

Liverpool City Region Combined Authority:

Spatial Development Strategy

Integrated Appraisal

Scoping Report
(Post Consultation Update)

October, 2020



Quality information

<u>Prepared by</u>	<u>Checked by</u>	<u>Verified by</u>	<u>Approved by</u>
Larna Smith Graduate Urban Planner	Ian McCluskey Principal Consultant	Ian McCluskey Principal Consultant	Frank Hayes Associate Director
Laurie Marriott Graduate Urban Planner			
Simon Long Economics Consultant			
Ian McCluskey Principal Consultant			
Laura Walker Equalities Specialist			
Alexandria Moore Principal Sustainability and Resilience Consultant			

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Prepared for:

Liverpool City Region Combined Authority (LCRCA)

AECOM Limited
4th Floor
Bridgewater House
Whitworth Street
Manchester
M1 6LT
UK

T: +44 (161) 907 3500
aecom.com

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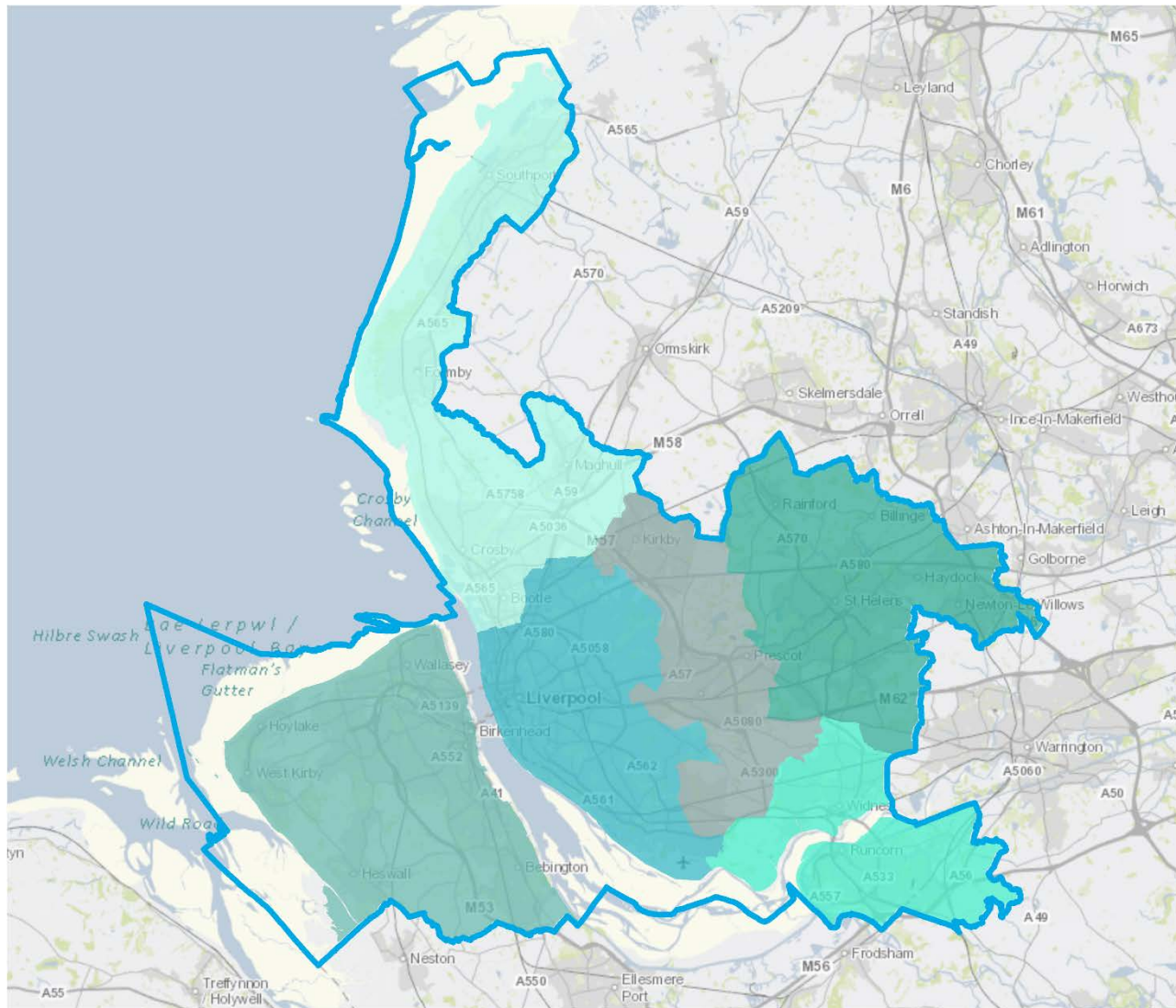
1. Introduction

1.1 Background

- 1.1.1 The Liverpool City Region Combined Authority (LCRCA) consists of Halton Council, Knowsley Council, Liverpool City Council, Sefton Council, St Helens Council and Wirral Council. Figure 1.1 provides a location map for the Liverpool City Region, showing each of the constituent authorities and the surrounding areas.
- 1.1.2 The LCRCA are looking to prepare a statutory Spatial Development Strategy (SDS) which will be the first of its kind for the region. It will set out a high-level spatial strategy to help guide future development; whilst tackling climate change and addressing social inequalities.
- 1.1.3 AECOM has been commissioned by the LCRCA to lead on an Integrated Impact Assessment (IIA) in support of the SDS.
- 1.1.4 This document is a ‘scoping report’, which sets out the background information, policy context and key issues in relation to a range of sustainability issues. This is one of the first outputs from the IIA process, and it sets the framework for future work.

Table 1.1: Key facts relating to the Spatial Development Strategy (SDS)

Name of Responsible Authorities	Liverpool City Region Combined Authority: <ul style="list-style-type: none"> • Halton Borough Council • Knowsley Council • Liverpool City Council • Sefton Council • St. Helens Council • Wirral Council
Title of Plan	Liverpool City Region Combined Authority: Spatial Development Strategy
Spatial Area covered by the plan	The SDS will cover the Liverpool City Region which consists of six local authorities listed above. However, there will also be a need to consider cross boundary issues with neighbouring locations (especially those with a strong link to the LCR such as Warrington and West Lancashire).
Plan contact point	Jamie Longmire Senior Spatial Planning Officer jamie.longmire@liverpoolcityregion-ca.gov.uk
IIA Contact Point	Ian McCluskey Principal Consultant ian.mccluskey@aecom.com



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Liverpool City Region Combined Authority

Liverpool City Region

Local Authority

- Halton
- Knowsley
- Liverpool
- Sefton
- St. Helens
- Wirral

The Blue outline is compiled from constituent Local Authority boundary data which extends beyond the land boundaries. This open source data allows for more fine-grained analysis at LSOA level (rather than using the 'land-only' boundaries for the LCR, which only present data at MSOA level).

Source for all of the LA boundaries: UK Data Service (<https://borders.ukdataservice.ac.uk/bds.html>)

under 'Open Government Agreement'.



*Liverpool City Region
Integrated Impact Assessment*

1.2 Relationship with other plans

- 1.2.1 The LCR Spatial Development Strategy is driven by a range of other plans, policies and strategies, and will have connections with other City Region and Local Authority documents.
- 1.2.2 Figure 1.2 below sets out the broad framework within which the LCRSDS will sit; listing key policy drivers and how the strategy fits within a wider hierarchy of land use plans at local authority level. Other important policies, plans and strategies have also been illustrated, but this list is by no means exhaustive.

Figure 1.2: Relationship with other Plans



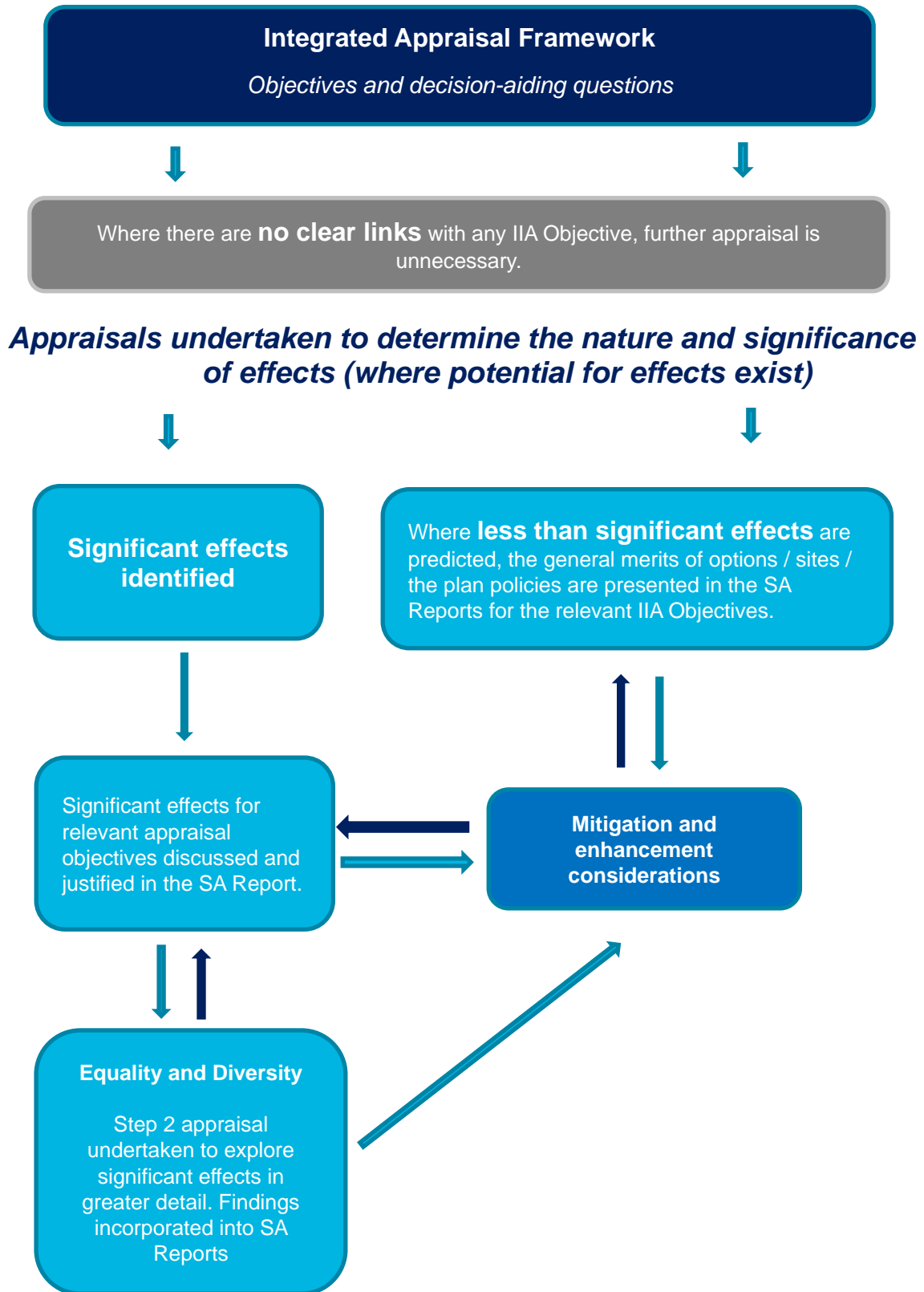
1.3 What is Integrated Impact Assessment?

- 1.3.1 There are a range of impact assessment tools that can be used to assess how a plan, programme, project or particular development performs against a range of criteria. The common aim of these tools is to gain an understanding of impacts upon environmental, social or economic issues (or a combination of these); with the aim of achieving a better performing proposal overall.
- 1.3.2 Certain impact assessment tools are a legal requirement for when preparing particular plans, and this is the case for the LCR Spatial Development Strategy. For example:
- A Sustainability Assessment / Strategic Environmental Assessment (SA/ SEA) which reviews and predicts how a proposal performs against a range of environmental and sustainability factors; whilst suggesting ways in which mitigation and enhancement measures can be taken into consideration.
 - A Health Impact Assessment (HIA) as defined by the World Health Organisation is a practical approach to reviewing potential health effects of plans, policies and projects.
 - An Equalities Impact Assessment (EqIA) reviews and seeks to ensure that equality and fairness is achieved in the delivery of services and how people experience life.
 - An assessment which has regard to community safety and the 'prevention of crime'.
- 1.3.3 It is possible to undertake these processes separately, but often an integrated approach is taken. This is sensible given that there are considerable overlaps between the processes.
- 1.3.4 An integrated impact assessment (IIA) therefore helps to reduce duplication of efforts (and the number of separate reports); whilst taking advantage of the strengths of each impact assessment tool. In turn, this aids in undertaking effective consultation with interested parties.
- 1.3.5 To undertake a successful IIA it is important to set out the approaches clearly from the outset and to invite comments. This is one of the purposes of the Scoping Report.
- 1.3.6 It is also important to ensure that the IIA is closely aligned to plan-making activities so that it can guide / influence decisions in a meaningful and positive way.

1.4 Our approach to integration

- 1.4.1 SA/SEA can perhaps be regarded as the most comprehensive impact assessment tool with regards to plan-making in the UK. This is because it is enshrined in legislation, and covers a wider range of factors than HIA and EqIA.
- 1.4.2 For this reason, the SA / SEA process is typically used as the over-arching framework for which an integrated impact assessment is conducted. The requirements of HIA and EqIA (which is also driven by legislation) are then woven into the SA process.
- 1.4.3 This is the approach being taken for the Liverpool City Region Spatial Development Strategy, and is illustrated in Figure 1.2.

Figure 1.2: Tiered approach to appraisal



Meaningful integration

- 1.4.4 SA should cover all the relevant sustainability factors that a plan could have significant effects upon. In this sense, health issues, equality and diversity issues and community safety issues would all typically be covered through the SA process.
- 1.4.5 However, IIA is not simply about including health, equality and community safety issues within a standard SA process; rather it should present nuanced approaches to data gathering and assessment within the broader framework of an SA. This ensures that the principles and methods of EqlA and HIA are captured properly, whilst using the SA as the overall approach to conducting the assessments.
- 1.4.6 For each step of the SA process, we have sought to reflect the requirements and benefits of HIA and EqlA in a meaningful, but proportionate way.

IIA Stage	How have HIA and EqlA been integrated?
Scoping	<p>Specific baseline information presented for each group with protected characteristics.</p> <p>Information relating to health characteristics of affected populations have been included in a specific health and wellbeing chapter. Further health related baseline data is incorporated throughout the scoping report, with health and wellbeing forming a central theme and vulnerable 'receptors' being identified throughout.</p> <p>A focused literature review has been included for each topic area to demonstrate links to health and wellbeing.</p>
Appraisal framework / Methods	<p>The appraisal methodology includes several objectives relating to health and equalities; with specific objectives set-out in the IIA framework.</p> <p>Where significant effects are identified through the IIA process, this will trigger a more detailed 'second tier' appraisal in terms of health or equality impacts. The purpose of this approach is to ensure a proportionate approach is taken for strategic issues, but allowing for potentially significant impacts to be explored further.</p> <p>Sources of information, assumptions and team members that will undertake appraisals have been identified. Demonstrates how stakeholders will input to the appraisal process.</p> <p>Key stakeholders will be engaged to input to the assessment findings. This is important because HIA and EqlA work best when they involve people who can contribute different perspectives, knowledge and insight.</p>
Appraisal of options	<p>The options identification process will seek to identify whether there are approaches that are led by social value and health outcomes.</p> <p>Appraisal of options will report upon the implications with regards to health impacts and equalities (through the Integrated Appraisal Process).</p>

IIA Stage	How have HIA and EqIA been integrated?
Appraisal / screening of policies	The Plan will be appraised against the IIA framework, with the primary aim of identifying significant effects. The IIA involves objectives and supporting questions that will interrogate the health and equality implications of the Plan.
Mitigation and enhancement	Recommendations are made in SA, HIA and EqIA; each with the intention of avoiding and minimising negative effects and enhancing benefits.
Detailed appraisal (if necessary)	Should significant effects be identified, this would trigger further exploration of potential impacts through the following steps: <ul style="list-style-type: none"> • Gather additional / more detailed information with regards to potentially affected receptors. • Identify impact pathways for specific affected groups.

1.4.7 We propose a tiered approach to assessment whereby all effects are identified initially through the IIA Framework. Where potentially significant effects are identified, this would trigger more detailed assessments tailored to the particular issues involved (whether these are related to HIA, EqIA, or community safety; acknowledging the crossover between these factors).

1.5 Scoping explained

Introduction

- 1.5.1 Scoping is undertaken as part of most impact assessment processes, and therefore, an integrated approach simply helps to combine the evidence gathering stages and devise appropriate methodologies.
- 1.5.2 As described above, the IIA uses the SA process as the over-riding structure to the approach. Therefore, the scoping exercise is arranged and presented in a similar way.
- 1.5.3 Essentially, scoping involves identifying a 'framework' of sustainability issues and objectives that should be a focus of, and provide a methodological framework for, the appraisal of the emerging plan (and reasonable alternatives).
- 1.5.4 In order to facilitate the identification of sustainability issues/objectives, scoping firstly involves review of the 'policy context' and 'baseline'. It is not a firm requirement to provide a review of literature as part of scoping. However, this is considered a useful exercise to help identify evidence to support any assumptions that are made about the nature of effects. Understanding research and real-world studies is also helpful in terms of feeding into the key issues identification process.
- 1.5.5 Scoping for the IIA therefore involves the following steps:
1. **Context review** - a review of existing policy and issues/objectives established by Government, the Council and other key organisations. This is broken down by the level at which the policy exists including; *international, national, city region, and local*.
 2. **Focused literature review** – a focused review of relevant literature and research that demonstrates the links between different issues and how they interact with health and other elements of sustainability.
 3. **Baseline review** - a review of the current 'state of the environment, economy and society' and a consideration of how this might evolve in the absence of the plan. A review of key trends and anticipated impacts that existing/emerging Local Plans are likely to have.
 4. **Key issues summary** - a summary of the key (*in the sense that the plan may have an effect*) problems and opportunities identified through steps (1), (2) and (3).
 5. **ISA Framework development** - a refinement of the key issues into a set of sustainability objectives (and description of assessment methods).
- 1.5.6 As described in the previous section, the health and equalities information gathered to support HIA and EqIA will be built into the wider IIA process. At this stage, the level of information is strategic, but further information can be gathered in support of more detailed assessments should this be deemed necessary.

Structure of this report

1.5.7 The outcomes of the scoping elements introduced through steps 1-5 above have been presented under a series of fourteen key themes, as follows:

- Climate change resilience
- Climate change mitigation
- Health and wellbeing
- Housing
- Economy
- Transport
- Equality and diversity
- Biodiversity
- Air quality
- Water
- Soil and land
- Landscape character
- Historic environment
- Waste
- Minerals

1.5.8 The selected environmental themes incorporate the 'SEA topics' suggested by Annex I(f) of the SEA Directive.¹

1.5.9 These were refined to reflect a broad understanding of the anticipated scope of plan effects and to incorporate the requirements for HIA and EqIA.

¹ The SEA Directive is 'of a procedural nature' (para 9 of the Directive preamble) and does not set out to prescribe particular issues that should and should not be a focus, beyond requiring a focus on 'the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors' [our emphasis]

2. Climate change resilience

2.1 Introduction

- 2.1.1 Planning for climate change resilience is a key aspect of planning for climate change adaptation. Climate change resilience is also a highly cross-cutting topic, reflecting the breadth of activities and assets that will be affected by climate change. Such complexity makes building resilience challenging and requires a holistic, flexible and cross-cutting approach to development and planning. It is paramount to understand how systems function and interact, and rethink how regions can be more flexible and adaptable to change. It also offers a great opportunity, as resilience calls for integrated interventions that can produce multiple co-benefits. For example, green infrastructure not only reduces vulnerability to the shocks of heatwaves and flooding, but also improves air and water quality, as well as public health and wellbeing of residents.
- 2.1.2 Within the United Kingdom there is a primary definitive source of information on the issues of relevance to the Liverpool Region, namely the iterative process of the United Kingdom government preparing and regularly updating a Climate Change Risk Assessment, followed by a review undertaken by the Committee on Climate Change's (CCC) Adaptation Sub Committee (ASC), under a regime established by the Climate Change Act.
- 2.1.3 This section provides a strategic review of the policy context, literature, and baseline position in relation to these important factors.
- Flood Risk
 - Other climate change impacts

2.2 Context review

International

- 2.2.1 The Intergovernmental Panel on Climate Change (IPCC) is a UN body which holds the most authoritative international role when it comes to climate change. It is dedicated to providing global objectives and scientific understanding which aids policy response.
- 2.2.2 Climate Adaptation is included in the United Nations' Sustainable Development Goals (UN SDGs), and the United Kingdom wishes to demonstrate leadership in the delivery of these goals. As a result, the Greening Government Commitments² state that: *"Climate resilience planning and mitigation shall be incorporated at all business levels. Strategic climate impact risk mitigation shall be embedded in strategic programmes and plans including estate rationalisation and disposal. Similarly, climate mitigation and adaptation measures shall be incorporated into projects to ensure deliverables are climate resilient. Where climate risks are identified, appropriate adaptation actions shall be undertaken"*.
- 2.2.3 **UN Sustainable Development Goals** are 17 life changing goals outlined by the UN in 2015. Taking action against a wide range of the goals will help to improve resilience to climate change. For example, protection of land, air and water resources, reducing inequalities, and tackling poverty.

² <https://www.gov.uk/government/publications/greening-government-commitments-2016-to-2020>

National

2.2.4 Key messages from the **National Planning Policy Framework**³ (NPPF) include:

- Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.
- Inappropriate development in areas at high risk of flooding should be avoided by directing development away from areas of highest risk (whether existing or future).
- Strategic policies should be informed by a strategic flood risk assessment and should manage flood risk from all sources.
- Plans should take account of the effects of climate change in the long term, taking into account a range of factors including flooding. Adopt proactive strategies to adaptation and manage risks through adaptation measures including well planned green infrastructure.
- Plans should reduce risk from coastal change by avoiding inappropriate development in vulnerable areas and not exacerbate the impacts of physical changes to the coast.

2.2.5 A second part of call is the NPPF (2019) the **Planning Practice Guidance** (PPG), paragraph 148 identifies the objective as being to “*minimise vulnerability and improve resilience*” and highlights the central importance of achieving this objective in respect of flood risk. Paragraph 149 then sets out further detail, identifying the need to take into account: “*the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures... [and] support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.*”

2.2.6 With regards to the PPG, the most relevant part of the section on Climate Change which presents the following bullet point list of ‘examples’ of ways local planning can support adaptation:

- “Considering future climate risks when allocating development sites to ensure risks are understood over the development’s lifetime;
- Considering the impact of and promoting design responses to flood risk for the lifetime of the development;
- Considering availability of water and water infrastructure for the lifetime of the development and design responses to promote water efficiency and protect water quality;
- Promoting adaptation approaches in design policies for developments and the public realm relevant.”

2.2.7 Focusing on infrastructure, the National Infrastructure Commission (NIC) published the National Infrastructure Assessment (2018), which identified the key national challenges, and the government is developing a National Infrastructure Strategy. The NIC also published two key reports in 2019:

³ MHCLG (2019) National Planning Policy Framework [online] available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_web.pdf

- Strategic Investment and Public Confidence – this report is clear that “the regulatory system has not adequately addressed societal interests: it needs to work more effectively to achieve net zero greenhouse gas emissions by 2050, transition to full-fibre digital networks, and manage the increasing risks of floods and drought.” It calls for a much more coordinated approach, explaining that:⁴ “The current system leaves strategy primarily to infrastructure owners and providers. But they may not be best placed to assess the coming challenges, and they do not have the right incentives to build the right infrastructure to address them... There are some good examples of the system delivering strategic, long-term investment, however in general the system is not designed to deliver this... [R]egulators should demonstrate how they have taken consideration of the strategic vision of... local government...”
- Resilience Study Scoping Report - includes a section on ‘Resilience in the planning system’, although the focus is on Nationally Significant Infrastructure Projects (NSIPs) more so local infrastructure.⁵

2.2.8 One of the three overarching objectives of the NPPF is an environmental objective to ‘contribute to protecting and enhancing our natural, built and historic environment’ including by ‘mitigating and adapting to climate change’ and ‘moving to a low carbon economy.’ ‘The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.

2.2.9 Focusing on planning legislation, the **Planning and Compulsory Purchase Act 2004**, which governs the preparation of Local Plans, requires that the Local Plan, taken as a whole, includes “*policies designed to secure that the development and use of land in the local planning authority’s area contribute to the mitigation of, and adaptation to, climate change.*”

2.2.10 The **National Flood and Coastal Erosion Risk Management Strategy** for England⁶ sets out a vision of a nation ready for, and resilient to, flooding and coastal change to the year 2100.

2.2.11 The **Climate Change Act, 2008** Regime requires the Government to present to Parliament an assessment of the climate change risks for the UK every five years. Following the publication of each Change Risk Assessment, the Government must lay out its objectives, policies and proposals to address the climate change risks and opportunities. The second National Adaptation Programme (NAP2, 2018-2023), setting out these objectives, policies and proposals, was published in 2018.

2.2.12 The ASC is required by the Act to assess the NAP and present progress reports. The most recent report was published in 2019, presenting a key diagram concluding as follows:⁷

*“Leaving adaptation responses to local communities and individual organisations without a strategic plan is not a strategy to manage the risks from climate change. Climate change impacts and adaptation are **associated with market failures, and institutional or behavioural barriers** that require Government intervention. These barriers are caused partly by adaptation requiring numerous interactions through time and between communities, regions, and economic sectors (...). For individual businesses, organisations or the public, it is extremely challenging to build awareness and take adaptation actions at a scale that is effective and efficient, and that accounts for social costs and benefits (...). These factors mean that adaptation action will not be successful without a strong,*

⁴ See [nic.org.uk/publications/strategic-investment-and-public-confidence/](https://www.nic.org.uk/publications/strategic-investment-and-public-confidence/)

⁵ See [nic.org.uk/publications/resilience-study-scoping-report/](https://www.nic.org.uk/publications/resilience-study-scoping-report/)

⁶ Environment Agency (2020) National Flood and Coastal Erosion Risk Management Strategy for England [online] available at: <https://www.gov.uk/government/publications/national-flood-and-coastal-erosion-risk-management-strategy-for-england--2>

⁷ See <https://www.theccc.org.uk/tackling-climate-change/preparing-for-climate-change/uk-adaptation-policy/>

*integrated, strategic national plan. Given the piecemeal nature of the NAP, the gaps within it, the decline in resources and local support, and the lack of progress in managing risks, the Committee's view is that the Government's approach of **mainstreaming adaptation has, so far, not succeeded** in putting in place a coherent and coordinated plan, nor the resources to enable the required actions to be carried out."*

The ASC report (2019) presents 12 recommendations, most of which are of limited direct relevance to Local Plans. However, the previous ASC report (2017) made the following notable recommendation: *“The Government should review the effectiveness of the land-use planning system in achieving reductions in greenhouse gas emissions from buildings and transport, and enhancing the resilience of communities and the built environment to the impacts of climate change. The review should consider both strategic and local land-use allocation, and building and infrastructure design.”*

2.2.13 The **Committee of Climate Change** published a 2012 report entitled ‘How Local Authorities Can Reduce Emissions and Manage Climate Change Risk’⁸ which emphasises the crucial role councils have in helping the UK meet its carbon targets and preparing for the impacts of climate change. It outlines specific opportunities for reducing emissions and highlights good practice examples from local authorities.

2.2.14 The **UK Climate Change Risk Assessment**⁹ is published on a 5-yearly cycle in accordance with the requirements of the Climate Change Act 2008. It required the Government to compile an assessment of the risks for the UK arising from climate change, and then to develop an adaptation programme to address those risks and deliver resilience to climate change on the ground. For both the 2012 and the 2017 UK Climate Change Risk Assessment, the Adaptation Sub-Committee commissioned an evidence report containing six priority risk areas requiring additional action in the next five years:

- Flooding and coastal change risks to communities, businesses and infrastructure;
- Risks to health, well-being and productivity from high temperatures;
- Risk of shortages in the public water supply, and for agriculture, energy generation and industry;
- Risks to natural capital, including terrestrial, coastal, marine and freshwater ecosystems, soils and biodiversity;
- Risks to domestic and international food production and trade; and
- New and emerging pests and diseases, and invasive non-native species, affecting people, plants and animals

2.2.15 The **Flood and Water Management Act (2010)**¹⁰ sets out measures to ensure that risk from all sources of flooding, not just rivers and seas, are managed more effectively. This includes: incorporating greater resilience measures into the design of new buildings; utilising the environment in order to reduce flooding; identifying areas suitable for inundation and water storage to reduce the risk of flooding elsewhere; roll back development in coastal areas to avoid damage from flooding or coastal erosion; and creating sustainable drainage systems (SuDS).

2.2.16 Recent context also comes in the form of the **Court of Appeal Judgement R (Friends of The Earth) V Secretary Of State For Transport And Others** in respect of expansion of capacity at Heathrow Airport by the addition of a third runway under the policy set out in the “Airports National Policy Statement: new runway capacity and infrastructure at airports in the south east of England” (“the ANPS”). The Court identified a fatal flaw in the process of preparing the ANPS, stating:

- “This relates to the legislative provisions concerning the Government’s policy and commitments on climate change, in particular the provision in section 5(8) of the **Planning Act**, which requires that the reasons for the policy set out in the ANPS “*must ... include an explanation of how the policy... takes account of Government policy*”

⁸ CCC (2012) ‘How local authorities can reduce emissions and manage climate risks’ [online] available at: <https://www.theccc.org.uk/publication/how-local-authorities-can-reduce-emissions-and-manage-climate-risks/>

⁹ HM Government (2008): ‘Climate Change Act 2008’, [online] available at: <http://www.legislation.gov.uk/ukpga/2008/27/contents>

¹⁰ Flood and Water Management Act (2010) [online] available at: <http://www.legislation.gov.uk/ukpga/2010/29/contents>

*relating to... climate change". We have concluded, in particular, that the designation of the ANPS was unlawful by reason of a failure to take into account the Government's commitment to the provisions of the **Paris Agreement** on climate change..."*

- 2.2.17 The requirement of the Planning Act referenced by the Court does not apply to the Scoping exercise; however, there are lessons to learn, nonetheless. Specifically, the judgement serves to indicate the importance of *explicitly* taking account of climate change commitments on the basis of an up-to-date understanding of everything that is "evidently material", as opposed to taking a narrow view.
- 2.2.18 Focusing on infrastructure, the National Infrastructure Commission (NIC) published the National Infrastructure Assessment (2018), which identified the key national challenges, and the government is developing a National Infrastructure Strategy. The NIC also published two key reports in 2019:

Strategic Investment and Public Confidence – this report notes that *"the regulatory system has not adequately addressed societal interests: it needs to work more effectively to achieve net zero greenhouse gas emissions by 2050, transition to full-fibre digital networks, and manage the increasing risks of floods and drought."* It calls for a much more coordinated approach, explaining that:¹¹ *"The current system leaves strategy primarily to infrastructure owners and providers. But they may not be best placed to assess the coming challenges, and they do not have the right incentives to build the right infrastructure to address them (...). There are some good examples of the system delivering strategic, long-term investment, however in general the system is not designed to deliver this (...). [R]egulators should demonstrate how they have taken consideration of the strategic vision of (...) local government (...)."*

- 2.2.19 Resilience Study Scoping Report - includes a section on 'Resilience in the planning system', although the focus is on Nationally Significant Infrastructure Projects (NSIPs) more so than on local infrastructure.¹²

City Region

- 2.2.20 **Built Climate Resilience: Good Practice Case Studies in Liverpool City Region (2017)** is a report prepared by the LCR CA highlighting existing best practice in the LCR and identifying opportunities elsewhere within the CA to apply this knowledge.
- 2.2.21 The Liverpool City Region Combined Authority declared a **Climate Emergency** on 24th May 2019, which included a number of initiatives to take climate change action primarily focusing on mitigation however these will also benefit climate change resilience, including assessing and adjust the region's current activities both in terms of their scope and how they are undertaken.

Local

- 2.2.22 Table 2.1 below highlights the common themes, policy approaches and strategic priorities for climate change resilience that are common to each of the six authorities. Locally specific issues have also been drawn out where they are of strategic importance.

¹¹ See [nic.org.uk/publications/strategic-investment-and-public-confidence/](https://www.nic.org.uk/publications/strategic-investment-and-public-confidence/)

¹² See [nic.org.uk/publications/resilience-study-scoping-report/](https://www.nic.org.uk/publications/resilience-study-scoping-report/)

Table 2.1. Key messages for climate change resilience.

Key policies & principles	Source / Authorities
New development must consider the future impacts of climate change and adapt accordingly.	Adopted or emerging Local Plan documents for All Local Authorities.
There is a need to manage and reduce flood risk.	Adopted or emerging Local Plan documents for All Local Authorities, including Strategic Flood Risk Assessments. Knowsley Local Flood Risk Management Strategy.
There is a need to raise community awareness of climate change resilience and actions to tackle climate change.	The Mayor of Liverpool's Inclusive Growth Plan 2018 states that there will be engagement across communities on the protection of climate change, waste reduction and recycling. The achievement is to improve local environment awareness and engagement across environmental issues.

2.3 Focused literature review

Climate change is likely to have profound impacts on health and wellbeing across the world

2.3.1 The WHO, 2020 states that climate change is the greatest threat to global health in the 21st century. Climate change has the ability to create health effects associated with extreme weather events, outbreaks of infectious diseases, malnutrition and other non-communicable diseases.

2.3.2 The ability to adapt to a changing of climate is essential in maintaining human health. In 2015, the United Nations delivered 17 sustainable development goals¹³, one of them being climate action.

The effects of flooding can severely affect people's mental health and wellbeing

2.3.3 Flooding has been found to increase psychological morbidity among participants who's homes have flooded. Approximately 20% of flood affected people experience greater depression, 28% greater anxiety and 36% greater post-traumatic stress disorder (*Waite et. al. 2017*).

2.3.4 The percentage of people whose homes have been flooded have mental health issues six times higher than those that have not been (*Public Health England, 2017*).

2.3.5 There is evidence that suggests the disruption of climatic events such as flooding can cause anxiety, depression, stress, trauma, poor sleep quality and post-traumatic stress disorder (*Berry et. al. 2010; Fritze et. al. 2008, Berry et. al. 2008, Waite et. al. 2017, Public Health England, 2017, Alderman et. a. 2013*).

2.3.6 *Du et. al. (2010)* reviews different scales health implications that occur once climatic events have taken place. Immediate health related can include drowning, injuries, hypothermia and animal bites. Medium term effects include infected wounds, complications of injury, communicable diseases and starvation. Longer term effects can include chronic disease, disability and mental health.

¹³ <https://sustainabledevelopment.un.org/?menu=1300>

- 2.3.7 In emergency contexts, mental disorders can be considered a long-term psychological outcome which arises from conflicts, natural disasters and other environmental conditions (*Slekiene & Mosler 2019*).

Climate change can discourage outdoor recreation

- 2.3.8 People are less likely to exercise during extreme weather events and this can be a detriment to overall physical health. For example, extreme heat exposure causing heat exhaustion (*Berry et. al. 2010*).

- 2.3.9 Climate change can affect community's overall well-being by damaging physical environments where people socialise and come together for example public green spaces and public squares (*Berry et. al. 2010*).

The effects of climate change are often felt more by deprived communities

- 2.3.10 Climate change particularly affects people that are within low-income and disadvantaged communities as they are considered vulnerable to the effects of climate change (*Berry et. al. 2010; Fritze et. al. 2008, Ahern et. al. 2005*).

- 2.3.11 People whose lives depend on the state of the environment such as farmers or people who work within agricultural industry are considered vulnerable and disadvantaged, for example in Australia, rural areas experience severe weather events such as prolonged droughts and this can have negative effects on the agricultural industry (*Berry et. al. 2009*).

2.4 Baseline review

- 2.4.1 As a region surrounded by water and located on a number of floodplains, flooding is regarded as one of the most likely major disasters in Liverpool City Region. Floods bring with them a risk to life and can damage properties, businesses, roads and infrastructure. The main types of flooding are coastal flooding, river flooding, and surface water flooding (due to excess rainfall). Other sources of flood risk include groundwater flooding, sewerage flooding and flooding from reservoirs.

- 2.4.2 Figure 2.1 reveals that the vast majority of flood risk areas in the Liverpool City Region are away from the most densely populated areas. There are a number of places which act as an exception to these circumstances, areas to the north of Southport show the potential for widespread flooding which encroaches upon some land with high population density. Some areas to the south of Formby and around the north and north west of Wirral also show vulnerabilities.

- 2.4.3 The Mersey Estuary Catchment Flood Management Plan (2009) estimate that 19,000 properties in the catchment are at risk of fluvial flooding with a 1% annual probability (1 in 100). Specifically, to the areas of Liverpool and Birkenhead, 4,850 properties were found at risk from a 1% annual probability event. In addition, critical infrastructure vulnerable to flooding includes 12km of transport network, 7 recreational assets and an additional 34 infrastructures and community assets including schools.¹⁴

- 2.4.4 The Merseyside Resilience Forum Planning for Emergency report (2014) found Merseyside has a significant coastal flood risk with approximately 7,500 properties in the tidal flood area (mainly found in the Wirral and Sefton coasts, popular recreational and retirement areas). Marine transport is a key sector at risk of coastal flooding with Liverpool's 13 working docks, ferry services, and Tranmere oil terminal.¹⁵

¹⁴ Environment Agency. 2009. Mersey Estuary Catchment Flood Management Plan. Summary Report December 2009. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/293769/Mersey_Estuary_Catchment_Flood_Management_Plan.pdf

¹⁵ MRF Secretariat. 2014. Emergency Preparedness and Management of the Main Risks in Merseyside. <https://www.merseysideprepared.org.uk/media/1213/emer-prep-man-of-the-main-risks-in-merseyside.pdf>

- 2.4.5 Many initiatives (i.e. flood defences) have been completed to protect the Merseyside coastline over the past 25 years and the risk of coastal flooding has been reduced however, the consequence of flooding if these defences were to be breached would be high.
- 2.4.6 Regarding inland flooding, no region wide assessment has been completed. The Sefton Borough Council's Surface Water Management Plan (2011) identified that sewerage infrastructure in the borough is mainly based on Victorian sewers with limited outputs. 47% of the sewer network would not provide the capacity to adequately remove excess water. As a result, localised flooding associated with sewerage network and land drainage systems remains a risk. Approximately 40,100 homes, businesses and infrastructure are vulnerable to severe events with 1% annual probability.¹⁶
- 2.4.7 Figure 2.2 shows the risk of surface water flooding across the City Region, based on an extreme flood event, of which the risk category is 1 in 1000 years. Broadly, the north of the City Region looks to be more vulnerable to surface water flooding. However, pluvial flood risk is highly dependent upon local factors and hence its distribution is less important than factors such as provision of sufficient drainage, infiltration rates, and topography. Urban, more built-up areas are generally more vulnerable to the risk of surface water flooding.
- 2.4.8 Overall the predicted impacts of flooding identified include: Loss of life; damage to properties and businesses; damage or disruption to critical infrastructure including roads, utilities, transport links; pollution and contamination of local environments; long-term damage to tourism and businesses; long-term psychological and health impacts.¹⁷

16 Sefton Metropolitan Borough Council. 2011. Surface Water Management Plan. Non-Technical Summary.

17 MRF Secretariat. 2014. Emergency Preparedness and Management of the Main Risks in Merseyside.

<https://www.merseysideprepared.org.uk/media/1213/emer-prep-man-of-the-main-risks-in-mside.pdf>

Figure 2.1 Fluvial flood risk

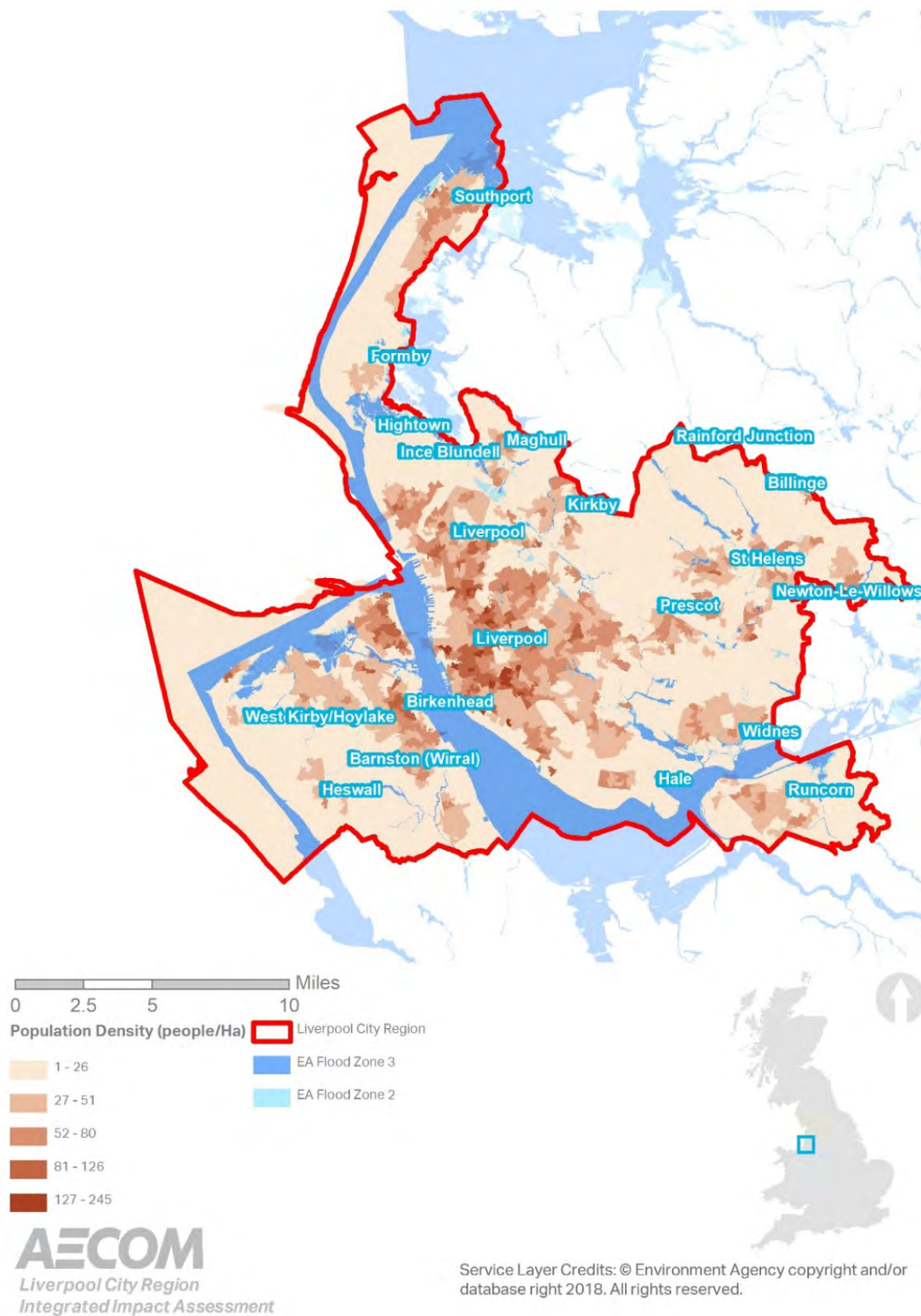


Figure 2.2 Surface water flood risk



AECOM
Liverpool City Region
Integrated Impact Assessment

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Sea level rise

- 2.4.9 Climate change and the current predictions for sea level rise will cause particular issues for coastal flood management. Increasing sea levels could significantly alter the topography of the coastline and put additional strain on coastal flood defences in the region. Where the coast is backed by hard defences, in areas such as Southport and Crosby there is likely to be an increased frequency of water coming over the top of the sea defence structures.¹⁸

Coastal erosion

- 2.4.10 Coastal erosion is the wearing-away of land and the removal of beach sediments by wave action, tidal currents, wave currents or drainage.¹⁹ Climate change and sea level rise pose additional constraints for coastal change management, with significant alterations of the topography of the coastline. This is likely to include an inland realignment of the coastal dunes and the salt marsh.²⁰
- 2.4.11 The existing natural sand dune complex has been weakened by heavy modifications from human activity, including forestry, agriculture, sand extraction and development, increasing the vulnerability of the region.²¹
- 2.4.12 The Sefton Council Flood and Coastal Erosion Risk Management Strategy (2015-2018) identifies areas affected by coastal erosion around Formby and from Hightown to Crosby. Whilst this strategy only considers Sefton, the risk does not stop at borders and high-risk areas have been identified on the border with Liverpool. The Strategy predicts limited impacts felt over the next fifty years, with significant increases in these towards the end of the century.²²
- 2.4.13 The North West England and North Wales Shoreline Management Plan (SMP2)²³ identifies a long-term plan to manage erosion risk to property and infrastructure if and when threatened by erosion but as far as possible allow natural processes to continue. Action plans are created across three areas; Seaforth to River Alt, the Formby Dunes, and Ribble Estuary.

Storms

- 2.4.14 One of the most severe impacts of climate change on critical infrastructure is the increase in the frequency and severity of storms, leading to more extreme erosion events.
- 2.4.15 The impacts of erosion hazards are of regional and national importance as they are costly, wide ranging, and critical to the vulnerability of critical infrastructure assets. In the UK storm and erosion hazards cause an additional £336 million a year in flood damage, £238 million a

18 <https://www.liverpoollep.org/wp-content/uploads/2015/06/Building-Climate-Resilience-in-Liverpool-City-Region-FINAL2017.pdf>

19 Sefton Council. 2015. Flood and Coastal Erosions Risk Management Strategy 2015-2018.

<https://modgov.sefton.gov.uk/documents/s62806/Seftons%20Flood%20and%20Coastal%20Erosion%20Risk%20Management%20Strategy.pdf>

20 Liverpool City Region Brussels Office. 2019. Building Climate Resilience. Good Practice Case Studies in Liverpool City Region. <https://www.liverpoollep.org/wp-content/uploads/2015/06/Building-Climate-Resilience-in-Liverpool-City-Region-FINAL2017.pdf>

21 Liverpool City Region Brussels Office. 2019. Building Climate Resilience. Good Practice Case Studies in Liverpool City Region. <https://www.liverpoollep.org/wp-content/uploads/2015/06/Building-Climate-Resilience-in-Liverpool-City-Region-FINAL2017.pdf>

22 Sefton Council. 2015. Flood and Coastal Erosions Risk Management Strategy 2015-2018.

<https://modgov.sefton.gov.uk/documents/s62806/Seftons%20Flood%20and%20Coastal%20Erosion%20Risk%20Management%20Strategy.pdf>

23 North West & North Wales Coastal Group (2011) North West England and North Wales Shoreline Management Plan SMP2. <https://modgov.sefton.gov.uk/documents/s11093/SMP%20Policy%20Action%20Plan.pdf>

year in water pollution, and £132 million a year in water treatment and maintenance for drainage networks.²⁴

- 2.4.16 Severe weather events such as storms, winds and very heavy rain cause considerable damage to critical infrastructure such as transport networks, bridges, flood defences, electricity pylons, sewage networks, and can also damage parks and ecosystems. They increase the needs of vulnerable people requiring services at a time when transport and other services are disrupted and less able to provide assistance. They also increase insurance costs, as they account for 25% of valid subsidence insurance claims.²⁵

Climate change

- 2.4.17 Climate change data from UK CP09 and UK CP18 for the Northwest of England project the following changes by 2080:

- 28% decrease in average summer precipitation—leading to reduced stream flows and water quality, increased drought, subsidence, changes to crops, serious water stress.
- 26% increase in average winter precipitation leading to increased flooding including from overwhelmed drains, subsidence, severe transport disruption, risks to critical infrastructure.
- 3°C increase in average summer temperatures leading to increased heat stress, infrastructure risks, strain on biodiversity, heat related deaths, increased food insecurity.
- Across the UK, by 2095, relative sea levels could rise by 39-53cm.²⁶

- 2.4.18 For the Liverpool City Region this means hotter and drier summers requiring an increased focus on water management; wetter winters potentially leading to increases in flood damage; reduced rainfall overall and more extreme events including storm and drought that can lead to damage to property and present risks to communities; longer lasting spells of extreme temperatures, and increased severity of hail and windstorms.²⁷

- 2.4.19 These can all place human life, urban infrastructure, property and natural ecosystems at increased risk. Some of the likely significant consequences of climate change in Liverpool City Region include put forward by the Merseyside Resilience Forum include²⁸;

- Storms, wind and flooding causing power cuts, damage to buildings and transport infrastructure, falling trees and closure of roads and ferries,
- Summer flash rainfall and heavy winter rainfall leading to the flooding of roads, homes and businesses and damage to local infrastructure,
- Periods of low temperatures and heavy snow, resulting in travel disruption, interruption to utility supplies, disruption of public services and increased risk to health of vulnerable people,
- Increase summer heat events, causing health impacts, particularly for vulnerable people living in dense urban areas, also linked to areas of high urban air pollution,
- Long terms stress and impacts on infrastructure due to combinations of extreme weather events, for example more rapid deterioration of road surfaces and rail tracks and disruption to ICT infrastructure networks,

²⁴ University of Liverpool. 2020. Erosion hazards in river catchments: How resilient is critical infrastructure to climate change? <https://www.liverpool.ac.uk/study/postgraduate-research/studentships/erosion-hazards/>

²⁵ University of Liverpool. 2020. Erosion hazards in river catchments: How resilient is critical infrastructure to climate change? <https://www.liverpool.ac.uk/study/postgraduate-research/studentships/erosion-hazards/>

²⁶ Liverpool City Region. 2013. Liverpool City Region and Warrington Green Infrastructure Framework Technical Document. https://www.merseyforest.org.uk/Technical_document.pdf

²⁷ Liverpool City Region. 2013. Liverpool City Region and Warrington Green Infrastructure Framework Technical Document. https://www.merseyforest.org.uk/Technical_document.pdf

²⁸ MRF Secretariat. 2014. Emergency Preparedness and Management of the Main Risks in Merseyside. <https://www.merseysideprepared.org.uk/media/1213/emer-prep-man-of-the-main-risks-in-mside.pdf>

- Increased temperatures and more marked seasonality in river flows will cause additional stress to the water environment and impact on the availability of water,
- Specific economic, environmental and social challenges for coastal areas which may experience extreme storms or flood events and the effects of sea level rise and coastal erosion,
- Economic impacts for local business with a direct relationship to the climate (tourism, agriculture, fisheries etc.), and
- Impacts on ecosystems resulting in changes in the distribution and abundance of species, the timing of seasonal events and the habitat use of species. For example, there is a higher risk of emergence and spread of infectious diseases as the climate becomes a more hospitable environment for disease carrying mosquitos and ticks.²⁹

Trends

2.4.20 The table below sets out a brief summary of issues and trends for the local authorities in relation to climate change resilience. Also provided is a summary of the conclusions reached in the relevant SA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Halton	<p>Delivery and Allocations Local Plan: SA Report (July, 2019)</p> <p>Critical climate change functions of green infrastructure for sustainable economic development in the North West of England (2008)</p>	<p>Increasing biodiversity, moderating the urban heat island (in settlements), protecting high quality agricultural land for food production, and reducing flood risk are important functions in a North West context.</p>	<p>Though development could potentially lead to increased flood risk, the Plan includes policy to reduce the risk of flooding in the Borough. Other policies such as enhancing green infrastructure are also likely to be beneficial with regards to flooding and climate change resilience.</p>
Knowsley	<p>Knowsley Core Strategy SA Report, (2012)</p> <p>Critical climate change functions of green infrastructure for sustainable economic development</p>	<p>Highlighted as important in a North West context for protecting high quality agricultural land for food production. Also important to moderate the urban heat island (in settlements).</p>	<p>Policies in the Local Plan should ensure that development is directed to areas at the lowest risk of flooding and that appropriate measures are taken to ensure new development does not exacerbate flood risk.</p> <p>The design policy seeks for development to respond to the challenges of climate change. Likewise, there are policies to protect and enhance greenspace,</p>

²⁹ MRF Secretariat. 2014. Emergency Preparedness and Management of the Main Risks in Merseyside. <https://www.merseysideprepared.org.uk/media/1213/emer-prep-man-of-the-main-risks-in-mside.pdf>

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
	in the North West of England (2008)		which should lead to positive effects upon climate change resilience.
Liverpool	SA Report: Submission Draft Local Plan, (Jan 2018) Critical climate change functions of green infrastructure for sustainable economic development in the North West of England (2008)	Coastal areas could be more heavily affected by sea level rise and storm events. The urban heat island is more prominent in Liverpool given it is the densest urban area in the LCR. Tourism is an important sector that could be affected by climate change (both positive and negative).	Overall, a cumulative mixed effect (minor positive and minor negative) is predicted with regards to flood risk. Whilst some sites are at risk of flooding, the majority are not, and there are a range of policies that require the mitigation of flood risk and incorporate climate change adaptation measures. Cumulative significant positive effects are predicted in relation to green infrastructure, which has knock on benefits with regards to climate change resilience.
Sefton	Sefton Local Plan SA Report (2015) Critical climate change functions of green infrastructure for sustainable economic development in the North West of England (2008)	Areas to the north of Southport and south of Formby have heightened vulnerability to flood risk (particularly if flood defences are breached). Coastal areas are more at risk from the impacts of sea level rise and storm events. Tourism is an important sector that could be affected by climate change (both positive and negative). Likewise, protecting the carbon store, reducing flood risk, and moderating the urban heat island (in settlements) are also important functions.	The majority of new development sites are at a low-risk of flooding. Some moderately constrained sites have been allocated, but mitigation measures ought to minimise flood risk and control potential increases in surface water run-off in these areas. On balance, the Plan is predicted to have neutral effects with regards to flood risk.
St Helens	St Helens Local Plan: Submission Draft: SA Report (Jan 2019) Critical climate change functions of green infrastructure for sustainable economic development	For St Helens, increasing biodiversity, increasing food production and protecting high quality agricultural land for food production and moderating the urban heat island (in settlements) are important functions in a North West context.	Overall, the Plan should help to tackle climate change and facilitate adaption to climate change. The Plan seeks to ensure that flood risk is minimised during the Plan period, setting out a number of policies to help achieve this objective. The effects of the Plan are therefore predicted to be positive overall, with significant positive

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
	in the North West of England (2008)		effects accruing in the longer term as a result of blue and green infrastructure enhancement, linked to the Sankey Catchment Action Plan.
Wirral	Wirral Issues and Options Consultation, Interim SA Report (Dec, 2019) Critical climate change functions of green infrastructure for sustainable economic development in the North West of England (2008)	Areas along the north and north west coast of Wirral show heightened vulnerability to flood risk. Coastal areas are more at risk from the impacts of sea level rise and storm events.	An Urban centred approach could have mixed effects. On one hand, flooding would be likely to be avoided for most new developments and there are opportunities for 'urban greening' to help adapt to climate change. However, some key development locations in the urban areas are at risk of flooding, which presents the potential for negative effects.

2.5 Key issues

2.5.1 The following key issues emerge from the scoping exercise:

- Overall, the Liverpool City Region faces many climatic risks. As a region surrounded by water and located on a number of floodplains, flooding is regarded as one of the most likely major disasters.
- Most of the high flood risk areas are away from densely populated locations in the Liverpool City Region. That said, Wirral and Sefton both have areas of dense population which show the potential to experience flooding.
- Many initiatives such as flood defences have been completed to protect the Merseyside coastline over the past 25 years and the risk of coastal flooding has been reduced however, the dependence on these defences means the consequence of flooding if these defences were to be breached would be high.
- Climate projections for the Liverpool City Region predict hotter and drier summers; wetter winters; reduced rainfall overall; a rise in the frequency and intensity of extreme events including storm and drought; longer lasting spells of extreme temperatures, and increased severity of hail and wind-storms.
- Climatic risks can lead to loss of life; damage to properties and businesses; damage or disruption to critical infrastructure including roads, utilities, transport links; pollution and contamination of local environments; damage to natural ecosystems, long-term damage to tourism and businesses; and long-term psychological and health impacts.

2.6 Scoping outcome

2.6.1 Considering the key issues discussed above it is proposed that the topic of climate change resilience should be **SCOPED IN** to the integrated Appraisal. The following objective and supporting questions are proposed as part of the IIA Framework.

IIA objective	Assessment questions (will the option/ proposal help to...)
Adapt and become more resilient to the impacts of climate change.	<ul style="list-style-type: none">• Ensure that development does not increase flood risk on site or elsewhere?• Implement multifunctional green infrastructure?• Ensure that critical infrastructure is resilient to the effects of climate change?• Locate development in appropriate locations?

3. Climate change mitigation

3.1 Introduction

- 3.1.1 Climate change has been identified as one of the most important issues facing the world. It is widely accepted that there is a link between human activities and an increase in global temperature. Whilst some changes are already 'locked-in'; it is still thought possible that more extreme changes to the climate (in the longer term) can be minimised. However, this requires coordinated, quick and radical action to reduce greenhouse gas emissions.
- 3.1.2 This section provides a strategic review of the policy context, literature, and baseline position in relation to the following important factors.
- Renewable Energy Generation
 - Greenhouse Gas Emissions
 - Energy Consumption

3.2 Context review

International

- 3.2.1 **UN Sustainable Development Goals** are 17 life changing goals outlined by the UN in 2015. The following are of most relevance for climate change, but many other actions are beneficial in terms of reducing emissions:
- Goal 7: Clean Energy: With specific goals for 2030 relating to the use of more renewable and affordable energy.
 - Goal 13: Climate Action: Urgent action is needed, by regulating emissions and promoting renewable energy.
- 3.2.2 **The Paris Agreement on Climate Change (2016)** unites many of the world's nations in a single agreement on tackling climate change. The UK is a signatory and has pledged actions to help mitigate climate change.
- 3.2.3 The Paris Agreement's central aim is to keep a global temperature rise well below 2 degrees Celsius (above pre-industrial levels) and to limit the temperature increase even further to 1.5 degrees Celsius. A range of actions are proposed to support this aim.

National

- 3.2.4 The **UK Climate Change Act**³⁰ was passed in 2008 and established a framework to develop an economically credible emissions reduction path. It also highlighted the role it would take in contributing to collective action to tackle climate change under the Kyoto Protocol, and more recently as part of the UN-led Paris Agreement.
- 3.2.5 The Climate Change Act 2008 commits the UK government by law to reducing greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050.
- 3.2.6 Key messages from the National Planning Policy Framework³¹ (NPPF) include:

³⁰ HM Government (2008): 'Climate Change Act 2008' [online] available at: <http://www.legislation.gov.uk/ukpga/2008/27/contents>

³¹ MHCLG (2019) National Planning Policy Framework [online] available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_web.pdf

- One of the three overarching objectives of the NPPF is an environmental objective to ‘contribute to protecting and enhancing our natural, built and historic environment’ including by ‘mitigating and adapting to climate change’ and ‘moving to a low carbon economy.’ The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure

3.2.7 The **UK 2070 Commission’s Final Report** on regional inequalities details the UK’s need to dismantle the extremities of regional inequalities through large scale, long term and all-encompassing policies. The report recommends widespread commitments which see areas outside of London and the South East benefitting from investment and exploiting cultural capital to realise their potential. The report sets out a 10-point framework for action which includes an explicitly spatial and equitable transition to zero-carbon. Mitigation will be assisted through more efficient transit networks which transform public transport network between, within and beyond cities.

3.2.8 The Department for Business, Energy and Industrial Strategy has recently consulted upon a policy options document called **Heat Networks: Building a Market Framework (2020)**. The document clearly sets out the Government’s thinking in relation to the decarbonisation of heat, suggesting that district heat networks will form an important part of the future mix. The consultation seeks views on policy options for regulating heat networks to protect consumers and ensure fair pricing, while supporting market growth and the development of low-carbon networks.

City Region

3.2.9 **The Liverpool City Region Combined Authority** has declared a climate emergency and set a target to be Zero Carbon by 2040. The **LCRCA (draft) Local Industrial Strategy (2020)** sets out the aspiration for the LCR to be pioneers of the zero carbon economy and a series of principles and actions to help address the climate emergency. This includes:

- Continued transformation of energy generation sources.
- Investing in modal shifts in transport.
- Providing sustainable homes that are fit for the future.
- Embedding the principles of a circular economy.

3.2.10 The **Low Carbon Economy 2018 – 2020**³² plan states that the city will increase numbers of people within the low carbon sector, capitalise on changing trends towards low carbon energy efficiency, improve workforce skills and raise awareness of low carbon economies.

3.2.11 The **Liverpool City Region Sustainable Energy Action Plan (2012)**³³ provides a vision for all LCR authorities in relation to sustainable energy generation across the region, and sets out a programme to coordinate the implementation of sustainable energy projects.

3.2.12 The **Northwest renewable and low carbon energy capacity and deployment report (2010)** was prepared by the then Northwest Regional Development Agency and set a target of 10% of North West electricity requirements being met by renewable sources by 2010 (at least 15% by 2015 and at least 20% by 2020)³⁴

³³ Liverpool City Region (2012) ‘Liverpool City Region Sustainable Energy Action Plan’ [online] Available at: <https://www.liverpoolcityregion-ca.gov.uk/wp-content/uploads/LiverpoolCityRegionSEAP1stEdition190712WEB-SUST-ENE-APL-2012.pdf>

³⁴ SQW (2010) Northwest renewable and low carbon energy capacity and deployment project report [online], available from: <http://www.sqw.co.uk/files/6813/8694/8765/40.pdf>

Local

- 3.2.13 Table 3.1 below highlights the common themes, policy approaches and strategic priorities for waste that are common to each of the six authorities. Locally specific issues have also been drawn out where they are of strategic importance.

Table 3.1. Key messages for climate change mitigation.

Key policies & principles	Source / Authorities
A climate emergency has been declared and there is a need to become carbon neutral.	<p>Halton: (October 2019)</p> <p>Knowsley: (Jan, 2020) will aim to reduce emissions from its own estate and services to net zero by 2040</p> <p>Liverpool City Council (July, 2019): <i>Eliminating the impact on Climate Change by its own estate and activities to zero carbon by 2030.</i></p> <p>Sefton Council (2019): <i>Net zero emissions by 2030</i></p> <p>Wirral draft Climate Change Strategy (2020): <i>Complete switch to zero carbon energy sources by at least 2041</i></p>
Encouragement for high quality design and the incorporation of low carbon and renewable energy in new developments.	Adopted and / or emerging Local Plans for all authorities.
Support for active transport and reduction of road transport emissions.	Adopted and / or emerging Local Plans for all authorities. Wirral draft Climate Change Strategy (2020): <i>A complete shift to fossil fuel free local travel by around 2030</i>

3.3 Focused literature review

Fuel poverty has detrimental effects upon health

- 3.3.1 Fuel poverty and domestic energy efficiency causes many health and wellbeing effects on a large portion of UK households (*Healy, 2013*).
- 3.3.2 The Warm Front Scheme conducted by Green and Gilbertson (2008) assessed the mental health impact on adults, concluding that anxiety and depression were strongly associated.
- 3.3.3 In fact mental health issues such as anxiety and depression are strongly associated with fuel poverty. Difficulty with paying fuel bills results in less fuel consumption to achieve improved temperatures and thermal comfort.
- 3.3.4 Green and Gilbertson (2008) reviewed that less mould in households reduces respiratory conditions. Better living conditions have significant impacts on health and that increased temperatures are linked to better health and fewer winter deaths.

The most vulnerable people in society are typically affected by fuel poverty

- 3.3.5 Fuel poverty is due to lower income and expensive forms of household heating and energy efficient housing (*Lawlor, 2001*).
- 3.3.6 Damp, mould and winter low indoor temperatures are linked with mental and physical health implications (*Green and Gilbertson, 2008*). In particular children are more vulnerable to damp conditions.

3.4 Baseline review

Renewable energy generation

- 3.4.1 Figure 3.1 shows the percentage of key renewable energy generating sources for each Local Authority in the LCR, as well as for the Liverpool City Region and Great Britain as a whole.
- 3.4.2 The dominant renewable energy generation schemes for each authority are also highlighted in Figure 3.2.
- 3.4.3 The data reveals that as a city region, renewable / low carbon energy has a healthy spread of generation sources. However, each individual local authority has one or two key contributing sources. This is understandable given that different locations present specific opportunities (for example, Wirral has the advantage of a coastline to support offshore wind).
- 3.4.4 The LCR is dominated by offshore wind energy, and plant biomass generation. The contribution made from onshore wind is relatively low compared to the British average.

Figure 3.3.1: Graph showing the percentage of overall Local Authority renewable energy generation by source. Source of data: DBEIS.

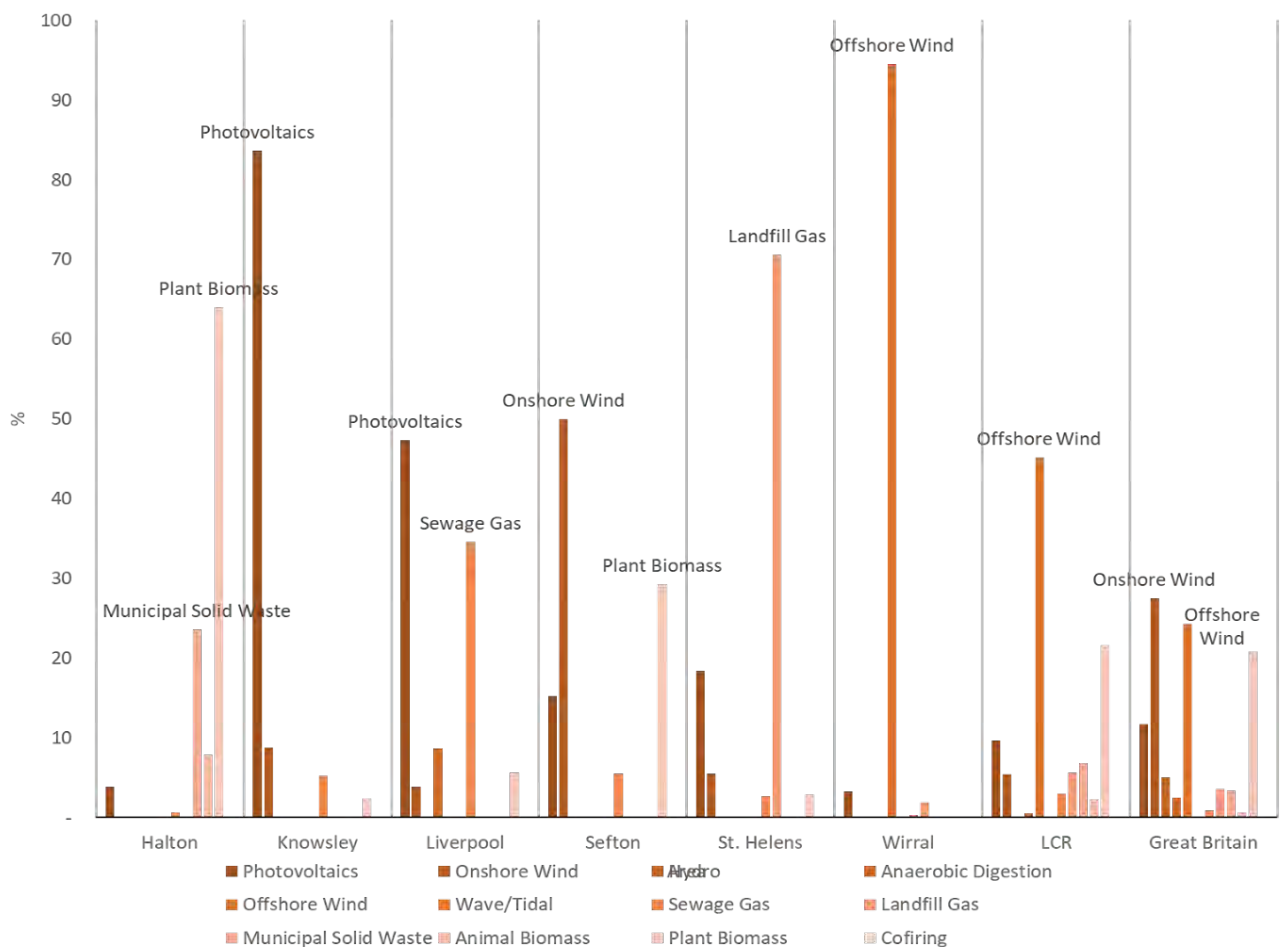
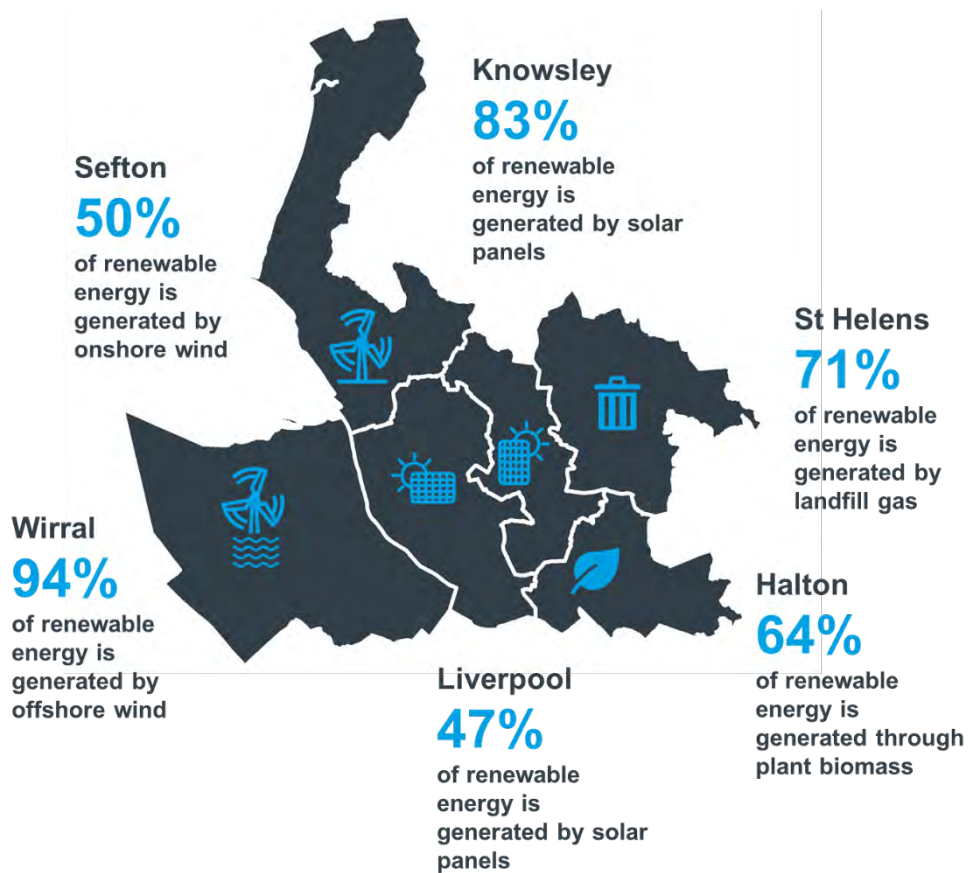
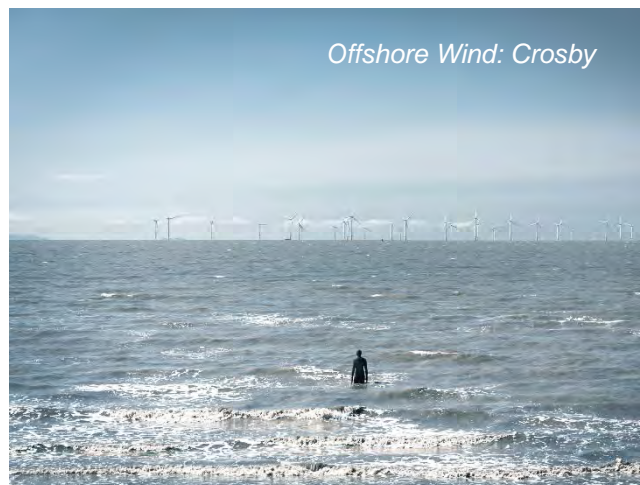


Figure 3.3.2 Key renewable energy generation sources for each local authority.



