

HEALTH IMPACT ASSESSMENT MILTON KEYNES EAST MARCH 2021



Milton Keynes East Health Impact Assessment

Hybrid Planning Application

St James Group Limited

March 2021

LICHFIELDS

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1.0 Introduction

- 1.1 This Health Impact Assessment (“HIA”) has been prepared by Lichfields on behalf of St James Group Limited (“the applicant” and/or “St James”). This HIA is a standalone report to accompany a hybrid planning application for a strategic urban extension to Milton Keynes; known as Milton Keynes East (“MKE”). The purpose of the HIA is to identify, assess and present any potential impacts on the health of the existing and future population arising as a result of the proposed development at the site.

Background and Site Context

- 1.2 The Milton Keynes Local Plan (otherwise known as ‘Plan:MK’) was adopted on 20 March 2019 by Milton Keynes Council (‘MKC’). It provides a comprehensive set of strategic land use policies and allocations to meet the Borough’s needs to 2031 while also responding to longer term strategies including MK Futures 2050 and the Oxford–Cambridge (OxCam) Arc. Over the current plan period (i.e. 2016 to 2031) the Council aims to provide land for a minimum of 30,900 homes and around 28,000 to 32,000 additional jobs. This is against a minimum housing target of at least 26,500 homes across the same period.
- 1.3 MKE is allocated for growth within the Plan:MK (2019) and will contribute towards meeting the longer-term housing and employment needs of Milton Keynes. The site is located on the eastern edge of Milton Keynes on the east side of the M1 motorway and south-east of Newport Pagnell. Policy SD12 allocates MKE, setting out the key policy requirements for future development. This includes the delivery of around 5,000 new homes across the whole allocation site, 105 hectares of land for a mix of employment uses and associated social infrastructure. This includes delivering primary and secondary education, community facilities, health, retail and local services.
- 1.4 As policy SD12 notes, the development of MKE is reliant on necessary strategic infrastructure including principally a new bridge of the M1 motorway as well as a primary school being funded to make the site deliverable. In respect of this infrastructure, Milton Keynes Council (in partnership with St James) have successfully secured £94.6 million of funding from Government to bring forward the development. This was announced in March 2020 as part of the Government’s ‘Housing Infrastructure Fund’ (‘HIF’).

Proposed Development

- 1.5 A hybrid planning application has been submitted by St James to Milton Keynes Council (‘MKC’) for the following development:
- 1.6 *“Hybrid planning application encompassing:*

(i) outline element (with all matters reserved) for a large-scale mixed-use urban extension (creating a new community) comprising: residential development; employment including business, general industry and storage/distribution uses; a secondary school and primary schools; a community hub containing a range of commercial and community uses; a new linear park along the River Ouzel corridor; open space and linked amenities; new redways, access roads and associated highways improvements; associated infrastructure works; demolition of existing structures and

(ii) detailed element for strategic highway and multi-modal transport infrastructure, including: new road and redway extensions; a new bridge over the M1 motorway; a new bridge over the River Ouzel; works to the Tongwell Street corridor between Tongwell roundabout and Pineham roundabout including new bridge over the River Ouzel; alignment alterations to A509 and Newport Road; and associated utilities, earthworks and drainage works”.

- 1.7 This application, therefore, seeks permission for the majority of the development allocated across the wider MKE allocation. It also includes in detail the key highways infrastructure being funded by the HIF funding mechanism which unlocks the whole of MKE for development.

Scope of the Assessment

- 1.8 The scope of this HIA has been prepared in accordance with Policy EH6 of Plan:MK (2019) and the draft Health Impact Assessment SPD (August 2020) ('HIA SPD'). The draft HIA SPD was consulted between the 5th August and 30th September 2020; however, at the time of writing the document has yet to be formally adopted. As per policy EH6 relevant applications are not required to prepare an HIA until the SPD has been formally adopted. However, given the scale of the development proposed and the fact the HIA SPD has been consulted upon, it is considered appropriate for an HIA to be prepared for this submission. This has been agreed with MKC. The exact scope and methodology of the HIA is set out in Section 2.0 of this report.

Report Structure

- 1.9 The report is structured as follows:
- **Assessment Methodology (Section 2.0)** sets out the assessment methodology, identifies the impact areas and reviews relevant legislation and policy;
 - **Health Determinants, Pathways and Outcomes (Section 3.0)** identifies links between the proposed development and health using determinants, pathways and impacts, and summarises the outcomes of public consultation;
 - **Health Baseline: Community Profile (Section 4.0)** sets out the demographic, socio-economic and environmental context of the impact areas and identifies specific groups within the population whose health could be more significantly affected than others by the proposed development;
 - **Assessment of Impacts (Section 5.0)** provides an assessment of the health impacts of the proposed development on priority groups identified in section 4.0 and the general population during the construction and operation phases;
 - **Meeting the Ten Active Design Principles (Section 6.0)** sets out how the proposed development (based on the illustrative masterplan) meets the ten Active Design Principles;
 - **Consideration of Cumulative Effects (Section 7.0)** considers the cumulative impact of identified schemes in the Environmental Statement; and
 - **Conclusions (Section 8.0)** draws together key conclusions from the previous sections of the report.

2.0 Assessment Methodology

Definition of Health

- 2.1 The World Health Organisation (WHO) defines health as the “*state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity*”. Many factors combine to affect the health of individuals and communities. In addition to personal characteristics and behaviour (such as genetics and personal choices), the determinants of health include the social, economic and physical environment.

Methodology

- 2.2 There is no single best practice for undertaking health impact assessments in England. Therefore, this assessment uses Lichfields’ own methodology which draws upon a number of respected approaches to undertaking assessments of health impact from development, including Public Health England (PHE) “Health Impact Assessments in Spatial Planning” guide¹ and the London² NHS Healthy Urban Development Unit (HUDU) “Rapid Health Impact Assessment Tool”³. It also draws on the MKC draft Health Impact Assessment SPD (August 2020).
- 2.3 Following a review of relevant policy and literature, this report identifies health determinants, pathways and outcomes linked to the proposed development based on the main components of the scheme and locational factors. A baseline health and wellbeing profile has been prepared for a defined local impact area taking account of demographic, health indicators, socio-economic and environmental information using published data and other sources.
- 2.4 It should be noted that much of the data reported will have been collected prior to the ongoing COVID-19 pandemic. Given the wider health and economic impacts of the pandemic some of the data may no longer reflect entirely the current situation. However, the latest data available has been used and where possible considered in the context of the potential effects of the pandemic.
- 2.5 An assessment is then undertaken of the impacts of the proposed development on health and wellbeing effects on priority groups, existing residents and new residents that could occupy the proposed development within different impact areas.
- 2.6 Figure 2.1 outlines the broad stages in preparing an HIA as per the MKC draft HIA SPD (August 2020). Appendix 2 of the SPD also identifies 11 different categories of possible health impacts as well as the potential negative and positive impacts of a new development on these. These 11 possible impacts on health are:
- 1 Housing quality and design;
 - 2 Access to healthcare services and other social infrastructure;
 - 3 Access to open space and nature;
 - 4 Air quality, noise and neighbourhood amenity;
 - 5 Accessibility and active travel;
 - 6 Crime reduction and community safety;
 - 7 Access to healthy food;

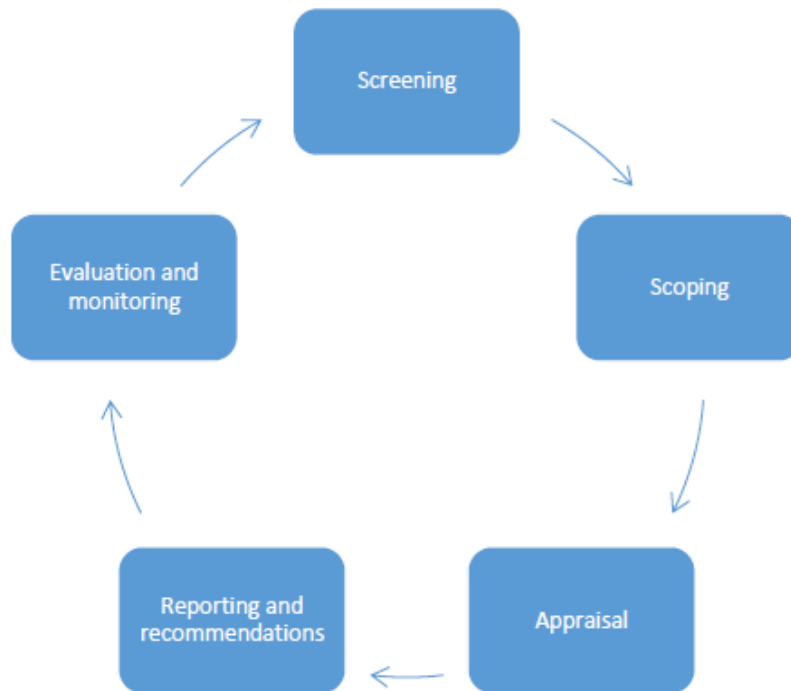
¹ Public Health England (PHE), Health Impact Assessments in Spatial Planning (October 2020)

² Although the scheme is not in London this was one of the initial tools published for undertaking HIAs in planning and is a well-established methodology.

³ London Healthy Urban Development Unit (HUDU), Rapid Health Impact Assessment Tool (2017)

- 8 Access to work and training;
- 9 Social cohesion and lifetime neighbourhoods;
- 10 Minimising the use of resources; and
- 11 Climate change.

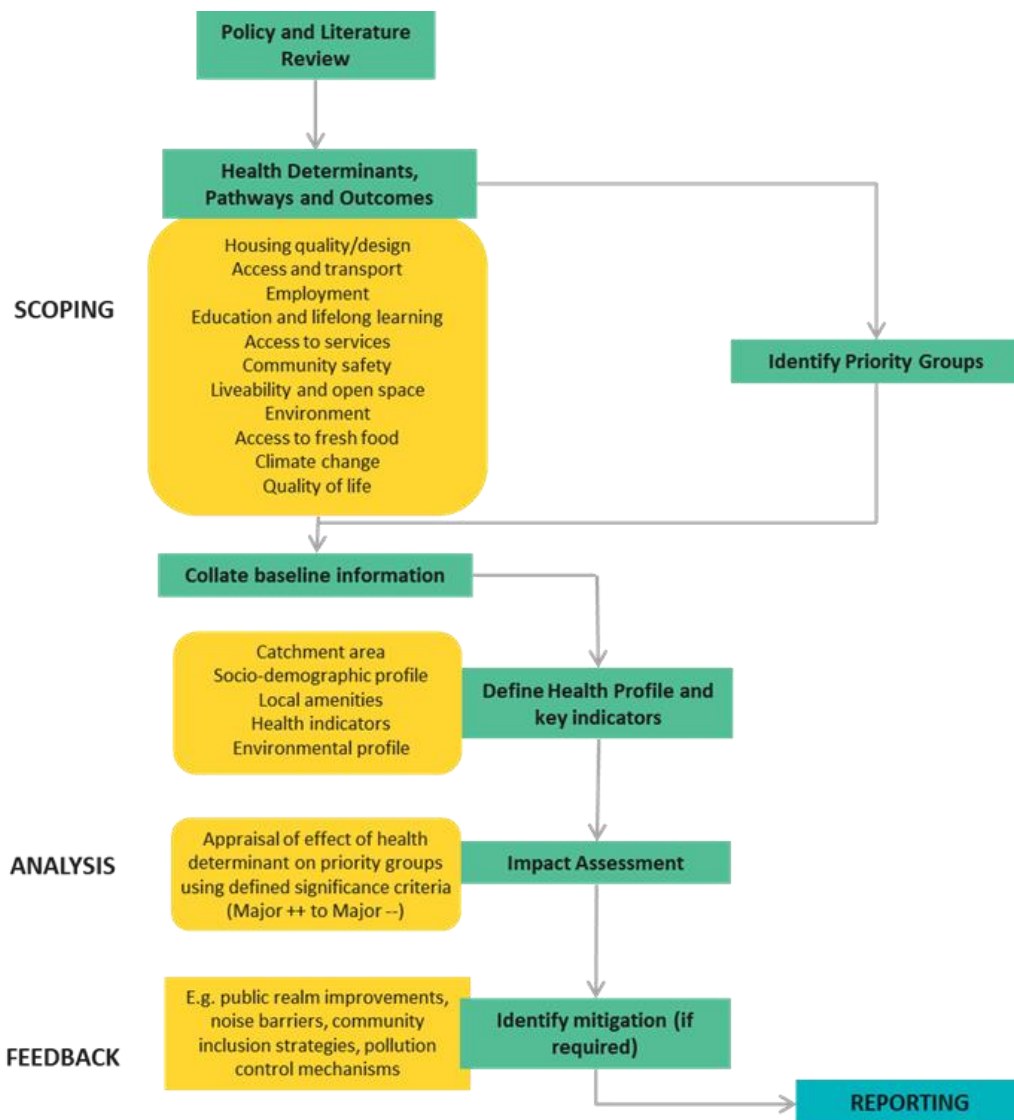
Figure 2.1 Milton Keynes Council: HIA Stages



Source: Figure 2.2, draft Health Impact Assessment SPD (August 2020)

2.7 Based on the Council’s HIA stages and wider examples of best practice, Figure 2.2 below outlines the methodology used to prepare this HIA. All 11 of the health considerations as detailed in Appendix 2 of the draft HIA SPD (August 2020) are considered as part of the ‘Assessment of Impacts’ stage (Section 5.0 of this report).

Figure 2.2 Lichfields Health Impact Assessment Framework



Source: Lichfields

Limitations and assumptions

2.8 The impact assessment (Section 5.0) of this report is split into two stages; construction impacts and operational impacts. A Construction Logistic Plan (‘CLP’) will be prepared to identify how traffic will be managed throughout the construction phase. The future contractors will be required to produce and agree a Construction and Environmental Management Plan (‘CEMP’). Details regarding the scope of both these documents are provided in Chapter L of the Environmental Statement (Mitigation and Monitoring). Both the CLP and CEMP are to be required by condition so have not yet been prepared.

2.9 On this basis and for the purposes of this health impact assessment, the following assumptions have been applied:

- There will be four main phases of development as set out below:

Table 2.1 Illustrative Phasing

Phase	Years	Residential Units	Commercial	Other
Enabling works / Infrastructure	2022-2024	~	~	HIF Funded Infrastructure Eastern Link Road Western Link Road
Phase 1	2025-2030	600	145,750 sqm	1x Primary School (2024) Community Hub Health Hub (2024) River linear park, sports pitches Grid road and primary streets for phase 1
Phase 2	2031-2037	1,100	257,900 sqm	1x Secondary School (2032) 1x Primary School (2038) Grid road and primary streets for Phase 2
Phase 3	2038-2048	2,900	~	1x Primary School (2047)

Source: Lichfields

- There will be rolling road closures and re-routing across the main development area during construction of the initial infrastructure (i.e. to 2024). This will include closures at Tongwell Street, the A509 (through the site and south of Interchange Park), Newport Road, and limited overnight closures of the M1 motorway.
- The site will be appropriately secured, and the equipment will be managed/stored appropriately;
- Waste will be monitored and recorded with material re-used on-site where possible; and
- The movement of Heavy Goods Vehicles (HGVs) will be managed and minimised where possible.

2.10 Should the future construction management/logistics plan deviate from these assumptions significantly, it may be necessary to revisit the health impact assessment for the construction phase as the impacts may be different to those identified in this report.

2.11 Because this application is in part an outline application a number of scheme details are yet to be confirmed. For the purposes of this assessment the indicative masterplan set out in the Design and Access Statement has been used.

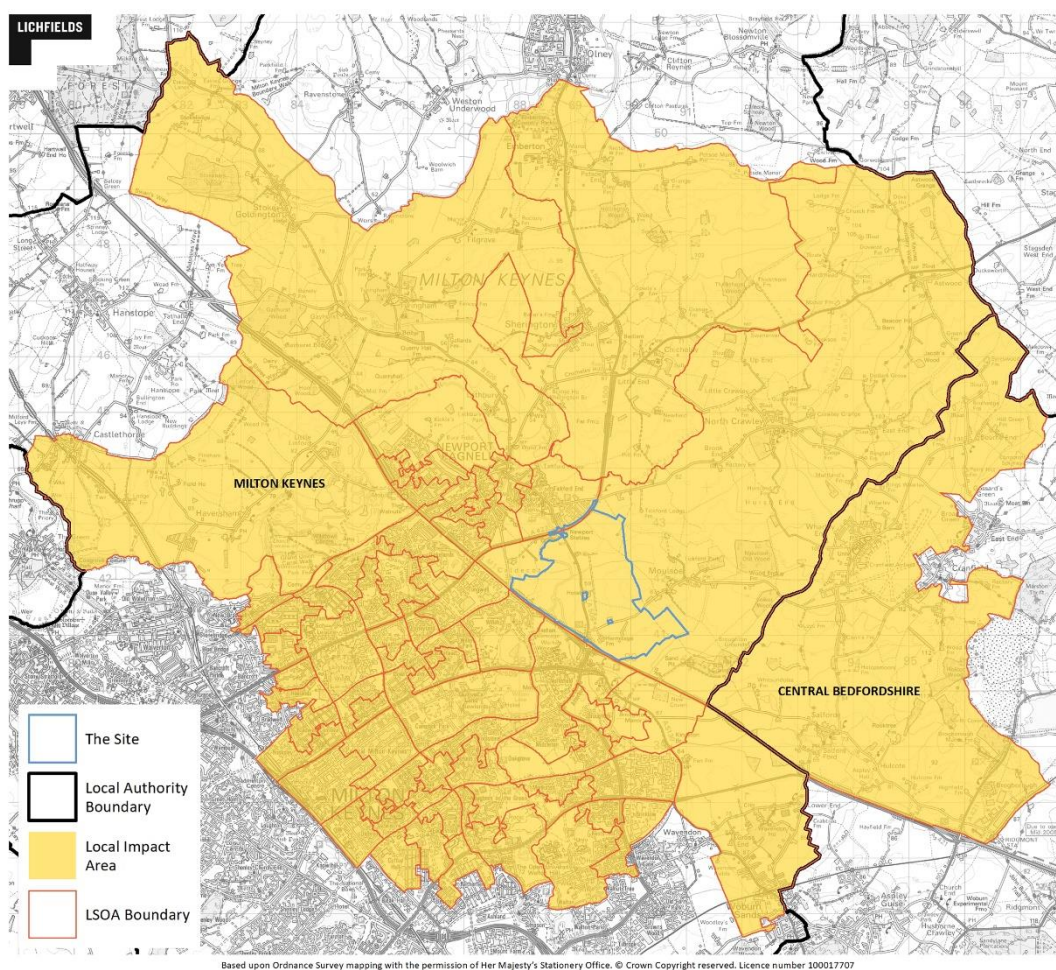
2.12 Finally, it is assumed the proposed measures set out in the accompanying technical assessments are taken forward in the scheme's development.

