

Ancoats Mobility Hub

Rapid Health Impact Assessment (HIA)

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Revision P01

Ancoats Mobility Hub HIA

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author **Buro Happold**

date 11/05/21

approved

signature

date

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Executive summary

This Health Impact Assessment (HIA) has been prepared by Buro Happold on behalf of Manchester Life Development Company in relation to the full planning application for a new Mobility Hub in the Poland Street NDF zone, in Ancoats.

The Ancoats Mobility Hub ("the Hub") is being brought forward to support the next phase of the redevelopment of the Ancoats area of Manchester which will be focused on the Poland Street Zone as defined by Poland Street Zone NDF endorsed by Manchester City Council in July 2020. The Hub offers the opportunity to transform how residential parking is provided on a neighbourhood basis, facilitating and enabling the transition away from petrol/diesel cars and to alternative, active modes of transport. The Proposed Development, provides car and cycle parking, changing facilities, rideshare, café, Electric Vehicle (EV) charging, green wall facades and new outdoor public realm.

In keeping with national, regional and local policies related to health outcomes and key relevant determinants of these outcomes, the assessment considers how the development, as set out currently within the planning application, could impact on the factors that can influence people's Health and Wellbeing (HWB). The report finds that The Hub is likely to bring multiple positive impacts and suggests ways positive HWB impacts could be enhanced and negative impacts avoided and/or mitigated, within the next stages of delivery.

Overall approach

A range of HWB measures are considered to establish the current status of local HWB. The local area, together with GM as a whole, has relatively poor HWB profile compared to regional and national averages. Indicators included measures of life expectancy, children and young people's health, lifestyle - including physical activity and the incidence of disease that can cause death, and poor mental health.

Planning and development can influence a range of factors that directly affect HWB and the causes of HWB. These include access to resources such as fresh air, healthcare and social infrastructure, open space, sustainable travel, healthy food and employment, as well as exposures to reasonable levels of noise, crime and community safety. An established and evidence-informed a) HIA UrHIA (Urban Health Impact Assessment) screening tool and b) HIA HUDU (Healthy Urban Development Unit) scoping tool were used to assess the influence of the Proposed Development against these factors. The tools were developed by the International Health Impact Assessment Consortium (IMPACT) and the NHS respectively.

Findings

The Mobility Hub is likely to support several key pathways to HWB amongst the Manchester and GM population groups and no constraints to planning were identified. The Proposed Development will deliver new cycle and car-sharing facilities, EV charging, a delivery Hub, new public realm, biodiversity provision and employment opportunities, that tie with local, regional and national HWB objectives and are strong drivers for the design. Air Quality and Transport Assessments shows the overall effect of the Proposed Development are considered to be low and a number of mitigatory measures will be implemented to ensure that negative effects, to both local and wider human health, are avoided in the longer term.

The provision of the resources listed above are likely to encourage and enable a greater number of the public to a) purchase EVs before 2030 and b) participate in 'modal shift', toward increased walking and the use of bicycles, e-bikes/e-scooters and car-sharing. The reduced and concentrated provision of residential car parking provided by The Hub over

the longer-term, represent restrictions that will improve conditions for wellbeing activities, such as walking and socialising - within the NDF zone. The delivery Hub is likely to encourage additional walking within the local resident and worker populations day-to-day routines and the proposed use of Photovoltaics as renewable energy supply will help to mitigate emissions elsewhere, contributing to reduced wider negative HWB impacts.

Within the next stages of operational development, there is scope to consider several recommendations to further enhance the potential of The Hub to support HWB. These include consideration of charging for electric wheelchairs, age friendly and disabled cycling support. Enabling these specific population groups whom are smaller in number (albeit growing e.g. ageing population), will support impact that is of potential greater magnitude, than for members of the larger general population. It is recommended that the latest behavioural science is used to explore operational interventions and to guide (independent) monitoring of behaviour change, so that the potential of the Hub is maximised and subsequent Hubs (within GM and nationally) can learn from 'what works'.

Taken together, The Hub will contribute to the achievement of the Manchester Population Health Plan 2018-2027.

The full planning application sets out principles and recommendations that will guide the following stages of detailed design and management, as the development is delivered. Overarching principles will guide development in order to support the local and wider community that are more likely to experience HWB, whilst being sustainable, energy efficient and, aiming to be van-guard best practice in the longer term.

The Proposed Development, together with a wider cycling and GM Transport Strategy (2014) have evolved in response to wider determinants of HWB, and to priorities identified through public and stakeholder consultation.

Potential impacts on HWB, during the construction and operational phases, have been considered and appropriate mitigation, recommendations and monitoring measures have been set out to ensure beneficial HWB effects. The development responds to local priorities including encouraging sustainable travel mode options as alternatives to single occupancy car use, providing a small number of high-quality employment opportunities, and futureproofing against the effects of air pollution and Climate Change.

Overall, drawing on the authoritative framework offered by the HUDU tool, and provided that mitigatory measures are implemented, the Proposed Development will have an overall beneficial impact on HWB.



London Healthy Urban Development Unit

HUDU and IMPACT tools were used to undertake HIA

1. Introduction

Background

This Health Impact Assessment (HIA) has been prepared by Buro Happold on behalf of Manchester Life Development Company (MLDC), in relation to the planning application for a new Mobility Hub in the Poland Street NDF zone, (hereafter referred to as the Proposed Development or 'The Hub').

The purpose of this assessment is to understand how the Proposed Development could directly and indirectly impact on the key determinants of health; to identify those people most likely to be affected by the Proposed Development with regard to health inequality issues; and to identify measures to enhance the positive impacts and mitigate any negative effects of the Proposed Development on public health, and establish responsibilities for delivering and monitoring these.

The Existing Site and Proposed Development

The existing site covers approximately 0.33 ha and is bounded by Poland Street to the west, the City Court Trading Estate to the south, Crown Industrial Estate to the north and Ancoats Green to the east.

The site is currently occupied by low-rise, multi-tenanted industrial estate units and hardstanding. The site can be accessed by pedestrians and vehicles via Poland Street. Security fencing runs along the eastern boundary where the Site meets Ancoats Green. The Rochdale Canal is located 0.2km south of the Site.

The Proposed Development is set to deliver a Mobility Hub development of up to 8 storeys including 150 cycle parking spaces and changing facilities, 408 car parking spaces, a ground floor café and a delivery hub.

The application site is currently occupied by light industrial buildings which will be demolished as part of the enabling works.

What is a HIA?

The 'Health and safe communities' guidance describe the HIA as a useful tool to assess and address the impacts of development proposals (MHCLG, 2019b). The University of Liverpool, describes the purpose of an HIA as *following "to improve policies, programmes and projects, ideally prior to their introduction, in order to maximise health gain and eliminate or mitigate any negative health impacts on the population"* (University of Liverpool, 2015).

For the purpose of this report, due to the diverse nature of health determinants and health outcomes which are assessed, it is not possible to quantify the severity of extent of the effects which give rise to these impacts. Instead, qualitative tools have been selected as the most appropriate measure for adequately assessing the health impacts and outcomes of the Proposed Development.

2. Scope and Methodology

Buro Happold have taken account of published data and information from a variety of sources, and applied professional judgement informed by relevant guidance to evaluate the health impacts of the scheme.

This HIA has considered how the Proposed Development may influence the physical and mental health and wellbeing of local residents and inhabitants of the Proposed Development, also taking into account the key determinants of health. A brief profile of the population groups, their health status and the social determinants likely to be affected by the Proposed Development are presented in Section 4.

This HIA has been guided by a combination of approaches set out by International Health Impact Assessment Consortium (IMPACT) at Liverpool University and the Healthy Urban Development Unit (HUDU). IMPACT is a WHO Collaborating Centre for Public Policy and the HUDU was created by the Greater London Authority (GLA), working with the NHS. Both exists to maximise the opportunities to improve HWB and narrow health inequalities and their main aims can be summarised as:

- Assess potential positive and negative HWB impacts of development on planned new communities and adjacent existing communities;
- Highlight any potential differential distribution effects among groups;
- Suggest actions / mitigations to minimise potential negative effects and maximise potential positive effects, referencing where possible the most affected vulnerable groups.

HIA Team

The preparation of this HIA was led by BuroHappold (sustainability team) on behalf of MLDC. However, the assessment draws on expertise from the wider project team including:

- The Applicant: MLDC
- Planning Consultants: Deloitte
- Architects & Masterplanners: Buttress Architects
- Landscape Architects: Planit-IE
- Air Quality Consultant: Hoare Lea
- Ecology: Tyler Grange
- Waste Consultant: Buro Happold
- Sustainability, Energy, lighting and ventilation consultant: Buro Happold.

Screening

Screening is the first stage of HIA. It is not possible, desirable or resource-efficient to undertake a detailed HIA on every plan or project. The UrHIA suggests using a robust tool, such as the Urban Health Impact Screening Tool (URHIST), to judge if a project requires a more detailed HIA.

In the absence of a local guidance to establish the need for a HIA, IMPACT's Urban Health Impact Assessment (UrHIA) was used. This tool is based on the foundation, principles and practice of HIA, in The Merseyside Guidelines for HIA (Scott-Samuel et al, 2001), the European Policy HIA (EPHIA): A Guide (Abrahams et al, 2004) and the Institute of Public Health in Ireland's publication: HIA Guidance 2009 (Metcalf et al, 2009).

The approach to the HIA was determined by screening the Proposed Development against the above sections of the UrHIA screening tool (Appendix B); deeming The Hub development to require a HIA.

Local Profile

The local HWB profile is comprised of an assessment of the existing local residential population, defined as the MCC area including the site. Comparison is made to regional averages (GM) and national averages (England), considering demographics, and HWB related measures such as life expectancy, infant and child health, chronic disease, mental health etc.

Insight has also been taken from the MCC (2016) Health and Wellbeing Strategy and Joint Strategic Needs Assessments (JSNA) which establish the future health, care and wellbeing needs of the local populations and provide strategic direction for service delivery.

Rapid assessment

This assessment identifies potential HWB impacts arising using the evidence provided by the Local Profile and the HUDU 'checklist' of considerations to apply at the planning stage for new developments. Each item on the list is informed by a science base, good practise and industry standards for health and wellbeing outcomes.

The HUDU HIA Checklist identifies the following 11 areas where development can have a direct and indirect impact on health and wellbeing:

- Housing design and affordability;
- Access to health and social care services and other social infrastructure;
- Access to open space and nature;
- Air quality, noise and neighbourhood amenity;
- Accessibility and active travel;
- Crime reduction and community safety;
- Access to healthy food;
- Social cohesion and inclusive design;
- Access to work and training;
- Minimising the use of resources; and
- Climate change

The assessment considers the potential consequences for HWB from the construction and operation of the Proposed Development and draws information from the following reports:

- Air quality assessment (Hoare Lea, May 2021);
- Construction Management Plan (Manchester life, April 2021);
- Crime Impact Statement (GM Police, April 2021);
- Daylight & Sunlight Impact Assessment (GIA, 2021);
- Ecological Impact Assessment (Tyler Grange, March 2021);

- Economic Impact Assessment (Deloitte, 2021);
- Environmental Standards and Energy Statement (Buro Happold, April 2021);
- RIBA Stage 3 Report (Buttress, April 2021);
- Stage 3 Acoustic Design Report (Sandy Brown, 2021);
- Sustainability Report (Buro Happold, April 2021);
- Transport Assessment (Hydrock, May 2021); and
- Ventilation Statement (Buro Happold, April 2021).

Using the HUDU list and specific questions associated with each of the eleven sections, the assessment section of this HIA outlines potential direct and indirect impacts of the Proposed Development, taking into account the above sources of evidence. The tool encourages users to prioritise specific actions and focus on key areas of relevance to the Proposed Development. Therefore, only the most relevant health determinants on HUDU list were assessed as part of this assessment (7 of the 11 HUDU categories). The completed HUDU checklist can be found in Appendix A.