3.4.5 As Figure 3.3 below shows, none of the constituent authorities in the LCR generate as much energy per household from renewable sources when compared to the equivalent average figures for across Great Britain.

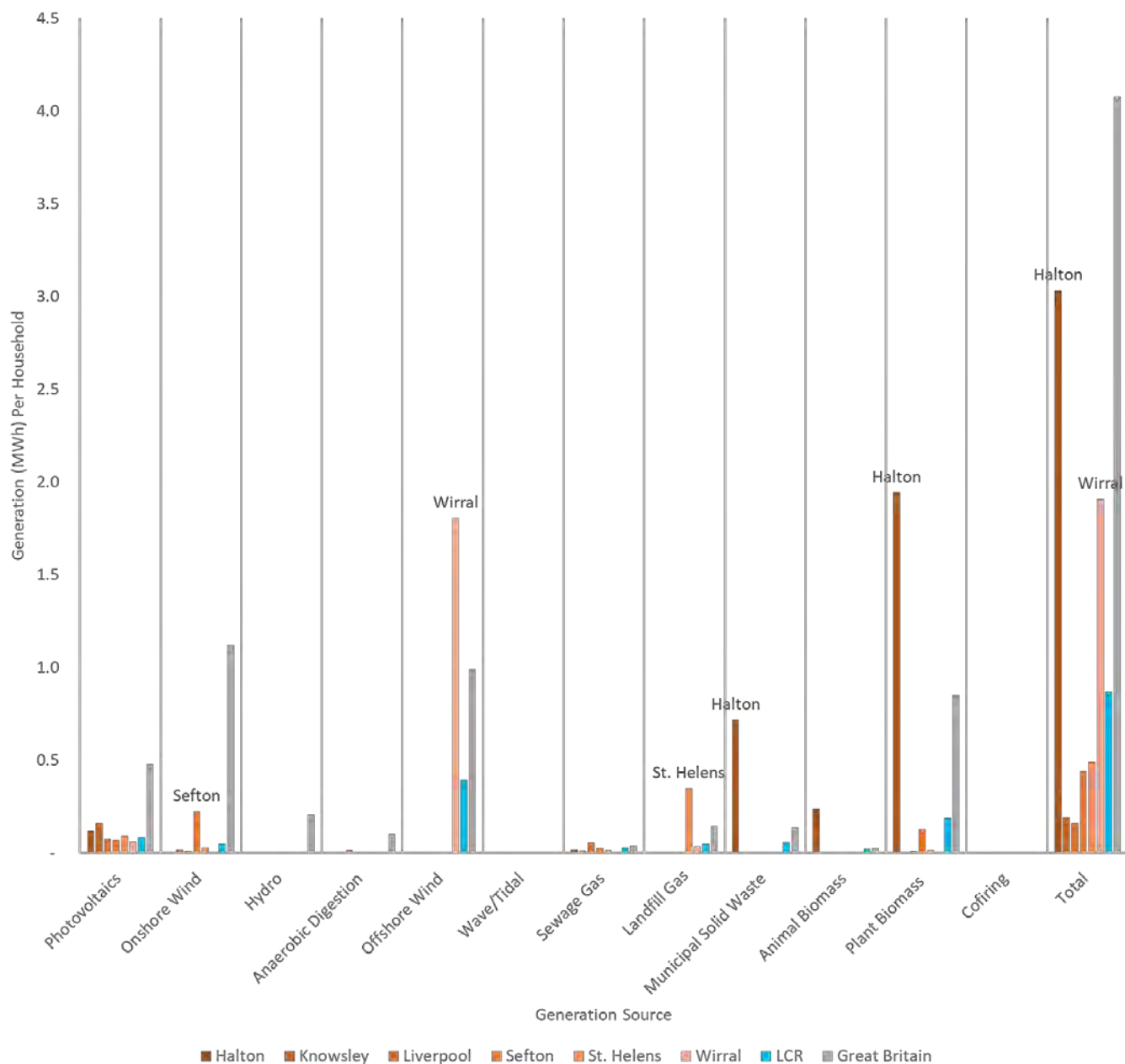
3.4.6 Within the region itself, Halton contributes the most energy generation from renewable sources (per capita), with the vast majority originating as plant biomass or from municipal waste (and at a level that is higher than the average per household for Great Britain).



3.4.7 The Wirral also contributes a significant amount of the regional total through offshore wind (and at a level that is higher than the average per household for Great Britain).

3.4.8 Knowsley and Liverpool contribute the lowest amounts of energy from renewable sources (when calculated on a per household basis).

Figure 3.3.3: Total renewable energy generation per household, by type. *Source of data: DBEIS.*

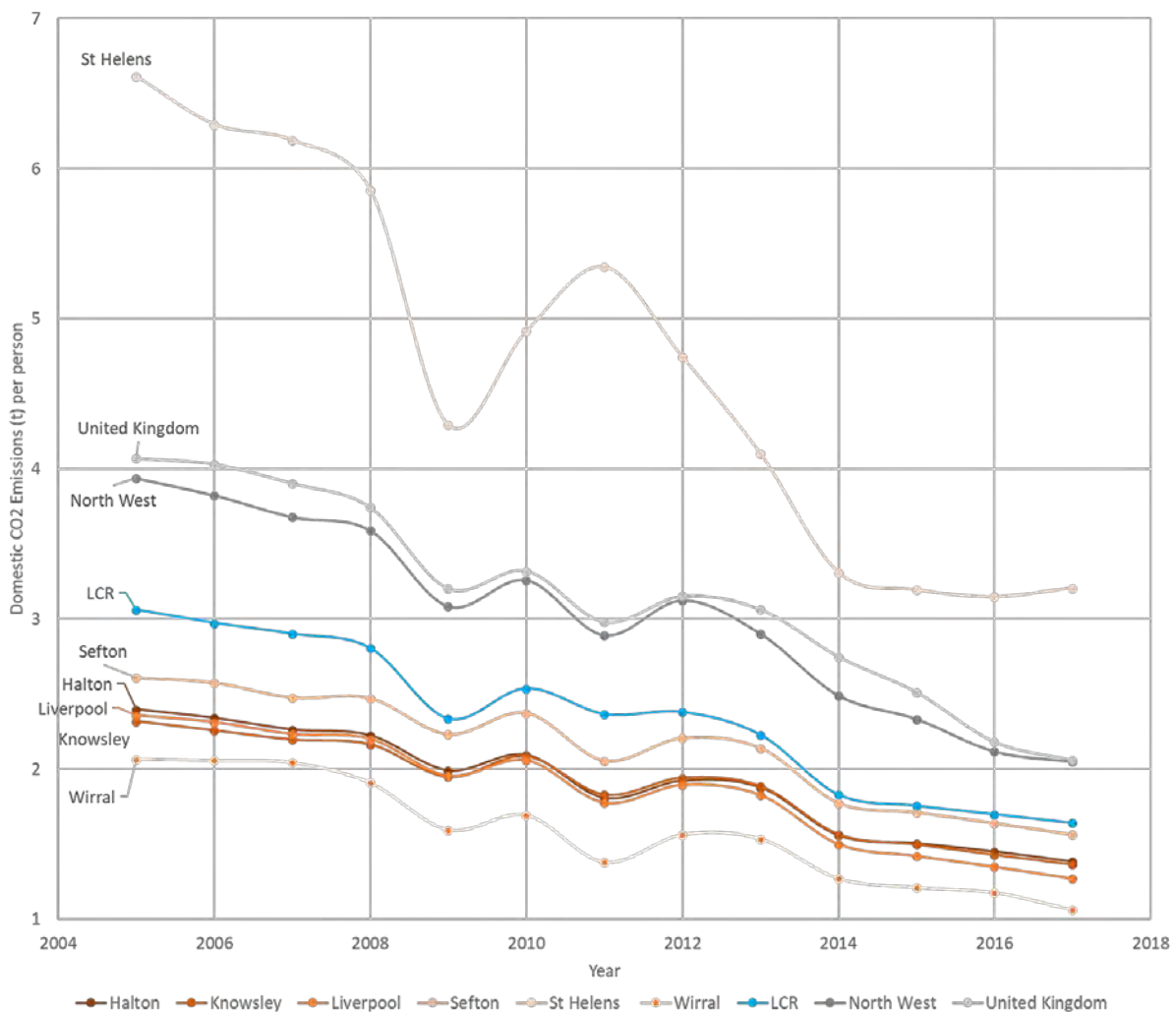


Carbon emissions

Domestic

- 3.4.9 Figure 3.4 reveals that overall, the Liverpool City Region has a lower level of CO² emissions per person compared to both the North West and the United Kingdom. With the exception of St Helens, all the constituent authorities have lower domestic emissions per capita compared to the north west and UK average.
- 3.4.10 There is a clear downward trend in domestic emissions for all areas between 2005 – 2017. For the LCR as a whole, emissions have almost halved in this time. Whilst St Helens has the highest levels of emissions per capita in the region (and higher than the UK and North West averages), it has seen the greatest reduction both in absolute terms and also the rate of change.
- 3.4.11 The rates of decrease in emissions have started to slow down for the city region since 2014, and this is most prominent for St Helens, which appears to have plateaued in this time period.
- 3.4.12 Wirral has the lowest domestic CO₂ per person at just over 1 tonne per person. This is half the national average and three times less than St Helens.

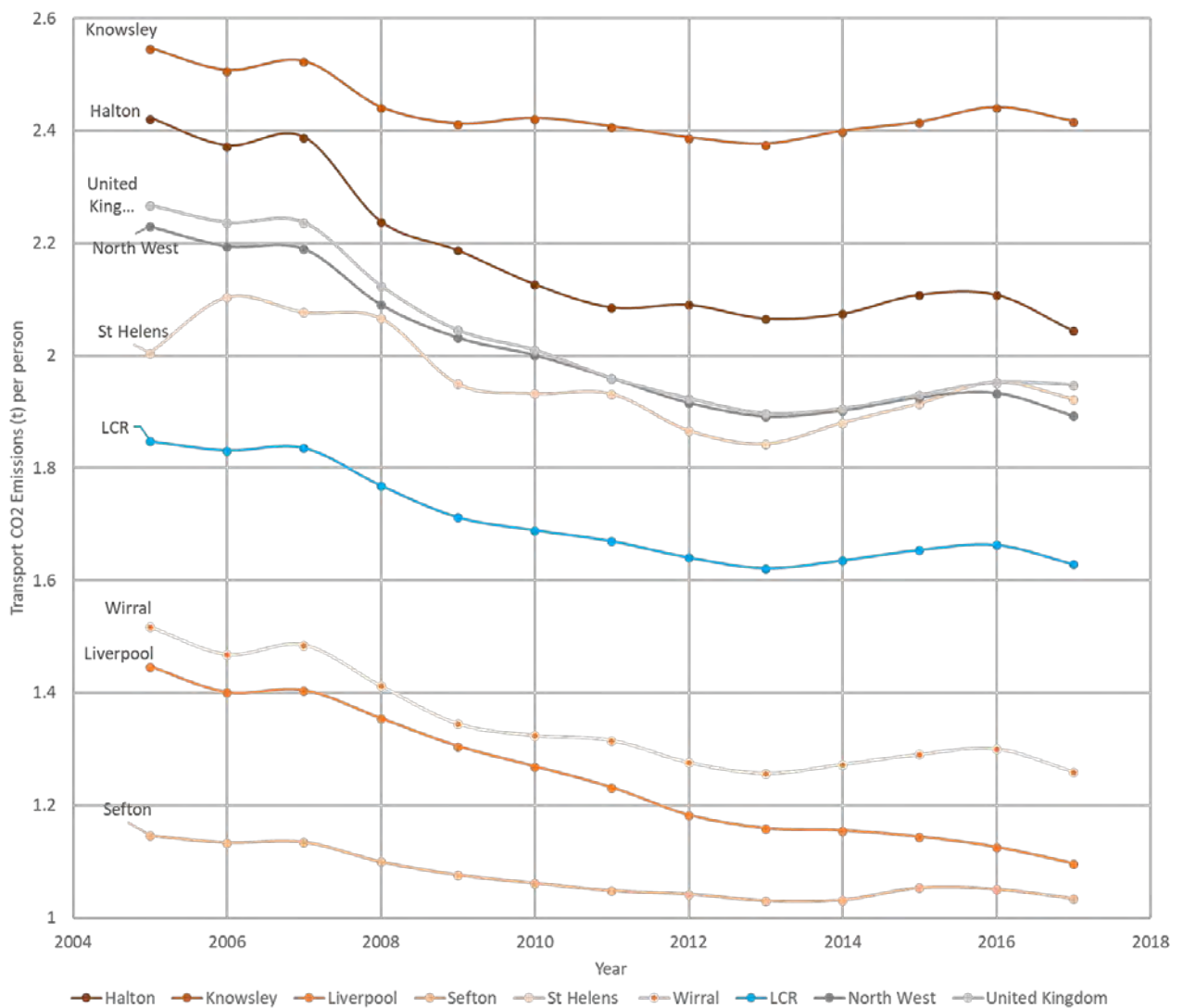
Figure 3.3.4: Domestic Carbon Dioxide Emissions per person. Source of data: DBEIS.



Transport

- 3.4.13 The picture for transport based emissions is slightly different. As Figure 3.5 illustrates, there have been decreases in emissions per capita for all areas. However, the rate of change has been much slower when compared to domestic emissions and it is evident that there are significant regional variations and despite technological advanced, issues are still prevalent.
- 3.4.14 Knowsley (highest) and Halton (second highest) both have got higher per capita emissions from transport than the city region, north west and national equivalents. The rate and amount of change for Knowsley has been slow between 2005-2017, whilst for Halton the increase has been more pronounced.
- 3.4.15 The LCR overall has seen a similar trajectory to the north west and UK averages. However, the per capita emissions were lower to start with, and have remained so.
- 3.4.16 Sefton (lowest), Liverpool and Wirral all contribute the least amount of emissions per capita in the LCR, being significantly below the LCR, North West and UK averages.

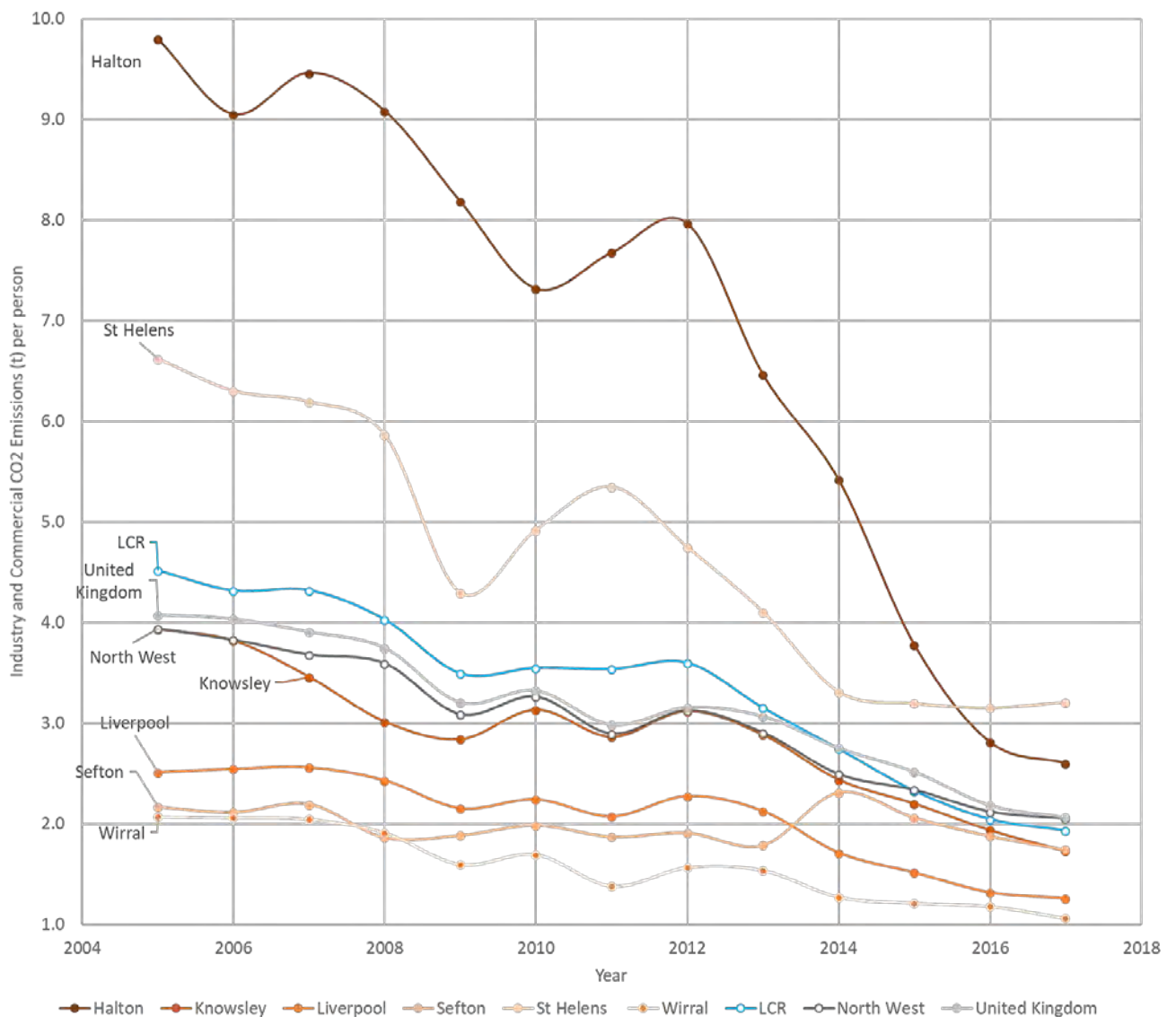
Figure 3.3.5: Transport CO2 emissions per person. Source of data: DBEIS.



Industry and commercial

- 3.4.17 Figure 3.6 illustrates that the LCR has similar emissions per capita when compared to the north west and UK averages. Emissions for the LCR have more than halved in the period 2005-2016.
- 3.4.18 Halton has seen a dramatic decline in its CO2 emissions from industry and commerce since 2005; St Helens has seen a large decline also, and at current levels St Helens generates the highest per capita emissions, with Halton second highest.
- 3.4.19 Liverpool and Wirral have the lowest CO2 emissions from industrial and commercial sources per person.

Figure 3.3.6: Industry and commercial CO2 emissions per person. Source of data: DBEIS.



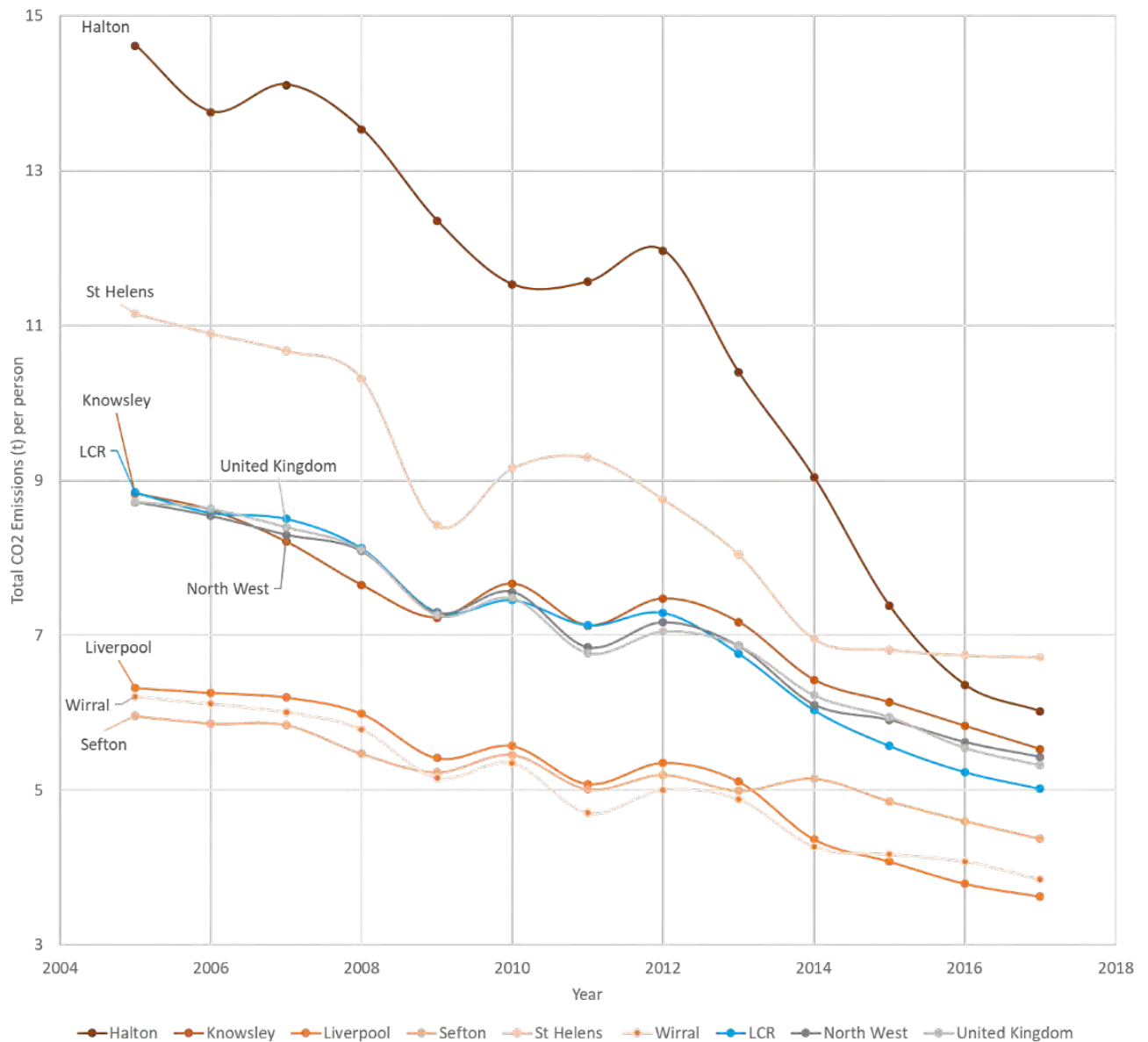
Overall emissions

- 3.4.20 Overall CO2 emissions from domestic, transport and industry show a downward trend for the LCR and all of the constituent authorities. The trajectory for the LCR is very similar to that

for the north west and the UK; with the overall figures in 2017 being slightly lower for the LCR compared to the regional and UK averages.

- 3.4.21 Halton has seen a dramatic decline in CO² emissions per person since 2004. St Helens now produces the most CO² per person, with Halton, St Helens and Knowsley all producing more than regional and national equivalents. Liverpool, Sefton and Wirral produce the least CO² per person overall.

Figure 3.3.7: Overall CO² emissions per person. Source of data: DBEIS.



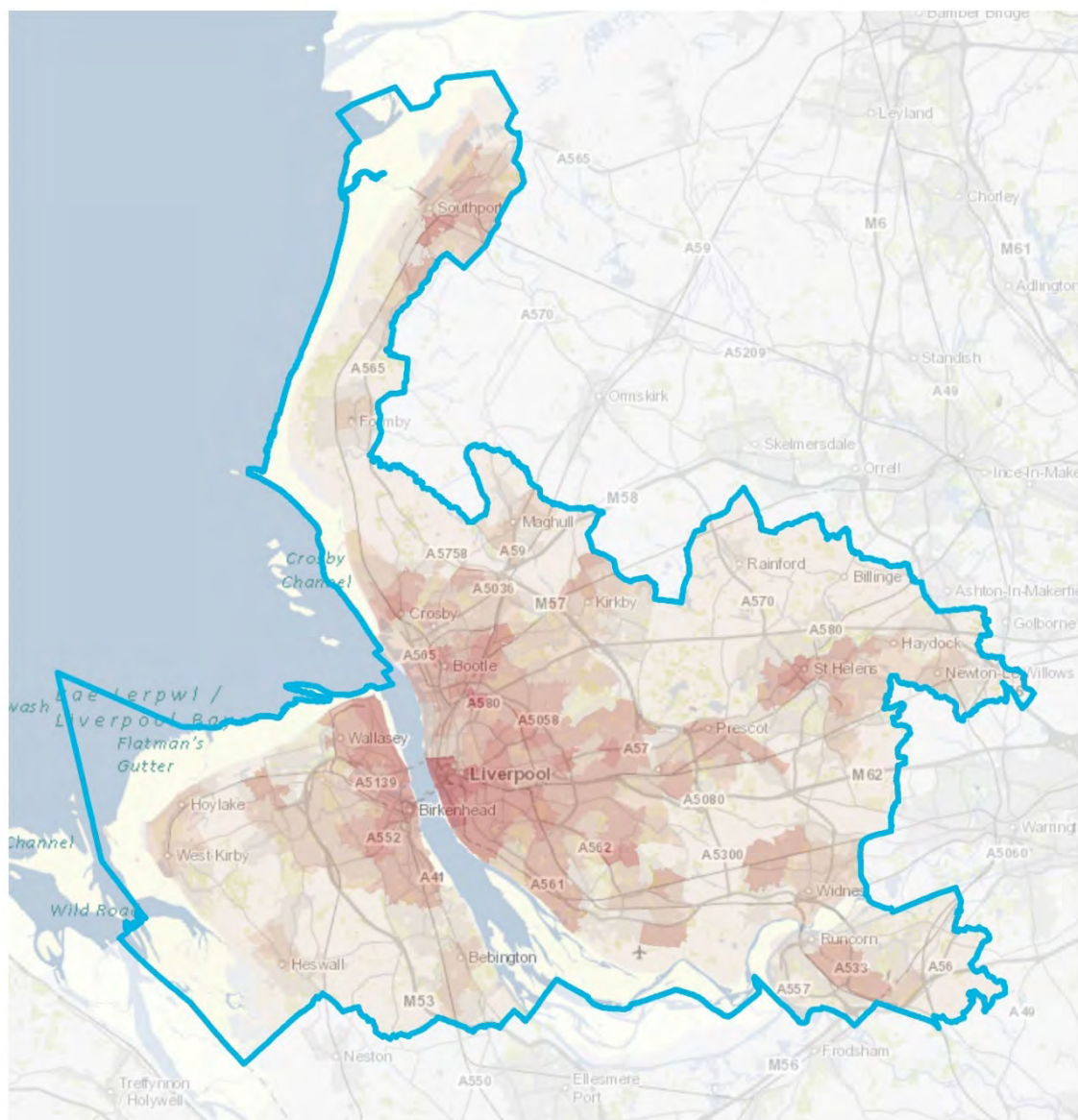
Energy consumption

- 3.4.22 Figure 3.8 reveals a pattern whereby overall electricity consumption is significantly higher in urban areas than rural ones. Particular areas showing high usage are Liverpool, Birkenhead, St Helens, Southport and Bootle.
- 3.4.23 However, figure 3.9 adds to these findings by revealing a pattern whereby despite the electricity usage being higher in the more densely populated urban areas, consumption at the smaller level (per electricity metre) is considerably higher in less densely populated

areas. As shown in the economy section (Figure 6.3) , these areas of lower population density also exhibit higher average incomes; suggesting that more affluent communities consume higher amounts of electricity.

- 3.4.24 Figure 3.10 shows the locations where gas consumption / demand is greatest in the LCR. There are clear pockets of high heat density scattered throughout the region.

Figure 3.8: Electricity consumption per hectare (2018)



0 2.25 4.5 9 Miles

Liverpool City Region

Total Electricity Use (KWh/Ha)

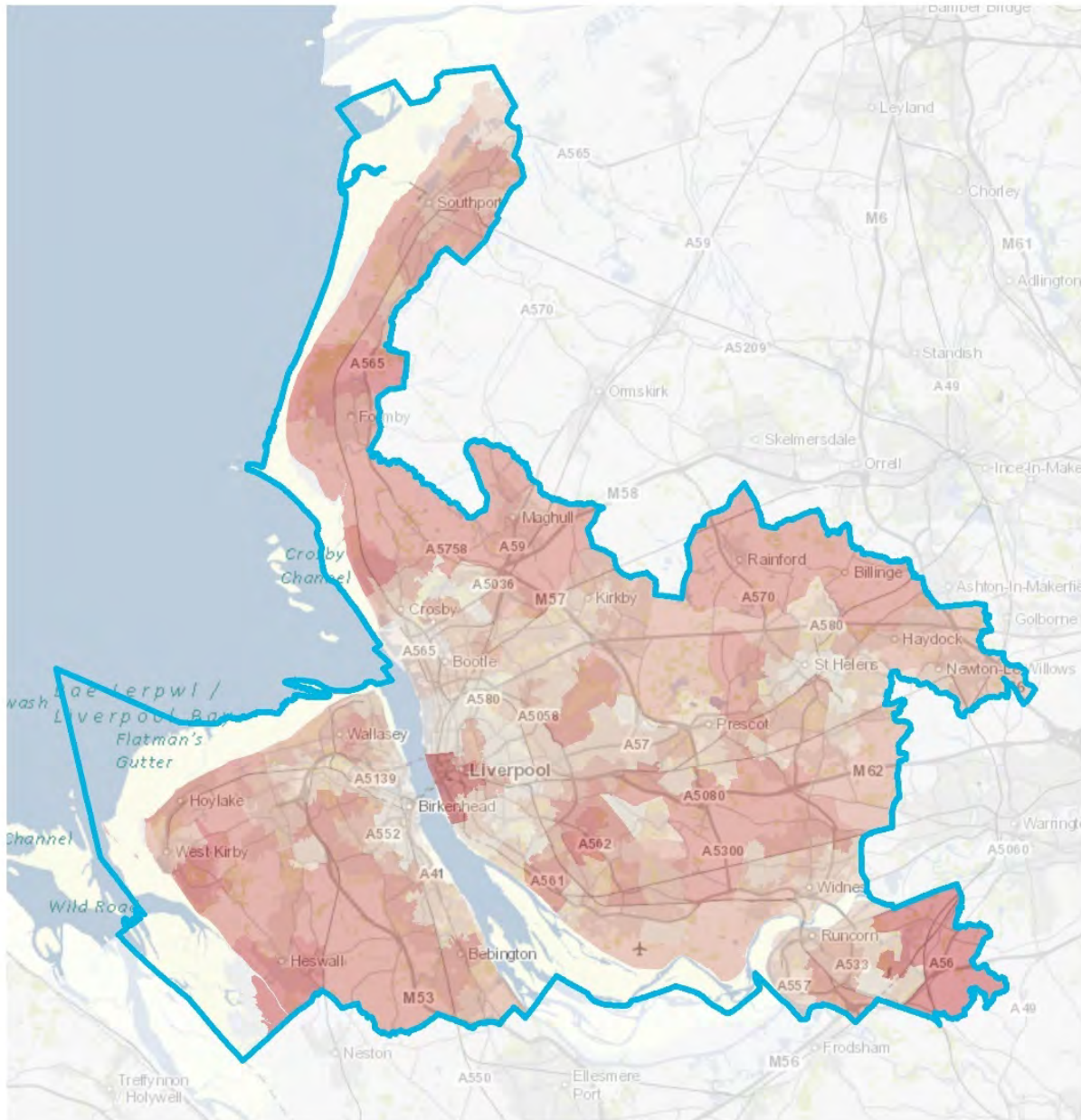
- 6038 - 34884
- 34885 - 62438
- 62439 - 98234
- 98235 - 170566
- 170567 - 415862

AECOM
Liverpool City Region
Integrated Impact Assessment



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Figure 3.9: Electricity consumption density per metre (2018)



Total Electricity Use Liverpool City Region

(KWh/Electricity Metre)

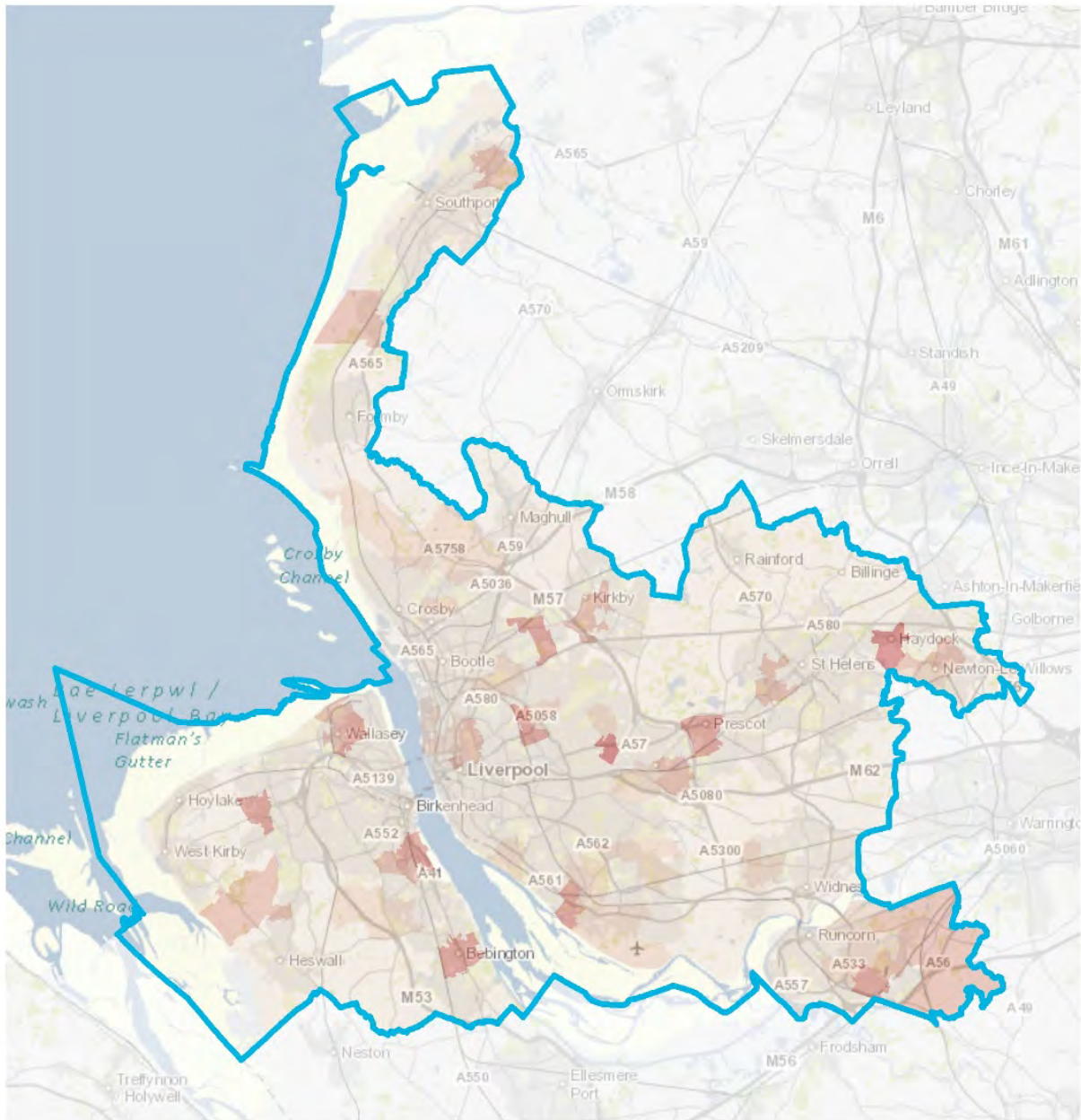
- 2420 - 2843
- 2844 - 3094
- 3095 - 3373
- 3374 - 3901
- 3902 - 5373

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 Integrated Impact Assessment



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Figure 3.10: Map showing gas consumption per metre (2018)



0 2.5 5 10 Miles

Domestic Gas Use Liverpool City Region

KWh/Metre

- 117861 - 490307
- 490308 - 954571
- 954572 - 1683051
- 1683052 - 3271579
- 3271580 - 5476455

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Trends

3.4.25 The table below sets out a brief summary of issues and trends for the local authorities in relation to climate change mitigation. Also provided is a summary of the conclusions reached in the relevant SA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Halton	<p>Delivery and Allocations Local Plan: SA Report (July, 2019)</p> <p>Liverpool City Region Renewable Energy Capacity Study (ARUP, 2010)</p>	<p>Relatively constrained with regards to wind generation.</p> <p>Plant biomass is a key renewable energy generation source.</p> <p>Highest renewable energy generation per household in the city region.</p> <p>Second highest CO2 emissions per person from transport.</p> <p>Second highest CO2 emissions per capita from industry and commercial sources, but largest drop over time.</p>	<p>The residential, commercial and industrial development that is proposed in the Local Plan will inevitably contribute to increasing carbon emissions throughout Halton over the plan period. However, there are numerous measures within the Plan that will help ensure that new development is delivered in the context of guarding against climate change.</p>
Knowsley	<p>Knowsley Core Strategy SA Report, (2012)</p>	<p>Solar energy (PV) is a key renewable energy generation source.</p> <p>Second lowest overall renewable energy generation per household in the city region.</p> <p>Highest transport based CO2 emissions per person</p>	<p>Whilst increased growth is likely to lead to greater greenhouse gas emissions, the Plan seeks to improve energy efficiency and the generation of energy from low carbon sources. This could lead to positive effects in terms of climate change in the longer term. Conversely, a focus on the delivery of employment sites that will encourage HGV use and is likely to increase emissions from vehicle based travel.</p>
Liverpool	<p>SA Report: Submission Draft Local Plan, (Jan 2018)</p>	<p>Key renewable generation sources are solar (PV) and sewage gas energy.</p> <p>Lowest overall renewable generation per household in the city region.</p> <p>Second lowest industrial and commercial CO2 emissions per person.</p>	<p>There inevitably will be some impact on the land resource, demand for energy and water resources and waste generation from new developments. In the medium to longer term, however, it is expected that the environmental impacts of new development schemes will be kept to a minimum through the implementation of environmentally-focused policies in the Local Plan. Indeed, there is strong support for growth of the renewable energy sector.</p>

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Sefton	Sefton Local Plan SA Report (2015)	<p>Onshore wind and plant biomass are the key renewable energy generation sources.</p> <p>Lowest transport related CO2 emissions per person.</p>	<p>The proposed level and distribution of growth is likely to lead to a continued reliance upon car travel (and associate carbon emissions). However, the Local Plan should help to mitigate this by supporting sustainable travel, maintaining the role of local centres and enhancing accessibility.</p> <p>The Plan is likely to help reduce carbon emissions from new development by supporting energy efficiency and sustainable design and facilitating the expansion or development of existing and committed renewables schemes. This is likely to have a significant positive effect on the baseline in the longer term.</p>
St Helens	St Helens Local Plan: Submission Draft: SA Report (Jan 2019)	<ul style="list-style-type: none"> • Landfill gas energy is the key renewable energy generation source. • Highest domestic CO2 per person in the city region. • Highest CO2 emissions per capital from industry and commercial sources, but second largest drop over time. • Highest overall CO2 emissions per person. 	<p>Whilst increased growth is likely to lead to greater greenhouse gas emissions, the Plan seeks to improve energy efficiency and the generation of energy from low carbon sources.</p> <p>Counterbalancing these positive effects somewhat is a focus on the delivery of employment sites that will encourage HGV use and is likely to increase emissions from vehicle based travel.</p> <p>Over time a significant positive effect is predicted reflecting these factors, but there is a degree of uncertainty whether this would be achieved.</p>
Wirral	Wirral Issues and Options Consultation, Interim SA Report (Dec, 2019)	<p>Offshore wind is the key renewable energy generation source.</p> <p>Second highest overall renewable energy generation per household in the city region.</p> <p>Lowest domestic CO2 per person in the city region.</p> <p>Lowest industrial and commercial CO2 emissions per person.</p> <p>Lowest overall CO2 emissions per person.</p>	<p>The preferred option at the current stage of plan making is predicted to have mixed effects.</p> <p>On one hand, it is an urban regeneration approach that encourages and supports efficient travel (and thus fewer emissions), but the sites involved may not present the opportunity to secure higher standards of sustainability / energy efficiency.</p>

3.5 Key issues

- 3.5.1 Overall, despite some key areas of high renewable energy generation (for example, Wirral's offshore wind and Halton's plant biomass schemes), the Liverpool City Region has a poorer balance of generation sources than Great Britain and an overall significantly lower generation from renewables per household. New development should seek to improve this where possible.
- 3.5.2 Overall, the Liverpool City Region has broadly similar levels of overall CO2 emissions per capita to the North West and United Kingdom. Despite this, the low CO2 emissions per person in Wirral and Liverpool are counterbalanced by the high levels seen in St Helens and Halton where more targeted action is required.
- 3.5.3 Overall electricity consumption is greater in the urban areas of the city region, however when breaking it down to a household level, consumption is often higher in the less densely populated and wealthy areas.

3.6 Scoping outcome

- 3.6.1 Considering the key issues discussed above it is proposed that the topic of climate change action should be **SCOPED IN** to the integrated Appraisal. The following objective and supporting questions are proposed as part of the IIA Framework.

IIA objective	Assessment questions (will the option/ proposal help to...)
Facilitate and contribute to the move towards a zero carbon Liverpool City Region; whilst improving social equity of access to energy.	<ul style="list-style-type: none"> • Avoid the sterilisation of renewable energy opportunities by locating incompatible development in areas with greatest suitability for generation? • Support the continued growth in renewable energy generation across the Liverpool City Region? • Continue to drive down greenhouse gas emissions associated with transport, housing and business? • Reduce energy consumption? • Decouple energy consumption and affluence? • Ensure affordable access to energy for all members of the community.? • Lead to greater self-sufficiency in energy provision?

4. Health and wellbeing

4.1 Introduction

4.1.1 According to the World Health Organisation:

*“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. ... The achievement of any State in the promotion and protection of **health** is of value to all”*

4.1.2 Wellbeing can be defined in any number of terms; it is a holistic sense of comfort, contentedness and health (mental and physical) which can be experienced as an individual or as a collective.

4.1.3 NHS England defines health inequalities as:

“Health inequalities are unfair and avoidable differences in health across the population, and between different groups within society. Health inequalities arise because of the conditions in which we are born, grow, live, work and age. These conditions influence our opportunities for good health, and how we think, feel and act, and this shapes our mental health, physical health and wellbeing.”

4.1.4 This section provides a strategic review of the policy context, literature, and baseline position in relation to the following relevant factors.

- Indicators of health
- Multiple deprivation
- Proximity to a GP
- Mental Health Issues
- Childhood Obesity
- Crime
- Access to greenspace

4.2 Context review

International

4.2.1 **UN Sustainable Development Goals** are 17 life changing goals outlined by the UN in 2015. The following are of direct relevance for health and wellbeing:

- Goal 1: No poverty: To end poverty, everyone should have basic healthcare, security and education.
- Goal 3: Good Health: Ensure healthy lives and promote well-being for all at all ages.
- Goal 11. Sustainability: Increase affordable housing and make settlements inclusive, safe and sustainable.

National

- 4.2.2 Key messages from the **National Planning Policy Framework**³⁵ (NPPF) include that planning policies should:
- Enable and support healthy lifestyles through provision of green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling.
 - Take into account and support the delivery of local strategies to improve health, social and cultural well-being for all sections of the community.
 - Help deliver access to high quality open spaces and opportunities for sport and physical activity to contribute to the health and well-being of communities.
 - Ensure that developments create safe and accessible environments where crime and disorder, and the fear of crime, do not undermine quality of life or community cohesion. Places should contain clear and legible pedestrian routes, and high quality public spaces, which encourage the active and continual use of public areas.
 - Ensure that there is a 'sufficient choice of school places' and taking a 'proactive, positive and collaborative approach' to bringing forward 'development that will widen choice in education'.
 - Local planning authorities should secure design quality through the policies adopted in their local plans. Good design is indivisible from good planning, and should be at the heart of the plan making process.
 - A healthy community is a good place to grow up and grow old in. It is one which supports healthy behaviours and supports reductions in health inequalities. It should enhance the physical and mental health of the community.
- 4.2.3 National **Planning Practice Guidance** (PPG)³⁶ (Healthy and safe communities PPG) identifies that local planning authorities should ensure that health and wellbeing, and health infrastructure are considered in local and neighbourhood plans and in planning decision making.
- 4.2.4 The Fair Society, Healthy Lives ('**The Marmot Review**')³⁷ investigated health inequalities in England and the actions needed in order to tackle them. Subsequently, a supplementary report was prepared providing additional evidence relating to spatial planning and health on the basis that there is: "*overwhelming evidence that health and environmental inequalities are inexorably linked and that poor environments contribute significantly to poor health and health inequalities*".
- 4.2.5 The **UK 2070 Commission's final report** on regional inequalities details the UK's need to dismantle the extremities of regional inequalities through large scale, long term and all-encompassing policies. The report recommends widespread commitments which see areas outside of London and the South East benefitting from investment and exploiting cultural capital to realise their potential. The report sets out a 10-point framework for action which includes delivering a connectivity revolution by creating a transformed public transport network between, within and beyond cities. It also recommends implementing a comprehensive framework for inclusive devolution by allowing places to 'step-up' via

³⁵ MHCLG (2019) National Planning Policy Framework [online]
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_web.pdf

³⁶ Department for Communities and Local Government (2012) National Planning Practice Guidance [online]
<http://planningguidance.communities.gov.uk/>

³⁷ The Marmot Review (2011) The Marmot Review: Implications for Spatial Planning [online]
<http://www.nice.org.uk/nicemedia/live/12111/53895/53895.pdf>

appropriate levels of devolution according to local ambition, need and capacity. A levelling up of the playing field with fairer access to funds and spatial priorities is also included.

- 4.2.6 **Planning for Sport Guidance (2019)**, is a document prepared by Sport England that establishes 12 principles for the planning system to help facilitate the role of planning. The key aim is to help provide active environments that maximise opportunities for sport and physical activity for all, enabling the already active to be more so and the inactive to become active
- 4.2.7 In response to research from PHE showing that people who experience flooding in their homes can suffer from mental health illnesses, including depression, anxiety and post-traumatic stress disorder, The Environment Agency have recently published a '**method for monetising the mental health costs of flooding**'³⁸ and assessing the associated economic impacts.

City Region

- 4.2.8 The **LCRCA Local Cycling and Walking Infrastructure Plan (2019)**³⁹ recognises the benefits of walking and cycling to health and wellbeing, and sets out a framework for delivering a network of enhanced and new routes across the LCR.
- 4.2.9 The LCRCA Economic Recovery Plan 'Building Back Better'⁴⁰, which has been submitted to central government, sets out how £1.4 billion in investment in the city region could unlock £8.8 billion of projects to begin in the next 12 months. The plan shows how economic recovery will be delivered across four strategic themes of the business ecosystem, people-focused recovery, place, and a green recovery; to the benefit of resident health and wellbeing.
- 4.2.10 **Responding to COVID-19 in the Liverpool City Region** is policy briefing prepared by the Heseltine Institute for Public Policy, Practice and Place (May, 2020).⁴¹ There are some key messages with regards to health, wealth and wellbeing:
- Before COVID-19, one third of the productivity gap between Liverpool City Region (LCR) and the rest of the UK can be attributed to poor health within the LCR. Mental ill health is particularly significant when considering economic impacts.
 - The LCR Wealth and Wellbeing programme focuses on three areas for the development of practical actions; employment support programmes, wellbeing economics, and transformation of work and the workplace. These themes will be reassessed in the next transitional phase given the transformative nature of the pandemic and its uneven impacts on vulnerable people and groups.
 - COVID-19's uneven effects are twofold: a) it acts more severely on the health of people who are physically vulnerable, and b) the action taken to stop the spread of infection, through lockdown and other measures, is known to disproportionately affect those who are economically vulnerable.
 - The pandemic and steps taken in response, underline the extent of the relationship between public health and a well-functioning economy. Adopting health and wellbeing outcomes as positive drivers for economic planning can usefully align with inclusive growth and zero-carbon economy goals.

³⁸ Environment Agency (2020) A method for monetising the mental health costs of flooding [online]

<https://www.gov.uk/government/publications/a-method-for-monetising-the-mental-health-costs-of-flooding>

³⁹ <https://www.liverpoolcityregion-ca.gov.uk/wp-content/uploads/LCR-LCWIP-Final.pdf>

⁴⁰ LCRCA (2020) Building Back Better – Our Economic Recovery Plan [online] https://www.liverpoolcityregion-ca.gov.uk/wp-content/uploads/LCRCA_BBB_2020.pdf

⁴¹ **Responding to COVID-19 in the Liverpool City Region**: Principles for Uncertain Times: Building an Effective Post-COVID Economy in Liverpool City Region: Heseltine Institute for Public Policy, Practice and Place (May, 2020).

Local

- 4.2.11 Table 4.1 below highlights the common themes, policy approaches and strategic priorities for health and wellbeing that are common to each of the six authorities. Locally specific issues have also been drawn out where they are of strategic importance.

Table 4.1: Key messages for health and wellbeing.

Key policies & principles	Source / Authorities
Green infrastructure can improve health and wellbeing and should be protected and enhanced.	Adopted and / or emerging Local Plans for each constituent authority. Joint Health and Social Needs Assessments Joint Health and Wellbeing Strategies for each constituent authority
Achieving healthy lifestyles and healthy living environments is essential.	
Community services and recreational facilities need to be placed in accessible locations.	
There is a need to bridge the gap between health inequalities.	

- 4.2.12 **Green infrastructure framework for North East Wales, Cheshire and Wirral** (2011) aims to “build healthier communities” in the region and highlights the important link between safe and attractive green spaces and increased levels of physical activity, with consequential benefits to both mental and physical health.
- 4.2.13 With the Liverpool sustainable city: Health and wellbeing strategy (2014 – 2019) Liverpool’s Health and Wellbeing Board (HWB) in response to the joint strategic needs assessment (JSNA). Their overall aim is to achieve good health and wellbeing of children and adults in Liverpool. It plans to reach this goal by reducing health inequalities working with partners, communities and residents to improve opportunities for adults and children to enjoy a healthy, safe and fulfilling life.

4.3 Focused literature review

There is a depth of evidence demonstrating that urban planning can influence human health and wellbeing

- 4.3.1 An umbrella review of evidence was undertaken by Public Health England in 2017, seeking to amalgamate the breadth of evidence linking the built and natural environment and health. The review focused on five key aspects; neighbourhood design, housing, healthier food, natural and sustainable development, and transport. Key outcomes include the following:
- Compact communities with safe and walkable infrastructure promotes increased physical activity.
 - Housing quality and affordability are critical determinants of health and wellbeing.
 - Increased access to unhealthier food retail outlets is associated with increased weight status in the general population and increased obesity and unhealthy eating behaviours among children residing in low income areas.
 - There is a wealth of consistent evidence demonstrating clear adverse effects of exposure to air pollutants on health outcomes across all population groups.
 - Exposure to excessive noise is associated with poorer mental health outcomes, particularly among older adults and children.
 - Access to, and engagement with, the natural environment is associated with numerous positive health outcomes.
 - Provision of active travel infrastructure and public transport show clear benefits in terms of cardiovascular health of communities.
- 4.3.2 Other benefits of planning for healthy inclusive communities, considering all aspects of health according to a range of academic sources include:
- improvements of self – esteem and reduction of stress (Barton et. al., 2010; Depledge et al. 2011; Meija, 2010).
 - promotion of good health and reduction of socioeconomic health inequalities (Mitchell, et. al., 2008).
- 4.3.3 A number of sources have reviewed the direct linkage between access to green space and green environments and the impacts this has on human health. The results from such studies include:
- determining that populations that are located closer to green space have low levels of health inequality related to income deprivation (Mitchell et. al., (2008);
 - green spaces are proven to be beneficial for health (Lee et. al. (2011);
 - green space development should be the forefront for plans and projects and should be considered as a starting point to create stronger connections with health (Fischer et. al. 2016).
 - Parks and green spaces are estimated to save the NHS around £111 MILLION PER YEAR (Fields in Trust (2018) Revaluing Parks and Green Spaces. Measuring their economic and wellbeing value to individuals)
- 4.3.4 Kuo (2015) suggests that there should be just as much attention on providing greenspaces as well as 'oases' such as ball fields and dedicated greenspaces for walking to promote recreation and physical activity. Such oases should be designed to incorporate plants, natural assts that induce feelings of deep relaxation, awe and vitality. Providing green and

natural oases where health risks are high could be a powerful yet inexpensive solution to public health and address health inequalities.

The built environment and quality of development can also affect mental health

- 4.3.5 Mental health can sometimes be overlooked when it comes to the planning and designing process. It's important to ensure that mental illnesses, where it can be planned for, is integrated throughout planning and design.
- 4.3.6 Several studies show linkages between poor quality urban environments and greater likelihood of mental illnesses. The following points have been confirmed:
- Galea, S. Et al (2005), found that living in neighbourhoods with poor quality built environments results in a greater likelihood of depression⁴².
 - McCay (2017) found that people who reside in high density urban areas are more likely to experience higher levels of depression, anxiety and other common mental illnesses⁴³.

Living in a deprived neighbourhood can be bad for mental health and wellbeing

- 4.3.7 Leventhal & Brooks – Gunn (2003) found that people moving to less deprived neighbourhoods became significantly less stressed in terms of mental health than those that lived in most deprived neighbourhoods⁴⁴.
- 4.3.8 Weich, Et al. (2002) depression was associated with independently rated features of the built environment, independent of individuals' socio-economic status and internal characteristics of dwellings. For example, graffiti, poor quality housing frontages, a lack of public space(s) and few private gardens had significant associations with prevalence of depression.
- 4.3.9 Gehl, Et al 2018 express that inclusion efforts among public space and public health should focus on areas of deprivation.

Addressing health and wellbeing through planning can be challenging

- 4.3.10 Barton, H. and Grant, M (2006)⁴⁵ expressed that the linkages between health, well – being and planning are widely recognised but often indirect and complex to combat.

4.4 Baseline review

Indicators of health

- 4.4.1 Local Authority Health Profiles provided by Public Health England present detailed overviews of the current health issues across the country including local and regional scales. Public Health England draw on relevant ONS data and other government departments to visually reflect the current state of ongoing physical health, mental health and well-being.

⁴² Galea, S. Ahren, J. Rudenstine, S. Wallace, Z. & Vlahov, D. (2005). Urban built environment and depression: a multilevel analysis. [online] available at: <https://jech.bmj.com/content/jech/59/10/822.full.pdf>

⁴³ McCay, L. (2017). Urban Mental Health. [online] available at: <https://books.google.co.uk/books?hl=en&lr=&id=W8SbDwAAQBAJ&oi=fnd&pg=PA32&dq=McCay,+L,+2017,+Designing+Mental+Health+into+Cities&ots=lzPcu4rqE5&sig=C1Zb0hnmVSF2GbpwCHCi4lu0z4l#v=onepage&q=McCay%2C%20L.%202017.%20Designing%20Mental%20Health%20into%20Cities&f=false>

⁴⁴ Leventhal, T. & Brooks – Gunn, J. (2003). Moving to opportunity: an experimental study of neighbourhood effects on mental health. *AM J Public Health*; 93: 1576 – 82.

⁴⁵ Barton, H., & Grant, M. (2006). A health map for the local human habitat. *Journal- Royal Society for the Promotion of Health*, 126(6), 252- 253. <https://doi.org/10.1177/1466424006070466>

- 4.4.2 The current health related issues within the Liverpool City Region have been compared with national and regional averages and are summarised below⁴⁶.
- 4.4.3 For the years 2016-2018, areas of health that have been reviewed include housing, population, social deprivation, economic deprivation, mental and physical health, crime and employability.
- 4.4.4 There are several areas of health identified across Liverpool City Region which are worse than, better than and similar to national averages.
- 4.4.5 The following key points reflected across all 6 local authorities are slightly or significantly **worse** than national averages:
- Unemployment rates
 - Limiting long-term illness or disability
 - Fuel poverty and pensioners living alone
 - A&E attendances (for ages 0-19)
 - Emergency hospital admissions
 - Hospital admissions from harm and injury
 - Mortality rates from all causes
 - Child development and education
 - Children who eat enough fruit and vegetables per day at age 15
 - Children across the region living within low income families
 - Smoking status at time of delivery
 - Breastfeeding initiation and prevalence
 - Uptakes on free school meals
 - Obesity
- 4.4.6 The following key points reflected across all 6 local authorities are slightly or significantly **better** than national averages:
- Smoking rates at a younger age are lower than national averages, however the use of e-cigarettes have been used
 - Percentage of children aged 15 reporting general health as excellent
 - Family homelessness
- 4.4.7 The following key points reflected across the 6 local authorities are **similar** to national averages:
- Minors aged 15 who have tried cannabis and other drugs.
 - Children killed or seriously injured in road incidents

Multiple deprivation

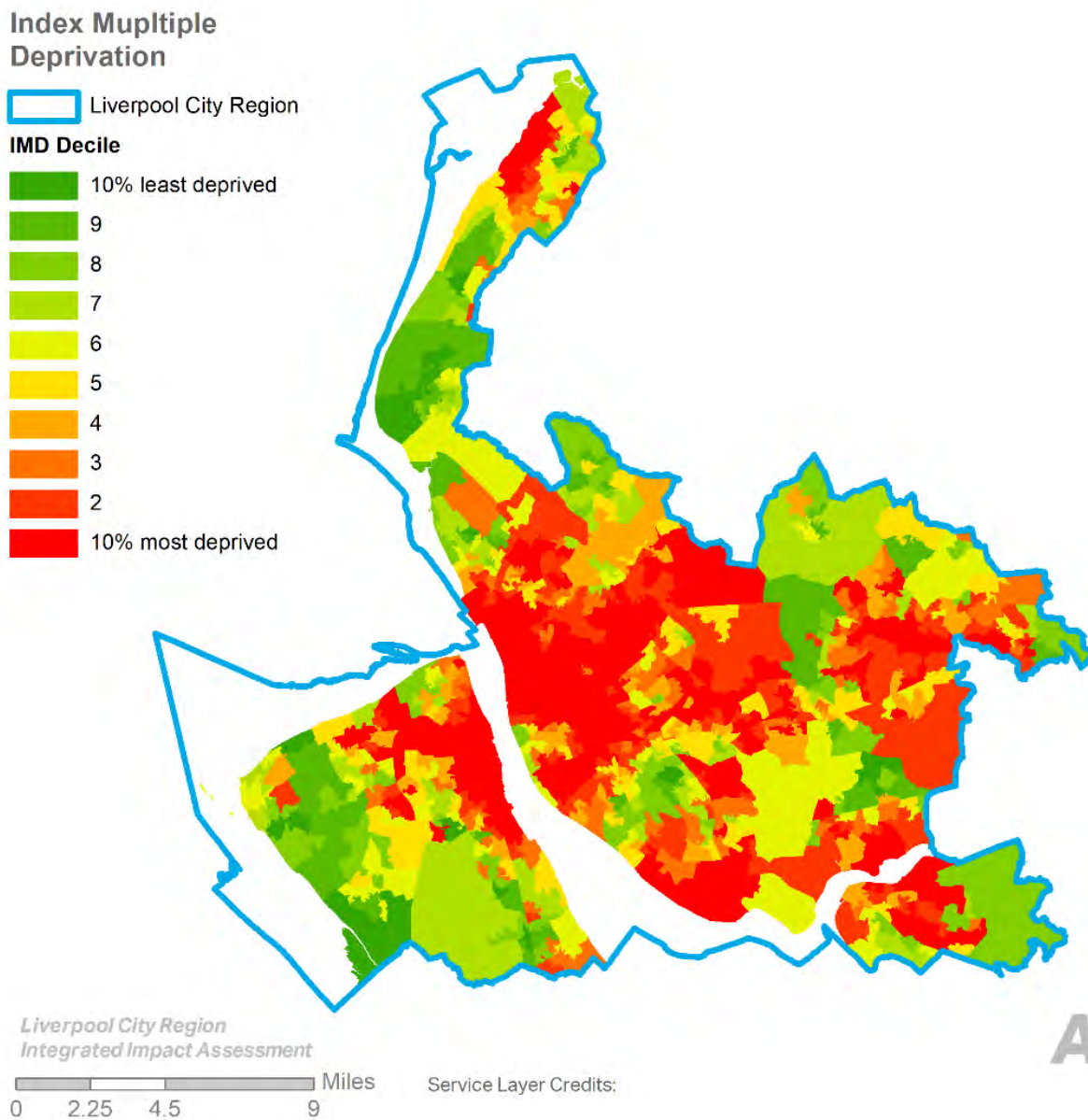
- 4.4.8 Local authorities within the region are among the most deprived areas in England based on the latest Index of Multiple Deprivation (IMD2019).
- 4.4.9 The IMD2019 is an indication tool that relatively ranks small areas within England on a scale from least deprived to most deprived based on seven domains of deprivation (Figure 4.1). The domains of deprivation cover factors such as income and living environments. The tool can be used to compare small areas across England in income, employment, education, health, crime, barriers to housing/ services and living environment.
- 4.4.10 Two local authorities in the region are among the most deprived in the country: Liverpool and Knowsley. In terms of changes in ranking since the last IMD2015, Liverpool moved from

⁴⁶ [https://www.localhealth.org.uk \(2016-2018\)](https://www.localhealth.org.uk (2016-2018))

4th to 2nd most deprived local authority, whilst Knowsley moved from 2nd to 3rd. LSOA's within Liverpool City and Wirral have remained among the most deprived neighbourhoods since 2004.

- 4.4.11 The IMD2019 has only seen minor changes between most deprived and least deprived areas since the IMD2015 suggesting that figures have remained the same.
- 4.4.12 Wirral, St. Helens and Sefton are significantly worse for mental health related hospital admissions. School pupils across the Liverpool City Region excluding Sefton are have social, emotional and mental health needs and are worse than the national averages. Sefton is considered slightly better than national averages.
- 4.4.13 Liverpool, St. Helens and Wirral have the worst scores for children in care across the NW.⁴⁷

Figure 4.1. Liverpool City Region – Index of Multiple Deprivation, 2019.



⁴⁷ https://fingertips.phe.org.uk/profile/wider-determinants/data#page/3/gid/1938133044/pat/6/par/E12000002/ati/102/are/E08000012/iid/90803/age/173/sex/4/cid/4/page-options/ovw-tdo-0_car-do-0_car-ao-0

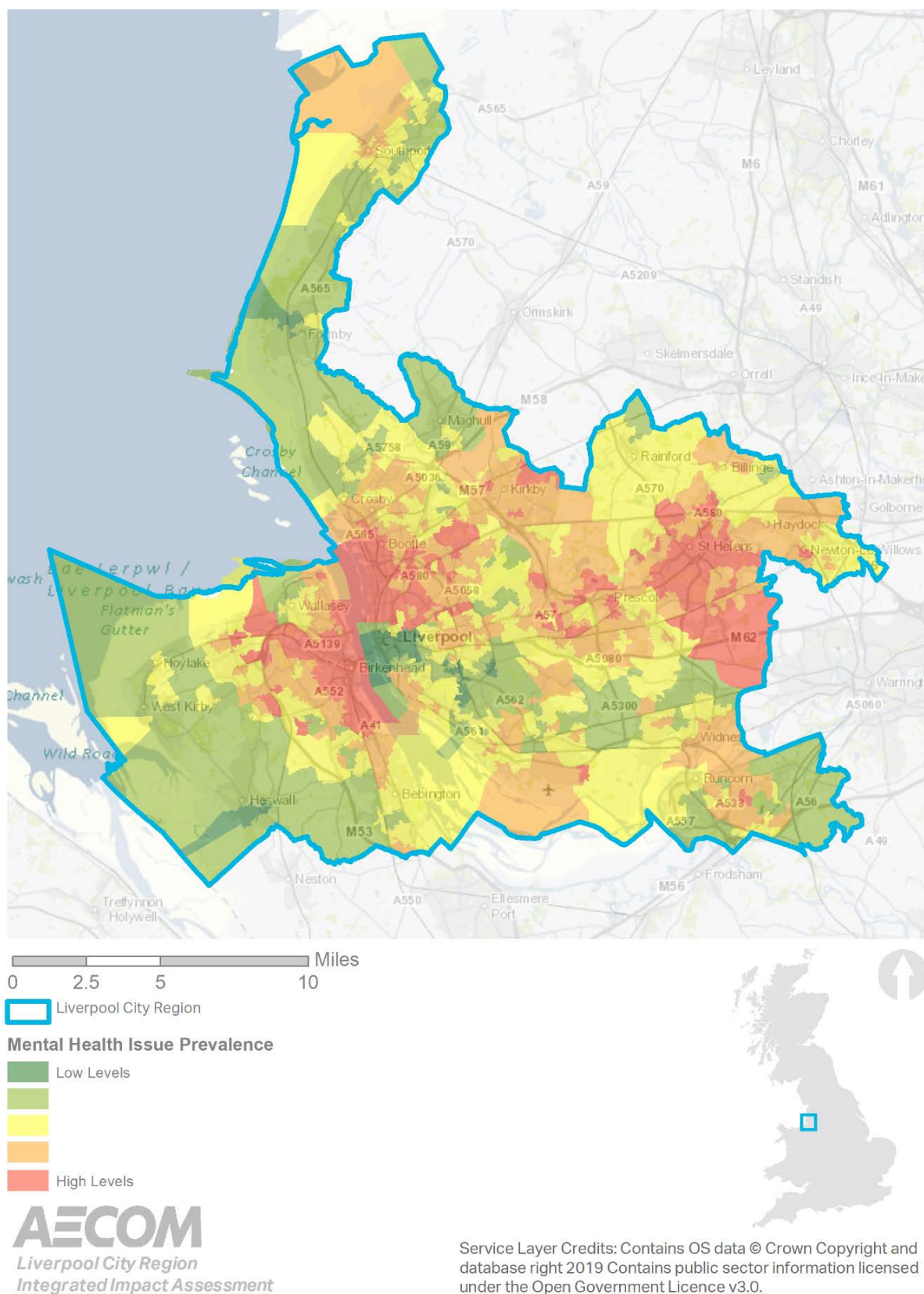
Proximity to a GP

- 4.4.14 As figure 4.2 demonstrates, the urban areas of the City Region can access a GP in a relatively short time / distance. For the more peripheral communities, the journey times are greater. However, there does not appear to be a correlation with GP access and deprivation. In fact, deprived areas are in closer proximity to health care facilities than less deprived areas. It is important to note that being in close proximity to a GP does not necessarily correlate to GP capacity or service quality.