Local Impact Area

2.13 A local impact area has been defined, as outlined in the Socio-Economics Chapter (Chapter M) of the Environmental Statement (ES), which consists of 65 LSOAs around the site (Figure 2.3)⁴. This area includes much of eastern Milton Keynes including the central area and the Milton Keynes University Hospital as well as Newport Pagnell. It also includes parts of western Central Bedfordshire. The local impact area is used to assess the relevant health and wellbeing impacts.

⁴ Milton Keynes 002B; Milton Keynes 002D; Milton Keynes 002E; Milton Keynes 002F; Milton Keynes 003 (All LSOAs); Milton Keynes 004 (All LSOAs); Milton Keynes 005 (All LSOAs); Milton Keynes 006 (All LSOAs); Milton Keynes 007 (All LSOAs); Milton Keynes 009 (All LSOAs); Milton Keynes 013 (All LSOAs); Milton Keynes 014 (All LSOAs); Milton Keynes 016 (All LSOAs); Milton Keynes 017 (All LSOAs); Milton Keynes 018 (All LSOAs); Milton Keynes 021 (All LSOAs); Milton Keynes 024B; and Central Bedfordshire 007G.

Figure 2.3 Local Impact Area



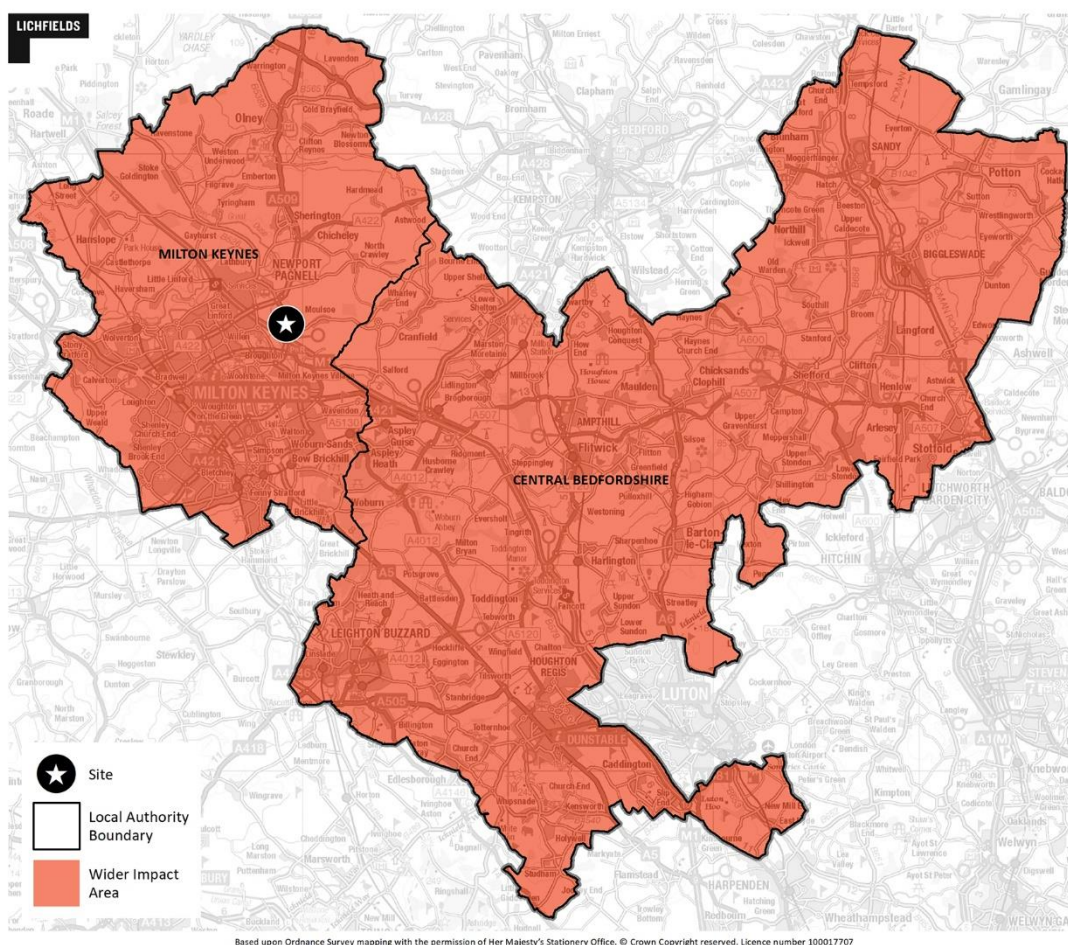
Source: ONS/Lichfields analysis (Note: the site area covers the main area of development and does not correspond with the red-line boundary for the application. This applies to all maps below)

Wider Impact Area

- 2.14 A wider impact area, as outlined in the Socio-Economics Chapter of the ES (Chapter M), comprises both the local authority areas of Milton Keynes and Central Bedfordshire, as shown in Figure 2.4 below.
- 2.15 As noted in the ES, Central Bedfordshire is assessed as part of the wider impact area given its geographical proximity to the proposed development. In reality, there is only limited commuting between Milton Keynes and Central Bedfordshire⁵ with a high level of self-containment in Milton Keynes Borough. Therefore, effects in Central Bedfordshire are likely to be more limited. In addition, Central Bedfordshire is a large authority area and towns in its eastern area (such as Sandy and Biggleswade) or in its southern area (such as Dunstable) are unlikely to experience any significant effect from the MKE development. Therefore, any impacts from the development in Central Bedfordshire are likely to be limited to those in the north western parts of the borough closest to Milton Keynes.

⁵ WU03EW, Census (2011)

Figure 2.4 Wider Impact Area



Source: ONS / Lichfields analysis

Literature and policy review

- 2.16 This section details a literature review of national and local policy and strategies in relation to improving public health.

National policy and strategies

Healthy Lives, Healthy People: Our Strategy for Public Health in England (2010)

- 2.17 This White Paper⁶ outlines the Government's commitment to protecting the population from serious health threats; helping people live longer, healthier and more fulfilling lives; and improving the health of the poorest, fastest. The White Paper recognised the wider factors, including the environment, influencing health, inequality and wellbeing:

⁶ HM Government, (2010); Healthy Lives, Healthy People
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/216096/dh_127424.pdf

“Our health and wellbeing is influenced by a wide range of factors – social, cultural, economic, psychological and environmental ... we are all strongly influenced by the people around us, our families, the communities we live in and social norms. Our social and cognitive development, self-esteem, confidence, personal resilience and wellbeing are affected by a wider range of influences throughout life, such as the environment we live in, the place in which we work and our local community... The quality of the environment around us also affects any community. Pollution, air quality, noise, the availability of green and open spaces, transport, housing, access to good-quality food and social isolation all influence the health and wellbeing of the local population.” (Healthy Lives, Healthy People, Paragraphs 1.13-1.16)

Health and Social Care Act (2012)

- 2.18 The Health and Social Care Act (2012)⁷ states that the Secretary of State’s duty is to promote a comprehensive health service designed to secure the improvement of the physical and mental health of people in England and the prevention, diagnosis and treatment of physical and mental health. This Act outlines the purpose of clinical commissioning as the function for the provision of services in accordance with this Act.

A Green Future: Our 25 Year Plan to Improve the Environment (2018)

- 2.19 The Government’s Environment Plan⁸ sets out its approach to protecting and enhancing the natural environment over the next 25 years. One of the six key areas of action identified was ‘connecting people with the environment to improve health and wellbeing’ which would be achieved by:

- 1 Helping people improve their health and wellbeing by using green spaces;
- 2 Encouraging children to be close to nature, in and out of school;
- 3 Greening our towns and cities; and
- 4 Making 2019 a ‘Year of Action’ for the environment.

Sport England and Public Health England, Active Design: Planning for health and wellbeing through sport and physical activity (2015)

- 2.20 Sport England and Public Health England have produced a ‘Ten Principles of Active Design’⁹ guide and checklist which centres on the role good design can play in contributing positively to making places better for people. The Ten Active Design Principles can be summarised as the following:

- 1 Activity for all;
- 2 Walkable communities;
- 3 Connected walking and cycling routes;
- 4 Co-location of community facilities;
- 5 Network of multifunctional open space;
- 6 High-quality streets and spaces;

⁷ UK Government, Health and Social Care Act, (2012)

⁸ HM Government, (2018): A Green Future: Our 25 Year Plan to Improve the Environment https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

⁹ Sport England and Public Health England, Active Design: Planning for health and wellbeing through sport and physical activity, (2015)

- 7 Appropriate infrastructure;
- 8 Active buildings;
- 9 Management, maintenance, monitoring and evaluation; and
- 10 Activity promotion and local champions.

2.21 As part of the ‘Ten Active Design Principles’ Sport England and Public Health England have produced a checklist which allows users to assess how proposals can be improved to deliver more active and healthier outcomes. This HIA assesses the proposed development against these principles in Section 6.0 of the report.

National Planning Policy Framework¹⁰ (NPPF) (2019)

2.22 The NPPF (2019) set out the national planning framework for plan-making and decision-making in England. Its policies place a reasonable amount of emphasis on creating a healthy society which should be considered by planning policies and decisions. The document focuses on three key aspects of creating a healthy society (Paragraph 91):

- 1 The promotion of social interaction which is achieved through the creation of strong neighbourhood centres, active street frontages and layouts that encourage cycle and pedestrian connections within the neighbourhoods;
- 2 Societies that are safe and accessible achieved through schemes that provide high-quality public space that encourages the usage and reduces the fear of crime; and
- 3 Support healthy societies that address localised health and wellbeing needs through access to healthier food, access to green infrastructure, and layouts that promote active uses such as walking and cycling.

2.23 In addition, the framework recognises the links between access to open space and health:

“Access to a network of high-quality open spaces and opportunities for sport and physical activity is important for the health and well-being of communities.” (NPPF para 96)

Planning Practice Guidance

2.24 The Planning Practice Guidance (PPG) highlights the need to consider the impact of the built and natural environment on health and well-being and to *“undertake positive planning to create environments that support and encourage healthy lifestyles”* (Reference ID: 53-001-20190722).

2.25 The PPG sets out the Government’s vision of a “healthy place”, which includes supporting and promoting healthy behaviours, reducing health inequalities and supporting community engagement and social interaction. It emphasises the importance of meeting the needs of children and young people, the increasingly elderly population, and those with dementia and other sensory or mobility impairments (Reference ID: 53-003-20191101).

2.26 HIAs are recognised as useful tools in the consideration of planning applications where there are expected to be significant impacts (Reference ID:53-005-20190722).

¹⁰ Ministry of Housing, Communities and Local Government (MHCLG), (2019); National Planning Policy Framework https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf

Public Health England: Health Impact Assessment in Spatial Planning (October 2020)

- 2.27 Public Health England’s guide, “Health Impact Assessments in Spatial Planning” (October 2020) describes the health and well-being outcomes that can be influenced or optimised as part of the plan-making and planning application process.
- 2.28 The guide sets out an evidence-based approach for preparing HIAs, which includes establishing the baseline for the project, identifying HIA health outcomes, identifying specific population groups that could be affected, assessing the potential impacts of wider determinants of health as part of the scheme, and identifying recommendations for implementation and monitoring that will support positive health outcomes. It sets out that the extent of assessment within HIAs should be proportionate to the significance of impact of a proposed development. This HIA follows the approach set out in this document.

Wales Health Impact Assessment Support Unit – A Practical Guide

- 2.29 This guide, published by Wales Health Impact Assessment Support Unit (WHIASU)¹¹, is produced with the intention to provide a strategy to improve health and reduce inequalities. This document provides best practice guidance for conducting HIAs and has been highlighted within the Milton Keynes Draft HIA SPD¹².
- 2.30 The document provides succinct guidance on determining health and well-being determinants, placing specific determinants e.g. diet and use of alcohol under six broad headings: lifestyles; social and community influences on health; living/environmental conditions affecting health; economic conditions affecting health; access and quality of services; and macro-economic, environmental and sustainability factors.
- 2.31 The document then outlines potential vulnerable and disadvantaged groups that could be more significantly affected in terms of health than the general population. Example groups include children, young and older people; people on low incomes; single-parent families; black and minority and ethnic groups; and people unable to access services and facilities.

Emerging policy: NPPF and National Model Design Code

- 2.32 The Government are currently consulting on updates to the NPPF¹³ and a new National Model Design Code which closes on the 27th March 2021. The proposed amendments, among wider changes, place a greater emphasis on development supporting wider health outcomes; for example:
- Paragraph 91(b) – proposed amendment to clarify expectations for attractive pedestrian and cycle routes supporting walkable neighbourhoods;
 - Paragraph 96 – proposed amendment to emphasise that access to a network of high-quality open spaces and opportunities for sport/physical activity is important for health and well-being.
 - Chapter 12 – updated references to ‘Building for a Health Life’ (2020). This is a design toolkit for neighbourhoods, streets, homes and public spaces.

¹¹ Wales Health Impact Assessment Support Unit (WHIASU), Health Impact Assessment: A Practical Guide, Available at: https://whiasu.publichealthnetwork.cymru/files/1415/0710/5107/HIA_Tool_Kit_V2_WEB.pdf

¹² Milton Keynes Council (2021) Draft Health Impact Assessment SPD, Appendix 3, p27

¹³ <https://www.gov.uk/government/consultations/national-planning-policy-framework-and-national-model-design-code-consultation-proposals/national-planning-policy-framework-and-national-model-design-code-consultation-proposals#chapter-8-promoting-healthy-and-safe-communities>

- 2.33 The National Design Code will provide detailed guidance on the production of local design codes, guides, and policies to promote successful design. As set out in the online consultation statement, the Government believes *“that design codes are important because they provide a framework for creating healthy, environmentally responsive, sustainable and distinctive places, with a consistent and high-quality standard of design.”*

Local policy and strategies

Plan:MK (2019)

- 2.34 Policy EH6 of Plan:MK requires HIAs to be prepared for certain development. The purpose of this is to consider the positive and negative impacts of development on the health of different groups in the population, in order to enhance the benefits and minimise any risks to health. The policy states:

“All Use Class C2 developments and Use Class C3 residential developments in excess of 50 dwellings will be required to prepare a Health Impact Assessment, which will measure the wider impact on healthy living and the demands that are placed upon the capacity of health services and facilities arising from the development. Further guidance on how this policy will be implemented will be provided in a Supplementary Planning Document, which will be published in due course. The Health Impact Assessment should not be required in advance of the Supplementary Planning Document being adopted.”

Milton Keynes East Strategic Urban Extension Development Framework SPD (March 2020)

- 2.35 The MKE Development Framework Supplementary Planning Document (‘SPD’) (March 2020) sets out the detailed planning framework for assessing future planning applications associated with the MKE development. This is a material consideration for the hybrid application.
- 2.36 The Development Framework sets out the requirement for future health facilities to be incorporated into the development. The framework also sets out key development principles associated with improving the health and wellbeing of future residents. For example, the development is expected to promote active modes of travel, quality placemaking, and new green infrastructure.

Draft Health Impact Assessment SPD (August 2020)

- 2.37 The [Draft Health Impact Assessment HIA](#) (August 2020) provides technical guidance for those preparing HIAs in accordance with Policy EH6 in Plan:MK (2019). Relevant aims of the SPD include:
- To provide information and guidance that can be used to support a Health Impact Assessment; and
 - To promote opportunities for healthier lifestyles, encourage healthier choices and help reduce the demand on the NHS, health professionals, the council and individuals across Milton Keynes.
- 2.38 The three objectives of the SPD are:
- To stimulate and bring about development proposals whose design is supportive of this SPD;

- To help deliver built and natural environments that provide suitable living conditions, encourage good physical and mental health and wellbeing and help prevent people becoming ill;
- To increase the number of Health Impact Assessments in order to maximise the positive health impacts of their proposals and provide mitigation against any potential negative impacts.

2.39 The SPD also highlights the links between planning and health. Health and wellbeing are not only impacted by what health services are on offer but also by the physical and social conditions in the places we live, work, shop, and learn in. The SPD concludes that good planning can play a crucial role in developing healthier communities to improve lifestyle choices. By considering these effects and their distribution, development policies and plans can enhance the potential to influence health and wellbeing, and therefore reduce health inequalities.

2.40 Finally, Appendix 1 of the SPD sets out findings on the wider determinants of health in Milton Keynes. This includes noting a number of risk factors including:

- 5.8% of deaths in adults over 30 are estimated to be due to poor air quality;
- The numbers of people in fuel poverty is lower than both national and regional numbers, but are increasing;
- Nearly two thirds of adults are overweight and obese; and
- The number of adults using outdoor space for exercise and health reasons has fallen.

Milton Keynes Joint Strategic Needs Assessment 2016/17

2.41 The [Joint Strategic Needs Assessment](#) for Milton Keynes sets out evidence regarding the health and wellbeing of people in the Borough. This evidence informs its other health and wellbeing strategies. The JSNA is covered in a number of separate pieces of evidence by age group (i.e. children and adult) and by factors associated with place; for example: air quality, employment, transport, and poverty.

Lifelong Wellbeing - The Joint Health and Wellbeing Strategy for Milton Keynes 2018-2028 (2020)

2.42 This [report](#) sets out the priorities which will enable families and communities to lead fulfilling lives from birth to older age. There are four parts to this Strategy:

- 1 **Starting Well:** The period from conception to the age of two years old play an influential role on overall childhood health and lifelong wellbeing. The strategy sets out seven priorities to improve life from the very start. This includes stopping abuse, helping children with their mental health, and supporting the wellbeing of pregnant women;
- 2 **Living well:** How and where we live, work and play can have a strong impact on our health and wellbeing. Income, employment, education, housing quality and crime play a role in physical and mental health. Eight priorities are set out including increasing healthy living and reducing smoking/alcohol consumption, as well as improving the detection and management of long-term conditions, and improving support and opportunities for carers.
- 3 **Ageing well:** The Strategy identifies the need to adapt as we will need to care to growing numbers of older people. Of this group, nearly a third live alone and social isolation is a contributing factor to over 60% of preventable illnesses. Seven priorities are set out including helping this group to live at home with adaptations where possible, increasing earlier diagnosis of dementia, and reduce social isolation.

Physical Activity Framework for MK 2015 – 2020 (2015)

- 2.43 This [report](#) provides an overarching framework that encompasses all elements of physical activity. It sets out a clear coordinated direction of travel for expanding physical activity in Milton Keynes in line with the Health and Wellbeing Board's priorities. The purpose of the framework is to provide clear guidance to strategic leaders, policymakers, commissioners and providers of physical activity. The report also highlights the key priority groups and sets out various approaches that need to be adopted to increase activity levels across Milton Keynes population.
- 2.44 The framework has three "Life Course" priorities to encourage children, young people and adults to be more active:
- 1 **Start moving:** Supporting all children and young people of all abilities to have an active life.
 - 2 **Moving everyday:** Encouraging all adults to build physical activity into their everyday lives.
 - 3 **Stay moving:** Supporting older adults to add years to live and active life to years by encouraging them to build activity into their daily routine.