Assessment of effects

The geographical extent of the impacts assessed depends on the type of effects and receptors. Effects will be considered during construction phase, and once the scheme is complete and occupied.

This HIA is a qualitative rather than quantitative assessment, due to the diverse nature of health determinants and health outcomes which are assessed. Although this HIA describes the likely qualitative health impacts, it is not possible to quantify the severity or extent of the effects which give rise to these impacts. As such, the potential health impacts during construction and operation are described as outlined in Table 1 based on broad categories for the qualitative impacts identified.

Table 1 HIA impact categories

Health Determinant	Impact Symbol	Description
Positive	+	A beneficial impact is identified
Neutral	0	No discernible health impact is identified
Negative	-	An adverse impact is identified
Uncertain	?	Where there is uncertainty as to the overall impact

Where an impact has been identified, actions have been recommended to mitigate any negative impact on health, or opportunities to enhance health benefits. It should be noted that in many cases, mitigation to reduce these impacts or measures to enhance certain benefits already form part of the Proposed Development and the assessment has considered these impacts as such.

3. Legislation and Policy Context

National policy and guidance

National Planning Policy Framework (NPPF) (2019)

The National Planning Policy Framework (NPPF) was adopted in March 2012, and last updated in February 2019 (MHCLG, 2019). It sets out the Government's economic, environmental and social planning policies for England. The social objectives include supporting "*strong, vibrant and healthy communities*". These policies outline the Government's Vision of sustainable development, which should be interpreted and applied locally to meet local and community aspirations.

Chapter 8: 'Promoting healthy and safe communities', require that planning policies and decisions should aim to achieve healthy, inclusive and safe places which:

- Promote social interactions, including opportunities for meetings between people;
- Are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine quality of life;
- Enable and support a healthy lifestyle, for example through the provision of safe and accessible social infrastructure.

Chapter 9: 'Promoting sustainable transport', outlines support for developments in sustainable locations, reducing congestion and emissions, and improving air quality and public health.

Chapter 12: 'Achieving well-designed places', describe standards of good design, including using design measures that promote safe, inclusive and accessible places; thereby, improving health and wellbeing. This may include measures mitigating and minimising light, noise and air pollution.

Planning Practice Guidance: Healthy and safe communities (2014, as amended)

The Healthy and safe communities' guidance was published in 2014 and updated in 2019. It sets out guidance on promoting healthy and safe communities (MHCLG, 2019). The guidance considered planning and health together in two ways. Relevant to the proposal is the aim to create environments that support and encourage healthy lifestyles. The guide defines a healthy place as, "One which supports and promotes healthy behaviours and environments, and a reduction in health inequalities for people of all ages. It will provide the community with opportunities to improve their physical and mental health, and support community engagement and wellbeing."

The Road to Zero (DfT, 2018)

The Road to Zero confirms the UK governments ambition to lead the world in zero-emission vehicle technology (Department for Transport, 2018). The strategy sets out ambition for at least 50% (and as many as 70%) of new car sales to be ultra-low emission by 2030, alongside up to 40% of new vans. The strategy highlights the government commitment by outlining steps to enable massive roll-out of infrastructure to support the electric vehicle revolution.

As part of the strategy, the Government posted a consultation 'Electric Vehicle Charging in Residential and Non-Residential Buildings (Department for Transport, 2019)' suggesting relevant policy regulations, including:

- Every new non-residential building and every non-residential building undergoing a major renovation with more than 10 car parking spaces to have one charge point and cable routes for an electric vehicle charge point for one in five spaces.

The Ten Point Plan for a Green Industrial Revolution (BEIS, 2020)

The Ten Point Plan for a Green Industrial Revolution highlights the Government's commitment to invest in green technologies (Department for Business, Energy & Industrial Strategy, 2020). The plan will mobilise £12 billion of government investment and is expected to support up to 250,000 green jobs. Relevant points for the development include:

- Point 4: Accelerating the shift to zero-emission vehicles, which states that by 2030 the sale of new petrol and diesel cars and vans will end in the UK.
- Point 5: Green public transport, cycling and walking, outlining how the Government will build segregated cycle lanes and create more low-traffic neighbourhoods.

Regional policy and guidance

The Greater Manchester Strategy (GMCA, 2018)

The GM Strategy "Our People, Our Place" sets out the collective ambition to make GM a good place "to grow up, get and grow old". It was co-produced by all ten councils, the Mayor, the NHS, transport, the police and the fire service, as well as businesses, voluntary, community and social enterprise organisations, and members of the public. The strategy is structured around ten priorities and the relevant ones include:

- Priority 5: World-class connectivity that keeps GM moving
- Priority 6: Safe, decent and affordable housing
- Priority 7: A green city-region and a high-quality culture and leisure offer for all
- Priority 8: Safer and stronger communities
- Priority 9: Healthy lives, with quality care available for those that need it

5-Year Environment Plan for Greater Manchester (GMCA, 2019)

The 5-Year Environment Plan for GM sets out the regions long-term environmental Vision to be carbon neutral by 2038. The long-term Vision sees GM as a clean, carbon-neutral, climate-resilient city-region with a thriving natural environment and circular, zero-waste economy. The Vision outlines five key focus areas that will maximise the positive impacts on public health:

- Aim for climate change mitigation;
- Aim to improve air quality;
- Aim for sustainable consumption and production;
- Aim to protect, maintain and enhance the natural environment; and
- Aim for resilient and adaptation to climate change.

Greater Manchester Clean Air Plan (GMCA, 2020 update)

The UK 'Air quality plan for tackling nitrogen dioxide in the UK' (2017), requires that local authorities reduce levels of nitrogen dioxide (NO₂) to legal EU limits, where annual average concentration is not to exceed 40µg/m³. GM has set out a Clean Air Plan to meet these requirements, which includes the following relevant measures:

- A charging Clean Air Zone (CAZ) category C which will target the most polluting commercial vehicles from the summer of 2021, and older polluting light goods vehicles from 2023, and;
- A package of supporting measures including a proposed Loan Finance scheme, sustainable journeys projects, additional EV charging infrastructure.

Greater Manchester Transport Strategy 2040 (TfGM, 2017)

The GM Transport Strategy 2040 was published in 2017, and it sets out Transport for GM'S sustainable mobility plan for the future. The strategy provides details on the priority interventions needed to deliver the vision set out in the GM 4th Local Transport Plan. The document highlights several key and relevant objectives, including:

- Reduce the need to travel by car and the distance travelled.
- Increase the use of sustainable transport to reduce the negative impacts of car use. New development to make it easier for people to use sustainable modes, e.g. the provision of secure cycle parking or the availability of EV charging points.
- Establish cycling as a recognised and attractive component of the future integrated transport offer. 'Aim to double and double again' the proportion of trips made by bicycle by 2025, with the aspiration that 10% of all trips should be made by bike."

Cycle Parking Design Guidance (Greater Manchester Police, 2009)

The document provides design advice for locating and setting out new cycle parking facilities. The guidance has been used as the basis for many GM Council's plans. The guidance is consistent with the principles of Secured by Design and Crime Prevention Through Environmental Design (CPTED). The guidance states that there should be one cycle space per bedroom in residential developments (Dwelling Houses, Flats, Apartments).

Local policy and guidance

Manchester Population Health Plan, 2018-2027

The Manchester Population Health Plan is the City's overarching plan for reducing health inequalities and improving health outcomes for residents. It reflects the ambition of the GM Strategy and is an integral component of the refreshed Locality Plan, "Our Healthier Manchester." The implementation of the policy and strategies are monitored by the Manchester Health and Wellbeing Board.

The Mobility Hub has the potential to impact on four of five priorities outlined within the Population Health Plan:

- Priority 2: Strengthen the positive impact of work on health;
- Priority 3: Supporting people, households and communities to be socially connected and make changes that matter to them;
- Priority 4: Create an age-friendly city that promotes good health and wellbeing for people in mid and later life; and
- Priority 5: Taking action on preventable early deaths.

Manchester Core Strategy, 2012-2027

A primary objective of the Manchester Core Strategy is Transport. The existence of an efficient, comprehensive and sustainable transport system is an essential element in supporting the city and in particular the regional centre, as the key economic driver for the north of England.

Additionally, excellent transport services, facilities and connections are vital for the city to: attract a growing, stable population; support existing and new businesses, thereby, contributing to sustainable economic growth; ensure good access to employment, education, leisure, retail, cultural opportunities and facilities; foster community cohesion and a sense of well-being and equality; improve residents' health; develop tourism; and address the issue of climate change.

The delivery plan is centred around three relevant strategic policies:

- Policy 1: Sustainable Transport
The aim is to deliver a sustainable, high quality, integrated transport system; to encourage modal shift away from car travel to public transport, cycling and walking;
- Policy 2: Accessible areas of opportunity and need
Within the city centre, car parking is to reflect the highly accessible nature of the location, as well as the realistic requirements of the users of the development. Proposals should have regard to the need for disabled and cycle parking.
- Policy 3: Strategic integration
The Council will support proposals that contribute to an economically and environmentally sustainable transport network, with emphasis on extending the Metrolink.

Manchester City Centre Transport Strategy to 2040 (Manchester City Council, 2020)

Manchester City Council (MCC), in collaboration with Salford City Council and Transport for GM developed the City Centre Transport Strategy to 2040. The vision is to deliver an integrated, inclusive and sustainable transport network with increased connectivity and capacity for a growing city centre; improve the quality and legibility of the streets to ensure it is a great place to spend time and to move around; and to support change toward a net-zero carbon city-centre.

The strategy sets out seven key ambitions, of which the following are relevant to the proposal:

- Ambition 1: Walking is the main way of getting around the city centre;
- Ambition 2: The city centre is cleaner and less congested;
- Ambition 3: More people choose to cycle to destinations within the city centre; and
- Ambition 5: Parking in the city centre is smarter and integrated with other modes.

4. Health, Community and Socio-Economic Profile

To understand the potential for health impacts, it is essential to establish the assessment baseline. This section focuses on a number of health determinants in the area surrounding the site in order to provide a demographic context of the existing community locally. It goes on to consider the baseline in terms of access to infrastructure and conditions relevant to the health of potential occupants of the Proposed Development.

Population Profile

According to the MCC population forecasting model (MCCFM), the residential population in 2019 was 576,500 (MCC, 2021c). This is slightly higher than the mid-year estimate from the ONS at 552,900. The ONS Population Projections expects the MCC population to grow from 552,900 in 2019 to 574,078 in 2030, representing an increase of 3.8% (ONS, 2020). Over the same period, GM is forecast to experience a 4.6% increase, whilst England as a whole will experience a similar population increase of 5.0%.

Population aged 15 and below represents 20.2% of the total MCC population, comparable with GM, where the same age group represents 20.5% of the total population (ONS, 2019b).

In 2019 an estimated 389,600 or 70.5% of MCC residents were of working age (defined by the ONS as the sum of women and men aged 16 to 64). This is higher than the 63.6% recorded within GM and 62.5% figure recorded for Great Britain as a whole (ONS, 2019b).

Population aged 65 years and above represented 9.3% of the total MCC population in 2019, broadly in line with the average recorded in 2015 (9.4%) (ONS, 2019b).

According to the ONS Annual Population Survey (2020), MCC's ethnic minority community accounted for 37.2% of the total population in 2020. This is significantly higher than that recorded in GM, where the ethnic minority community accounts for 19.7% of the total population (ONS, 2020). The proportion of ethnic minorities within both MCC and GM population had increased somewhat since the Census 2011 when the ethnic minority community accounted for 33.4% of the total MCC population and 16.2% of the GM population (ONS, 2011).

Health Status

Children and Young People's Health

Child health in Manchester is relatively poor.

- The infant mortality rate is 6.36 per 1,000 live births compared with the national average of 3.93 per 1,000 live births.
- Approximately 26% of children aged 10 to 11 are classified as obese, worse than England's average (20%).

