It is assumed that the development will be built in accordance with the RFFP's own CMP. There may be a minor adverse additive cumulative effect, which is not significant.
137346/FO/2023	There is potential for construction impacts of the Scheme to interact with those of the construction stages of the RFFP to generate additive cumulative adverse effects upon nearby receptors. Specific impacts that are likely to occur include noise and vibration impacts, traffic impacts and air quality impacts. Discharge application CDN/24/0624 included the submission of a CMP for the development.	It is assumed that the development will be built in accordance with the RFFP's own CMP. There may be a minor adverse additive cumulative effect, which is not significant.
122598/FO/2019	There is potential for construction impacts of the Scheme to interact with those of the construction stages of the RFFP to generate additive cumulative adverse effects upon nearby receptors. Specific impacts that are likely to occur include noise and vibration impacts, traffic impacts and air quality impacts. Discharge application CDN/21/0487 included the submission of a CMP for the development.	It is assumed that the development will be built in accordance with the RFFP's own CMP. There may be a minor adverse additive cumulative effect, which is not significant.
128911/FO/2020	There is potential for construction impacts of the Scheme to interact with those of the construction stages of the RFFP to	It is assumed that the development will be built in accordance with the RFFP's own CMP. There may be a minor adverse

RFFP	Nature of Impact	Construction Effect
	generate additive cumulative adverse effects upon nearby receptors. Specific impacts that are likely to occur include noise and vibration impacts, traffic impacts and air quality impacts. However, the application is accompanied by an OCMP, which details mitigation for these impacts associated with the RFFP.	additive cumulative effect, which is not significant.

Operation

14.10.9. Cumulative inter-project impacts on human health could occur in conjunction with the RFFPs identified as relevant to the Proposed Development. Table 14-11 presents a qualitative assessment of inter-project cumulative effects with the RFFPs that may arise during operation of the Proposed Development.

Table 14-11 - Inter-project cumulative operation effects

RFFP	Nature of Impact	Operation Effect
128191/FO/2020	The RFFP will create employment that will introduce new receptors to the study area. During operation, there is the potential for additive traffic impacts to occur. This RFFP is for the development of five office buildings with flexible ground floor use. The Transport Assessment (TA) submitted with the application confirms that this development is not forecast to generate any material level of vehicle trips. This is due to the fact that no car parking is provided for non-operational vehicles and the fact that the development is more easily accessible from sustainable modes, which is encouraged by the creation of new and improved public realm and the proliferation of cycle parking.	In accordance with the submitted TA, it is considered that the development may generate a negligible adverse additive cumulative effect on transport, which is not significant.
132574/FO/2021	The RFFP will introduce up to four new households to the study area. No potential for notable inter-project effects with this RFFP has been identified.	N/A

RFFP	Nature of Impact	Operation Effect
126608/FO/2020	The RFFP will create 66 new homes that will introduce new residential receptors to the study area. During operation, there is the potential for impacts to occur from traffic and new demand for local services such as health or education facilities. The Transport Assessment (TA) submitted with the application states that it not considered that there would be a significant impact of vehicular trips on the surrounding highway network. Future users of the site would be less likely to commute by their own cars due to its proximity to major transport interchanges and proposed sustainable travel planning measures to increase the level of walking, cycling and public transport use to and from the site As a residential development, the RFFP is considered to have greater potential for impact on demand for local services than the Proposed Development – no notable cumulative impact interaction of this type is identified.	In accordance with the submitted TA, it is considered that the development may generate a minor adverse additive cumulative effect on transport, which is not significant.
135662/FO/2022	During operation, impacts are likely to occur from traffic impacts as the development is for a 154 Bedroom Hotel with ancillary café / bar / restaurant and gym. The Transport Assessment (TA) submitted with the application confirms that this development is not forecast to generate any material level of vehicle trips. This is due to the fact that no car parking is provided as part of the development. It is considered that direct vehicular trips related to the development will be limited to occasional taxi drop-offs and deliveries.	In accordance with the submitted TA, it is considered that the development may generate a negligible adverse additive cumulative effect on transport across a very limited portion of the network, which is not significant.
135675/FO/2022	The RFFP will create 267 new homes that will introduce new residential receptors to the study area; plus ground floor	The TA does not anticipate any significant transport impacts associated with the development. The development may generate a negligible adverse additive