Mental health issues

- 4.4.15 Figure 4.3 below shows that higher levels of mental health issues generally correlate with areas that are most deprived. However, the areas that suffer most from mental health issues are more spatially focused, with significant clusters in the Liverpool and Birkenhead urban areas and the built up areas of St Helens.

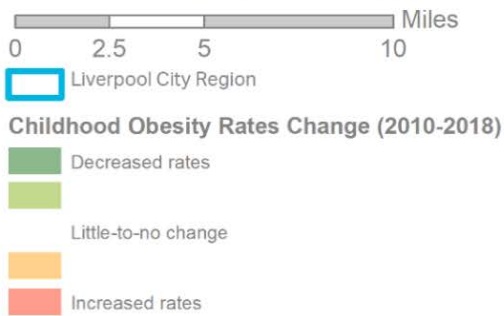
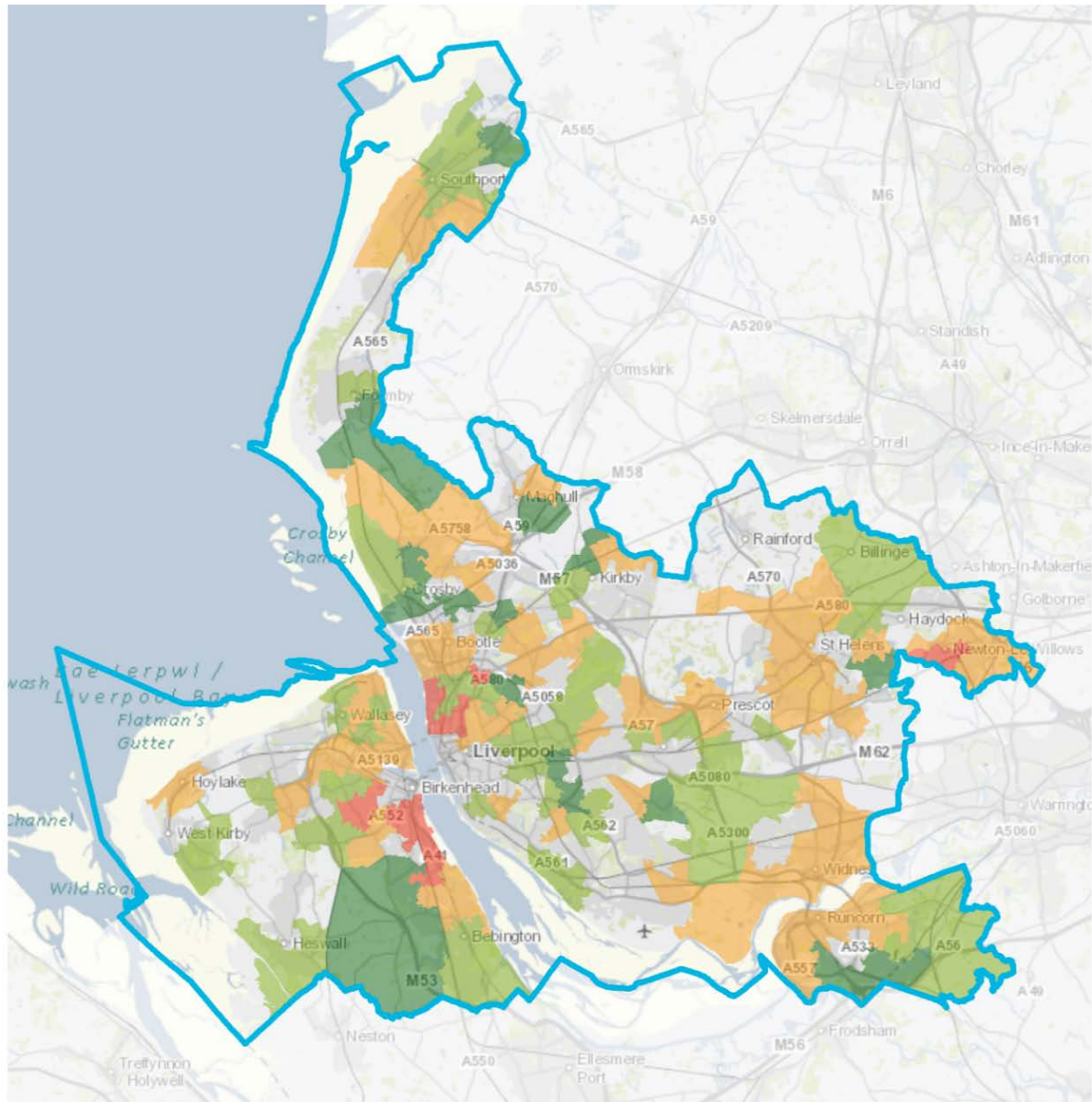
Figure 4.3: Prevalence of mental health issues (2019)



Childhood obesity

- 4.4.16 Figure 4.4 below illustrates rates of change with regards to childhood obesity between 2010 and 2018. The areas that are green show decreases in obesity, whilst those that are amber and red show a decline. Other areas show no statistically significant change. Three key areas stand out with regards to a worsening in obesity, which are south of Bootle, Birkenhead and to the west of Newton-le-Willows. Clear improvements can be seen in other locations such as Crosby, Formby, north of Southport, south of Runcorn, south of Maghull, south of St Helens town centre and 'rural areas'.

Figure 4.4: Childhood Obesity rates (2010 - 2018)



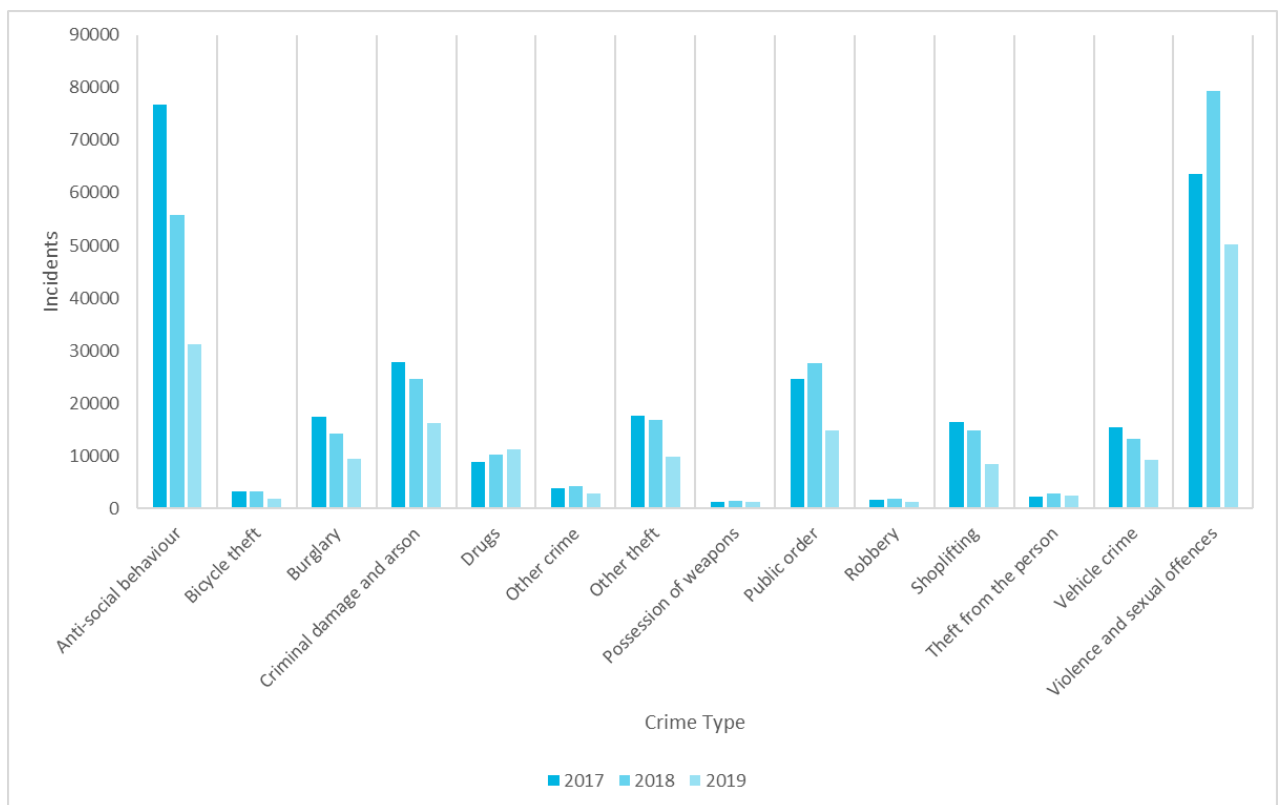
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Crime

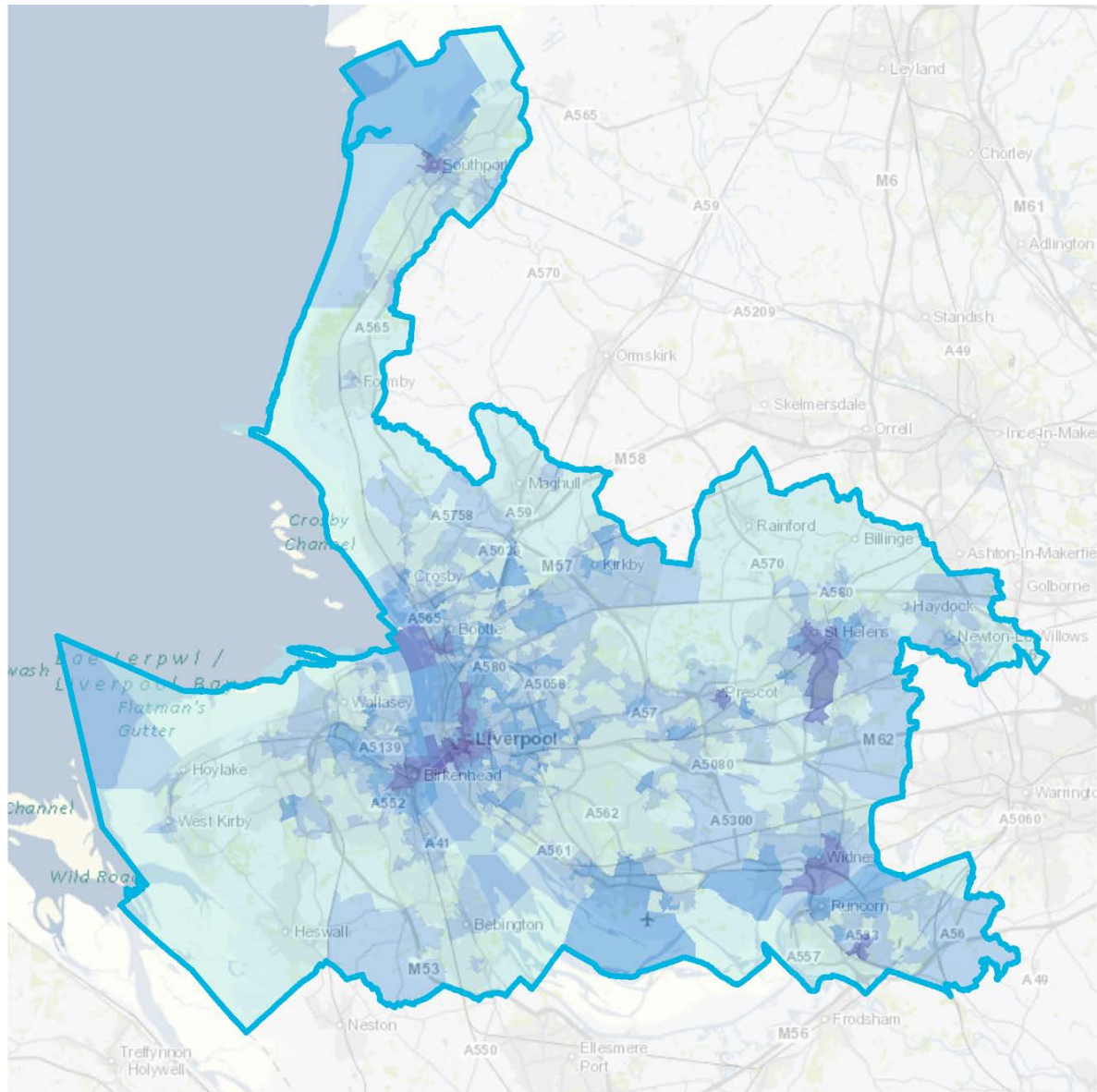
- 4.4.17 Crime rates across the region are worse than national averages, however only two local authorities are in the top 10 areas in the country for crime deprivation in the North West: Liverpool (5th) & Halton (9th)⁴⁸.
- 4.4.18 Figure 4.6 illustrates the total count of all crimes across the city region in 2019. There are clear concentrations of crime in the more built up areas of Liverpool, St Helens, Birkenhead, Widnes, Prescott, and Southport. The rural areas experience much lower rates of crime, which is similar to the picture across most of the UK.
- 4.4.19 The graph shown in Figure 5.5 demonstrates that a large amount of recorded crimes were violent or sexual in nature or anti-social behaviour.

Figure 4.5 Recorded crime across the Liverpool City Region from 2017 to 2019



⁴⁸ https://fingertips.phe.org.uk/profile/wider-determinants/data#page/3/gid/1938133073/pat/6/par/E12000002/ati/102/are/E06000006/iid/92635/age/-1/sex/-1/cid/4/page-options/ovw-tdo-0_car-do-0

Figure 4.6 Concentrations of crime in the Liverpool City Region, 2019



Liverpool City Region

Crime Count (2019)

- 8 - 138
- 139 - 289
- 290 - 643
- 644 - 1667
- 1668 - 4333

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Access to green space / recreation

- 4.4.20 Figure 4.7 measures accessibility to designated / formal open space such as public parks, playing fields, sports facilities, play areas and allotments.
- 4.4.21 By mapping access from dwellings to access points to these facilities, it is found that 81% of the LCR population have access to formal open space within 400m, and 94% within 800m. It is recognised that there are other locally important open spaces that may provide further access to natural or semi-natural green space. Nevertheless, the information is encouraging as it suggests that most communities can access recreational facilities within walking distance.
- 4.4.22 Figure 4.8 also takes account of Green Belt locations and the National Woodland Inventory, making assumptions that communities would also be able to benefit from informal recreation in such locations. Again, this demonstrates that the majority of the City Regions communities have good access to recreation opportunities within walking distance.
- 4.4.23 There are isolated locations where access within walking distance is not established using this analysis.
- 4.4.24 However, most of these areas correspond to larger-scale employment and retail uses such as at Haydock Park, John Lennon Airport, Kirkby and Widnes.
- 4.4.25 Access to greenspace and recreation in these locations is therefore not associated with homes as such. Locations along the coast also benefit from access to blue infrastructure i.e. coastal and estuarine environments. There are however, some residential locations where walking access to recreational facilities appears to be poorer (for example, residential areas in Kirkby, and within the 'outer ring' of Liverpool such as Knotty Ash).
- 4.4.26 The overall picture demonstrates that access to public available open / recreational space across the region is strong. However, this does not take account of the quality of open space, nor the amount that is available per capita. There are also private facilities such as golf courses, but these are not accessible to all, particular more deprived communities.



Figure 4.7 Access to formal public open space / recreation (excludes greenbelt, and woodland)

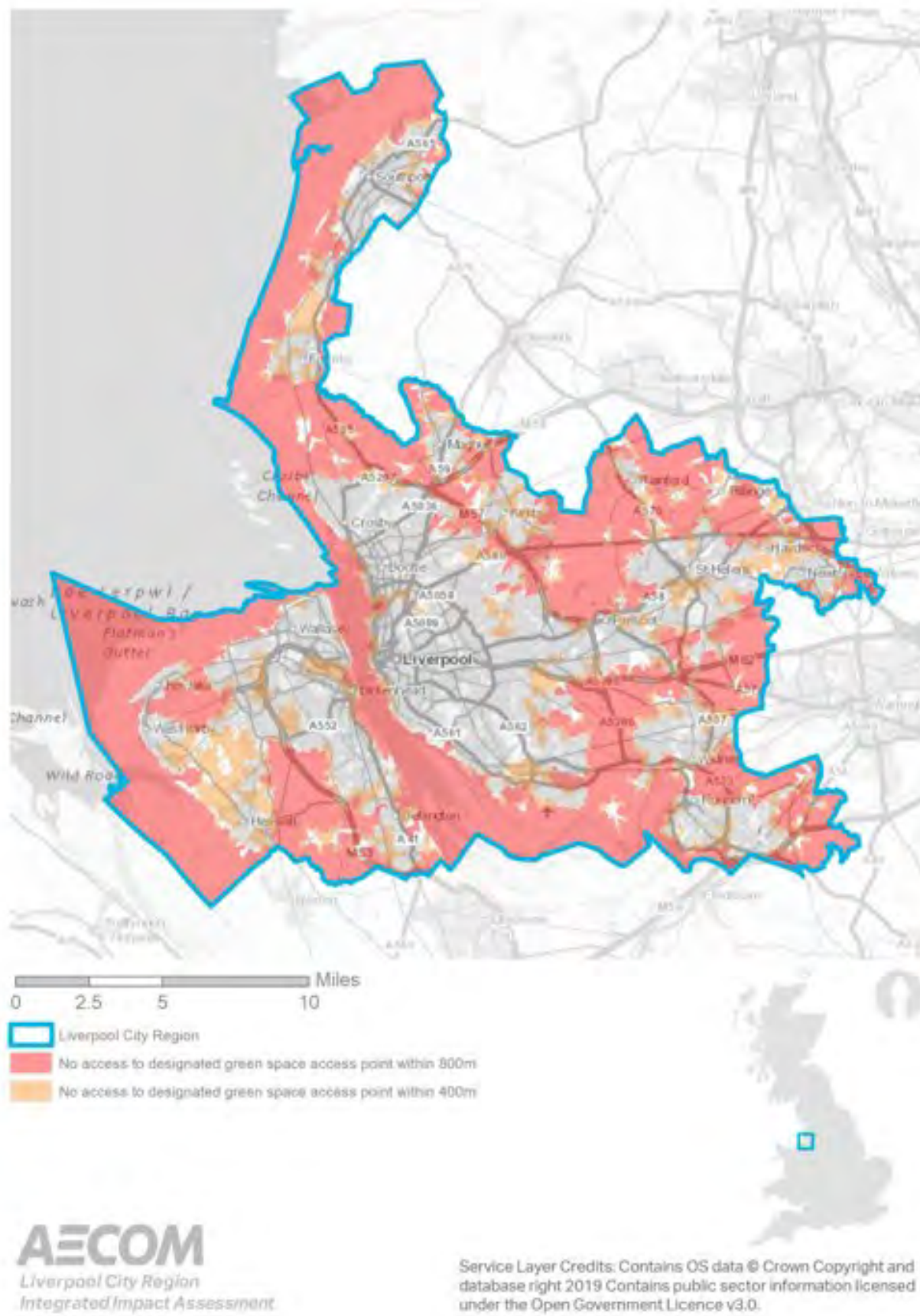
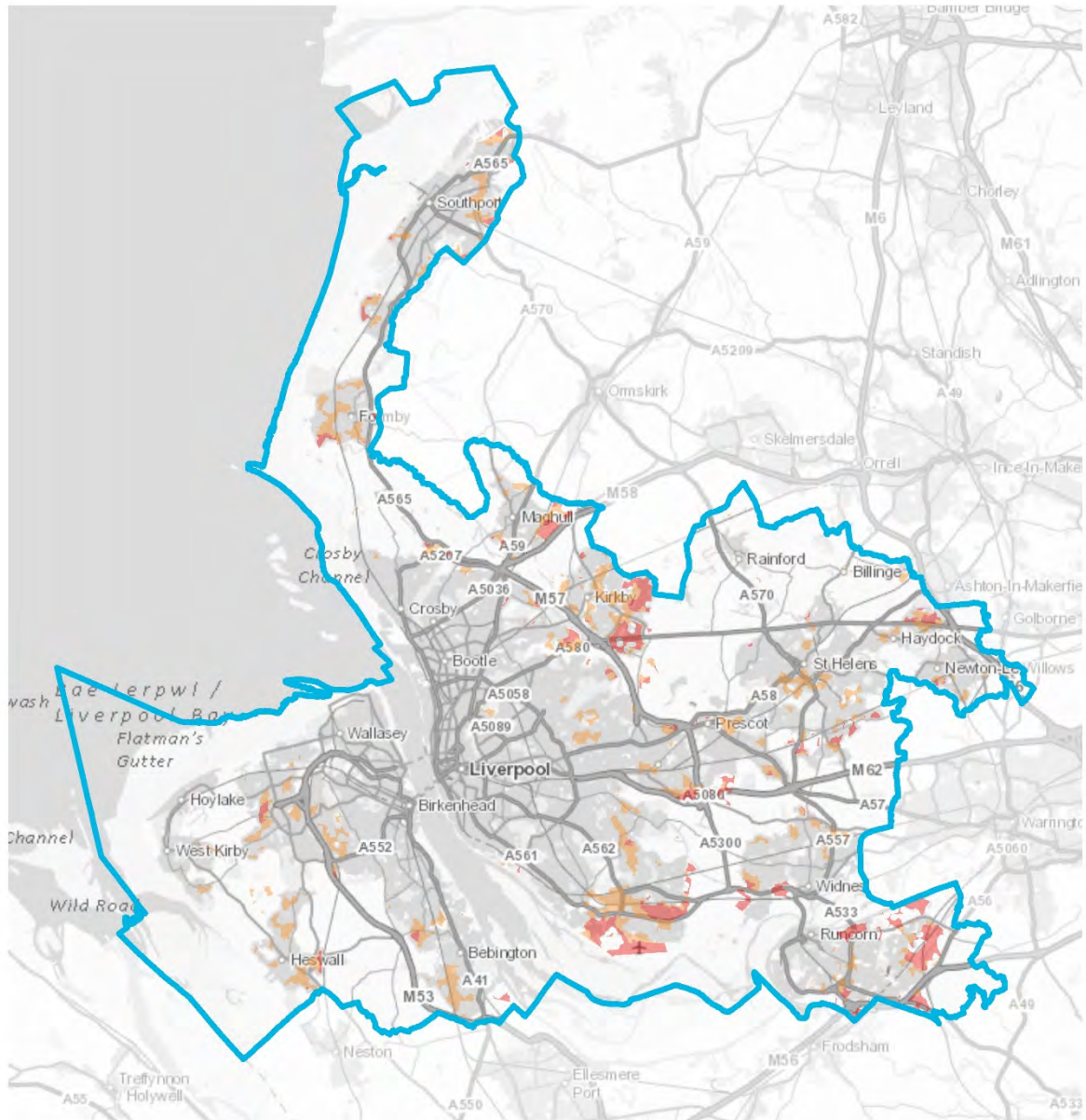


Figure 4.8 Access to formal public open space / recreation (including greenbelt and woodland areas)



0 2.5 5 10 Miles

- Liverpool City Region
- Insufficient greenspace within 800m
- Insufficient greenspace within 400m

Map highlights key areas with insufficient access to greenspace. Areas marked on the map are:

- Not in close proximity to woodland
- Not in close proximity to greenbelt
- Either 400 or 800 metres by road from the nearest area of formal greenspace

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Wellbeing

4.4.27 Wellbeing is inherently hard to quantify and its qualitative nature makes it difficult to identify areas with a specific prevalence of issues. The information detailed below (Figure 4.9) gives a broad indication of levels of wellbeing across the City Region. The data was taken from a detailed household survey which covers the years 2017/18.

4.4.28 Figure 4.9 shows that across the local authorities of the Liverpool City Region, happiness, life satisfaction and feelings of worthwhile are broadly aligned. In terms of anxiety, Knowsley and Sefton have the least anxious populations, with St Helens and Wirral experiencing the most anxiety. Whilst these broad assertions give an overview, the availability of more granular data would provide insight into the highly localised distribution of issues relating to wellbeing, permitting more targeted and effective mitigation measures.

Figure 4.9 Personal Wellbeing Estimates by Local Authority (ONS, 2017/18)



Trends

- 4.4.29 The table below sets out a brief 'snapshot' summary of issues and trends for the local authorities in relation to health and wellbeing.
- 4.4.30 Also provided is a summary of the conclusions reached in the relevant SA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Halton	Delivery and Allocations Local Plan: SA Report (July, 2019)	The population of Halton consists of more elderly aged residents than national averages. It is expected that almost 1/5 of the population by 2041 will be above the age of 70.	Overall the plan policies are likely to have positive impacts on social inclusiveness, housing and employment.
	JSNA Halton Summary Document (2019)	There is only a small portion of black and minority ethnic population (2.2%) compared to national averages.	Health inequalities gaps between most and least deprived are expected to remain the same as are current lifestyle health issues.
	Public Health Profiles: Public Health England 2016-2018	There is a large portion of obese children, worse than national averages.	Policies within the Local Plan are likely to provide some positive effects on health and well-being, whilst some have little to no effects.
		The average rate of employment is lower for men and higher for women compared to national standards.	
		Elderly people are not covered by flu vaccinations and deaths from cardiovascular disease are worse than national averages.	
		Deprivation, crime, fear of crime and safety of residents is an issue across the Borough.	
		There is a skills shortage within Halton, meaning the population is restricted to access local jobs due to inadequate education status.	Development should be located in places that have access to services, facilities and sustainable transport networks.
		Halton has the least amount of road related deaths per 100,000 within the Region and the highest estimated diabetes rate.	
		Halton has the second highest rates for teenage mothers in the country.	Design of developments should reduce crime rates through the 'designing out crime' principles. The effects of crime depend on the extent of safety designed into proposals.
		A&E attendance in children ages 0 – 4 is significantly higher than England.	
	Hospital stays for self-harm is significantly higher than the national averages.		
	Covid-19 death rate of 47 per 100,000 people between March and April 2020. This is moderately high in comparison to the rest of the UK.		

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Knowsley	Knowsley Core Strategy SA Report, (2012)	A significant proportion of Knowsley's population experience serious health issues, with binge drinking, smoking and obesity being particular problems.	Significant issues within the borough include unemployment, health educational attainment and fear of crime.
	JSNA Knowsley	Alcohol related hospital admission is higher than regional / national averages.	Policies that relate to the vitality and viability of Knowsley's city centres is likely to have positive effects on reducing crime and it increases activity and natural surveillance.
	Public Health Profiles PHE	Smoking is prevalent in Knowsley and rates are worse than national averages.	Policies that place facilities and employment opportunities in deprived areas have positive effects upon poverty and social inclusion.
	2016-2018	Fear of crime, unemployment and the need for better education are significant issues.	Knowsley is one of the top five local authorities with the highest proportions of neighbourhoods among the most deprived in England (2019).
		Knowsley is notably worse for mortality rates in particular due to cancer.	Highest self-reported anxiety rates across the Liverpool City Region.
		Covid-19 death rate of 41 per 100,000 people between April and March 2020. This is moderately high in comparison to the UK.	

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Liverpool	SA Report: Submission Draft Local Plan, (Jan 2018)	Liverpool City is one of the top five local authorities in England in terms of prevalence of high levels of multiple deprivation.	New development should be located in areas that are accessible to sustainable transport systems, and active transport corridors.
	JSNA Liverpool	The local authority is worst in the city region for life expectancies, mortality and suicide. However, it has the lowest number of self-harm admissions to hospital in the LCR.	Green spaces and hubs such as St. George's Quarter should encourage enhancements to public realm having minor positive effects on health and wellbeing.
	Public Health Profiles PHE	A&E attendance in children ages 0 – 4 is significantly higher than England.	Green infrastructure improvements are likely to have significant positive effects on health and wellbeing in the longer term.
	2016-2018	Longer term disability illnesses are significantly worse than England.	Deaths from causes considered preventable are significantly higher than England.
		Liverpool has the fourth highest rates of new Sexually Transmitted Infections.	Highest ethnic diversity in the City Region.
		More 16-17 year olds are not in education compared to the rest of the City Region.	
		High rates of respiratory diseases. Relatively high Covid-19 death rate of 82 per 100,000 people (through to May 2020).	

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Sefton	Sefton Local Plan SA Report (2015)	Parts of Sefton are within the least deprived in the country, whilst others are within the most deprived. There are therefore large disparities in life quality.	The Local plan recognise that natural environments can be beneficial for health and well-being of local residents and the visitor economy. The plan also suggests that preserving heritage aspects can positively effect health and well-being. The Local Plan is likely to have significant positive effects on health and well-being as it will protect local centres, regenerate public realms, delivering green infrastructure, upgrading social and economic infrastructure and protecting and enhancing built and natural assets. Policies around regeneration will have some positive effects on providing access to educational facilities, employment opportunities by placing them close to area of deprivation.
	JSNA Highlight Report Sefton (2018 / 2019)	Sefton is one of the better local authorities within the region for life expectancy, mortality and suicide rates; but still falling short of national averages.	
	Public Health Profiles PHE	Sefton is the worst authority in the City Region for self-reported low happiness.	
	2016-2018	<p>Younger children are achieving expected standards from reading writing and maths.</p> <p>The core areas of concerns highlighted in the JSNA summary include:</p> <ul style="list-style-type: none"> ▪ Male & Female life expectancy at birth. ▪ Under 75 mortality rate (all causes). ▪ Suicide rate. ▪ Hospital stays for self-harm. ▪ Alcohol specific hospital stays (under 18s). ▪ Alcohol related harm hospital stays. ▪ Physically active adults. ▪ Smoking status at time of delivery. ▪ Children in low income families. ▪ Employment rate. <p>Sefton is considered significantly worse than averages across the North West for alcohol related harm and breastfeeding initiation.</p> <p>Covid-19 death rate of 37 per 100,000 people between April and March 2020. This is moderate in comparison to the rest of the UK.</p>	

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
St Helens	St Helens Local Plan: Submission Draft: SA Report (Jan 2019)	Dementia numbers are predicted to increase by the year 2035 by 67%.	Overall, mixed effects are predicted. On one hand, health and wellbeing is expected to experience significant positive benefits arising from employment opportunities, generation initiatives and environmental improvements. However, congestion is a concern to health and wellbeing and it is projected to cause minor negative effects. This is because the road infrastructure may be at capacity or congestion may increase before infrastructure can be delivered thus causing strain on existing services. However these are only considered to be temporary effects.
	JSNA (St. Helens).	Two main causes of death in St. Helens are cancer and circulatory disease.	
	Public Health Profiles PHE 2016-2018	Much of the population is considered to be overweight or obese.	
	Adult Social Care Survey, 2017	St. Helens performs better than the North West with a lower rate of permanent admissions to residential nursing care.	
		St. Helens has the second highest rate in the region for hospital admissions due to substance use among young people (15-24 years).	
		The authority is the worst in the region for low satisfaction in well-being.	
		Substance use is significantly worse in St. Helens compared with the Liverpool City Region.	
		School readiness is quite low in St. Helens.	
		St Helens has the most alcohol related specific conditions.	
		St Helens is the second highest local authority for under 18s pregnancy.	
	Covid-19 death rate of 38 per 100,000 people between April and March 2020. This is moderate in comparison to the rest of the UK.		

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Wirral	Wirral Issues and Options Consultation , Interim SA Report (Dec, 2019)	<p>Wirral’s population is expected to increase by 1.6% by the year 2039.</p> <p>In 2018, the lowest rates of birth were recorded in over 40 years.</p> <p>Wirral’s elderly population is higher than national averages.</p>	<p>Options for different scales and distributions of growth are proposed for the Local Authority.</p>
	JSNA Wirral Intelligent Services Key Messages (Feb 2020)	<p>The majority of residents are of a white background (95%).</p> <p>There are areas within Wirral along the western coastline in areas such as Heswall that are within the least deprived communities. However, to the east are some of the most deprived communities in the City Region (and indeed England).</p>	<p>The emerging preferred approach focuses on urban regeneration, with a large amount of growth in areas that are experiencing health deprivation (such as within Birkenhead in particular). This should have benefits with regards to the provision of affordable homes, the improvement of the public realm, and in terms of being accessible to healthcare facilities. However, without upgrades to healthcare services, there could be negative implications on existing facilities</p>
	Public Health Profiles PHE 2016-2018	<p>Wirral is the highest rates in the region for mental health hospital admissions.</p> <p>Younger people are consuming alcohol as young as at age 15 within Wirral.</p>	<p>In terms of open space and recreation, this option will place new homes within walkable communities in the main, which is positive in terms of active travel.</p>
		<p>Healthy Life Expectancies demonstrate that Wirral residents spend around 3 quarters of their lives in good health (which is lower than in England).</p>	
		<p>Elderly adults are vulnerable in Wirral, more so than younger adults.</p>	
		<p>Wirral has the highest employment rates within the Liverpool City Region.</p>	
		<p>There are correlations between those living in Wirral’s most deprived areas and those with least favourable economic factors.</p>	
	<p>Covid-19 death rate of 48 per 100,000 people between April and March 2020. This is moderately high in comparison to the rest of the UK.</p>		
		<p>Other options involve Green Belt loss. Broadly speaking, this does not place development in areas that are likely to address health inequalities.</p>	

- 4.4.31 Population growth across the City Region is expected to continue, and this is likely to result in an aging population in most locations. This will bring challenges associated with demographic shifts and increasing needs of services such as housing, health care, employment and education.
- 4.4.32 The impact of Covid-19 is not yet fully understood, but it is likely to continue affecting mortality (at least in the short term), health care provision, and levels of unemployment and economic activity. It is very possible that the aftermath of the pandemic could lead to a plethora of secondary health and wellbeing issues related to unemployment, isolation, mental illness and other factors. As with many other factors, these issues could be felt disproportionately by those already suffering multiple deprivations. This could serve to exacerbate regional inequalities.

4.5 Key issues

- 4.5.1 The following key issues emerge from the scoping exercise:
- Supporting healthy lifestyles, promoting access to green and blue infrastructure, and tackling health inequality are key policy drivers at a national, regional and local level.
 - There is a need to plan for an aging population as numbers are increasing in older aged residents region-wide.
 - The Liverpool City Region contains a high proportion of deprived communities, with spatial concentrations in the more built-up urban areas. This is set against a growing economy with areas that are affluent, thereby demonstrating large inequalities across the region.
 - There should be a focus on improving younger people's health as it can affect them in the longer term. Issues such as teenage pregnancies, alcohol and drug related incidents and unemployment are prevalent among young people in the region, particularly in deprived areas.
 - Being physically close to a GP does not necessarily correlate to good health and wellbeing.
 - Mental health issues are more prevalent in urban locations, particularly those suffering from multiple deprivation.
 - Access to formal recreational space / green space is generally good, but there are areas where improvements could be made. This is important given that there is clear evidence that green infrastructure has positive effects on health and wellbeing.
 - Childhood obesity rates have increased in some locations.

4.6 Scoping outcome

- 4.6.1 Considering the key issues discussed above it is proposed that the topic of health and wellbeing should be **SCOPED IN** to the integrated Appraisal. The following objectives and supporting questions are proposed as part of the IIA Framework.

IIA objectives	Assessment questions (will the option/ proposal help to...)
<p>Support healthy lifestyles for all community groups, whilst seeking to close 'inequality gaps' and improve resilience to health issues.</p>	<ul style="list-style-type: none"> • Ensure that places are designed to support improved access to recreation opportunities and natural greenspace? • Ensure places are designed to allow public health and safety measures to be employed effectively? • Improve access to suitable housing and employment opportunities? • Reduce inequalities in health between the most and least affluent communities? • Support active travel? • Manage demand for and access to health and social care services?
<p>Improve mental health and wellbeing, particularly in areas of greatest need.</p>	<ul style="list-style-type: none"> • Strengthen protective factors for mental health such as socio-economic and environmental conditions and community support networks? • Ensure access to good quality, affordable food? • Provide opportunities for people to pursue meaningful activities?

5. Housing

5.1 Introduction

- 5.1.1 Access to housing is a basic human right, yet there is a chronic shortage of suitable, affordable and quality housing across the UK.
- 5.1.2 The Government recognises that there is a housing crisis and is committed to tackling under supply, whilst ensuring the right homes are available to meet the needs of a range of communities.
- 5.1.3 This section provides a strategic review of the policy context, literature, and baseline position in relation to the following important factors related to housing.
- Housing delivery
 - Homelessness
 - Housing condition
 - House prices and affordability.

5.2 Context review

International

- 5.2.1 **UN Sustainable Development Goals** are 17 life changing goals outlined by the UN in 2015. The following are of direct relevance for housing in:
- Goal 11. Sustainability: Increase affordable housing and make settlements inclusive, safe and sustainable.

National

- 5.2.2 Key messages from the National Planning Policy Framework⁴⁹ (NPPF) include:
- 5.2.3 Support for strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural wellbeing.
- 5.2.4 To support the Government's objective of significantly boosting the supply of housing, strategic policies 'should be informed by a local housing need assessment, conducted using the standard method in national planning guidance. In addition to the local housing need figure, any needs that cannot be met within neighbouring areas should also be taken into account in establishing the amount of housing to be planned for.'
- 5.2.5 The size, type and tenure of housing needed for different groups in the community should be assessed and reflected in planning policies. Where a need for affordable housing is identified, planning policies should specify the type of affordable housing required, and expect it to be met onsite where possible.

⁴⁹ MHCLG (2019) National Planning Policy Framework [online]
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_web.pdf

- 5.2.6 Recognise the important contribution of small and medium sized development sites in meeting housing needs. Local Plans should identify land to accommodate at least 10% of their housing requirement on sites no larger than one hectare, and neighbourhood planning groups should also consider the opportunities for allocating small and medium-sized sites.
- 5.2.7 In rural areas, planning policies and decisions should be responsive to local circumstances and plan housing development to reflect local needs, particularly for affordable housing, including through rural exception sites where appropriate. Authorities should consider whether allowing some market housing would facilitate the provision of affordable housing to meet local needs.
- 5.2.8 National Planning Practice Guidance (NPPG)⁵⁰ identifies that:
- Local Planning Authorities should assess their development needs working with the other local authorities in the relevant housing market area or functional economic market area in line with the duty to cooperate. This is because such needs are rarely constrained precisely by local authority administrative boundaries.
- 5.2.9 The Select Committee on Public Service and Demographic Change report *Ready for Ageing?* (2013)⁵¹ warns that society is underprepared for the ageing population. The report says that ‘longer lives can be a great benefit, but there has been a collective failure to address the implications and without urgent action this great boon could turn into a series of miserable crises’. The report says that the housing market is delivering much less specialist housing for older people than is needed. Central and local government, housing associations and house builders need urgently to plan how to ensure that the housing needs of the older population are better addressed and to give as much priority to promoting an adequate market and social housing for older people as is given to housing for younger people.
- 5.2.10 The **UK 2070 Commission’s** final report on regional inequalities details the UK’s need to dismantle the extremities of regional inequalities through large scale, long term and all-encompassing policies. The report recommends widespread commitments which see areas outside of London and the South East benefitting from investment and exploiting cultural capital to realise their potential. The report sets out a 10-point framework for action which includes rethinking the housing crisis by viewing housing as a part of national infrastructure and ensuring supply meets the needs of the economy.

City Region

- 5.2.11 The Liverpool city region (LCR) strategic housing and employment land market assessment (**SHELMA**) was published in draft for consultation in 2017 and updated in March 2018. It identifies an objectively assessed housing need between the constituent LCR authorities. The SHELMA identifies an objectively assessed housing need (OAHN) of 3,564 dwellings per annum across the LCR.
- 5.2.12 The LCRCA Housing Statement⁵² identified five high level ambitions and priorities which are designed to improve the housing offer in the LCR. These are:
- Delivering more homes, improving housing choice and quality
 - Supporting the ageing population
 - Regenerating neighbourhoods

⁵⁰ Department for Communities and Local Government (2012) National Planning Practice Guidance [online] <http://planningguidance.communities.gov.uk/>

⁵¹ Select Committee on Public Service and Demographic Change (2013) *Ready for Ageing?* [online] <http://www.parliament.uk/business/committees/committees-a-z/lords-select/public-services-committee/report-ready-for-ageing/>

⁵² LCRCA (2019) *Our Housing Ambitions for the Liverpool City Region 2019-2024* [online] <https://www.liverpoolcityregion-ca.gov.uk/wp-content/uploads/LCRCA-HOUSING-STATEMENT-2019.pdf>

- Improving the quality of renting
- Tackling homelessness

5.2.13 The LCRCA (draft) Local Industrial Strategy (2020) acknowledges several issues and opportunities relating to housing. In particular this means addressing existing low value, low quality housing stock, there is also a need to accelerate delivery of new homes, regeneration and retrofitting. The key outcome related to housing is as follows:

Increased supply of quality, sustainable, affordable housing: measured by number of housing completions, number of homes retrofitted to improve energy efficiency.

Local

5.2.14 Table 5.1 below highlights the common themes, policy approaches and strategic priorities for Housing that are common to each of the six authorities. Locally specific issues have also been drawn out where they are of strategic importance.

Table 5.1. Key messages for Housing

Key policies & principles	Source / Authorities
Maximise growth on previously developed land.	All adopted and / or emerging Local Plans for constituent authorities.
Achieve a viable proportion of affordable housing delivery.	
Provide specialist accommodation to meet the needs of specific community groups.	
Take account of economic aspirations in calculating housing need.	
Sustainable Urban Extensions are likely to form an important part of the housing delivery trajectory over the next 15 years.	<ul style="list-style-type: none"> • Sefton Local Plan 2017(Adopted) • Knowsley Local Plan Core Strategy 2016 (Adopted) • Halton Local Plan 2013 (Adopted) • St Helens Local Plan 2020 – 2035 (Emerging) • Wirral Local Plan 2020 – 2035 (Emerging)

5.3 Focused literature review

5.3.1 Providing housing in the right locations for all is a priority for localities and is reflected amongst national, regional and local policies and frameworks across the nation.

Inadequate housing conditions are associated with a wide range of health issues, with specific issues for certain groups

5.3.2 The Building Research Establishment calculated in 2010 that poor housing conditions have a detrimental impact on health, costing the NHS at least £600 million per year.

- 5.3.3 Issues associated with poor housing conditions include respiratory infections, asthma, lead poisoning, injuries and mental health (*Kreieger & Higgins, 2002*), (*Montgomery et. al. 1996*) (*Weitzman et. al. 1990*) (*Wilkinson 1999*)
- 5.3.4 Overcrowding leads to social tension and can affect the development of children. Young people can be disproportionately affected by poor conditions in terms of emotional development and educational attainment (*Montgomery et. al. 1996*) (*Hunt, 1997*)
- 5.3.5 Growing up in poor housing has a profound and long-term impact on children's life chances (*Harker, L. 2006*).
- 5.3.6 Older people can be particularly affected by issues such as inadequate heating, damp, and homes that are not adapted for mobility issues.
- 5.3.7 Women living in flatted accommodation can be more likely to suffer from emotional wellbeing issues (*Gabe and Williams, 1993*)

Housing affordability can have detrimental effects on health and wellbeing

- 5.3.8 Homeless people face clear and obvious physical and mental health difficulties.
- 5.3.9 For renters, unaffordable housing has negative effects on mental health (*Baker et. al. 2013*).
- 5.3.10 Affordable Housing Can Improve Health Outcomes by freeing up disposable income (*Maqbool et al, 2015*).

Housing appearance and quality can affect mental wellbeing

- 5.3.11 A study conducted by *Bond et. al. (2012)* analysed approximately 4,000 residents within deprived areas of Glasgow, Scotland. The results found that mental wellbeing was higher when respondents, neighbourhoods had very good aesthetic qualities.
- 5.3.12 *McCay (2017)*, states that the association between urban living environments and mental health is becoming more apparent.
- 5.3.13 'Difficult to let' properties can result in poorer emotional wellbeing compared to those living in 'better areas'. (*Blackman et al, 1989*).

5.4 Baseline review

Housing delivery

- 5.4.1 Figure 5.1 below shows the overall housing completions in each of the local authorities across the Liverpool city region. This data has been sourced from each Local Authorities most up to date annual Monitoring report, which isn't consistent for all the authorities.
- 5.4.2 This figure of net completions is then compared against the target for each local authority. Data from 2013-2016 is complete, and therefore shows the complete picture for across the Whole city region. In 2013 all local authorities, apart from Wirral did not meet their housing target, therefore overall the housing target (4,311⁵³) was not met across the whole of the Liverpool City region. This trend was also similar in 2014, however the overall completions was closer to the target across the region.
- 5.4.3 In 2015 and 2016, the overall completions across the city region rose significantly but not quite reaching the target, apart from in 2015 Knowsley and Sefton surpassed their target and in 2016 Liverpool and St Helen's surpassed their target.

⁵³ Sum of 6 LA housing targets from Local plans.

- 5.4.4 In the more recent years, the data that is available is more sporadic. In 2017, the picture seems to change across the city region⁵⁴. The number of completions is significantly higher than the target, which is mainly due to the extremely high numbers of completions in Halton, Liverpool and Sefton which surpassed target more significantly than St Helens and Wirral which did not meet target.
- 5.4.5 In 2018, the trend is reversed once again⁵⁵, with the completions being below the target for the region, however not by a significant amount, St Helens was the only Local Authority to surpass its target. In 2019, there are only two data sets available (Halton and Sefton) whereby the completions are almost reaching the target.
- 5.4.6 Tables 5.2 and 5.3 below provide more details on the individual LA housing completions, including affordable housing figures (where available).

⁵⁴ Data from Knowsley is not available.

⁵⁵ Based on 4 LAs (missing data Knowsley and Liverpool)

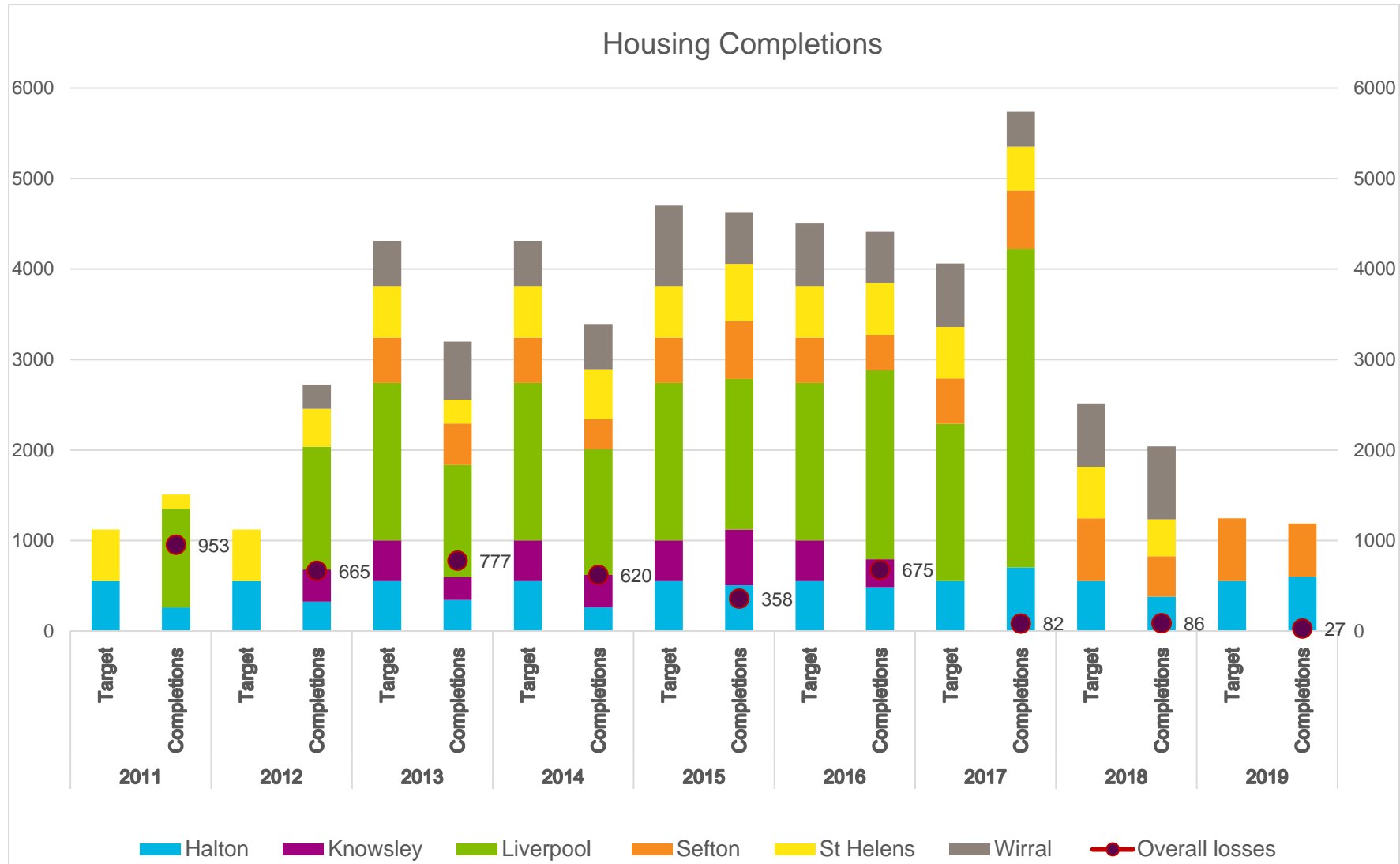
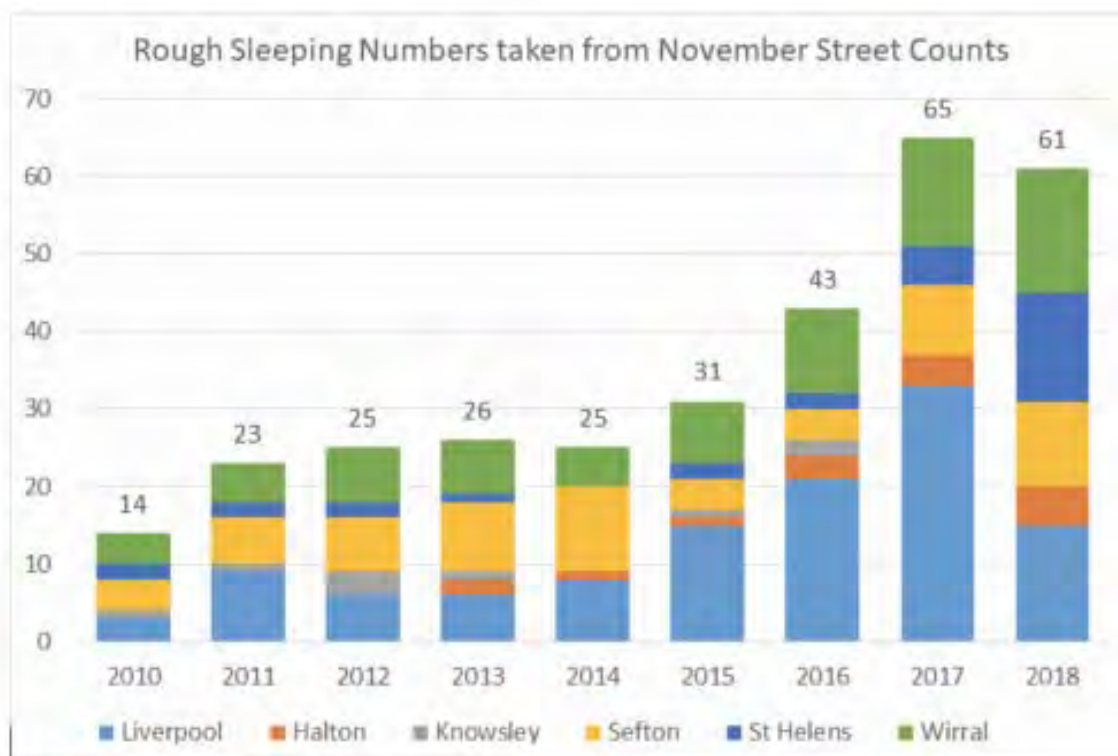


Figure 5.1: Local Authority Housing Completions (where data is available)

Homelessness

- 5.4.7 Rough sleeping is the most visible feature of homelessness and, as illustrated in Figure 5.2, this has increased in the City Region since 2010. Obviously, these figures do not include the homelessness we can't see. This reflects national trends.
- 5.4.8 These figures show numbers as a snapshot in time and due to being in November maybe not be fully reflective of the overall annual trends. It is clear however that the situation is worsening.

Figure 5.2: Numbers of rough sleepers in Liverpool City Region (2010-2018)



Housing condition

- 5.4.9 There are several factors that contribute towards the quality and condition of housing as well as living experience. The following selection of figures and data illustrate the spatial patterns in relation to several factors that contribute towards housing condition such as those defined in 'poor condition', those without access to central heating, and those where overcrowding is prevalent.
- 5.4.10 Figure 5.3 shows the percentage of homes that are in a poor condition across the whole of the Liverpool City region. The figures highlight that the areas that have over 30% of their housing stock that are in a poor housing condition are mainly located to the North of the region in Sefton LA area, surrounding the town of Southport. There are also pockets where housing in poor condition exists in a ring around the urban area of Liverpool including locations such as Bootle.
- 5.4.11 Figure 5.4 highlights the rates of housing without access to central heating. This is a key indicator which relates to a number of sustainability issues, including health, energy and housing. The areas with the highest rates were found in patches to the north and east of Liverpool and to the west of Southport, St Helens and Widnes. It is notable that these areas all fall in built-up conurbations and overlap with locations suffering from multiple deprivation.

5.4.12 Figure 5.5 shows household overcrowding rates for the city region; this is an important social indicator which relates to deprivation and health, as well as housing. The highest rates can be seen in central and western areas of central Liverpool, the north-eastern side of Southport and marginally heightened rates in the built-up areas of Runcorn, Widnes, St Helens, Prescot, Birkenhead

Figure 5.3: Rate of housing in poor condition (2019)

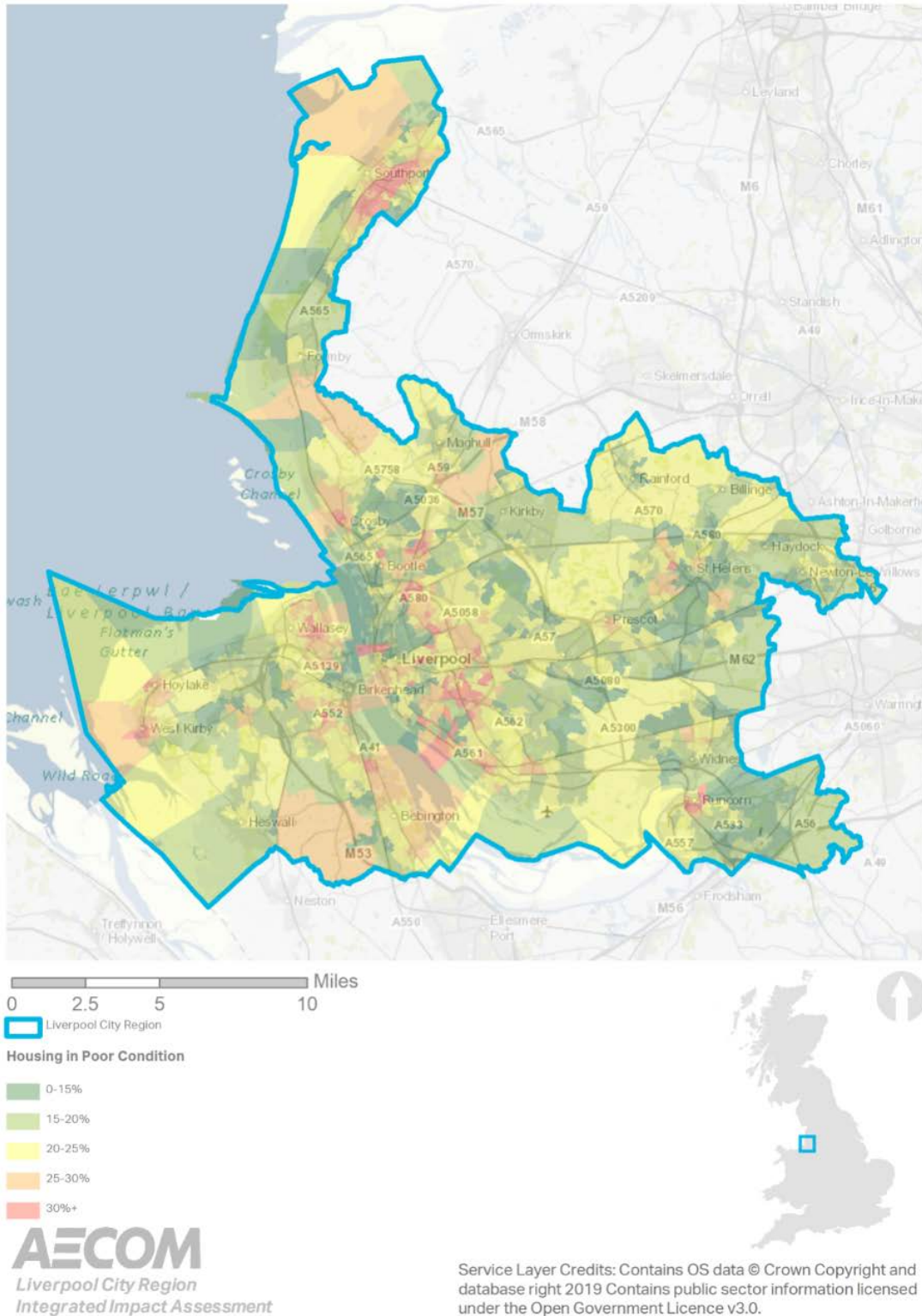


Figure 5.4: Houses without central heating (2019)

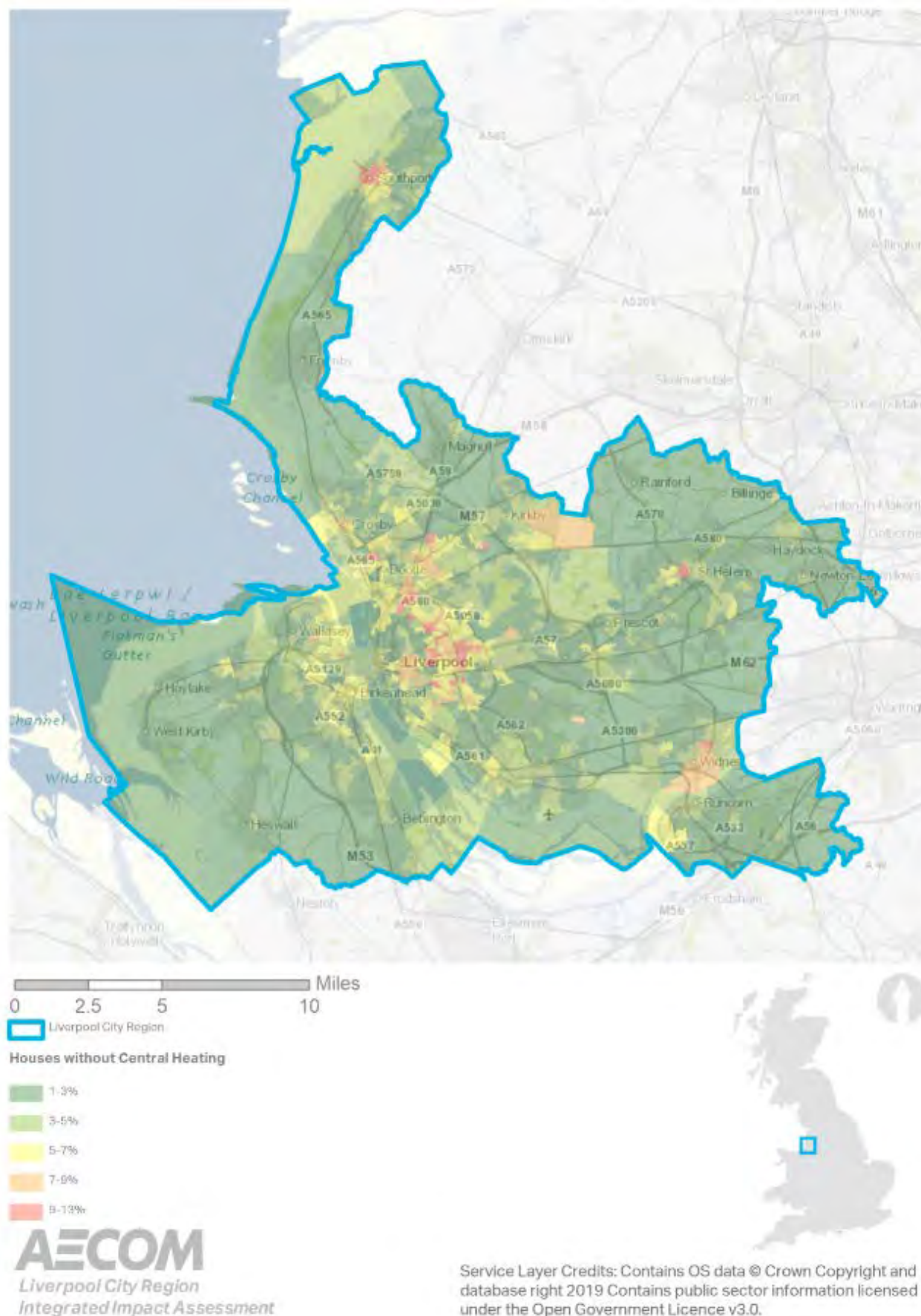
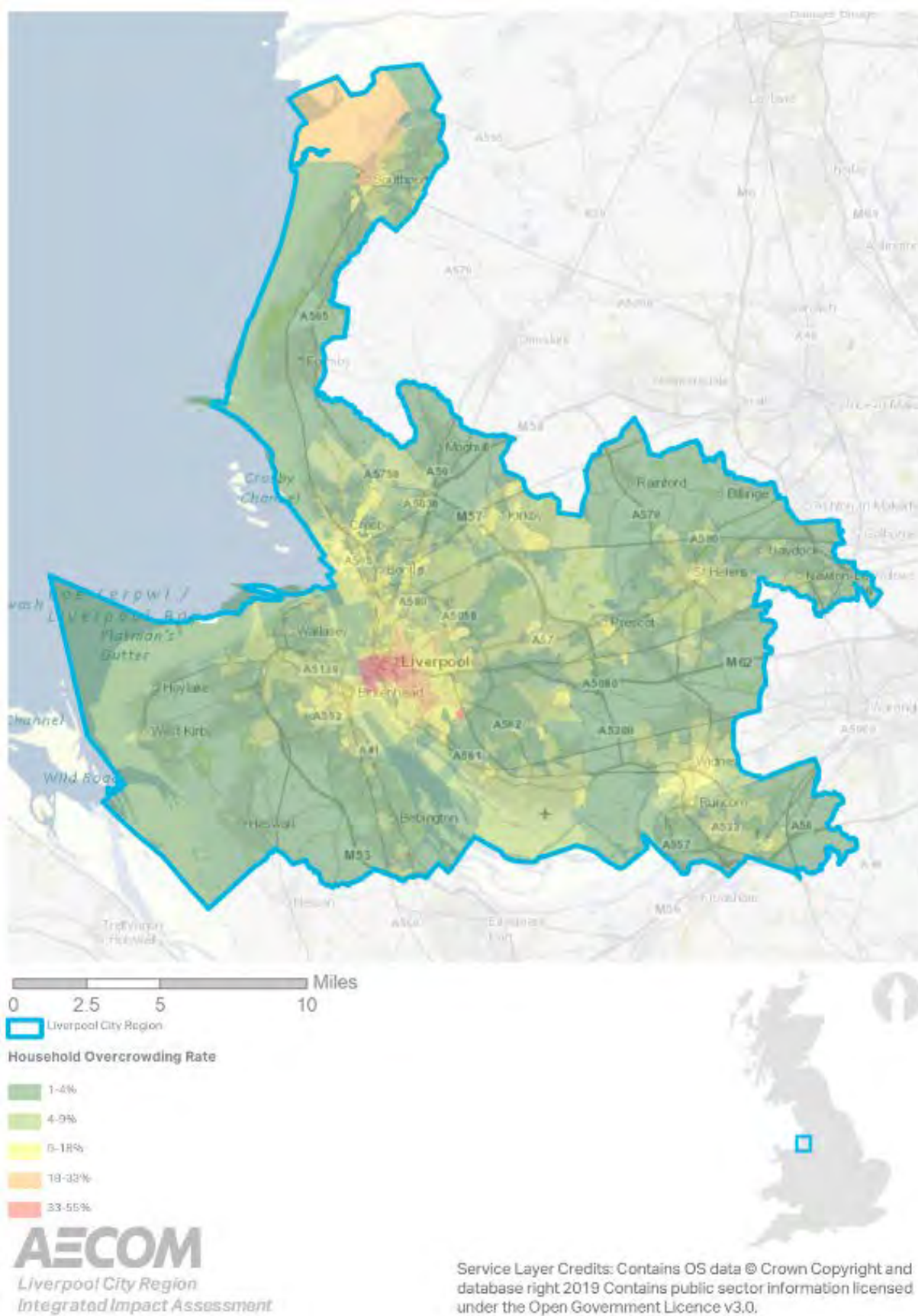


Figure 5.5: Household overcrowding rate (2019)



House prices and affordability

- 5.4.13 Figure 5.6 on the following page shows the mean house prices across the city region, with the blue pockets showing the lowest house prices and the red showing the highest house prices.
- 5.4.14 It is clear from the map that the highest house prices (£279,569 – £409,425) are some concentrated rural parts of the city region area, such as South East Wirral and the southern parts of Sefton.
- 5.4.15 As for the areas that have the lowest house prices, which are located in the built-up areas
- 5.4.16 This data fairly correlates with the figures above that highlight where the the poor quality of housing is located, it shows that the areas where the lowest house prices are similar as those that have the poorest housing conditions, lack of central heating and overcrowding.
- 5.4.17 When looking at affordability of housing, average incomes and average house prices are looked at together, giving a picture of how accessible home ownership is within a locality. Figure 5.7 reveals that in general Liverpool is the most affordable area in the City Region, aside from an area to the south east of the centre. More rural areas around Formby and in the west of Wirral are less affordable.