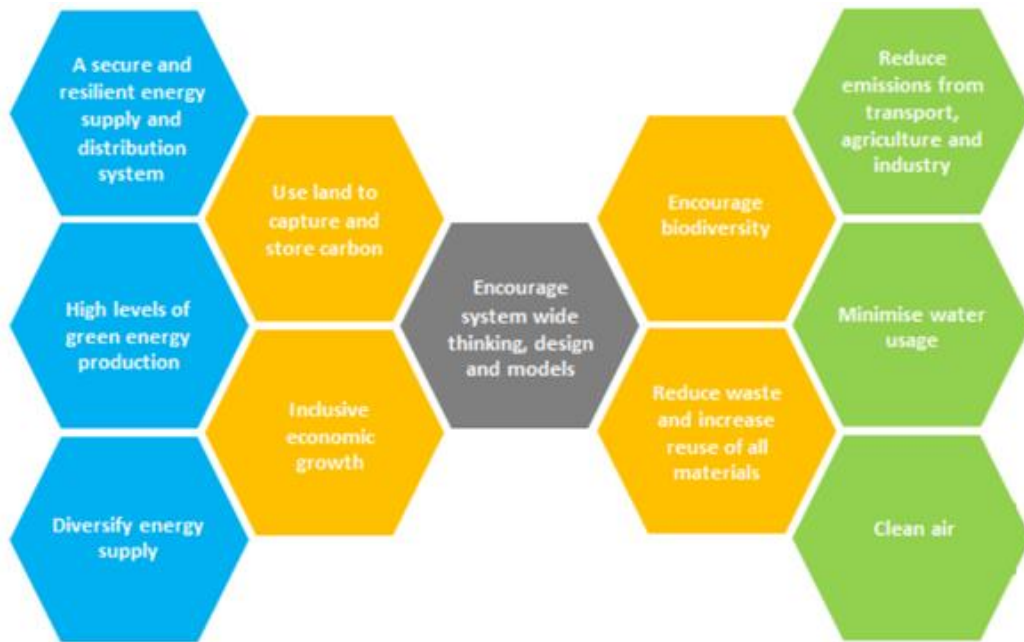
Milton Keynes Sport and Active Communities Strategy 2014-2023

- 2.45 This [strategy](#) identifies the role physical activity has in impacting on an individual's mental and physical health positively. The strategy has a clear role in supporting the objectives of the Joint Health and Wellbeing Strategy in encouraging children and adults to become more active. It sets out a long-term vision to build active, healthy, safe, and successful communities. This will be achieved partly through increase sport and active recreation participation. To achieve this, three strategy priorities are set out:
- 1 **Enhance identity:** *"we will enable the infrastructure that creates a sense of pride and place"*
 - 2 **Increase opportunity:** *"we will work with others to create activities that raise participation"*
 - 3 **Actively celebrate:** *"we will create experiences, recognise achievement, and share stories of success"*

Milton Keynes Council Sustainability Strategy 2019-2050 (2018)

- 2.46 The [MKC Sustainability Strategy](#) sets out a number of aims including:
- Using less carbon than we are able to capture;
 - A more sustainably designed city;
 - A transition to low-cost renewable energy source; and
 - Cleaner air.
- 2.47 The Strategy sets out what the Council has done and will do in respect of each of its aims. For example, with regards to 'green energy' the Council aims for all new developments to include green energy generation schemes; to driver lower and more efficient energy use; and use energy efficient and carbon passive technology.
- 2.48 The objective of this strategy is to set out MKCs intentions to be the 'Greenest City in the World' and set a framework for how they intend to achieve this. The priorities for action by 2050 are set out below in Figure 2.5.

Figure 2.5 MKC Sustainability Strategy Priorities



Source: MKC Sustainability Strategy 2019-2050 (2018), p3

3.0 Health Determinants, Pathways and Outcomes

3.1 The HIA identifies links between new development and health using determinants, pathways and impacts. This analysis informs the identification of potential health outcomes of the proposed development during the construction and operational phases of the development.

Health Determinants

3.2 Health determinants are factors that can influence health outcomes. Factors may be personal, social, cultural, economic and environmental. They include living and working conditions such as housing, employment, the environment, transport, education and access to services. For this assessment, the London NHS HUDU ‘Rapid Health Impact Assessment Tool’ is used to identify determinants (which are the same as those set out in the draft MKC HIA SPD, Appendix 2):

- 1 Housing design and affordability;
- 2 Access to health and social care services and other social infrastructure;
- 3 Access to open space and nature;
- 4 Air quality, noise and neighbourhood amenity;
- 5 Accessibility and active travel;
- 6 Crime reduction and community safety;
- 7 Access to healthy food;
- 8 Access to work and training;
- 9 Social cohesion and inclusive design;
- 10 Minimising the use of resources; and
- 11 Climate change.

Health Pathways

3.3 Health pathways are the factors that lead to a change in a determinant which affects health outcomes.

Health Outcomes

3.4 Health outcomes reflect the range of medical and general well-being factors of a population. For this assessment, health impacts are considered as potential changes in health outcomes arising from the proposed development. Table 3.1 below considers the relationship between health determinants, pathways and outcomes.

Table 3.1 Health Determinants, Pathways and Outcomes

Determinant	Pathway	Outcomes
Housing quality and design: High quality, well designed, accessible housing can improve quality of life, health and well-being.	New housing development can increase the supply of different housing tenures (e.g. PRS, affordable housing) and different sized dwellings to improve access to housing for different social/priority groups. Providing adaptable homes allows residents to stay in their homes despite changing	The provision of mixed and socially inclusive housing developments that meet varying requirements can have a positive impact on physical and mental health and reduce incidents of accidents of those living in overcrowded, unsuitable or temporary accommodation.

Determinant	Pathway	Outcomes
	requirements. The quality of design including energy efficiency, internal sound insulation, daylight and provision of private space can also influence health and well-being.	
Access to healthcare services and other social infrastructure: Access to healthcare, social and community infrastructure promotes positive health and well-being and social inclusion.	New housing may generate additional demand for healthcare and other social infrastructure. Ensuring access to a range of healthcare services and social infrastructure for new residents. Access may be temporarily reduced during construction.	Placing additional demand on existing facilities could reduce accessibility/availability of provision leading to negative health impacts if there is not sufficient capacity. Easy access to healthcare facilities can have positive health impacts. For older people, poor access to local services could limit opportunities for social interaction and lead to isolation and depression.
Access to open space and nature: Access to good quality open space and nature promotes physical activity, fitness, positive mental well-being and healthy childhood development.	Mixed-use developments can incorporate open space for use by residents and possibly the general public. Design can improve access to existing open-space and nature by providing safe pedestrian and cycle routes to these spaces and thereby increase usage. Construction activities can cause temporary disruptions to access.	An increase in access and interaction with open-space and nature can lead to an improvement in mental health, well-being and stress reduction. It can lead to an improvement in physical fitness which in turn can help counteract obesity. It can also help reduce incidences of cancer, diabetes and cardiovascular and respiratory problems.
Air quality, noise and neighbourhood amenity: These factors can adversely affect health and well-being and life expectancy.	Construction activities can have short-term negative impacts on air quality and can increase noise and vibration levels particularly during demolition. There can be dust from site works. There can be increased levels of emissions associated with plant and construction traffic. The design and location of new development can impact on demand for car-borne travel, in turn affecting local air quality and noise. The design and layout of new buildings can determine the levels of insulation from noise and other amenity factors which affect the wellbeing of new residents and neighbours.	Poor air quality can reduce life expectancy by 7-8 months as a result of long-term exposure to small particles. Increases in air pollution can lead to increased cardiovascular and respiratory problems and mortality, especially amongst individuals with existing respiratory problems and chronic illnesses such as asthma and chronic obstructive pulmonary disease. Fumes from diesel engines typically used in construction vehicles can also lead to higher incidences of cancer.
Accessibility and active travel: Walking and cycling are active forms of travel. Design measures that support active travel is a determining factor in increasing up-take. High quality, accessible new routes are important.	There can be disruption and reduced access to existing transport modes and routes from route closures and diversions during construction. Completed development can facilitate active travel options by improving infrastructure.	Limited and disrupted accessibility may reduce access to amenities and services, adversely affecting health and well-being. Disruption to pedestrian routes may result in a temporary increase in local traffic and congestion and higher risks of accidents. Increased levels of active travel and discouraging car use can have positive health impacts and act to reduce obesity.
Crime reduction and community safety: Well-designed spaces will reduce fear and incidences of crime. The construction phase can impact on community safety	Well-designed public spaces and other crime prevention strategies can reduce crime and enhance community safety through natural surveillance, increased pedestrian flows and CCTV.	Fear of crime can lead to stress and anxiety. People who experience fear (more likely to be children, women, elderly and people with disabilities) are less likely to choose active travel options and use public spaces.

Determinant	Pathway	Outcomes
particularly pedestrians and cyclists.		
Access to healthy food: Healthy eating is linked to better health therefore access to healthy food is important.	Access to a supply of local food, allotments as well as food stores and markets. An over-concentration of hot food takeaways can restrict healthy eating choices.	Easy access to healthy food can improve general health and well-being and assist in reducing chronic diseases related to obesity, particularly among children.
Access to work and training: The construction and operational phases of mixed-use developments generate and support new employment opportunities. Employment is a positive factor for health providing financial security and contributing to self-esteem.	New employment opportunities can be generated by the construction phase as well as the operational phase for various social groups. Displacement of existing jobs can also have a negative impact on health.	People in employment experience better health. Employment is associated with financial security, social networks and status which are linked to better health, particularly mental health. Employment also reduces health inequalities experienced by low-income families.
Social cohesion and lifetime neighbourhoods: There is a relationship between positive social capital and health. New development should provide opportunities for social interaction and community cohesion.	Well-designed communal spaces including public realm and shared amenity spaces provide opportunities for social interaction which assists in the creation of active neighbourhoods. Mixed-use developments in town centres and provision of employment can widen social options for people. Design can connect the scheme with existing communities in the locality. Creation of lifetime neighbourhoods.	Social interaction can have positive health impacts particularly mental well-being for priority groups like children, older people and people with disabilities.
Minimising the use of resources: Reducing or minimising waste and encouraging recycling can improve human health.	Making the best use of existing land, incorporating recycling facilities, utilising sustainable design and construction and waste management could minimise the use of resources.	If waste is not managed correctly this can have negative health impacts, particularly for priority groups. Encouraging recycling can improve human health directly and indirectly by minimising environmental impacts.
Climate change: Greenhouse gases can contribute to climate change.	The construction phase can increase vehicle movements from construction vehicles. Embodied energy and carbon in construction materials can lead to an increase in fossil fuel use leading to an increase in greenhouse gas emissions. Sustainable design measures can reduce impacts on the environment. Reducing car usage should help decrease greenhouse gas emissions.	Climate change is an immediate and long-term threat to health and quality of life because of poorer air quality, prolonged heat waves and extremes of weather, such as more frequent storms, flooding, and drought events leading to, for example, increased fatalities, injury, infectious diseases, heat-related deaths and incidences of skin cancer. In addition, the risks associated with energy and food security are likely to increase. Reduction in greenhouse gas emissions will also have a positive impact on health.

Source: Lichfields

Public Consultation Process

- 3.5 The applicant has undertaken extensive pre-application engagement with MKC ahead of submission starting in May 2020. The initial consultation process is documented in the supporting Statement of Community Involvement (“SCI”).
- 3.6 Due to COVID-19, the proposed pre-application submission consultation strategy was significantly altered during the application’s preparation to ensure that as many people as

possible could view and comment on the proposals whilst complying with necessary guidance for public meetings, social distancing and essential travel. As such, engagement has almost entirely been undertaken through channels not involving in-person contact.

- 3.7 The proposed development of MKE as a whole has however been widely consulted with the local stakeholders. In 2014, a topic paper was published by MKC as part of the initial consultation on the then emerging 'Plan:MK'. [‘The Way Forward Strategy Topic Paper’](#) (September 2014) identified MKE as a ‘potential site within the MKC boundary’ for development (figure 1, p 24). The MKE allocation was carried forward through the local plan process and formally adopted in Plan:MK (2019). A site-specific development framework SPD has since been adopted in March 2020 after a further period of consultation. Section 1.5 of the development framework sets out how the community was engaged during the preparation of the SPD. This included two workshops and a further meeting held by a local stakeholder group set up by the Council. A formal consultation was also carried out between August and October 2019. Therefore, the development of MKE has been consulted upon, in various capacities, for nearly six and a half years ahead of the hybrid application.
- 3.8 Since the adoption of the Development Framework (2020), St James has committed to a significant pre-application engagement programme. First, extensive pre-application engagement has been undertaken to refine the design and agree in the parameters of the application’s submission. There have been various meetings with local Councillors, parish Councillors, and key stakeholders (including the MKC Development Review Forum). A website and introductory film are online, and a brochure has been sent to local residents.
- 3.9 The objectives of the public consultation programme have been to maximise awareness of the submission and to engage with as many local people, stakeholders and groups as possible during a period of significant national restrictions. Of course, most of the development remains in outline and is mainly seeking permission to formalise what the adopted framework SPD (2020) requires into a formal planning permission alongside the required infrastructure for which detailed permission is sought.
- 3.10 The applicant remains committed to engaging with the local community throughout the applications determination and through future reserved matters. The project team will also work closely with the local community throughout the construction period to ensure they are kept informed with the development’s progress and how it may affect them. Local stakeholders will therefore continue to be consulted with and will have further opportunities to engage on the detailed design of the scheme.

4.0 Health Baseline: Community Profile

4.1 This section sets out the demographic, socio-economic, health and environmental context of the neighbourhood and wider impact areas. Indicators are also benchmarked against national averages where available and applicable.

Demographic Profile

Population

4.2 The resident population of the local impact area in 2019 totalled 119,600 people. This accounts for 21.4% of the wider impact area's total population in 2019; a slight increase proportionally compared to the 21.2% in 2011 (the time of the last Census). This high proportion of the wider population reflects the local impact area including large parts of eastern Milton Keynes and Newport Pagnell. The resident population of the wider impact area in 2019 was 558,105 people, having increased by 10.4% since 2011.

Age

4.3 Table 4.1 below provides a breakdown of the population by age-group. It shows that c.27,300 residents in the neighbourhood area were aged 0-15, equating to 22.8% of the total population. This is more, as a proportion, than the wider impact area where there were 21.5% aged 0-15 and the national equivalent of 19.2%. The proportion of residents aged 65 and over in the local impact area is 13.3%. This is below the wider impact areas equivalent of 16.1% and well below the national comparator (18.2%). While older residents make up a smaller proportion of the population at present, the Milton Keynes Joint Health and Wellbeing Strategy 2018 - 2028 notes that the number of over 65's is expected to increase by 86% from 2017 to 2030 with the number of people living with dementia also increasing.

Table 4.1 Population Age Structure (2019)

Age Group (yrs)	Local Impact Area	Wider Impact Area	England
0-15	22.8%	21.5%	19.2%
16-64	63.9%	62.4%	62.6%
65 and over	13.3%	16.1%	18.2%

Source: ONS (2019) / Lichfields analysis

Gender

4.4 In 2019, there were slightly more males than females in the local impact area (50.2% and 49.8%, respectively). This is in contrast to both the wider impact area and the national split where there are slightly more females than males as shown in Table 4.2.

Table 4.2 Gender split (2019)

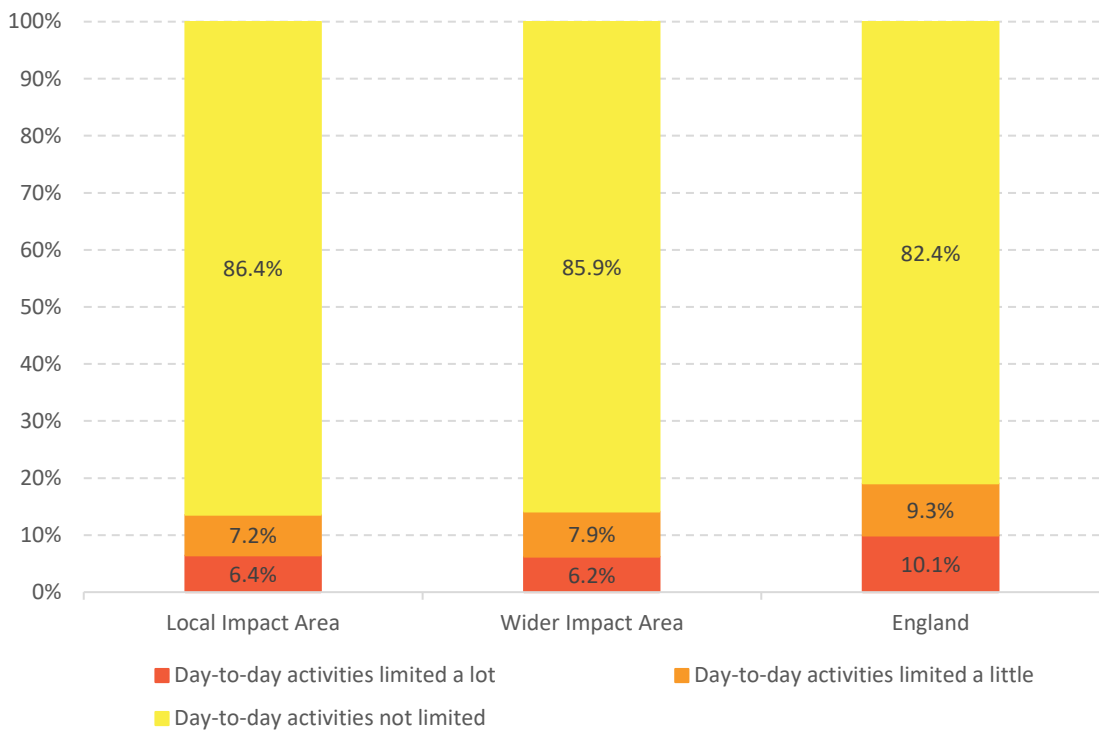
Gender	Local Impact Area	Wider Impact Area	England
Male	50.2%	49.4%	49.4%
Female	49.8%	50.6%	50.6%

Source: ONS (2019) / Lichfields analysis

Disability

- 4.5 As shown in Figure 4.1, Census 2011¹⁴ data indicates that 13.6% of the local impact area residents had a long-term health problem or disability that limits (to a degree) their day-to-day activities, which was a slightly lower proportion than the wider impact area and England’s equivalents (14.1% and 19.4%, respectively).