Adult Health

Physical health in Manchester demonstrates room for improvement:

- Approximately 81% of MCC residents self-reported good or very good Health, which is slightly higher than the GM average of 79.5%, but somewhat lower than the England average of 81.4%.

- Estimated 7% of MCC residents self-reported bad or very bad Health, which is higher than the averages in GM (6.7%) and England (5.4%) (ONS, 2011).
- More than 50% of the population aged 65 years old in the UK have more than one long term medical condition. The share of the population with long-term conditions rise to 75% at the age of 75. People aged 60 or over accounted for 27.8% of all A&E visits during 2019 -2020 (NHS, 2020).

Life Expectancy

- The average life expectancy within MCC is worse than the England average. According to Public Health England (PHE), the male life expectancy at birth within MCC is 76.1 years compared to 79.6 years in England. At birth, female life expectancy is 79.8 years compared to 83.2 years in England (Public Health England, 2019).

Minority Communities and Health

- A recent study of ethnic minority health in the population aged 55 and over discovered significant health inequalities across most ethnic minority groups, compared with white British people. The study found that within some ethnic groups, the average Health of 60-year olds was similar to a typical 80-year-old (Watkinson, Sutton & Turner, 2021).

Disability and Health

- According to the Family and Resources Survey, approximately 21% of the UK population reported a disability, which is less than the average in the North West England region, where 25% of the population reported a disability (ONS, 2019). A person is considered to have a disability if they have a physical or mental impairment that has 'substantial' and 'long term' negative effects on their ability to do normal daily activities (Equality Act 2010).
- In the 2011 Census self-assessment, 9.4% of Manchester residents reported that they had a long-term health problem or disability that limits their daily activities 'a lot', which is higher than the national average of 8.3%. Another 8.3% of Manchester residents reported that they have a long-term problem or disability that limits their daily activities 'a little', which is slightly less than the national average of 9.3% (ONS, 2011).

Air-Pollution and Health

- Toxic air affects everyone; however, it can have a disproportionate effect on some population groups - children, pregnant women, older people and people with medical conditions like asthma, heart attack, and COPD are particularly vulnerable. MCC estimates that over a hundred people in Manchester die because of toxic air every year (MCC, 2021).
- Environmental Research Group at King's College London studies likely impacts of air pollution in Manchester. The evidence suggests that higher air pollution days (compared to low pollution days) are linked to a higher number of cardiac arrests, increase in hospitalisation due to respiratory and cardiovascular diseases. The study also found evidence between air pollution in Manchester and low lung function, underweight babies and lung cancer. In addition, the study found that a child is 4.4% more likely to be hospitalised for asthma on days with high nitrogen dioxide pollution, compared to days with lower air pollution (Williams et al., 2019).

Summary

The overall population in Manchester and GM have increased over the past years, and the growth is expected to continue. Currently, the general Health in Manchester is considered to be worse than the national average. The infant mortality rate (6.36 per 1,000 live births) is higher than the national average (3.93 per 1,000 live births), and the life

expectancy for both men (76.1 years) and women (79.8 years) is lower than the England average (79.6 years and 83.2 years, respectively). More people in Manchester report bad or very bad Health (7.1%) compared to the averages in GM (6.7%) and England (5.4%) (ONS, 2011). While air pollution affects all Manchester and GM residents, some population groups are particularly vulnerable such as children, pregnant women, older people and people with medical conditions like asthma, cardio-vascular diseases, and COPD.

Social Determinants

Deprivation

According to the Index of Multiple Deprivation (IMD) 2019, the MCC is the 2nd (out of 317) most deprived borough based on average rank. MCC is within the top 10% of most deprived Local Authorities in England (MHCLG, 2019). This is comparable to its position in 2015 when MCC ranked as the most (out of 326) deprived borough in England (MHCLG, 2015).

Manchester has 32 Lower Layer Super Output Areas (LSOAs); 43% of all LSOAs are within the top 10% of most deprived LSOAs in England. The Proposed Development is located within the Ancoats & Beswick LSOA, which ranks as the 17th most deprived LSOA in MCC (MHCLG, 2019).

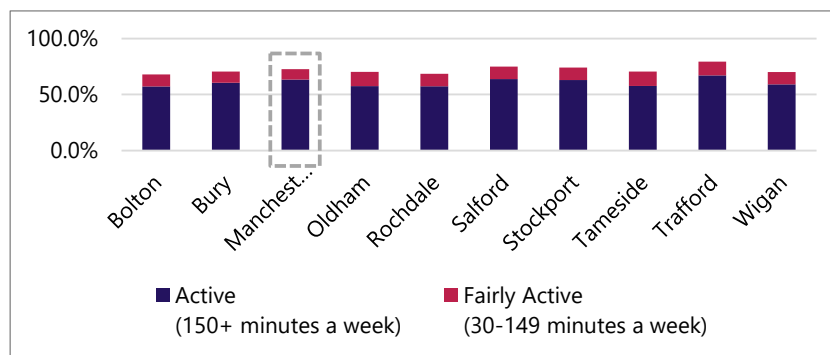
Manchester one of the 20% most deprived boroughs in England regarding employment and living environment. Furthermore, the borough is one of the 10% most deprived boroughs in terms of Health and crime – the borough is the most deprived in England in terms of crime (MHCLG, 2019).

Lifestyle

Physical activity contributes to lower risk of cardiovascular disease, coronary heart disease, and stroke. According to the World Health Organization (WHO), adults aged 18-64 should engage in at least 150-minute moderate activity per week (WHO, 2020). Physical activity above this recommended uptake is also negatively correlated with Non-Communicable Diseases such as diabetes, obesity, osteoporosis and mental health, and positively correlated with physical independence in older adults.

MCC is the 4th most active borough in GM, with an estimated 72.6% of adults (16+ years old) are moving (active for at least 30 minutes a week) between 2019 and 2020. This is slightly higher than the GM activity, recorded at 72.0% (Sports England, 2020).

Figure 1 Activity Levels within GM Boroughs 2019/2020



Source: Sports England (2020)

Population aged 55 and above are on average less active in England, as only 67.5% are moving. This decreases to 53.2% when accounting for only aged 75 years and above (Sports England, 2020). The activity levels among population in this age group in Manchester can be expected to follow the national trend.

On average, only about 59.6% of the population with a long-term disability, that limits their ability are moving (Sports England, 2020). The activity levels among long-term disabled in Manchester can be expected to follow the national trend. Evidence from Public Health England finds that physical activity improves the health and reduces the risk of chronic diseases for disabled adults (Public Health England, 2018).

People's health behaviours are widely known to affect their Health and risk of mortality. The GM Population Health Plan 2017-2021, published in collaboration with NHS, identified four main unhealthy behaviours (smoking, excessive consumption of alcohol, poor diet, and low levels of physical activity) that contribute negatively to GM populations' Health (GMCA, 2017). Evidence from the King's Fund: Clustering of unhealthy behaviours over time estimates that approximately 1.4 million adults in GM (circa 70%) are engaged in two or more of these unhealthy behaviours (Buck & Frosini, 2012).

According to the 'Taking Charge Together project, 90% of GM residents want to improve their lifestyles, with most people citing being more active (55%) and eating more healthily (46%) as their key areas of need.

Summary

MCC is one of the 10% most deprived boroughs in England in terms of Health. Approximately 27% of the MCC residents are moderately physically active less than 30 mins per week. As well as low levels of physical activity, poor diet have been identified as second main unhealthy behaviour in GM. These are also the two behaviours the majority of the GM residents want to improve about their lifestyle.

Infrastructure Baseline

Open Space

The latest 'Open Space and Recreational Needs Assessment' was conducted in 2009, when there was a provision of 182.70 ha amenity green space and 859.28 ha of natural and semi-natural open space across MCC. The site is located in Central Manchester, where the green amenity space provision per 1,000 population was higher (0.78 ha per 1,000 population) than the Manchester average (0.40 ha per 1,000 population). In comparison, the provision of natural and semi-natural open space was lower (1.80 ha per 1,000 population) than the Manchester average (1.90 ha per 1,000 population) (MCC, 2009).

Table 2 identifies open space within varying distances of the site in line with Manchester's Local Development Framework – Core Strategy 2012 to 2027 (MCC, 2012). In total, there are several open spaces within proximity to the Proposed Development, Ancoats Green being the closest. Besides, the nearby Rochdale Canal pathway provides natural and semi-natural and amenity green space and several unnamed amenity green spaces within proximity. There is one open space with outdoor sports opportunities, Victoria Mill Park, which has a Multi-Use Games Area (MUGA) (MCC, 2021b; Buro Happold, 2021).

Table 2 Open spaces access from the site

Open Space Category	Accessibility Guidelines	Distance from site to open space (km)	Open space name
City Park	15 minute Public Transport Time.	1 km	St Catherine's Park

	City Centre – 15 minute drive time (Public Transport)		
Local Parks	10 minute walk time (480m).	< 0.1 km	Ancoats Green
Natural and Semi Natural Open Space	15 min walk (720m). City Centre – 15 minute drive time (Public Transport)	0.3 km	Rochdale Canal
		0.5 km	St Michael's Flags and Angel Meadow
Amenity Green Space	10 minute walk time (480m).	0.3 km	Rochdale Canal
		0.3 km	Kemp Street
Outdoor Sports	15 minute walk time – grass pitches, tennis courts and bowling greens.	1 km	Victoria Mill Park

Source: MCC (2021b), Buro Happold analysis (2021)

Social infrastructure and Community Facilities

Victoria Mill Community Centre is the only community centre within a 1km catchment from the Proposed Development site. Services at the community centre include benefits validation, training, employment and training advice, health information point, parents and carer information, photocopying, events and other community services. The community centre also has a public library, Miles Platting Community Library. The library offers computers with internet and WI-FI access, books, events, children's courses and board games. There is no car parking on the community centre premises. (MCC, 2021b).

Access to Work

According to the Annual Population Survey (2020), 70.9% of the MCC population were economically active between October 2019 and September 2020, which is lower than recorded within GM (76.3%) and Great Britain (79.0%) (ONS, 2020).

Approximately 8.0% of the MCC population were unemployed between October 2019 and September 2020, which is higher than that recorded within GM (5.2%) and Great Britain (4.2%) (ONS, 2020).

Approximately 40.3% of economically inactive people in MCC were students, which was significantly higher than in GM (28.6%) and Great Britain (26.9%). This reflects the large size of the student population in Manchester (ONS, 2020).

Accessibility and Transport

The site is accessible by foot, with a number of bus stops, Metrolink stations, railways stations, and local amenities within the Ancoats and New Islington District and across Manchester City Centre (Hydrock, 2021). The site has direct link to Oldham Road, which is a major commute route and the main route to Oldham borough, where 3.9% of all MCC employees reside (ONS, 2011). In addition, within 800m of the site, here are a number of key destinations such as; Cutting Room Square, New Islington Marina / Cotton Field Park, Northern Quarter, and Stevenson Square, all of which combined offers a range of public spaces, shops, bars, restaurants, office spaces etc (Hydrock, 2021).

Based on best practises, the site is assessed to be highly accessible by cycle (Hydrock, 2021). The site is accessible by bike from Poland Street, with direct access to Oldham Road. According to Transport for GM (TfGM), Oldham Road has a cycle route with cycling facilities along the road. Route 66, a traffic-free canal-side cycling route, is also less than 1km away. Route 66 from Manchester city centre to Yorkshire is part of the National Cycle Network (TfGM, 2021). The site also is within proximity to National Cycle routes 6, 55 and 60. Despite Metrolink trams and business currently only allowing fold-up bikes on board, TfGM is looking to improve this in the future.