Table 5.2: Delivery of affordable housing

Authority Affordable housing completion

Halton	Data relating to the provision of affordable units has been extracted from MCHLG 'Live tables on affordable housing supply from 2015-2019. The grand total from different affordable housing supply sources amounts to 626 over this four year period.
Knowsley	Data relating to the provision of affordable units has been extracted from MCHLG 'Live tables on affordable housing supply from 2015-2019. The grand total from different affordable housing supply sources amounts to 812 over this four year period.
Liverpool	191 affordable homes were completed in 2016-17 compared with 145 in 2015-16, annual affordable housing delivery averages 179 dwellings per year.
St Helens	There have been a total of 989 affordable completions over 8 years up to 2019, which equates to 123 affordable completions per year on average.
Sefton	<p>During 2018/19 there were 141 affordable housing completions, slightly lower than 165 completed in 2017/18 but significantly higher than the 37 completed in 2016/17.</p> <p>37 of the 141 or 26.2% of the affordable units that have been completed during 2018/19 were secured through the section 106 process.</p> <p>The number of affordable housing completions during 2018/19 has consolidated a return towards levels secured in previous years following much lower figures in 2016/17</p> <p>This period also predates the adoption of the Sefton Local Plan (April 2017) and early indications are this is boosting the provision of affordable homes, including through the section 106 process.</p>
Wirral	<p>The number of new affordable dwellings completed in 2017/18 increased to 153, from 83 in 2016/17.</p> <p>Average house prices increased by 4.5 percent in Wirral in the year to March 2018, higher than the overall increase for Merseyside (3.6 percent) but lower than the increase for the North West region (4.8 percent).</p> <p>The average property price for the Borough as a whole was just over six times the average salary for the Borough in 2017/18.</p>

Figure 5.6: Mean House Prices (2019)

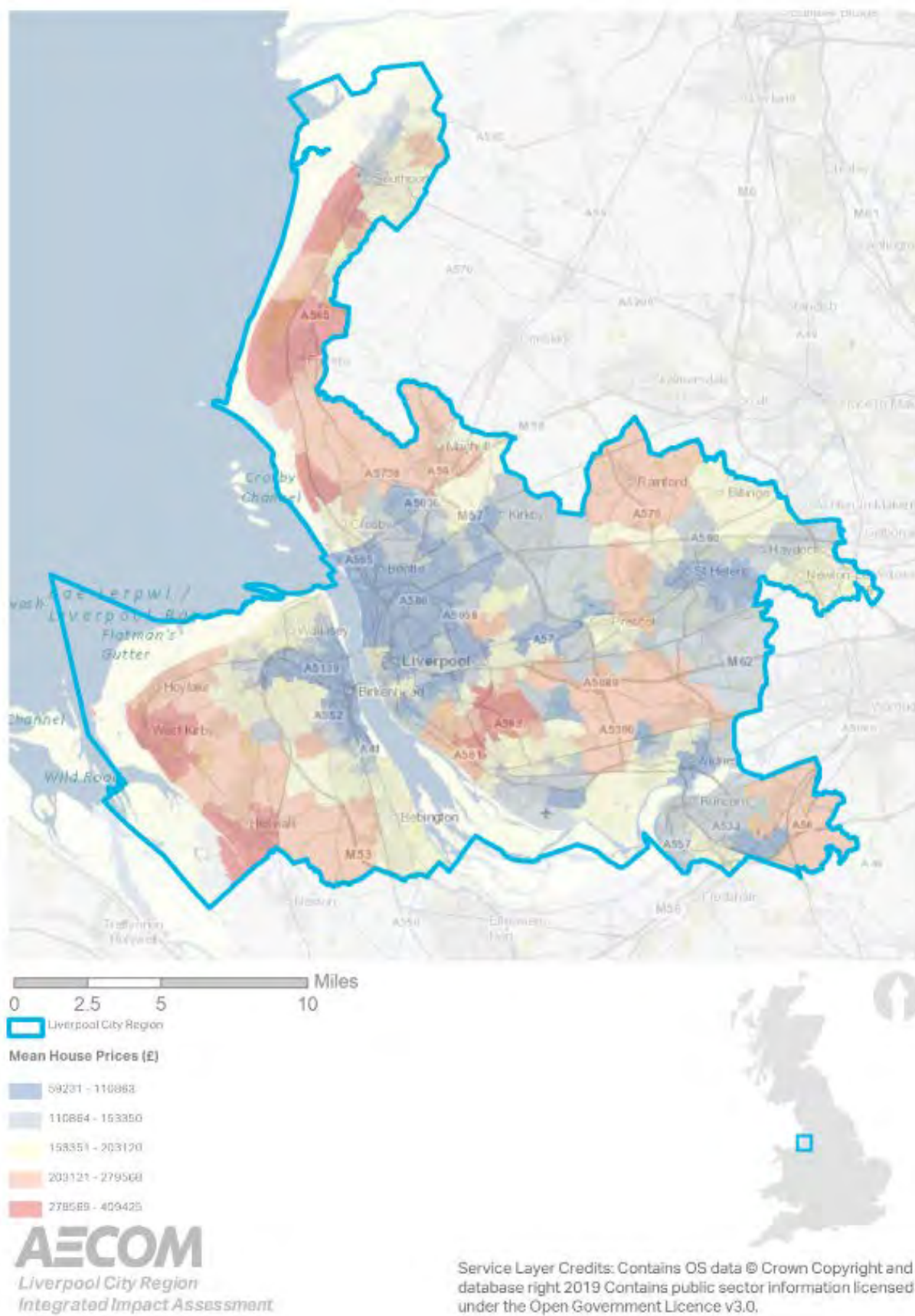
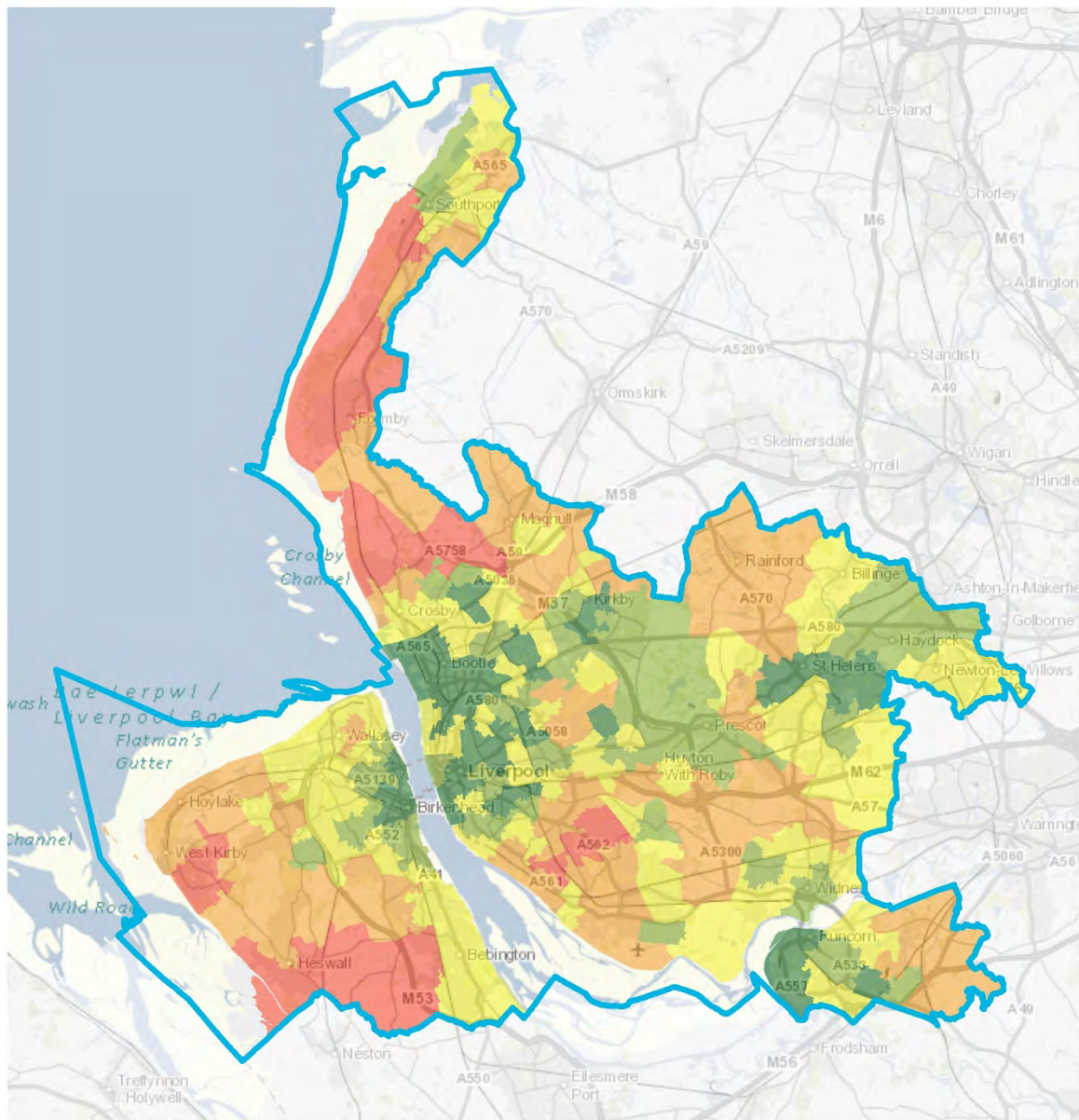


Figure 5.7: Housing affordability Ratio (ONS, 2018)



0 2.5 5 10 Miles

Liverpool City Region

Housing Affordability (house price/medium income ratio)

- Most Affordable
-
-
-
- Least Affordable

AECOM

Liverpool City Region
 Integrated Impact Assessment



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5.4.18 The table below sets out a brief summary of issues and trends for the local authorities in relation to housing. Also provided is a summary of the conclusions reached in the relevant

SA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Halton	<p>Delivery and Allocations Local Plan: SA Report (July, 2019)</p> <p>Annual Monitoring Reports</p>	<p>It is stated that the Borough should deliver 9,930 new homes within the plan period at an average of 552 net new homes each year until 2028. Since 2010, there have been 3,670 net dwellings completed within Halton, an average on 408 dwellings each year which is below target overall.</p>	<p>All parts of the Borough will benefit from increased housing quantity, quality, affordability and choice. The areas that are likely to be significantly affected are those that are seeing the greatest levels of development e.g. North Widnes and East Runcorn.</p> <p>There are positive social and economic effects, mainly related to the provision of more affordable housing, low carbon, sustainable, and adaptable housing, and a more diverse mix of house types. Other secondary impacts include the relation between housing and employment, where the construction of housing will provide employment and the need to house employees.</p>
Knowsley	<p>Knowsley Core Strategy SA Report, (2012)</p>	<p>From 2010/11 to 2013/14, new build completions were relatively steady averaging 333 per annum. There was a large increase to 616 from 2015-2016, but housing delivery was running just over 900 behind the target since the beginning of the current Local Plan period (2012).</p> <p>It was expected the net completions would rise again in 2016–17, and the LA is working with landowners and developers on major Sustainable Urban Extension development sites.</p>	<p>It was concluded that policies for Housing Supply (CS3), would have a positive impact on a range of objectives, particularly those that relate to social and economic issues.</p>
Liverpool	<p>SA Report: Submission Draft Local Plan, (Jan 2018)</p>	<p>The overall scale of new housing development for Liverpool set out in the draft Liverpool Local Plan (January 2017) indicates a dwelling target of 34,780 dwellings, net of demolitions, for a twenty-year period between 1/4/2013 and 1/4/2033.</p> <p>Between April 2013 and March 2017 inclusive there were 8,015 completions leaving a residual requirement of 26,765. Additionally, the City Council has an overall requirement for 149.5 hectares of land for industrial and business uses.</p>	<p>A range of housing sites are proposed that will meet the needs of a diverse range of communities. The sites identified are sufficient to provide choice and flexibility and are supported by other policies such as those relating to regeneration and mixed use development. Some policies requiring contributions towards infrastructure provision raise question marks over viability, but overall the Plan is predicted to have a significant positive effect on providing a mix of good quality, affordable and resource efficient housing.</p>

Local Authority	Key studies / Issues and trends evidence	Conclusions from Local Plan SA documents
-----------------	------------------------------------------	------------------------------------------

		Large areas of housing which is classified as most affordable	
Sefton	<p>Sefton Local Plan SA Report (2015)</p> <p>Annual monitoring Report (2019)</p>	<p>As of 31 March 2019, the Council has a 6.0 years housing supply, up from 4.6 years at 31 March 2018.</p> <p>During 2018/19 there were 564 net additional dwellings in Sefton. This maintains a level more in line with previous levels of completions following the net loss in 2015/16 due to large scale demolitions.</p> <p>The annual monitoring report indicates that by December 2019 planning approval has been granted or committee minded to approve 41.4% of the total indicative site capacity given in the Local Plan.</p> <p>Large areas of housing which is classified as least affordable</p>	<p>The Local Plan is likely to have a significant positive effect on housing by planning to meet Sefton’s objectively assessed housing needs in appropriate locations.</p> <p>The Plan policies will also help to improve access to affordable and specialist needs housing, but allows a more relaxed approach in areas that are in need of regeneration. Along with a number of policies that allow flexibility in the delivery of housing (provided that this leads to the creation of suitable residential environments) on other land uses, this should ensure that the diverse housing needs of the Borough are delivered.</p> <p>As a large number of the allocated sites consist of greenfield land (which have been modelled mainly as being viable including affordable housing requirements), the likelihood of the housing targets being met is considered to be fairly high.</p>
St Helens	<p>Annual Monitoring Report, 2018</p> <p>St Helens Local Plan: Submission Draft: SA Report (Jan 2019)</p>	<p>The Core Strategy housing target (570 dpa up to 2027) runs from a base date of 2003. 7,271 new dwelling completions (net of losses) have taken place between 1 April 2003 and 31 March 2018 i.e. an average of 485 dwellings per annum. Whilst this is lower than the target of 570 dpa it is in line with more recent housing requirement figures including the 486 per annum target quoted in the emerging Local Plan (2019).</p> <p>The Borough has also (in 2019) met the requirements of the national standard method (for calculating housing needs) and the Housing Delivery Test recently introduced by the Government.</p> <p>The SHMA 2019 suggests that there is a clear need to increase the supply of accessible and adaptable dwellings and wheelchair user dwellings.</p>	<p>The Plan seeks to deliver the housing needs for the Borough, with a buffer added to allow for flexibility and choice. The distribution of housing ought to ensure that housing is accessible, and that ‘local needs’ can be met across the Borough in most areas.</p> <p>The application of Plan policies should also help to improve the quality of housing developments and their surrounding environment, which is likely to be attractive to buyers / investors. Consequently, a significant positive effect is predicted throughout the Plan period.</p> <p>The Policy requirements to develop affordable, accessible and energy efficient homes could prove to be a barrier in some circumstances (due to viability). However, the Plan is sufficiently flexible to ensure that housing is delivered if viability could be an issue.</p>

Local Authority	Key studies / Issues and trends evidence	Conclusions from Local Plan SA documents
Wirral	<p>Wirral Issues and Options Consultation, Interim SA Report (Dec, 2019)</p> <p>Gross housing completions increased to 806 new dwellings in 2017/18, from 384 new dwellings in 2016/17 but the number of new dwellings under construction had fallen to 1,138 in April 2018 from 1,315 in April 2017.</p> <p>The capacity of land with planning permission for new housing, outside Wirral Waters, had continued to rise, to 2,637 in April 2018, compared to 2,577 dwellings in April 2017.</p> <p>Wirral has many areas of attractive high quality housing but large concentrations of poorer stock, particularly in east Wirral.</p> <p>Large areas of housing which is classified as least affordable</p>	<p>Several sites have also been safeguarded to ensure that sufficient land exists beyond the Plan period for longer term development needs. This is positive, as it sets a marker for future growth.</p> <p>Should the objectively assessed housing need be achieved (for the Borough), this would lead to positive effects on housing. However, setting a target in line with the OAN does not necessarily mean it will be achieved if there are issues of deliverability and phasing. Therefore, at this scale of growth, the potential for significant positive effects could be reduced somewhat unless additional land is released to allow for flexibility.</p> <p>The distribution of housing is also important to ensure that a wide range of communities benefit from growth, and that development occurs in appropriate, attractive locations. In this respect, Option 2B and urban expansion of Eastham perform less well compared to Options 1A/1B and 2A.</p>

5.5 Key issues

5.5.1 The following key issues emerge from the scoping exercise

- There is policy direction from international through to local level to provide quality, affordable and sustainable homes to meet the needs of different communities.
- There is a considerable body of evidence that demonstrates the critical role accommodation has on health and wellbeing.
- Parts of the City Region demonstrate a high proportion of homes in poor condition.
- There is a large difference in house prices between different communities, with those in the most urbanised locations tending to be the cheapest and those in suburban / rural locations more expensive.
- Affordability remains an issue, but monitoring data shows that local authority targets are not always being met.
- The Sustainability Appraisals undertaken in support of Adopted and emerging Local Plans suggest that significant positive effects are likely to occur with regards to housing in the

next 15 years. However, this will be dependent upon delivery on sites allocated for development. It is uncertain how the economic slowdown will affect this.

5.6 Scoping outcome

5.6.1 Considering the key issues discussed above it is proposed that the topic of housing should be **SCOPED IN** to the integrated Appraisal. The following objective and supporting questions are proposed as part of the IIA Framework.

IIA objective	Assessment questions (will the option/ proposal help to...)
Ensure that everyone has access to suitable, safe and secure housing accommodation in sustainable locations.	<ul style="list-style-type: none"> • Secure the delivery of affordable housing? • Ensure that those in greatest need can benefit from access to affordable housing? • Improve housing condition for existing poor quality stock? • Ensure that new development is of a high basic standard and seeks to deliver exceptional design? • Meet the specific needs of different community groups? • Be designed to meet the changing needs of householders?

6. Economy

6.1 Introduction

- 6.1.1 The economy is a 'structure' created by societies to allow for the creation and trade of goods and services, which sustain human life and support wellbeing. Economies are intrinsically linked to people's lives and rely upon environmental resources and social capital to grow. Whilst strong economies are considered necessary to support communities, there is a need to ensure that this is achieved in a socially just and environmentally friendly way.
- 6.1.2 This section provides a strategic review of the policy context, literature, and baseline position in relation to the following important economic factors.
- Education and Skills
 - Income and economic activity
 - Commuter movements
 - Town centres and retail
 - Tourism
 - Broadband

6.2 Context review

International

- 6.2.1 **UN Sustainable Development Goals** are 17 life changing goals outlined by the UN in 2015. The following are of particular relevance for economy and infrastructure:
- Goal 4. Education: To ensure everyone has access to inclusive, equitable quality education.
 - Goal 8: Economic Growth: Secure sustainable economic growth and decent employment for all.
 - Goal 9: Industry and Infrastructure: Building resilient infrastructure and fostering innovation.

National

- 6.2.2 The **UK Industrial Strategy White Paper** (2017) presents a long term vision for a transformed economy, with five foundations for achieving the vision.
1. To become the world's most innovative economy.
 2. To create good jobs and greater earning power for all.
 3. Major upgrades to the UKs infrastructure networks.
 4. To be the best place to start and grow a business.
 5. to support prosperous communities across the UK.

Whilst achieving the vision there are some key challenges that need to be addressed including an aging society, achieving 'clean growth', changing how people goods and services move, and being at the forefront of the artificial intelligence and data revolution.

- 6.2.3 An overarching objective of the **NPPF** is to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places

and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure.

- 6.2.4 Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development.
- 6.2.5 Local plans should positively seek opportunities to meet the development needs of their area taking account of unmet needs from neighbouring areas. Strategic policies should set out an overall strategy for the pattern, scale and quality of development, and make sufficient provision for employment, retail, leisure and other commercial development.
- 6.2.6 To support economic growth, planning policies should:
- Set out a clear economic vision and strategy which encourages economic growth;
 - Set criteria or identify sites for inward investment to meet anticipated needs;
 - Seek to address potential barriers to investment;
 - Be flexible enough to accommodate needs not anticipated in the plan;
 - Recognise and address the specific locational requirements of different sectors, including clusters or networks of knowledge and data-driven, creative or high technology industries, and for storage and distribution operations of various scales;
 - Provide for large-scale transport facilities that need to be located in the area, such as interchanges for rail freight, public transport projects and roadside services, all of which either generate employment or have an impact on economic activity in an area;
 - Support the rural economy.
- 6.2.7 The NPPF says that the role that town centres play at the heart of local communities should be supported, by taking a positive approach to their growth, management and adaptation.
- 6.2.8 The **UK 2070 Commission's final report** on regional inequalities details the UK's need to dismantle the extremities of regional inequalities through large scale, long term and all-encompassing policies. The report recommends widespread commitments which see areas outside of London and the South East benefitting from investment and exploiting cultural capital to realise their potential. The report sets out a 10-point framework for action which includes creating new global centres of excellence outside of the South East, strengthening the foundations of local economics, rethinking the housing crisis and harnessing cultural and environmental assets in areas outside of London. It goes on to suggest the implementation of a comprehensive framework for inclusive devolution, provisions to equip the country for the skills of the future, provide fairer access to funds and develop a national spatial plan, which corresponds with corresponding plans for Wales, Scotland and Northern Ireland.
- 6.2.9 Partnerships between the government and industry on sector-specific issues can create significant opportunities to boost productivity, employment, innovation and skills. In this respect, partnerships are promoted through Sector Deals⁵⁶ which currently include the economic sectors of aerospace, artificial intelligence, automotive, construction, creative industries, life sciences, nuclear, offshore wind, rail and tourism.

City Region

- 6.2.10 The **LCRCA (draft) Local Industrial Strategy** (2020) sets out a vision and guiding principles for achieving inclusive, sustainable growth. It provides a framework for investment decisions, and for conversations with government about how working together, through devolution, can maximise prosperity for all people and communities. The strategy is

⁵⁶ Department for Business, Energy & Industrial Strategy (2019) Policy paper – Introduction to Sector Deals [online] <https://www.gov.uk/government/publications/industrial-strategy-sector-deals/introduction-to-sector-deals>

founded in evidence of issues and opportunities and how these can be harnessed to ensure that there are strong foundations in place to address the National Industrial Strategy's 'three grand challenges'. The Local Industrial Strategy focuses on a number of transformational opportunities as follows:

- Building a sustainable industrial future through utilisation of industrial digital technologies;
- Open health innovation to improve health and wellbeing whilst developing new market opportunities;
- Global cultural capital, through creating a City Region where culture creates prosperity for all;
- Social innovation to solve society's deepest challenges;
- Pioneers of the zero-carbon economy, to become a national leader in clean growth and a net zero carbon City Region by 2040; and
- Tech for good, which utilises specialisms to use technology and data in a way that improves society and addresses global challenges.

6.2.11 The LCRCA Economic Recovery Plan 'Building Back Better'⁵⁷, which has been submitted to central government, sets out how £1.4 billion in investment in the city region could unlock £8.8 billion of projects to begin in the next 12 months. The plan shows how economic recovery will be delivered across four strategic themes of the business ecosystem, people-focused recovery, place, and a green recovery.

6.2.12 Transport for the North, **The Potential of Northern Powerhouse Rail** (2019) is a document outlining how this major rail programme will help to unlock the economic potential of the North. There are key aspirations to link the Liverpool City Region to the rest of the North through a new rail line, as well as to planned HS2 routes. Wider improvements across the north will bring more far-reaching benefits and connectivity, with the aim of improving access to people and jobs⁵⁸.

6.2.13 **The LCR skills Strategy 2018 – 2023** recognises the importance of partnership between different institutions for unlocking economic growth, identifying the importance of "working together across the combined authority councils, the LEP employers, colleagues, training providers, universities, trade unions and public agencies". The strategy aims to ensure that the necessary infrastructure and training is in place to enable employers to readily access the high-quality skills they need for growth.

6.2.14 **Responding to COVID-19 in the Liverpool City Region** is policy briefing prepared by the Heseltine Institute for Public Policy, Practice and Place (May, 2020).⁵⁹ There are some key messages with regards to promoting a proactive approach to economy recovery:

- The pandemic has created much uncertainty, which is problematic in a policy making context as it can lead to rushed or delayed responses. A considered, strategic, and impactful response is required.
- The pandemic is highlighting the chronic weaknesses and inequalities that exist across the City Region. In particular, some members of the community have been unable to cope with the sudden shock of an economic shutdown more so than others.

⁵⁷ LCRCA (2020) Building Back Better – Our Economic Recovery Plan [online] https://www.liverpoolcityregion-ca.gov.uk/wp-content/uploads/LCRCA_BBB_2020.pdf

⁵⁸ https://transportforthenorth.com/wp-content/uploads/Potential-of-NPR_TfN-web.pdf

⁵⁹ **Responding to COVID-19 in the Liverpool City Region: Principles for Uncertain Times: Building an Effective Post-COVID Economy in Liverpool City Region:** Heseltine Institute for Public Policy, Practice and Place (May, 2020).

- Rapid responses to the pandemic illustrate that positive measures can be taken to address issues and this approach could be applied to economic recovery and building future resilience.
- Economic recovery cannot be predicated on a return to the old economy that, for all its notable successes, continued to produce inequality, environmental degradation, and poor health outcomes across the City Region.
- We must ensure that our immediate plans for economic recovery post-pandemic inherently support, complement, and embed the long-term transformation of the LCR economy.

Local

6.2.15 Table 6.1 below highlights the common themes, policy approaches and strategic priorities for economy and infrastructure that are common to each of the six authorities. Locally specific issues have also been drawn out where they are of strategic importance.

Table 6.1: Key messages for economy and infrastructure.

Key policies & principles	Source / Authorities
Tackle unemployment and deprivation through investment in new employment opportunities and support for existing businesses.	Adopted and / or emerging Local Plans for each constituent authority.
Improving employment in the area by improving accessibility and targeting emerging specific sectors and those which are currently underrepresented.	
Support for proposals which build upon Liverpool's role as a regionally important cultural, tourist, leisure and business location.	Liverpool Local Plan Submission draft (2018) (not yet adopted)
Liverpool as a regionally important retail centre	Liverpool Local Plan Submission draft (2018) (not yet adopted)
Support for viable and vibrant town, district and local centres	Adopted and / or emerging Local Plans for each constituent authority.
Support for the diversification of rural businesses.	A Local Plan for Sefton (2017) (Adopted)
Protect and recognise the role of waterways / waterfronts to the visitor economy.	Liverpool Local Plan Submission draft (2018) (not yet adopted)
	Halton Delivery and Allocations Local Plan Submission Draft (2019) (not yet adopted) A Local Plan for Sefton (2017) (Adopted)
Tourism is an important element of the Liverpool City Region that must be protected and nurtured.	A Local Plan for Sefton (2017) (Adopted)

6.3 Focused literature review

- 6.3.1 Macro-economic factors, wealth creation and the local economy are determinants of health and wellbeing (Barton and Grant, 2006). Research shows that where we spend most of our time throughout our lives has an impact on our physical, mental, social, environmental and economic well – being. (*Carmichael, 2017; Barton, 2009; Barton et al, 2015*)
- 6.3.2 It is important that people have access to a good income and have a working job to support themselves otherwise this can be detrimental to people’s health and wellbeing. The IMD 2019 considers income and employment as two main domains when analysing deprivation across the nation.
- 6.3.3 A case study showing the impact of the economy on regeneration and wellbeing, as well as the impact of the working environment and natural environment on health is the green space project in West Rhys, Wales. A new vibrant community was constructed, with open spaces and retail opportunities (Fischer et al, 2018). This suggests that people will be attracted to the area from the increase in green spaces with the hope people will then want to explore the new retail on offer. This is an example of a combination of open spaces and new retail influencing the economy. Glasgow’s east end had a similar development strategy regenerating the area with the aim to create a vibrant new city district through a process of reinvention and reconnection (Fischer et al, 2018).
- 6.3.4 Research shows that if developers urbanise an area that urbanisation is associated with increased life expectancy and economic growth. It can be evident that green space is associated with improvements to public health and wellbeing and that urban sustainability such as modern parks may have associated increase in property values (Patrick, 2011). Examples of urban greening such as the New York City High Line project saw successes in economic development whilst also providing public space and urban greening through regentrification of an underutilised railway line (Rainy, J, 2014; Lang, S & Rothenberg, J 2017.)
- 6.3.5 However, research also suggest the process of new developments could temporarily disrupt the local economy due to noise, dust nuisance and air quality nuisance (Cave, et. al. 2019).
- 6.3.6 Gentrification could also lead to displacement of the residents the new development was intended to benefit (Wolch et al, 2014). Grant et. al. details that urbanisation has generally been associated with economic factors suggesting that there is perhaps an increase in jobs leading to a better working environment (Grant et. al, 2017).
- 6.3.7 On the other hand, the challenges to regeneration and health include ‘stalled schemes’ due to economically unviable affordable housing requirements result in no development and no regeneration.
- 6.3.8 McCay, 2017 suggests that mental health and urbanicity along with modern values and expectations have shaped recent developments across many cities around the world. The traditional high – street shops can be replaces by cafes and meeting places and thus changing the functionality of previously well – recognised shopping areas⁶⁰. McCay states that there is a dystopian perspective on modernity which may impact traditional attitudes and values, thereby affecting an individual’s self and self-esteem.
- 6.3.9 There are also associated issues with workplace productivity health and wellbeing. Bloom et. al. (2011) states that there are significant economic burdens on businesses and the economy due to non – communicable diseases such as mental illness.

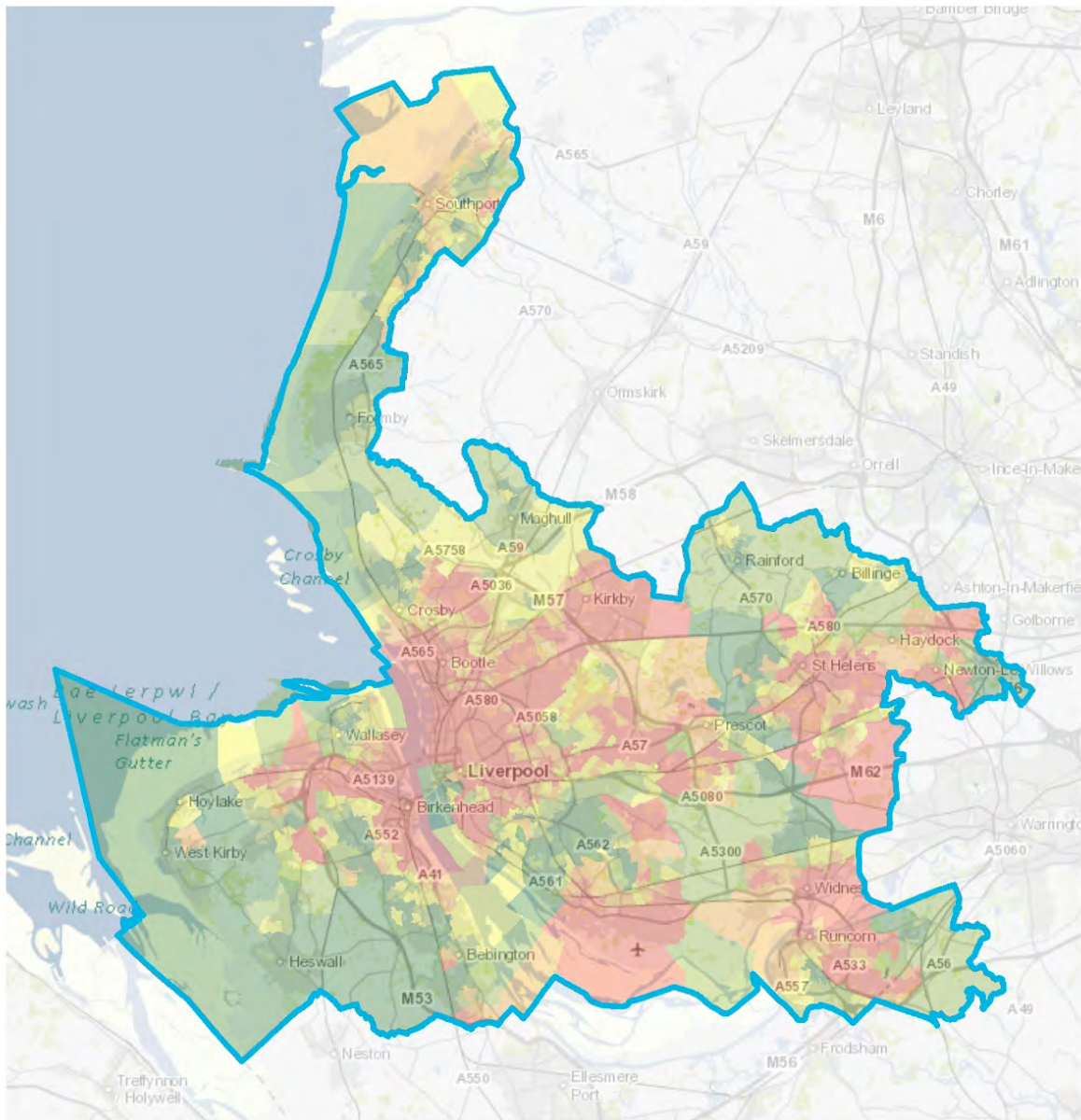
6.4 Baseline review

Education and skills

- 6.4.1 Figure 6.1 clearly shows the extent of deprivation in the city region with large expanses forming some of the most deprived areas in the UK. This has not significantly changed since 2015, in which The State of LCR Report⁶¹ identifies that the LCR is the most deprived Local Enterprise Partnership (LEP) area nationally. The most disadvantaged neighbourhoods are found in north Liverpool (including Everton, Kirkdale, Walton), south Sefton (Bootle), east Wirral (Birkenhead central and north, Tranmere, Rock Ferry and New Ferry), south east Liverpool (Speke and Netherley) north and central Knowsley, central St Helens and north and south Halton. The rural areas show significantly less deprivation than the more urban areas in terms of skills and education. The pattern follows a similar pattern to gross household income, showing a correlation between wealthy areas and lower levels of education and skills deprivation.

⁶¹ LCRCA (2018) State of Liverpool City Region [online] https://www.liverpoolcityregion-ca.gov.uk/wp-content/uploads/Appendix_One.pdf

Figure 6.6.1: Map showing education and skills deprivation (2019).

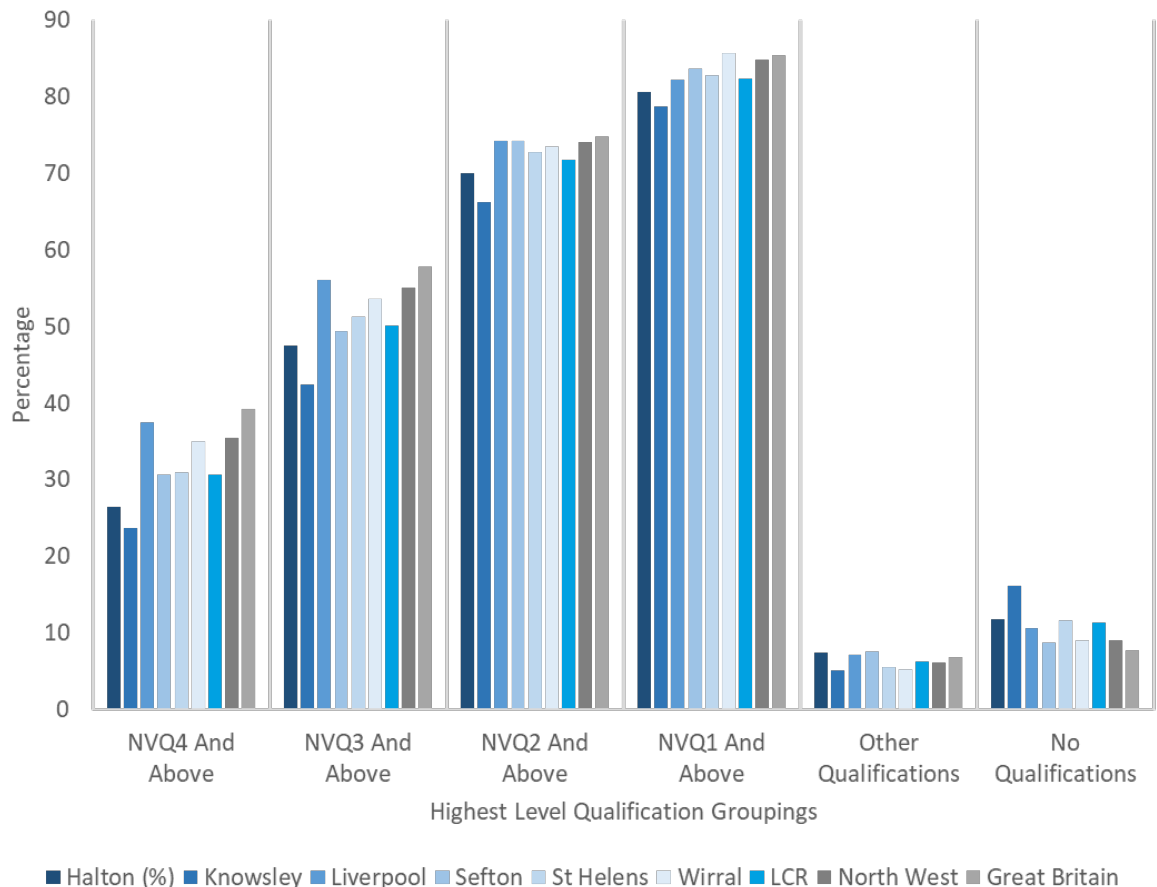


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- 6.4.2 Figure 6.2 shows how Liverpool has higher than average rates of people with high level qualifications compared to the city region and regional equivalents.
- 6.4.3 Knowsley shows higher than average levels of people without any qualifications, and overall the poorest education levels across the city region. Overall, the Liverpool City region shows patterns of poorer educational attainment than regional and national averages.

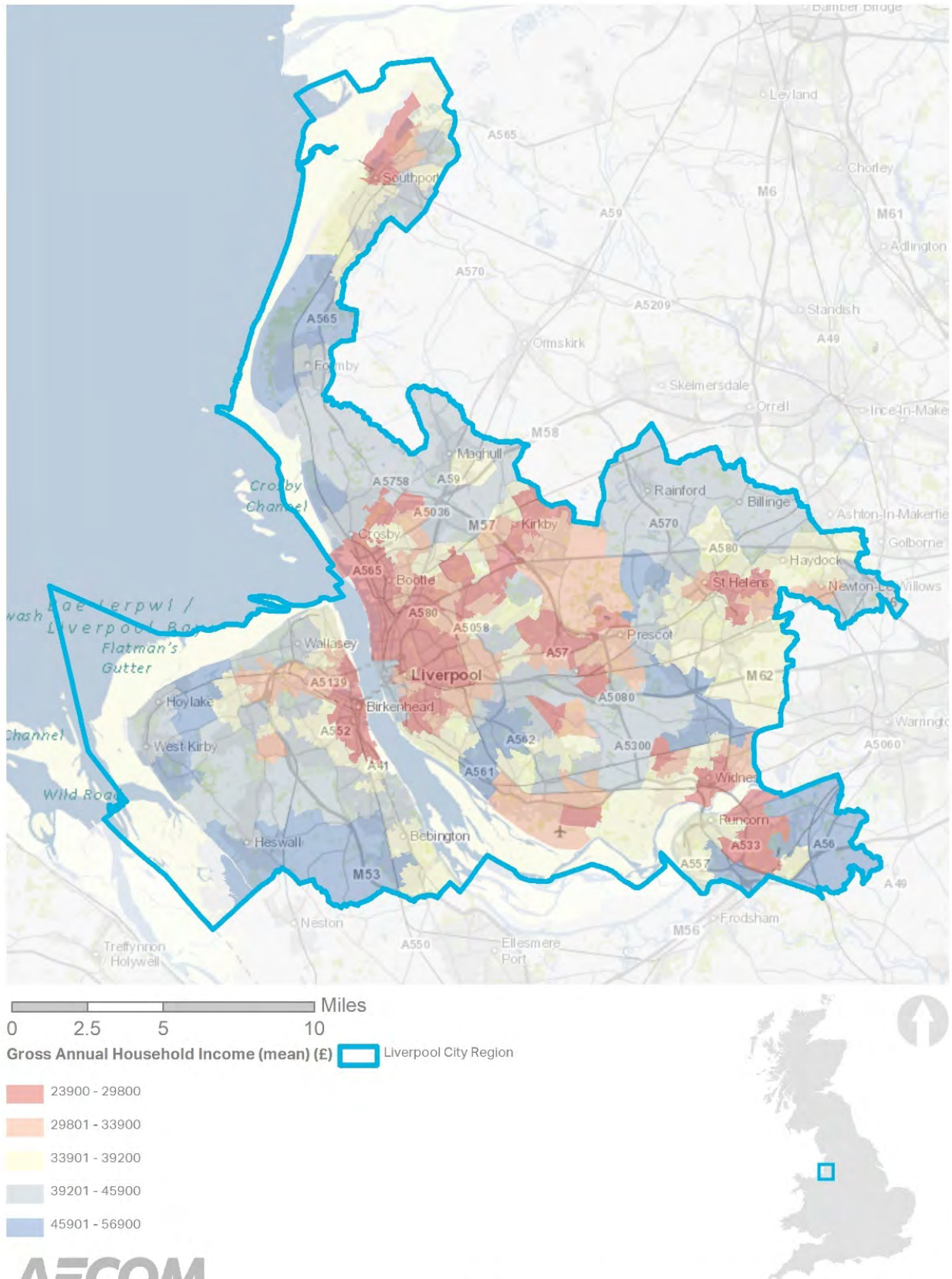
Figure 6.2 Graph showing highest level qualifications. Source of data: Nomis, 2018.



Income and economic activity

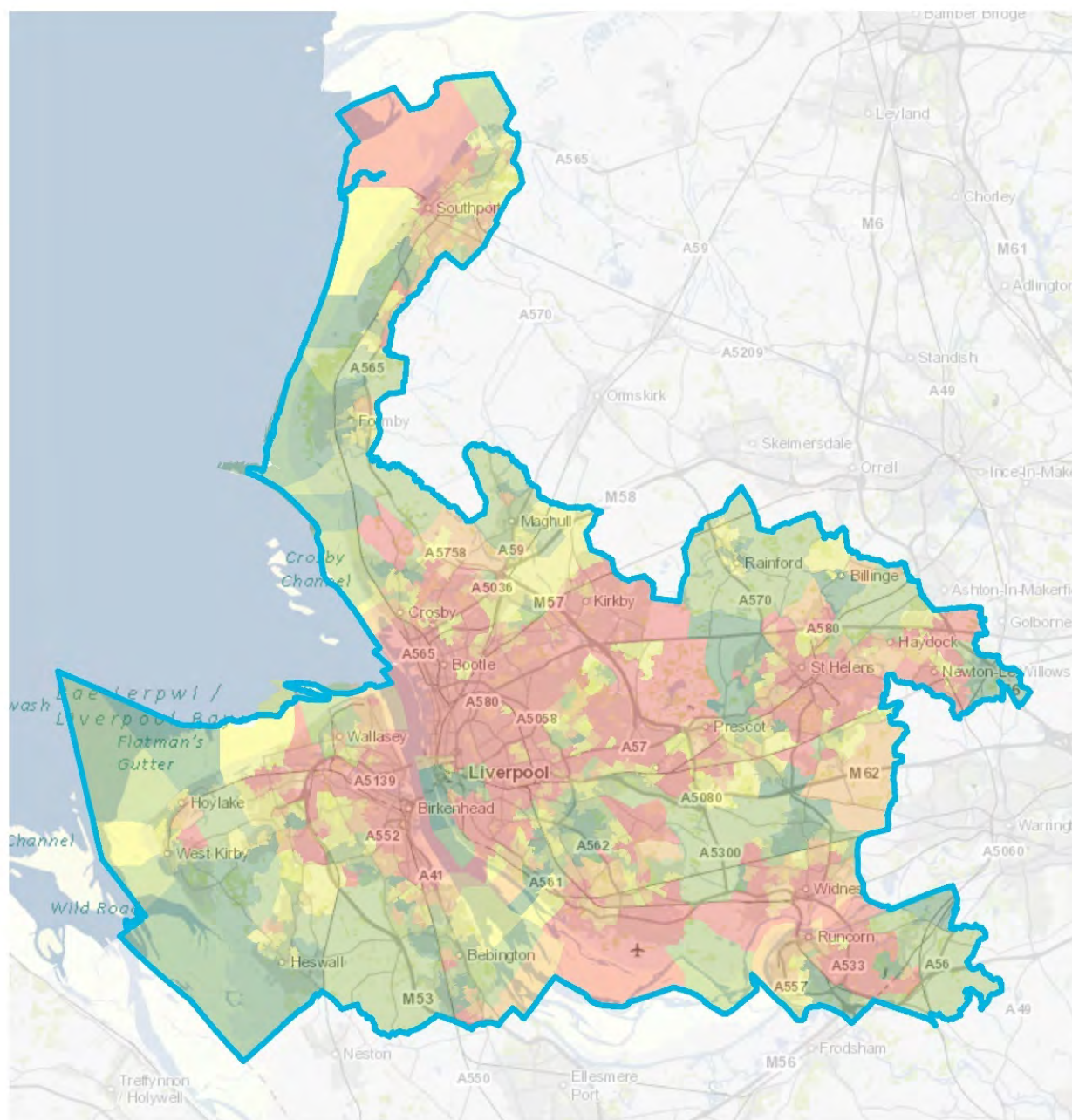
- 6.4.4 Figures 6.3 and 6.4 reveal a pattern whereby Liverpool has the largest clustering of areas with low income and classed as deprived in terms of income. The urban centres of Birkenhead, Southport, Runcorn, Wildnes, St Helens and Kirby (including a band of low income and deprivation running between Kirby and Prescot). The more rural areas generally show high rates of income.

Figure 6.3: Average gross annual income (2018)



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Figure 6.4: Distribution of income deprivation (2019)



0 2.5 5 10 Miles

Income Deprivation  Liverpool City Region

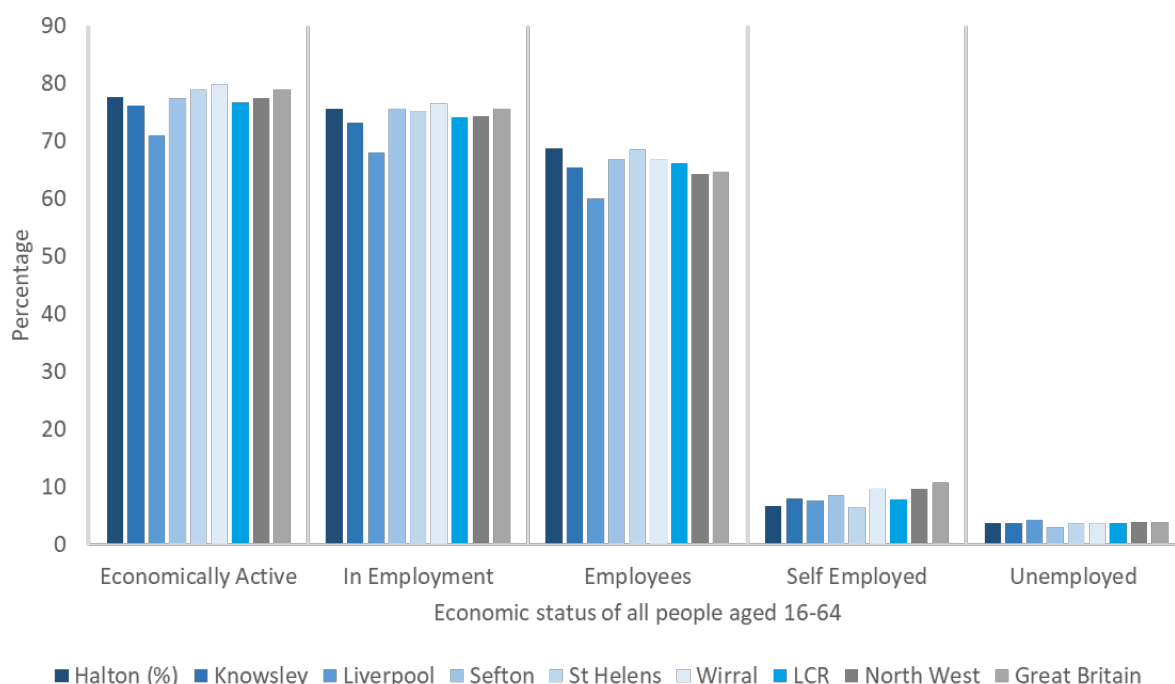
-  Most Deprived
- 
- 
- 
-  Least Deprived



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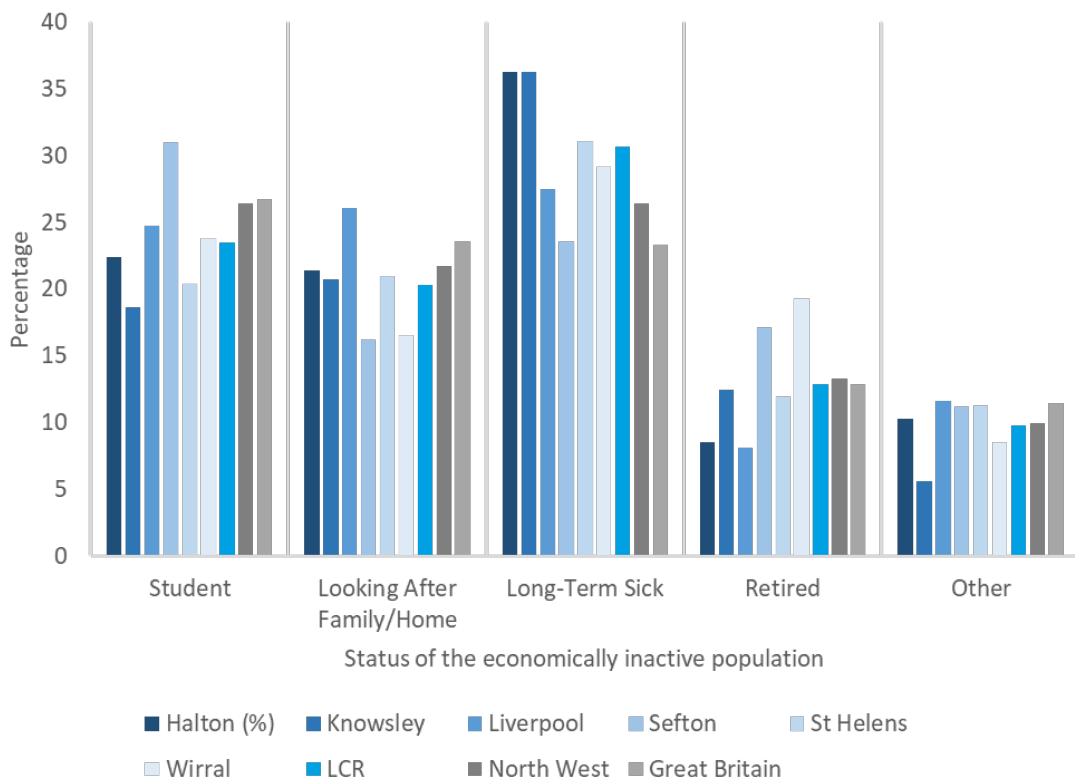
Figure 6.5: Graph showing economic status of working age population. *Source: Nomis, 2018.*



6.4.5 Figure 6.5 above shows how Liverpool has the lowest rates of economically active people, those in employment and in employment as an employee. Wirral has the highest rates of economically active people; it also has the highest levels of self-employment in the city region. Overall, Liverpool City Region has fairly similar rates of economically active people compared to regional and national rates.

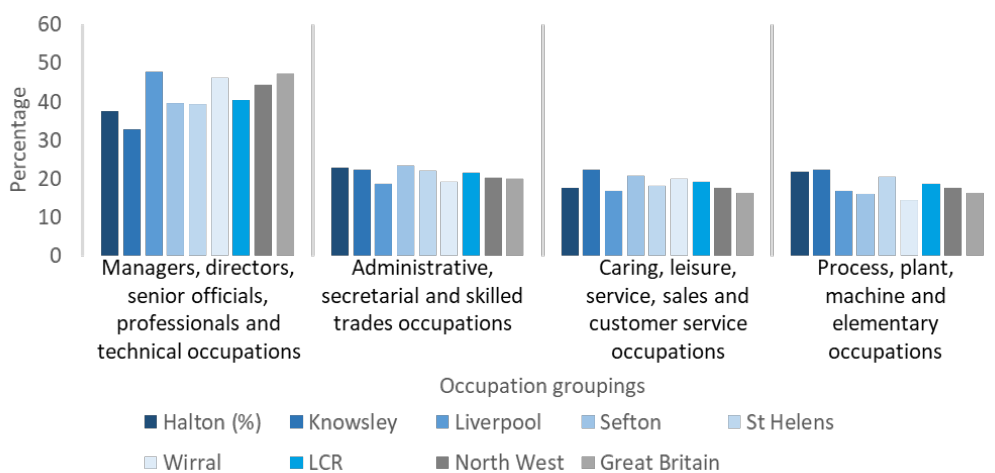
6.4.6 Figure 6.6 reveals Sefton has having the highest rates of students, Liverpool as experiencing high rates of people looking after family/home, Halton and Knowsley having high rates of people off work with long-term sickness and Wirral and Sefton with high rates of retirees. Overall the Liverpool City Region has higher rates of economically inactive people with long-term sickness compared to the north west and national averages.

Figure 6.6 : Status of economically inactive populations. Source of data: Nomis, 2018.



6.4.7 Figure 6.7 shows how high level and more professional jobs are more focused in Liverpool and Wirral than the rest of the city region. Halton and Knowsley have higher levels of low skilled jobs, and overall the city region has lower than regionally and nationally average high skilled roles, and higher than average lower skilled roles.

Figure 6.7 : Occupation grouping rates Source of data: Nomis, 2018.

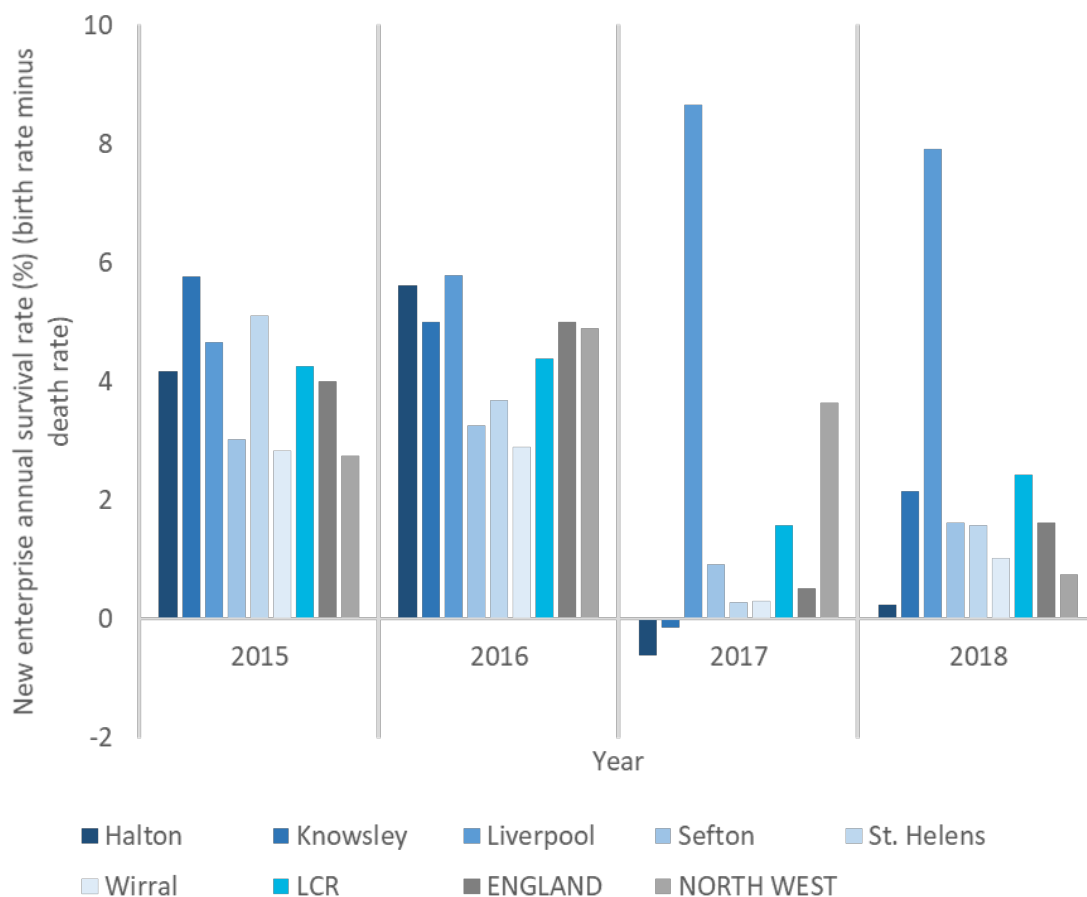


6.4.8 Figure 6.8 shows a pattern whereby change over time is evident in the net annual additional enterprises.

6.4.9 In the latest set of data (2017 and 2018), Liverpool scored exceptionally highly in comparison to all comparative scores. However, in 2015 and 2016, Knowsley was amongst the highest ranked.

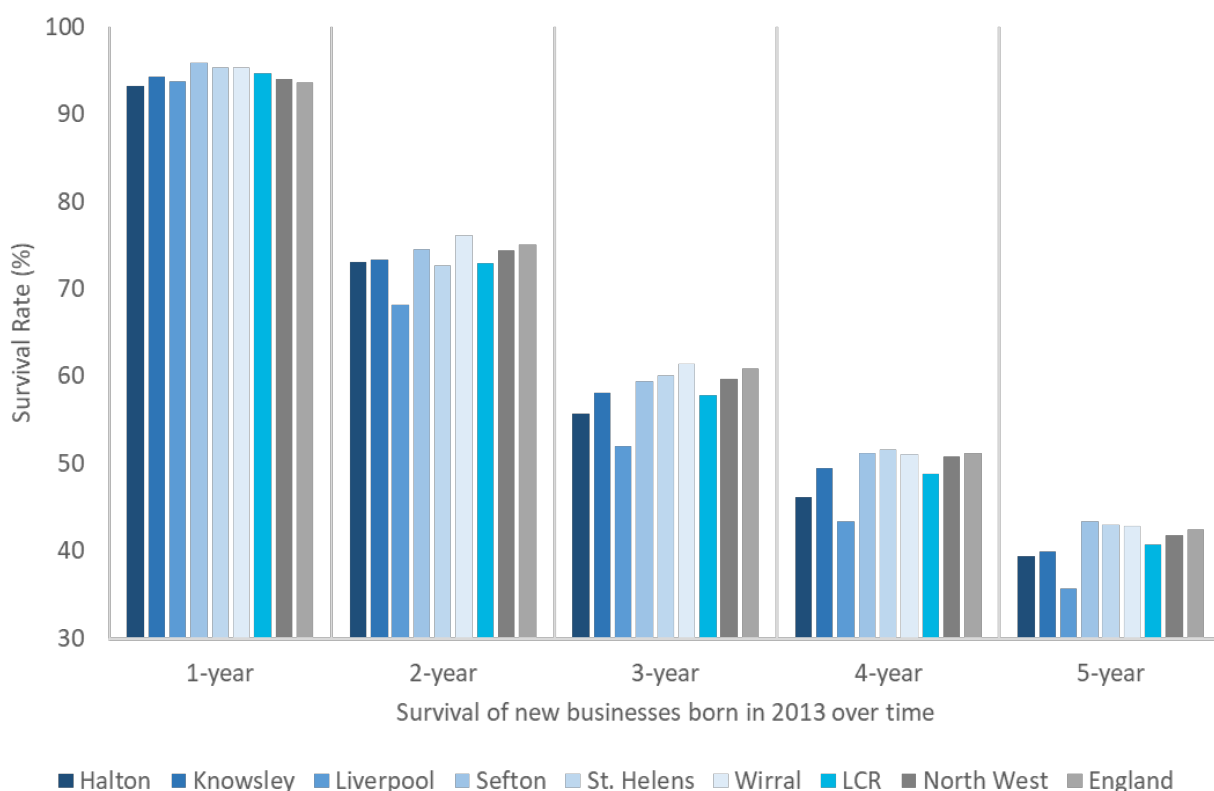
- 6.4.10 In 2017 Knowsley and Halton both had a net loss of additional enterprises, leading to the potential conclusion that Liverpool's draw factors are negatively impacting upon the surrounding areas.
- 6.4.11 In 2018 the Liverpool City Region overall had significantly higher net additional enterprises than regional and national equivalents; though this can be mostly attributed to the high performance of Liverpool.

Figure 6.8 : Year-on-year new enterprise survival rates (yearly birth rate minus death rate: net annual additional enterprises). Source of data: ONS, 2018.



- 6.4.12 Figure 6.9 shows how, of those businesses born in 2013 in the Liverpool City Region, Liverpool has the worst survival rate of all the local authorities over time to 2018. Sefton, St Helens and Wirral all show survival rates a par to North West and National levels.

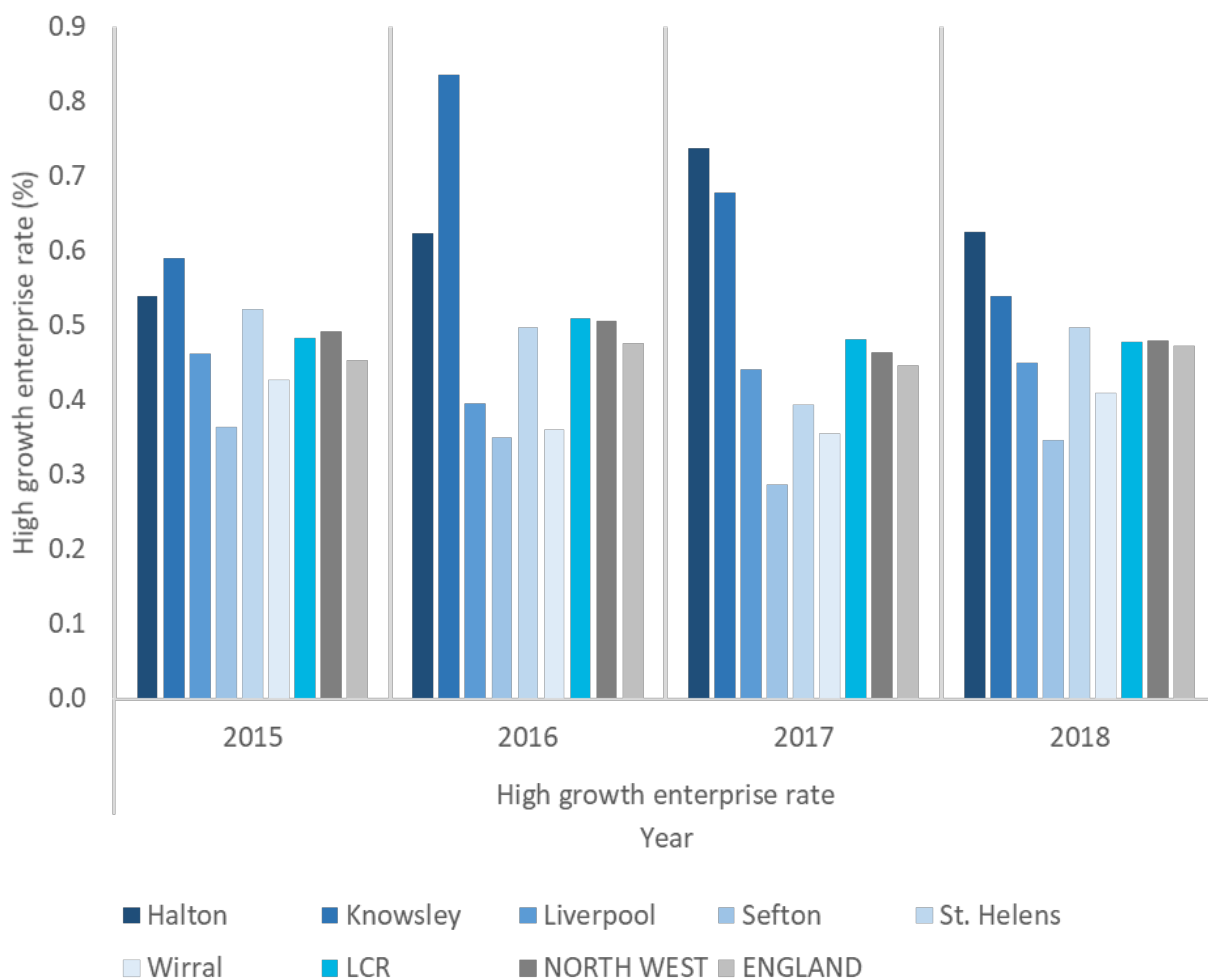
Figure 6.9 : Survival rates of new businesses born in 2013. Source of data: ONS, 2018.



6.4.13 High growth employment rates identify the proportions of enterprises within an area which exhibit high levels of growth in employment and turnover, hence providing a key long-term asset to the local economy.

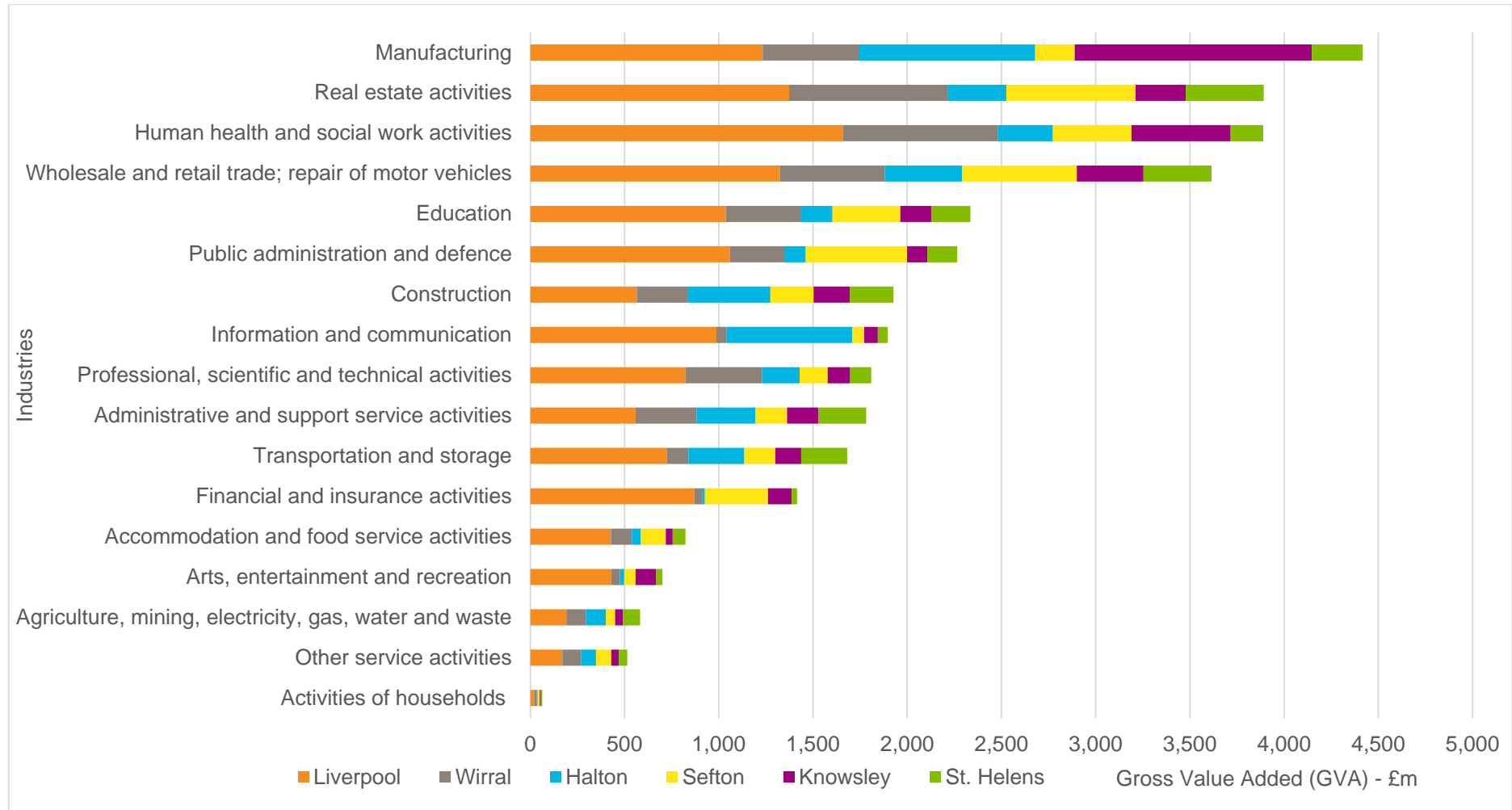
6.4.14 Figure 6.10 shows how Halton and Knowsley both have higher than average rates than city region, regional and national rates, whilst Sefton and Wirral both have the lowest rates. The overall Liverpool City Region has rates of high growth enterprises which are broadly similar to North West rates.

Figure 6.10 : High growth enterprise rates. Source of data: ONS, 2019.



6.4.15 Figure 6.11 shows Liverpool as generating the highest amount of economic value across all industry sectors across the city region. It reveals that Liverpool's largest sectors in terms of GVA is the human health and social work activities, real estate and motor vehicle repair and trade. Overall in the city region, manufacturing, real estate and human health and social work activities are the highest value generators.