Figure 4.1 Proportion of Population with Long-Term Health Problem or Disability (2011)



Source: ONS Census (2011) / Lichfields analysis

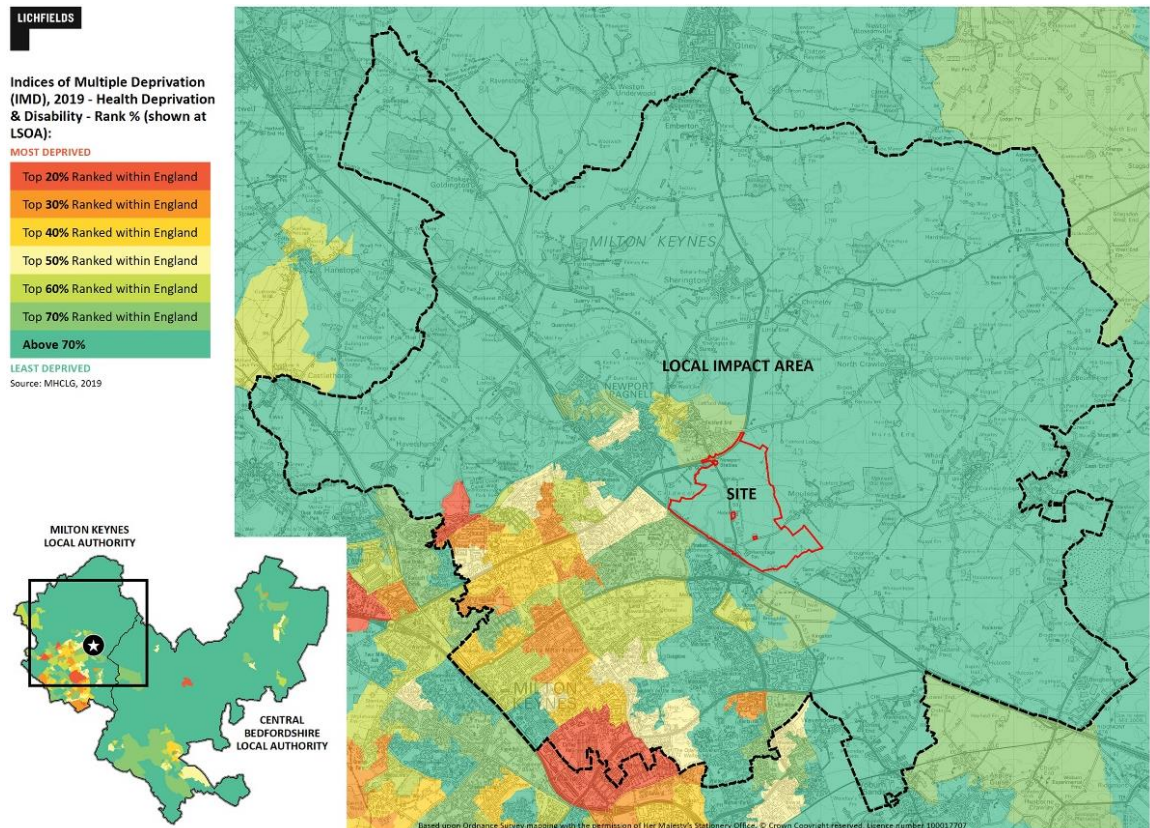
Health Deprivation

- 4.6 The Indices of Multiple Deprivation (“IMD”) (2019)¹⁵ measures relative levels of deprivation at lower super output areas (LSOA) across a number of domains of deprivation. Figure 4.2, overleaf, illustrates health and disability deprivation across the neighbourhood and wider impacts area. The map indicates that the majority of LSOAs in the local impact area are in some of the least deprived areas by this indicator; including much of the more rural areas. However, there are some areas in the Milton Keynes urban area that are ranked in to top 40%, 30% and 20% most deprived neighbourhoods across the country. The wider impact area follows the urban/rural split with most rural areas falling within the least deprived LSOAs while in the urban areas there are pockets of high deprivation.

¹⁴ (QS303EW), ONS, (2011) Census

¹⁵ MHCLG, (2019); Indices of Multiple Deprivation

Figure 4.2 IMD Health and Disability Sub-domain



Source: MHCLG IMD (2019) / Lichfields analysis

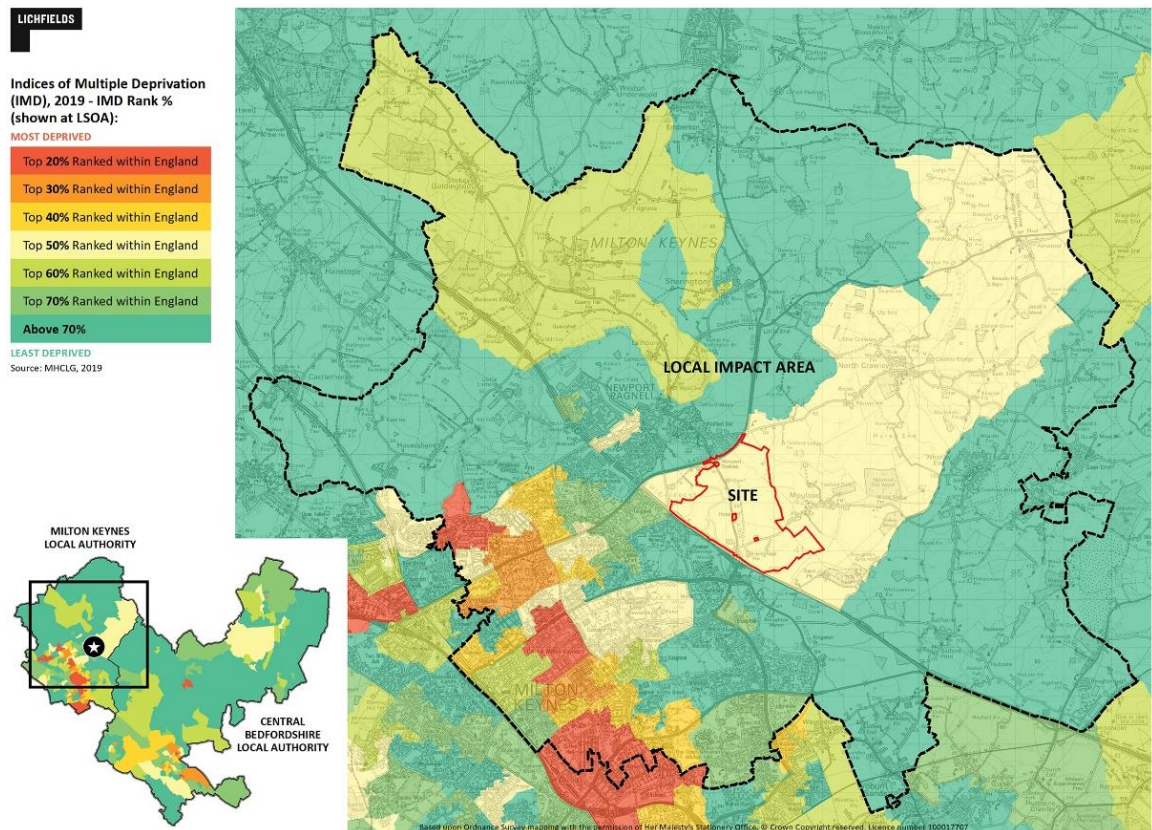
Socio-Economic Profile

Deprivation

- 4.7 The IMD (2019) ranks Milton Keynes Borough as the 172nd most deprived of the 317 local authorities in England¹⁶ (where rank 1 is the most deprived and 317 is the least deprived). Milton Keynes is therefore comparatively more deprived than neighbouring Central Bedfordshire (254th most deprived) by this measure.
- 4.8 Figure 4.3 overleaf shows the level of variation in terms of overall IMD ranking at LSOA level. The site itself is within the LSOA ranked in the top 50% least deprived areas with the surrounding LSOAs ranked in the top 60%, 70%, and 70%+ deprived in the country. There are however pockets of LSOAs in the top 20% most deprived in urban Milton Keynes. In the wider impact area, most areas are less deprived by this overall IMD measure.

¹⁶ MHCLG, (2019); Indices of Multiple Deprivation

Figure 4.3 IMD Overall



Source: MHCLG IMD (2019) / Lichfields Analysis

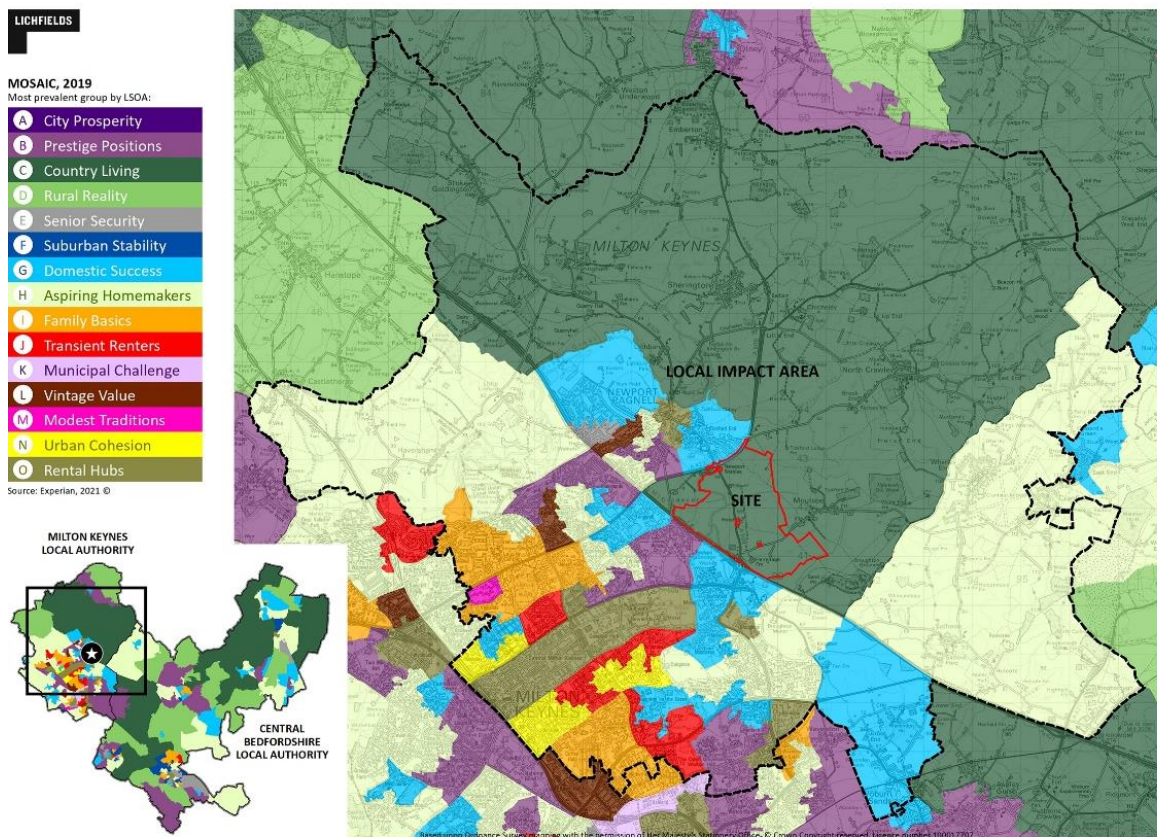
Socio-economic groups

- 4.9 The analysis of Experian Mosaic data correlates with the IMD data in terms of the spatial contrasts between the types of socio-economic groups that occupy the south western parts of the local impact area. Figure 4.4 presents the most prevalent group per LSOA.
- 4.10 The analysis of the Mosaic data¹⁷ highlights the current rural character of the site (in its current context) and much of the wider area with being classified as 'Country Living'. The most prevalent socio-economic groups within the wider impact area include Group H: Aspiring Homemakers (27%) and Group G: Domestic Success (14%).
- 4.11 In terms of the local impact area, the most prevalent groups are Group H: Aspiring Homemakers (22%); Group G: Domestic Success (17%); Group I: Family Basics (15%); Group B: Prestige Positions (10%); and Group N: Urban Cohesion (10%). These groups are described as:
- **Group H: Aspiring Homemakers** are younger households who have, often, only recently set up home. They usually own their homes in private suburbs, which they have chosen to fit their budget.
 - **Group G: Domestic Success** are high-earning families who live affluent lifestyles in upmarket homes situated in sought after residential neighbourhoods. Their busy lives revolve around their children and successful careers in higher managerial and professional roles.

¹⁷ Experian (2020); Mosaic data

- **Group I: Family Basics** are families with children who have limited budgets and can struggle to make ends meet. Their homes are low cost and are often found in areas with fewer employment options.
- **Group B: Prestige Positions** are affluent married couples whose successful careers have afforded them financial security and a spacious home in a prestigious and established residential area. While some are mature empty-nesters or elderly retired couples, others are still supporting their teenage or older children.
- **Group N: Urban Cohesion** are settled extended families and older people who live in multi-cultural city suburbs. Most have bought their own homes and have been settled in these neighbourhoods for many years, enjoying the sense of community they feel there.
- **Group C: Country Living** are well-off homeowners who live in the countryside often beyond easy commuting reach of major towns and cities. Some people are landowners or farmers, others run small businesses from home, some are retired, and others commute distances to professional jobs.

Figure 4.4 Mosaic Classification: Most Prevalent Group per LSOA - Neighbourhood and Wider Impact Area



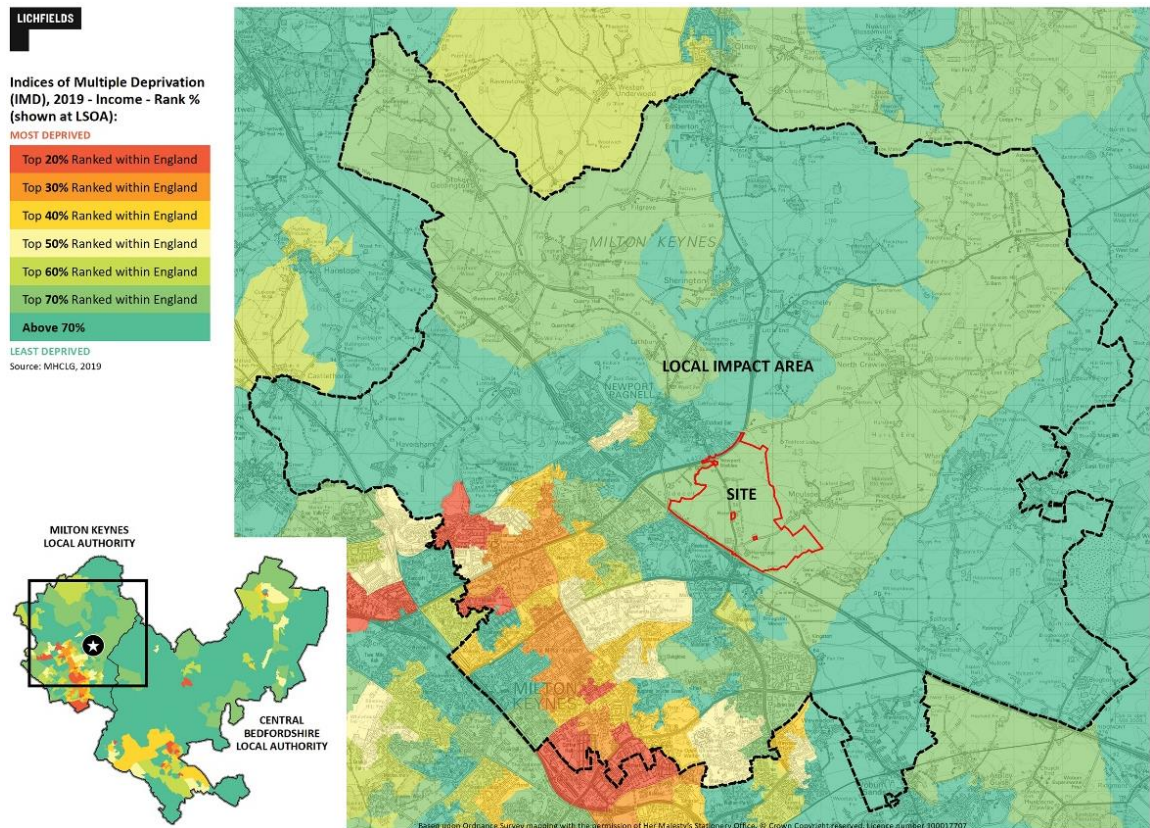
Source: Experian (2020) / Lichfields analysis

Income

4.12

Figure 4.5 maps the IMD income sub-domain across the neighbourhood and wider impact areas. A total of 25 out of the 65 LSOAs (38%) that make up the local impact area fall within the 40% least deprived LSOAs in terms of income. Within the wider impact area, 23% of LSOAs (49 LSOAs) are within the 40% least deprived ranked nationally, with 9% of LSOAs (19 LSOAs) falling in the 20% most deprived in terms of income.

Figure 4.5 IMD Income Sub-domain



Source: MHCLG IMD (2019) / Lichfields analysis

Community Infrastructure and Living Environment

- 4.13 Access to community infrastructure can have a significant impact on health and well-being. The Proposed Development is adjacent to the M1, close adjacent to the eastern area of Milton Keynes and South East of Newport Pagnell. This will include a full complement of housing, employment, green infrastructure and community infrastructure provision. The site itself is mainly free of development so there is no community infrastructure within the site boundary at present.
- 4.14 More widely, the eastern areas of Milton Keynes and Newport Pagnell do provide a range of community infrastructure services including schools, doctors, shops, and leisure facilities within relatively close proximity to the site. These services are set out in more detail below (both within and immediately outside the local impact area):
- **Primary education:** Within 3km of the site there are nine primary schools of which, two are part of all through schools. As illustrated in Figure 4.6 the majority are located in the eastern parts of Milton Keynes. The two closest primary schools are currently at or above capacity. The National Audit Office recommend schools having 5% capacity to allow for cohort fluctuations¹⁸.
The MKE development falls within the 'North Planning Area' for school places. In this area there were 395 primary school places available with a need for 238 additional places; equating to a 157 places surplus in primary education facilities across the North Planning

¹⁸ https://www.nao.org.uk/wp-content/uploads/2013/03/10089-001_Capital-funding-for-new-school-places.pdf

Area¹⁹. This was expected to rise to 171 places by 2024. Of those primary school pupils, 95% attended a school in the planning area;

- **Secondary education:** Within 5km of the site there are five secondary schools (of which, two are part of all through schools), the closest of which is in Newport Pagnell.

Secondary schools in the North Planning Area are under more pressure in comparison to primary school places. There was a need for 305 places in 2019 with a capacity of 360 places; resulting in a surplus of 55 places. Projecting forward, there was expected to be a shortfall of places in 2022 and 2023 (of 15 and 20 places, respectively) before a minor surplus of 9 units returned in 2024;

- **Primary healthcare²⁰:** The proposed development is located within the NHS Milton Keynes Commissioning Group in which there are 304,539 patients in total. There are 35.82 FTE GPs ('Full Time Equivalent') per 100,000 patients. This compares with 46 FTE GPs per 100,000 patients nationally (as in September 2020 – the latest data available).