Air Quality and unequal exposure

Air pollution is linked to a wide range of serious illnesses and conditions. It contributes to the equivalent of approximately 1,200 deaths a year in GM. To tackle the air pollution, the Central Government has instructed the ten GM authority to take action to reduce levels of nitrogen dioxide (NO₂) on local roads and meet legal concentration limits in "the shortest possible time". The ten local authorities are proposing to introduce a 'Clean Air Zone', covering local roads across the whole GM from 2022. The aim is to improve air quality by encouraging upgrades to cleaner vehicles. Private cars, motorbikes and mopeds would not be charged (GMCA, 2021).

GM has five automatic air quality monitoring stations, of which three are located in MCC. Piccadilly Gardens monitoring station, within 1km of the site, is the closest to the Proposed Development (GMCA, 2020).

According to the Local Air Quality Management (LAQM) Annual Status Report (2020), NO₂, PM10 and PM2.5 are measured at the Piccadilly monitoring site, and levels of these pollutants are below legal limits. During 2019 there were slight increases in NO₂ and PM2.5 (GMCA, 2020).

In addition to the automatic monitoring sites, Clean Air GM has a 400 passive diffusion tubes network. There are three diffusion tubes within 1km of the Proposed Development. However, the target of less than 40µg/m³ was not met in 2019 (CleanAirGM, 2021). Details are presented in Table 3.

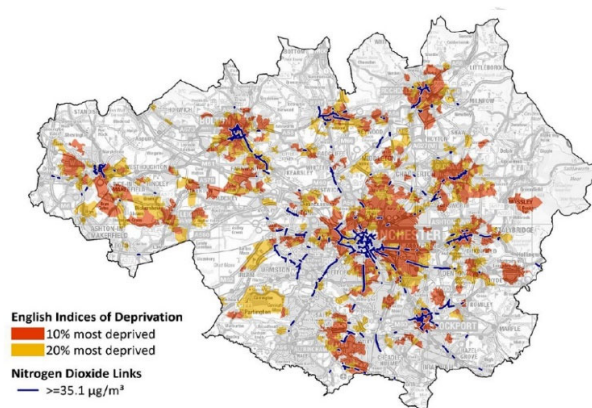
Table 3 Air quality monitoring within 1km of the Proposed Development

Monitoring Site	Distance to the Proposed Development (m)	2019 air quality (µg/m ³)
Manchester 88A	850 m	43.3
Manchester 71	900 m	45.3
Manchester 9AB	950 m	44.9

Source: Clean Air GM (2021)

Areas with higher deprivation often have higher exposure to nitrogen dioxide (NO₂). High levels of nitrogen dioxide are especially prominent in Central Manchester (TfGM, 2019). Figure 2 shows the relationship between locations close to or in exceedance of the EU limit value and 2015 deprivation.

Figure 2 Index of multiple deprivations (2015) and the links with high levels of NO₂ in GM



Source: TfGM (2019)

5. Conclusion and Recommendations

The HIA aims to identify potential health impacts arising from the Proposed Development based on the local health profile and the evidence from the design team, available at the time of writing.

The following assessment was carried out using the HUDU Rapid HIA Toolkit. The potential impacts of the development are assessed both during demolition and construction and operational phases. This chapter summarises the potential impacts under each relevant heading as set out in the Toolkit. The text highlights recommendations, review and monitoring measures that would ensure health impacts are maximised, or minimised. The full HUDU checklist can be found as Appendix A.

Access to open space and nature

The site is currently occupied by light industrial buildings. The Proposed Development would require the loss of amenity grassland in the form of a grass verge on the western boundary of the site (e.g. Poland Street side), dense scrub, scattered trees, and the demolition of all four buildings and three container units. It is assessed that the site has minimal ecological value or importance, and therefore, the proposals would not result in any net loss in biodiversity. Consequently, it is unlikely that the Proposed Development will not have adverse health impacts from this perspective.

Currently, the site does not provide any public amenity space, therefore, the Proposed Development would not result in the loss of existing public amenity space. As part of the development, new hard and landscaped open space will be introduced on three development sides. The open space will make better use of the public realm, becoming a key arrival threshold for Ancoats Green. The area provides space for cyclists and pedestrians to coexist while providing separated spaces for sitting and relaxing. In addition, the Proposed Development will have green façades on three sides, creating a strong interface between the Hub and the nearby park. With green facades on three sides, the ground floor provides visual stimulation, encouraging social interaction, which contributes to improved mental health.

The Proposed Development would enhance and maximise the public realm by improving the accessibility to the open space, Ancoats Green. The enhancements will directly link the city centre to the open space by removing a fence and creating a welcoming, car-free pathway for pedestrians and cyclists. Accessing open/green space can support more physical activity and reduce stressful lifestyles associated with heart diseases.

Overall and using the HUDU tool it is found that The Hub will bring potential positive or 'neutral' impacts. In particular, providing a more welcoming and flexible public realm that encourages cycling and recreation around the Mobility Hub. This will have a positive impact on public health and wellbeing, particularly mental health.

Mitigation, Recommendations and Monitoring

Within the next stages of Hub's implementation and in response to the HUDU questions pertaining to access to open space and nature, the following should be considered:

- Any tree and vegetation clearance should be timed outside of the birds breeding season (generally accepted to be March-August inclusive) to avoid conflicts with active bird nests.
- It is recommended to introduce bird and bat boxes within the site when in operation.
- Further open space management plan should be included at the next stage.

Air quality, noise and neighbourhood amenity

During Demolition and Construction

There are potential adverse health impacts associated with activities during the demolition and construction phase. Activities during demolition and construction are expected to generate noise and vibration such as excavation, piling, cutting, breaking out, and plant movements will be reviewed and planned to minimise, as far as practicable, the potential nuisance caused by these works. Mitigation measures will be considered, including low noise options, noise attenuation techniques and alternative methods.

The working hours for construction works will follow the MCC guidance for construction works (Monday to Friday: 7.30 am to 6 pm and Saturday: 8.30 am to 2 pm). This includes standard working hours for noisy, disruptive and external works. Work will only be undertaken outside of these hours where the works are internal to the building and will not result in noise or disruption to local residents. External work outside standard hours will be minimised, but where it is unavoidable will be agreed upon using the process set out in the guidance.

There is an increased potential for nuisance relating to air quality and emissions from construction activities as dust and fumes during construction. The degree of dust deposition is usually dependent on the nature of the works. Increased dust levels are most likely to occur during: demolition works, piling, moving construction traffic and groundwork activities. To minimise dust and fumes, the Principal Contractor will consider the following, each helping to avoid ingestion of particles that could cause harm or exacerbate existing health conditions:

- Control measures and dust suspension techniques;
- Minimise stockpiling and positioning in a manner that reduces the risk of dust arising through wind-action;
- Measures such as screening and covering;
- Installation of appropriate wheel and body wash facilities;
- Keep adjacent roads and pavements clean;
- Ensure plant is turned off and not left running when not in use;
- Selection of electrically powered plant where possible instead of diesel or petrol plant; and
- Ensuring no waste or unwanted construction materials are burned on site.

During Operation

The Proposed Development is part of the overall masterplan with the vision of delivering a sustainable and healthy neighbourhood. The applicant recognises the importance of providing for, encouraging, and promoting the use of a range of sustainable travel mode options, as alternatives to single occupancy car use to/from, or as a connecting node from the Mobility Hub. This is central to an integrated transport plan and infrastructure of the Ancoats area and promotes sustainable travel modes, with a modal shift towards walking, cycling and public transport.

An Air Quality Assessment (AQA) for The Hub assess potential impacts of additional vehicle trips generated and provide details for several trip generation scenarios. The results of this modelling demonstrate the impact at existing receptors range from 'moderate adverse' to 'negligible' in relation to annual mean NO₂ concentrations and in accordance with the EPUK and IAQM planning guidance. The moderate adverse impacts were predicted for a worst-case vehicle routing scenario only and when using a more realistic trip distribution, the impacts were found to range from 'slight adverse' to 'negligible adverse'. Although this analysis suggests mitigation measures are not required to offset the adverse impacts from the operational phase, the Proposed Development introduces mitigation measures to reduce the impacts to local and wider air quality (Electric Vehicle charging and car club and ride share).

With appropriate mitigation measures implemented, the AQA report concludes that air quality should not be viewed as a constraint to planning and the Proposed Development. In addition, as part of a wider integrated transport plan for the Ancoats area, measures taken at the Mobility Hub will promote healthy/sustainable travel modes, facilitate modal shift towards zero tailpipe emissions modes of transport and mobility (Electric Vehicles, e-bikes, Car Club/ridesharing, walking, cycling and public transport).

The Proposed Development will incorporate an Electric Vehicle (EV) and e-bike charging facility that will further accelerate EVs take-up and encourage the residents to move away from privately-owned Internal Combustion Engine vehicles. Initial provision of 25% (102 spaces) of the total parking is provided for EV vehicles, with the capacity to grow with demand up to 100%. If this provision is successfully taken up, this would help improve the air quality of the Poland Street NDF zone (and beyond) when operational. This will contribute to the national ambition of leading the world in zero-emission vehicle technology and end conventional fossil fuel-powered vehicles by 2030.

The Proposed Development will consolidate deliveries at the Mobility Hub, resulting in a reduced need for delivery vehicles to access pedestrian dominated spaces. It is envisaged that larger deliveries of appliances and furniture would still be delivered directly to residential properties due to impracticality of handling larger items and the lower frequency of that type of delivery. The Transport Assessment concludes that the Proposed Development is forecast to reduce the number of vehicles throughout the NDF zone and wider Ancoats, compared to each plot providing a parking provision of 30%. In addition, the Transport Assessment indicates that the Mobility Hub is assessed to reduce the distances travelled within the NDF zone by 1,197km over 24 hours, a significant reduction in vehicle distances and vehicles routing through the wider masterplan area. This has the potential to reduce the distribution of emissions from vehicle trips within the NDF area, reducing the likelihood of exposure to the immediate local population.

The Proposed Development will take measures to minimise and mitigate the local impact of emissions from operational use. Such measures include:

- A section within the Transport Assessment has been developed to promote sustainable travel modes of transport for both users of The Hub and future residential occupants of Poland Street Zone developments.
 - As part of this, the Hub is promoted to residents of the Poland Street Zone developments from the outset. It will be marketed to direct and encourage residents to use the Hub's facilities.
- The car parking levels of the building are naturally ventilated via openings.
- The ventilation strategy has been developed to minimise the installed mechanical plant's impact on the neighbouring buildings or locations where people are likely to be present.
- Non-combustion systems will supply all heating and hot water to the ground floor amenity spaces.

The Proposed Development will take measures to minimise and mitigate the noise pollution generated by the development. To minimise the risk of noise disturbance, it is advised that access times for deliveries and service vehicles to the development be restricted to daytime hours only, between 07:00 and 23:00 hrs. The promotion of EVs will also reduce levels of noise (dB) otherwise generated by combustion engine vehicles.

The Cafe is understood not to be a bar-type space; however, guidance on amplified sound limits has been considered part of the plan.

With clear mitigatory steps, the Proposed Development can help GM and Manchester to improve air quality and embed low-emission behaviours into the local culture by 2025. This would positively impact on the quality of local and wider environment, which consequently will have an impact on physical and mental health. In conclusion, the

Proposed Development promotes a shift in behaviour away from private Internal Combustion Engine vehicle ownership towards:

- Owning/sharing an EV;
- Using EV car hire and ride share;
- Cycling and using e-scooters more often, and;
- Walking more and more frequently.

Mitigation, Recommendations and Monitoring

Within the next stages of Hub's delivery and in response to the HUDU questions pertaining to air quality, noise and neighbourhood amenity, the following are recommended for consideration:

- Once the Principal Contractor has been appointed, a detailed Construction Environmental Management Plan to be submitted to the LPA for approval ahead of the commencement of the development on site.
- Continue to monitor the three diffusion tubes within 1km of the Proposed Development to help understand whether the site contributes toward negative local air quality.
- Operational modal-shift related measures and mechanisms that explore the potential for:
 - Setting of aspirational SMART targets for behaviour change, together with annual independent monitoring of progress against agreed targets;
 - Use of latest behavioural science to guide selection of incentives and restrictions (e.g. Capabilities Opportunities Motivation-Behaviour approach – Michie et al.);
 - Staggered increase in the number of spaces dedicated to EV car hire and ride share.