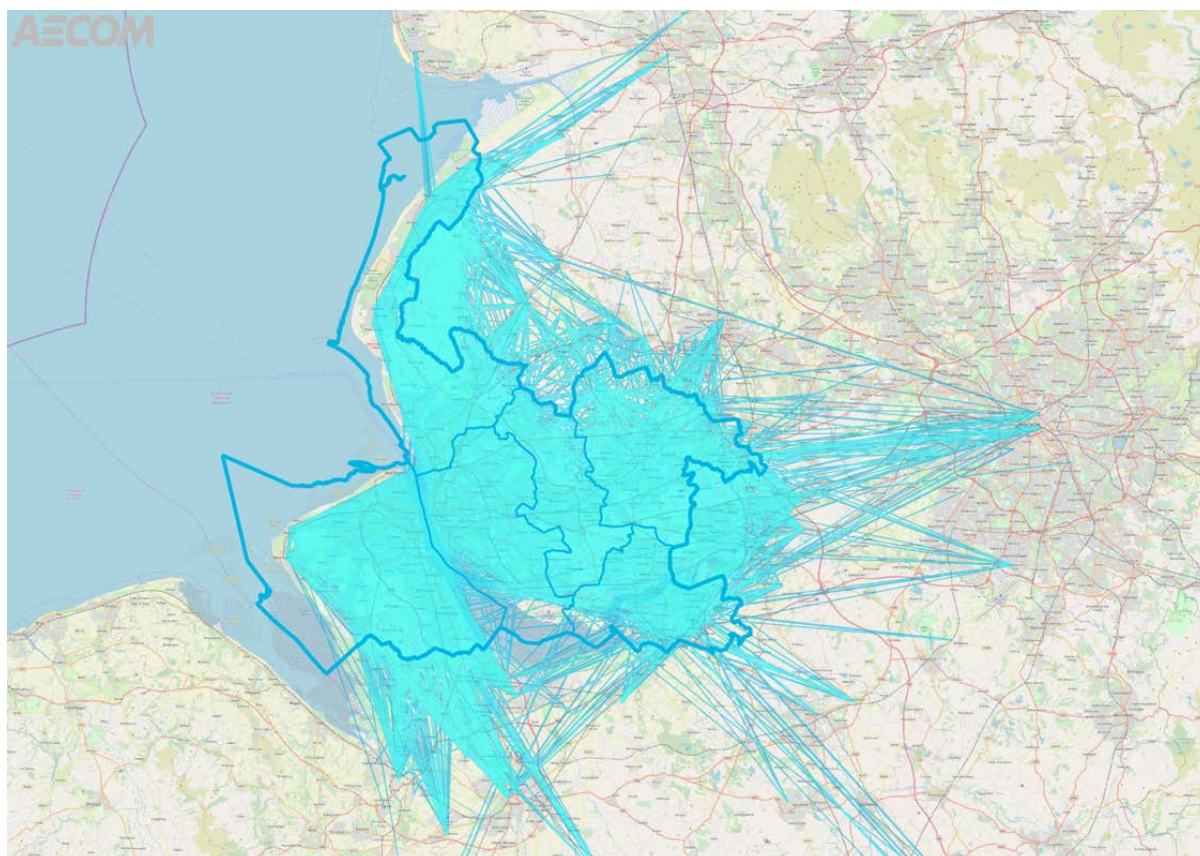
Figure 6.11 : GVA per local authority per industry (2018 , ONS).



Commuter movements

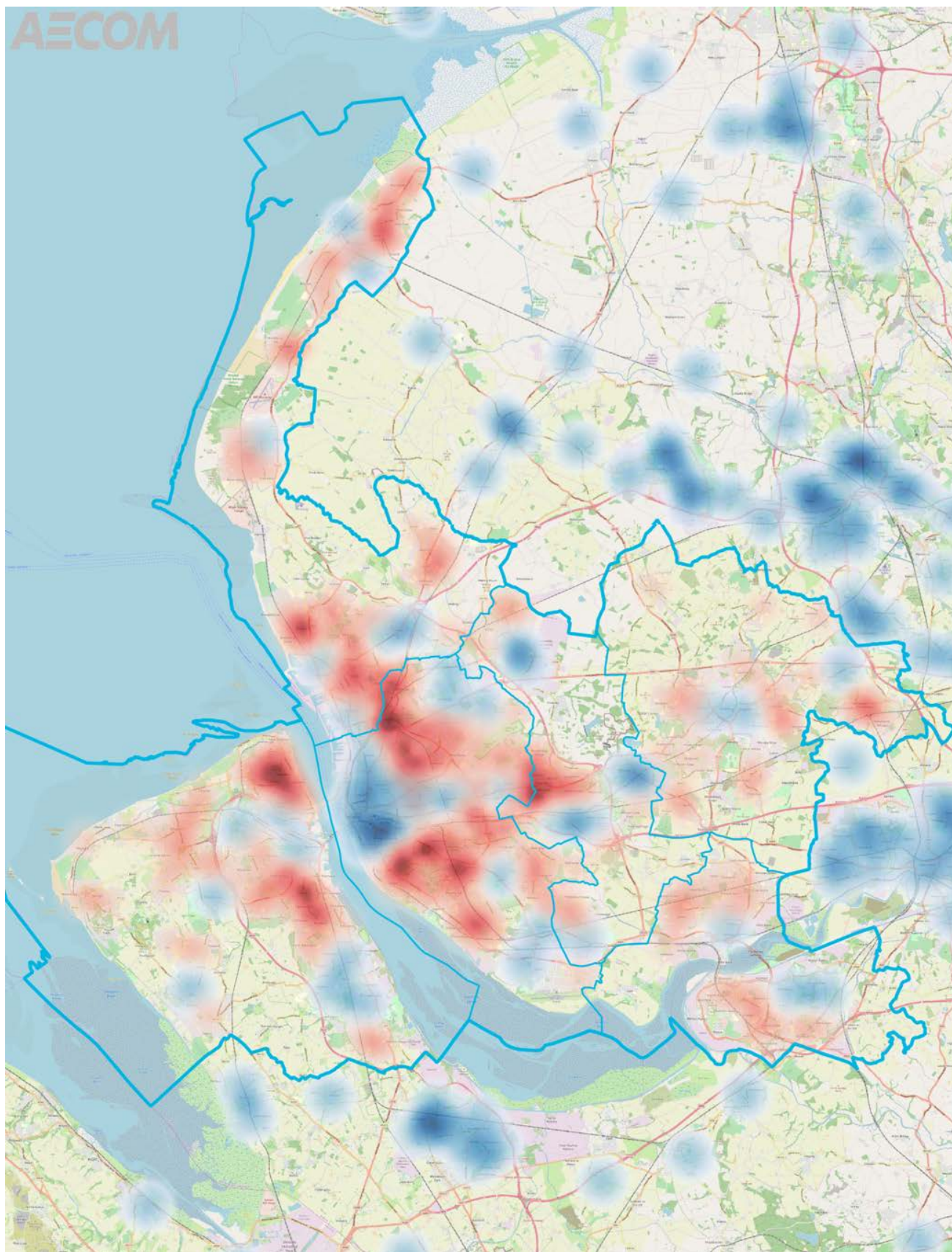
- 6.4.16 Figure 6.12 highlights the commuter patterns of residents of the Liverpool City Region. It shows a pattern whereby the majority of commuter flows are contained within the city region. Outside of this pattern are a small number of areas which exhibit significant flows of commuters from the Liverpool City Region, these areas are: Manchester, Preston, Chester, Wythenshawe, Wigan, Skelmersdale and Omskirk.

Figure 6.12 : Commuter flow map for all residents of the Liverpool City Region. Weight of line represents volume of commuters. Source of data: 2011 Census.



- 6.4.17 Figure 6.13 reveals key general bands of areas which experience a net in-, or out-flow of commuters. Liverpool City Centre has the highest intensity of inflow commuters, with bands around it of high levels of outflow commuters. This patterns is generally mirrored (with less significant flows) by the other major built-up areas in the city region. It is important to note that Figure 6.13 does not include any commuter flows of people who live outside the city region, who commute in.

Figure 6.13: Liverpool City Region population's commuter patterns. Red: net outflow. Blue: net inflow.
Source of data: 2011 Census.

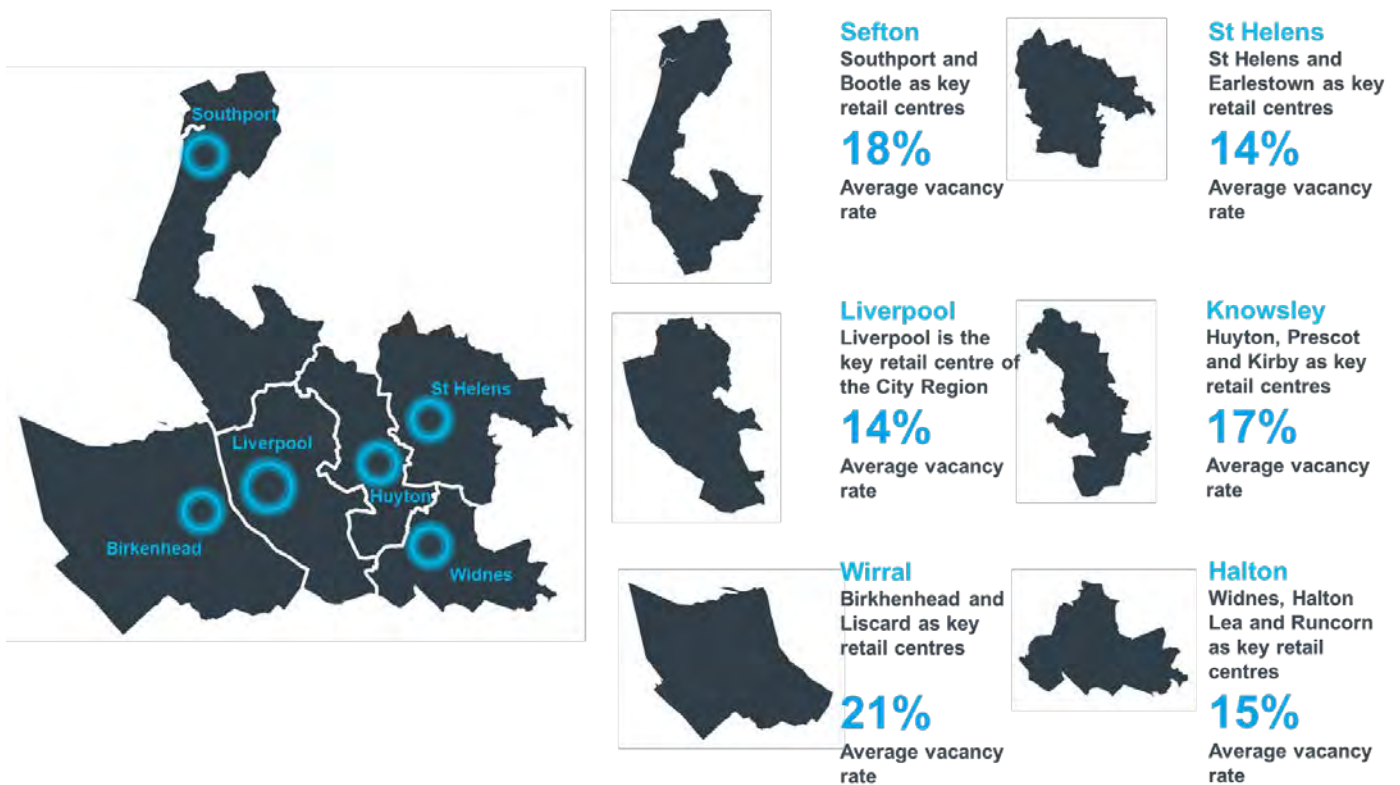


Town centres and retail

6.4.18 Figure 6.14 reveals the core retail centres across the city region. As of the last recorded data, Wirral, Sefton and Knowsley had the highest vacancy rates. However, it must be noted that the most up-to-date data relating to Knowsley was from a 2009 study which is likely to have been affected by the 2008 financial crash.

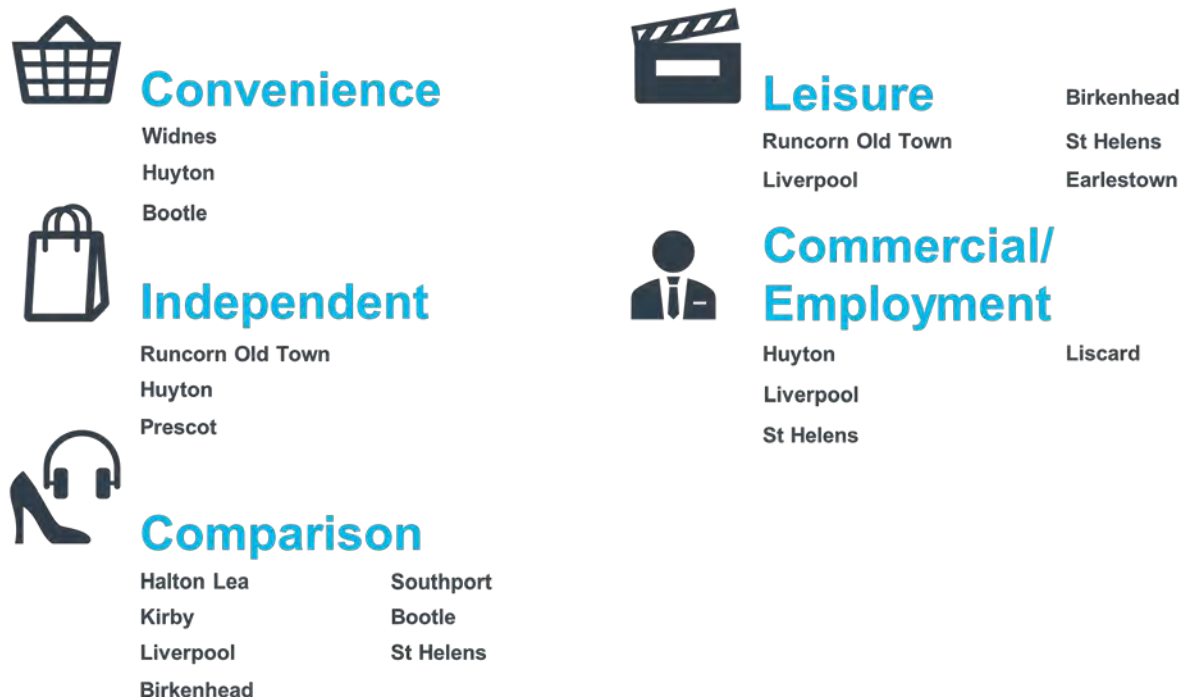
Figure 6.14 : Retail patterns across the Liverpool City Region

(Halton Retail Study 2017, Knowsley town centre and shopping study 2009, Liverpool retail study 2016, Sefton retail strategy review 2015, St Helens retail and leisure study 2017, Wirral retail and centres study 2019)



6.4.19 Figure 6.15 shows the range of retail focus across key centres in the City Region. The smaller centres had a greater focus on convenience stores, with several large supermarkets dominating retail trade. Independent shops were also found to be more dominant in the smaller town centres, though these are often important pull factors for external visitors. Liverpool and St Helens both offer key focus on comparison goods, leisure and commercial activity/employment.

Figure 6.15 : Key retail sectors and area-based retail focus.



Tourism

- 6.4.20 Figure 6.16 highlights the key visitor economy attractions, with the vast majority of all major attractions, as well as visitor number concentrating in Liverpool City Centre.
- 6.4.21 The data shows how the visitor economy forms a key part of the City Region's GVA, providing significant numbers of jobs and retaining its status on the national and international standings as a place to visit, for both daytrips and extended visits.
- 6.4.22 Liverpool (city) currently stands as the 6th most visited city in the UK for overseas visitors, and 7th for domestic visitors.
- 6.4.23 In terms of business travel, in the UK Liverpool (city) is the 5th most visited city by overseas business travellers and 7th for domestic.
- 6.4.24 The visitor economy plays a key role in supporting the following sectors: shopping, food & drink, recreation, accommodation and transport.
- 6.4.25 In 2019 the development of a new cruise liner terminal at Princes Dock was approved; this will include a hotel and car parking and is expected to be a boost the city's visitor economy.

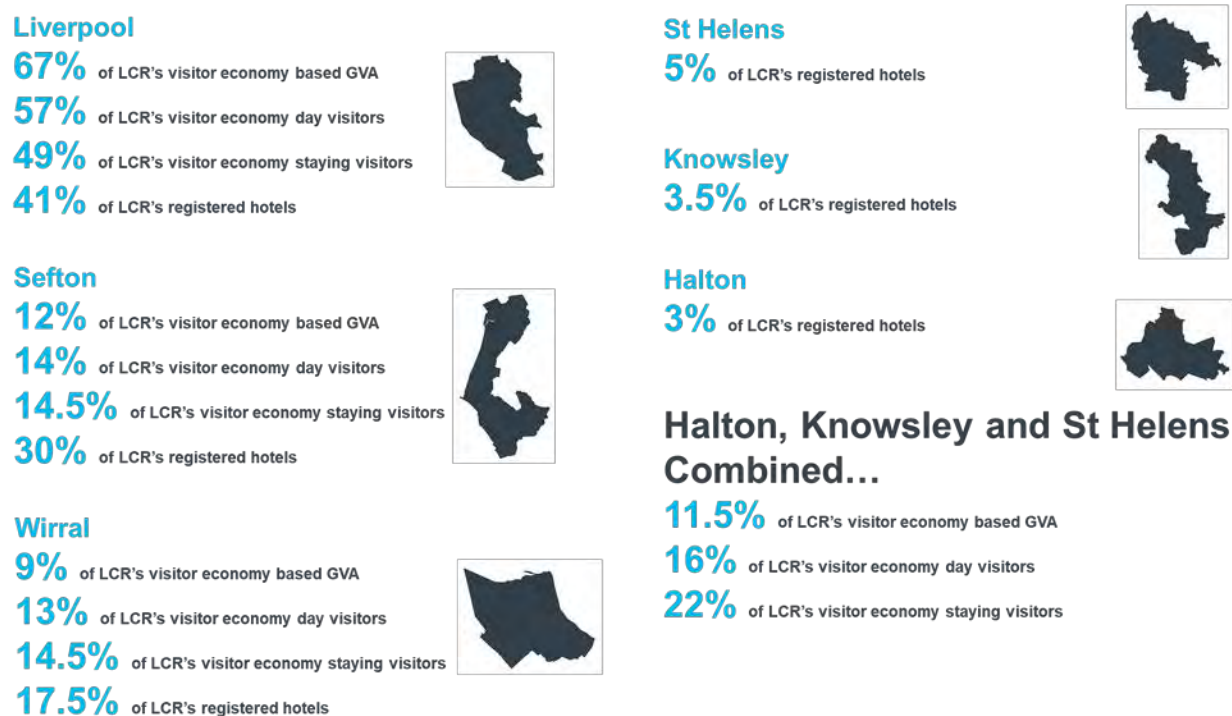
Figure 6.16 : Key tourist attractions and visitor economy contributions to the City Region. Liverpool Economic Partnership (2019)



6.4.26 Figure 6.17 reinforces the fact that Liverpool is the key centre for tourism in the city region. However, it also shows Sefton and Wirral as strong contributors. Sefton has a high proportion of the region's hotels in relation to its overall contributions to the visitor economy.

6.4.27 It would be useful to further explore the role that private short-term rentals (for example: Air BnB) play within the tourism sector in cities like Liverpool. Recently increased rates of short-term rentals have been prevalent in large cities across the world. Although these act as a positive factor for tourism, the impacts on residents can be negative, including rent price increases, the decline of smaller, independent hotels and damage to community spirit.

Figure 6.17 : Liverpool City Region local authority visitor economy contributions. Liverpool Economic Partnership (2019)

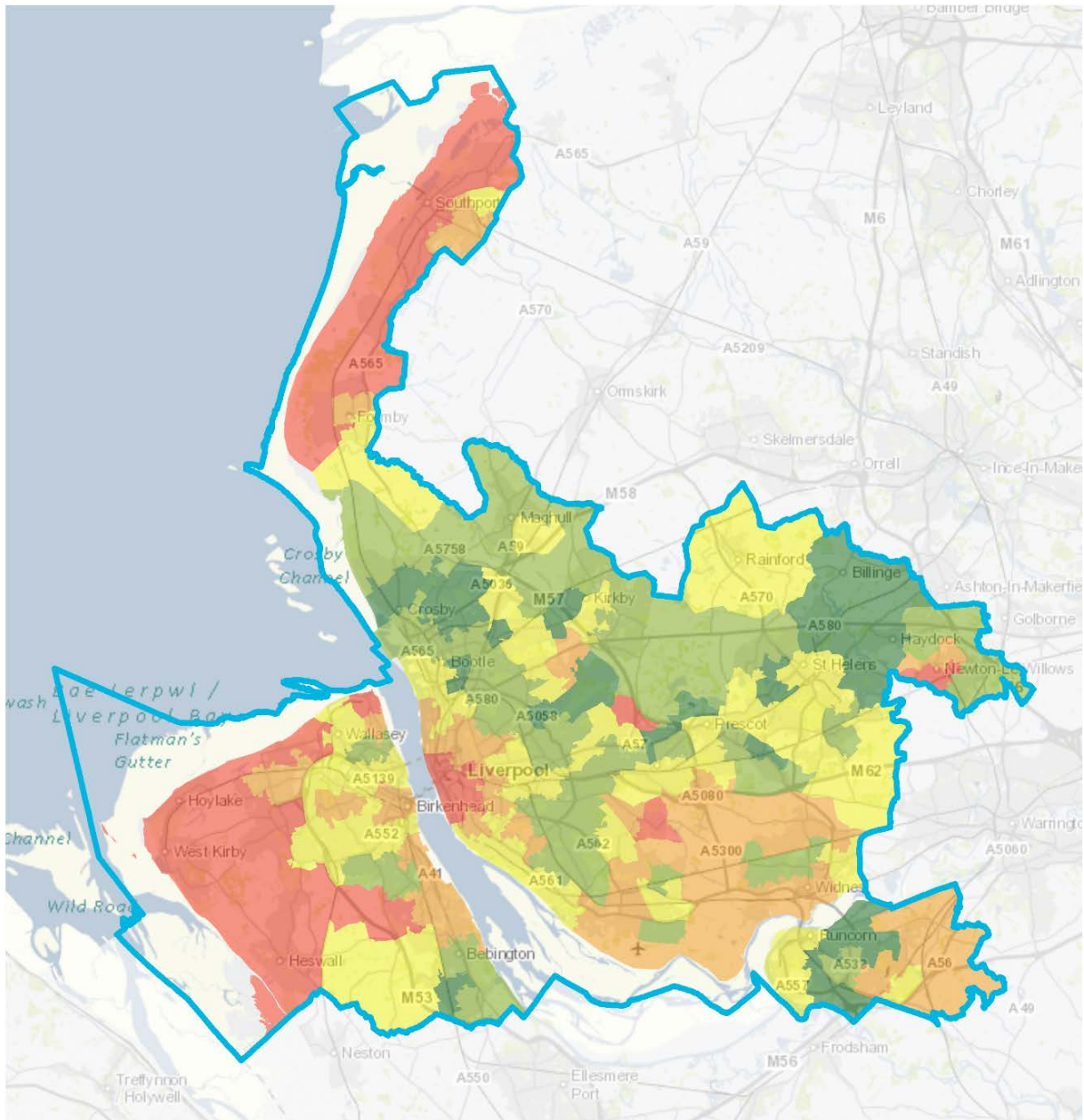


Telecommunications

- 6.4.28 The majority of the city region is well-covered by superfast broadband, but as illustrated on Figure 6.18, average speeds vary considerably.
- 6.4.29 Perhaps surprisingly, central parts of Liverpool City show relatively slow download speeds on average; which could be attributed to greater demands from the commercial and business centres in addition to domestic loads. However, this data relates to 2019 and the telecommunications picture is evolving constantly.
- 6.4.30 There are hyperfast networks developing, with a cluster growing in the centre of the City where average speeds are purported above 200mbps and up to 1gbps.
- 6.4.31 Looking at additional sources of data, the locations that display poor connectivity appear to be in the less urbanised areas. Figure 6.19 shows a snapshot of speed test data, taken from 20th June 2020⁶², demonstrating that the more rural areas have poor broadband access.
- 6.4.32 With regards to mobile coverage, there is widespread access to 3G and 4G across several networks throughout the City region. The urban areas have good coverage both indoor and outdoor, whilst some rural areas only have good outdoor coverage. 5G is an emerging technology, but there are some locations covered already in the city region including the following on THREE Network; St Helens Town centre, Newton -le-Willows, Bromborough, Greasby, Bootle, the Baltic Triangle, Knotty Ash. Vodafone 5G coverage currently concentrates on much of the Liverpool City centre and surrounding area. EE have rolled out a more extensive coverage of 5G in the Liverpool City region covering much of the Liverpool urban area, east Wirral, Huyton and St Helens.

⁶² <https://labs.thinkbroadband.com/>

Figure 6.18: Average Broadband Download Speed (2019)



0 2.5 5 10 Miles

Liverpool City Region

Average Broadband Download Speed

- Slowest
-
-
- Fastest

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Figure 6.19: Areas reported as below 2mbps (red) or 10mbps (amber) using fixed line estimated speed (June, 2020)

[Leaflet](#) | © [OpenStreetMap](#) contributors, Points © 2012 LINZ, Data © thinkbroadband.com, © [thinkbroadband](#) © 2020

Trends

6.4.33 The table below sets out a brief summary of issues and trends for the local authorities in relation to economy. Also provided is a summary of the conclusions reached in the relevant SA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Halton	Delivery and Allocations Local Plan: SA Report (July, 2019)	<p>High rates of long-term sick.</p> <p>High rates of low level occupations.</p> <p>High rates of high growth enterprises.</p> <p>Retail dominated by convenience, independent stores and leisure.</p> <p><u>Growth areas</u></p> <p>Daresbury</p>	<p>The overall effect is significantly positive. The provision of a wide range of employment opportunities should have positive indirect effects on the vitality of communities.</p> <p>Policies encourage sustainable transport and require new developments to contribute to providing an integrated sustainable transport network and improved walking and cycling facilities within the Borough. Providing better transport links to the Borough's employment areas will improve access for the Borough's residents.</p> <p>In the longer term these positive policies should also be contributing to the levels of employment in the Borough and the level of economic activity.</p>
Knowsley	Knowsley Core Strategy SA Report, (2012)	<p>Highest rates of people with no qualifications in the LCR,</p> <p>High rates of long-term sick.</p> <p>High rates of low level occupations.</p> <p>High rates of high growth enterprises.</p> <p>High retail vacancy rates (2009 data).</p> <p>Knowsley Safari Park as a significant visitor attraction.</p> <p><u>Growth areas</u></p> <p>Knowsley Industrial Park</p>	<p>It was concluded that the Plan would have a positive effect upon the economy and town centres.</p> <p>There would be major positive effects in relation to Kirkby Town Centre, Knowsley Industrial and Business Parks, South Prescot and Prescot Town Centre.</p>

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Liverpool	SA Report: Submission Draft Local Plan, (Jan 2018)	<p><u>Key issues</u></p> <p>Key centre of income deprivation.</p> <p>Highest rates of population with high level qualifications.</p> <p>High rates of high level occupations.</p> <p>Lowest rates of economically active people in the city region.</p> <p>High net additional enterprises in 2017 and 2018.</p> <p>Worst business survival rates over a 5-year period from 2013</p> <p>Highest GVA across all sectors in the city region.</p> <p>Highest level of inflow commuting across LCR.</p> <p>Key city centre role, attracting a significant skills base.</p> <p>Key retail centre within LCR.</p> <p>Key centre for tourism:6 of the top 9 main tourist attractions in the city region</p> <p>Internationally important visitor location.</p> <p><u>Growth areas</u></p> <ul style="list-style-type: none"> • Cruise liner terminal at Princess Dock. • Liverpool Waters. • Knowledge Quarter. 	<p>Significant positive effects are predicted with regards to employment and economy. New development sites for employment, mixed-use, retail and offices are located within proximity of the most deprived areas.</p> <p>Areas allocated for employment are protected, and encouragement is given for business sectors with strong growth potential.</p> <p>There is also specific mention of the Ports of Liverpool and Garston and Liverpool John Lennon Airport, and the visitor economy; all of which are important to the future investment of the City.</p> <p>Minor negative effects are identified to reflect potential viability impacts due to infrastructure requirements for new developments.</p>
Sefton	Sefton Local Plan SA Report (2015)	<p>High rates of students.</p> <p>Low rates of high growth enterprises.</p> <p>High retail vacancy rates.</p> <p>Comparison and convenience retail.</p> <p><u>Growth Areas</u></p> <ul style="list-style-type: none"> • The Port of Liverpool. • Atlantic Gateway. 	<p>The Local Plan supports the growth of the local economy by providing attractive land for employment development.</p> <p>Further positive effects are created through support for the expansion of the Port of Liverpool, strengthening the role of centres, building houses, and facilitating regeneration of deprived areas.</p> <p>The plan also recognises the importance of the natural environment to the visitor</p>

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
------------------------	-------------------------------	--------------------------	-------------------------------------------------

			<p>economy and for the health and wellbeing of local residents.</p> <p>Taking these factors into account the Local Plan is likely to have a significant positive effect on the economy.</p>
St Helens	St Helens Local Plan: Submission Draft: SA Report (Jan 2019)	<p>High rates of low level occupations.</p> <p><u>Growth areas</u></p> <p>Logistics and distribution at key transport hubs / M6 corridor.</p>	<p>Widespread benefits ought to be generated helping to strengthen the Borough's economy and its links with the Liverpool City Region.</p> <p>The policies are also supportive of efforts to train individuals, offer apprenticeships, and increase accessibility; creating a more robust and mobile workforce.</p> <p>Of critical importance to the success of the economic strategy (for the people of St Helens) is to ensure that public transport links to strategic employment sites are strengthened. It is also important to seek high quality developments that distinguish the Borough from the employment offer of other land opportunities that are located along motorway corridors.</p>
Wirral	Wirral Issues and Options Consultation, Interim SA Report (Dec, 2019)	<p>Major hotspot of income deprivation in Birkenhead.</p> <p>High rates of high level occupations.</p> <p>Low rates of high growth enterprises.</p> <p>High retail vacancy rates.</p> <p><u>Growth areas</u></p> <ul style="list-style-type: none"> • Wirral waters. • Port related employment. 	<p>The employment strategy proposed consists of existing key locations for growth such as Port Sunlight and Wirral Waters. Continued investment in these areas is likely to have positive effects upon the regional economy and strengthen links to future investment opportunities associated with Ports and logistics.</p> <p>The proposed housing growth is also well located in relation to new employment development and is likely to contribute to the positive effects upon the economy.</p>

- 6.4.34 The current situation regarding Covid-19 and Brexit will have implications for the structure and output of the economy at a regional, national and international scale.
- 6.4.35 In the short term, as a result of the Covid-19 pandemic, there is likely to be a dramatic decline in economic output which will directly affect GDP/GVA, employment and investment.
- 6.4.36 From a positive perspective, organisations, businesses and communities have responded rapidly to the pandemic and are already making adjustments to the new ways of living. There are plans in place to create a recovery plan and recently, a £3million LCR Future Innovation Fund has been launched by the Metro Mayor to support businesses in the region to adapt and innovate in the wake of the COVID-19 pandemic. Such measures, along with support from central government, innovations from people and business could help to offset the negative implications and foster positive new paradigms in relation to how the economy should take shape in the future.
- 6.4.37 The Wealth and Wellbeing programme⁶³ identifies as a core theme that it will explore the ways to shape the changing world of employment so that the needs of employers and employees are best met through a focus on a health-enhancing workplace. However, it is noted that there remains uncertainty over the future demand for workspace, particularly within city centres; reflecting a need for a flexible, agile approach to economic development and forecasting needs.
- 6.4.38 The pandemic is also likely to have secondary implications for wellbeing (mental as well as physical health) as well as for the speed at which the delivery of projects will be realised as a result of delays. There is also likely to be shifts in terms of the urban landscape, with initial expectations of a reduced use of public transport, increased personal mobility (active travel as well as motor vehicle use); a balance between an increase in traffic alongside higher rates of walking and cycling could result in no significant overall changes to congestion levels.
- 6.4.39 Commuting times are likely to become more staggered, resulting in an expected reduction in air pollution. Whilst these impacts are severe, they are expected to last for a relatively short timeframe.
- 6.4.40 The impacts of COVID-19 have particularly affected the tourism and visitor economy and a recent Policy Briefing⁶⁴ identifies the need to reconsider the existing 'global just-in-time economic model' to adjust to a 'smaller, more local world'. This could see people flying and travelling less, with a greater need to support the local cultural and hospitality offer.
- 6.4.41 In the longer term, the implications of Brexit are still not fully understood; trading arrangements are likely to shift, and issues with access to migrant labour are likely to prevail, especially for roles including, healthcare professionals, seasonal farm workers and hospitality staff.
- 6.4.42 Positive measures to support the recovery of the economy include existing investment schemes in key infrastructure such as the Northern Powerhouse, as well as the availability of high quality employment sites coming through Adopted and emerging Local Plans.

6.5 Key issues

- 6.5.1 Economic recovery from Covid-19 and the uncertainty of Brexit brings significant challenges to the short term performance of the economy.
- 6.5.2 Broadly speaking, Liverpool's more built up urban areas have greater levels of educational and skills deprivation, as well as lower average incomes than the rural areas.

⁶³ LCRCA (2020) Responding to COVID-19 in the Liverpool City Region – Liverpool City Region Wealth and Wellbeing Programme: Adapting to COVID-19 [online] https://www.liverpool.ac.uk/media/livacuk/publicpolicyamprpractice/covid-19/Policy.Brief.007_final.draft.pdf

⁶⁴

- 6.5.3 Liverpool City Region performs less well compared to regional and national averages in terms of education and skills. However, there are certain locations where skills and levels of education are high.
- 6.5.4 The Liverpool City Region has rates levels of self-employment and higher rates of employees than national and regional equivalents.
- 6.5.5 Liverpool City Region has relatively low rates of high-level occupations and high-rates of lower level occupations (compared to regional and national equivalents).
- 6.5.6 Liverpool City Region shows poorer business survival rates than regional and national equivalents, for businesses born in 2013.
- 6.5.7 The Liverpool City Region has an intra-city region imbalance between rates of high growth enterprises.
- 6.5.8 The Liverpool City Region's key GVA generators are in the manufacturing, real estate and human health and social work sectors.
- 6.5.9 Areas around central urban core's show high levels of commuter outflow, whilst central core's have high levels of inflow. This highlights issues where concentrations of housing and workplace are segregated.
- 6.5.10 The SA findings for Local Plans suggest that development activity should generate significant positive effects in the region over the next 20 years. This should therefore provide a strong basis on which to plan the longer-term economic strategy for the City Region.
- 6.5.11 The LCR has a strong tourism offer, with Liverpool being a central hub.
- 6.5.12 There are significant infrastructure and investment schemes in the pipeline that should help to improve connectivity and boost the economy of the LCR.

6.6 Scoping outcome

- 6.6.1 Considering the key issues discussed above it is proposed that the topic of economy should be **SCOPED IN** to the integrated Appraisal. The following objectives and supporting questions are proposed as part of the IIA Framework.

IIA objective	Assessment questions (will the option/ proposal help to...)
<p>Achieve a sustainable and inclusive economy in the city region that builds upon current strengths and the opportunities offered by investment and innovation.</p>	<ul style="list-style-type: none"> • Respond to the 'grand challenges' and transformational opportunities as outlined in the draft LCR LIS? • Build upon the City Region's strong tourism sector? • Facilitate growth in attractive locations with excellent accessibility via sustainable modes of transport? • Make the most of the opportunities offered by the Northern Powerhouse? • Provide high quality, sustainable jobs whilst ensuring education and skills are improved through demand-led approaches? • Support businesses to grow by enabling the development of the right economic infrastructure and of innovation assets? • Create a paradigm shift in economic growth that eradicates inequalities and decouples economic activity from environmental degradation? • Creates resilience to future economic shocks?

7. Transportation

7.1 Introduction

- 7.1.1 The movement of people, goods and services is essential to support economic activity and social interaction.
- 7.1.2 This section provides a strategic review of the policy context, literature, and baseline position in relation to the following relevant factors.
- Key infrastructure
 - Public Transport
 - Active transport

7.2 Context review

International

- 7.2.1 The **Aviation strategy for Europe** aims at strengthening the competitiveness and sustainability of the entire EU air transport value chain. The strategy underlines that 'Europe must be a leading player in international aviation' and that 'growth in air traffic in Europe and worldwide needs to be reconciled with maintaining high standards of aviation safety and security, as well as reducing aviation's environmental footprint and contributing to the fight against climate change'

National

- 7.2.2 Key messages from the **National Planning Policy Framework**⁶⁵ (NPPF) include:
- Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:
 - a. The potential impacts of development on transport networks can be addressed;
 - b. Opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised;
 - c. Opportunities to promote walking, cycling and public transport use are identified and pursued;
 - d. The environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account; and
 - e. Patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places.
 - Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.

⁶⁵ MHCLG (2019) National Planning Policy Framework [online] available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_web.pdf

- 7.2.3 **National Planning Practice Guidance (NPPG)**⁶⁶ identifies that it is important for local planning authorities to undertake an assessment of the transport implications in developing or reviewing their Local Plan so that a robust transport evidence base may be developed to support the preparation and/or review of that Plan.
- 7.2.4 **The Transport Investment Strategy - Moving Britain Ahead (2017)**⁶⁷ sets out the Department for Transport's approach for future investment decisions and priorities. At the local level, the strategy relies on devolved decision-making where local communities have the power and will be backed by funding. Investment aims to achieve a transport network that is reliable, well-managed, safe, and works for everyone. The transport system should also provide smooth, fast and comfortable journeys, and have the right connections in the right places.
- 7.2.5 The **UK 2070 Commission's final report** on regional inequalities details the UK's need to dismantle the extremities of regional inequalities through large scale, long term and all-encompassing policies. The report recommends widespread commitments which see areas outside of London and the South East benefitting from investment and exploiting cultural capital to realise their potential. The report sets out a 10-point framework for action which includes delivering a connectivity revolution by creating a transformed public transport network between, within and beyond cities. It also recommends implementing a comprehensive framework for inclusive devolution by allowing places to 'step-up' via appropriate levels of devolution according to local ambition, need and capacity. A levelling up of the playing field with fairer access to funds and spatial priorities is also included.
- 7.2.6 Transport for the North, **The Potential of Northern Powerhouse Rail (2019)** is a document outlining how this major rail programme will help to unlock the economic potential of the North. There are key aspirations to link the Liverpool City Region to the rest of the North through a new rail line, as well as to planned HS2 routes. .

City Region

- 7.2.7 The **LCRCA: A Transport Plan for Growth (2015)** sets out a "strategic direction for transport which supports growth, regeneration and carbon reduction" in the region. The plan notes the central role that the transport plays in unlocking economic growth and identifies that delivering the necessary to enable economic development at Wirral waters is a regional transport priority. The plan effectively absorbs the previously separate transport plans for Merseyside and Halton as these were prepared prior to the establishment of the LCR Combined Authority which became the single transport authority in the region.
- 7.2.8 There is a combination of other developments that also support sustainable development and do not compromise existing transportation infrastructures or schemes, those being: The Local Cycling and Walking Infrastructure Plan and The Liverpool City Region Local Journeys Strategy. The aim of the policy is to ensure that development does not have a detrimental impact on the safe, sustainable operation of the transport network, including vulnerable groups such as pedestrians, cyclists and motorcyclists, is protected and enhanced.
- 7.2.9 The **LCRA Long Term Rail Strategy (2018)** states that an effective rail network is vital to support the continued economic growth and success of the City Region. As well as taking advantage of strategic opportunities offered by the Northern Powerhouse; the strategy seeks to strengthen local rail links, and support the use of rail for freight movements.
- 7.2.10 The **LCRCA Local Cycling and Walking Infrastructure Plan (2019)**⁶⁸ sets out how the network of cycling and walking routes will be enhanced in the LCR; with the aim of making it more feasible and desirable for people to walk or cycle journeys Local. Some key messages include the following:

⁶⁶ Department for Communities and Local Government (2012) National Planning Practice Guidance [online] available at: <http://planningguidance.communities.gov.uk/>

⁶⁷ Department for Transport (2017) Transport Investment Strategy - Moving Britain Ahead [online] available at: <https://www.gov.uk/government/publications/transport-investment-strategy>

⁶⁸ <https://www.liverpoolcityregion-ca.gov.uk/wp-content/uploads/LCR-LCWIP-Final.pdf>

- The evidence shows that the vast majority of journeys are short journeys: 66% of all trips are less than 5km in length. The potential for walking and cycling is therefore great.
- Promotion of corridor links between housing and employment locations.
- Routes through green space and focusing on habitat improvements.

Local

- 7.2.11 Table 7.1 below highlights the common themes, policy approaches and strategic priorities for transport that are common to each of the six authorities. Locally specific issues have also been drawn out where they are of strategic importance.

Table 7.1: Key messages for transport

Key policies & principles	Source / Authorities
Promote active forms of transport to facilitate better health and wellbeing.	<ul style="list-style-type: none"> • Adopted and / or emerging Local Plans for each Local Authority. • Local Transport Plans.
Support a shift to more sustainable modes of travel.	<ul style="list-style-type: none"> • Adopted and / or emerging Local Plans for each Local Authority. • Local Transport Plans.
Ferry terminal linkages are important.	<ul style="list-style-type: none"> • Wirral Issues and Options paper 2020 • Liverpool Local Plan 2013 - 2033

- 7.2.12 The **Mayor of Liverpool Inclusive Growth Plan** has a priority to provide quality transport systems that are smart, clean and accessible. Encouragement of active and healthy sustainable transport is also priority, along with improving air quality standards and making Liverpool a digitally connected city.

7.3 Focused literature review

Transport systems can be a key determinant in improving or deterring people's health and wellbeing.

- 7.3.1 Evidence shows that commuting daily can cause stress and have an impact on our health and social wellbeing. Driving when compared to other modes of transport such as active modes and public transport is the most stressful (Legrain et al. 2015).

Active travel has demonstrable benefits for health and wellbeing.

- 7.3.2 Good access to public and active transport can improve people's health and well – being as car usage is often the most dominant mode of transport. Promoting greener modes of transport within regions and cities could significantly improve people's health for the better.

- 7.3.3 Studies have also found that that people who partake in active transport as their commute to work generally have more satisfaction than those who drive a car or catch public transport (Chatterjee et. al. 2019 & Goryakin et. al. 2014).

Higher car use and long commutes are associated with increased risk of obesity and stress

- 7.3.4 City dwellers are often located close to services and can walk to most resources, whereas individuals who live in leafy suburban areas are often leaned towards using cars as transport, leading to decreases in exercise (Oakes, et. al. 2007; Richardson et. al. 2012).

- 7.3.5 A study conducted by Chatterjee et. al. (2019) reviewed the linkages between commuting and wellbeing. The study concluded that daily commutes to work can cause stress due to lack of control associated with congestion, crowding and unpredictability.
- 7.3.6 Clarke, et. al. (2019), found that shorter commute times benefits job satisfaction and increased leisure time satisfaction. It also reduces strain and improved mental health. On top of shorter commute times the study found that walking to work has similar benefits also. Hence shorter and walkable commute times is proven to improve aspects of subjective wellbeing.
- 7.3.7 Personal satisfaction increases when commutes are travelled with company and decreases with duration of commute regardless of mode of transport (Chatterjee et. al. 2019, Stutzer and Frey, 2008). Evidence suggests that morning commutes effect how people work and perform in the workplace or at home (Chatterjee et al., 2019), however Moriss and Zhou (2017) were of the opinion that longer commutes were not associated with mood during the commute or more meaningful work.

Not all people are affected in the same way by accessibility

- 7.3.8 Cooper et. al. 2020 states that transport access, modes of transport and wider effects of transport infrastructure all effect health and well-being. The research report states that there are several groups who are more 'sensitive' to negative health impacts and this includes older people, younger people, economically disadvantages people and people with disabilities. Interventions such as public transport services improve access to health care services and overall health and well – being outcomes.
- 7.3.9 Gatersleben et. al. (2013), researched the social perceptions of different types of travel modes within urban neighbourhoods. The study found that car usage has negative implications on urban communities thus affecting social perceptions. It also found that increased car usage within deprived areas has negative effects on how people view the area. Car use has negative effects on urban communities by affecting social perceptions (Gatersleben, et al. 2013).

7.4 Baseline review

Key infrastructure

- 7.4.1 As illustrated on figure 7.1, the Liverpool City Region has strategic east-west road links with the wider north west region, in particular along the M56, M62 and A580. This also creates connections to the north and south (primarily along the M6).
- 7.4.2 There are several railway lines serving the region, though these are mostly intra-regional, serving connections within the LCR rather than the wider UK. The largest and busiest station is Liverpool Lime Street station, which does have wider links with the UK.
- 7.4.3 The Northern Powerhouse Rail aspirations would create stronger links between the City Region and other Cities within the North and beyond.
- 7.4.4 There are several ferry terminals in Liverpool which create links to Dublin, Belfast and the Isle of Man. The ports also provide trading links across the world and are a calling point for certain cruise liners.
- 7.4.5 In terms of air travel, the John Lennon Airport is one of the major regional airports in the UK, providing over 60 destinations and handling 5 million passengers annually. The airport provides key international links and brings significant income to the city region through jobs and supply chain. There is a strategic plan with a vision through to 2030, as well as a masterplan through to 2050. These both seek to expand the airport to enhance its role as a key economic asset and transportation hub.

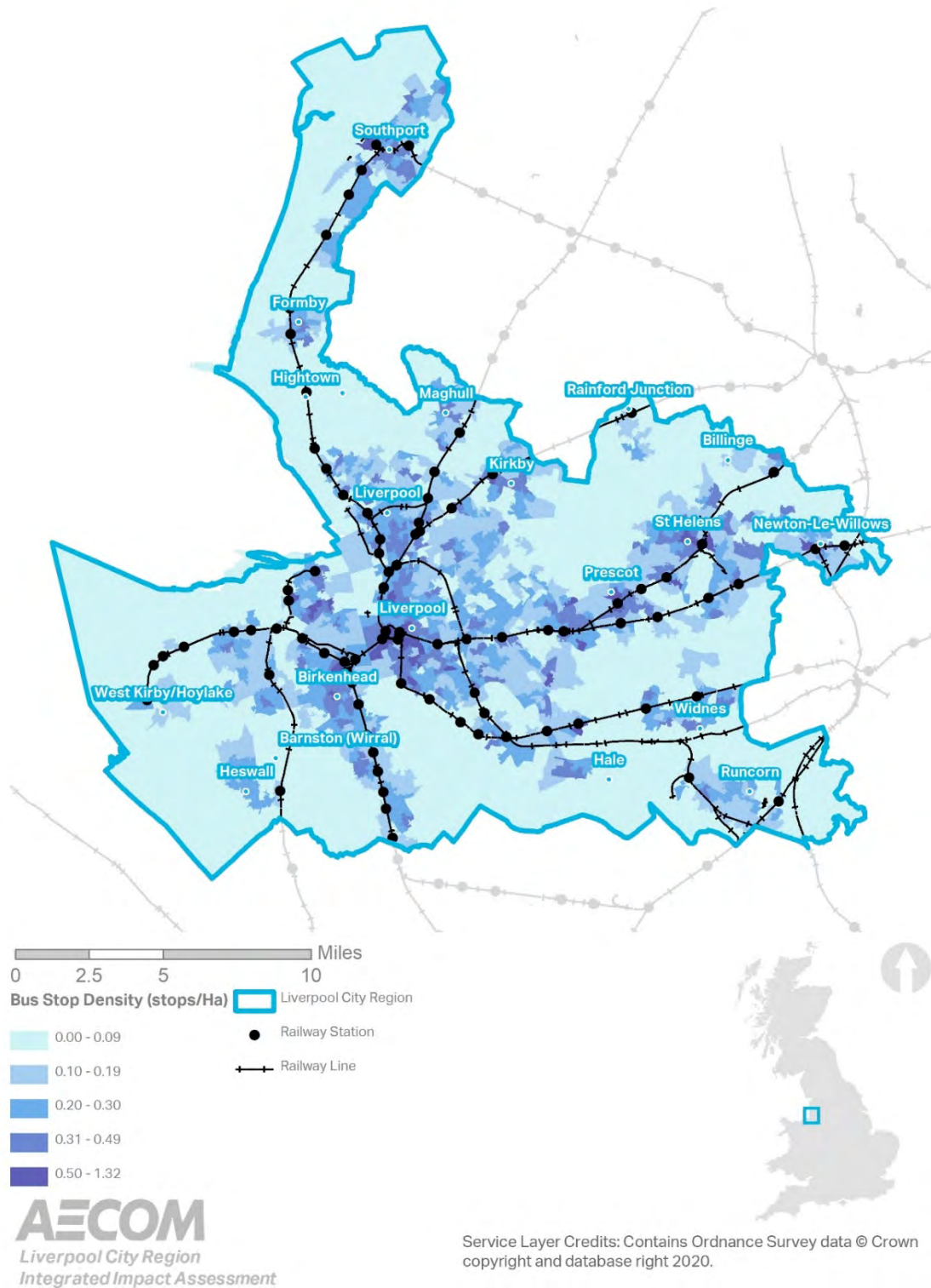
Figure 7.1. Major roads and transport linkages.



Public transport

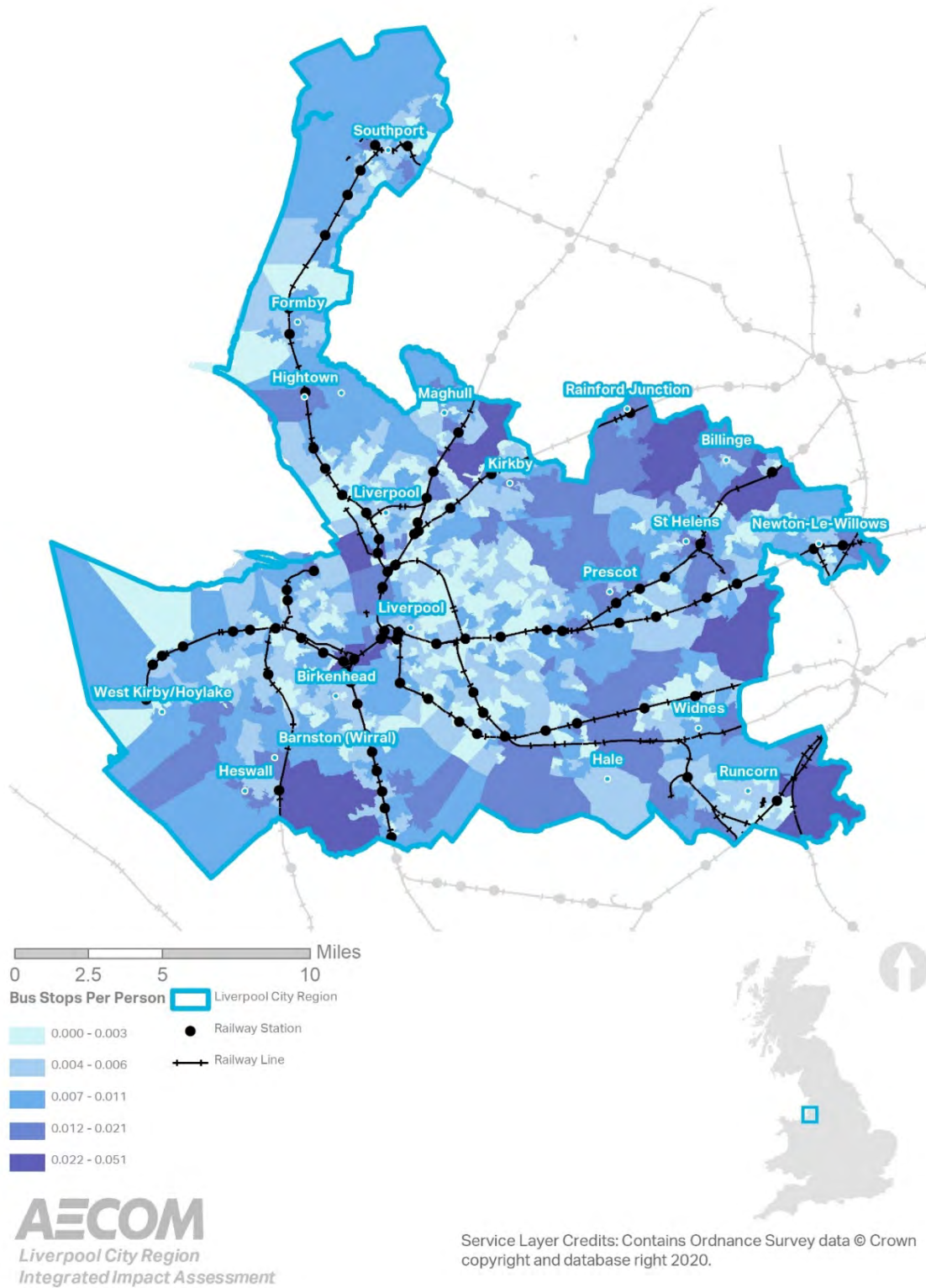
7.4.6 Figure 7.2 represents bus stop densities within the Liverpool City Region, and reflects that the closer to urban centres, the more bus public stops there are.

Figure 7.2: Bus stop density



7.4.7 Figure 7.3 below adds an interesting dimension to the picture, showing that number of bus stops per person is actually lower in the more densely populated areas compared to the less dense rural areas.

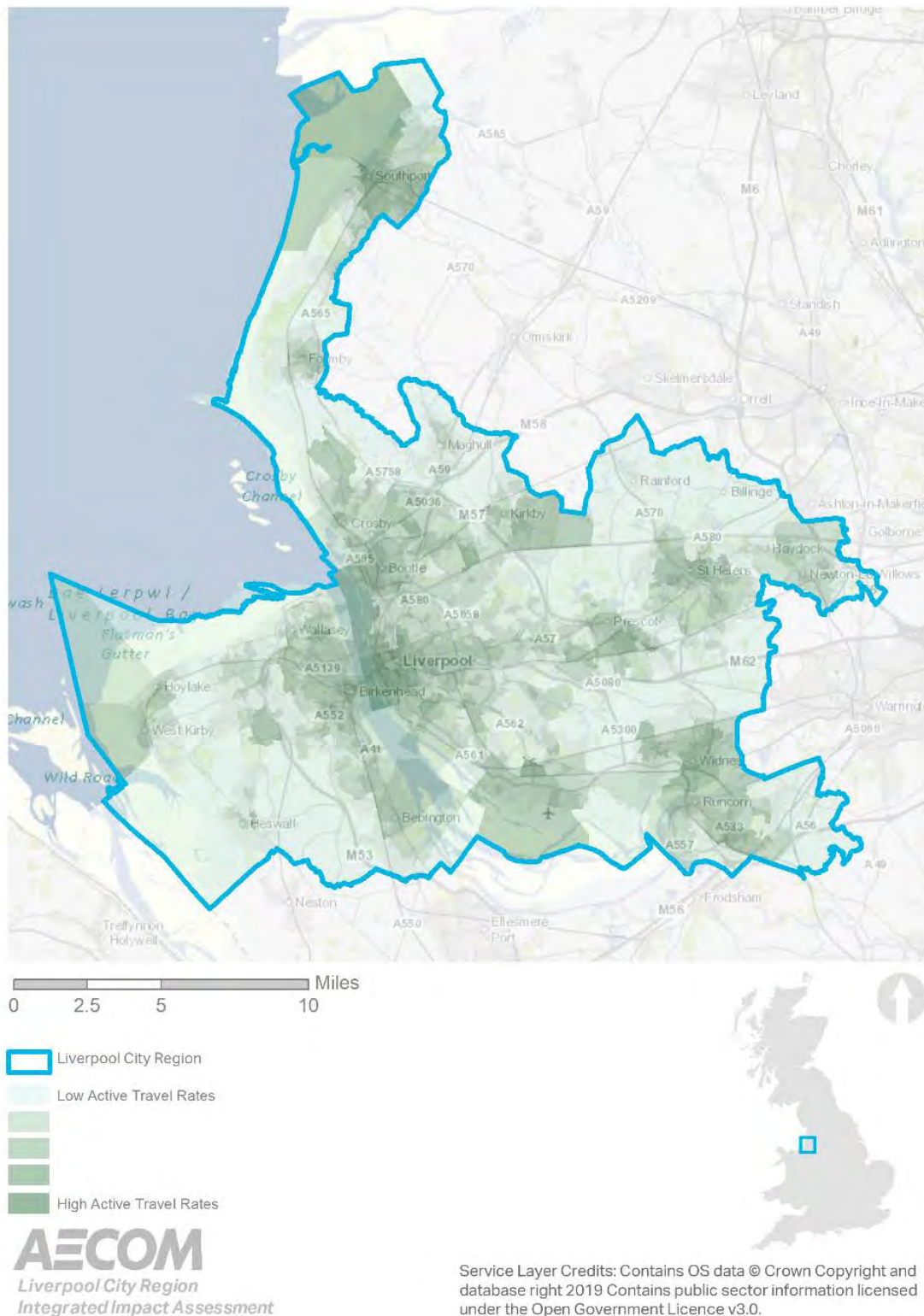
Figure 7.3: Bus stops per person



Active travel

7.4.8 Active travel such as walking and cycling is beneficial from a public health and environmental perspective. It is therefore a central feature of transport policy and land use plans across the City Region. Currently, levels of active travel vary across the region, as illustrated by figure 7.4 below. The highest levels of walking and cycling occur in the denser urban areas, suggesting a strong correlation between a higher range of services, jobs and leisure opportunities and the likelihood of active travel rates being higher.

Figure 7.4: Rates of active travel (Census, 2011)



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Trends

- 7.4.9 The table below sets out a brief summary of issues and trends for the local authorities in relation to climate change mitigation. Also provided is a summary of the conclusions reached in the relevant SA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Halton	Delivery and Allocations Local Plan: SA Report (July, 2019)	<p>Halton's annual traffic by all vehicles has significantly increased between the years 2017 – 2018.</p> <p>There are several major transport road networks that serve the local area including the M62 motorway, M56 motorways.</p> <p>Halton has fewer people per bus stop compared to other authorities within the Liverpool City Region.</p>	<p>Locating development closer to transport routes could encourage public transport uses and improvements or it may encourage car usage.</p> <p>Expanding on existing developments would see less need to have new transport links and existing ones potentially strengthen.</p> <p>Increases of new housing will lead to increased pressures on transport networks and will lead to increases in car usage.</p> <p>Increases of new provisions across the Borough is likely to increase car usage and have negative effects.</p> <p>Increasing the provision of pitches will have a negative effect on reducing the need to travel.</p> <p>Impacts to sustainable travel is dependent on the location of future development.</p> <p>Appropriate retail development is likely to reduce the need to travel further distances if located in the right areas and provides local needs.</p>

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Knowsley	Knowsley Core Strategy SA Report, (2012)	Access to personal vehicles is considered a main enabler to a greater freedom to work and have access to leisure facilities.	Policies that support the use of sustainable modes of transport will have positive effects on mitigating climate change.
	Knowsley Transport Feasibility Study (2012)	37% of residents do not have access to a car or van for travel which is 12% higher than national averages.	Development located within the Green Belt should be accessible by a choice of means of transport.
	Knowsley Local Plan Core Strategy Transport Modelling (2012)	Key transport linkages within Knowsley include the east-west corridor towards Liverpool City Centre, the port of Liverpool and the major airport.	Directing future retail services and town centre leisure opportunities near accessible public transport is likely to have some positive effects.
		Major roads within Knowsley include the M62, A580, A57 and A562. The M57 and A5300 are important links connecting Knowsley to the south of England.	Some policies suggest that transport linkages between housing and employment will be strengthened however does not directly state public transport modes which reduce certainty in prioritising public transport over other methods.
		Several rail lines pass through Knowsley, with the main services departing from and arriving at Liverpool, Manchester and Wigan.	
		Knowsley has an extensive bus network that runs from the Liverpool City Centre to different areas within the borough. However, Knowsley has limited regular bus services between the different centres which restricts access to jobs. Public transport access to Knowsley Industrial Park is also limited.	

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Liverpool	SA Report: Submission Draft Local Plan, (Jan 2018)	Liverpool has an extensive variety of transport options including road, rail and port linkages across the city, to other areas within the Liverpool City Region and beyond.	The Plan policies have a strong stance toward significant contribution to sustainable transport, and providing different travel options.
		Liverpool traffic has decreased between the years 2017 – 2018.	It has been noted that in relation to health, tensions arise from policies which support both sustainable transport, and increased travel and car parking provision.
		Liverpool and St. Helens are significantly worse than national averages for road traffic related accidents in children ages 6-10.	
		Increasing road traffic is a major issue within Liverpool and has the highest volume of traffic within the Liverpool City Region.	
		Bus densities within Liverpool are better than other areas within the Liverpool City Region, mainly due to increased demands and population densities.	
		Whilst this is positive for accessibility and growth, road transport in particular heavy duty vehicles within Liverpool City Centre is still a main contributor for the city-wide AQMA.	
			The Local Plan has management policies in place that support measures that enhance and encourage active transport and sustainable freight logistics along key transport network to improve air quality.
			Implementation of wider city regional strategies would be harder to implement without the Local Plan in place as it is essential for infrastructure to improve and maximise on existing transport networks.
			Sustainable growth principles within the Local Plan are likely to have significant positive effects to transport.
			Significant positive effects for transport are predicted as there is an SA objective to maximise sustainable accessibility.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Sefton	Sefton Local Plan SA Report (2015)	<p>Annual traffic in Sefton has increased over the past years.</p> <p>Sefton decreased in active transport methods between the years 2001 and 2011 by 9%.</p>	<p>Facilitating improved accessibility and transport links within Sefton including supporting the expansion of the Port have positive effects on sustainable economic growth.</p>
	Road Traffic Statistics, Department for Transport	<p>Across the Liverpool City Region, Sefton has the greatest percentage of residents commuting via cars into towns and centres.</p> <p>Sefton lacks transport connectivity to areas outside of the borough. Congestion is also an issue in particular in around motorways in Southport.</p>	<p>Enhanced accessibility through improving the existing transport network is likely to have positive effects on the community and helps connect jobs to services and communities.</p> <p>It is important that the Port of Liverpool see enhancements as it will accommodate anticipated growth in the longer term beyond 2020.</p> <p>Policies which mention increasing infrastructure to support active transport will have positive effects on accessibility in the short – term at least.</p>
St Helens	St Helens Local Plan (2020-2035)	<p>St. Helens has an extensive well used bus and rail network. However there is a need to improve aspects of the existing public transport network and to improve active transport.</p> <p>Highways within the Borough are under increasing pressures as traffic flows are increasing and result in congestion.</p> <p>A large portion of residents do not have access to a car.</p> <p>Travel times by public transport and walking are lower than national averages.</p> <p>Liverpool and St. Helens are significantly worse than national averages for road traffic related accidents in children ages 6-10.</p> <p>The majority of CO² emissions in St. Helens is caused by transport.</p>	<p>The overall implications for traffic and air quality are likely to be negative given the focus on development along key road networks, and in economic sectors that generate significant vehicular movements. On balance, an uncertain significant negative effect is predicted.</p> <p>Without appropriate infrastructure to suffice adequate growth, transport networks may result in negative effects.</p> <p>Overall there are potential/ uncertain negative effects on traffic and congestion.</p>

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents	
Wirral	W4. Wirral Issues and Options Consultation, Interim SA Report (Dec, 2019) JSNA Wirral Intellectual Services	<p>Approximately 30% of Wirral do not have access to a vehicle.</p> <p>Wirral is served by approximately 38 bus routes</p> <p>There were 43 million journeys on Mersey rail between 2018 – 2019.</p> <p>Cycling increased by 43% between 2008/09 – 2016/17.</p> <p>Needs for transport systems are likely to change due to a change in technology affecting employment, leisure and day to day living.</p> <p>Car availability is generally higher in Wirral than the rest of the Liverpool City Region.</p> <p>Wirral's accessibility to city economic centres is approximately 23 minutes travel time. This is better than North West and Liverpool City Region averages.</p> <p>Increasing road traffic is a major issue within Wirral and has the second highest volume of traffic within the Liverpool City Region.</p>	<p>Wirral is well serviced by transport linkages including cycle routes, roads and rail.</p> <p>Overall it is expected that with new developments, Wirral's transport connectivity will improve with strategic transport plans in place to provide adequate infrastructure. Sustainable transport initiatives with growth is supported.</p> <p>However increases in development in the short to medium term is likely to cause congestion issues due to construction. This is likely to have a minor negative effect.</p>	
	7.4.10	The future baseline position is still likely to be dominated by cars, given that these are heavily entrenched into society and physical infrastructure. With increased prosperity, a growth in the number of cars on the roads may also occur.		
	7.4.11	Offsetting this historic trend are proactive measures to promote walking and cycling, public transport and other alternative modes of travel. With the significant focus on modal shift and the planned investment in improvements, it is likely that the proportion of people using such modes will increase in the medium to longer term.		
	7.4.12	The short term implications of Covid19 are likely to see a reduction in public transport use, and the longer term implications are unsure.		
	7.4.13	In terms of freight, this is a growing sector, and with the continued expansion of online shopping and deliveries, it is possible that an increase in such transport will be required.		
	7.4.14	Likewise, international travel from the John Lennon Airport is projected to increase, though in the short term Covid 19 is likely to reduce patronage.		

7.5 Key issues

7.5.1 The following key issues emerge from the context and baseline review:

- There are risks that future development may cause congestion and traffic issues down the line if infrastructure demands cannot keep up with projected growth in a timely manner.
- Freight transport is likely to increase in the region and needs to be managed sustainably.
- Despite making gains in other aspects of climate change mitigation, emissions from transport remain problematic.
- There is considerable scope to increase levels of walking and cycling and this is a key policy objective.
- Congestion on key routes into the City Centre creates delays at peak times in critical locations.
- The long term goal to increase public transport patronage may be tempered in the short term by the ongoing pandemic. There is uncertainty as to when confidence and ability to travel at full capacity will return.
- Evidence suggests that active travel is positive for health and wellbeing, whilst lengthy car-based commuting can be detrimental.

7.6 Scoping outcome

7.6.1 Considering the key issues discussed above it is proposed that the topic of transport should be **SCOPED IN** to the integrated Appraisal. The following objectives and supporting questions are proposed as part of the IIA Framework.

IIA objective	Assessment questions (will the option/ proposal help to...)
<p>Improve accessibility and transport networks, whilst reducing the negative impacts of vehicular travel and supporting a greater shift to active and sustainable modes of travel.</p>	<ul style="list-style-type: none"> • Reduce the impact of increased freight traffic on the road networks? • Reduce emissions of greenhouse gases and pollutants associated with vehicular travel? • Consider cross boundary implications of long distance travel? • Encourage and enable greater amounts of walking and cycling? • Support greater patronage of public transport? • Manage congestion at peak times and pressured locations?

8. Equality and diversity

8.1 Introduction

- 8.1.1 Equality is about promoting equality of opportunity for all, regardless of background, circumstance or belief. As a public sector body, LRCA are required to pay due regard to section 149 of the Equality Act 2010, the Public Sector Equality Duty (PSED) in the development and delivery of their policies and plans.
- 8.1.2 This section provides a strategic review of the policy context, literature, as well as the current baseline position in relation to the protected characteristic groups as set out under the Equality Act 2010. These are:
- Age
 - Disability
 - Race/Ethnicity
 - Religion or belief
 - Sex
 - Gender reassignment
 - Sexual orientation
 - Pregnancy and maternity
 - Marriage/Civil Partnership
- 8.1.3 Although not officially a protected characteristic under the Equality Act, some local authorities choose to include socio-economic status and income as part of their equality impact assessment process and therefore this section also examines the socio-economic profile and levels of deprivation across the region.

8.2 Contextual review

International

- 8.2.1 The **Universal Declaration of Human Rights** (UDHR) was proclaimed by the United Nations General Assembly in 1948. There are 30 Articles, seeking to ensure that all humans are treated as free and equal regardless of social background.
- 8.2.2 **UN Sustainable Development Goals** are 17 life changing goals outlined by the UN in 2015. The following are of particular relevance for equality and diversity:
- Goal 5: Gender Equality: This is a human right and vital for a peaceful, prosperous world.
 - Goal 10: No Inequality: The poorest 40% of the population should be able to grow their income faster than average.
 - Goal 16: Peace and justice: There is a need for inclusive societies with strong institutions that provide justice for all.

National

- 8.2.3 The Equality Act 2010 legally protects people from discrimination both in the workplace and in wider society. The Act ensures that individuals with certain 'protected characteristics' are not indirectly or directly discriminated against. The Public Sector Equality Duty (PSED) is set out under section 149 of the Equality Act 2010. Under the duty public bodies must try to:

- Eliminate unlawful discrimination, harassment, victimisation and other conduct prohibited by the Act.
- Advance equality of opportunity between people who share a protected characteristic and those who do not.
- Foster good relations between people who share a protected characteristic and those who do not.