RFFP	Nature of Impact	Operation Effect
	commercial uses that will also bring new receptors to the study area. During operation, there is the potential for impacts to occur from traffic and new demand for local services such as health or education facilities. The Transport Assessment (TA) submitted with the application confirms that this development is not forecast to generate any material level of vehicle trips. This is due to the fact that no car parking is provided as part of the scheme and the highly sustainable city centre location. As a residential-led development, the RFFP is considered to have greater potential for impact on demand for local services than the Proposed Development – no notable cumulative impact interaction of this type is identified.	cumulative effect on transport, which is not significant.
137346/FO/2023	The RFFP will create 256 new homes that will introduce new residential receptors to the study area; plus ground floor commercial uses that will also bring new receptors to the study area During operation, there is the potential for impacts to occur from traffic and new demand for local services such as health or education facilities. The TA submitted with the application confirms that this development is not forecast to generate any material level of vehicle trips. This is due to the fact that development would see a decrease of two-way vehicular trips in the AM and PM peak hours respectively, when compared against the existing uses of the site. Consequently, no notable cumulative impact interaction of this type is identified. As a residential-led development, the RFFP is considered to have greater potential for impact on demand for local services than the Proposed Development –	N/A

RFFP	Nature of Impact	Operation Effect
	no notable cumulative impact interaction of this type is identified.	
122598/FO/2019	The RFFP will create 94 new homes that will introduce new residential receptors to the study area; plus ground floor commercial uses that will also bring new receptors to the study area During operation, there is the potential for impacts to occur from traffic and new demand for local services such as health or education facilities. The TA submitted with the application confirms that this development is not forecast to generate any material level of vehicle trips. This is due to the fact that development a minimal increase in trips on the network. The likely impact would be around an additional vehicle less than every two minutes even during the busiest peak hour periods. Consequently, no notable cumulative impact interaction of this type is identified. As a residential-led development, the RFFP is considered to have greater potential for impact on demand for local services than the Proposed Development – no notable cumulative impact interaction of this type is identified.	N/A
128911/FO/2020	The RFFP will create 89 new homes that will introduce new residential receptors to the study area; plus ground floor commercial uses that will also bring new receptors to the study area During operation, there is the potential for impacts to occur from traffic and new demand for local services such as health or education facilities. The Transport Assessment (TA) submitted with the application confirms that this development is not forecast to generate any material level of vehicle trips. This is due to the fact that the development will	N/A

RFFP	Nature of Impact	Operation Effect
	generate ten two-way vehicle trips during the morning and eleven two-way trips during the evening peak hours, equating to approximately one trip every 6-minutes. Consequently, no notable cumulative impact interaction of this type is identified. As a residential-led development, the RFFP is considered to have greater potential for impact on demand for local services than the Proposed Development – no notable cumulative impact interaction of this type is identified.	

Mitigation measures

14.10.10. No residual cumulative effects are anticipated. As such, no specific mitigation is required.

Summary of Cumulative Effects

14.10.11. There are no significant cumulative effects on human health anticipated during the construction or operation phase.

14.11. Summary and conclusions

14.11.1. Human health receptors have been identified and clustered on the basis of shared physical characteristics and/or location. The impacts of the Proposed Development on these receptor groups has been assessed, as appropriate for construction and operation phase, under the following topics, which link to the health determinants scoped into the assessment:

- Ambient air quality – construction and operation.
- Ambient noise – construction and operation.
- Sources of pollution and environmental exposures – construction and operation.
- Townscape amenity – construction and operation.
- Risk of injuries and death - construction.
- Characteristics of the transport network - construction.
- Access to private property and housing (also drawing on the relevant land use baseline) - construction.
- Access to work and training (also drawing on the relevant land use baseline) – construction and operation.
- Community assets supporting health (also drawing on the relevant land use baseline) – construction and operation.