Accessibility and active travel

The site is highly accessible and benefits from relative proximity to several local amenities, good nearby connections to the Northern Quarter and Manchester City Centre, in addition to good sustainable public transport facilities within the Ancoats and New Islington District. In 2019, it was estimated that approximately 14,855 people lived in Ancoats & Beswick ward (ONS, 2019), where the Proposed Development is located. Given the site is central to the Back of Ancoats area, it is expected that a large portion of the associated trips to, from and connecting from the development will be taken using sustainable travel mode options. The site is within proximity of the National Cycle routes 6, 55, 60 and 66. The site is also located near Oldham Road, the main commute route to Oldham and car-free cycle route 66. The Proposed Development is likely to be accessed by a wide range of users by various modes of transport.

The Hub will provide 408 car parking spaces (inclusive of the Car Club and EV charging facilities). As the Poland Street NDF zone comes forward, the spaces will be used increasingly for residents and visitors. In the longer term, the provision of parking for residents will be 6.5% lower than the average exhibited by recent comparable and nearby precedents (31.5%), helping to manage the public expectation for city centre car parking provision and prompting mobility choices that support population health – via reduced emissions and increased physical activity pathways.

This car parking provision will help address the current problems reported by residents of on street parking, which leads to blocked driveways, congestion in narrow residential streets - undermining walking and cycling within and through the NDF zone. By 2029, when the wider masterplan is expected to become operational, 330 of the parking spaces will be reserved for residential parking (inclusive of 24 disabled parking). The residential car parking spaces would not be owned by residents and instead leased, using relatively short-term leases. Furthermore, a tenure model for car parking provision, which breaks the link between homes and car parking spaces, will allow spaces to be sold back to the operator as residents choose not to own a car, instead making use of healthy modes of transport.

Around 7% allowance would always remain ringfenced for visitor parking. Up to 20 spaces are initially reserved for Car Club and 10 additional spaces initially reserved for rideshare, with room to grow. The ride sharing spaces will facilitate residents with EVs who wish to offer their vehicle for private hire via a ride share platform. The Proposed Development will also provide a total of 150 cycle parking spaces with changing areas and lockers – including disabled facilities. The cycle parking is in line with the 'MCC Core Strategy 2012-2027' cycle parking standards. The cycle parking spaces will be publicly accessible however, in order to access the changing areas and lockers, the public will need to obtain membership. While the Mobility Hub is part of the wider development, each residential development coming forward will provide a secure cycling space for each apartment, representing an important step toward the GM Police (2009) recommendation to provide 1:1 cycle space per bedroom. The 150 cycling spaces delivered at The Hub are targeted primarily for local residents, visitors and commuters. However considering the recommended GM Police ratio and assuming the successful use of the Bee Network, it is possible that a wider catchment of residents and visitors will generate additional demand for secure bicycle spaces in the short-to-medium-term. Nonetheless, The Hub's 150 cycle parking spaces provides greater opportunity for cycling activities, which will support increased physical activity and in turn support positive physical and mental health impacts.

A delivery Hub will be provided on site. Rather than receiving deliveries at home or the office, the provision of a delivery Hub for the collection of parcels is likely to prompt local residents and workers to integrate additional walking into their daily routines. The last mile of deliveries can be complemented by sustainable means (EV or cargo bike) or residents can collect deliveries via lockers. The forecasted reduction in vehicle movements within the NDF zone is likely to improve walking conditions here but the increased vehicle trips generated by new commuters and visitors may marginally contribute to congestion and impaired walking conditions in the wider network.

TfGM is currently progressing with the new Bee Network, aiming to improve walking and cycling within GM, and it will be introduced/developed over the upcoming years. The Proposed Development aligns with the TfGM agenda, as it is evident that both pedestrian and cycling movements would be a viable mode of transport accessing the development (as a base and connecting nodes to and from the site). Changes in these modes of mobility within the Ancoats and New Islington district are likely to increase and improve because of the Proposed Development and the area's continued re-development. Furthermore, the Proposed Development will provide an area of hard standing with power supply that will be offered to TfGM for their proposed city-wide cycle hire scheme.

In summary and based on answers to questions presented by the HUDU tool, The Proposed Development will create a more accessible neighbourhood and will provide the Ancoats and New Islington District with a range of facilities (car parking, cycle parking, delivery hub service, retail/hospitality land uses). Along with the provision of enhanced access from the city centre to Ancoats Green Park, these will improve connectivity and linkages by facilitating pedestrian/cyclist access and improve the public realm within the NDF zone – either maximising positive travel behaviours with appropriate opportunities, or minimising obstacles, such as unreasonable travel distances.

Mitigation, Recommendations and Monitoring

Within the next stages of The Hub's implementation and in response to the HUDU questions pertaining to accessibility and active travel, the following are recommended for consideration:

- Further assessments will be undertaken to consider the vehicle routing, servicing, and pedestrian/cycle movements to determine the safe and feasible solution given the current constraints surrounding the site. Furthermore, capacity assessments will be undertaken within the surrounding area following confirmation from MCC and TfGM.

- Explore how 'wheels for all' may be catered for, ensuring that vulnerable groups are supported to cycle in the NDF zone and the city centre. Explore options to provide active travel provision for a wider range of users, including children and people with mobility issues such as the elderly.
- Explore opportunities to collaborate with TfGM to pilot a free shuttle bus to The Hub at peak times, evenings and weekends.

Crime reduction and community safety

The MCC is the most deprived borough in England in terms of crime (out of 317 local authorities) which has direct and indirect negative consequences for physical and mental health. The Proposed Development will incorporate design techniques to reduce crime naturally, such as:

- Lighting will be provided to the ground floor public realm spaces to provide a safe and welcoming environment for building users, local residents and the general public.
- As with the façade lighting, the ground level lighting shall be provided in a layered effect and incorporate lighting to footpaths, trees, architectural features, benches, and vehicular roadways.
- The increased foot traffic generated from staff and other users are likely to support safety and natural surveillance.

The Proposed Development will incorporate elements to help design our crime and includes techniques to help employees and visitors feel secure, e.g. automatic access control system for vehicles and visitors.

- Members-only access for pedestrians and cyclists is proposed into the cycle hub (cycle storage and changing facilities), with access gained through the use of a secure key card or keypad.
- Access to the delivery hub will be for authorised personnel only, i.e. those working with the delivery hub itself or for access/maintenance into plant/MEP spaces.
- CCTV system will be provided with both internal and external coverage for both safety and security purposes. The CCTV system shall provide surveillance of public, highly trafficked, low populated and potentially vulnerable areas that may be subject to instances of crime. External CCTV will also cover the landscaping around the building, which can increase safety for Ancoats Green users.

In summary, The Hub is likely to provide substantive positive impact for both the reduction of crime and the simultaneous improvement of community safety.

Mitigation, Recommendations and Monitoring

At the next stages of The Hub's delivery, building on the recommendations within the Crime Impact Assessment and in response to the HUDU questions, the following is recommended for consideration:

- Contractor engagement with the local community engagement is recommended throughout the development process.

Access to work and training

Approximately 8.0% of the MCC population were unemployed between October 2019 and September 2020, which is higher than recorded within GM (5.2%). MLDC has a target of 60% local employment (City of Manchester postcodes) on their developments to show its commitment to invest in local citizens' professional growth and wellbeing.

The Proposed Development provides new temporary construction jobs during the construction programme (c. 150 FTE jobs) and new permanent local employment when operational, generated from commercial and delivery hub use (c. 20 FTE jobs). The jobs will be available to all, generating economic activity in MCC. This will likely create positive health impacts for individuals working on the site, as being in employment is associated with a range of improved physical and mental health outcomes – such as increased cardiovascular activity and improved psychological states, including a sense of competence, purpose and environmental mastery.

In summary, The Hub will make a modest but positive impact on unemployment and the provision of good quality of employment.

Mitigation, Recommendations and Monitoring

Within the next stages of Hub's delivery and in response to the HUDU questions pertaining to access to work and training, the following is recommended for consideration:

- It is suggested that the developer will engage with local schools, universities and prospective local employees to offer training and local employment opportunities within the local community.

Minimising the use of resources

HUDU's Rapid HIA Tool sets out the role of measures that reduce or minimise waste including disposal, processes for construction and recycling at all levels in improving health directly and indirectly by minimising environmental impact such as air pollution.

Measures to minimise the use of resources within the construction and completed phases of the Proposed Development are set out in the, Waste strategy, Construction plan, Sustainability Statement and the Environmental Standard Statement (ESS).

Construction

A waste strategy has been developed to reduce waste and encourage recycling of building materials and encourages the implementation of a waste management hierarchy. This strategy shall also seek to maximise the reuse, recycling and recovery of waste streams resulting from construction. It has been prepared in line with the 'Site Waste Management Plan Regulations 2008'.

The Construction Management Plan 2021 developed by the contractor further develops recycling efforts on site.

Completed Development

The ESS accompanying the application sets out the approach to implementing sustainable principles to the Proposed Development.

- The design has been developed using an efficient grid with columns running generally full height through the floors, avoiding the need for transfer structure at the lower levels.
- The reinforcement can be recycled, and the concrete can be crushed and re-used as an aggregate for future mixes.
- To minimise the frequency of replacement and maximise material optimisation, the durability and resilience of key finishes and components has been considered from the early design stages.

- During the concept design, the external envelope was developed to utilise robust, long lasting, and sustainable materials.
- In internal areas of high footfall, hard-wearing and easily maintainable finishes will be specified.
 - A functional adaptability appraisal will be developed to identify opportunities to keep the commercial units in use throughout its useful design life.
 - Sustainable procurement and responsible sourcing will be considered at detailed design and during construction.
 - 50% of operational use bins will be dedicated to recycling with flexibility to increase as recycling rates increase

Overall, it is deemed that the above steps represent constructive steps toward achieving the HUDU expectations, providing 'upstream' support for longer terms population health outcomes. Further details at Design and Access Statement (Buttress Architects) and ESS (Buro Happold).

Mitigation, Recommendations and Monitoring

At the next stages of The Hub's delivery and in response to the HUDU questions related to minimising the use of resources, the following is recommended for consideration:

- The project should continue to review and identify any areas vulnerable to damage both internally and externally and removing risk where possible.

Climate Change

The HUDU HIA tool sets out the links between Climate Change and longer-term or future health impacts. It highlights the dual role planning has at the forefront of carbon emissions reduction, and environmental adaptation to reduce vulnerability to weather changes.

The Environmental Standard Statement, which includes the Energy Statement, sets out the approach to Climate Change and the proposed strategy aims to reduce carbon emissions by utilising Low and Zero Carbon (LZC) with a route to net zero carbon by 2038 set out in the sustainability statement.

- The design followed the Lean, Clean and Green Energy Hierarchy throughout.
- Highly efficient LED lighting for the entire building.
- Highly efficient MVHR units for ground floor spaces including cycle hub, commercial unit and delivery hub.
- Roof mounted PV to generate electricity for use in the building.
- During summer months the renewable energy potentially generated on site will be much more than daytime demand from the car park / landlord users.
- Use of allocated battery space for the installation of batteries will also improve the resilience of the Mobility Hub.
- The drainage strategy has been designed for a 1 in 100-year storm with 40% increase for climate change.
- The building has been designed with the green walls and landscaped proposal to contribute to the climate resilience.

- The car park floors are naturally ventilated with adequate openings to encourage air movement. The occupied spaces on the ground floor of the building is mechanically ventilated using heat recovery for providing ventilation.
- The systems are inherently resilient to cope with rising external temperatures due to climate change. Provision has been made for the ground floor commercial units to install cooling units when needed.
- The building's adaptation to climate change will be further enhanced by the future landscaped green corridor and the green park nearby as part of Neighbourhood Development Framework. The proximity to the green infrastructure would benefit the Proposed Development with reduced extreme temperatures, biodiversity, and water management.