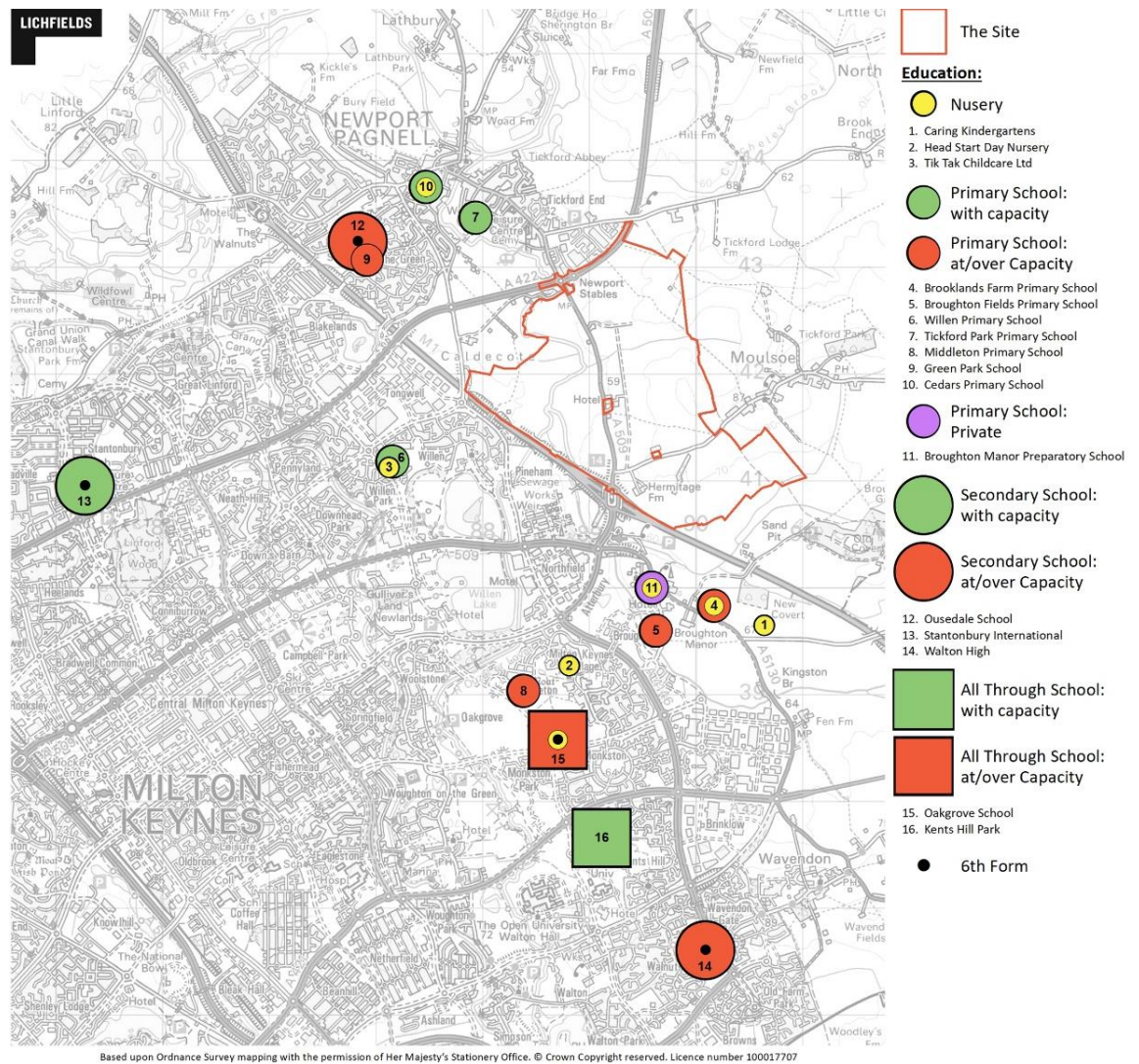
Within 5km of the site there are eight GP practices with 28.4 FTE GPs serving nearly just over 90,000 patients. This results in a ratio of one GP per 3,183 registered patients. This is above the national average of 1 FTE GP per 1,848 patients across England (0.54 GPs per 1,000);

- **Open space:** Milton Keynes has an extensive network of open spaces resulting from its original planned lattice structure including linear parks. There is currently a wide variety of such open and green spaces in close proximity to the site given its location near the eastern edge of Milton Keynes and spaces in Newport Pagnell. Nearby open spaces include Pineham (located 0.8 km from the site), Willen Lake (located 2.28 km from the site), and Ousebank Gardens (located 2.31 km from the site). However, the M1 acts as a barrier to open spaces in eastern Milton Keynes.
- **Playspace:** there is no formal open-air child play space within the site, but facilities are close by as part of formalised open spaces. For example, there are child play spaces at Kingfisher Park in Newport Pagnell (located 2.36 km from the site), Willen Park (located 1.73 km from the site), and Brooklands Meadow (located 1.69 km from the site).
- **Other community facilities:** There is a full range of other community facilities within c. 5km distance from the site including several community centres in the main residential areas of Milton Keynes, Newport Pagnell, as well as Moulsoe. There are also religious centres within c. 5 km distance, local halls, and sports pavilions.

¹⁹ MKC 'School Place Planning: Forward View' (2019), Page 21

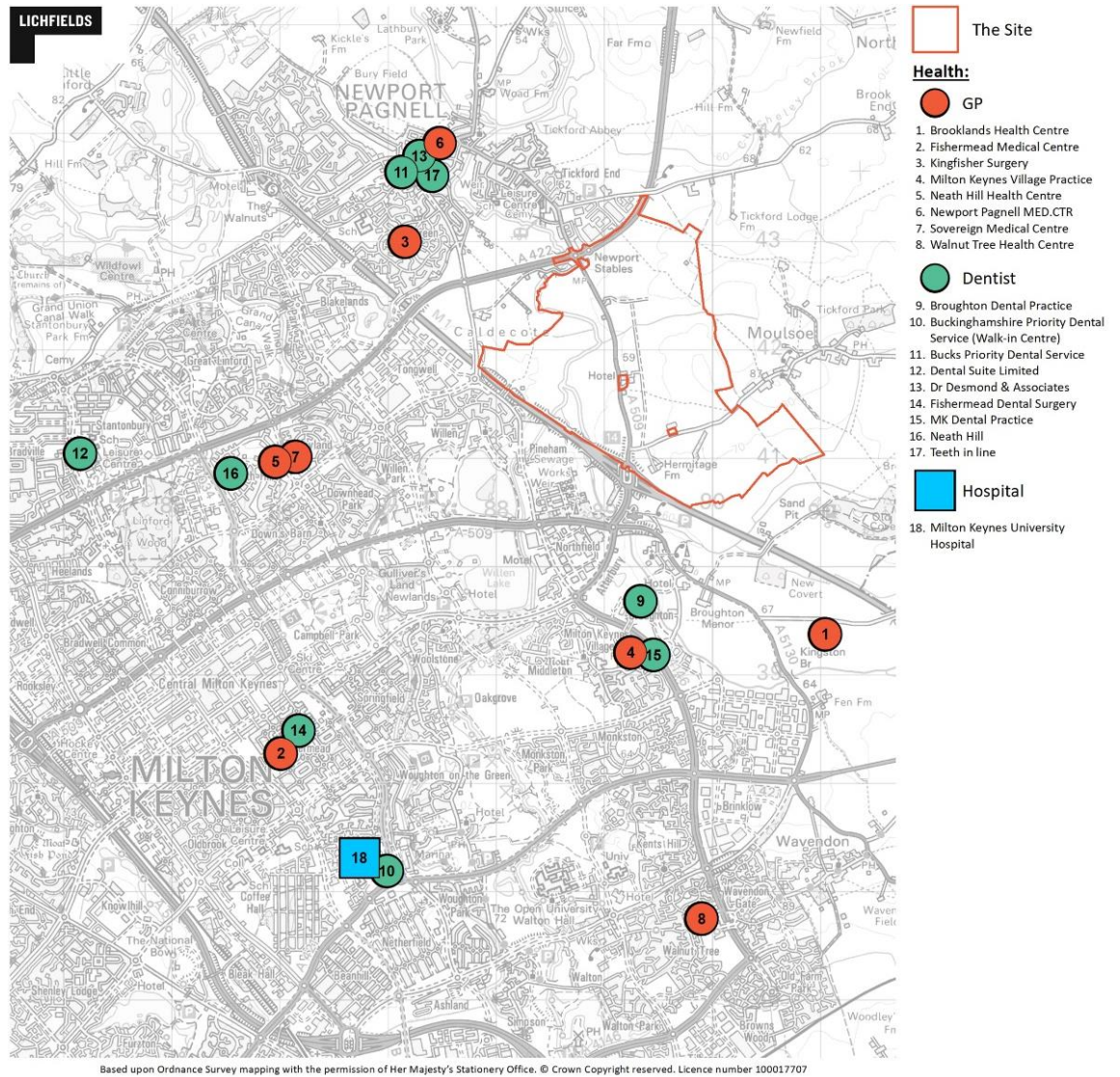
²⁰ <https://digital.nhs.uk/data-and-information/publications/statistical/general-and-personal-medical-services/30-september-2020>

Figure 4.6 Community Infrastructure Map: Education



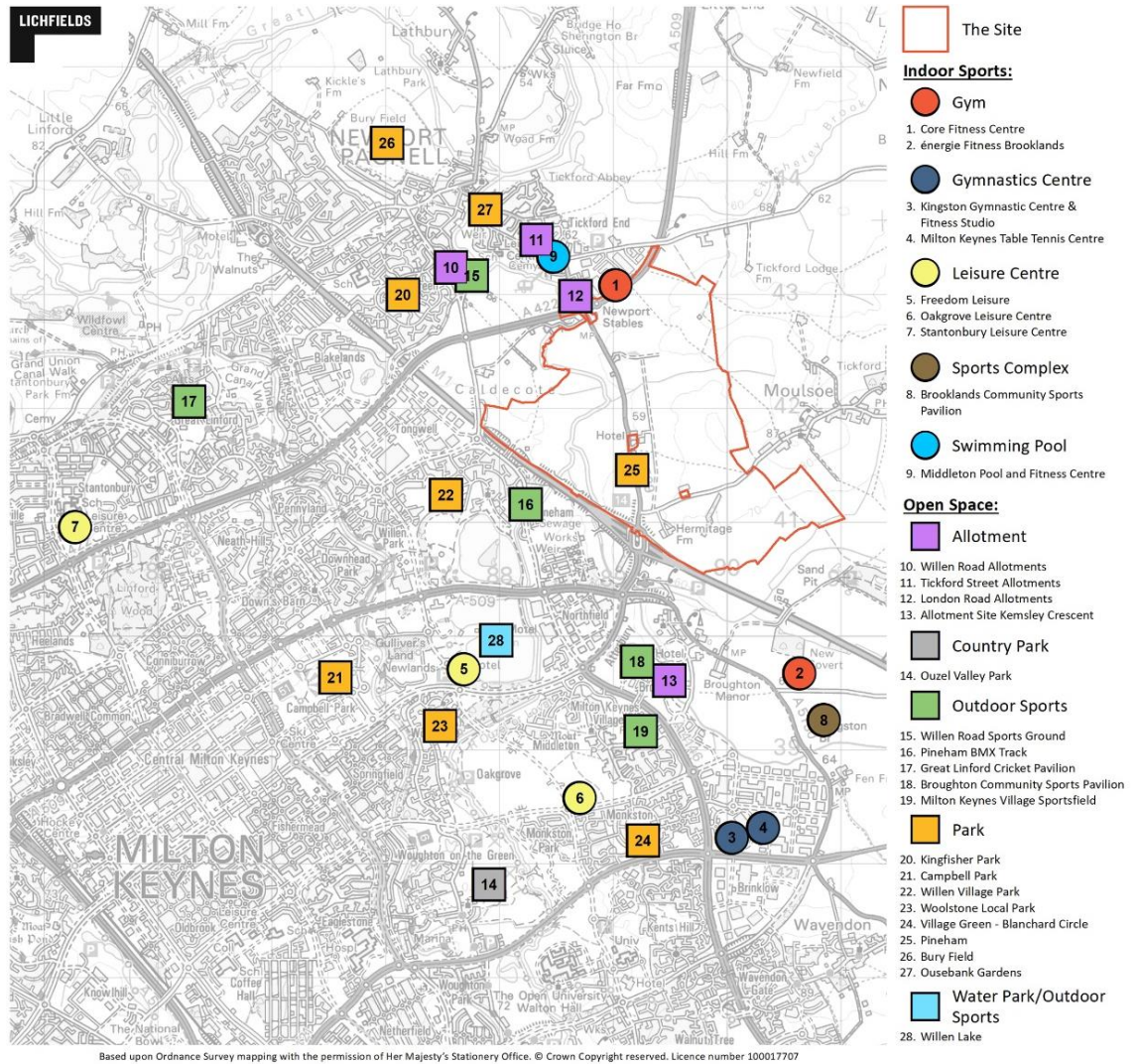
Source: Lichfields analysis

Figure 4.7 Community Infrastructure Map: Health



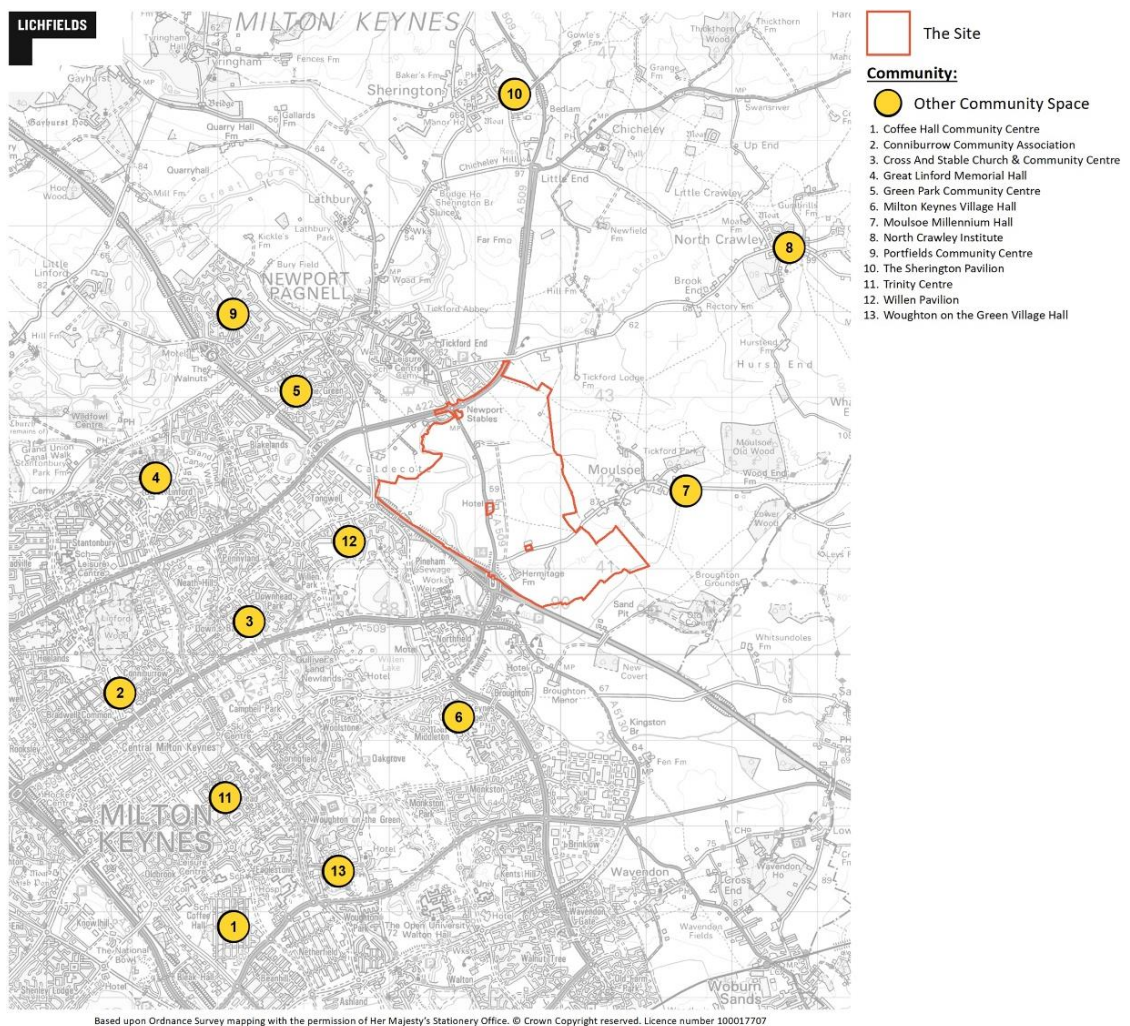
Source: Lichfields analysis

Figure 4.8 Community Infrastructure Map: Open Space and Recreation



Source: Lichfields analysis

Figure 4.9 Community Infrastructure Map: Community



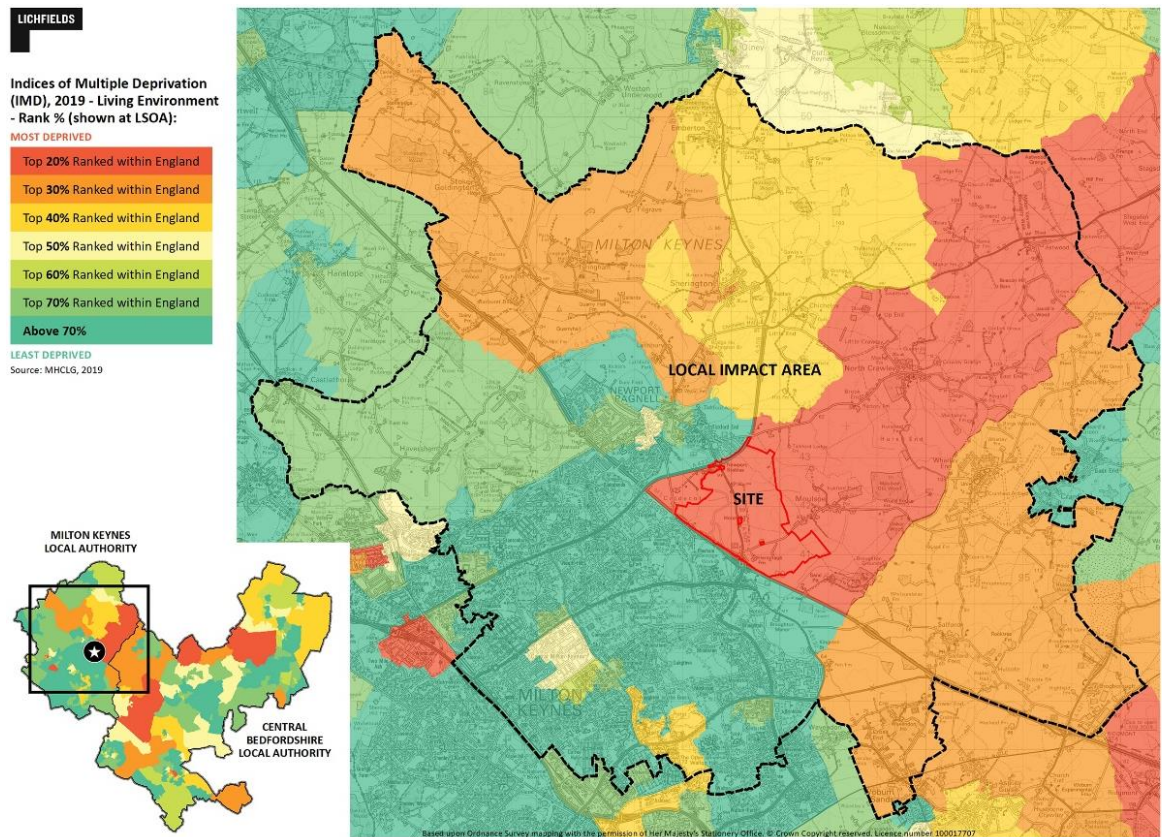
Source: Lichfields analysis

Living Environment

4.15

The IMD living environment sub-domain measures the quality of surroundings both within and outside the home. It factors in indicators including quality of housing, availability of central heating, air quality and road traffic accidents. Figure 4.10 illustrates how LSOAs within the local and wider impact areas rank within the living environment sub-domain of deprivation. The urban LSOAs comprising the local impact area perform better compared to the rural areas; indeed, the LSOA in which the site is located is within the top 20% most deprived nationally by this measure.