8.2.4 The Act explains that ‘due regard’ for advancing equality involves:

- Removing or minimising disadvantages experienced by people due to their protected characteristics.
- Taking steps to meet the needs of people from protected groups where these are different from the needs of other people.
- Encouraging people from protected groups to participate in public life or in other activities where their participation is disproportionately low.

8.2.5 **Building for Equality: Disability and the Built Environment**⁶⁹ is a House of Commons Report from 2017, which states that:

“There is a real need for a proactive, concerted, effort on the part of ‘mainstream’ systems and structures—be that national and local government or the professionals responsible for creating and changing our built environment—to take seriously the challenge of creating an inclusive environment”

8.2.6 Key messages from the **National Planning Policy Framework** (NPPF) include that planning policies should:

“Provide the social, recreational and cultural facilities and services the community needs, such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship, whilst guarding against the unnecessary loss of community facilities and services”.

- Ensure that the size, type and tenure of housing needed for different groups in the community is assessed and reflected in planning policies.

8.2.7 The PPG Chapter on housing for older and disabled people sets out a definition for older, disabled and vulnerable group and how such matters can be assessed and addressed in Local Plans.

8.2.8 **Is Britain Fairer? The state of equality of human rights (2018)**, is a report published by the Equality and Human Rights Commission. It reviews how the UK is performing as a nation on equality and human rights. It reveals there has been progress, but serious challenges remain that must be addressed, including:

- Poverty has changed little, and for children it has increased. The government needs to take radical action to reverse these trends.
- Disabled people are not enjoying the progress felt by other groups and are in danger of ‘being left behind’. There should be an acute focus on improving life in Britain for disabled people.
- Women’s equality has improved, but full equality has not been achieved. There is an urgent need to improve the experiences of women across Britain.
- Black African, Bangladeshi and Pakistani people are still the most likely to live in poverty and deprivation. Gypsy, Roma and Travellers face multiple disadvantages across different areas of life. There is a need to address the multiple factors that contribute to this trend.

⁶⁹ <https://publications.parliament.uk/pa/cm201617/cmselect/cmwomeq/631/631.pdf>

City Region

- 8.2.9 **The LCR fairness and Social Justice Advisory Board (FASJAB) was set up** to ensure that every policy, every service and every economic initiative that the LCR Combined Authority develops is measured against a commitment to deliver a fairer and more equal city region.
- 8.2.10 **Liverpool City Council (Equality and Diversity Policy Statement, 2018)** seeks to support a strong diverse city that is built on fairness. Key objectives are:
- Good quality accessible services, buildings and public spaces.
 - Tackling discrimination, addressing inequality and promoting diversity in how services are delivered and people experience places.
- 8.2.11 **Responding to COVID-19 in the Liverpool City Region** is a policy briefing prepared by the Heseltine Institute for Public Policy, Practice and Place (May, 2020).⁷⁰ There are some key messages with regards to economic recovery that relate specifically to equality and justice:
- The pandemic is highlighting the chronic weaknesses and inequalities that exist across the City Region. In particular, some members of the community have been unable to cope with the sudden shock of an economic shutdown more so than others.
 - It is becoming evident that young people, those on low-incomes, women, and Black, Asian and Minority Ethnic (BAME) communities are disproportionately exposed to the impacts of the pandemic.
 - Economic recovery cannot be predicated on a return to the old economy that, for all its notable successes, continued to produce inequality, environmental degradation, and poor health outcomes across the City Region.

Local

- 8.2.12 Table 8.1 below highlights the common themes, policy approaches and strategic equality priorities that are common to each of the six authorities. Locally specific issues have also been drawn out where they are of strategic importance.

Table 8.1: Key messages for equality and diversity

Key policies & principles	Source / Authorities
Meeting the needs of Gypsy, Traveller and Travelling Showpeople communities	<ul style="list-style-type: none"> • Adopted and / or emerging Local Plan documents from each authority.
Providing housing to meet the needs of all residents, including specialist accommodation	
There is a need to tackle discrimination, address inequality and promote diversity in how services are delivered and people experience places.	<ul style="list-style-type: none"> • St Helens Council Comprehensive Equality Policy 2018-21 • Knowsley Council Equality Policy Statement 2017-20

⁷⁰ **Responding to COVID-19 in the Liverpool City Region:** Principles for Uncertain Times: Building an Effective Post-COVID Economy in Liverpool City Region: Heseltine Institute for Public Policy, Practice and Place (May, 2020).

8.3 Focused literature review

- 8.3.1 There is a tendency for people belonging to protected characteristic groups, particularly young people, older people, disabled people, and BAME people, to experience poorer health.⁷¹

Age

- 8.3.2 Poor quality urban environments can negatively affect children's health, wellbeing and development will result in greater costs to society over the longer term.
- 8.3.3 Children are more vulnerable to adverse impacts of air and noise pollution.⁷²
- 8.3.4 Interactions with nature can positively improve children's behaviour, academic performance and social skills (*Keniger et. al. 2013*).
- 8.3.5 Neighbourhood greenery can affect children in a positive way (*Roberts et. al. 2013*).
- 8.3.6 Younger people aged 16-25 are more likely to be users of public transport and rely on this mode of travel to access employment, education and leisure opportunities⁷³.

Disability

- 8.3.7 Many disabled people live in accommodation that has not been suitably adapted to meet their needs and enable them to live independently. This is particularly the case for older people with disabilities.⁷⁴

Race/Ethnicity

- 8.3.8 BAME groups experience a range of barriers in accessing housing suitable for their needs, with overcrowding being a particular issue⁷⁵.
- 8.3.9 Many Gypsies and Travellers are caught between insufficient supply of suitable accommodation and the insecurity of unauthorised encampments and developments. This results in a cycle of evictions, typically linked to threatening behaviour from private bailiff companies. Roadside stopping places, with no facilities and continued instability and trauma, become part of the way of life for this group. This results in deteriorating health, as well as severe disruptions in access to, healthcare services, employment opportunities and education for children.⁷⁶

Religion/Belief

- 8.3.10 Studies have revealed that there is a 'broken social mobility promise' for young Muslims where educational success did not translate into good labour market outcomes (*Shaw, et al, 2016*)

Sexual orientation / Gender Reassignment

- 8.3.11 The National LGBT Survey (2018) shows that LGBTQIA+ respondents are less satisfied with their life than the general UK population

⁷¹ EHRC (2010); *How Fair is Britain?* Report. Available at: https://www.equalityhumanrights.com/sites/default/files/how_fair_is_britain_-_complete_report.pdf [accessed January 2018]

⁷² World Health Organisation (2018) Air Pollution and Child Health: Prescribing Clean Air <https://www.who.int/ceh/publications/air-pollution-child-health/en/>

⁷³ DfT (2018) National Travel Survey <https://www.gov.uk/government/statistics/national-travel-survey-2018>

⁷⁴ Equality and Human Rights Commission (EHRC) (2010), *How fair is Britain? Equality, human rights and good relations in 2010*. Available online at:

<http://www.equalityhumanrights.com/en/our-work/how-fair-britain>.

⁷⁵ Race Equality Foundation (2013), *Understanding ethnic inequalities in housing: analysis of the 2011 census*. Available online at: <http://www.better-housing.org.uk/sites/default/files/briefings/downloads/Housing%20Briefing%2023.pdf>.

⁷⁶ EHRC (2009), *Inequalities experienced by Gypsy and Traveller communities*. Accessed June 2020:

http://dera.ioe.ac.uk/11129/1/12inequalities_experienced_by_gypsy_and_traveller_communities_a_review.pdf.

- 8.3.12 The existing evidence suggests that LGBTQIA+ people are at greater risk than the general population of being victims of crime
- 8.3.13 The NIESR report found that the existing evidence base points to LGBTQIA+ people being more dissatisfied with health services in comparison to those who are not LGBT
- 8.3.14 Gentrification can have a disproportionate impact on different members of the LGBTQIA+ community. Black, Asian and minority ethnic (BAME) within the LGBTQIA+ community have not seen the same level of increase in their purchasing power during the last decade and have therefore been targeted by gentrification more deeply than white members of the community. BAME people continue to be kept out of these safe neighbourhoods because their purchasing power remains below their white counterparts.
- 8.3.15 Young people who identify as LGBTQIA+ are over-represented within the young homeless population in the UK⁷⁷.
- 8.3.16 A UK survey of transgender people in 2012 showed that respondents avoided some activities due to a fear of being harassed or identified as transgender. Many said they avoided public toilets and gyms, and around a quarter said they avoided clothing shops, leisure facilities, clubs or social groups, public transport, restaurants or bars. Those with 'clear and constant gender identities' as men avoided many more situations than those with 'clear and constant identities' as women. This was particularly the case with public toilets, with 77% of transgender men avoiding them.⁷⁸

Parenthood

- 8.3.17 Pregnant women can be more susceptible to experience negative effects associated with development and the built environment. For example, pregnant women can be more susceptible to poor air quality⁷⁹, which can have a negative impact on birth weight.
- 8.3.18 Pregnant women need good access to health care facilities, particularly towards the latter stages of pregnancy. Accessibility is therefore an important issue for this group.
- 8.3.19 With regards to income, housing and wellbeing, young parents may be more likely to suffer from deprivation and struggle to find affordable housing.

Social interaction

- 8.3.20 Research suggests that the presence of trees and grass supports social interaction with one another (*Kuo et. al. 1998*)
- 8.3.21 Living within close proximity to green spaces delivers reductions in crime rates (*Kuo et. al. 1998, Keniger et. al. 2013*).
- 8.3.22 Urbanisation can cause negative impacts on individuals including social isolation, lack of social support, interracial conflict and increased incidence of crime and violence. (*Health Council Netherlands, 2004*).

8.4 Baseline review

- 8.4.1 The equalities baseline examines the spatial distribution of groups with protected characteristics across the region. This is necessary for the identification of potential equality impacts in order that an assessment can be made as to the potential level of impact the spatial development strategy may have on specific groups.

⁷⁷ Albert Kennedy Trust (2015) LGBT Youth Homelessness: A UK National Scoping of Cause, Prevalence, Response & Outcome. Accessed June 2020 <https://www.homeless.org.uk/sites/default/files/site-attachments/201512%20-%20Young%20and%20Homeless%20-%20Full%20Report.pdf>

⁷⁸ EHRC (2015) Is Britain Fairer?: Key Facts and Findings on Transgender People [online] available at: https://www.equalityhumanrights.com/sites/default/files/key_facts_and_findings-transgender_0.pdf [accessed 22/02/19]

⁷⁹ <https://www.nhs.uk/news/pregnancy-and-child/air-pollution-associated-with-low-birthweight/>

- 8.4.2 The section outlines the equalities baseline relevant to the city region. This includes analysis of Census 2011 data and other datasets from the Office for National Statistics (ONS) for the local authorities, combined data for the city region and the North West and England for comparison purposes where appropriate. Where possible the most recent data available is used. Where Census 2011 data is should be noted that although broad trends remain similar, there is a need to take into account the aged nature of this information.

Age

- 8.4.3 According to ONS 2018 population projection data, the city region is home to 1.55 million people. This is estimated to increase to 1.68 million people by 2043.
- 8.4.4 Table 18.1 provides an age breakdown of the population for each local authority, the city region and the North West and England for comparison purposes. The age groups included in the table are more likely to require specialist housing including family, affordable, social housing and supported housing etc as well as access specific education, recreation, health and community facilities. The table shows that overall, the city region has similar rates or lower rates to the North West and England for each of the age groups. However, there are variations across the local authorities with higher rates of people aged 65 over in Sefton and elderly (aged 85 and over) in St Helens. Halton, Knowsley, St Helens and Wirral all have higher rates of children than for the North West and England whereas Liverpool has a much higher proportion of young people aged 15-24.

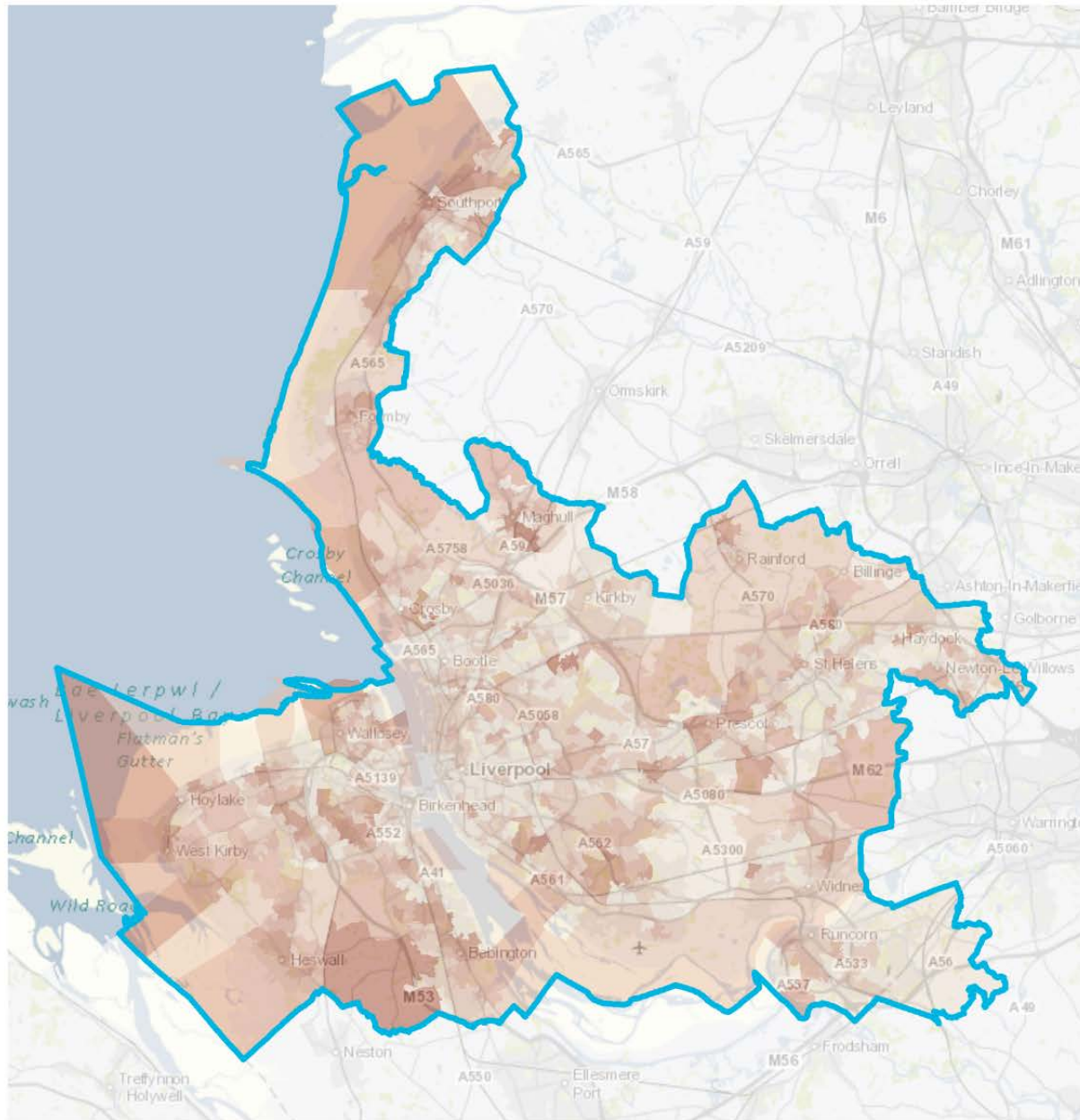
Table 8.1 Age breakdown by different geographical areas. For full range of aged see Figure 8.12

Age (years)	Halton	Knowsley	Liverpool	Sefton	St Helens	Wirral	City region	North West	England
0-14	18.9%	19.0%	13.3%	16.4%	17.3%	17.6%	16.2%	16.6%	16.3%
15-24	11.0%	11.7%	16.7%	10.1%	10.5%	10.2%	12.5%	12.7%	12.6%
65+	18.1%	17.1%	14.7%	23.3%	20.4%	21.6%	18.8%	21.9%	21.8%
85+	1.8%	2.2%	1.9%	3.4%	4.3%	2.9%	2.7%	3.0%	3.2%

Source: ONS Mid-year population estimates, 2018

- 8.4.5 Figures 18.1 and 18.2 highlight areas with high levels of children and elderly residents across the region. For full distribution of ages by gender, see Figure 8.12 (population pyramid).
- 8.4.6 ONS population projections estimate that by 2043, the proportion of people aged 65 years and older living in the region will increase by approximately 4.5% on 2018 levels. This is the highest increase of any of the above age groups.

Figure 8.1: Map showing rates of elderly population (aged 85 and over). *Source of data: 2011 Census.*



0 2.5 5 10 Miles

Liverpool City Region

Over 85s

Low rates

High rates

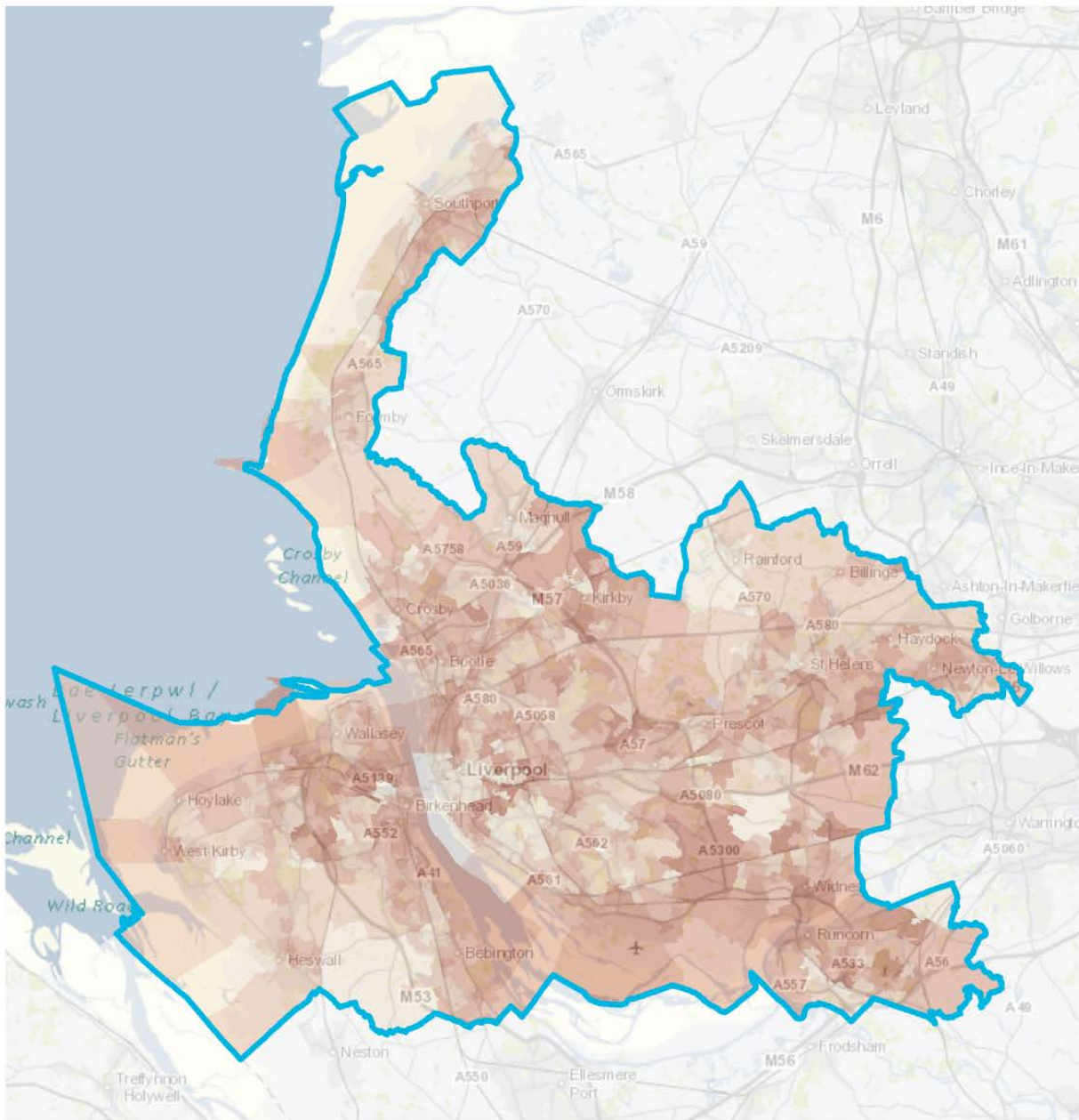
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Figure 8.2: Map showing rates of children (residents aged 0-15). *Source of data: 2011 Census.*



0 2.5 5 10 Miles

Liverpool City Region

Aged 0 to 15

Low rates

 High rates

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Disability

8.4.7 Figure 8.3 shows that overall, Liverpool City Region has a higher than regional and national rate of people who stated that they were limited in their daily activities by a long term limiting illness or disability. Knowsley has the highest rate of people considered to be limited a lot by disability or health of all the local authorities in the city region.

8.4.8 Figure 8.4 adds spatial detail to these figures; showing that although long-term limiting illness of the population generally shows a mixed pattern across the city region, the more rural areas show lower rates of people with a long-term limiting illness and urban areas show a high rate of long-term limiting illness.

Figure 8.3: Population limited in their daily activities by a disability or illness. *Source of data: 2011 Census.*

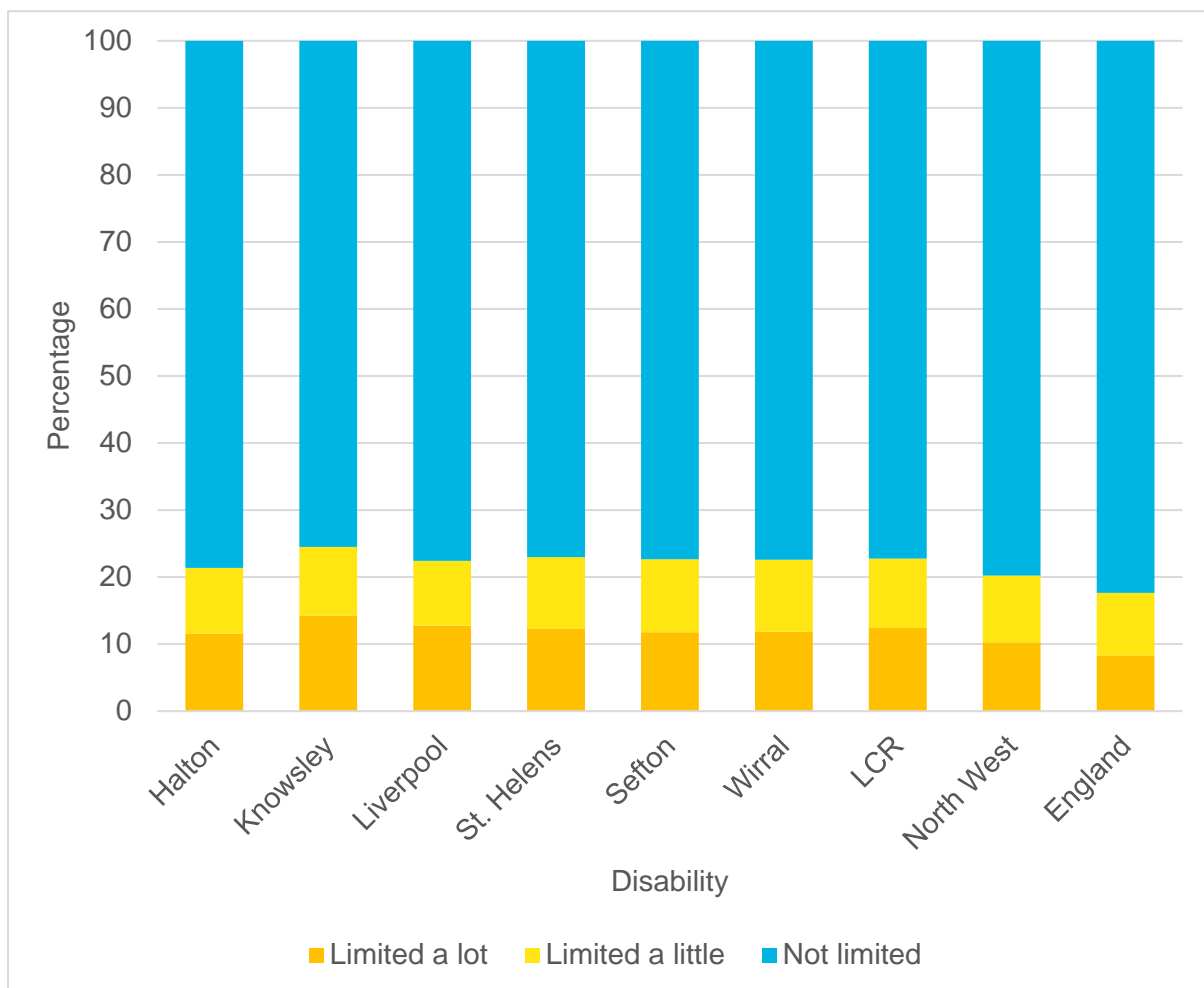
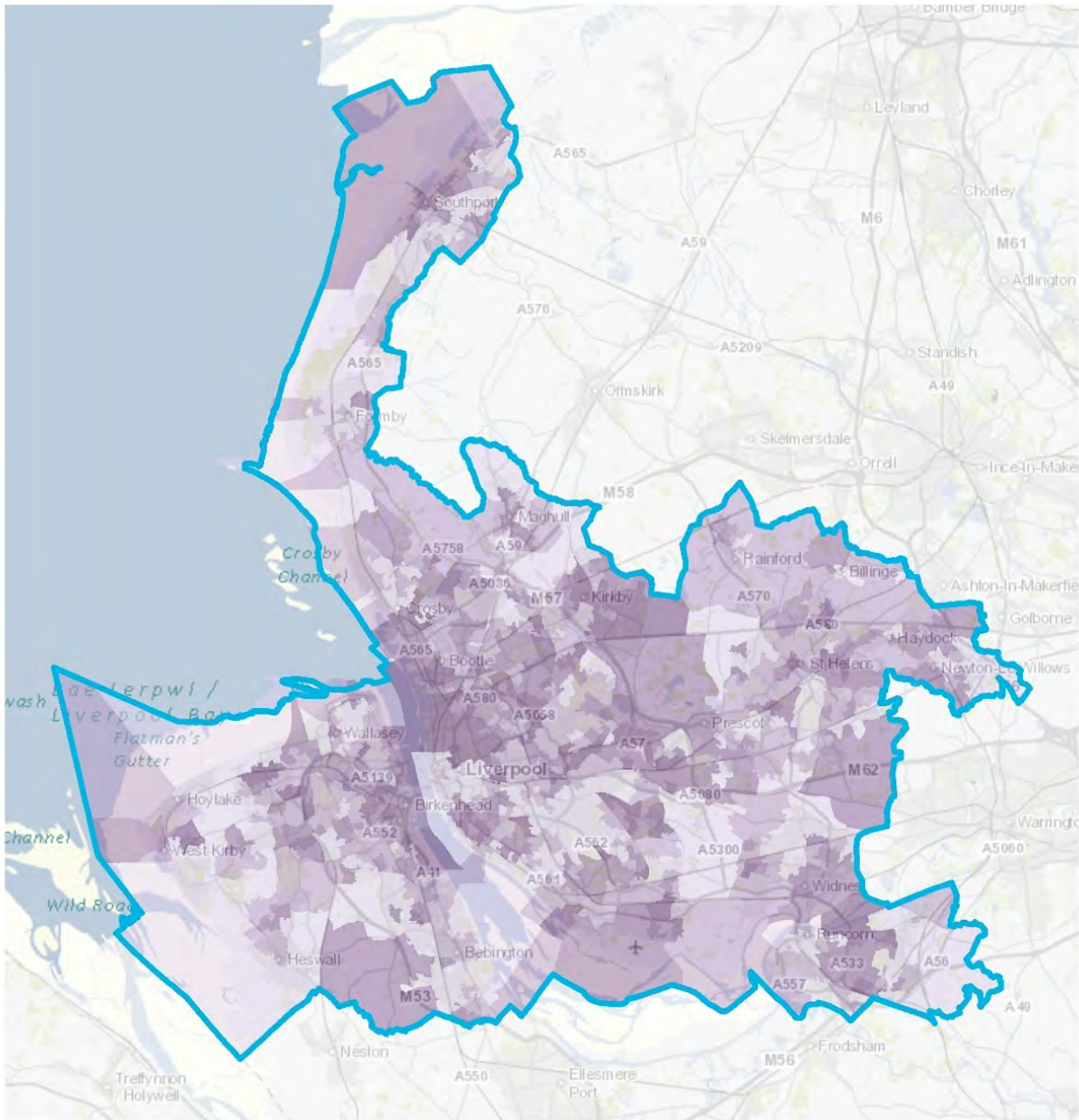


Figure 8.4 : Map showing the distribution of area based rates of people identifying as being limited a lot due to disability or illness (Census, 2011)



0 2.5 5 10 Miles

 Liverpool City Region **Disabilities (limited a lot)(%)**

-  1 - 9
-  10 - 13
-  14 - 18
-  19 - 29

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Race/ ethnicity

- 8.4.9 Figure 8.5 shows that all of the local authorities in the city region, except for Liverpool, have a population identifying as White British of over 90% (higher than the North West and UK average). Liverpool City is more aligned with regional and national averages; demonstrating greater ethnic diversity.
- 8.4.10 Figure 8.6 highlights the breakdown of ethnicities in the city region overall. The vast majority are white. Of the minority groups, Asian British, Mixed and 'White Other' are the most prevalent groupings.
- 8.4.11 Figure 8.7 adds a spatial element to the data, revealing a pattern whereby the more urban, built-up areas in the city region generally higher rates of people identifying as BAME. This shows that in some areas the BAME population is as high as 82%.

Figure 8-5 : Population identifying as White British. *Source of data: 2011 Census*

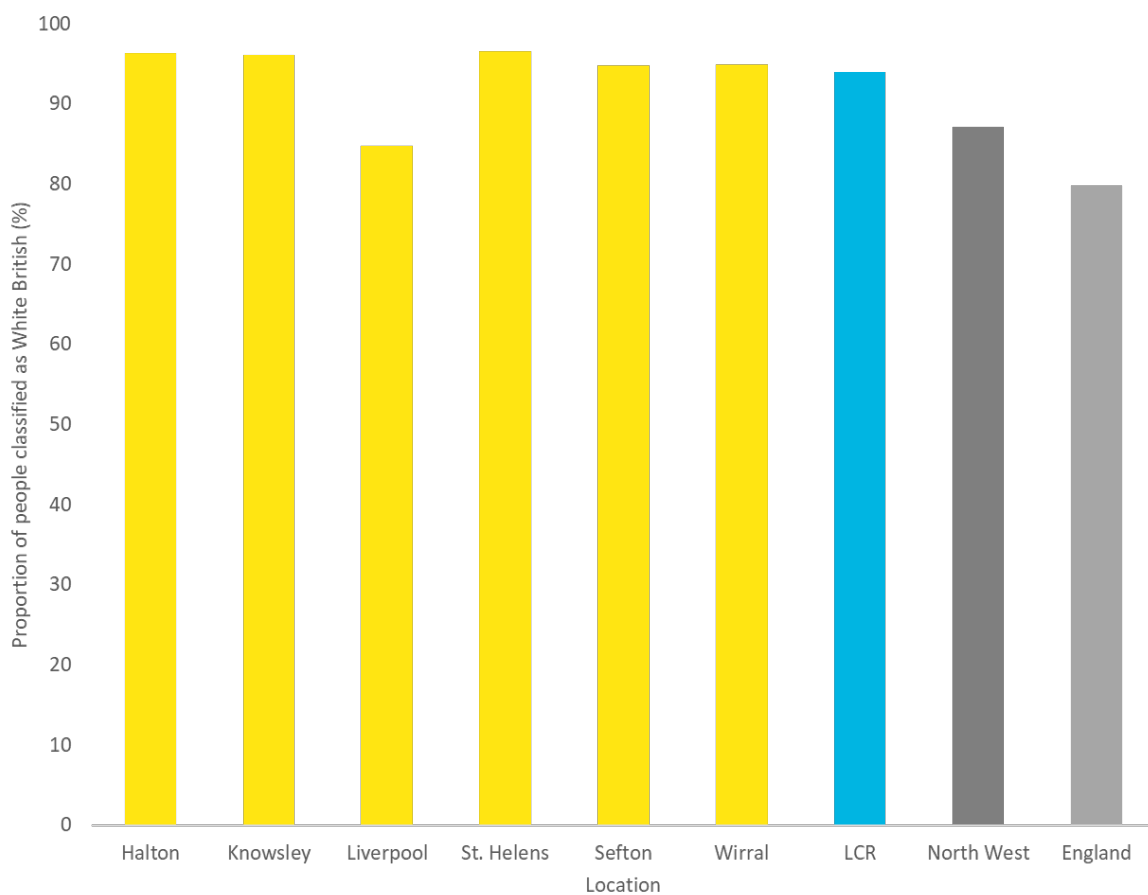


Figure 8-6 : Breakdown of ethnicities in the Liverpool City Region. *Source of data: 2011 Census.*

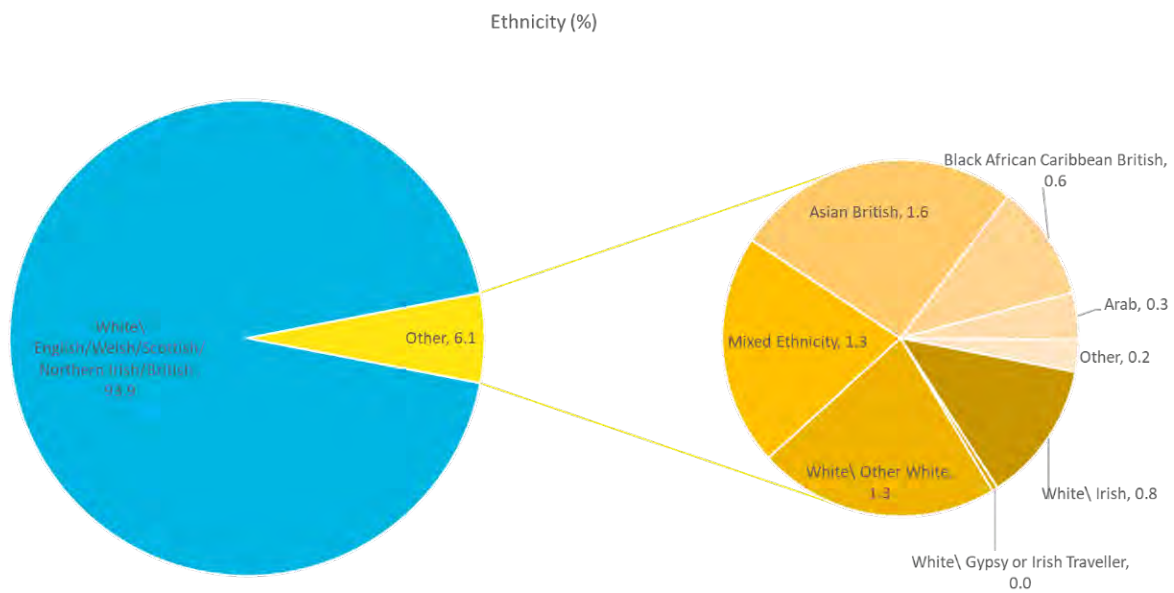
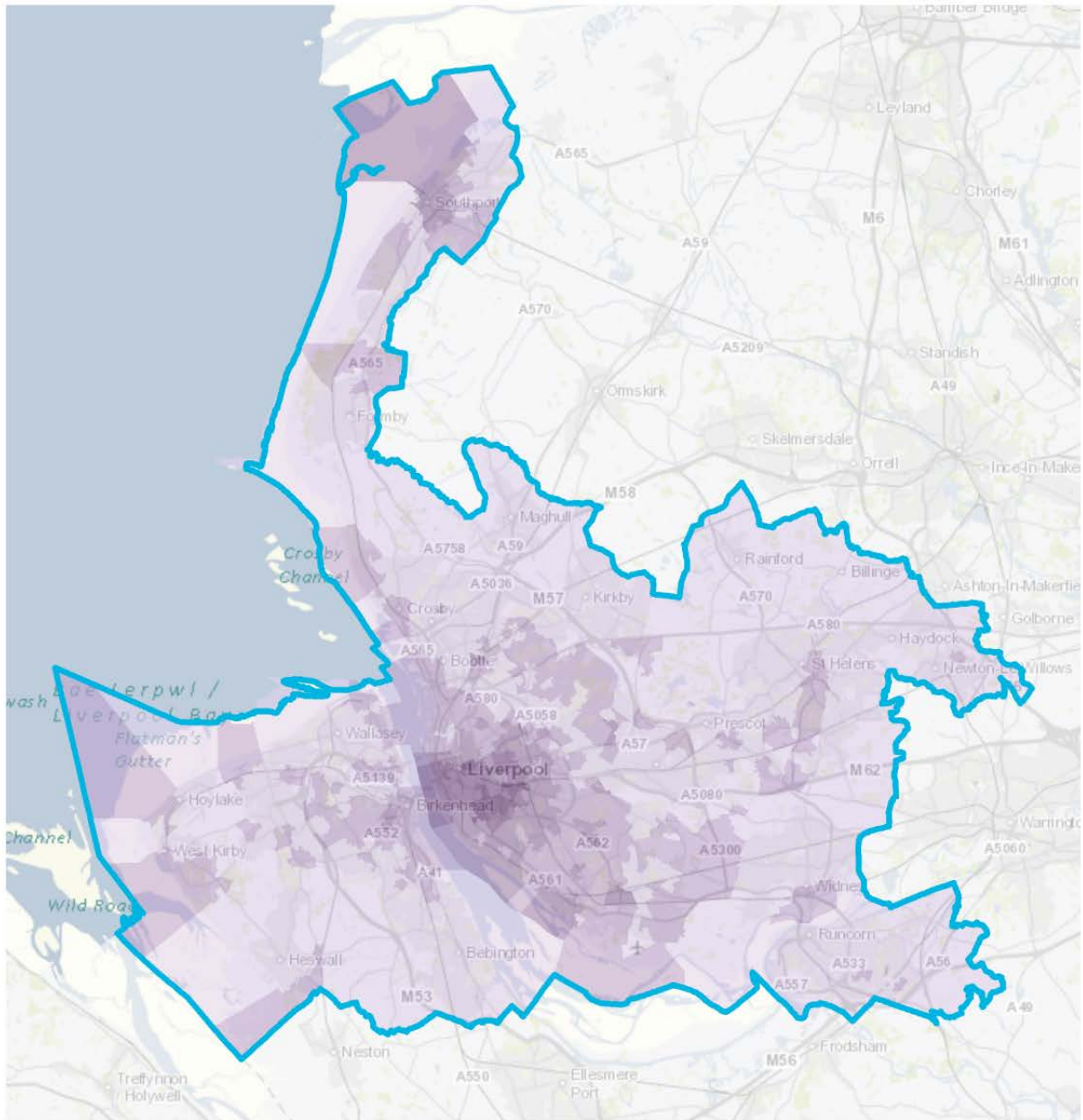


Figure 8-7 : Map showing rates of population identifying as other than 'White British'. *Source of data: 2011 Census.*



0 2.5 5 10 Miles

Liverpool City Region

Black and minority ethnic populations (%)

0 - 6

7 - 13

14 - 27

28 - 49

50 - 82

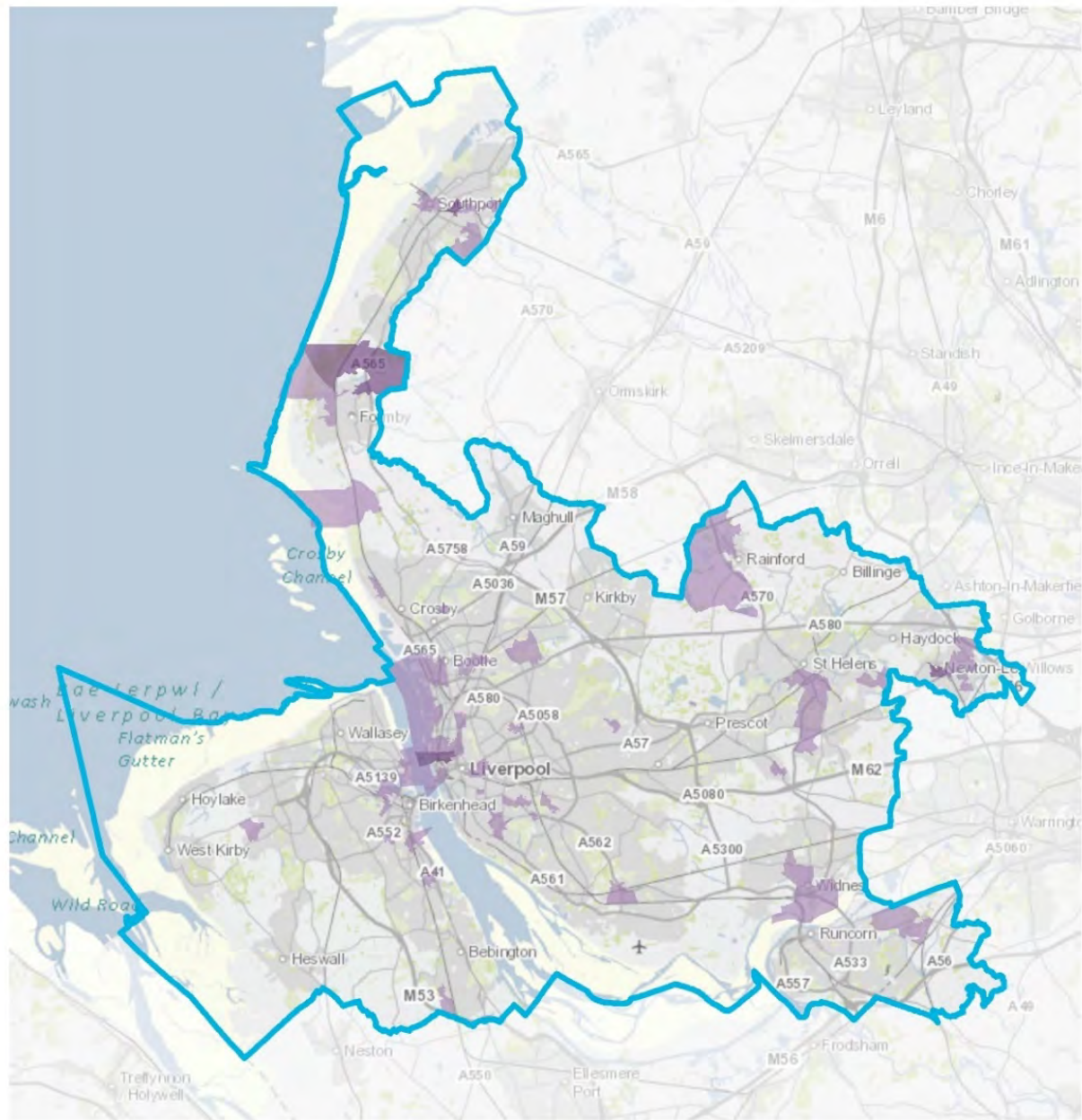


- 8.4.12 Figure 8.8 reveals a number of areas around the city region which have higher levels of people categorised as Gypsy and Travellers. There are concentrations to the north of Liverpool City Centre, north of Formby, West of Rainford, Widnes, Newton-Le-Willows and to the south west of St Helens.
- 8.4.13 The Merseyside and West Lancashire Gypsy and Traveller Accommodation Assessment (2015)⁸⁰ identified a total net requirement for 20 additional pitches across Knowsley, Liverpool, Sefton, St Helens and Wirral between 2013 and 2028. The future pitch requirements between 2017 and 2032 is 12 for Halton⁸¹.

⁸⁰ Merseyside and West Lancashire Gypsy and Traveller Accommodation Assessment (2015). Accessed June 2020
[http://www.knowsley.gov.uk/pdf/LCR29%20Liverpool%20GTAA%20FINAL%20Report%20\(Jan%202015\).pdf](http://www.knowsley.gov.uk/pdf/LCR29%20Liverpool%20GTAA%20FINAL%20Report%20(Jan%202015).pdf)

⁸¹ Cheshire East, Cheshire West and Chester, Halton and Warrington GTAA (amended) (August 2018) Accessed June 2020
https://www.warrington.gov.uk/sites/default/files/2019-08/gypsy_traveller_and_travelling_showpeople_accommodation_assessment_-_2018.pdf

Figure 8-8 : Areas with high proportions of Gypsy and Traveller communities. *Source of data: 2011 Census.*



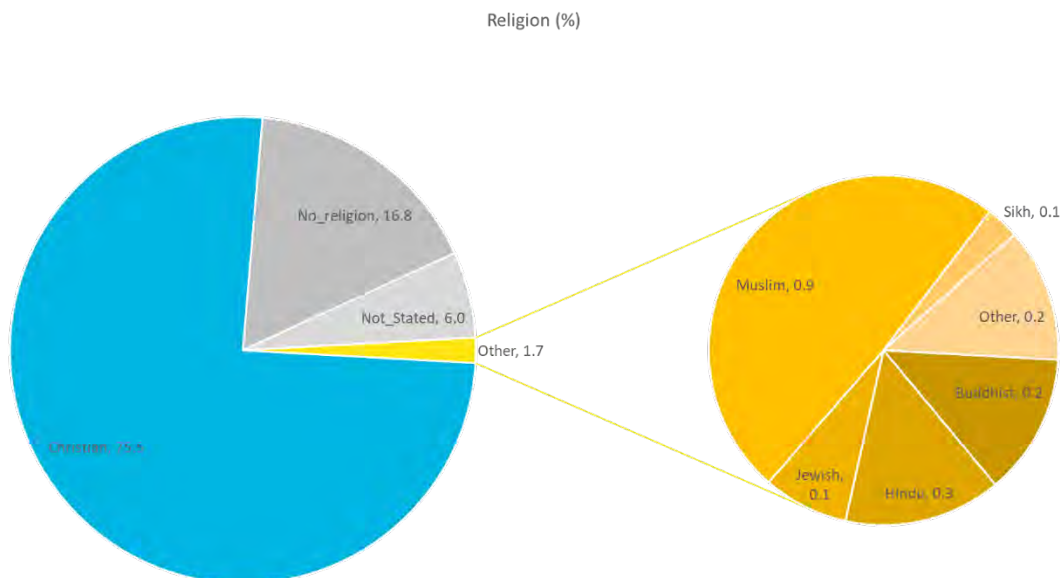
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Religion / belief

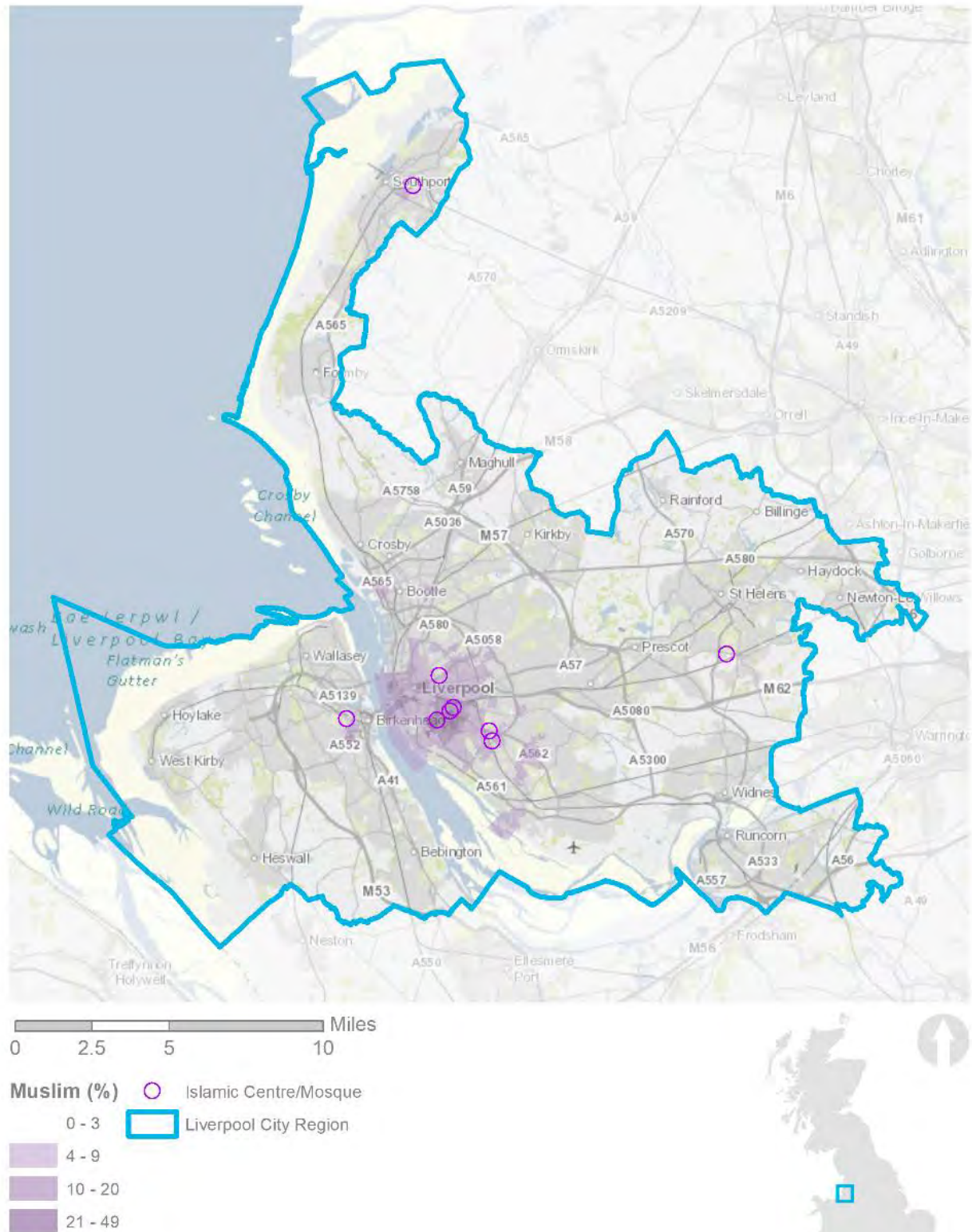
- 8.4.14 Figure 8.9 shows that the vast majority of the city region identify as Christian (75.5% compared to 67.3% for the North West), with the next highest proportion identifying as having no religion (16.8%). Of those classified as observing a minority religion, most are Muslim (0.9% compared with 5.1% for the North West).

Figure 8-9 : Breakdown of religion in the Liverpool City Region. *Source of data: 2011 Census.*



- 8.4.15 Although the religious diversity at the city region level is comparatively low when compared with the North West, Figures 8-10 and 8-11 highlight that there are small areas of Muslim and Jewish communities in the city region that account for more than 5% of the overall population within those areas.
- 8.4.16 In-between Wavertree and Gateacre and Liverpool City centre and its immediately surrounding areas are the locations where there are the most significant rates of Muslim communities with overall population percentages of up to 49% of the population.
- 8.4.17 It is evident from 2011 data that there were two clusters of communities following Judaism (accounting for up to 9% of the population); one to the west of Southport, and the other, a more significant cluster, found to the south east of Liverpool City Centre.
- 8.4.18 The prevalence of specific places of worship help to confirm these trends somewhat. For example, there are several Mosques and Muslim Social Centres in the central area of Liverpool.

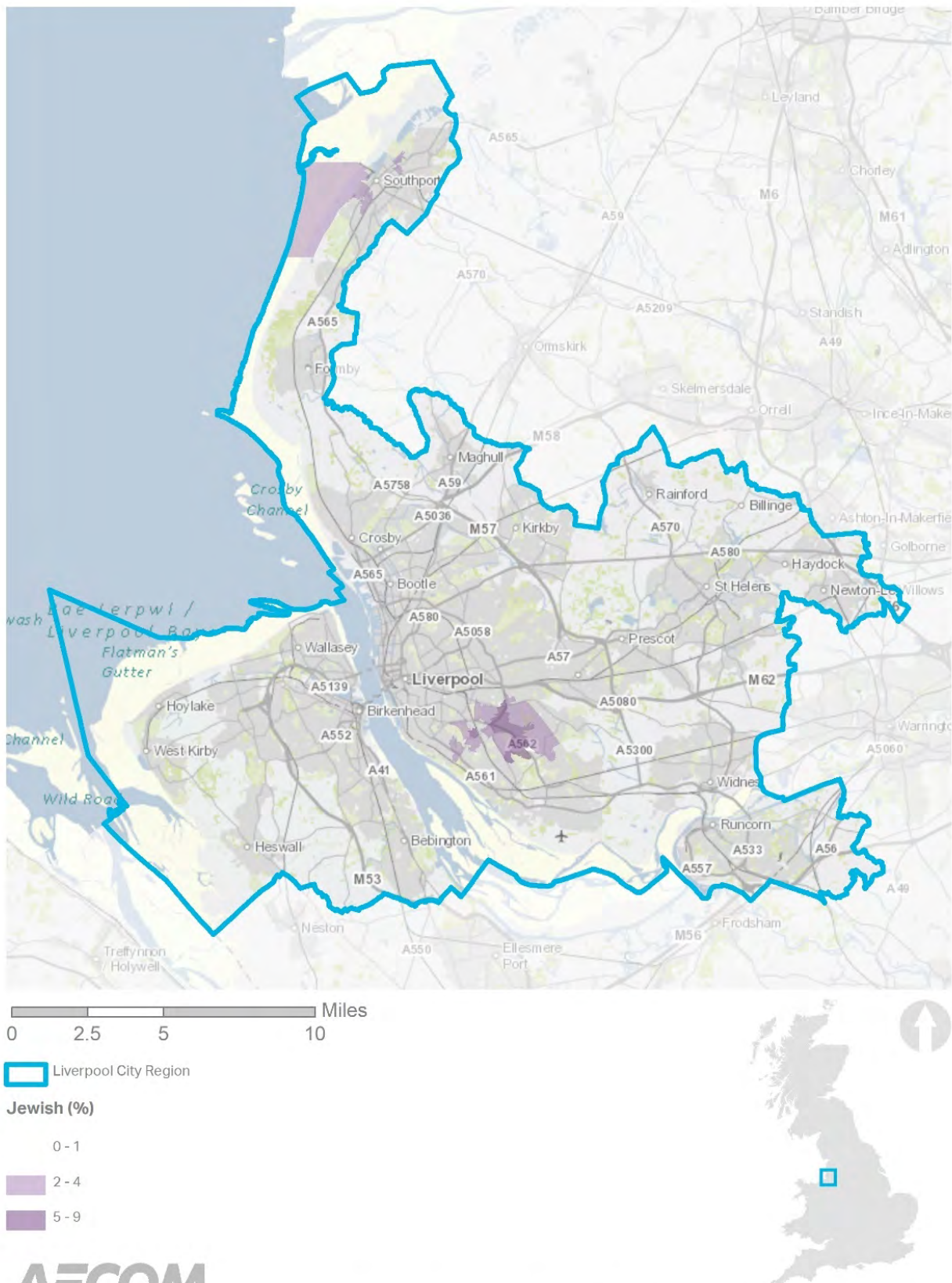
Figure 8-10 : Concentrations of Muslim Communities. *Source of data: 2011 Census.*



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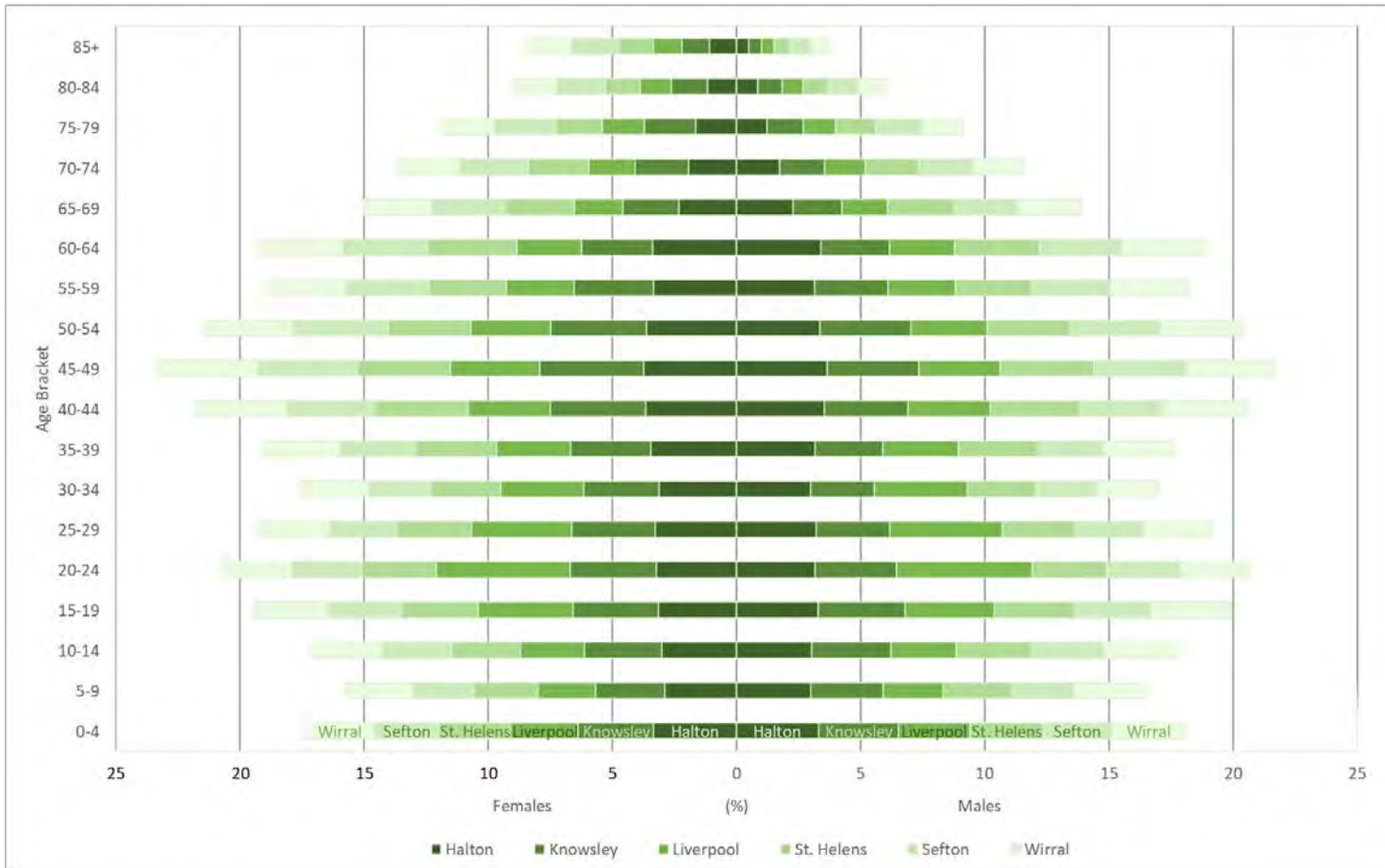
Figure 8-11 : Concentrations of Jewish Communities. Source of data: 2011 Census.



Sex

8.4.19 The Liverpool City Region has a slightly higher proportion of female residents (51.6%) compared to males (48.4%). This is in line with national population breakdown (ONS mid-year population estimates 2018). Figure 8.12 provides a breakdown of sex by age group for residents of the local authorities in the city region.

Figure 8-12: Age and sex profile of resident population. *Source of data: 2011 Census.*



Gender reassignment

- 8.4.20 There are no official UK statistics relating to gender reassignment. The UK Census currently only collects data relating to sex (gender assigned at birth). The ONS has identified the need for information about gender identity for policy development and service planning. This need is further strengthened by the requirement for information on those with the protected characteristic of gender reassignment as set out in the Equality Act 2010. Work is currently being undertaken by ONS to identify ways of capturing this information.

Sexual orientation

- 8.4.21 In 2017, there were an estimated 1.1 million people aged 16 years and over identifying as lesbian, gay or bisexual (LGB) out of a UK population of 52.8 million (ONS, 2017).
- 8.4.22 The North West as a region has the fourth largest proportion of adults identifying as Lesbian, Gay, or Bisexual (LGB), at 2.2% (with other regions in the UK ranging from 1.0% in the East Midlands to 2.6% in London). Estimates relating to numbers of people identifying with a specific sexual orientation are not available at a local authority level or below, due to the small sample size of this dataset.

Pregnancy and maternity

- 8.4.23 Live birth rates from ONS 2018 data shows that there were 17,054 births across the region in 2018. Total fertility rates⁸² were higher or equal to the national rate for all local authorities except for Liverpool. Halton has the highest fertility rate at 1.95 compared to 1.70 for England.
- 8.4.24 Census 2011 data showed that 9.1% of households within the Liverpool City Region were lone-parent households with dependent children (compared with 7.1% nationally and 8% in the North west). Of these households, 91.3% were female lone parent households with 42% of these not in employment. However, it should be noted that more recent estimates show an increase in male single parent households nationally and regionally (ONS 2018).

Marriage and Civil Partnership

- 8.4.25 The Marriage (Same Sex Couples) Act 2013 legalised same-sex marriage in England, Wales and Scotland in 2014. In 2019 there were 212,000 same-sex families in the UK, an increase of 40% since 2015. (ONS 2019)⁸³
- 8.4.26 Same-sex cohabiting couples are the most common type of same-sex couple family, accounting for just over half of same-sex families in 2019. However, the proportion of same-sex cohabiting couples has decreased from 59.6% in 2015 to 51.6% in 2019, driven by the growing number of same-sex married couple families.
- 8.4.27 The sample size for this analysis is based on small numbers and therefore estimates are not available at the local level and are susceptible to annual fluctuation.

⁸² The Total Fertility Rate (TFR) is the average number of live children that a group of women would bear if they experienced the age-specific fertility rates of the calendar year throughout their childbearing lifespan, calculated using mid-2018 population estimates (ONS 2018)

⁸³ Families and Households in the UK (Office for National Statistics 2019)

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/families/bulletins/familiesandhouseholds/2019#same-sex-married-couples-are-the-fastest-growing-type-of-same-sex-family>

Socio-economic profile

- 8.4.28 The socio-economic profile of the region considers levels of deprivation, employment, education. These factors are pertinent to those with protected characteristics and inequality and as such provide additional baseline information for equality and diversity.

Deprivation

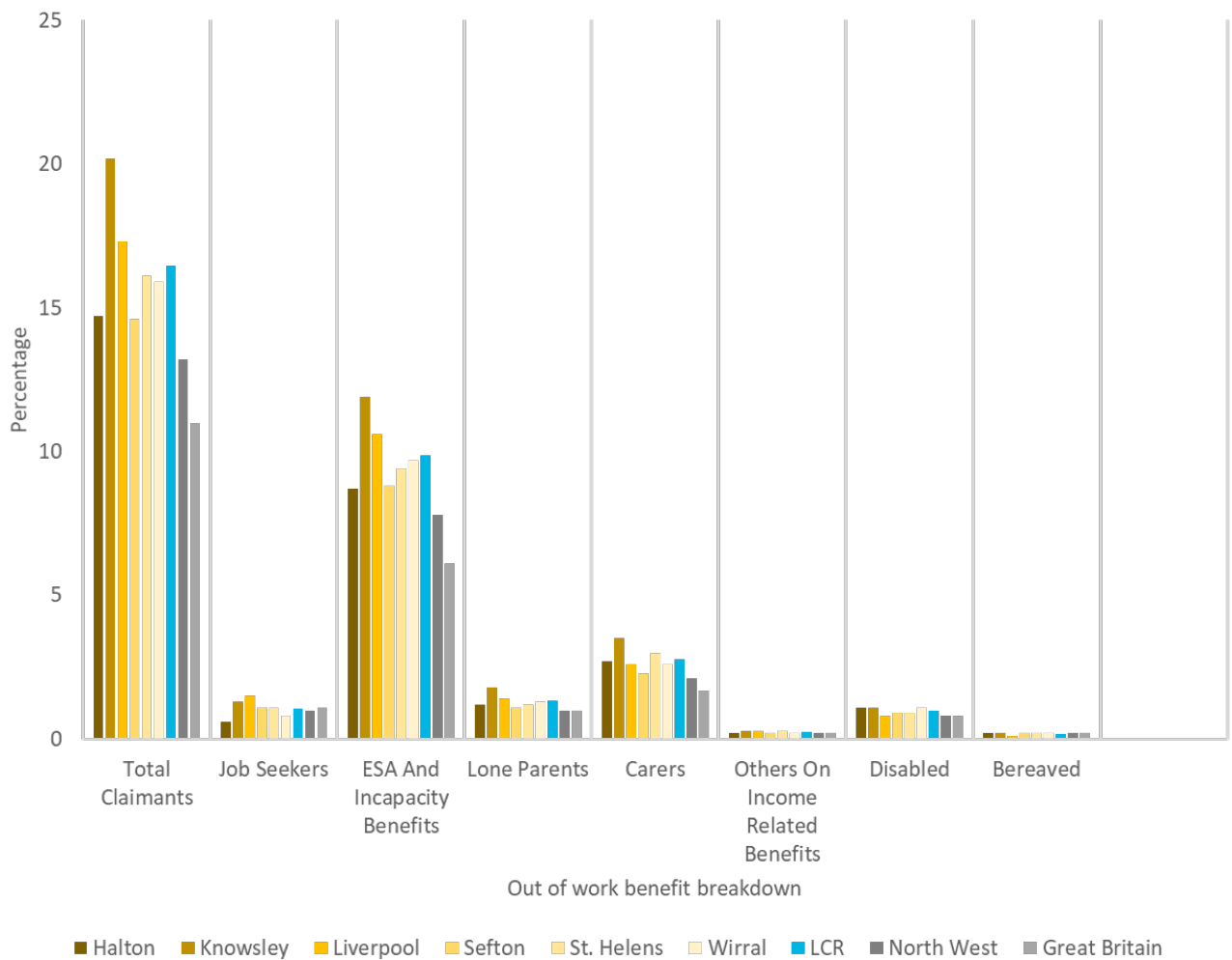
- 8.4.29 Deprivation and income inequalities can have negative effects upon a range of communities, including those with protected characteristics. It is therefore important to understand the key issues and trends in relation to such factors. According to the English Indices of Deprivation 2019 (IoD2019) of the 989 Lower Super Output Areas (LSOAs) in the Liverpool City Region:

- 37% are in the most deprived decile nationally for **employment deprivation** which measures the proportion of the working age population in an area involuntarily excluded from the labour market.
- 21% are in the most deprived decile nationally for **living environment deprivation** which measures the quality of both the indoor and outdoor environment;
- 47% are in the most deprived decile nationally for **health deprivation** which measures the risk of premature death and the impairment of quality of life through poor physical or mental health.
- 14% are in the most deprived decile nationally for **crime deprivation** which measures the risk of personal and material victimisation at the local level.
- 32% are in the most deprived decile nationally for **income deprivation** which measures the population experiencing deprivation relevant to low income. Supplementary income indices for deprivation also show that the region has:
 - 30% of LSOAs in the most deprived decile nationally for Income Deprivation Affecting Children Index (IDACI) which measures the proportion of all children aged 0 to 15 living in income deprived families; and
 - 27% of LSOAs in the most deprived decile nationally for Income Deprivation Affecting Older People Index (IDAOPI) which measures the proportion of those aged 60+ who experience income deprivation.

Benefit claimants

- 8.4.30 Out of work benefit claims provide an indication of the proportion of population that experience a limiting condition. This includes **disability**, those that are **carers**, people without a job, and those with incapacity.
- 8.4.31 As Figure 8-13 shows, Liverpool City Region has a greater proportion of out of work benefit claimants than the average rates for regional and national equivalents. Knowsley has the highest level, demonstrating rates above the average across all claimant categories.
- 8.4.32 Halton has a low rate of job seekers benefit claimants, whilst the city region has lower job seekers claimant rates than national equivalents.
- 8.4.33 ESA and incapacity claimants are higher than regional and national averages across all local authorities in the city region.
- 8.4.34 There are higher numbers of carers in the City Region compared to the north west and GB average, with the highest numbers recorded for Knowsley.

Figure 8-13 : Breakdown of out of work benefit claimants. *Source of data: Nomis, 2018.*



Safety and security

8.4.35 Feelings of safety and security are key to ensuring personal wellbeing. Everyone is vulnerable to feeling unsafe, but this may be particularly acute for people belonging to certain protected characteristic groups, including young people, older people, disabled people, women, and people belonging to a particular ethnic group, or sexual orientation.