For further details: Drainage Strategy (Hill Cannon,) Ventilation Statement (Buro Happold), Design and Access Statement (Buttress Architects).

Mitigation, Recommendations and Monitoring

At the next stages of The Hub's delivery and in response to the HUDU questions examining Climate Change issues, the following is recommended for consideration:

- No further recommendations.

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Appendix A: Healthy Urban Development Unit (HUDU) Checklist

Housing design and affordability

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal seek to meet all 16 design criteria of the Lifetime Homes Standard or meet Building Regulation requirement M4 (2)?	☐ Yes ☐ No ☒ N/A	The Proposed Development does not include residential development.	N/A	Not Applicable.
Does the proposal address the housing needs of older people, i.e. extra care housing, sheltered housing, lifetime homes and wheelchair accessible homes?	☐ Yes ☐ No ☒ N/A	The Proposed Development does not include residential development.	N/A	Not Applicable.
Does the proposal include homes that can be adapted to support independent living for older and disabled people?	☐ Yes ☐ No ☒ N/A	The Proposed Development does not include residential development.	N/A	Not Applicable.
Does the proposal promote good design through layout and orientation, meeting internal space standards?	☐ Yes ☐ No ☒ N/A	The Proposed Development does not include residential development.	N/A	Not Applicable.
Does the proposal include a range of housing types and sizes, including affordable housing responding to local housing needs?	☐ Yes ☐ No ☒ N/A	The Proposed Development does not include residential development.	N/A	Not Applicable.
Does the proposal contain homes that are highly energy efficient (e.g. a high SAP rating)?	☐ Yes ☐ No ☒ N/A	The Proposed Development does not include residential development.	N/A	Not Applicable.

Access to health and social care services and other social infrastructure

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal retain or re-provide existing social infrastructure?	☐ Yes ☒ No ☐ N/A	The Proposed Development does not include residential development.	N/A	Not Applicable.
Does the proposal assess the impact on health and social care services and has local NHS organisations been contacted regarding existing and planned healthcare capacity?	☐ Yes ☒ No ☐ N/A	The Proposed Development does not include residential development and therefore is not expected to create additional demand for health and social care services.	N/A	Not Applicable.
Does the proposal include the provision, or replacement of a healthcare facility and does the facility meet NHS requirements?	☐ Yes ☒ No ☐ N/A	The Proposed Development does not include residential development.	N/A	Not Applicable.
Does the proposal assess the capacity, location and accessibility of other social infrastructure, e.g. primary, secondary and post 19 education needs and community facilities?	☐ Yes ☒ No ☐ N/A	The Proposed Development does not include residential development. The provision of other social infrastructure is therefore not relevant.	N/A	Not Applicable.
Does the proposal explore opportunities for shared community use and co-location of services?	☐ Yes ☒ No ☐ N/A	A wide stripe of the public realm is provided to the south of the site, including new pedestrian and cyclist connections from Ancoats Green.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	Not Applicable.

Access to open space and nature

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal retain and enhance existing open and natural spaces?	☒ Yes ☐ No ☐ N/A	The existing site is currently occupied by light industrial buildings similar to the immediately surrounding plots. All trees and vegetation will be cleared as part of the development; however, it is assessed that the site has very limited ecological value or importance and	☐ Positive ☐ Negative ☒ Neutral ☐ Uncertain	Any tree or vegetation clearance should be timetabled outside of the birds breeding season (generally accepted to be March-August)

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		therefore the Proposed Development would not result in a net loss of biodiversity. The Proposed Development will enhance access to the adjacent Ancoats Green Park and the new landscaping will enhance the neighbourhood open space provision.		inclusive) to avoid conflicts with active bird nests. The introduction of bird and bat boxes within the site is recommended.
In areas of deficiency, does the proposal provide new open or natural space, or improve access to existing spaces?	☒ Yes ☐ No ☐ N/A	The site currently does not include any public amenity space, and therefore will not result in the loss of existing public amenity space. It will enhance access to the existing Ancoats Green Park, which is adjacent and new hard and landscaped open spaces will be introduced on three sides of the Hub. The introduced features make better use of the public realm, becoming a key arrival threshold for Ancoats park. The area provides space for cyclists and pedestrians to coexist whilst providing separated spaces for sitting and relaxing. In addition, the proposal will have green façades on three sides, creating a strong interface between the Hub and the nearby park. Overall, the Proposed Development will provide a more welcoming and flexible public realm that encourages cycling and recreation around the Mobility Hub. This is likely to facilitate a positive impact on public health and wellbeing, in particular supporting key behaviours associated with positive mental health.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	
Does the proposal provide a range of play spaces for children and young people?	☐ Yes ☒ No ☐ N/A	The Proposed Development does not include residential units.	N/A	Not Applicable.
Does the proposal provide links between open and natural spaces and the public realm?	☒ Yes ☐ No ☐ N/A	The Proposed Development provides a link between Ancoats Green Park and the city by creating a pathway. A wide stripe of the public realm is provided to the south of the site, including new pedestrian and cyclist connections from Ancoats Green. This link will facilitate improved perceptions of the area and also how the public navigate the area, to access the healthy and sustainable travel mode options.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	No further actions.
Are the open and natural spaces welcoming and safe and accessible for all?	☒ Yes ☐ No ☐ N/A	The Proposed Development has vehicle movement contained within the north east zone of the site. The remainder of the site is proposed to be car-free, allowing access from pedestrians and cyclists only. The new public realm is on the ground floor and is accessible from the delivery hub pedestrian and vehicle route. It has a level surface providing inclusive access for people with mobility issues. The public realm will also have lighting, providing a safe and welcoming environment for building users, local residents and the general public.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	Ensure changing facilities and stairwell provide active frontage on to Ancoats Green i.e. maximum windows overlooking not blank facades.

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		Overall, activation of the ground floor has a positive impact on the building users and local residents. With green facades on three sides, the ground floor provides visual stimulation, encouraging social interaction, contributing to experienced (or self-reported) wellbeing.		
Does the proposal set out how new open space will be managed and maintained?	☐ Yes ☒ No ☐ N/A	The information is not provided at this stage.	☐ Positive ☐ Negative ☐ Neutral ☒ Uncertain	Information to be included at next stage.

Air quality, noise and neighbourhood amenity

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal minimise construction impacts such as dust, noise, vibration and odours?	☒ Yes ☐ No ☐ N/A	Construction activities can generate noise and vibration. As set up in the Construction Management Plan, the construction working hours will follow the MCC guidance. External work outside standard hours will be minimised and will be agreed upon using the process set out in the guidance where the impact is unavoidable. In order to minimise nuisance relating to air quality and emissions from the construction activity, the Principle Contractor will consider the following: • Control measures and dust suspension techniques; • Minimise stockpiling and positioning in a manner that reduces the risk of dust arising through wind action; • Measures such as screening and covering; • Installation of appropriate wheel and body wash facilities; • Keep adjacent roads and pavements clean; • Ensure plant is turned off and not left running when not in use; • Selection of electrically powered plant where possible in lieu of diesel or petrol plant; and • Ensuring no waste or unwanted construction materials are burned on site.	☐ Positive ☐ Negative ☒ Neutral ☐ Uncertain	See further details from the accompanying Air Quality assessment report (Hoare Lea, 2021). Once the Principal Contractor has been appointed, a detailed Construction Environmental Management Plan to be submitted to the LPA for approval ahead of the commencement of the development on site.

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		The need for further assessment of the potential air quality impacts associated with construction phase road traffic emissions, principally HDV movements, have been screened out as they are considered to have an insignificant effect on air quality and mitigation measures are not required.		
Does the proposal minimise air pollution caused by traffic and energy facilities?	☒ Yes ☐ No ☐ N/A	In terms of air pollution generated from energy facilities, the Proposed Development will minimise and mitigate the local impact by making sure: The majority of the building is naturally ventilated via openings. The ventilation strategy has been developed to minimise the impact of the installed mechanical plant on the neighbouring buildings or locations where people are likely to be present. All heating and hot water to the ground floor amenity spaces will be supplied by non-combustion systems. The Proposed Development is part of the overall masterplan with the vision of delivering a sustainable neighbourhood. Hoare Lea's Air Quality Assessment (AXA) provides details for three trip generation scenarios. One of the scenarios (2A) is predicted to result in a 'moderate adverse' impact on air pollution at the outset. The more realistic scenario (2B) is predicted to result in 'slight adverse' impact at the outset and the final scenario (1A) is predicted to have a 'negligible' impact. Hoare Lea assesses that the overall effect is considered to be 'not significant'. In addition, the Proposed Development introduces mitigation measures to reduce the impacts to local air quality. With appropriate mitigation measures implemented, Hoare Lea concludes that air quality should not be viewed as a constraints to planning and the Proposed Development. As part of a wider integrated transport plan for the Ancoats area, mitigation measures taken at the Mobility Hub will promote healthy/sustainable travel modes, facilitate modal shift towards zero and low tailpipe emissions modes of transport and mobility (Electric Vehicles (EVs), e-bikes, rideshare, walking, cycling and public transport). The Proposed Development will incorporate an EV and e-bike charging facility that will support the EVs' take-up and encourage the use of a range of sustainable travel mode options as alternatives to single occupancy car use to/from or as a connecting node from the Mobility Hub. The proposal also will have	☐ Positive ☐ Negative ☒ Neutral ☐ Uncertain	Continue to monitor the three diffusion tubes within 1km of the Proposed Development to help understand whether the site contributes toward negative local air quality. Clarify operational mitigatory modal-shift related measures, considering: - Staggered increase in the number of spaces dedicated to EV car hire, rideshare; - Setting of aspirational SMART targets for behaviour change together with annual independent monitoring of progress against the agreed targets; - Use of latest behavioural science to guide selection of incentives and restrictions e.g. COM-B (Capabilities Opportunities Motivation for Behaviour).

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		the infrastructure provision in place for all the parking spaces to become EV if and when required in the future. Forecasts provided within Hydrock's Transport Assessment show that the Proposed Development will reduce the number of vehicles throughout the area, therefore limiting the distribution of vehicular air pollution by providing centralised vehicle parking (instead of each individual plot providing a separate parking provision). In addition, the delivery hub is expected to reduce the number of parcel deliveries, as the development will prevent parcel deliveries being distributed in an uncoordinated manner throughout the Poland Street Neighbourhood Development Framework (NDF) and will provide a single destination for deliveries. The last mile of deliveries can be completed by sustainable means (electric vehicle or cargo bike) or residents can collect deliveries via lockers. It is envisaged that larger deliveries of appliances and furniture would still be delivered directly to residential properties due to impracticality of handling larger items and the lower frequency of that type of delivery. In addition, the Transport Assessment indicates that the Mobility Hub reduces the distances travelled within the NDF area by 1,197km over a 24-hour period, a significant reduction in vehicle distances and vehicles routeing through the masterplan area. A section pertaining to Travel Plan embedded in the Transport Assessment has been developed to promote sustainable travel modes among the wider development users. It states that sustainable travel mode options that the Hub presents will be promoted to residents of the wider development from the outset and will be marketed to direct and encourage residents to use the Hub's facilities. Bullet point summary of proposals to shift behaviour away from private vehicle ownership towards: • Owning/sharing an EV • Using EV car hire and rideshare trips • Cycling and using e-scooters more often • Walking more and more frequently		

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		Overall, the Proposed Development will contribute towards GM's target of achieving legal air quality by 2024 and the wider national ambition of leading the world in zero-emission vehicle technology and end the sale of conventional fossil fuel-powered vehicles by 2030. However these aspirations are contingent on leadership from the Mobility Hub's operator to support the public's capabilities, opportunities and motivation to modify travel behaviours and therefore reduce tail pipe emissions.		
Does the proposal minimise noise pollution caused by traffic and commercial uses?	☒ Yes ☐ No ☐ N/A	The Proposed Development will take measures to minimise and mitigate the noise pollution generated by the Proposed Development. To minimise the risk of noise disturbance, it is advised that access times for deliveries and service vehicles to the Proposed Development be restricted to daytime hours only, between 07:00 and 23:00 hrs. The Cafe is understood to not be a bar-type space, however, guidance on amplified sound limits have been considered as part of the plan. The promotion of EVs will also reduce levels of noise (dB) otherwise generated by combustion engine vehicles.	☐ Positive ☐ Negative ☒ Neutral ☐ Uncertain	No further actions.