Figure 4.10 IMD Living Environment Sub-domain



Source: MHCLG (2019) / Lichfields analysis

Health-Related Indicators

Access to healthy food

- 4.16 The latest Milton Keynes Director of Public Health: Public Health Report (2016/17) notes that in the Borough, only 53.9% of 15-year olds eat their recommended five portions of fruit and vegetables a day (2014/15).

Children's Health

- 4.17 The latest Public Health England data (2019/20)²¹ shows that in the Borough 21.2% of children at reception age were overweight including those children that were obese. 2.2% of this age group were severely obese. This compares to 23% of children at this age that are overweight and 2.5% that were severely obese nationally. As children grow up, the rates of obesity in Milton Keynes gets worse (akin to the national trend). By year six, 33.2% of children are overweight (including those children that were obese) and 4.2% were severely obese. This is an increase of 12% and 2%, respectively, between reception and year six.
- 4.18 The latest Milton Keynes Director of Public Health: Public Health Report (2016/17) also notes that 17.6% of children in the Borough were living in poverty (2013). Growing up in poverty can negatively impact children's health and well-being, adversely affecting their future health and

²¹ https://fingertips.phe.org.uk/profile/national-child-measurement-programme/data#page/1/gid/8000011/pat/6/par/E12000008/ati/302/are/E06000042/iid/20601/age/200/sex/4/cid/4/page-options/ovw-do-0_cin-ci-4_car-do-0

life chances as adults. Ensuring a good environment in childhood, especially early childhood, is important.

Adult Health

- 4.19 MKCs 2016/17 JSNA notes that life expectancy at birth for men and women in England and for those living in Milton Keynes has risen: from 78.8 years for females in 1992-1994 to 82.9 years in 2013-2015 and for males from 74.3 years to 79.1 years during the same period. However, despite life expectancy increasing in the Borough, it was slightly below the national average for both female (0.2 years) and males (0.4 years). However, this masks wide variations across the Borough where life expectancy in Middleton (the ward with the greatest percentage improvement in life expectancy since 2003-07) is 84.7 years (in 2008-12) compared to just 73.0 years in Woughton (the most deprived ward in Milton Keynes).
- 4.20 Regarding healthy weight for adults in Milton Keynes, the 2016/17 JSNA found that 23.4% of adults were obese with 66.7% either overweight or obese.

Environmental Profile

- 4.21 This section highlights the key environmental baseline data that relates to health determinants to establish the existing environmental conditions to which people are currently exposed.

Noise & Vibration

- 4.22 Chapter H of the ES considers the current baseline noise and vibration conditions associated with the application site. The chapter fully details the noise and vibration assessment undertaken taking account of relevant on-site receptors. The main sources of noise within the site relate to the M1, A509 and A422.

Air quality

- 4.23 Chapter G of the ES considers the current baseline air quality conditions associated with the application site. The site is located in an area where air quality is mainly influenced by emissions from road transport using the M1, A509, A422 and other local minor roads. There are also nearby wastewater treatment facilities and industrial activities in proximity to the site. Due to their proximity it is possible that these sources of emissions could have some small influence air quality at site.

Priority Groups

- 4.24 This HIA considers the impact of the proposed development on both the health of the general population as well as the impacts on priority groups that occupy the local and wider impact areas. These priority groups are likely to be more sensitive to changes to health determinants.
- 4.25 The priority groups identified through the community profiling exercise are set out in Table 4.3.

Table 4.3 Priority Groups

Priority Groups	Explanation
Children and adolescents	22.8% of the population in the local impact area is composed of people aged between 0-15 years. Children and adolescents are often more susceptible to health issues and need to have easy access to community infrastructure, services and open space.
Residents aged 65 and over	<p>Around 13.3% of the population in the local impact area is composed of people aged 65 and over. However, this is expected to grow rapidly as a proportion over the next few decades, and with increasing numbers of elderly people with dementia.</p> <p>Older people may be more susceptible to health issues, experience barriers to movement and need to have easy access to community infrastructure.</p>
People on low incomes and those unemployed	<p>Generally, people nearby rank highly in terms of income; however, there are pockets of more deprived neighbourhoods in the local impact area. People living in poverty are more susceptible and more likely to experience health problems linked to not being able to access suitable housing, food and healthcare.</p> <p>Employment is known as a protective factor in terms of long-term health. This group may be more susceptible to health issues and will need to have easy access to community infrastructure and services. Given the impact of the COVID-19 pandemic, unemployment rates are likely to be higher in the local and wider impact area.</p>

Source: Lichfields analysis

5.0 Assessment of Impacts

5.1 The following section provides a detailed health impact assessment for the proposed development during the construction and operational phases. The following terms have been used to define the significance of the impacts identified:

- **Major impact:** where the proposed development could be expected to have a significant impact (either positive or negative) on the identified priority groups or the general population in health terms;
- **Moderate impact:** where the proposed development could be expected to have a noticeable impact (either positive or negative) on the identified priority groups or the general population in health terms;
- **Slight impact:** where the proposed development could be expected to result in a barely noticeable impact (either positive or negative) on the priority groups or the general population in health terms; and
- **Negligible:** where no discernible impact is expected as a result of the proposed development on the priority groups or the general population in health terms.

5.2 The potential health impacts of the proposed development are outlined in Table 5.1 and Table 5.2. The following key is applied in the table:

- **Green** – positive impact;
- **Orange** – neutral impact;
- **Red** – negative impact; and
- **Grey** – not relevant or unknown at this stage.

5.3 The likelihood of each health impact on each of the specified population groups has been assessed in line with the Public Health England Guidance (October 2020), which provides the following definitions:

- **Definite:** Strong direct evidence (for example from a range of qualitative and quantitative sources) or direct evidence from official statistics to support the impact;
- **Probable:** Good direct evidence (for example from a range of qualitative and quantitative sources) to support the impact;
- **Possible:** Direct evidence to support the impact, but drawn from limited source(s) (for example grey literature, news articles, blogs or commentaries); and,
- **Unlikely:** No direct evidence, but issue highlighted as a potential impact.

5.4 The assessment draws upon a range of supporting materials including:

- 1 Environmental Statement;
- 2 Design and Access Statement;
- 3 Statement of Community Involvement;
- 4 Sustainability Statement;
- 5 Energy Strategy; and
- 6 Transport Assessment.

Impacts

- 5.5 Table 5.1 sets out the likely health impacts of the proposed development during the **construction** phase. Table 5.2 sets out the likely health impacts of the proposed development during the **operational** phase.
- 5.6 As set out in Section 2.0 a construction management/logistics plan has not yet been prepared as this is an outline application. For the purposes of the health impact assessment for the construction phase the following assumptions have been adopted:
- Although there are four main phases of development as set out previously in Table 2.1, for the purposes of this assessment we consider that the construction impacts will vary mainly between the initial construction period to 2024 and the rest of the Phases between 2025 and 2047. There will be rolling road closures and re-routing across the main development area during construction of the initial infrastructure (i.e. to 2024). This will include closures at Tongwell Street, the A509 (through the site and south of Interchange Park), and the Newport Road.
 - The site will be appropriately secured, and equipment will be managed/stored appropriately;
 - Waste will be monitored and recorded with material re-used on-site where possible; and
 - The movement of Heavy Goods Vehicles (HGVs) is managed and minimised where possible.
- 5.7 In absence of any design details (which will come forward through reserved matters applications), it is assumed that the scheme will be broadly in line with the indicative masterplan shown in the Design and Access Statement and that the measures set out in the various technical assessments are taken forward.
- 5.8 Finally, we have assessed the impacts during operation for the entire Proposed Development as design information per Phase is not yet formed.

Table 5.1 Construction Phase Health Impacts

Determinant	Potential Impact in Relation to Wider Determinants of Health and Well-Being	Population Group	Group-Specific Health Impact	Likelihood of Impact	Duration	Overall Health Impact	Mitigation, Enhancement, & Monitoring Measures
Access to healthcare services and other social infrastructure	<p>For the initial period of construction (assumed to be completed by 2024) there will likely be rolling road closures and re-routing to enable the development of new and upgraded highways infrastructure.</p> <p>This is unlikely to restrict the ability of existing residents to access the existing healthcare services and other social infrastructure which mainly fall outside of the site.</p> <p>In this period, the impact of the scheme on access to healthcare services and other social infrastructure is assessed to be neutral for all groups.</p> <p>Once the initial highways works are completed there will be improved access across the site and across the M1 (i.e. 2025 to 2047). Based on phasing and design details, it is possible that the access to healthcare services of the new residents might be restricted at some point for temporary basis until the new GP is provided locally, however at this stage it is not possible to assess the likelihood of this occasion. In addition, the CLP and CEMP will ensure that this potential impact is limited as possible.</p> <p>On this basis, during the period to the completion of the site, the impact of the scheme's construction on access to healthcare services and other social infrastructure is assessed to continue being neutral</p>	General Population	Neutral (to 2024) Neutral (2025 to 2047)	Unlikely	Temporary	Neutral (to 2024) Neutral (2025 to 2047)	<p>The updated CLP and CEMP need to ensure road closures and traffic movements to/from the site are minimised. Cycle and pedestrian mitigation will also need to be implemented. This will need to include on-site supervising operatives/traffic marshals to maintain flow around the site.</p> <p>The updated CLP and CEMP will need to be implemented and monitored by the main contractor (not known at this stage).</p>
		Priority Group 1: Children & adolescents	Neutral (to 2024) Neutral (2025 to 2047)	Unlikely			
		Priority Group 2: People with long-term health problems / disabilities	Neutral (to 2024) Neutral (2025 to 2047)	Unlikely			
		Priority Group 3: People on low incomes and those unemployed	Neutral (to 2024) Neutral (2025 to 2047)	Unlikely			

	<p>for all groups.</p> <p>Further detail of these road closures and appropriate mitigation (if applicable) will be detailed in future updates to the CLP and CEMP which will be agreed with the Council.</p>						
<p>Access to open space and nature</p>	<p>For the initial period of construction (assumed to be completed by 2024) there will likely be rolling road closures and re-routing to enable the development of new and upgraded highways infrastructure.</p> <p>This will restrict the ability of nearby residents to access open space in Milton Keynes, Newport Pagnell and in the rural areas to the west. Some public rights of way through the site (which is primarily open fields) may also need to be shut during this construction phase. Further detail of these road closures and appropriate mitigation will be detailed in an updated CLP and CEMP which will be agreed with the Council.</p> <p>In this period, the impact of the scheme on access to open space and nature is assessed to be slight negative for all groups.</p> <p>Once the initial highways works are completed there will be improved access across the site and across the M1 (i.e. 2025 to 2047). There however will still be some closures of public rights of way through the site during this phase to enable different plots to come forward.</p> <p>Given the size and phasing of the scheme, operational benefits regarding access to open space and nature will be realised during the rolling construction of the urban extension. These offset some of the rolling closures of public rights of way</p>	<p>General Population</p>	<p>Slight Negative (to 2024)</p> <p>Neutral (2025 to 2047)</p>	<p>Possible</p>	<p>Temporary (most effects short term)</p>	<p>Slight Negative (to 2024)</p> <p>Neutral (2025 to 2047)</p>	<p>Future CLP and CEMP need to ensure road closures and traffic movements to/from the site are minimised. Cycle and pedestrian mitigation will also need to be implemented. This will need to include on-site supervising operatives/traffic marshals to maintain flow around the site.</p> <p>Future CLP and CEMP will need to be implemented and monitored by the main contractor (not known at this stage).</p>
		<p>Priority Group 1: Children & adolescents</p>	<p>Slight Negative (to 2024)</p> <p>Neutral (2025 to 2047)</p>	<p>Possible</p>			
		<p>Priority Group 2: People with long-term health problems / disabilities</p>	<p>Slight Negative (to 2024)</p> <p>Neutral (2025 to 2047)</p>	<p>Possible</p>			
		<p>Priority Group 3: People on low incomes and those unemployed</p>	<p>Slight Negative (to 2024)</p> <p>Neutral (2025 to 2047)</p>	<p>Possible</p>			

	during construction. Therefore, the impact of the scheme's construction on access to open space and nature is assessed to be neutral for all groups in this phase.						
Air quality, noise and neighbourhood amenity	<p>During construction, the proposals have the potential to cause air quality impacts resulting from dust and road traffic emissions as well as associated noise impacts.</p> <p>Chapter G of the ES considers the potential air quality effects of construction, setting out appropriate mitigation. The highest risks of impacts relate to Dust Soiling. It is therefore recommended that a Dust Management Plan is implemented to control dust alongside site management measures, monitoring, and other mitigation measures are implemented. On this basis, the impact of the scheme on air quality is assessed to be a neutral effect</p> <p>Chapter H of the ES considers the potential noise and vibration effects of the construction, setting out appropriate mitigation. Given the construction, there is assessed to be adverse effects during certain construction phases to some areas of the wider MKE area. Future detailed mitigation proposals will be brought forward at a later date to ensuring the phasing and management of development reduces noise impacts. On this basis, the impact of the scheme on noise is assessed to be a slight negative effect</p> <p>During the initial enabling phase (2022-2024), construction works would generally take place between 08:00 – 17:30 Monday to Saturday. Any exceptions will be carried out in agreement with the local authority and the Highways Agency. Exceptions will include the installation of the M1</p>	General Population	Slight Negative	Possible	Temporary (long term)	Slight Negative	<p>Future CLP and CEMP will need to contain appropriate mitigation measures for the different construction phases.</p> <p>Implemented Dust Management Plan and ongoing monitoring /mitigation measures as set out in Chapter G of the ES.</p> <p>Future CLP and CEMP will need to be implemented and monitored by the main contractor (not known at this stage).</p>
		Priority Group 1: Children & adolescents	Slight Negative	Possible			
		Priority Group 2: People with long-term health problems / disabilities	Slight Negative	Possible			
		Priority Group 3: People on low incomes and those unemployed	Slight Negative	Possible			

	bridge which will require 24-hour working including short-term closures of the main motorway carriageway. After this (i.e. 2025 to 2047), works are planned to be undertaken between 08:00 – 17:30 Monday to Saturday. No works will be undertaken at night-time, on Sundays or Bank Holidays without prior agreement with MKC.						
Accessibility and active travel	<p>For the initial period of construction (assumed to be completed by 2024) there will likely be rolling road closures and re-routing to enable the development of new and upgraded highways infrastructure. There will also be short-term closures of the main M1 carriageway to enable construction. To enable the initial phase of construction there will also be significant levels of vehicle movements. There may also be the closing of existing public rights of way.</p> <p>This will restrict the ability of nearby resident’s accessibility. Further detail of these road closures and appropriate mitigation will be detailed in an updated CLP and CEMP which will be agreed with the Council.</p> <p>In this period, the impact of the scheme on accessibility and active travel is assessed to be slight negative for all groups.</p> <p>Once the initial highways works are completed there will be improved access across the site and across the M1 (i.e. 2025 to 2047). Given the size and phasing of the scheme, operational benefits regarding active travel and accessibility enhancements will be realised during the rolling construction of the urban extension. During this period to the completion of the site, the impact of the scheme’s construction is assessed to be neutral for all groups.</p>	General Population	Slight Negative (to 2024)	Possible	Temporary (most effects short term – longer term effects as well).	Slight Negative (to 2024)	Future CLP and CEMP need to ensure road closures and traffic movements to/from the site are minimised. Cycle and pedestrian mitigation will also need to be implemented. This will need to include on-site supervising operatives/traffic marshals to maintain flow around the site.
			Neutral (2025 to 2047)				
		Priority Group 1: Children & adolescents	Slight Negative (to 2024)	Possible			
			Neutral (2025 to 2047)				
	Priority Group 2: People with long-term health problems / disabilities	Slight Negative (to 2024)	Possible		Neutral (2025 to 2047)	Future CLP and CEMP will need to be implemented and monitored by the main contractor (not known at this stage).	
			Neutral (2025 to 2047)				
		Priority Group 3: People on low incomes and those unemployed	Slight Negative (to 2024)	Possible			
			Neutral (2025 to 2047)				

Crime reduction and community safety	<p>For the purposes of this assessment we have assumed that an updated CLP and CEMP will set out appropriate measures to ensure that the site is fully secured, for example through a hoarding to all exposed boundaries surrounding the site (with contact details for the project management team, including a 24-hour emergency contact number) and security to prevent any unauthorised access outside of construction hours.</p> <p>A future CLP and CEMP are also expected to include other community safety measures including: Ensuring all plant, material and equipment are stored on-site and not on the public highway. Vehicle movement to and from the site will be managed by banksmen who will direct construction vehicles, pedestrians and cyclists.</p> <p>The proposed development is assessed to have a neutral impact for all groups.</p>	General Population	Neutral	Unlikely	Temporary (long term).	Neutral	<p>Future CLP and CEMP will need to contain appropriate measures to reduce the risk of crime and improve community safety during construction include security and management of site vehicles.</p> <p>Future CLP and CEMP will need to be implemented and monitored by the main contractor (not known at this stage).</p>
		Priority Group 1: Children & adolescents	Neutral	Unlikely			
		Priority Group 2: People with long-term health problems / disabilities	Neutral	Unlikely			
		Priority Group 3: People on low incomes and those unemployed	Neutral	Unlikely			
Access to healthy food	<p>For the initial period of construction (assumed to be completed by 2024) there will likely be rolling road closures and re-routing to enable the development of new and upgraded highways infrastructure, however this should not restrict the ability of nearby resident's access to healthy food given the availability of healthy food in the wider area.</p> <p>Therefore, the impact is assessed to be neutral.</p> <p>Once the initial highways works are completed there will be improved access across the site and across the M1 (i.e. 2025 to 2047). During this period to the completion of the site, the impact of the scheme's construction on access to healthy food is assessed to be neutral for all groups.</p>	General Population	Neutral	Unlikely	Temporary (Long term)	Neutral	<p>Future CLP and CEMP need to ensure road closures and traffic movements to/from the site are minimised. Cycle and pedestrian mitigation will also need to be implemented. This will need to include on-site supervising operatives/traffic marshals to maintain flow around the site.</p> <p>Future CLP and CEMP will need to be</p>
		Priority Group 1: Children & adolescents	Neutral	Unlikely			
		Priority Group 2: People with long-term health problems / disabilities	Neutral	Unlikely			
		Priority Group 3: People on low incomes and those unemployed	Neutral	Unlikely			