Community cohesion and participation

8.4.36 The development of communities which are functional, safe, and enjoyable places to live and work, requires the promotion of community cohesion and good relations between different groups. Encouraging participation in civic engagement and dialogue with all people in the community; particularly those belonging to protected characteristic groups, is an important step in working towards achieving cohesion with communities. For people belonging to protected characteristic groups, their feelings of a lack of cohesion (or exclusion) may be more acute than those of other people. As such, it is important to ensure the needs of different groups are met through ongoing consultation and engagement activities which form part of the SDS process, and that equality monitoring is undertaken to show fair representation throughout the consultation process.

Trends

8.4.37 The table below sets out a brief summary of issues and trends for the local authorities in relation to equalities. Also provided is a summary of the conclusions reached in the relevant SA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Halton	Delivery and Allocations Local Plan:		SA: Overall, the Local Plan is predicted to have positive effects with regards addressing social inequalities. There are specific significant positive effects identified for Gypsies and Travelling Show people.
	SA Report (July 2019)	Highest birth rates and high levels of children residents.	
	Equalities Impact Assessment (EqIA) Report (April 2019)		EqIA: The overall summary has not identified any disproportionate negative impacts for any of the protected characteristics. Positive effects were identified with regards to: <i>race, disability, age, and carers.</i>
Knowsley	Knowsley Local Plan: Core Strategy	High levels of out of work benefit claimants, especially for ESA and incapacity claimants.	SA: The spatial strategy is predicted to have a positive effect with regards to tackling inequalities (through regeneration activities, improved access to goods and services and addressing health issues).
	SA Report, (2012)	High levels of people classified as disabled and 'limited a lot'	
	Equality Impact Assessment Report (2012)	Highest rate of children aged 0-14 years old	EqIA: The assessment has shown that the policies of the Core Strategy will generally benefit all people who live, work and visit the borough.
Liverpool	SA Report: Submission Draft Local Plan, (Jan 2018)	Liverpool has the highest concentration of minority ethnic groups in the region, however it is in line with regional and national levels.	The SA concludes that the Plan could have mixed effects with regards to health inequalities. Mostly significant positive effects are identified linked to addressing deprivation. However, some minor negatives are likely.
	Equality Impact Assessment of the Submission Draft Liverpool Local Plan (Jan 2018)	Areas to the south and south east of Liverpool City Centre have higher proportions of Muslim and Jewish populations in comparison to the rest of the city region. Higher than regional and national average rates of young people living in the city (aged 15-24)	EqIA: Although it does not directly affect people with particular protected characteristics, the Local Plan has been appraised as having mostly positive or neutral effects with regards the protected characteristics considered in the assessment.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Sefton	Sefton Local Plan SA Report (2015) Sefton Local Plan Equalities Impact Assessment (2015)	Sefton has the highest rate of people aged over 65 years in the region. High proportion of BAME communities across some areas of Sefton.	Two SA Topics are directly related to equality and diversity ('Health and wellbeing', and 'Communities'). The SA concludes that the Plan ought to have significant positive effects upon its' communities by helping to reduce social exclusion. The EqIA concludes that the Plan should have positive effects on the following groups: <i>Age, disability, gender reassignment, gender, race, religion, sexual orientation</i> . No differential effects are identified with regards to <i>pregnancy/maternity and marriage/civil partnerships</i> .
St Helens	St Helens Local Plan: Submission Draft: SA Report (Jan 2019)	St Helens has the highest rate of people aged 85 and over in the region.	SA: The 'health and wellbeing' SA topic covers the issues of equality, diversity and social inclusion. Overall, the Plan is predicted to be positive with regards to those disadvantaged by social class. This is due to development being placed in accessible locations. There are also specific policies that benefit elderly and vulnerable communities with regards to housing.
Wirral	Wirral Issues and Options Consultation, Interim SA Report (Dec 2019)	There are concentrations of Muslim communities within Birkenhead.	Two SA Topics are directly related to equality and diversity ('Health' and 'Population and Communities'). An urban regeneration focused approach is likely to have significant positive effects upon some of the most disadvantaged communities in the borough.

8.5 Key issues

- 8.5.1 The city region overall has lower levels of the more vulnerable age groups including older people. However, there are variations across the region with higher than average rates of older people in Sefton and St Helens. The 65 years and over age group is set to increase to 4.5% over the next 25 years.
- 8.5.2 There are higher proportions of children living in Halton, Knowsley, St Helens and Wirral than for regional and national levels. Furthermore, some areas of Liverpool and Sefton suffer from extreme levels of child poverty and income deprivation.
- 8.5.3 Liverpool city has a high rate of young people aged 15-24.
- 8.5.4 Overall, in comparison to regional and national levels, the city region has a higher rate of people who are classified as being limited a lot by a long-term limiting illness or disability.

Generally, the more urban areas have higher levels of people classed as limited a lot through a long-term limiting illness or disability.

- 8.5.5 The city region has lower levels of ethnic minority populations than the North West and national figures. However, areas with Liverpool and other urban areas across the region have a BAME population of up to 82%.
- 8.5.6 The Gypsy and Traveller needs assessments for the region identifies a net demand for approximately 32 additional sites by 2032.
- 8.5.7 The City region also has a lower than average percentage of non-Christian or ‘no religion’ households when compared to the North West or national levels. However, there are some areas with Muslim populations of up to 49% and Jewish communities that make up 9% of the resident population.
- 8.5.8 Levels of deprivation are high in some parts of the region. Health deprivation is a particular issue with 47% of the region’s LSOAs ranked in the most deprived decile nationally. Levels of employment and income deprivation are also high.
- 8.5.9 The Liverpool City Region exhibits high rates of out of work benefit claimants, with especially high rates of ESA and incapacity benefit claimants.
- 8.5.10 Impact assessments of current and emerging Local Plans suggest that social inequalities ought to reduce as a result of new development. However, the presence of vulnerable groups across the region is higher than average in some areas and issues relating to development planning exists across all groups. This includes residents in the region with multiple protected characteristics for which the cumulative impacts of spatial planning could have an exacerbated effect.
- 8.5.11 Equality impacts should be monitored carefully throughout the SDS process. Consultation and participation of appropriate organisations representing groups with protected characteristics can help to create a more inclusive planning process and reduce social inequalities.

8.6 Scoping outcome

- 8.6.1 Considering the key issues discussed above, and the requirements of the EqIA it is proposed that the topic of Equality and Diversity should be **SCOPED IN** to the integrated Appraisal. The following objectives and supporting questions are proposed as part of the IIA Framework.

IIA objective	Assessment questions (will the option/ proposal help to...)
Ensure that everybody has equity and justice and that diversity is embraced; allowing all people to fulfil their potential in life.	<ul style="list-style-type: none"> • Tackle inequalities between different communities? • Ensure that those with ‘protected characteristics’ are not disproportionately affected negatively by development? • Retain community identities whilst encouraging diversity and strengthening relationships between different groups?

- 8.6.2 In the event that potential significant effects are identified in terms of equality and diversity, it may be deemed necessary to undertake further assessment using a more detailed EqIA framework. An example of the template that would be applied is attached at **Appendix A**.

9. Biodiversity

9.1 Introduction

9.1.1 DEFRA defined biodiversity as follows in its' 2011 strategy "Biodiversity 2020".

"Biodiversity is the variety of all life on Earth. It includes all species of animals and plants – everything that is alive on our planet. Biodiversity is important for its own sake, and human survival depends upon it".

9.1.2 Biodiversity is a 'catch-all' word, and covers a range of factors that are important to land use planning. As well as the range and diversity of species that it refers to, it also encapsulates particular habitats, ecological networks, and supporting environments.

9.1.3 This section provides a strategic review of the policy context, literature, and baseline position in relation to these important factors.

- Key Habitats
- Nature conservation designations
- Trends

9.2 Contextual review

International

9.2.1 **UN Sustainable Development Goals** are 17 life changing goals outlined by the UN in 2015. The following are of direct relevance for biodiversity in the Liverpool City Region:

- Goal 15. Life on Land: To stop degradation, we must preserve forest, desert and mountain ecosystems.

9.2.2 The **EU Biodiversity Strategy** was adopted 3 May 2011 with the aims to halt biodiversity loss and degradation of ecosystem services by 2020. The plan recognises that there needs to be value in natural assets to deliver multiple benefits including social, economic and environmental value. The strategy identifies the following targets and is an integral part of the Europe 2020 strategy:

- conserving and restoring nature
- maintaining and enhancing ecosystems and their services
- ensuring the sustainability of agriculture and forestry
- ensuring the sustainable use of fisheries resources
- combating invasive alien species
- addressing the global biodiversity crisis

9.2.3 The **EU Natura 2000** combines a network of sites that are associated with rare and threatened species. It covers habitat types both on land and at sea covering 18% land mass and 6% marine territory within the EU. The Natura 2000's purpose is to protect biodiversity within the EU.

9.2.4 The **Ramsar Strategic Plan 2016 - 2024** is an intercontinental plan commissioned by the Convention of Wetlands. It outlines 19 goals with specific targets relating to wetlands and waterbodies ranging from lakes, rivers, aquifers, estuaries and tidal flats. The Convention of Wetlands is an international intergovernmental treaty that provides direction and a

framework for conserving the use of wetlands and their resources. The convention was adopted in the city of Ramsar in 1971 with approximately 90% of UN member states.

National

9.2.5 Key messages from the **National Planning Policy Framework**⁸⁴ (NPPF) include:

- One of the three overarching objectives of the NPPF to ‘contribute to protecting and enhancing our natural, built and historic environment’ including by ‘helping to improve biodiversity’.
- Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value [...], take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.
- Planning policies and decisions should contribute to and enhance the natural and local environment by: protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with the statutory status or identified quality in the development plan); and minimising impacts on and providing net gains for biodiversity, including establishing coherent ecological networks that are more resilient to current and future pressures.
- To protect and enhance biodiversity and geodiversity, plans should:
 - Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping-stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
 - Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.
 - Take a proactive approach to mitigating and adapting to climate change, considering the long-term implications for biodiversity.
- The presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined, unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

9.2.6 The Government’s **25 Year Environment Plan**⁸⁵ (2018) sets out a strategy for managing and enhancing the natural environment, embedding ‘net gain’ principles as key to environmental considerations.

9.2.7 **The Biodiversity 2020 Strategy**⁸⁶ (2011) presents a strategy for England’s wildlife and ecosystem services which builds on the Natural Environment White Paper⁸⁷ and sets out the “strategic direction for biodiversity for the next decade”. The strategy aims to halt biodiversity loss and improve ecological networks and ecosystems for all people.

⁸⁴ MHCLG (2019) National Planning Policy Framework [online] available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_w eb.pdf

⁸⁵ HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment [online] available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/673203/25-year-environment-plan.pdf

⁸⁶ DEFRA (2011) Biodiversity 2020: A strategy for England’s wildlife and ecosystem services [online] available at: <https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services>

⁸⁷ DEFRA (2012) The Natural Choice: securing the value of nature (Natural Environment White Paper) [online] available at: <http://www.official-documents.gov.uk/document/cm80/8082/8082.pdf>

- 9.2.8 The **UK Biodiversity Action Plan**⁸⁸ (BAP) identifies priority species and habitats requiring conservation action. Although the UK BAP has been superseded, BAP priority species and habitats have been used to draw up statutory lists of priority species and habitats in England.
- 9.2.9 The Department of Environment Food & Rural Affairs have released '**The Environmental Bill 2020 policy statement**⁸⁹' as part of protection and improvement of the natural environment in the UK. The policy statement addresses biodiversity loss and climate change. The bill introduces mandatory requirements for biodiversity net gains to ensure that developments enhance biodiversity.
- 9.2.10 The **Natural Environment and Rural Communities Act 2006** states that there is a duty for public authorities to conserve biodiversity including restoring habitats and enhancing population.

City Region

- 9.2.11 The Liverpool City Region Ecological Network⁹⁰ was developed by the Merseyside Environmental Advisory Service (MEAS). MEAS provides specialist technical advice to each local authorities within the region in relation to contaminated land, ecology and biological recoding, waste, environmental assessment, historic environment, minerals and low carbon issues. The plan for biodiversity at across the City's Region's and its natural assets. It comprises a core biodiversity area of designated nature and geological sites and priority habitats. It includes linking networks together with strategic and district priorities for protection, management and enhancement of the city regions natural assets.
- 9.2.12 The **Mersey Forest Plan 2014**⁹¹ is a long term strategic plan to achieve 'more from trees' and involves the six local councils plus Natural England, Environment Agency and the Forestry Commission. The Forest Plan seeks to plant more trees across the Mersey region and parts of Cheshire.
- 9.2.13 The government approved LCR Local Nature Partnership 'Nature Connected' is currently developing a LCR Natural Capital baseline. The role of Nature Connected includes promoting and valuing the natural environment, consolidating and coordinating existing groups, developing, maintaining and using a robust evidence base, and providing strategic influence.

Local

- 9.2.14 The table below highlights themes, policy approaches and strategic priorities for biodiversity that are common to the six authorities within their Adopted and / or emerging Local Plans. Locally specific issues have also been drawn out where they are of strategic importance.

Table 9.1. Key messages for biodiversity

Key policies & principles	Source / Authorities
Promoting high quality green infrastructure and sustainable development that benefit local communities.	Adopted and / or emerging local plan documents for all authorities. Mayor of Liverpool's Inclusive Growth Plan 2018 ⁹²

⁸⁸ JNCC (2007) UK BAP priority species [online] available at: <http://archive.incc.gov.uk/page-5717>

⁸⁹ DEFRA (2020) Environmental Bill 2020 policy statement [online] available at: <https://www.gov.uk/government/publications/environment-bill-2020/30-january-2020-environment-bill-2020-policy-statement>

⁹⁰ Merseyside Environment Advisory Service (2015) Liverpool City Region Ecological Network [online] available at: http://www.meas.org.uk/media/5870/main-report-cbv1final_web.pdf

⁹¹ The Mersey Forest Team (2014) The Mersey Forest Plan [online] available at: https://www.merseyforest.org.uk/The_Mersey_Forest_Plan_web_version_single_new.pdf

⁹² Mayor of Liverpool (2018) Inclusive Growth Plan [online] available at: <https://liverpool.gov.uk/media/1356877/mayoral-growth-may-2018-a3-spreads.pdf>

Key policies & principles	Source / Authorities
There is a need to achieve net gain in biodiversity value.	Adopted and / or emerging local plan documents for all authorities.
Ensure development causes no significant harm to priority species and habitats.	Adopted and / or emerging local plan documents for all authorities.
Protect biodiversity from pollution.	Adopted and / or emerging local plan documents for all authorities.
Biodiversity and green infrastructure should serve as a recreational resource, which benefits health and wellbeing.	Adopted and / or emerging local plan documents for all authorities.

9.3 Focused literature review

- 9.3.1 The World Health Organisation (WHO, 2020) states that loss of biodiversity and ‘nature’ can have significant direct human health impacts and that human health depends on ecosystems that provide fresh water, food and fuel sources. Microorganisms, flora and fauna produce also provide extensive benefits in terms of medicines, pharmacological sciences and biological health.
- 9.3.2 Increasing bodies of evidence suggest that contact with the natural environment and access to green space and biodiversity (in particular in an urban setting) can provide health benefits and that natural environments have direct positive impacts on well – being (*Bowler et al. 2010; Frumkin 2001; Hartig et al. 2014; Irvine and Warber 2002; Keniger et al. 2013*).
- 9.3.3 Several studies demonstrate the following links between nature and health and wellbeing:
- Access to green space is beneficial for people that are affected by mental illness including psychological, cognitive and psychological health (*Bloom et. al. 2011; Keniger et. al. 2013*).
 - Even short-term exposure to green space has positive benefits for health and well-being (*Bowler et al. 2010; Maller et al. 2006*).
 - Biodiversity loss that affects visual qualities, vegetation, animals, soil and water quality can also be harmful to human health (*Mabahwi et. al. 2014*).
 - Species richness can also be important. For example, trees which are high in species richness (compared to lower species richness) had a more positive impact on people’s anxiety levels (*Wolf et al. 2017*).
 - Detriments to people’s health are also caused by human factors such as urban development and traffic, which negatively effects air quality (*Mabahwi et. al. 2014*).
 - Living closer to natural environments as opposed to urban environments is beneficial for health and well-being (*Wolf et. al. 2017; Rook, 2013; Maas et al. 2009*). It can also provide long term health reductions in death rates, cardiovascular, psychiatric problems and chronic stress (*Hartig 2014, Rook, 2013*).
 - Moving and relocating to greener areas (instead of dense and built up areas) demonstrated sustained mental health improvements (*Alcock, et al, 2014*).
 - The natural environment can promote social interactions and a sense of community (*Kuo et al. 1998*).
 - Green spaces can encourage and facilitate physical activity (*Maas, et. al. 2009*).

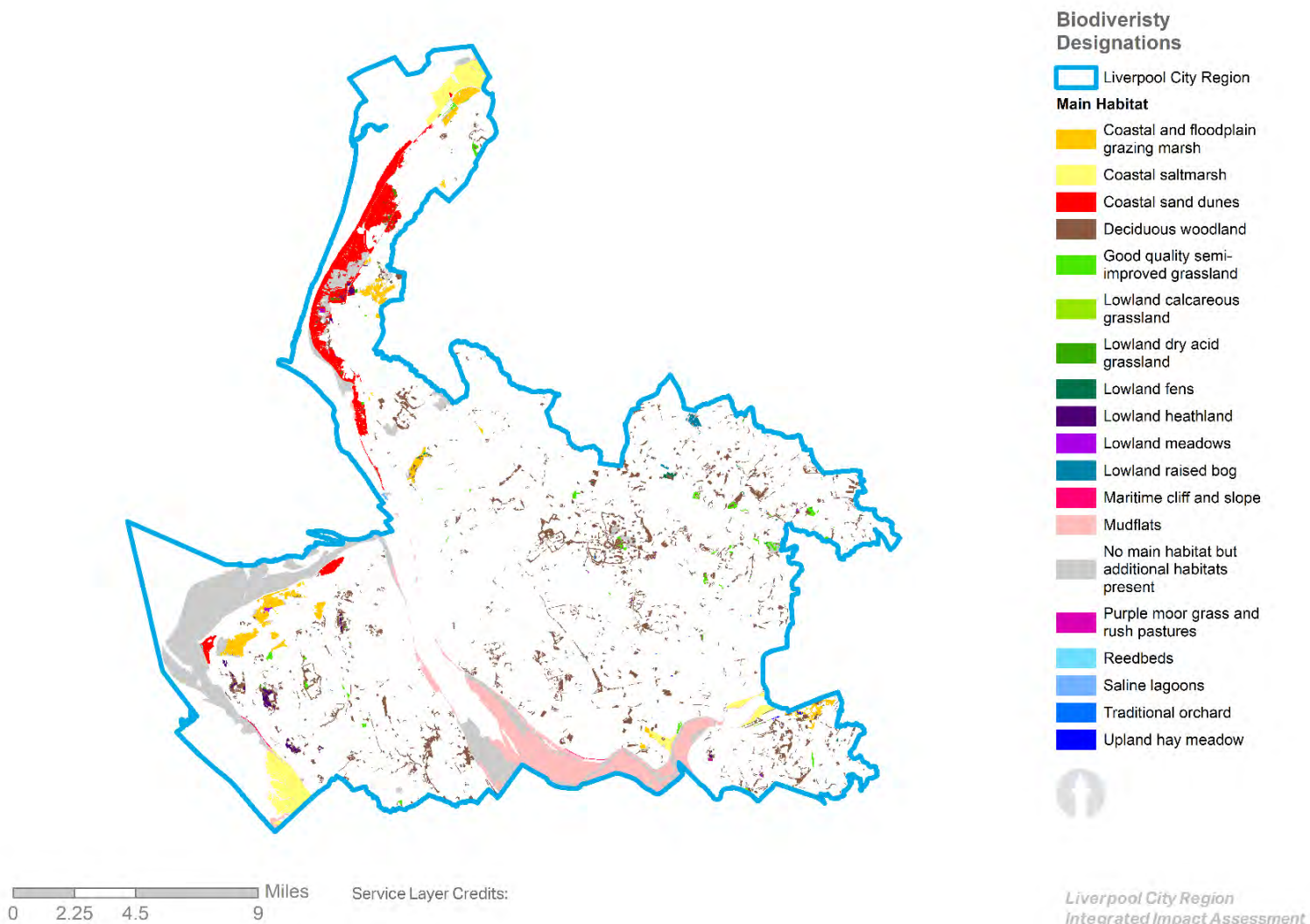
9.3.4 Spatial planning has the ability to reflect on potential impacts to biodiversity and the secondary effects that biodiversity loss may have on communities and their health and wellbeing. However biodiversity loss in relation to human health, social and behavioural aspects have traditionally been considered less comprehensively in impact assessments (Fischer et. al., 2010).

9.4 Baseline review

Key habitats

9.4.1 The Liverpool City Region is positioned in a unique environmental location and provides the UK with an abundance of important environmental assets, particularly along its coastlines and estuaries. These habitats contribute to the protection of biodiversity, but also provide ecosystem services with regards to health and well-being, climate change resilience, tourism and other economic activities / opportunities. There is a diverse range of habitats such as estuarine and coastal, inland water courses, smaller scale water bodies such as ponds, bogs and mosses, dry habitats such as lowland heath, ancient natural woodland and neutral grasslands. As can be seen in figure 9.1 below, a large proportion of the area consists of coastal / tidal environments.

Figure 9.1. Liverpool City Region – Key Habitats



Designated sites

- 9.4.2 Figure 9.2 on page 156 illustrates the designated and key protected habitats across the Liverpool City Region. This includes international, national and locally designated habitats, each of which is discussed in greater detail below.
- 9.4.3 Areas designated for their biodiversity importance are widespread across the region, covering a sizeable amount of land mass and marine areas. Some of these areas overlap with one another though (for example, an SPA can also be designated in parts as a SSSI).

Table 9.2. Area of land covered by Biodiversity Designations⁹³

Biodiversity Designation	LCR Area Covered (approx. ha)
<i>Special Areas of Conservation (SAC)</i>	9,800
<i>Special Protection Areas (SPA)</i>	12,760
<i>Ramsar Site</i>	13,800
<i>Site of Special Scientific Interest (SSSI)</i>	22,500
<i>National Nature Reserve (NNR)</i>	520
<i>Local Nature Reserve (LNR)</i>	810
<i>Local Sites</i>	15,522

International sites (see Figure 9.2)

- 9.4.4 The North West Marine Plan zone contains several protected nature conservation areas. Within the Liverpool region, Liverpool Bay is listed as an entirely marine Special Protection Area (SPA), one of only two such designations in England.
- 9.4.5 Special Protection Areas (SPA) are designations for the conservation of European Wild Birds across the EU. There are four SPAs within or adjacent to the Liverpool City Region. These are the Dee Estuary SPA, the Mersey Narrows and North Wirral Foreshore SPA, the Mersey Estuary SPA and the Ribble and Alt Estuaries SPA.
- 9.4.6 Special Areas of Conservation (SAC) protect flora and fauna habitats across the EU. There are two SACs of direct relevance to the Region. The Dee Estuary SAC covers the entire Dee Estuary area to the west of Wirral and the northern coastline. The Sefton Coast SAC is located along the north of the Region and follows the coastline of the Metropolitan Borough of Sefton.
- 9.4.7 Much of the region lies on a peninsular and as such, there is notable potential for wetland habitats of an international significance.



⁹³ http://www.knowsley.gov.uk/pdf/LC06_LiverpoolCityRegionEcologicalFramework.pdf

- 9.4.8 Ramsar sites are wetland environmentally significant sites of international importance declared under the Ramsar Convention. Across the UK there are 175 designated wetland sites. There are four of these Ramsar sites within the Liverpool City Region.
- 9.4.9 The Dee Estuary Ramsar site is the largest of these, covering the entire estuary area of the River Dee (the body of water between the Wirral peninsula and the north Wales coast) and following the western coastline of the Borough. The Mersey Narrows and North Wirral Foreshore Ramsar site follows the Wirral peninsula's northern coastline and wraps around the north east as far as Seacombe. The Mersey Estuary Ramsar site covers much of the mid-Mersey River estuary, though only a relatively small area of the Ramsar site at the shoreline at Bebington is directly adjacent to the plan area. Activities within the plan area could also have potential to affect the Ribble and Alt Estuaries Ramsar site at the shoreline of Bootle on the far side of the Mersey River to the north of the plan area. There are no future proposed Ramsar sites within the region.

Nationally designated sites

- 9.4.10 There are over 4,100 Sites of Specific Scientific Importance (SSSI) in England, which covers around 8% of the country's land area. SSSIs are recognised as the country's very best wildlife and geological sites. SSSIs are monitored and assessed for their conditions. There are six (6) reportable categories for SSSI conditions; unfavourable recovering; unfavourable no change; unfavourable declining; part destroyed and destroyed.
- 9.4.11 The Liverpool City Region comprises of offshore coastal and non – coastal SSSIs (Figure 9.2). The coastal SSSI's are located along the Mersey River, River Dee and Liverpool Bay and overlap greatly with internationally designated habitats.
- 9.4.12 The extensive marine protected areas contribute towards Liverpool City Region's reputation as a unique and environmentally valuable maritime area within the UK.
- 9.4.13 The non-coastal SSSIs comprise of ancient wooded areas, lowland heath and can be used for recreational, research and leisure purposes. The conditions of the SSSI's across the region are summarised in Table 2.3, along with key characteristics and overall designation.
- 9.4.14 Across the UK there are 224 National Nature Reserves (NNR) that make up 0.7% hectares of the countries landscape. NNR's purpose is to protect important habitats, species and geologies for research. There are three NNRS within the region all located in Sefton. Cabin Hill NNR, Ainsdale Sand Dunes NNR and Ribble Estuary NNR are located along within the Metropolitan Borough of Sefton's coastline. Cabin Hill is noted as one of the NW's finest dune system. Ainsdale Sand Dunes are home to an extensive list of plant species and other wildlife. The Ribble Estuary is a nationwide important site for over-wintering wildfowl.
- 9.4.15 Priority habitats are habitats of national importance that are located within designated or outside designated sites. There are a total of 29 different priority habitats within the City Region⁹⁴.
- 9.4.16 Table 9.3 outlines some key issues and trends in association with designated sites across the City Region. Given that the condition of SSSIs are reported upon, these are recorded.

Locally designated sites

- 9.4.17 Local Nature Reserves (LNR) are locally designated sites that are important for either wildlife, geology, education and enjoyment. There are a large portion of LNRs within the region in all local areas (see Figure 9.1).
- 9.4.18 Local Authorities have also identified and designated local wildlife sites, which are important instruments for the protection and enhancement of biodiversity.

⁹⁴ http://www.natureconnected.org/wp-content/uploads/2015/11/Main-Report-CBv1FINAL_Web.pdf

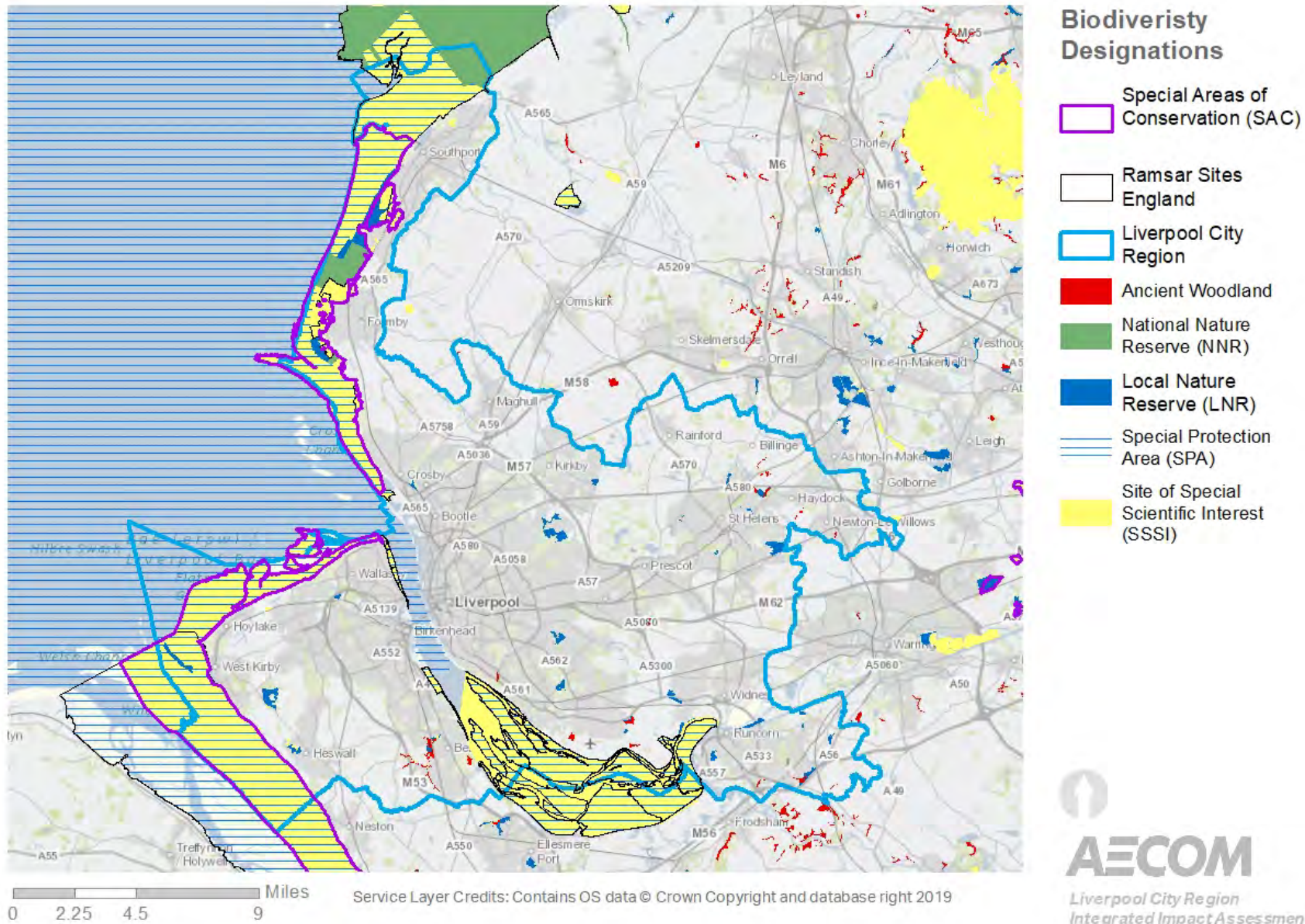
Table 9.3. Liverpool City Region Designated Habitats and SSSI conditions.

Biodiversity Asset	Description, SSSI Condition and key threats
<p><i>The Dee Estuary:</i></p> <ul style="list-style-type: none"> • SSSI • SAC / SPA • LNR • Ramsar 	<p>The Dee Estuary is part of the north west inshore and offshore marine plans and is important for energy production and a diverse range of marine activities and environments. The river is a large funnel – shaped sheltered estuary and serves an important role in stabilising the shoreline. The river marks a distinct contrast between coastal aspects of Wales and the coastline of Wirral. The SSSI units are in 100% favourable condition. Operations most likely to damage the special interest include cultivation, grazing, stock feeding, pesticides and other harmful pollutants to the natural environment.</p>
<p><i>Dee Cliffs:</i></p> <ul style="list-style-type: none"> • SSSI 	<p>Dee Cliffs SSSI are located along Wirral’s western coastline to the east of Dee Estuary and comprise supralittoral rock and neutral grassland – lowland. The majority of the SSSI units are in favourable condition (86.9%), but some are in an Unfavourable – no change condition (13.1%). Changes in freshwater fishery production and management are a key risk.</p>
<p><i>New Ferry:</i></p> <ul style="list-style-type: none"> • SSSI • SPA • Ramsar 	<p>New Ferry is located within the Mersey Estuary and is predominantly large areas of intertidal sand, mud flats and other species that are nationally important. Much of the SSSI units are in an unfavourable condition, but recovering (77.3%), with only a quarter of the site in a favourable condition (22.77%). Cutting of vegetation, and dumping/ discharging of waste materials are key threats.</p>
<p><i>Dibbinsdale:</i></p> <ul style="list-style-type: none"> • SSSI • LNR 	<p>Dibbinsdale is an SSSI and LNR located within Wirral and is broadleaved, mixed and yew woodland. The biodiversity asset is relatively undisturbed woodland unit. Around 78% of the ancient woodlands is of favourable or unfavourable recovering conditions. The remaining 22% is an unfavourable – no change condition. The reason for adverse conditions is due to forestry and woodland management. Key threats include several agricultural activities such as cultivation, grazing, application of pesticides, burning and spreading and drainage. Other threats include construction / urban development and material extraction.</p>
<p><i>Hesketh Golf Links:</i></p> <ul style="list-style-type: none"> • SSSI 	<p>Hesketh Golf Links borders the region to the north in Sefton. The habitat is predominately supralittoral sediment and is of an unfavourable – recovering condition. The local club has a continuing necessary scrub and vegetation management plan to address issues. Key threats include several agricultural activities such as cultivation, grazing, application of pesticides, burning and spreading and drainage. Other threats include construction / urban development, recreational pressures, and material extraction.</p>
<p><i>Heswall Dales:</i></p> <ul style="list-style-type: none"> • SSSI • LNR • SBI 	<p>Heswall Dales is located north west of Heswall in Wirral. The site is of national and local importance. Part of the Bush Way is considered a Site of Biological Importance (SBI). The habitat is lowland heath and is used by the public for recreational, health and well-being purposes and leisurely activities. The SSSI units are all in an unfavourable condition, but recovering.</p>
<p><i>Meols Meadows:</i></p> <ul style="list-style-type: none"> • SSSI 	<p>Meols Meadows is located 8km from the Birkenhead coastline in Wirral and is a neutral grassland habitat. The SSSI units are all in an unfavourable condition, with 41% in recovery and 58% with no change. The reason for such adverse conditions is due to overgrazing, lack of corrective work and scrub control.</p>

Biodiversity Asset	Description, SSSI Condition and key threats
<p><i>Mersey Estuary:</i></p> <ul style="list-style-type: none"> • SSSI • SPA / Ramsar 	<p>The Mersey Estuary runs between Liverpool, Wirral and upstream between Widnes and Runcorn in Halton, and through Greater Manchester, Cheshire, Derbyshire and Lancashire. It is important on an international scale for providing habitat for over-wintering birds. A large amount of the SSSI units are in an unfavourable condition (71%).</p>
<p><i>The Mersey Narrows:</i></p> <ul style="list-style-type: none"> • SSSI • SAC / SPA / Ramsar 	<p>The Mersey Narrows is mainly intertidal mud and sandflats that are located along Wirral's coastline. It's SPA designation is due to the bar-tailed godwit, common tern, knot and little gull species found on the asset. Part of the Mersey Narrows SSSI is in a favourable condition (22.3%), however a large portion of the asset (77.7%) is in an unfavourable – recovering condition⁹⁵. There are several agricultural threats such as cultivation, grazing, mowing and removal of vegetation. Other specific issues include use of vehicles or craft and recreational activities.</p>
<p><i>North Wirral Foreshore:</i></p> <ul style="list-style-type: none"> • SPA / SAC / Ramsar • SSSI 	<p>The North Wirral Foreshore is located towards the outer Dee and Mersey Estuaries surrounding Wirral. It is a combination of intertidal flats and saltmarshes which is important for feeding and roosting flocks of waders, wildfowl, terns and gulls. The SSSI units are all in a favourable condition. Cultivation, grazing, stock feeding, changes in coastal sea practices, damage to the ecosystem by harming wildlife or introducing pesticides are key operations that are likely to damage the special interest.</p>
<p><i>Red Rocks:</i></p> <ul style="list-style-type: none"> • SSSI 	<p>The Red Rock is a sand dune system consisting of brackish dune slack and reedbed. It is situated on Wirral's north west coastline and is adjacent to Dee Estuary. The landform includes a highly diverse range of flora, fauna and national rarities which contributes to the nature conservation across the Liverpool City Region. The SSSI units are all unfavourable, with 28.4% declining still. Key threats include cultivation, grazing and other agricultural practices.</p>
<p><i>Ribble & Alt Estuaries:</i></p> <ul style="list-style-type: none"> • SSSI • SPA / Ramsar 	<p>The Ribble & Alt Estuaries are located towards the north of the region and is vital habitat for a range of wildlife and migrations of birds living around the estuary. The majority of the SSSI units are in favourable condition (99.11%).</p>
<p><i>Stanley Bank Meadow:</i></p> <ul style="list-style-type: none"> • SSSI 	<p>Stanley Bank Meadow's main habitat is natural grassland – lowland and is located 2.8km north-east of St. Helens. The site consists of extensive damp, unimproved neutral grassland; all of which is in favourable condition.</p>
<p><i>Sefton Coast</i></p> <ul style="list-style-type: none"> • SSSI • SAC 	<p>The Sefton Coast aligns the Metropolitan of Sefton coastline and is of special interest due to the foreshore consisting of mud and sandflats and an extensive dune ecosystem which extends for 20km. The majority of the SSSI units are in a favourable condition (70%), with a further 22% in a recovering position.</p>
<p><i>The Dungeon:</i></p> <ul style="list-style-type: none"> • SSSI 	<p>The Dungeon is within the Metropolitan Borough of Wirral and is significant for its' steep sided wooded valley located on a small stream which flows into the Dee Estuary to the west. The landform is of lowland heath to the north west and woodland towards the stream. The SSSI units are all in a favourable condition.</p>

⁹⁵<https://designatedsites.naturalengland.org.uk/sitelist.aspx?SiteCode=UK9020287&SiteName=mersey%20narrows&countyCode=&responsiblePerson=&unitId=&SeaArea=&IFCAArea=>

Figure 9.2 Biodiversity designations within the Liverpool City Region



Trends

9.4.19 The table below sets out a brief summary of issues and trends for the local authorities in relation to biodiversity. Also provided is a summary of the conclusions reached in the relevant SA / HRA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Key studies / evidence	Conclusions from Local Plan SA / HRA documents
Halton	Delivery and Allocations Local Plan: SA Report and HRA Report (July, 2019)	<p>SA: The level of new development proposed, and its location on greenfield land (including land that is not intensively farmed) poses a significant risk to biodiversity. However, several policies should help to mitigate that risk or indeed provide opportunities for the enhancement of habitats and biodiversity.</p>
		<p>Most of the impacts will be temporary as new habitats and areas of green infrastructure are created although there may be instances of habitat loss due to new development that will inevitably be permanent.</p> <p>The Mersey Estuary is an area that could be affected more prominently.</p> <p>HRA: Overall, it is concluded that the policies and site allocations within the Halton Local Plan will not result in adverse effects on European Sites. This is because sufficient protective mechanisms within the policies exist. However, some impact pathways require the incorporation of further mitigation wording into the relevant policies (mainly in relation to recreational pressure, loss of functionally linked land, noise and disturbance and water quality).</p>
Knowsley	Knowsley Core Strategy SA Report and HRA Report, (2012)	<p>SA: The Spatial Strategy is unlikely to generate negative effects upon biodiversity as the focus is on urban regeneration. The strategy also seeks to maintain and enhance the Borough's Green Infrastructure network and areas of environmental importance. It is therefore considered that it would have a positive effect on biodiversity and geodiversity. There are also specific positive effects predicted in relation to policies that seek to protect and enhance greenspaces and trees.</p>
		<p>HRA: Several potential impact pathways were identified in relation to the Mersey Estuary, Liverpool Bay, Sefton Coast, Dee Estuary and Martin Mere. With recommended measures in place though, significant effects should be possible to avoid.</p>
Liverpool	SA and HRA Reports: Submission Draft Local Plan, (Jan 2018)	<p>SA: Potential significant negative effects are predicted in relation to Liverpool Waters. Liverpool Airport could also have negative effects upon wildlife. Minor negative effects are also recorded for site allocations that are within close proximity to certain biodiversity habitats.</p>
		<p>Positive effects are recorded though to reflect the overall focus on brownfield regeneration. Significant positive effects are predicted in relation to policies on environmental protection of sensitive areas.</p> <p>HRA: Has identified a small number of aspects of the emerging Local Plan that have the potential to result in significant adverse effects on European Sites (notwithstanding current protective mechanisms in draft policy). Recommendations have been made in order to mitigate these effects. A key issue is the need for a strategic recreation study and resulting measures to manage recreational access within the coastal European sites around Merseyside.</p>

Local Authority **Key studies / evidence** **Conclusions from Local Plan SA / HRA documents**

Local Authority	Key studies / evidence	Conclusions from Local Plan SA / HRA documents
Sefton	Sefton Local Plan including Strategic Site Allocations: SA Report / HRA Report (2015)	<p>SA: Broadly speaking, the more sensitive locations are protected from planned development. This is beneficial. However development elsewhere could still have some localised impacts on wildlife.</p> <p>On balance, it is considered that any adverse effects on wildlife would be minor provided that suitable mitigation, enhancement and compensation are secured (which the Plan seeks to achieve). At this stage however, an uncertain (negative) effect has been recorded, as there is potential for cumulative adverse effects on wildlife, which cannot be ruled out.</p> <p>HRA: With the inclusion of recommended changes, the HRA/AA concluded that the Sefton Local Plan would contain an adequate policy framework to enable the required amount of development to occur within Sefton whilst adequately protecting European Sites. However, without successful implementation of mitigation measures, the potential for significant negative effects exist.</p>
	St Helens Borough Local Plan Submission Draft: SA Report (Jan, 2019)	<p>SA: Overall, despite the planned growth, the Plan provides measures to secure the protection and enhancement of biodiversity across the Borough, with a significant positive effect predicted in the long term (related to policies regarding net gain).</p> <p>The potential for temporary minor negative effects exists. There could be increased disturbance to habitats and species during construction, and the net value of biodiversity across the Borough may take time to be restored / and/or increased following development.</p>
	HRA Report (Dec, 2018)	<p>HRA: It is concluded that the St Helens Local Plan contains a sufficient policy framework to ensure that no adverse effects on the integrity of any European sites arise, either from the Plan alone, or from the Plan in combination with other plans and projects.</p>
Wirral	Wirral Issues and Options Consultation, Interim SA Report (Dec, 2019)	<p>SA: Impacts will depend upon the chosen strategy. An urban focused approach is likely to present potential for impacts on waterside environments. However, there are unlikely to be significant negative effects in other locations across the borough. The loss of green belt sites could lead to significant negative effects in terms of the loss of land that is functionally linked to European protected sites. However, certain locations might also present better opportunities to achieve biodiversity enhancement.</p>
9.4.20	The conclusions from SA and HRA documents suggest that there will be some negative effects upon biodiversity across the region over the next 20 years. However, the nature of effects will depend upon the application of plan policies. It is also thought likely that enhancements will occur in the longer term, but this is uncertain. Trend data for designated sites suggests some areas are improving, and this could be expected to continue perhaps.	
9.4.21	The Environment Bill, 2020 is also likely to drive improvements in biodiversity, which should help to form a basis upon which biodiversity can be enhanced through development.	
9.4.22	Additional development could come forward on an ad-hoc basis, including that which is not governed through local plans. Certain schemes such as major infrastructure may pose threats to the natural environment.	
9.4.23	The effects of climate change may also be detrimental with regards to habitat loss and fragmentation.	

9.4.24 In a strategic planning scale, there are opportunities to develop cross border schemes to help protect, recover and improve biodiversity networks across the region. Newer development should look at becoming more sustainable through green infrastructure initiatives and this can alleviate some of the pressures built environments place on natural environments by exploring way to incorporate them together. Ongoing national initiatives suggest that development in future should aim for biodiversity net gain to enhance connections between biodiversity networks and longer term development proposals. This will be particularly relevant for the Liverpool City Region as much of the region is built environment. On-going development with no regards to effects on the environment may detract biodiversity values going forward.

9.5 Key issues

9.5.1 The following key issues have been identified from the scoping exercise:

- There is a strong legislative and policy framework seeking to protect and enhance biodiversity. In particular there is a need to reverse the declines that have been experienced in biodiversity and to achieve 'net gain'.
- The LCR contains a range of internationally important biodiversity assets which are vulnerable to human activity. The coastal and tidal habitats are of particular importance and are affected by a range of localised and regional activities (recreation, water pollution, water abstraction, urbanisation).
- The condition of SSSI units in the region varies; but there is over half of areas in unfavourable condition. The majority of these were recorded as 'recovering' though, which could possibly be helped through net gain measures.
- Biodiversity assets serve the region for many purposes such as providing habitats for species, valuable landscapes, research, leisure and recreation, health and wellbeing.
- There is a body of evidence that demonstrates the link between access to biodiversity (particularly high quality and species diverse areas) and improved health and wellbeing.
- It is necessary to protect wildlife corridors and enhance the resilience of ecosystems to biodiversity.

9.6 Scoping outcome

9.6.1 Considering the key issues discussed above it is proposed that the topic of biodiversity should be **SCOPED IN** to the integrated Appraisal. The following objective and supporting questions are proposed as part of the IIA Framework.

SEA objective	Assessment questions (will the option/ proposal help to...)
Avoid unacceptable impacts upon species and habitats; whilst ensuring the strengthening of ecological networks and an overall net gain in biodiversity value.	<ul style="list-style-type: none"> • Avoid unacceptable harm to key habitats? • Avoid severing ecological corridors? • Improve the resilience of ecosystems to climate change and other pressures? • Achieve net gain in biodiversity value? • Ensure new development and growth in the Ports / along waterside environments does not have a detrimental impact upon habitats and wildlife? • Recognise the multiple ecosystem services that biodiversity provides?

10. Air quality

10.1 Introduction

- 10.1.1 Air quality is a major environmental factor which can affect health and ecosystems. Several factors contribute to air pollution with a particular issue being with emissions relating to transport and subsequent pollutants.
- 10.1.2 This section provides a strategic review of the policy context, literature, and baseline position in relation to these important factors.
- Air Quality Management Areas
 - Vulnerable Communities
 - Pressures

10.2 Context review

International

- 10.2.1 The **Ambient Air Quality Directive (2008/50/EC)** is a legally binding document that sets targets and limits for concentrations of air pollutants. It strives to achieve cleaner air for Europe. It has been identified within the directive that fine particulate matter (PM2.5) is one of the worst air pollutants in terms of significant negative effects on human health and therefore should be treated and regulated differently to other pollutants such as oxides of nitrogen, ozone, sulphur dioxide and others. Particulate matter is essentially a wide range of materials from a variety of sources both derived from human made and natural sources. In the UK, the largest human-made sector is stationary fuel combustion and transport.
- 10.2.2 **UN Sustainable Development Goals** are 17 life changing goals outlined by the UN in 2015. The following is of some relevance for air quality:
- Goal 13: Climate Action: Urgent action is needed, by regulating emissions and promoting renewable energy.

National

- 10.2.3 The **Air Quality Standards Regulations 2010** transpose into UK law the Ambient Air Quality Directive (2008/50/EC) which sets legally binding limits for outdoor concentrations of major air pollutants which impact public health.
- 10.2.4 Key messages from the **National Planning Policy Framework**⁹⁶ (NPPF) include:
- Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas.
 - Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.

⁹⁶ MHCLG (2019) National Planning Policy Framework [online] available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_web.pdf

- Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health.
 - New and existing developments should be prevented from contributing to, being put at unacceptable risk from, or being adversely affected by unacceptable levels of air pollution.
- 10.2.5 The **Clean Air Strategy** published in 2019⁹⁷ identifies how government will tackle all sources of air pollution and is aimed at complementing the Industrial Strategy, Clean Growth Strategy and 25 Year Environment Plan. The strategy proposes new goals to cut public exposure to particulate matter pollution and sets out the comprehensive action that is required from across all parts of government and society to meet these goals. The proposed measures include new legislation and new local powers to take action in areas with an air pollution problem, including through the creation of ‘Clean Air Zones’.
- 10.2.6 The government published the ‘**UK plan for tackling roadside nitrogen dioxide concentrations**’ in July 2017.⁹⁸ This is the air quality plan for bringing nitrogen dioxide within statutory limits in the shortest possible time. The plan identifies that *“the link between improving air quality and reducing carbon emissions is particularly important”* and that consequently the UK government is determined to be at the forefront of vehicle innovation by making motoring cleaner.
- 10.2.7 Published in January 2018 by the UK Government, ‘**A Green Future: Our 25 Year Plan to Improve the Environment**’⁹⁹ sets out a number of goals and policies in order to help the natural world regain and retain good health. In this context, Goal 1 ‘Clean Air’ and the policies contained within ‘Chapter 4: Increasing resource efficiency and reducing pollution and waste’ within the 25-year plan directly relate to the air quality SEA theme.
- 10.2.8 Within the **Environmental Bill 2020**⁷ there is a clear commitment to set an ambitious, legally binding target for the pollutant with the most significant impact on human health; fine particulate matter.
- 10.2.9 The **Clean Air Act 1993**¹⁰⁰ contains specific legislation to deal with issues such as smoke, dust, grit, fumes, the height of chimneys on trade and industrial premises, the operation of furnaces, problems caused by dark smoke, and the use of authorised fuels. The legislation identifies the parameters for the creation of smoke control areas.
- 10.2.10 The **Environmental Permitting Regulations 2016**¹⁰¹ sets out an environmental permitting and compliance regime that applies to various activities and industries.
- 10.2.11 **The UK 2070 Commission’s Final Report (2020)**¹⁰² on regional inequalities details the UK’s need to dismantle the extremities of regional inequalities through large scale, long term and all-encompassing policies. The report recommends widespread commitments which see areas outside of London and the South East benefitting from investment and exploiting cultural capital to realise their potential. The report sets out a 10-point framework for action which includes delivering a connectivity revolution by creating a transformed public transport network between, within and beyond cities.

⁹⁷ DEFRA et al. (2019) Clean Air Strategy 2019 [online] available from: <https://www.gov.uk/government/publications/clean-air-strategy-2019>

⁹⁸ DEFRA (2017) ‘UK plan for tackling nitrogen dioxide concentrations’ [online], available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/633269/air-quality-plan-overview.pdf

⁹⁹ HM GOV (2018) A Green Future: Our 25 Year Plan to Improve the Environment [online] available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

¹⁰⁰ Clean Air Act 1993 [online] <https://www.legislation.gov.uk/ukpga/1993/11/contents>

¹⁰¹ The Environment Permitting (England and Wales) Regulations 2016 [online] <https://www.legislation.gov.uk/uksi/2016/1154/contents>

¹⁰² UK 2070 Commission (2020) Make No Little Plans – Acting at Scale for a Fairer

- 10.2.12 The National Infrastructure Commission document '**Better Delivery: the challenge for freight' (2019)**¹⁰³ establishes that it is possible to decarbonise road and rail freight by 2050 and manage its contribution to congestion. Some key messages are as follows:
- Freight traffic contributes to poor air quality which has a damaging impact on health and is particularly concentrated in urban areas.
 - Battery electric and hydrogen are both emerging as the most viable alternatives to diesel and it is expected that commercially available vehicles will be available from the beginning of the 2020s.
 - Recharging battery electric HGV fleets is likely to require grid reinforcements, smart charging, energy storage, or a combination of these elements, to enable depot charging. It is essential that local grid infrastructure is not a barrier to an uptake in electric vans.
 - To help manage peak time congestion on the urban transport network, local authorities should include a plan for urban freight within the infrastructure strategies they are developing.
 - Provide and protect sufficient land/floorspace for storage and distribution activities.

City Region

- 10.2.13 The LCRCA Transport Plan (Facilitating an Inclusive Economy) 2019, seeks to address the challenges of poor air quality and supports the move to a zero carbon LCR by 2040. There are several key strands of action required.¹⁰⁴
- Supporting modal shift that encourages more walking and cycling
 - Addressing air quality issues caused by freight.
 - Championing action to improve air quality.
- 10.2.14 LCRCA are working closely with the six local councils and its Air Quality Task Force to form a number of recommendations that will result in the development of a 600km walking and cycling network, investigations into scrappage scheme, working towards zero emissions through bus fleets, rolling out a network of fossil fuel alternatives and more.
- 10.2.15 Supporting the LCRCA Transport Plan is the **LCRCA Local Cycling and Walking Infrastructure Plan** (2019)¹⁰⁵. This aims to make it easier and more attractive for people to choose walking and cycling over car travel. The links with air quality and environmental condition is acknowledged.
- 10.2.16 The **Liverpool City Region Combined Authority (draft) Local Industrial Strategy** (2020), recognises that transport is critical to the development of a well-connected, sustainable City Region. Facilitating continued shift to modes of travel that contribute to reduced congestion and improved air quality is identified as in an important principle.

Local

- 10.2.17 An existing solution to tackling transport challenges are **Local Transport Plans** (LTPs). LTPs are government statutory plans that blueprint a longer term transport vision for a local authority in line with the Transport Act 2000 (amended in 2008).
- 10.2.18 One of the top priorities LTP's seek to achieve is to produce better air quality across a plan area, amongst other issues such as congestion and road safety.
- 10.2.19 Table 10.1. below highlights the common themes, policy approaches and strategic priorities for air quality that are common to each of the six authorities (as drawn from adopted or

¹⁰³ <https://www.nic.org.uk/wp-content/uploads/Better-Delivery-April-2019.pdf>

¹⁰⁴ <https://www.liverpoolcityregion-ca.gov.uk/wp-content/uploads/LCRCA-TRANSPORT-PLAN.pdf>

¹⁰⁵ <https://www.liverpoolcityregion-ca.gov.uk/wp-content/uploads/LCR-LCWIP-Final.pdf>

emerging Local Plan documents). Locally specific issues have also been drawn out where they are of strategic importance.

Table 10.1: Key messages for air quality

Key policies & principles	Source / Authorities
Improvement of air quality through mitigation of carbon emissions.	Adopted and / or emerging Local Plans for all authorities.
Minimise adverse impacts on air quality from new development.	
Requirement for a Transport Assessment / Transport Statement for major developments.	
Supportive of low carbon development that does not cause significant harm to air quality.	
Air quality should be managed to improve overall health and well – being.	

10.2.20 The **Mayor of Liverpool’s Inclusive Growth Plan (2018)** outlines the city’s need to improve air quality, particularly particular matter and NO². Air quality has been considered in Priority 5.4 which suggests that quality infrastructure will help improve air quality and reduce congestion. The plan also recognised that improvements to planning such as highway programmes can have positive effects on air quality as there are opportunities to maximise accessibility through active and sustainable modes of transport. This will also have benefits for health and wellbeing.

10.2.21 Liverpool City Council (LCC) are working with The Joint Air Quality Unit to create a **Clean Air Plan 2019 (CAP)**¹⁰⁶. LCC notes that the UK is subject to specific laws requiring we meet certain legal requirements for several pollutants. Nitrogen dioxide is the only pollutant in Liverpool that is above the legal level in some areas of the city. LCC is working to bring the levels down to the legal requirement like that of the Clean Air Zone (CAZ) framework implemented by the UK government. LCC are currently preparing a Business Case that will be approved by the UK government and is subject to funding.

10.3 Focused literature review

Poor air quality contributes to health issues and death

- 10.3.1 Air pollution is a significant problem (particularly in cities) causing disruptions to people’s health, well – being and the natural environment.
- 10.3.2 The risk of adverse effects on air quality due to development is prevalent and a variety of air pollutants are harmful to human health and the environment (*DEFRA, 2020*) (*Mabahwi et. al. 2014*) (*Rebmann et. al. 2016*).
- 10.3.3 Long term exposure to poor air quality has a negative effect upon mortality and reduces life expectancy (Hoek et. al. 2002) (Public Health England, 2009).
- 10.3.4 Air pollution is often be associated with worsening and / or causing a range of health issues such as cancer, asthma, stroke, heart disease, dementia, obesity and diabetes (Royal College of Physicians, 2016. WHO, 2016).

¹⁰⁶ The Joint Air Quality Unit (JAQU) on behalf of Liverpool City Council (2019) Clean Air Plan Strategic Outline Case. [online] available at: <https://liverpool.gov.uk/council/strategies-plans-and-policies/environment-and-planning/liverpools-clean-air-plan/>

Urban areas are more likely to suffer from poor air quality and its negative effects

- 10.3.5 Broadly speaking, more than 80% of people who reside in urban areas are exposed to air quality levels that exceed the WHO limits (WHO,2016).
- 10.3.6 Areas with high density urban with greater population causes greater risk of air pollution compared to less - developed areas and natural environments (Ling et. at. 2012).
- 10.3.7 Several studies conducted in the USA demonstrate that people who live in less polluted cities are more likely to live longer than those who live in polluted cities (Dockery et. al. 1993; Pope et. al. 1995).

Environmental factors can improve or worsen air quality

- 10.3.8 Other urban design mechanisms such as planting urban trees have demonstrated to remove quantities of pollutants to result in air quality improvements (Nowak et al. 2006).
- 10.3.9 Hartig et. al. (2014) states that there are both negative and positive impacts nature has on air quality.
- Trees and other vegetation have the ability to reduce levels of some pollutants such as PM2.5.
 - However some trees and plants release substances such as VOCs which can impact on local air quality.

Travel behaviour can help to improve air quality

- 10.3.10 Much research has shown that walking, cycling and mass public transport systems are contributing to help tackle poor air quality and reduce carbon emissions.
- 10.3.11 An exemplar reviewed by Fischer et al. (2010) on Peterborough City Council LTP2 2006 show several references relating to health and encouraging active modes of transport such as walking and cycling¹⁰⁷. The plan also demonstrated understating around 'Better Air Quality'.

10.4 Baseline review

Air quality management areas (AQMA)

- 10.4.1 AQMAs are locations which have been assessed and identified as experiencing particularly poor levels of air quality. Specific areas are established where air quality is monitored, with targeted actions taken to help improve upon poor levels of air quality and exposure to subsequent pollutants.
- 10.4.2 There are several AQMAs across the Liverpool City Region as illustrated in Figure 10.1. There are no AQMAs within Knowsley and Wirral. There are five AQMAs within Sefton, four within St. Helens and two within Halton; however the largest AQMA within the region is the whole of the City of Liverpool.
- 10.4.3 The majority of AQMAs are designated as such due to the influence of road transport emissions.
- 10.4.4 Hence, the predominant locations are on busy high streets and key routes into urban areas. Table 10.2 illustrates the broad trends in air quality at the AQMAs for each of the Local Authorities in the City Region.

¹⁰⁷ Peterborough City Council. (2006). The Peterborough (Provisional Local Transport Plan 2006 – 2011). [online] available at: <https://democracy.peterborough.gov.uk/Data/Council/20050720/Agenda/050720%20-%20Council%20Report%20-%20Local%20Transport%20Plan%20Council%20draft.pdf>

Vulnerable communities

- 10.4.5 UK National Air Quality Objectives outline desired air quality target values for key pollutants. The primary aim is to protect human health, vegetation and wider ecosystems.
- 10.4.6 Unfortunately, some communities and environments ('receptors') are more likely to suffer from the effects of poor air pollution. It is therefore useful to understand the implications of each pollutant and to identify those at risk of suffering adverse impacts.
- 10.4.7 Table 10.2 below lists the key air pollutants measured across the UK; with a short description of implications, vulnerable receptors and risk factors.

Table 10.2. Links between air quality and vulnerable receptors (Source: DEFRA, 2020).

Pollutant	Description	Implications	Vulnerable Receptors and risk factors
Nitrogen Dioxide (NO ₂)	A respiratory irritant.	Exacerbation of respiratory issues and could lead to increased infections.	People with pre-existing diseases such as allergies, asthma and other respiratory issues.
		Contributes to climate change	Older-adults. Children.
Particulate Matter (PM ₁₀ and PM _{2.5})	Particles in the atmosphere that can be natural or a range of chemical constituents.	Public health concerns relating to lungs.	Lack of access to greenspace.
		Elevated exposures to roadways can affect socially disadvantaged groups.	Residents within AQMAs. Deprived communities. Heavy smokers.
Sulphur Dioxide (SO ₂)	A corrosive, acidic gas which combines water vapour in the atmosphere.	Damage of the natural environment including vegetation, soils, building materials and watercourses.	People who depend on the agricultural industry. Concentrations of historic buildings in areas of poor air quality such as Liverpool City .
Ozone	A secondary pollutant following reactions between NO ₂ and O ₂	Long term effects on human health.	Ozone is higher in rural areas and can result in summer smog's due to the hot, still and sunny weather.

- 10.7.1 Potentially vulnerable communities are those faced with poor air quality and a range of other risk factors. The evidence demonstrates that such people are more likely to suffer disproportionately in terms of health and wellbeing.
- 10.7.2 Risk factors (in addition to being located within an AQMA) can include poor access to outdoor natural environments, increased exposure to roads and industrial activity, limited access to greenspace and living within highly urbanised areas.

- 10.7.3 Exposure to heavily trafficked areas and domestic smoke can also be problematic, in particular for adults with heart problems (as they are considered vulnerable people with greater risk of symptoms)¹⁰⁸.
- 10.7.4 Figure 10.1, represents locations where poor air quality corresponds with several other risk factors including those within a deprived living environment (IMD2019) and having poor access to green infrastructure.
- 10.7.5 The dense urbanised areas of Liverpool are all affected by an AQMA, are of a deprived nature, and in some cases, this overlaps with poor access to greenspace and higher incidences of respiratory conditions. This is also the case on a much smaller scale in the towns such as St. Helens, Halton and Wirral's east coast (See Figure 10.2).
- 10.7.6 The southern areas within Sefton which join with Liverpool's urban area and surrounding the major roads may also be an area of concern.

Trends

- 10.7.7 The table below sets out a brief summary of issues and trends for the local authorities in relation to air quality. Also provided is a summary of the conclusions reached in the relevant SA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Halton	<p>Delivery and Allocations Local Plan: SA Report (July, 2019)</p> <p>LCRCA Health and Economic Impact Assessment Study (2018)</p>	<p>There has been a general improvement in air quality over the last five (5) years.</p> <p>The AQMAs in Widnes Town Centre could potentially be de-allocated should improvements continue.</p>	<p>Though proposed development could have negative effects on air quality in the short to medium term, it is expected that in the longer term the effects would be neutral (due to improvements in technology, and an assumption that sustainable travel policies will be successful in changing travel behaviours).</p>
Knowsley	<p>Air Quality Annual Status Report (2018)</p> <p>LCRCA Health and Economic Impact Assessment Study (2018)</p> <p>Knowsley Core Strategy SA Report, (2012)</p>	<p>Monitoring suggests that levels of air quality are relatively stable, and so no AQMAs have been established.</p> <p>However, it is clear that there is an air quality problem in the Cronton Road area that could potentially result in AQMA being declared</p> <p>There are areas of poor air quality correlated to deprivation in central and northern Knowsley.</p>	<p>The potential for minor negative effects in terms of air quality are identified. This is associated mainly with the development of out of centre employment, and a general increase in development that could generate trips into urban centres. A range of positive effects are also identified, mostly, associated with sustainable transport measures.</p>

¹⁰⁸ <https://www.gov.uk/government/publications/air-quality-explaining-air-pollution/air-quality-explaining-air-pollution-at-a-glance>

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Liverpool	<p>LCRCA Health and Economic Impact Assessment Study (2018)</p> <p>SA Report: Submission Draft Local Plan, (Jan 2018)</p>	<p>The most vulnerable individuals in Liverpool are more likely to be exposed to higher levels of air pollution and would benefit the most from further reduction of air pollution. The main areas affected are located in a ring around Liverpool city centre.</p> <p>Sulphur dioxide emissions from shipping is also a source of air pollution in the City.</p>	<p>Development is likely to be located in areas of poor air quality (given that all of Liverpool is within an AQMA), and growth could lead to more trips and worsening of air quality. However, measures to promote sustainable travel are likely to offset these effects. Overall, both minor positive and minor negative effects are recorded.</p>
Sefton	<p>Air Quality Annual Status Report (2019)</p> <p>Sefton Local Plan SA Report (2015)</p>	<p>Air quality in two AQMAs is showing an improvement, but those associated with an increase port-traffic still show exceedances</p> <p>There is an action plan in place with specific schemes and measures to improve air quality. There are larger schemes designed at tackling increased port activity, but it is unknown the extent to which this will address the issues.</p>	<p>The spatial strategy was identified as having potential negative effects due to increased traffic heading into Liverpool and the Ports in particular. However, mitigation measures (in the form of plan policies) are anticipated to offset these negative effects and / or lead to improvements in some areas.</p> <p>The alternatives appraisal process identified that higher levels of growth could lead to significant pressures in terms of air quality, particularly where this increases trips towards the ports.</p>
St Helens	<p>Air Quality Annual Status Reports (2016 - 2019)</p> <p>LCRCA Health and Economic Impact Assessment Study (2018)</p>	<p>The general overall trend within St Helens is decreasing levels of nitrogen dioxide and particulate matter over the last 5 years. Three of the four AQMAs now have levels of nitrogen dioxide below the national objective at the closest sensitive receptors.</p> <p>There are areas of poor air quality correlated to deprivation in central parts of St Helens.</p>	<p>The overall implications of new development for traffic and air quality are likely to be negative given the focus on development along key road networks, and in economic sectors that generate significant vehicular movements. These effects could potentially be significant.</p> <p>There are positive and mitigating policies in the plan relating to sustainable transport, but a residual minor negative effect is likely.</p>

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Wirral	Air Quality Annual Status Reports (2016-2019) Wirral Issues and Options Consultation, Interim SA Report (Dec, 2019)	Monitoring data suggests that air quality has remained relatively stable, and there is no evidence to suggest that an AQMA should be declared.	For any strategic option it is possible that air quality issues will be generated for the more urbanised eastern parts of Wirral. It is expected that the Local Plan will seek to address these issues through policies that support sustainable travel.
10.7.8		Vehicle emissions are steadily decreasing, and it is likely that a switch to electric powered will dramatically reduce emissions associated with car travel. This should help to improve the overall situation for the City Region in the longer term.	
10.7.9		For example, the Government is committed to increasing the number of electric powered vehicles and charging points. There are also a range of initiatives regarding public transport, active travel, and wider sustainability measures that should help to put the City Region on the right track with regards to improving air quality.	
10.7.10		Other factors such as net gain in greenspace would have benefits for residents, though not necessarily for those living within highly urban and higher risk areas.	
10.7.11		Investment in public transport infrastructure, active transport initiatives and improvements to green infrastructure should help alleviate some current issues in relation to traffic and congestion which is a current major issue within Liverpool itself.	
10.7.12		It is unclear how the Covid19 pandemic will affect future travel behaviour, but clearly there may be implications that impact upon air quality; whether this be temporary or long lasting (for example social distancing could reduce bus and rail patronage, increase car usage, and / or lead to more people working from home on a more permanent basis.	
10.7.13		There is also emerging evidence that those areas suffering from poor air quality are more likely to suffer from more serious outcomes when infected with Covid-19.	

Key issues

10.7.14 The following issues have been identified from this scoping exercise:

- There are several Air Quality Management Areas located within urban areas of the region including the entirety of the City of Liverpool, and associated with busy roads within Sefton, Halton and St. Helens in particular.
- There are vulnerable communities across the City Region that are more likely to experience the negative effects of air quality. This is particularly the case in parts of Liverpool that exhibit several risk factors such as deprivation, respiratory illnesses and less access to greenspace.
- There is a clear legislative and policy framework with the aim of improving air quality and minimising the effects on human health.
- An increase in growth, particularly associated with ports activity and traffic within the Liverpool urban areas could lead to worsening air quality.

- A focus on strategic employment opportunities that involve logistics could exacerbate air quality problems in locations such as St Helens and those with a link to the Liverpool / Sefton / Wirral Ports.

10.8 Scoping outcome

10.8.1 Considering the key issues discussed above it is proposed that the topic of air quality should be **SCOPED IN** to the integrated Appraisal. The following objective and supporting questions are proposed as part of the IIA Framework.

IIA objective	Assessment questions (will the option/ proposal help to...)
Achieve cleaner air across the City region, whilst protecting the environment and people from the effects of poor air quality.	<ul style="list-style-type: none"> • Achieve a reduction in emissions from vehicular travel? • Avoid and mitigate the effects of poor air quality on human health? • Improve air quality through enhancements to green infrastructure in urban areas? • Target air quality measures towards the most vulnerable receptors?