Accessibility and active travel

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal address the ten Healthy Streets indicators?	☒ Yes ☐ No ☐ N/A	Healthy Streets Approach was designed to improve personal health and reduce health inequalities through promoting active, sustainable travel throughout London. The approach was developed as a way to achieve the daily minimum of 20 minutes of active travel outlined in the London Mayor's Transport Strategy (2018). The strategy assess that this is the minimum level of activity people should do to stay healthy. By providing active travel facilities, reducing car dominance and by encouraging residents to walk to and from the mobility hub, the Proposed Development helps the local population to reach the daily minimum of 20 minute of active travel and therefore helping them to stay healthy.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	No further actions.

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		While no official Healthy Streets Assessment has been undertaken as part of the Proposed Development, the development contributes creating health streets in Manchester by addressing the following indicators (out of 10): • 'Pedestrians from all walks of life' by providing facilities accessible by everyone and by enhancing community access to open space. • 'People choose to walk, cycle and use public transport' by providing a cycle hub and enhancing access to open space. • 'Clean Air' by providing and encouraging the use of EV and active travel. • 'People feel safe', by generating increase in footfall, improving vitality across the wider area, providing additional natural surveillance, which can help promote a greater sense of safety. • 'Not too noisy' by encouraging active travel. • 'Easy to cross' by enhancing the link between the city centre and open space (Ancoats Green). • 'Places to stop and rest' by providing a publicly accessible café, where visitors can rest while walking around the area or after cycling to the Hub. This is especially important for groups with limited mobility. • 'People feel relaxed' by providing car-free pedestrian access to open space (Ancoats Green).		
Does the proposal prioritise and encourage walking, for example through the use of shared spaces?	☒ Yes ☐ No ☐ N/A	The Proposed Development primary use will be car parking; however, it will encourage walking by providing a shared pedestrian and cycle path along southern side of the Hub allowing access from the city centre to Ancoats Green Park. The Proposed Development is also located in proximity (800m) of number of key destination and therefore is expected to encourage walking in the area. Visitors can arrive to the area with various sustainable travel modes and continue their journey by walking. Nearby destinations include Cutting Room Square, New Islington Marina / Cotton Field Park, Northern Quarter, and Stevenson Square, all of which combined offers a range of public spaces, shops, bars, restaurants, office spaces etc. Rather than receiving deliveries at home or the office, the provision of a delivery Hub for the collection of parcels is likely to prompt local residents and workers to integrate additional walking into their daily routines. The forecasted reduction in vehicle movements within the NDF area is likely to improve walking conditions	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	No further actions.

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		here however the increased vehicle trips generated by new commuters and visitor s may impair walking conditions in the wider network.		
Does the proposal prioritise and encourage cycling, for example by providing secure cycle parking, showers and cycle lanes?	☒ Yes ☐ No ☐ N/A	The Proposed Development includes a total of 150 cycle parking spaces and changing areas and lockers – including disabled facilities. The cycle parking will be publicly accessible, however in order to access the changing areas and lockers, users need to obtain membership. According to the 'MCC Core Strategy 2012-2027' cycle parking standards, for 162 sqm of food retail, there should be 2 cycle parking spaces and for 275 sqm of delivery space, there should be 2 cycle parking spaces. As a guidance, according to the Design for Security: Cycle Parking (GM Police, 2009), there should be one cycle parking per bedroom. While the Mobility Hub is part of the wider development, each residential development coming forward will provide a secure cycling space for each apartment, representing an important step toward the GM Police (2009) recommendation to provide 1:1 cycle space per bedroom. The 150 cycling spaces delivered at The Hub are targeted primarily for local residents, visitors and commuters. However considering the recommended GM Police ratio and assuming the successful use of the Bee Network, it is possible that a wider catchment of residents and visitors will generate additional demand for secure bicycle spaces in the short-to-medium-term. Nonetheless, The Hub's 150 cycle parking spaces provides greater opportunity for cycling activities, which will support increased physical activity and in turn support positive physical and mental health impacts. At the time of writing, it is not clear if the cycle spaces provided will cater for a wider range of users e.g. children, disabled or aging population – who are likely to experience large beneficial health and wellbeing effects from suitable provision.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	Explore how 'wheels for all' may be catered for, ensuring that vulnerable groups are supported to cycle in the NDF area.
Does the proposal connect public realm and internal routes to local and strategic cycle and walking networks?	☒ Yes ☐ No ☐ N/A	The Proposed Development will provide enhanced access from the city centre to Ancoats Green Park. A new cycle route is intended to intersect the site. These enhancements will expand connectivity and linkages by allowing pedestrians / cyclists to become more inclusive, improve the public realm and generate place values within the Ancoats and New Islington District. The existing cycle network within proximity of the site comprises the National Cycle routes 6, 55, 60 and 66. The Proposed Development provides cycle parking	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	No further actions.

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		for commuters visiting the area. The site is located in proximity to Oldham Road, the main commute route to Oldham and car-free cycle route 66. Furthermore, the Proposed Development will provide an area of hard standing with power supply that will be offered to TfGM for their proposed city-wide cycle hire scheme.		
Does the proposal include traffic management and calming measures to help reduce and minimise road injuries?	☒ Yes ☐ No ☐ N/A	The Proposed Development is located in the Ancoats controlled zone area, with a 20mph traffic calming speed limit. Based on the 'Personal-Injury Accidents' review undertaken by Hydrock, no evidence to indicate substantial highway issues were found. In conclusion, the existing road safety is not a concern around the site. Nevertheless, any potential safety implication will be considered due to any highway work associated with the Proposed Development at later stages. The car park will have a one-way system, which will reduce the potential for collisions. In addition, the Proposed Development includes a shared pedestrian/ cycle path along the southern side of the Hub for traffic calming. Further assessments in relation to vehicle routing, servicing, and pedestrian / cycle movements to determine the safe and feasible solution will be undertaken at a later stage. A Construction Traffic Management Plan will detail the coordinated routes and coordinated delivery system and address the following issues: • Integration of the traffic management scheme with surrounding construction developments and calming measures; • Access, egress, drop off and turning areas; • Temporary and / or permanent alterations to local traffic routes (both vehicular and pedestrian); • Additions, alterations and positions of any temporary signage, road markings or protection barriers; • Pedestrian access around the site and relevant protection, lighting and signage schemes; • Temporary suspension / relocation of parking bays and bus stops as necessary; • Segregation of plant, materials and pedestrians on site and safe access routes between welfare and site areas; • The provision of car parking, off and on site, and public transport strategy for staff and operatives; • Loading bays, hoist positions and tower crane areas; and	☐ Positive ☐ Negative ☒ Neutral ☐ Uncertain	A detailed Construction Traffic Management Plan will be submitted to the LPA for approval ahead of the commencement of the development on site. Parking bays should be generous to accommodate large vehicles and reduce the potential for conflict between users.

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		Any other measures to ensure the safe integration of pedestrians, cyclists and road users both on, off and surrounding the development.		
Is the proposal well connected to public transport, local services and facilities?	☒ Yes ☐ No ☐ N/A	This site is accessible by bus, with the nearest bus stops located along the A62 Oldham Road approximately 120m away from the site, providing services in both directions. This key route network along the Oldham Road captures trips into the city centre, the Proposed Development therefore has the potential to provide alternative forms of transport through this link into the city centre. The New Islington Tram stop is also within a reasonable walking distance from the site. The nearest rail station is Manchester Piccadilly, located approximately 1.2km to the south of the site (considered an acceptable walking distance as per Transport Assessment) and Manchester Victoria Railway station is also located approximately 1.4 km to the north west of the site. Both Manchester Piccadilly Railway and Manchester Victoria Railway Stations provide access to the Metrolink, offering frequent services to a variety of destinations within GM. Transport for GM (TfGM) provides a free bus service, and the Proposed Development is located in proximity to one of the stops, Shudehill Interchange (1km). Overall, the Proposed Development is considered to be accessible by public transport, providing future users with a good range of public transport travel options. Prospective visitors, staff, and local residents within the area will have a range of public transport travel choices, even outside of what might normally be considered as the daytime 'core' hours.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	Explore scope to pilot site location integration as part of the free bus service route at peak times, evenings and weekends with TfGM. The site is relatively near Route 2 and Route 3 (evening service).
Does the proposal seek to reduce car use by reducing car parking provision, supported by the controlled parking zones, car clubs and travel plans measures?	☒ Yes ☐ No ☐ N/A	The Hydrock Transport Assessment shows that compared to a recent average of 31% in the local area, the proposed level of car parking provision for residents (25%), represents a 6% overall reduction - once the residential developments are finalised within the NDF area. By 2029, it is planned that 330 car parking spaces will become residential parking provision, as new development currently within various stages of design process, will be built out. The residential car parking spaces would not be owned by residents and instead leased, using relatively short leases. Furthermore, a tenure model for car parking provision which breaks the link between homes and car parking spaces and allows spaces to be recycled by being sold back to the operator as residents choose not to own a car and to make use of Car Clubs and other sustainable travel modes.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		The Proposed Development will 'ring-fence' 7% of the car parking spaces for the Enterprise Car Club and a rideshare scheme. The Transport Assessment undertaken by Hydrock deems this to be a sufficient number of spaces at the outset and subject to demand and the short term leasing arrangement will provide scope to turn visitor or commuter spaces into Car Club and/or rideshare spaces. This transition will be facilitated by operational initiatives set out within the management plan. The Manchester Core Strategy 2012-2027 provides car parking standards. Parking spaces requirement depend on the number of residential units, which is not available at the time of writing but estimated to be approximately 1,700 within the NDF area. The plan is to deliver parking spaces according to the local planning policy, while considering the wider masterplan. Compared to recent city centre precedents, The Hub will reduce car parking spaces located on other developers as part of the wider development, freeing up the land for additional homes and more ground floor animation of streets. According to the UK Government' Future of Mobility: Evidence Review (2019) some population groups will be more vulnerable to mobility changes in the future. These groups include elderly, parents with young children and residents with mobility issues. This highlights that the demand for car parking space might reduce in the future but some groups will continue to demand parking spaces in the future.		
Does the proposal allow people with mobility problems or a disability to access buildings and places?	☒ Yes ☐ No ☐ N/A	Approximately 6% (24) of the parking spaces are reserved as disabled parking bays. This is according to the UK Government 'Inclusive Mobility' Guidelines (2005). Disable parking bays are located within proximity to the stairs and the lift. Disabled refuge call points will be situated within each protected lobby on each floor level served by a lift. An Emergency Voice Communication System (EVC) will be provided in accordance with the requirements of BS:5839-9 and Building Regulations.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	Explore opportunities to provide electric wheelchair and other mobility assistance device charging stations on the ground floor of The Hub.