	Given the size and phasing of the scheme, operational benefits regarding access to healthy food (including from new allotments and community orchards) will be realised during the rolling construction of the urban extension. This will offset potential negative effects during the main construction phases from 2025 onwards.						implemented and monitored by the main contractor (not known at this stage).
Access to work and training	The proposed development will improve access to work and training opportunities by creating jobs across a range of skills levels during the construction phase. This could enable existing residents to gain jobs that offer higher wages, helping them to afford goods (e.g. healthy food) and services that positively impact on health. Training opportunities would also offer residents the possibility of learning a trade and gaining a new job after being unemployed or access employment for the first time. This will positively impact low income, unemployed groups and the general population, though supported children could be positively impacted indirectly. Overall the proposed development will result in a slight positive impact on the general population, and people on low incomes and those unemployed. The impact on people with long-term health problems and disabilities and children is judged to be neutral as the construction employment opportunities would likely be less accessible to the group than others.	General Population	Slight	Possible	Temporary (Long term)	Neutral to Slight	Encourage local recruitment, apprenticeships and training for generating new career opportunities through the construction of the proposed development in consultation with local organisations and Milton Keynes Borough Council.
		Priority Group 1: Children & adolescents	Neutral	Unlikely			
		Priority Group 2: People with long-term health problems / disabilities	Neutral	Unlikely			
		Priority Group 3: People on low incomes and those unemployed	Slight	Possible			
Social cohesion and inclusive design	For the initial period of construction (assumed to be completed 2024) there will likely be rolling road closures and re-routing to enable the development of new and upgraded highways infrastructure. There will also be short-term closures of the main M1 carriageway to enable construction. To enable the initial phase of construction there will also be	General Population	Slight Negative (to 2024)	Possible	Temporary (most effects short term)	Slight Negative (to 2024)	Future CLP and CEMP need to ensure road closures and traffic movements to/from the site are minimised. Cycle and pedestrian mitigation will also
			Neutral (2025 to 2047)				
		Priority Group	Slight	Possible			

	<p>significant levels of vehicle movements. There may also be the closing of existing public rights of way.</p> <p>This will likely discourage temporarily the access of some of the nearby residents to visit friends, family, and leisure/community facilities due to highways works. Further detail of these road closures and appropriate mitigation will be detailed in a future updated CLP and CEMP which will be agreed with the Council.</p> <p>In this period, the impact of the scheme on social cohesion is assessed to be slight negative for all groups.</p> <p>Once the initial highways works are completed there will be improved access across the site and across the M1 (i.e. 2025 to 2047). Given the size and phasing of the scheme, operational benefits regarding social cohesion enhancements will be realised during the rolling construction of the urban extension. During this period to the completion of the site, the impact of the scheme's construction is assessed to be neutral for all groups.</p>	1: Children & adolescents	<p>Negative (to 2024)</p> <p>Neutral (2025 to 2047)</p>				<p>need to be implemented. This will need to include on-site supervising operatives/traffic marshals to maintain flow around the site.</p>
		Priority Group 2: People with long-term health problems / disabilities	<p>Slight Negative (to 2024)</p> <p>Neutral (2025 to 2047)</p>	Possible		Neutral (2025 to 2047)	<p>Future CLP and CEMP will need to be implemented and monitored by the main contractor (not known at this stage).</p>
		Priority Group 3: People on low incomes and those unemployed	<p>Slight Negative (to 2024)</p> <p>Neutral (2025 to 2047)</p>	Possible			
Minimising use of resources	<p>For the purposes of this assessment we have assumed that a future updated CLP and CEMP will contain appropriate measures to minimise the use of resources, including the monitoring and recording of waste.</p> <p>Because the site is a greenfield site, the re-use of existing materials will be considered however the opportunity to re-use material is limited.</p> <p>The health impact on all groups during construction is assessed to be neutral, assuming appropriate measures are contained within the CLP</p>	General Population	Neutral	Unlikely	Temporary (Long term)	Neutral	<p>Future CLP and CEMP will need to contain appropriate measures to monitor and minimise waste.</p> <p>Ensuring compliance with environmental and waste standards during construction.</p>
		Priority Group 1: Children & adolescents	Neutral	Unlikely			
		Priority Group 2: People with long-term health problems / disabilities	Neutral	Unlikely			
		Priority Group 3: People on	Neutral	Unlikely			

	and CEMP.	low incomes and those unemployed					
Climate change	<p>The construction of the proposed development has the potential to increase greenhouse gas emissions linked to increasing journeys of heavy goods vehicles to deliver the materials needed to build the scheme.</p> <p>The accompanying Sustainability Statement (prepared by Hodkinson) sets out sustainability measures to be taken during construction. For example, the use of recycled materials, waste management, and the circular economy.</p> <p>Measures will also to be set out in a future updated CLP and CEMP to manage movement to/from and around the site would also be expected to minimise the potential greenhouse gas emissions associated with the construction phase.</p> <p>The development will also incorporate modern and innovative lower carbon construction methodologies in accordance with Policy D4 of Plan:MK (2019).</p> <p>Overall, the proposed development through construction is assessed to have a neutral health impact in relation to climate change, assuming appropriate measures are contained within the CMP.</p>	General Population	Neutral	Unlikely	Temporary (Long term)	Neutral	<p>Future CLP and CEMP will need to contain appropriate measures to minimise waste and greenhouse gas emissions, such as ensuring vehicles do not sit idle and minimising the use of petrol/diesel powered generators.</p> <p>Future CLP and CEMP will need to be implemented and monitored by the main contractor (not known at this stage).</p>
		Priority Group 1: Children & adolescents	Neutral	Unlikely			
		Priority Group 2: People with long-term health problems / disabilities	Neutral	Unlikely			
		Priority Group 3: People on low incomes and those unemployed	Neutral	Unlikely			

Source: Lichfields analysis

Table 5.2 Operational Phase Health Impacts

Determinant	Potential Impact in Relation to Wider Determinants of Health and Well-Being	Population Group	Group-Specific Health Impact	Likelihood of Impacts	Duration	Overall Health Impact	Mitigation, Enhancement, & Monitoring Measures
Housing quality and design	<p>The proposed development will deliver approximately 4,000 homes (up to a maximum of 4,600) and 1,240 affordable homes (i.e. 31% of 4,000). This MKE proposal will deliver a full range of housing sizes (from 1-bed flats to 5-bedroom homes) and housing tenures (i.e. market/ social/ intermediate). This will provide a wide range of housing to meet a variety of needs, including those on low incomes and could also reduce issues of overcrowding through the provision of family-sized housing. In addition, a proportion of homes will be designed to meet standards relating to adaptability and wheelchair use. The exact mix and tenure split will be determined phase by phase as part of reserved matters application.</p> <p>The affordable housing would help residents of the local and wider impact areas – which include sub-areas with high levels of income deprivation - with access homes and realise their ambition to own part of their own home, if they were not able to do so before. Thereby also, bringing together a community of residents from different income groups.</p> <p>Using high quality materials and ensuring good design of future homes, will also improve noise levels in properties, ensure good light levels, and improve energy efficiency. This will support those in need of affordable housing reducing the need to spend more on daily living needs and create a</p>	General Population	Moderate	Probable	Permanent	Moderate	<p>Ensure homes are advertised within the local area so residents know when the dwellings are available for purchase.</p> <p>Ensure good design of homes via the determination of future reserved matters application in accordance with prevailing design standards.</p>
		Priority Group 1: Children & adolescents	Moderate	Probable			
		Priority Group 2: People with long-term health problems / disabilities	Moderate	Probable			
		Priority Group 3: People on low incomes and those unemployed	Moderate	Probable			

	<p>better overall living environment.</p> <p>All these factors are likely to improve health and wellbeing among priority groups and therefore the overall health impact is assessed as moderate positive.</p>						
<p>Access to healthcare services and other social infrastructure</p>	<p>New residents of the development will be in close proximity to a range of services including primary and secondary schools, a new Health Hub (up to 2,000 sqm) and other community facilities (provided either as part of flexible space or new sports clubhouses).</p> <p>The new Health Hub will provide for local health services and is to be located within the central community hub. This will be a co-location facility providing a range of health services to improve the effectiveness of service delivery. The majority of new homes will be located within a 15-minute walk of this hub via attractive and safe pedestrian and cycle routes.</p> <p>The developments design will also incorporate 'dementia friendly' principles. These features will help this group navigate to the healthcare services and other social infrastructure.</p> <p>Access to these nearby services in Newport Pagnell and the eastern areas of MK will also be improved because of the public transport and active travel improvements (i.e. new redway across the M1).</p> <p>The healthcare facilities and other community infrastructure proposed has been designed to be sufficient to support both the population arising from this proposal and wider development planned</p>	<p>General Population</p> <p>Priority Group 1: Children & adolescents</p> <p>Priority Group 2: People with long-term health problems / disabilities</p> <p>Priority Group 3: People on low incomes and those unemployed</p>	<p>Slight</p> <p>Slight</p> <p>Slight</p> <p>Slight</p>	<p>Probable</p> <p>Probable</p> <p>Probable</p> <p>Probable</p>	<p>Permanent</p>	<p>Slight</p>	<p>Ensuring future reserved matters applications adhere to dementia friendly principles.</p> <p>Ensuring the long-term management and upkeep of pedestrian and cycle redways to ensure easy and attractive active travel routes through the site.</p>

	<p>at MKE.</p> <p>Overall, the proposed development is expected to have a slight positive impact on access to social and community facilities.</p>						
Access to open space and nature	<p>Exposure to nature reduces the risks of serious depressive disorders by more than 5% and people that live in green areas or with easy access to such areas are three times more likely to be physically active. Considering the health and placemaking benefits of open and natural space, the proposed development sets out parameters to include a wide array of open spaces and natural spaces. These spaces will be high quality, attractive, and easily accessible to future and nearby residents.</p> <p>The overall provision of open space is sufficient to support both the population arising from this proposal and wider development planned at MKE.</p> <p>The principal area of open and natural space will be a new linear park along the River Ouzel as well as a linear park (84 ha). This space will include information open space, wildlife habitats, meadow land, wetlands, and woodlands accessible via new pathways and cycleways.</p> <p>The development is also laid out on a landscape lattice of open and green spaces. These include play spaces, ponds and woodland. Across the development the creation of these spaces will ensure a biodiversity net gain of at least 10% with current assessments showing a 14.5% net gain. Parts of the landscaping will also provide for SuDS to reduce and manage flood risk across the site.</p>	General Population	Moderate	Probable	Permanent	Moderate	<p>Ensuring future signage within the development signposts residents to their near open spaces.</p> <p>Ensuring future reserved matters applications adhere to dementia friendly principles.</p> <p>Ensure the longer-term management of open and natural spaces.</p>
		Priority Group 1: Children & adolescents	Moderate	Probable			
		Priority Group 2: People with long-term health problems / disabilities	Moderate	Probable			
		Priority Group 3: People on low incomes and those unemployed	Moderate	Probable			

	<p>Finally, in terms of play spaces there are four neighbourhood play areas and eight local play areas proposed in the development. These are all within relevant catchment areas defined in Plan:MK (2019).</p> <p>All open spaces throughout the development will be easily accessible. Redways link the spaces via a lattice network providing safe and attractive routes car free routes. Furthermore, the dementia friendly design principles will help older age groups navigate the development.</p> <p>Overall, the proposed development is assessed to have a moderate positive health impact through access to open space and nature.</p>					
<p>Air quality, noise and neighbourhood amenity</p>	<p>Chapter G of the ES considers the air quality effects of the development once operational. It demonstrates that by 2047 (the predicted completion year) the predicted annual mean NO₂ concentrations are compliant with the AQS for all human receptors. Furthermore, the results of the assessment show that predicted annual mean concentrations of PM10 at all receptors in all modelled future year scenarios are well below the annual mean AQS of 40µg/m³.</p> <p>Chapter H of the ES considers the noise and vibration effects of the development once operational. The main source of noise will be from operational road traffic; concluding impacts of negligible to minor adverse. Design mitigation can be incorporated to reduce any impacts; for example, a 3m high noise barrier along Tongwell Street and 30mph speed limits.</p>	<p>General Population</p> <p>Priority Group 1: Children & adolescents</p> <p>Priority Group 2: People with long-term health problems / disabilities</p> <p>Priority Group 3: People on low incomes and those unemployed</p>	<p>Neutral</p> <p>Neutral</p> <p>Neutral</p> <p>Neutral</p>	<p>Unlikely</p> <p>Unlikely</p> <p>Unlikely</p> <p>Unlikely</p>	<p>Permanent</p>	<p>Neutral</p> <p>Ensure the completed development meets relevant standards to minimise potential impacts on the surrounding neighbourhood.</p> <p>Ensure appropriate noise mitigation is included in relevant housing areas.</p>

	<p>Future reserved matters applications will detail relevant design measures to ensure private and local neighbourhood amenity (taking account of Policy D5). This includes relevant offsets from children’s play areas, planting, and detailed housing designs. The parameter plans do however already consider neighbourhood amenity in respect of the distribution of uses for example, the location of the employment hub along the M1.</p> <p>Overall, the proposed development is assessed to have a neutral air quality impact on all groups.</p>					
<p>Accessibility and active travel</p>	<p>The layout of the proposed development is designed to encourage active travel. A separate assessment is included at Section 6.0 of this report demonstrating how the design meets the ten Active Design Principles that Sport England and Public Health England published in 2015.</p> <p>The DAS and illustrative masterplan include the provision of new redways that will provide an attractive and safe option for walking and cycling across the site on car free routes. Via these redways and other pedestrian friendly routes the majority of homes will be within a 15-minute walk of the community hub. Furthermore, the dementia friendly design principles will help older age groups navigate the development.</p> <p>New highways and road improvements will also provide accessible routes across the site, to Newport Pagnell and to Milton Keynes via the provision of a new bridge over the M1. This new bridge links to the community hub and safeguards land for a future Rapid Mass Transit system.</p> <p>However, the ultimate aim of the design and layout</p>	<p>General Population</p> <p>Priority Group 1: Children & adolescents</p> <p>Priority Group 2: People with long-term health problems / disabilities</p> <p>Priority Group 3: People on low incomes and those unemployed</p>	<p>Slight</p> <p>Slight</p> <p>Slight</p> <p>Slight</p>	<p>Probable</p> <p>Probable</p> <p>Probable</p> <p>Probable</p>	<p>Permanent</p>	<p>Slight</p> <p>Promote the use of the walking and cycling routes across the development. This can be via good wayfinding, ensuring the long-term upkeep of routes, and providing sufficient safe cycle parking.</p> <p>Ensuring future reserved matters applications adhere to dementia friendly principles.</p>

	<p>of the design is to reduce car dependency and encourage active travel and public transport use.</p> <p>Disabled parking will also be provided in accordance with relevant standards in both the Community Hub, at schools, and other community uses.</p> <p>Taking account of these factors, the impact of the proposed development is assessed to be slight positive on the general population and all priority groups.</p>					
<p>Crime reduction and community safety</p>	<p>Once the development is built out there will be an inherent level of crime associated with it. This will represent an increase in crime levels when compared to the baseline position given the lack of existing population.</p> <p>The design of the individual plots is a matter for future consideration via reserved matters submissions. These will be assessed against prevailing local policy.</p> <p>Currently Policy EH7 expects developments to be designed so as to create safe residential environments, addressing the fear and perception of crime. In accordance with this policy, it should be expected that new build development (via reserved matters submissions) will be appropriately lighted and designed to reduce crime through measures such as ensuring natural surveillance in public spaces.</p> <p>Overall, the proposed development is assessed to have a neutral impact; however, this could be reassessed as part of future reserved matters</p>	<p>General Population</p>	<p>Neutral</p>	<p>Unlikely</p>	<p>Permanent</p>	<p>Neutral</p> <p>Ensure future detailed designs promote safe residential areas that are well lit with natural surveillance.</p>
		<p>Priority Group 1: Children & adolescents</p>	<p>Neutral</p>	<p>Unlikely</p>		
		<p>Priority Group 2: People with long-term health problems / disabilities</p>	<p>Neutral</p>	<p>Unlikely</p>		
		<p>Priority Group 3: People on low incomes and those unemployed</p>	<p>Neutral</p>	<p>Unlikely</p>		

	applications.						
Access to healthy food	<p>The baseline assessment indicates there is some potential to improve healthy eating among the residents of Milton Keynes.</p> <p>Regarding takeaways, the Council will retain control over the number of takeaways and their location in relation to schools as part of future reserved matters and other associated planning applications.</p> <p>The development also includes provision for a new foodstore and other smaller stores that will sell healthy food.</p> <p>Space for community orchard and allotments space will also be provided in the development. These will improve access to healthy locally grown food.</p> <p>Taking account of these factors, the impact of the proposed development is assessed as slight positive.</p>	General Population	Slight	Possible	Permanent	Slight	Encourage future residents to make use of allotment spaces and the community orchard.
		Priority Group 1: Children & adolescents	Slight	Possible			
		Priority Group 2: People with long-term health problems / disabilities	Slight	Possible			
		Priority Group 3: People on low incomes and those unemployed	Slight	Possible			
Access to work and training	<p>The proposed development includes c. 80ha of employment land in addition to a new community hub, local parade and schools. Once the development is occupied, new businesses and community infrastructure will offer employment opportunities. Furthermore, new residents will increase spending in the area and consequently will support the creation of additional jobs nearby.</p> <p>Chapter M of the ES (Socio-Economic) concludes the site could generate significant numbers of operational jobs. These jobs will vary across different economic sectors and it is expected that a</p>	General Population	Moderate	Definite	Permanent	Moderate	Encourage local recruitment for the new job opportunities in the development.
		Priority Group 1: Children & adolescents	Moderate	Probable			
		Priority Group 2: People with long-term health problems / disabilities	Moderate	Possible			
		Priority Group 3: People on low incomes	Moderate	Definite			