- Green space, open space, recreation, and leisure-time activities (also drawing on the relevant land use baseline) – construction and operation.
- Walking and cycling routes supporting human health (also drawing on the relevant land use baseline) – construction.

14.11.2. The assessment has identified the impacts on determinants of human health that have the potential to result in effects to each receptor group during both the construction and operation and these are reported in Table 14-8 and Table 14-9 respectively.

14.11.3. Additional mitigation measures proposed to control the magnitude of human health impacts that could result in adverse effects include;

- Reactive process to instigate additional mitigation measures for individual receptors should specific unforeseen issues arise during construction, to be managed by the contractor through the work of the CLO. This should include a connection to actions that will be set out in the Noise Monitoring and Management Plan, as appropriate.
- Opportunities for recruitment of construction jobs and procurement of goods and services would start at the local and regional level to ensure that the employment and economic benefits for the construction are realised here. GPA is already committed to supporting the provision of construction apprenticeships; and the detailed proposals for this would form additional mitigation, once agreed.
- The approach to managing the construction workforce would be underpinned by several key objectives: reducing the number of workers on site by increasing off site manufacturing and pre-fabrication and efficient on-site execution; achieving optimum staff productivity by providing high quality staff and site-wide workforce facilities and services; provide a healthy and safe working environment, whilst ensuring that people can move to where they need to be in the right numbers and at the right time; and avoid or mitigate potential impacts on the local community.

14.11.4. The main assessment identifies a range of impacts to determinants of human health and sensitive receptors that result in effects that range from minor adverse to minor beneficial during the construction phase. None of these are considered significant in EIA terms. The additional mitigation reflects ongoing monitoring and reactive processes that would continue for the duration of construction works. These are necessary to ensure that the conclusions of the main assessment remain unchanged as construction work progresses.

14.11.5. The main assessment identifies a range of impacts to determinants of human health and sensitive receptors that result in effects that range from minor adverse to minor beneficial once the Proposed Development enters the operation phase. None of these are considered significant in EIA terms. The additional mitigation is drawn from the contributing topic chapters and includes a commitment to using the detailed design stage to resolve specific issues through further technical analysis, for example, acoustic enclosure to rooftop plant.

14.11.6. A residual effects assessment has been undertaken, which considers any change in the nature or significance of effects once approaches to avoiding, lessening or mitigating effects have been taken into account. The mitigation measures contributing to this residual effects assessment are clarified within the reporting presented in Table 14-8 and Table 14-9.

14.11.7. No significant residual construction or operation effects on human health are predicted.

14.11.8. Additionally, an assessment of inter-project cumulative effects was undertaken. This considered the potential for the Proposed Development to interact with RFFPs to result in additive or synergistic effects that differed from the assessment of the effects of the Proposed Development in isolation. This inter-project cumulative effects assessment also demonstrated that there would be no significant residual effects on human health during both the construction and operation phase. These cumulative effects (within topic) are reported in Table 14-10 and Table 14-11 respectively.

14.11.9. All residual effects arising from impacts on determinants of human health are set out by receptor in ES (Volume 4) Appendix 14.1.

14.12. Acronyms

Table 14-12 – Acronyms

Term	Definition
AQMA	Air Quality Management Area
CEMP	Construction Environmental Management Plan
CMP	Construction Management Plan
CTMP	Construction Traffic Management Plan
EIA	Environmental Impact Assessment
ES	Environmental Statement
GCMA	Greater Manchester Combined Authority
IEMA	Institute of Environmental Management and Assessment
MCC	Manchester City Council
NCA	National Character Area
NIA	Noise Important Area
OCEMP	Outline Construction Environmental Management Plan
OEMP	Outline Environmental Management Plan
RFFP	Reasonably Foreseeable Future Project

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