Crime reduction and community safety

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal incorporate elements to help design out crime?	☒ Yes ☐ No ☐ N/A	Lighting plays a crucial role in ensuring the environment feels bright and welcoming within the car park. The lighting installed will promote welcoming and safe movement of vehicles and pedestrians. The lighting installation can also help to reduce crime and the fear of crime for the users of the space. External feature lighting is to be provided to illuminate both the building façade and the landscape. The strategy for external lighting is to be developed during RIBA Stage 3 in conjunction with the Architect and Landscape Architect. The Proposed Development will involve a number of ground floor activities to increase the level of pedestrians and public uses. This will provide natural surveillance of the surrounding public realm. Glazed elevations to most of the public elevations will help to enliven the street scene and enhance natural surveillance of and from the building. A CCTV system shall be provided to the building to provide both internal and external coverage for both safety and security purposes. The quantity and positioning of CCTV cameras shall be further developed during RIBA Stage 3. The Proposed Development will use digital platform to control access, the platform will be linked to relevant bookings, memberships, or rights to park. Finally, there will be onsite private management/ security team patrolling the area regularly which will deter potential offenders from operating in the area.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	No further actions.
Does the proposal incorporate design techniques to help people feel secure and avoid creating 'gated communities'?	☒ Yes ☐ No ☐ N/A	The proposal includes an automatic access control system that will manage the access privileges of building users - both in vehicles and pedestrians to provide a means of restricting access. This will help users feel secure; in addition, the communal area of the Proposed Development will promote a sense of shared community. Members-only access for pedestrians and cyclists is proposed into the cycle hub (cycle storage and changing facilities), with access gained through use of a secure key card or key-pad. Access to the delivery hub will be for authorised personnel only i.e. those working with the delivery hub itself or for access/maintenance into plant/MEP spaces.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	No further actions.

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal include attractive, multi-use public spaces and buildings?	☒ Yes ☐ No ☐ N/A	The Proposed Development includes a 54-seating café (162sqm) open for public, which is accessible from an attractive public realm. The café is directly accessible from the Ancoats Green Park.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	No further actions.
Has engagement and consultation been carried out with the local community and voluntary sector?	☒ Yes ☐ No ☐ N/A	No engagement or consultation regarding crime and community safety has been carried out with the local community and voluntary sector.	☐ Positive ☐ Negative ☐ Neutral ☒ Uncertain	No further actions.

Access to healthy food

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal facilitate the supply of local food, for example allotments, community farms and farmers' markets?	☐ Yes ☒ No ☐ N/A	Not Applicable.	N/A	Not Applicable.
Is there a range of retail uses, including food stores and smaller affordable shops for social enterprises?	☐ Yes ☒ No ☐ N/A	Not Applicable.	N/A	Not Applicable.
Does the proposal avoid contributing towards an over-concentration of hot food takeaways in the local area?	☐ Yes ☒ No ☐ N/A	Not Applicable.	N/A	Not Applicable.

Access to work and training

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal provide access to local employment and training opportunities, including temporary construction and permanent 'end-use' jobs?	☒ Yes ☐ No ☐ N/A	The Proposed Development is expected to create temporary direct construction jobs and additional jobs in supply chain and construction employee spending during the construction phase. During the operational phase, the Proposed Development would create a small number of additional employment opportunities from commercial use (mainly the café) and maintenance. It is assessed that the Proposed Development will generate 150 temporary jobs during construction and 20 permanent jobs when operational.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	No further actions.
Does the proposal provide childcare facilities?	☐ Yes ☒ No ☐ N/A	The Proposed Development does not include residential use, no childcare facilities are proposed on site.	N/A	Not Applicable.
Does the proposal include managed and affordable workspace for local businesses?	☐ Yes ☐ No ☒ N/A	Not Applicable.	N/A	Not Applicable.
Does the proposal include opportunities for work for local people via local procurement arrangements?	☒ Yes ☐ No ☐ N/A	Details regarding the procurement of staff/workers are not known at this stage.	☐ Positive ☐ Negative ☐ Neutral ☒ Uncertain	It is expected that this may be agreed as part of a planning condition such as a procurement and/or skills and training strategy.

Social cohesion and inclusive design

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal consider health inequalities by addressing local needs through community engagement?	☒ Yes ☐ No ☐ N/A	Public consultation has been undertaken as part of the development process. Whilst this consultation did not specifically focus on health inequalities, participants were allowed to raise any concerns they had. Topics raised as part of the consultation	☐ Positive ☐ Negative ☐ Neutral ☒ Uncertain	No further actions.

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		included affordability, safety and child space – each of which represent factors related to health and wellbeing.		
Does the proposal connect with existing communities, i.e. layout and movement which avoids physical barriers and severance and land uses and spaces which encourage social interaction?	☒ Yes ☐ No ☐ N/A	The new public realm proposed on site including new pedestrian and cycle paths allow connections from the Ancoats Green towards the city and beyond. This further helps promote a sense of place for local communities. The Proposed Development will enable good connections to existing and future local amenities. The design team have considered a number of options to optimise the functionality and diversity of the Proposed Development.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	No further actions.
Does the proposal include a mix of uses and a range of community facilities?	☒ Yes ☐ No ☐ N/A	Apart from the main mobility hub proposed on site, the Proposed Development also includes a café and communal area. The Cycle Café allows users to meet and spend more time working/relaxing and provides a café-come-bike workshop feel. Cycle Hire, Car Club/ Rideshare, Delivery Hub, and Car Parking facilities will all be available to the community (particularly by the residential community). The Proposed Development does not include community facilities categorised as C2 (e.g. residential institutions), E (e.g. healthcare facilities), F1 (e.g. education facilities), F2 (e.g. hall or meeting place) and Sui Generis (e.g. cinemas).	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	Not Applicable.
Does the proposal provide opportunities for the voluntary and community sectors?	☐ Yes ☐ No ☒ N/A	Not Applicable.	N/A	Not Applicable.
Does the proposal take into account issues and principles of inclusive and age-friendly design?	☒ Yes ☐ No ☐ N/A	The Equality Act (2010) was considered as part of the design; however the tenant will be responsible for the final fitout works prior to occupation.	☐ Positive ☐ Negative ☐ Neutral ☐ Uncertain	No further actions.

Minimising the use of resources

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal make best use of existing land?	☒ Yes ☐ No ☐ N/A	The Proposed Development makes efficient use of existing land. The development has 7 floors in comparison with the brownfield status of the site previously. The current proposal for the Mobility Hub seeks to future-proof the surrounding development area by reducing provision of private residential car parking within nearby forthcoming developments. This will improve space efficiency freeing up scope for more homes, active frontages and outdoor space as outlined within the updated NDF Design drawings. The use of land also supports centralised deliveries, sustainable travel mode options and health conscious transport opportunities – each of which contribute toward a good use of land, The use of the land will improve as the transition to EV cars is made and the volume of commuter and visitor spaces are also reduced over time.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	Clarify measures taken for transition to sustainable and healthier travel modes.
Does the proposal encourage recycling, including building materials?	☒ Yes ☐ No ☐ N/A	Construction impact A site waste management system has been made in line with 'Site Waste Management Plan Regulations 2008'. The Construction Management Plan developed by the contractor will further develop recycling efforts. The recycling strategy for construction and operation has been aligned with the Draft Manchester Zero carbon framework (2020-2038) as Manchester aims to become Zero Carbon by 2038. This involving materials and waste becoming part of a new circular economy. The development will seek to minimise the use of primary resources and materials and to minimise the generation of waste during construction works. With specific targets from Manchester life, such as a 98% target rate for the percentage of waste removed from site that has been. Where feasible, the contractor will incorporate secondary and recycled materials with low embodied impacts. NB. Concrete, used as building material, has been identified as being recyclable for use in aggregate in the future. Operational impact There are two main refuse stores within the development based on the commercial/café and delivery hub staff mess. 50% of bins will be dedicated to recycling with flexibility to increase as recycling rates increase. Regarding operational waste, sufficient space for the segregation, storage and collection of recyclables has been provided. The space provided complies with local policies and regulations. Refer to waste management strategy.	☐ Positive ☐ Negative ☒ Neutral ☐ Uncertain	Further information regarding compliance expected of contractors during construction.

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal incorporate sustainable design and construction techniques?	☒ Yes ☐ No ☐ N/A	Operational impact The design followed the Lean, Clean and Green Energy Hierarchy throughout. Materials have been chosen that are long-lasting and durable to minimise the need for replacement. For example: • Hard wearing floor finishes • sustainable, durable materials for the external envelope. • Material efficient structure using an efficient grid with column running the full height of the floors. In addition, 25% of spaces will have infrastructure for EV chargers with electrical design infrastructure to adapt and install 100% EV charging spaces.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	A sustainability strategy document will be developed for inclusion in the contract documents for the main contractor. This will set targets on sustainable construction best practice, drawing on BREEAM, WELL and other latest industry guidance

Climate change

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
Does the proposal incorporate renewable energy?	☒ Yes ☐ No ☐ N/A	The development includes roof mounted PV to generate electricity for use in the building to reduce the energy use from the grid. This will provide up to 40% of the estimated annual car park requirements and the landlord operational energy will be from the roof mounted PVs. During summer months the renewable energy potentially generated on site will be much more than daytime demand from the car park / landlord users. In addition, 25% of spaces will have infrastructure for EV chargers with electrical design infrastructure to adapt and install 100% EV charging spaces. The fully electric strategy takes advantage of continual grid decarbonisation.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	Install battery to increase climate resilience. Finalising PV vs grid energy ratio, if any based on above (potential for renewable energy grid supply).
Does the proposal ensure that buildings and public spaces are designed to respond to winter and summer temperatures, for example ventilation, shading and landscaping?	☒ Yes ☐ No ☐ N/A	Natural ventilation openings will be provided to maintain occupancy comfort and minimise operation of HVAC systems where possible. The car park floors are naturally ventilated with adequate openings to encourage air movement. The occupied spaces on the ground floor of the building is mechanically ventilated using heat recovery (MVHR) for providing ventilation. The systems are inherently resilient to cope with rising external temperatures due to climate change.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	Reference should be made to the Energy Statement for details of how the proposed natural ventilation will reduce its vulnerability to Climate Change impacts and

Assessment Criteria	Relevant?	Details and Evidence	Potential Health Impact	Further Action or Mitigation Recommended
		In addition to the MVHR, the airtight fabric also maximises heat retention in the winter.		how the overheating risk projected will be prevented. Potential for shading in summer on south facing facades
Does the proposal maintain or enhance biodiversity?	☒ Yes ☐ No ☐ N/A	The site, previously a brownfield site, has been deemed to have very limited ecological value or importance. The development proposals would not result in any net loss in biodiversity. However, there is opportunity to enhance the site by implementing tree planting in the landscape proposal. With the implementation of appropriate mitigation and compensation, it is expected that the development proposals within the site would be in conformance with Local and National Planning Policy in relation to protected/notable species, habitats and sites. The GM Biodiversity Action Plan (2009) lists Black Redstart birds and all UK bat species as relevant species to the site. Habitat loss due to potential for birds to nest within the tree present on the site will be compensated through the provision of new nest box features and bat surveyor locations. In addition, the green wall integrated into the building façade will provide habitats for local species.	☐ Positive ☐ Negative ☐ Neutral ☒ Uncertain	Investigate opportunities to improve the wider ecological environment through identifying specific local biodiversity needs and tree planting and avoiding unintended negative effects.
Does the proposal incorporate sustainable urban drainage techniques?	☒ Yes ☐ No ☐ N/A	The site is located entirely within Flood Zone 1, according to the national flood map produced by the Environment Agency (EA), which is classified as having a low risk of fluvial flooding. The strategy proposes onsite below ground attenuation of surface water run-off to achieve a restricted maximum flow discharge rate of 5 l/s for storm events. The Hub has an attenuating tank located below the external paved area to the west of the structure. Due to the low risk of flooding and feasibility, no additional nature-based SUD solutions have been used, although the green walls on the building façade will contribute to the reduction of run-off surface water. The strategy has been developed within a 1 in 100 year storm with 40% increase for climate change scenario.	☒ Positive ☐ Negative ☐ Neutral ☐ Uncertain	Further information regarding extent of benefit of green walls.

Appendix B: UrHIA screening tool

Buro Happold
Buro Happold Limited
17 Newman Street
London
W1T 1PD
UK

T: +44 (0)207 927 9700
F: +44 (0)870 787 4145