	<p>variety of skills and occupations from elementary to managerial will be required.</p> <p>In addition, the new highways infrastructure sought detailed planning permission as part of this application will enable the delivery of additional employment land and other employment generating community uses across the wider MKE allocation, on other sites (excluding the application site).</p> <p>On this basis, the development is assessed to have a moderate positive impact across all priority groups and the general population.</p>	and those unemployed				
<p>Social cohesion and inclusive design</p>	<p>The scheme includes a range of open spaces, public realm, and sports facilities which all provide opportunities for increased social interaction. The aim is also to reduce car dependency and promote active travel modes that provide greater opportunity of social interaction and create safer streets. These measures will assist in creating an active neighbourhood and developing social capital between new residents.</p> <p>New sports facilities are included in the proposals including the development of new clubhouses. These spaces will facilitate social interaction.</p> <p>The proposed development will also incorporate dementia friendly design principles. This will support those with dementia navigate the development and support their continued living at MKE.</p> <p>The design of the future homes will be subject to reserved matter submissions. However, Policy HN4 currently sets out requirements for the provision of</p>	<p>General Population</p> <p>Priority Group 1: Children & adolescents</p> <p>Priority Group 2: People with long-term health problems / disabilities</p> <p>Priority Group 3: People on low incomes and those unemployed</p>	<p>Slight</p> <p>Slight</p> <p>Moderate</p> <p>Slight</p>	<p>Possible</p> <p>Possible</p> <p>Possible</p> <p>Possible</p>	<p>Permanent</p>	<p>Slight</p> <p>Ensuring future reserved matters applications adhere to dementia friendly principles.</p>

	<p>wheelchair accessible and adaptable homes. In accordance with this policy, MKE will increase the supply of such homes meeting the specific current and future needs within the development.</p> <p>Overall, the proposed development is assessed to a moderate positive impact on people with long-term health problems and disabilities and slight positive impacts on the other priority groups and the general population.</p>						
Minimising use of resources	<p>The submitted Sustainability Statement (prepared by Hodkinson's) sets out details regarding the management of waste and minimising the use of resources. The effects of the operational waste and appropriate mitigation are considered in Chapter O of the ES.</p> <p>Following the implementation of mitigation measures to minimise the use of resources, the generation of waste during the operation of the proposed development will be neutral.</p>	General Population	Neutral	Unlikely	Permanent	Neutral	<p>Ensure appropriate mitigation to minimise the use of resources is implemented.</p> <p>Ensure appropriate space is provided for recyclable and non-recyclable waste in homes and commercial properties.</p>
		Priority Group 1: Children & adolescents	Neutral	Unlikely			
		Priority Group 2: People with long-term health problems / disabilities	Neutral	Unlikely			
		Priority Group 3: People on low incomes and those unemployed	Neutral	Unlikely			
Climate change	<p>The proposed development is designed to promote active travel and public transport. It is therefore likely to help foster lower car usage rates for journeys within the new community.</p> <p>The design standards of new homes will be detailed in future reserved matters submissions (as detailed in the submitted Energy Strategy). However, they will be designed to meet the current and future standards (i.e. 75-80% reduction</p>	General Population	Slight	Possible	Permanent	Slight	<p>Encourage residents of the proposed development to cycle and use public transport and discourage them from keeping motor vehicles in other locations and storage facilities near the proposed</p>
		Priority Group 1: Children & adolescents	Slight	Possible			
		Priority Group 2: People with long-term health problems / disabilities	Slight	Possible			

	<p>in carbon emissions over current Part L). They will likely incorporate air-source heat pumps and incorporate other sustainability measures to reduce energy usage. The homes will also be designed to reduce water-usage to a minimum of 105 litres/person/day.</p> <p>All commercial buildings will also achieve BREEAM 'Very Good' rating.</p> <p>Overall, the proposed development is expected to have a slight positive impact.</p>	<p>Priority Group 3: People on low incomes and those unemployed</p>	<p>Slight</p>	<p>Possible</p>		<p>development.</p> <p>Ensure residents are aware of the sustainability measures within the new homes to reduce energy use.</p>
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Source: Lichfields analysis

6.0 Meeting the Ten Active Design Principles

- 6.1 Following the assessment above, the proposed development is also considered to meet the ten Active Design Principles that Sport England and Public Health England published in 2015. Table 6.1 below provides a summary of how the proposed scheme development meets the ten principles and reflects on the assessment outcomes even.
- 6.2 The assessment is based on the illustrative masterplan and illustrative designs shown in the accommodating DAS (see Sections 6 and 7). The assessment is considered in high level design terms given the specific design aspects of the scheme will be defined in future reserved matters applications.

Table 6.1 Summary of the Ten Active Design Principles

Ten Active Design Principles	How the Proposed Development supports the Design Principles
<p>1. Activity for all Neighbourhoods, facilities and open spaces should be accessible to all users and should support sport and physical activity across all ages.</p>	<ul style="list-style-type: none"> The proposed development will include flexible community space, flexible space for a commercial gym, space in the masterplan for a variety of sports pitches (including clubhouses) and a range of equipped play area alongside accessible open space. The range of facilities available will promote healthy lifestyles and ensure that every day needs can be met. The proposed open spaces and places for activity are easily accessible via safe and attractive redway routes.
<p>2. Walkable communities Homes, schools, shops, community facilities, workplaces, open spaces and sports facilities should be within easy reach of each other.</p>	<ul style="list-style-type: none"> The majority of homes will be within a 15-minute walk of the central community hub (see the DAS for more detail). All homes will be able to access primary schools via safe and attractive redway routes. While the design of primary schools is for reserved matters submissions, it is anticipated the schools will not incorporate car drop off space to discourage car use.
<p>3. Connected walking and cycling routes Destinations should be connected by a direct, legible and integrated network of walking and cycling routes. Routes must be safe, well lit, overlooked, welcoming, well-maintained, durable and clearly signposted. Active travel (walking and cycling) should be prioritised over other modes of transport.</p>	<ul style="list-style-type: none"> All homes will be able to access primary schools via safe and attractive redway routes. Similarly, the community hub, local parade, open spaces and employment land are all easily accessible via active travel methods via the redways. These are located throughout the site along the landscape lattice and are designed to be more convenient than driving across MKE. Walking routes and wayfinding will be incorporated across the site. Private car parking (except for disabled and servicing) at the community hub will be limited and pedestrians given priority in the main central area of the hub.
<p>4. Co-location of community facilities The co-location and concentration of retail, community and associated uses to support linked trips should be promoted. A mix of land uses and activities should be promoted that avoid the uniform zoning of large areas to single uses.</p>	<ul style="list-style-type: none"> All three primary schools will provide for community space as a dual use. This has been agreed with the Council. The community hub provides a concentration of retail, community uses, healthcare and both a primary and secondary school to support linked trips. The majority of homes are within a 15-minute walk of this hub.
<p>5. Network of multifunctional open space A network of multifunctional open space should be created across all communities to support a range of activities including sport, recreation and play</p>	<ul style="list-style-type: none"> The proposed development will include a significant proportion of green and blue infrastructure provision. The green infrastructure will include existing retained woodland; retained

Ten Active Design Principles	How the Proposed Development supports the Design Principles
<p>plus other landscape features including Sustainable Drainage Systems (SuDS), woodland, wildlife habitat and productive landscapes (allotments, orchards). Facilities for sport, recreation and play should be of an appropriate scale and positioned in prominent locations.</p>	<p>trees and hedgerows; formal parks and gardens; and multifunctional open space, comprising informal and formal areas; sports pitches; play spaces, and buffer planting;</p> <ul style="list-style-type: none"> • The development also includes the creation of a new linear park along the River Ouzel. This is made up of linked areas of open space, woodlands, meadows, wetlands, and play areas. • There is land provision for community orchards and allotments. • The proposed development will include a network of sustainable drainage features including both wet and dry ponds, swales, ditches, and rain gardens. The features will be implemented in a naturalistic and sensitive way complementing the natural topography, hydrology and bringing biodiversity benefits.
<p>6. High-quality streets and spaces Flexible and durable high-quality streets and public spaces should be promoted, employing high-quality durable materials, street furniture and signage.</p>	<ul style="list-style-type: none"> • This is mainly a matter for future reserved matters submissions. However, the illustrative masterplan and the DAS shows interpretations of the parameter plans including high quality streets and community space across the development and in the community hub.
<p>7. Appropriate infrastructure Supporting infrastructure to enable sport and physical activity to take place should be provided across all contexts including workplaces, sports facilities and public space, to facilitate all forms of activity.</p>	<ul style="list-style-type: none"> • The necessary infrastructure will be delivered for the population arising from both this planning application and development across the wider MKE allocation. Provision includes pitches, club houses and indoor sports provision (such as flexible space for a commercial gym). These will be available to the wider community.
<p>8. Active buildings The internal and external layout, design and use of buildings should promote opportunities for physical activity. Providing opportunities for activity inside and around buildings. Where possible, methods should be sought to promote physical activity as part of daily routines, particularly in the workplace.</p>	<ul style="list-style-type: none"> • This is a matter for future reserved matters submissions. However, facilities and employment generating floorspace can be designed to encourage as far as possible physical activity including the flexible nature of the B Use Class floorspace which could include sit and stand desks. Additionally, the adaptable flexible use of buildings for the wider community (i.e. dual use education facilities) could allow the spaces to be transformed to host indoor sports clubs and activities. The buildings are intended to serve the day-to-day needs of all residents and employees within the proposed development.
<p>9. Management, maintenance, monitoring and evaluation The management, long-term maintenance and viability of sports facilities and public spaces should be considered in their design. Monitoring and evaluation should be used to assess the success of Active Design initiatives and to inform</p>	<ul style="list-style-type: none"> • In order to ensure the expansive provision of green infrastructure and sports facilities is managed effectively, St James will be entering into an agreement with The Milton Keynes Parks Trust, who will take on the management responsibilities of all green infrastructure within the development.

Ten Active Design Principles	How the Proposed Development supports the Design Principles
future directions to maximise activity outcomes from design interventions.	
<p>10. Activity promotion and local champions Promoting the importance of participation in sport and physical activity as a means of improving health and wellbeing should be supported. Health promotion measures and local champions should be supported to inspire participation in sport and physical activity across neighbourhoods, workplaces and facilities.</p>	<ul style="list-style-type: none"> The proposed development is being submitted as an outline application and therefore initiatives such as activity promotion and local champions are yet to be determined. However, mitigation measures such as community stewardship schemes could maximise the benefits of the community facilities.

Source: Sport England and Public Health England (2015) / Lichfields analysis

7.0 Consideration of Cumulative Effects

7.1 This development could have cumulative effects with other nearby developments including other development as part of the MKE urban extension. In line to the [Milton Keynes Draft HIA SPD](#), this section assesses the cumulative impacts that might emerge through the combined effects of nearby developments. In line to the ES Cumulative Assessment Section, this includes a two-stage assessment:

- **Stage 1: Wider Strategic Allocation** – This stage considers the effects of the Proposed Development alongside other development expected to come forward across the wider MKE allocation; and
- **Stage 2: Other Schemes** – This stage considers the effects of the Proposed Development in combination with other already approved and submitted development schemes nearby.

Stage 1 – Wider Strategic Allocation

7.2 Across the MKE allocation, there are four main landowners whom will in combination deliver the MKE strategic urban extension. At the time of writing these other landowners have not submitted planning applications in support of their schemes. Therefore, for the assessment the MKE cumulative effects the amount of development has been assumed as per Table 7.1 below.

Table 7.1 Other MKE Development

	Bloor	MKC	Newlands
Assumed Development	<ul style="list-style-type: none"> • Up to 800 dwellings • Local Parade of shops • Primary School • Open space and play parks 	<ul style="list-style-type: none"> • Up to 350 dwellings 	<ul style="list-style-type: none"> • Up to 25ha of Employment Land

Source: Lichfields

7.3 The cumulative impacts in relation to the construction and operational phases to the wider strategic allocation is considered below.

Table 7.2 Cumulative Impact Assessment with wider strategic allocation

Stage	Potential Cumulative Impacts	Cumulative Health Impact
Construction Phase	The main construction impacts will be in relation to road closures around the site. Most road closures will be as a result of this proposed development given it will contain the majority of the highways infrastructure associated with the site. Therefore, the cumulative impacts of road closures will be slight negative . However, appropriate mitigation will be agreed with the Council in relevant Construction and Logistics Plan. However, access to work and employment opportunities will cumulatively have a slight positive impact. For the rest of the themes the impacts are assessed as neutral .	Neutral (Temporary)
Operational Phase	The majority of development – including housing, social and community infrastructure, and active travel measures – is proposed as part of this development. Other landowners will bring forward new housing, business space, open space, social infrastructure, ecological enhancements and other beneficial uses which will cumulatively have a slight to moderate positive impact across housing, access to community facilities, access to open space and access to employment. For the rest of the themes assessed in this HIA the impacts are expected to be neutral .	Slight Positive (Permanent)

Stage 2 – Other Schemes

- 7.4 As per the Cumulative Assessment Section of the ES, there are 13 other proposed and approved developments that could give rise to cumulative impacts with the proposed development. As per the Cumulative Assessment section of the ES, the majority of schemes are associated with other previous urban extensions to Milton Keynes (i.e. the Eastern Expansion Area). The cumulative impacts from these schemes are limited given they are mainly self-contained (i.e. they provide for their own social and community infrastructure) and are being developed in the shorter term with less overlap with the proposed development.
- 7.5 The main development that could have cumulative impacts with the proposed development is at Tickford Fields Farm (reg. 20/00133/OUTEIS²² – pending consideration). This is given the proposed development’s proximity to MKE and the likely overlap in development.
- 7.6 In this context, Table 7.3 provides the cumulative impact assessment considering other nearby schemes.

²² Application Number: 20/00133/OUTEIS - Description Outline planning application (all matters reserved except access) for the demolition of the existing farm buildings on site and the development of up to 930 dwellings (including affordable dwellings), primary school, local centre, open space, sports pitches, play areas, pavilion/wellbeing centre and other associated works.

Table 7.3 Cumulative Impact Assessment – Nearby Schemes

Stage	Potential Cumulative Impacts	Cumulative Health Impact
Construction Phase	<p>The main construction impacts will be in relation to road closures around the site. There is potential for cumulative impacts with road closures on the A509 and A422 as well as combined vehicle movements. Therefore, the cumulative impacts of road closures will be a slight negative. However, appropriate mitigation will be agreed with the Council in relevant Construction and Logistics Plan.</p> <p>Access to work and employment opportunities will cumulatively be slight positive.</p> <p>For the rest of the themes the impacts are assessed as neutral.</p>	<p>Neutral (Temporary)</p>
Operational Phase	<p>The developments will cumulatively increase the provision of housing, education facilities, social infrastructure, ecological enhancements and access to employment. This will cumulatively have slight to moderate positive impacts. For the rest of the themes assessed in this HIA the impacts are expected to be neutral.</p>	<p>Slight Positive (Permanent)</p>

8.0 Conclusions

8.1 This HIA has been prepared to identify, assess and present any potential effects on the health and wellbeing of the population arising from the proposed development at MKE.

8.2 The HIA identifies links between new development and health and wellbeing using determinants, pathways and outcomes to assess potential impacts on health and wellbeing. Factors are personal, social, cultural, economic and environmental. They include working conditions such as employment, the environment, transport, education and access to services.

Local context

8.3 A review of demographic, socio-economic and health-related indicators, drawing on different data sources, has been undertaken to identify key priority groups within the local impact area against the wider impact area and England averages. The review shows that the local impact area has a higher number of young (0-15 years) and working age people (16-64 years) residents than both the wider impact area and the national average. The same is true for those that have a long-term health problem or disability limiting their day-to-day activity.

Priority groups and health impact assessment

8.4 The key priority groups for which health impacts have been considered in this study include:

- **Priority Group 1: Children & adolescents** – 22.8% of the population in the local impact area is composed of people aged between 0-15 years. Children and adolescents are often more susceptible to health issues and need to have easy access to community infrastructure, services and open space.
- **Priority Group 2: People with long-term health problems / disabilities** – Around 13.3% of the population in the local impact area is composed of people aged 65 and over. However, this is expected to grow rapidly as a proportion over the next few decades including increasing numbers of elderly people with dementia.
- **Priority Group 3: People on low incomes and those unemployed** – Generally, people nearby rank highly in terms of income; however, there are pockets of more deprived neighbourhoods in the local impact area. People living in poverty are more susceptible and more likely to experience health problems linked to not being able to access suitable housing, food and healthcare.

Employment is known as a protective factor in terms of long-term health. This group may be more susceptible to health issues and will need to have easy access to community infrastructure and services. Given the impact of the COVID-19 pandemic, unemployment rates are likely to be higher in the local and wider impact area.

Construction and operation impacts

8.5 The proposed development is expected to have a slight negative to neutral impact during the construction phase and an overall slight positive impact on the health of the priority groups and the overall community in the local impact area once operational.

8.6 The slight negative impacts relate mainly to access to open space, active travel, noise and vibration and social cohesion during construction which can be limited with the appropriate mitigation measures for the different construction phases adopted in the future CLP and CEMP. During construction, however, there will be slight to moderate positive impacts in terms of access to work. All the rest of themes are assessed to have neutral impacts during construction.

- 8.7 The positive operational health outcome is linked to the provision of housing (including affordable and wheelchair adaptable housing), commercial and community floorspace, a new health hub, high-quality local amenities, public realm improvements and better access to healthy food. The impacts across the rest of the themes, namely air quality, crime reduction and minimising use of resources are assessed as neutral during the operation.

Active Design Principles

- 8.8 The proposed illustrative development aligns with a number of Sport England and Public Health England's Active Design principles which are linked to optimising new developments to deliver positive, active lifestyle outcomes. The proposed development does this by providing a number of playing pitches, space for a new commercial gym, sports facilities, community centre, play spaces and a linear park along the River Ouzel. In addition, the proposed development has been designed to prioritise the pedestrians and cyclists through the access routes between the community hub, local parades, employment areas, and schools. As a result, the proposed development will help to deliver walkable communities, encourage active lifestyles and improve existing and future residents' health and wellbeing.

Cumulative Impacts

- 8.9 The cumulative impacts in both stages of the assessment are expected to be neutral during construction and slight positive during the operation. In particular, the cumulative impacts of road closures will have a slight negative impact during construction; however, the appropriate mitigation will be agreed with the Council in relevant Construction and Logistics Plan. Access to work and employment opportunities will cumulatively be slight positive during construction and the rest of the impacts across the different themes of this assessment are assessed neutral.
- 8.10 During operation, the developments will cumulatively increase the provision of housing, education facilities, social infrastructure, ecological enhancements and access to employment generating slight to moderate positive impacts. For the rest of the themes assessed in this HIA the impacts are expected to be neutral.