Figure 10.1 Air quality and vulnerabilities. *Source data: (IMD, 2019) (AQMA, 2020) (Greenspace, 2019)*

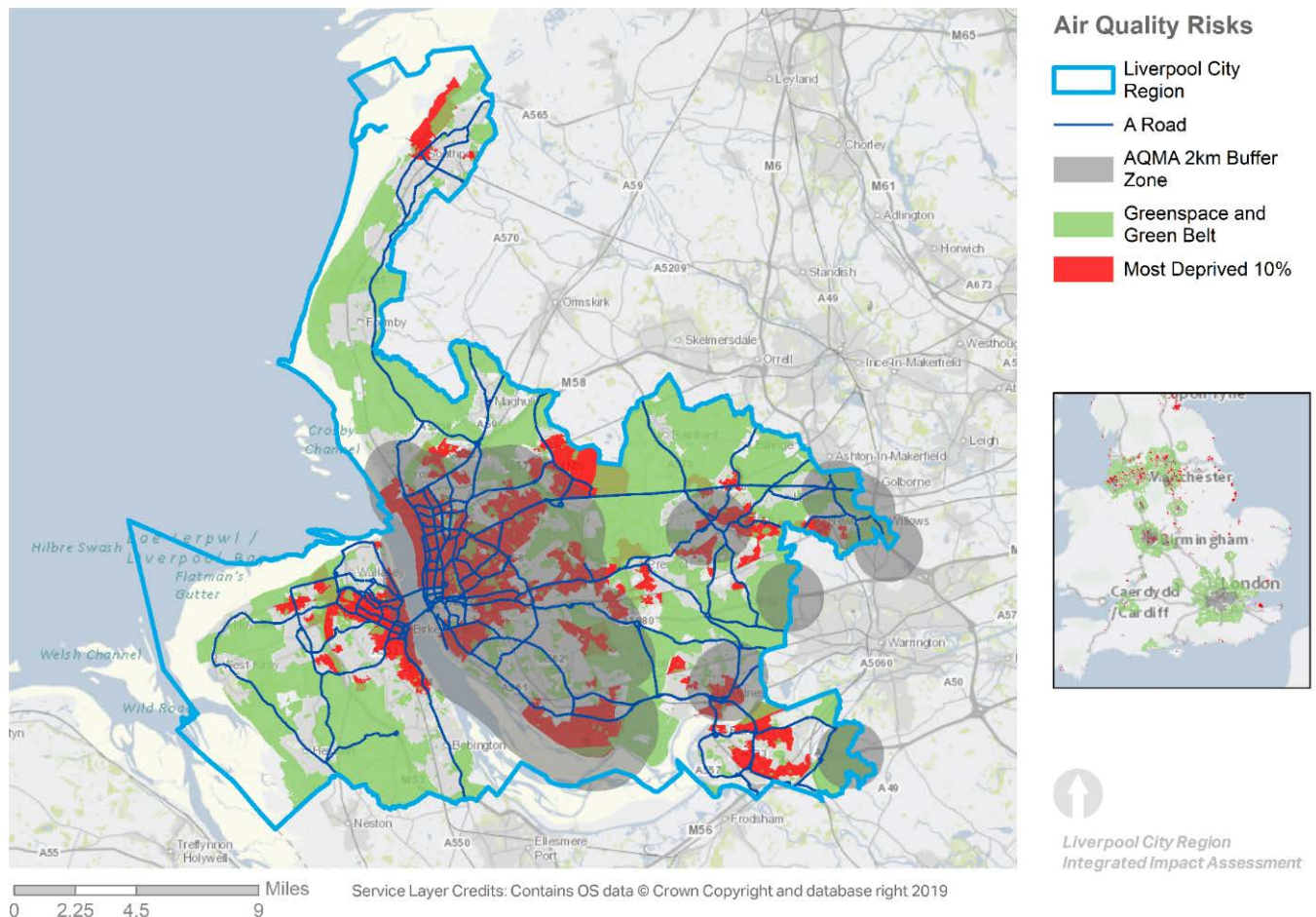
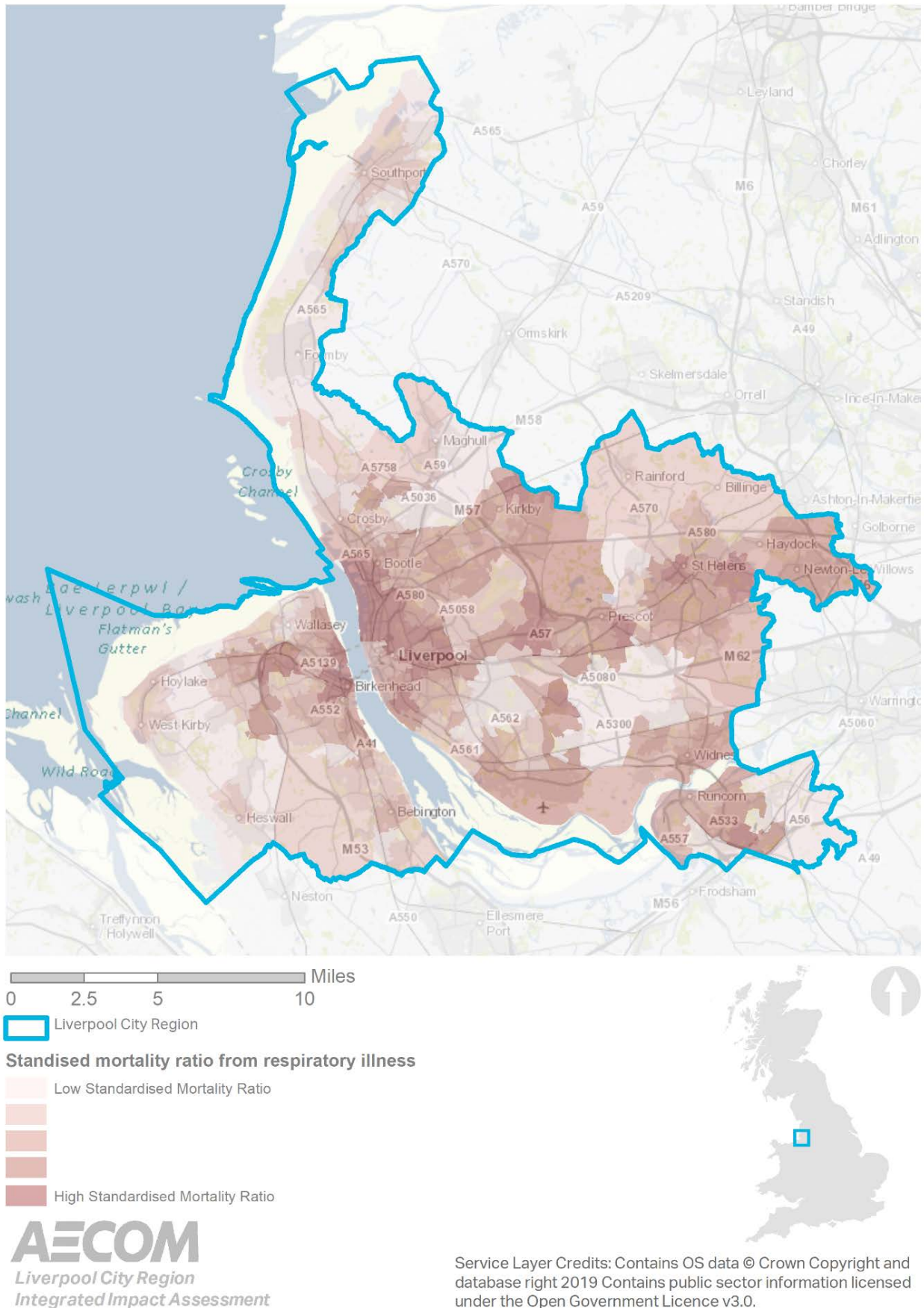


Figure 10.2: Incidences of mortality related to respiratory illness (2017)



Water

10.9 Introduction

- 10.9.1 Water is perhaps the most important resource on the planet. People need water to survive, and it links and maintains all ecosystems. The sustainable management of water resources is therefore extremely important.
- 10.9.2 This section provides a strategic review of the policy context, literature, and baseline position in relation to the following important factors.
- Water catchment areas
 - Water resources
 - Water quality

10.10 Context review

International

- 10.10.1 The **United Nations (UN)** highlighted the importance of water quality that a **sustainable development goal** was created to ensure clean accessible water is achieved across all developing and developed countries. The UN states that negative impacts of poor water quality include impacts to food security, livelihood choices and education.
- 10.10.2 Another Development goal is 'Life Underwater', which seeks to sustainable use the oceans, seas and marine resources. This is pertinent to the Liverpool City Region given its coastal areas.
- 10.10.3 The **Water Framework Directive**¹⁰⁹ (2000) introduced a holistic approach to the management of water quality and requires the protection and improvement of all aspects of the water environment including, rivers, lakes, estuaries, coastal waters and groundwater. The Directive requires that all waterbodies must meet Good Ecological Status by 2027. Under the Directive a management plan is to be prepared for water catchment areas to inform planning and help meet objectives and obligations in areas such as water efficiency and sustainable drainage.

National

- 10.10.4 Key messages from the **National Planning Policy Framework**¹¹⁰ (NPPF) include:
- Development should, wherever possible, help to improve local environmental local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.
 - Development should remediate, mitigate, despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
- 10.10.5 The **Water Environment Regulations 2017**, replace earlier legal instruments. They continue to transpose the requirements of the Water Framework Directive and are primarily concerned with environmental permitting, abstraction and impoundment of water¹¹¹.

¹⁰⁹ Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy.

¹¹⁰ MHCLG (2019) National Planning Policy Framework [online] available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_w eb.pdf

¹¹¹ <http://www.h2ogeo.co.uk/water-framework-directive/the-water-environment-water-framework-directive-england-and-wales-regulations-2017/>

- 10.10.6 **The Government's 25 year Environment Plan** has goals and policies specifically related to water. Notably there is an objective to achieve clean and plentiful water by returning waterbodies as close to their natural state as possible and as soon as practicable.
- 10.10.7 There are also objectives to support thriving plants and wildlife, which has implications for water-related habitats. As well as protecting and restoring the designated habitat network, there is a goal to create or restore an additional 500,000 hectares; of wildlife-rich habitats, of which wetlands, estuarine environments and coastal areas are important.
- 10.10.8 The **Planning Practice Guidance** section on Water supply, wastewater and water quality promote a catchment-based approach to water. Of critical importance is the need to ensure that development is phased so that water and waste water infrastructure is in place once needed. Sustainable drainage systems that promote water quality improvements are promoted.
- 10.10.9 The **PPG** also outlines the potential for tighter (optional) water efficiency standards to be set.
- 10.10.10 **The Environmental Bill 2020**¹¹² policy statement states that the new bill will help secure long – term, resilient water and wastewater services, making for a greener and more resilient country for the next generation within its 25-year environmental plan. Key elements to help reform the 25-year plan include:
- Extraction and trying to reform waterbodies to as close to their natural state.
 - Ensures regulations protecting water quality will not become 'frozen' due to the loss of the European communities act 1972 section 2.
 - The bill amends the land drainage act 1991, to enable valuation calculations to be provided for in secondary legislation.
- 10.10.11 The **Water White Paper 2011**¹¹³ sets out the Government's vision for a more resilient water sector. It states the measures that will be taken to tackle issues such as poorly performing ecosystems, and the combined impacts of climate change and population growth on stressed water resources.
- 10.10.12 The Government's **Water Strategy for England**¹¹⁴ (2008) provides strategy for the water sector up until 2030, which aims to sustainably deliver secure water supplies and an improved and protected water environment. It sets out actions within the following areas:
- Water demand;
 - Water supply;
 - Water quality;
 - Surface water drainage;
 - River and coastal flooding;
 - Greenhouse gas emissions;
 - Charging for water; and
 - Regulatory framework, competition and innovation.
- 10.10.13 **Water for life**¹¹⁵ (2011) sets out the Government's vision for a more resilient water sector. It states the measures that will be taken to tackle issues such as poorly performing

¹¹² <https://www.gov.uk/government/publications/environment-bill-2020/30-january-2020-environment-bill-2020-policy-statement>

¹¹³ Defra (2011) Water for life (The Water White Paper) [online] available at: <http://www.official-documents.gov.uk/document/cm82/8230/8230.pdf>

¹¹⁴ Defra (2011) Future Water: the Government's Water Strategy for England [online] available at: <https://www.gov.uk/government/publications/future-water-the-government-s-water-strategy-for-england>

¹¹⁵ Defra (2011) Water for life [online] available at: <http://www.official-documents.gov.uk/document/cm82/8230/8230.pdf>

ecosystems, and the combined impacts of climate change and population growth on stressed water resources.

City Region

- 10.10.14 Water Resource Management Plans (WRMP) are prepared by water companies to ensure supply continues to meet demand into the future, even under water stressed conditions. WRMPs cover 25-year planning periods to ensure that long term needs, trends and changes are considered appropriately at a strategic level. The Liverpool City Region's water management is carried out by United Utilities who cover most of the North West. Their Water Resources Management Plan 2019¹¹⁶ (2020-2045) sets out their long-term strategy.
- 10.10.15 Wirral, Liverpool and Mersey Heartlands Water Cycle Study (2014) explores projected impacts on water quality and water resources at a regional level, based on project growth as at 2014.

Local

- 10.10.16 Table 11.1. below highlights the common themes, policy approaches and strategic priorities for water quality that are common to each of the six authorities (as drawn from adopted or emerging Local Plan documents). Locally specific issues have also been drawn out where they are of strategic importance.

Table 11.1 Key messages for water resources

Key policies & principles	Source / Authorities
Improve and protect water quality in the River Mersey and Leeds & Liverpool Canal.	Adopted or emerging Local Plan documents for All Local Authorities.
Development proposals should protect and enhance water quality.	
Sustainable drainage systems (SUDs) must be incorporated into new development.	

10.11 Focused literature review

Water contamination can have negative effects on health

- 10.11.1 Elevated levels of anxiety, stress and depression can occur among city residents due to health impacts cause by contaminated waters. Further mental health effects were perceived to have ripple effects into other behavioural health issues such as substance abuse (*Cuthbertson et. al. 2016*).
- 10.11.2 Water issues that affected the community were seen to have greater effects among those who were of low socioeconomic status (*Cuthbertson et. al. 2016*).

High quality water environments are a positive influence on health and wellbeing

- 10.11.3 In respects to water quality and water bodies, living close to natural and coastal environments known as 'green spaces' and 'blue spaces' respectively have positive effects and is beneficial for human health (*Rook, 2012*).
- 10.11.4 Access to urban green and blue infrastructure has been shown to increase physical activity, improve mental health, and improve community safety (*White, M.P. et al, 2016*)

¹¹⁶ United Utilities (2019) WRMP [online], available at: <https://www.unitedutilities.com/corporate/about-us/our-future-plans/water-resources/water-resources-management-plan/>

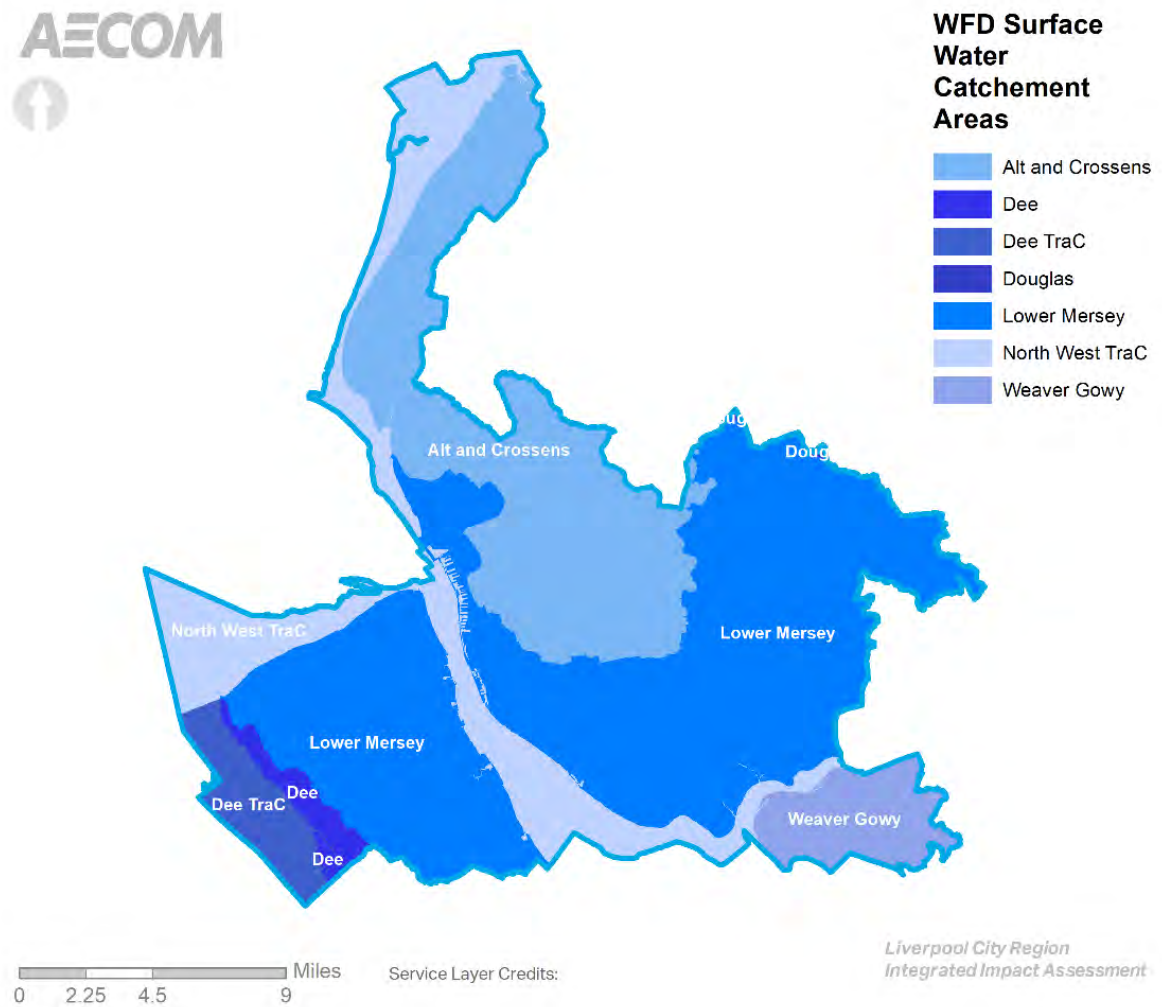
- 10.11.5 Epidemiological studies have shown that relatively speaking, people living in coastal environments with access to water are likelier to have better health outcomes (*Grellier, J. et al, 2017*)
- 10.11.6 Green and blue infrastructure have been shown to have particular benefits for ageing populations (*De Keijzer, et al, 2019*)

10.12 Baseline review

Water catchment areas

- 10.12.1 The North West and The Dee are the two River Basin Districts that form the Liverpool City Region.
- 10.12.2 The North West covers majority of the Liverpool City Region and extends far north to Cumbria, includes Staffordshire and finally stretches east covering parts of North Yorkshire. The North West River Basin District covers large urban areas such as Liverpool and Manchester.
- 10.12.3 Beyond the urban areas are a range of diverse wildlife habitats and species of a global and national importance. There are various natural, artificial and heavily modified water bodies within the basin that include interconnected rivers, lakes, groundwater and coastal waters.
- 10.12.4 The Dee River Basin District covers a small portion of Wirral Borough and spans across the English and Welsh border. The river basin is mainly in Wales.
- 10.12.5 The two River Basin Districts breakdown into smaller Management Catchment Areas (MCA) as shown in figure 11.1 below.

Figure 11.1. Liverpool City Region - Management Catchment Areas



Water quality

10.12.6 The quality of water is measured for a range of waterbodies including rivers, surface water, groundwater and bathing water. Quality is generally classified according to the characteristics of waterbodies using chemical and ecological status as proxies for quality.

10.12.7 Strategic water catchment areas across the LCR are introduced below, with a short summary of recorded water quality on watercourses within each.

10.12.8 **The Alt and Crosses** is an area of low-lying land between the Mersey and Ribble Estuaries. One third of the catchment area is urban landscape and includes the north of Liverpool, Formby and Southport in Sefton and areas in Knowsley.

10.12.9 There are 11 heavily modified river, canals and surface water transfers; all but one have a moderate ecological, and nine of out the eleven are recorded as having good chemical



status. The main two sectors contributing towards not achieving good ecological status are 'domestic general public' and 'agricultural/rural land management'.¹¹⁷

10.12.10 **The Dee management catchment** is part of the Dee river basin and consist of 10 rivers, canals and surface water transfers; most of which are in moderate-good condition (7), whilst the remaining are recorded as poor (3). The main sector contributing to the decline in water quality is 'agricultural and rural land management'.

10.12.11 **The Mersey Lower MCA** covers the Wirral peninsular across to the coastline of Liverpool, Knowsley, Halton, parts of Sefton and St. Helens. The area serves approximately 1.4 million people. There are a total number of 24 rivers, canals and surface water transfers and one natural lake within the catchment. Eighty percent of the waterbodies are recorded as having moderate ecological condition / potential, whilst 20% are 'poor'. All but one of the waterbodies are categorised as having good chemical status except for one. The two main sectors contributing towards not achieving good status are 'urban transport' and 'agricultural/rural land management'¹¹⁸.

10.12.12 **The North West TraC** is a transitional estuarine and coastal water body that stretches along the coastline of the north of England. The catchment area has five coastal environments and eleven estuaries both with elements of natural and heavily modified courses. All range from bad to high quality for ecological status. The majority of the water bodies in this catchment are of good chemical status except two. It has been suggested that there is no sector particularly responsible for the water bodies not achieving good status, though some sectors are under investigation.¹¹⁹

10.12.13 **The Weaver Gowy management catchment** is spread across the Cheshire regions but also covers the South of Halton in the Liverpool City Region. The catchment consists of low-lying rolling countryside, but some parts are heavily industrialised in Runcorn and Ellesmere Port. There are 62 river, canals and surface water bodies and 16 lakes within the catchment. Approximately half of water bodies are in moderate to good condition (36) while the remaining are either poor or bad. The main sector contributing to the lack of good quality of water is 'agriculture/ rural management'¹²⁰.

Bathing water quality

10.12.14 Figure 11.2 shows the major watercourses across the city region, with the largest being the Mersey tidal estuary. The Environment Agency's information relating to bathing water quality shows that the city region has generally high quality bathing waters (good or excellent classification). This is important for tourism, biodiversity and human health.

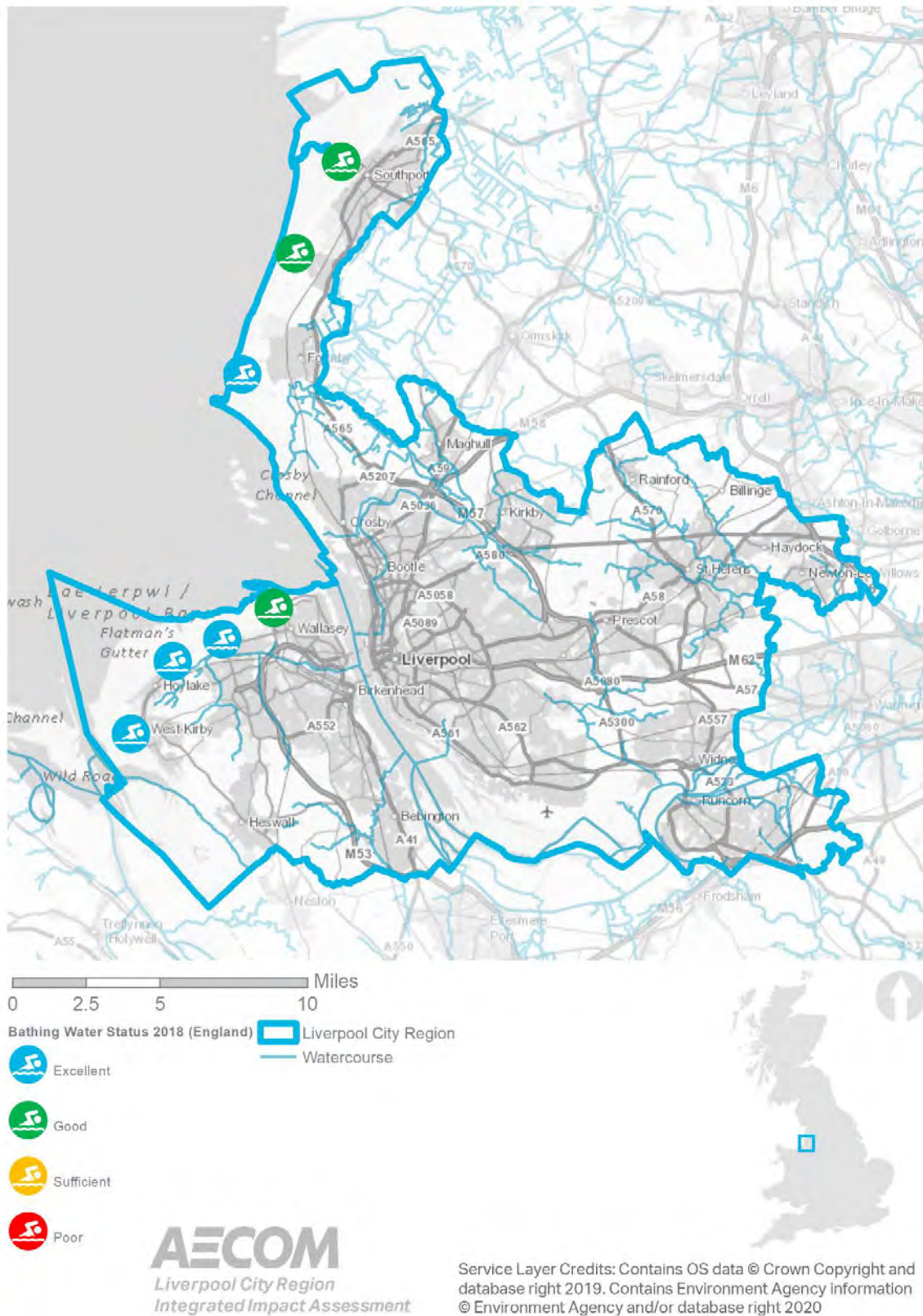
¹¹⁷ <https://environment.data.gov.uk/catchment-planning/ManagementCatchment/3002>

¹¹⁸ <https://environment.data.gov.uk/catchment-planning/ManagementCatchment/3051>

¹¹⁹ <https://environment.data.gov.uk/catchment-planning/ManagementCatchment/3066>

¹²⁰ <https://environment.data.gov.uk/catchment-planning/ManagementCatchment/3111/Summary>

Figure 11.2: Liverpool City Region watercourses and bathing water status (2018)

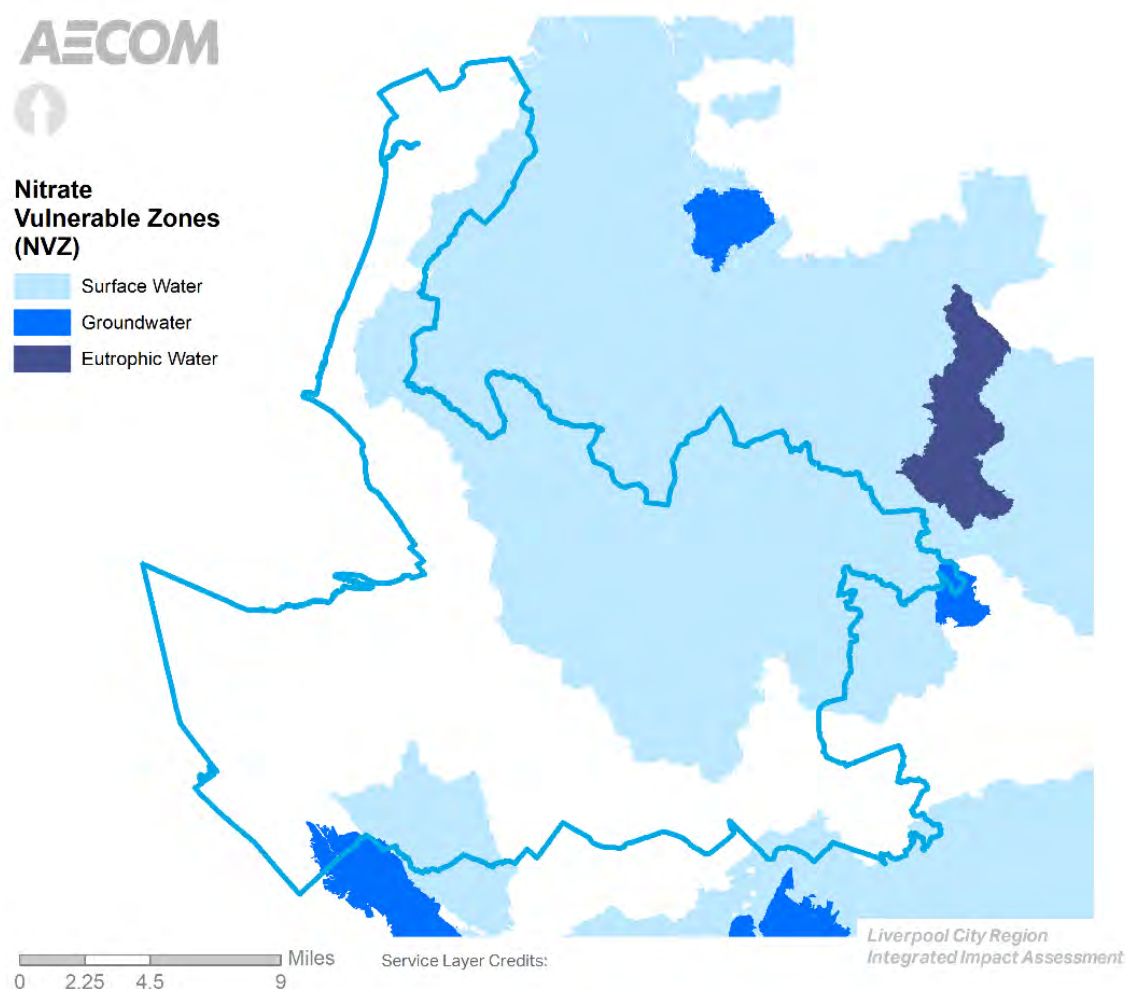


Nitrate vulnerability

10.12.15 As can be seen on Figure 11.3, a large portion of the region is within a Nitrate Vulnerable Zone (NVZ) for surface water and a small portion for ground water. NVZs are areas designated as being at risk from agricultural nitrate pollution (in particular), in accordance with the Nitrate Pollution Prevention Regulations (2015).

10.12.16 Activities which alter the management of agricultural land or lead to a change of use can therefore have implications in terms of the amount of nitrates finding their way into the region's watercourses.

Figure 11.3: Liverpool City Region – Nitrate Vulnerable Zones (NVZ)



Water resources

10.12.17 Figure 11.4 shows the key messages from the United Utilities water resource management plan¹²¹ covering the Liverpool City Region.

10.12.18 It is evident that large quantities of water are wasted through leaks in the system. Key hazards are also likely to be affected by the role of climate change, making droughts, flooding, freeze-thaw damage and power failures more likely.

10.12.19 Future pressures and targets mean that efficiency is key, and hence future developments must consider innovative methods for maximising water savings, through both embodied water (through construction) and operational usage.

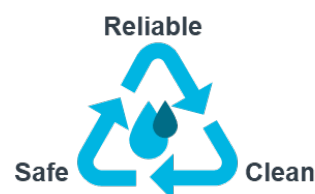
¹²¹ https://www.unitedutilities.com/globalassets/z_corporate-site/about-us-pdfs/wrmp-2019---2045/final-water-resources-management-plan-2019.pdf

Figure 11.4: Key messages from the United Utilities Water Resource Management Plan

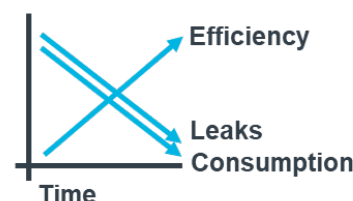


- The utilities operator provides water services for **3 million households** and **200,000 businesses**
- Liverpool City Region falls within its largest management zone, the 'Strategic Resource Zone' which covers much of the south side of the North West of England
 - **7 million people** who consume an average of **1.7 billion litres** of water per day
 - Key water sources: impounding reservoirs and groundwater
 - **2020-2040: water resourcing surplus**
 - **2041-2045: water resourcing deficit**
- Leak reductions: Currently **448 million litres** per day lost
 - planning for a **20% decrease** by 2025 and a **40% decrease** by 2045
- Drought: aiming for a **2.5%** average annual drought order risk, a **50%** reduction on current rates.

Water resourcing principles:



Long term resource forecast:



Key Hazards

- Drought
- Flooding
- Freeze-thaw
- Contamination
- Asset Failure
- Power Failure

10.12.20 Groundwater is a regional resource and strategic consideration. The proactive protection of groundwater resources is key to providing improvements to the water environment and protecting water resources for future use. There are several groundwater Source Protection Zones located within the LCR.

Trends

10.12.21 The table below sets out a brief summary of issues and trends for the local authorities in relation to water resources. Also provided is a summary of the conclusions reached in the relevant SA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Halton	Delivery and Allocations Local Plan: SA Report (July, 2019)	Increasing development within the Borough is one of the main threats to water quality and water resources.	The scale of development within the Local Plan is likely to place pressures on the provision of water and treatment of wastewater.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Knowsley	Knowsley Core Strategy SA Report, (2012)	<p>Green infrastructure opportunities are needed to improve water quality and water bodies.</p> <p>There is a need to improve water quality within Knowsley to align with standards measured by the WFD.</p>	<p>Loss of urban greenspaces could have adverse impacts on water quality particularly within Knowsley's existing urban areas. However, development must consider environmental assets, must not disturb bird species, deteriorate water quality or air quality.</p>
Liverpool	SA Report: Submission Draft Local Plan, (Jan 2018)	<p>Waterbodies within Liverpool are achieving a moderate/ good ecological status. Improvements are needed to be made to achieve the WFD standards of good ecological and chemical status.</p> <p>There is a Ground Source Protection Zone within the Liverpool Local Area.</p> <p>There was an investment in 2016 to extend the Liverpool WasteWater Treatment Works.</p>	<p>Development location and phasing will need to be managed through policies within the Local Plan, however some allocated sites within the Local Plan are expected to have minor negative effects on water quality. These are within the Groundwater Source Protection Zone and could potentially contaminate groundwater sources.</p> <p>However some policies within the Local Plan are expected to ensure protection and enhancement of green infrastructure which includes water quality improvements.</p>
Sefton	Sefton Local Plan SA Report (2015)	<p>The water source in Sefton is supplied by the River Dee.</p> <p>There are three designated bathing water sites within the local area. Two have a good bathing water status and the other has 'excellent status'.</p>	<p>Development within Sefton may have adverse effects on water quality as expansions of the port and maritime zone could lead to increased traffic and industrial activity. However. It is anticipated that the use of sustainable drainage systems should help minimise negative effects on water quality.</p>
St Helens	<p>LCRCA Health and Economic Impact Assessment Study (2018)</p> <p>St Helens Local Plan: Submission Draft: SA Report (Jan 2019)</p>	<p>Water supply comes from Lake Vyrnwy.</p> <p>There is a Drinking Water Safeguard Zone within St Helens bordering the local authority to the east.</p> <p>St Helens is covered by the Lower Mersey catchment area.</p>	<p>Policies within the Local Plan relating to natural resources are likely to have positive effects with regards to protecting and improving water quality.</p> <p>Water resources, supply infrastructure and sewerage capacity are not a huge constraint on growth within St. Helens. However, the North West region contains some of the nation's poorest water quality.</p> <p>A change in agricultural land use could lead to reduced nitrates run-off in the longer term, with positive implications.</p>

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Wirral	Wirral Issues and Options Consultation, Interim SA Report (Dec, 2019)	<p>There are two NVZs in Wirral that are ground water and surface water.</p> <p>Wastewater and sewage services for the Borough are provided by a combination of United Utilities and Dŵr Cymru/Welsh Water.</p> <p>There are four bathing water sites within the borough. Three have excellent bathing water status, the other is 'good'.</p> <p>The majority of surface water bodies within Wirral are of moderate to good quality.</p>	<p>Much development within Wirral is proposed for existing urban areas such as the upcoming Wirral Waters development, which is converting underutilised brownfield land.</p> <p>Changes in land use from agricultural to residential may reduce the levels of nitrate pollution, therefore development within some green belt areas may have minor positive effects on water quality in the long term.</p> <p>Overall it is expected that development should not have a significant adverse effect upon water quality and could potentially help to achieve improvements.</p>

10.12.22 Water availability across the region and the UK has the potential to be affected by population growth and by increased risks of drought as a result of climate change.

10.12.23 Although the North West is not generally a water-strained region, poorly planned development could potentially lead to unsustainable pressure on water resources through intensifying demand without providing additional supply in a coordinated manner.

10.12.24 Growth within the region in the long term is likely to add pressure on existing water resources by placing more demand on infrastructure. There may be a potential need to increase the capacity of wastewater treatment plants and sewers within the region in order to sufficiently provide for such demands in the future. It is expected that the utilities companies will plan for such eventualities though.

10.12.25 Future development may have effects upon surface water nitrates on the basis that a lot of proposed development is upon greenfield land (overlapping with NVZs).

10.12.26 The promotion of sustainable forms of development are likely to be encouraged in new developments as a result of Local Plan policies. This should help to protect water flow and water quality in respect of consumption and wastewater management. This is important as an increase in development could have the opposite effect.

10.13 Key issues

10.13.1 The following key issues emerge from the context and baseline review:

- The policy framework provides a clear directive to manage water resources effectively, ensuring that water quality is protected and where necessary enhanced.
- Access to water environments has a positive effect upon health.
- There are high quality water environments along the coastal parts of the City Region which need to be protected whilst taking advantage of these assets for tourism and human enjoyment.
- The quality of watercourses across the region is mixed, but the majority are either moderate or good in terms of ecological status. However, there are still areas where poor quality is recorded.

10.14 Scoping outcome

10.14.1 Considering the key issues discussed above it is proposed that the topic of water resources should be **SCOPED IN** to the integrated Appraisal. The following objective and supporting questions are proposed as part of the IIA Framework.

IIA objective	Assessment questions (will the option/ proposal help to...)
<p>Ensure the sustainable management of water resources, helping to protect and enhance value with regards to the environment, human health and economic growth.</p>	<ul style="list-style-type: none"> • Support improvements to the ecological quality of waterbodies in line with WFD requirements? • Maintain areas with excellent / good water quality and make improvements where necessary? • Promote the role of water resources for their recreational and economic benefits without compromising environmental quality? • Promote the integration of blue infrastructure into new developments? • Ensure the timely phasing of wastewater and drainage infrastructure improvements to support new development?

11. Soil and land

11.1 Introduction

- 11.1.1 Soil resources are vital to ensure both the production of food is met and global ecosystems function effectively.
- 11.1.2 The efficient use of land is a key issue given the finite amounts of greenfield land and natural resources that are coming under pressure from development.
- 11.1.3 This section provides a strategic review of the policy context, literature, and baseline position in relation to these important factors.
- Soil / agricultural land
 - Land Use

11.2 Context review

International

- 11.2.1 The **EU Common Agricultural Policy (CAP)** was launched in 1962 and is a partnership between agriculture and society between Europe and its farmers. The aim of the policy is to support farmers to provide a stable supply of affordable foods.

National

- 11.2.2 Key messages from the **National Planning Policy Framework**¹²² (NPPF) include the following:
- Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils.
 - Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.
 - Prevent new or existing development from being ‘adversely affected’ by the presence of ‘unacceptable levels’ of soil pollution or land instability and be willing to remediate and mitigate ‘despoiled, degraded, derelict, contaminated and unstable land, where appropriate’.
 - Planning policies and decisions should promote an effective use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions. Strategic policies should set out a clear strategy for accommodating objectively assessed needs, in a way that makes as much use as possible of previously-developed or ‘brownfield’ land.
 - Planning policies and decisions should ‘give substantial weight to the value of using suitable brownfield land within settlements for homes and other identified needs’, and ‘promote and support the development of under-utilised land and buildings.’
- 11.2.3 Since July 2017 the **Government’s Planning Practice Guidance (PPG)** requires Local Planning Authorities to publish a Brownfield Land Register, and review it at least once a year, in order to identify all previously developed sites with potential for delivering new development.

¹²² MHCLG (2019) National Planning Policy Framework [online] available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_web.pdf

- 11.2.4 This is to help achieve maximum planning value and efficiency from available land, whilst avoiding unnecessary land take at greenfield sites.¹²³ Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of a higher quality.¹²⁴
- 11.2.5 The **Government’s 25 Year Environment Plan** was published in 2018 and presents the ‘goals for improving the environment within a generation and leaving it in a better state than we found it’.¹²⁵ The implementation of this plan aims to achieve clean air, clean and plentiful water, reduced risk from environmental hazards, and managed exposure to chemicals. Specific polices and actions relating to environmental quality include:
- Improving soil health and restoring and protecting our peatlands;
 - Reducing pollution; and
 - Maximising resource efficiency and minimising environmental impacts at end of life.
- 11.2.6 **Safeguarding our Soils: A strategy for England**¹²⁶ sets out a vision for soil use in England which includes better protection for agricultural soils, protecting stores of soil carbon, improving the resilience of soils to climate change and preventing soil pollution. The essential message in relation to development is that pressure on soils is likely to increase in line with development pressure and the planning system should seek to mitigate this.

City Region

- 11.2.7 No policy documents identified.

Local

- 11.2.8 Table 12.1. below highlights the common themes, policy approaches and strategic priorities for soil, land and minerals that are common to each of the six authorities. Locally specific issues have also been drawn out where they are of strategic importance.

Table 12.1. Key messages for soil and land

Key policies & principles	Source / Authorities
Protect Best and Most Versatile Agricultural Land	<ul style="list-style-type: none"> • Adopted and / or emerging Local Plans for all authorities. • Brownfield land registers for all authorities.
Ensure the timely remediation of contaminated land	
Prioritise brownfield land supplies	

¹²³ MHCLG (2017) Guidance: Brownfield Land Registers [online] available at: <https://www.gov.uk/guidance/brownfield-land-registers>

¹²⁴ Department for Communities and Local Government (2012) National Planning Practice Guidance [online] available at: <http://planningguidance.communities.gov.uk/>

¹²⁵ DEFRA (2018) 25 Year Environment Plan [online] available at: <https://www.gov.uk/government/publications/25-year-environment-plan>

¹²⁶ DEFRA (2009) Safeguarding our Soils: A strategy for England [online] available at: <https://www.gov.uk/government/publications/safeguarding-our-soils-a-strategy-for-england>

11.3 Focused literature review

Local soil resources are valuable to ensure a supply of nutritious food

- 11.3.1 Food security is essential to human health, and this is heavily reliant upon sufficient soil resources. Though many food sources are imported, a strong domestic agricultural sector is important to ensure self-sufficiency and contributes to the economy. This has direct benefits on the wellbeing of those communities that work in these sectors.
- 11.3.2 Not only does self-sufficiency support jobs, it helps to reduce impacts due to transport of goods, and there is evidence that locally sourced, fresh, seasonal food is more nutritious and promotes better health (given that the food is picked when it is ripe, the time from being picked to eaten is often shorter, and processing measures are usually reduced). (*Wunderlich S.M. et al. 2009*) (*Martinez, S, et al. 2010*) (*Kaume.L. et al. 2012*).
- 11.3.3 Soil health is key to the sustainability of our food system, and use of pesticides, herbicides and fertilizers are damaging to the health of our soil, while also posing potential human health risks. Transitioning to well-managed extensive farming systems, can help to mitigate environmental and population health impacts. These include but are not limited to: a reduction in NH³ emissions to reduce particulate matter (which is a risk to human health) and a reduced need for antibiotic use in livestock production due to higher animal welfare standards (which reduces the phenomenon of antibacterial resistance that has occurred in both animals and humans). (*Bash. A & Donnelly. A, 2019*)

There are amenity benefits offered by agricultural activities in communities

- 11.3.4 Benefits to health may be gained by introducing farming into local and urban areas. These include an increase in well-being, physical and mental health gained from access to green spaces (*Twohig-Bennett and Jones, 2018*; *South et al, 2018*).
- 11.3.5 Within the UN sustainability development goals, goal three states 'to ensure healthy lives and promote well-being for all' this is discussed in 'Health, Environment and Climate Change' regarding reducing the number of deaths from hazardous soils and contaminants. Further suggesting that soil does have an impact on our health and wellbeing (*WHO, 2019*).

There is evidence that mining activities can be detrimental to the health of workers and nearby communities.

- 11.3.6 Minerals development can increase the levels of dust particles (particulate matter) and release gases from transportation of minerals and operation of on-site machinery.
- 11.3.7 There is consistent evidence of the association of coal mining with a wide spectrum of diseases in populations resident or in proximity of the mining activities (*Cortes-Ramirez, J, 2018*).

11.4 Baseline review

Soil resources / agricultural land

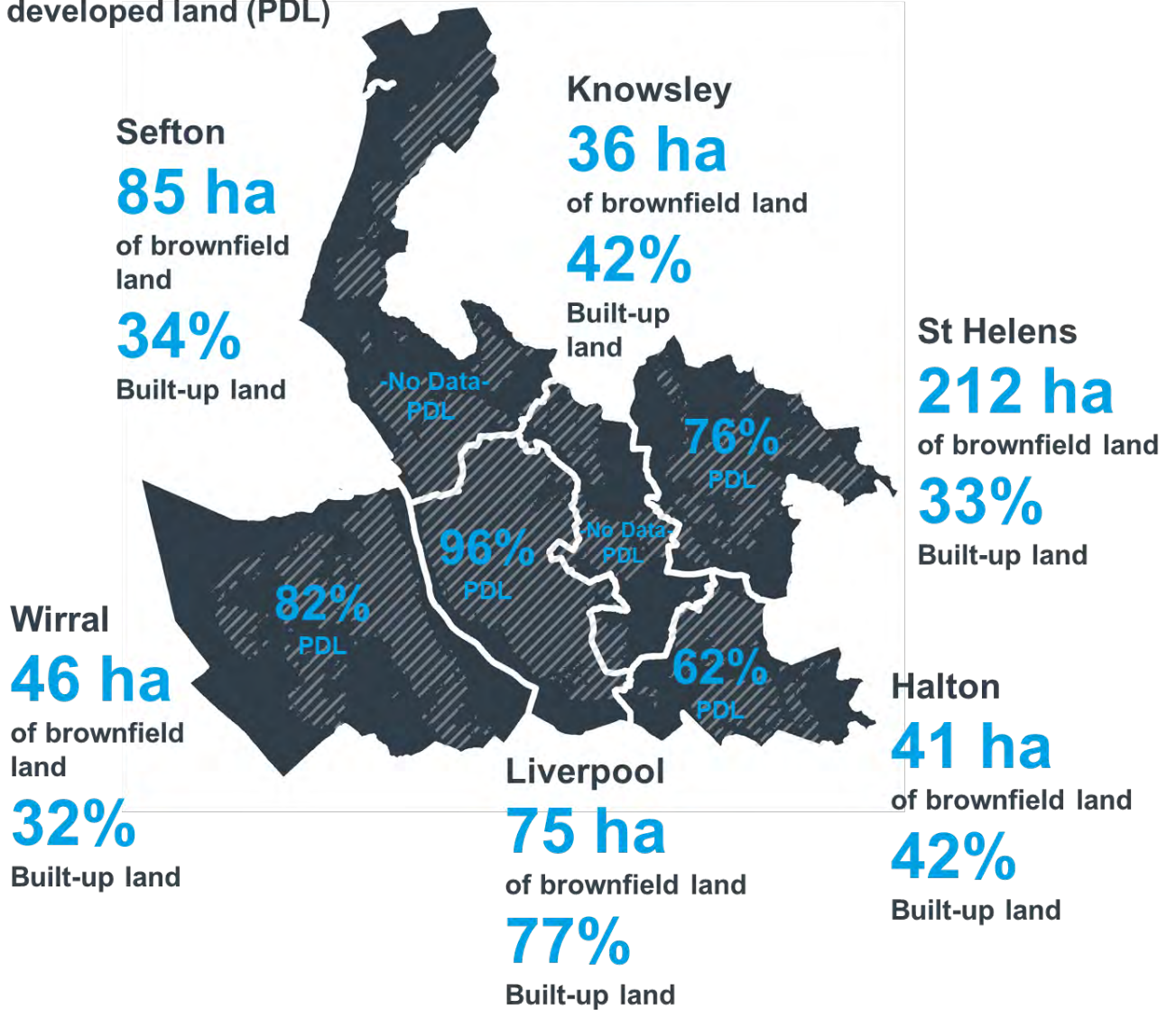
- 11.4.1 The Agricultural Land Classification (ALC) classifies land into six grades (plus 'non-agricultural' and 'urban'), where Grades 1 to 3a are recognised as being the 'best and most versatile' (BMV) land and Grades 3b to 5 are of poorer quality. The higher quality soils are important as they support a wider range of crops and produces better yields.
- 11.4.2 The subdivision of Grade 3 into 3a and 3b has not been undertaken on a national scale, including within much of the LCR area. Grade 3 land is therefore presumed to be best and most versatile unless and until evidence can be provided to demonstrate it is 3b, not 3a).
- 11.4.3 More than half (59%) of the Liverpool City Region is urbanised. Therefore, soil resources are limited in these locations. However, it is increasingly possible to introduce agriculture into urban environments, which can lead to an increase in soil quality on otherwise poor quality land (for example allotments, urban farming).
- 11.4.4 As can be seen on figure 5.2, the highest quality soils in the LCR are mostly located to the north of Knowsley and St Helens and to the south of Sefton. These resources are Grade 1 and 2 and form part of a wider area of high quality land that extends into West Lancashire. There is also a band of Grade 2 land to the south of St Helens.
- 11.4.5 There are small pockets of Grade 1 and 2 land elsewhere in the LCR, but the majority of land in Wirral and the remaining parts of St Helens and Knowsley are Grade 3.
- 11.4.6 There are limited soil resources in Liverpool and Halton, which is to be expected given that these areas are heavily urbanised.
- 11.4.7 The overall percentage of ALC Grade is set out in the legend for figure 12.2. Urban areas make up the greatest proportion of land at 53%. The combined percentage of BMV land is 36%.

Land use

- 11.4.8 The Liverpool City Region is tightly constrained by the coast and Green Belt. It is therefore not surprising that most of Liverpool City itself comprises a built-up environment. In the surrounding authorities though, the rate of built-up land to 'greenfield' is much lower (see figure 12.1)
- 11.4.9 Despite this, the rates of development on previously developed land remain relatively high. Over a 4 year period 2015-2019, the Wirral still delivered an average of 82% residential development on previously developed land (PDL).
- 11.4.10 There is still PDL in the supply of sites for development, with a total of some 495 ha of brownfield land registered as such across the region. There are also a range of other (non-registered) brownfield sites that have been identified through call for site exercises; suggesting that the efficient use of PDL can still form part of a growth strategy.
- 11.4.11 Nevertheless, it is clear that pressure for growth on greenfield land is mounting in the region and the wider north west. The consideration of Green Belt release has been a feature of many Local Plan's in the last 5 years, and this is likely to continue in light of the housing crisis.

Figure 12.1: Proportion of built-up land (grey striped), brownfield land registered, and average delivery of housing on PDL

Available brownfield land, built-up land and average rates of residential completions on previously developed land (PDL)



Trends

11.4.12 The table below sets out a brief summary of issues and trends for the local authorities in relation to soil and land. Also provided is a summary of the conclusions reached in the relevant SA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Halton	Delivery and Allocations Local Plan: SA Report (July, 2019)	52.74 hectares of land have been identified on the Brownfield Register.	<p>Site allocations as far as possible have been directed to brownfield sites, sites with lower agricultural grades and sites where the contamination could be mitigated by development.</p> <p>This has minimised the level of impact that the sites will have on soil and land resources.</p>
Knowsley	<p>Annual Monitoring Reports, 2014-2016</p> <p>Knowsley Core Strategy SA Report, (2012)</p>	<p>Knowsley consists of urban areas and pockets of Grade 2 agricultural land.</p> <p>84.18 hectares of land have been identified on the Brownfield Register (2018).</p> <p>No information on residential development on previously developed land was presented in the AMRs from 2014-2016.</p>	<p>The spatial strategy and policies within the local plan are envisaged to have minor positive effects on land and soil across the local area in the short to medium term.</p> <p>However policies that direct development towards urban areas would result in development encroaching on Green Belt which is likely to have negative effects in the long term.</p>
Liverpool	<p>Annual Monitoring Reports for Housing and Employment (2017)</p> <p>SA Report: Submission Draft Local Plan, (Jan 2018)</p>	<p>Historically, the city has provided housing on brownfield (PDL) land. In overall terms between 2002 and 2017, 98.2% of (gross) residential completions have been on previously developed land. A similar picture exists for employment land.</p> <p>195 hectares of land have been identified on the Brownfield Register (2019).</p>	<p>Given that almost all of the proposed development is on brownfield land, the effects on agricultural land are neutral.</p> <p>Significant positive effects are predicted in terms of land quality, as brownfield redevelopment should help to remediate contamination.</p>
Sefton	<p>Annual Monitoring Report, 2019</p> <p>Sefton Local Plan SA Report (2015)</p>	<p>Approximately 20% of land within Sefton is BMV agricultural.</p> <p>50.54 hectares of land have been identified on the Brownfield Register (2019). The majority of sites remain the same as where on the register in 2018.</p>	<p>The Local Plan allocates a number of sites that contain land classified as BMV agricultural land.</p> <p>Losses and the effects on the rural economy itself are not considered likely to be insignificant. However only a small portion of good quality land (5%) is proposed therefore it is not anticipated to have significant effects on the rural economy overall.</p>
St Helens	Annual Monitoring Report, 2018	<p>202.51 hectares of land have been identified on the Brownfield Register.</p> <p>85% of development from 2016 -2018 took place on</p>	Higher growth scenarios proposed across St. Helens would be at the expense of BMV agricultural land.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
	St Helens Local Plan: Submission Draft: SA Report (Jan 2019)	previously developed land. This is an increase from the period 2012-2016.	Once developed, this resource cannot be recovered, and so this represents a negative effect on soil resources. The overall amount of land affected is relatively low, and in the main avoids the most sensitive land. Therefore, the effects are not predicted to be significant over the plan period.
Wirral	Annual Monitoring Report 2018 Wirral Issues and Options Consultation, Interim SA Report (Dec, 2019)	Historic ALC surveys suggest a predominance of Grade 3a soils within the Borough ¹²⁷ The proportion of units with planning permission on previously developed land increased from 80 percent in 2016/17 to 83 percent in 2017/18. 47.68 hectares of land have been identified on the Brownfield Register (2018)	Options for growth within Wirral are suggested to be within brownfield land among existing urban areas. This would result in minimal overlap with agricultural land. At a higher scale for growth, some greenbelt may need to be released however this would not necessarily mean BMV agricultural land.

11.4.13 The Joint Waste Local Plan further identifies strategic priorities for the LCR recognising that significant renewal programmes have significant implications for waste. The LCR is a highly urbanised area with limited opportunity for landfill operations and significant constraints on land for built facilities (including geology and aquifers). This ultimately requires strategic interventions to manage waste arisings as well as measures which target increases in recycling and composting.

11.5 Key issues

11.5.1 The following key issues have been identified from this scoping exercise:

- The policy framework makes it clear that poorer quality land should be developed instead of best and most versatile agricultural land.
- Opportunities to remediate contaminated land should be explored ahead of greenfield and agricultural land.
- There is research that suggests high quality soil resources and less-intensive farming practices provide health and environmental benefits.
- The majority of the region contains urban land, and this is reflected by relatively high levels of past development occurring on previously developed land. However, increasing amounts of greenfield / agricultural land is being proposed for release in current or emerging Local Plans. Pressure for urbanisation in the longer term is therefore likely to increase.

¹²⁷ ADAS (June 2019), Study of Agricultural Economy and Land in Wirral.

- There are relatively few areas consisting of Grade 1 land within the Liverpool City Region, but the region has strong links with west Lancashire, which has a strong agricultural economy and abundance of high quality soil resources.

11.6 Scoping outcome

11.6.1 Considering the key issues discussed above it is proposed that the topic of soil and land should be **SCOPED IN** to the integrated Appraisal. The following objective and supporting questions are proposed as part of the IIA Framework.

IIA objective	Assessment questions (will the option/ proposal help to...)
Promote the effective use of land and soil; ensuring that the best and most versatile agricultural land resources are preserved and used effectively by prioritising brownfield development and the remediation of contaminated land.	<ul style="list-style-type: none"> • Promote the use of previously developed land where this exists as a viable alternative to greenfield development? • Avoid the loss of the highest quality agricultural land (particularly, where there are poorer quality alternatives)? • Promote the effective use of agricultural land for temporary uses where soil quality can be retained? • Promote community food growing and greater self-sufficiency? • Promote the timely remediation of contaminated land?

12. Landscape

12.1 Introduction

- 12.1.1 Landscape is defined in the European Landscape Convention as “*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*”.
- 12.1.2 Landscapes contribute immensely to the character of places, and have an important role in how people interact with and enjoy the environment. It is therefore important to understand how these areas are perceived, what makes them special, and how they should be managed.
- 12.1.3 This section provides a strategic review of the policy context, literature, and baseline position in relation to the following relevant factors.
- National Landscape Character Areas
 - Protected landscapes
 - Trends

12.2 Context review

International

- 12.2.1 The **European Landscape Convention** (ELC) promotes protection, management and planning for European landscapes and organises European co-operation on landscape issues. The ELC was signed by the UK government and introduced in 2007.

National

- 12.2.2 Key messages from the **National Planning Policy Framework**¹²⁸ (NPPF) include:
- Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty [...]. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads. The scale and extent of development within these designated areas should be limited.
 - Strategic policies should set out an overall strategy making provision for ‘conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure.
 - Planning policies and decisions should ensure that developments ‘are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation of change (such as increased densities).
 - Planning policies and decisions should contribute to and enhance the natural and local environment by:
 - f. protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils;
 - g. recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic

¹²⁸ MHCLG (2019) National Planning Policy Framework [online]
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_web.pdf

and other benefits of the best and most versatile agricultural land, and of trees and woodland; and

h. remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

- The government attaches great importance to Green Belts, whose fundamental aim is to prevent urban sprawl by keeping land permanently open. The general extent of Green Belts is established and can only be altered in exceptional circumstances through preparation or review of a Local Plan.

12.2.3 National Character Area (NCA) Profiles are published by Natural England and divide England in 159 distinct natural areas based on their landscape, biodiversity, geodiversity, historic, cultural and economic characteristics.¹²⁹ NCAs follow natural features in the landscape and are not aligned with administrative boundaries. NCA profiles describe the features which shape each of these landscapes, providing a broad context to its character.

12.2.4 **The Government's 25 Year Environment Plan**¹³⁰ states the intention to work with relevant authorities to deliver environmental enhancements within all 159 NCAs across England. Along with the policies contained within Chapter 2 'Recovering nature and enhancing the beauty of landscapes', Goal 6 'Enhanced beauty, heritage and engagement with the natural environment' of the Government's 'A Green Future: Our 25 Year Plan to Improve the Environment' directly relates to the Landscape.

12.2.5 The recent **Environmental Bill 2020 Policy Statement** supplements existing legislation and policy on protected sites and species and introduces new incentives, actions and planning tools to drive further improvements for nature:

- It establishes provisions that require the development of local nature reserve strategies across England.
- Tools will support better spatial planning for nature recovery by setting out priorities and opportunities for protecting and investing in nature within a local area.

City Region

12.2.6 The **Merseyside Historic Landscape Characterisation Study** was undertaken by the Merseyside Archaeological Advisory Service (MAAS) prior to its closure in 2011.

Local

12.2.7 **Landscape Character Assessments (LCA)** are provided across the local districts within the Liverpool City Region. They are used to inform local councils, planning departments, consultants, developers on a range of activities. The LCAs are used to describe landscapes, provide spatial reference, identify key characteristics and assist with the monitoring of change.

12.2.8 Table 13.1 below highlights common themes, policy approaches and strategic priorities for landscape that are common to each of the six authorities. Locally specific issues have also been drawn out where they are of strategic importance.

¹²⁹ Natural England (2012) 'National Character Area profiles' [online] <https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making>

¹³⁰ HM GOV (2018) A Green Future: Our 25 Year Plan to Improve the Environment [online] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

Table 13.1: Key messages for landscape.

Key policies & principles	Source / Authorities
Building materials should be compatible with existing landscape character features.	Adopted and / or emerging local plans for all Local Authorities.
Development should not be detrimental to historic and landscape character	
Landscape character should contribute to local distinctiveness, amenity and overall quality of life	
Development must protect, enhance and restore landscape character.	

12.3 Focused literature review

The are many studies showing a positive link between access to green space and health

12.3.1 Access to nature and attractive green spaces has been a recurring theme throughout history in relation to healthy lifestyles (*Ward-Thompson, 2011*)

12.3.2 Greenspace exposure is associated with a wide range of health benefits, both the reduction in blood pressure and heart rate and the decrease of diabetes and cardiovascular mortality. (*Jones & Twohig-Bennett 2018*).

12.3.3 There are correlations between quality and quantity of neighbourhood greenspace in relation to health and well – being (*van Dillen et. al, 2011; McEachan et. al. 2018*).

Access to scenic environments is associated with positive effects upon wellbeing

12.3.4 Inhabitants of more scenic environments report better health, across urban, suburban and rural areas, even when taking core socioeconomic indicators of deprivation into account (*Seresinhe, C., Preis, T. & Moat, H, 2015*)

12.3.5 There is evidence that more frequent visits to the countryside is associated with higher life satisfaction (*Coldwell & Evans, 2018*).

12.3.6 Access to good-quality landscape has positive effects on health and wellbeing – and negative effects when access is lacking (*Landscape Institute, 2013*).

Urban landscapes / townscapes are as important as the countryside

12.3.7 Jerrett, et al. (2014) states that greenness within urban areas is positively associated with physical activity. The strongest association was linked between young adults and grew weaker with increase of age.

12.3.8 A combination of air pollution, noise pollution and limited access to green space in urban areas can appear particularly harmful to health (*Persson et, al. 2018*).

12.3.9 McEachan et. al. (2002) suggests there is a positive link between longevity and walkable access to urban greenspace for older people.

12.4 Baseline review

National Landscape Character Areas

- 12.4.1 Across England, there are 159 National Character Areas (NCAs) which distinctly define unique landscapes, biodiversity, historical aspects and geographical context of an area.
- 12.4.2 There are a variety of national Landscape Character Areas (LCA) within the Liverpool City Region (Figure 13.1).
- 12.4.3 The most prominent of these is the Merseyside Conurbation which encompasses the City of Liverpool and parts of Wirral.
- 12.4.4 To the north of the region is the Sefton Coast, adjoining the Lancashire and Amounderness Plain, followed by the Lancashire Coal Measures which covers majority of St. Helens, the Mersey Valley covering Halton and finally Wirral.

NCA 58: Merseyside Conurbation is characterised by its predominant urban and suburban landscape, dense settlement pattern, large scale industry and its clear maritime heritage, though the notable natural feature of the Mersey Estuary, associated mudflats and coastal habitats injects natural influences into the urban landscape.

NCA 59: Wirral is characterised by its rich pastoral landscape, natural coastal scenery, wooded sandstone ridges and the local distinctiveness of the peninsula's settlements and villages. Wirral was once former landscape for large country estates, rural pastoral land and natural coastline scenery.

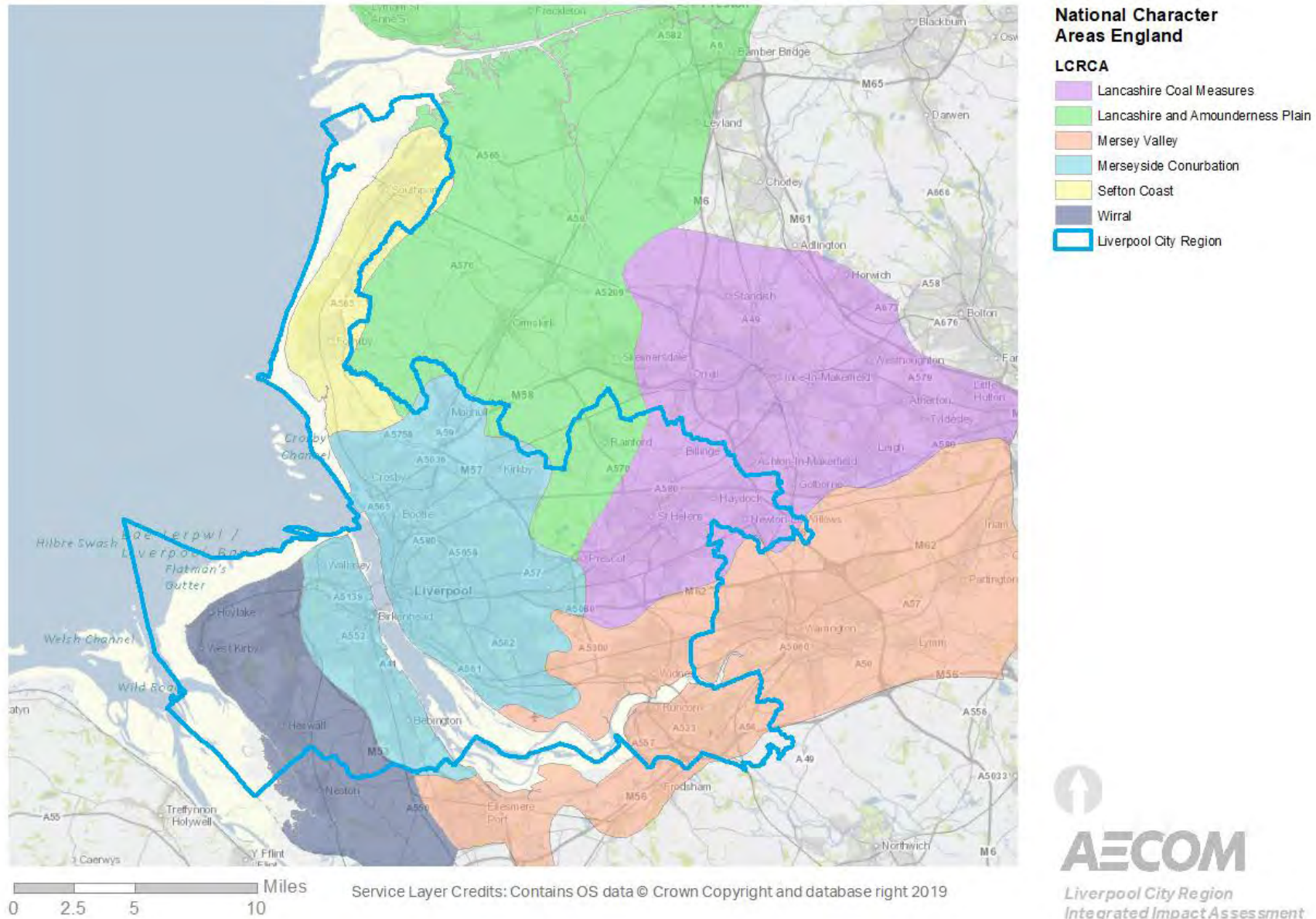
NCA 57: Sefton Coast located north of the region and is characterised by intertidal sands, silts, coastal and sand dune systems, health land and conifer plantations. It includes coastal towns of Southport, Ainsdale, Formby and Hightown.

NCA 32: Lancashire and the Amounderness Plain is an area known for its high grade agricultural land which includes arable fields, patchwork pastures and drainage ditches.

The NCA 56: Lancashire Coal Measures is surrounded by the towns of St. Helens and Wigan and is extended of the Mersey Valley to the south. It's industrial heritage is based on a longstanding coal mining history, heavy industrialisation and restoration of minerals interspersed with a complex mosaic of farmland and urban centres. The landscape consists of degraded agricultural farmland, sparse urban centres, industry, active mineral sites those which are derelict or reclaimed.

NCA 60: Mersey Valley consists of a wide, low-lying river valley which encompasses the River Mersey and associated tributaries and estuaries. Parts of the Mersey Valley are made up of varied landscape including a mix of complex extensive industrial development, urban areas and high-quality farmland. The landscape includes distinct river valleys, associated estuaries and tributaries, waterways and semi-natural grasslands.

Figure 13.1: National Landscape Character Areas



Protected landscapes

National

- 12.4.5 Areas of Natural Beauty (AONB) are countryside landscapes across England that are designated for their overwhelming natural and historic beauty.
- 12.4.6 Although the Liverpool City Region benefits from a variety of attractive natural landscapes and distinctive characteristics, there are no Areas of Outstanding Natural Beauty (AONBs) or National Parks within the region. The region is also relatively distant from any AONBs or National Parks so as to be outside their setting or zones of influence.

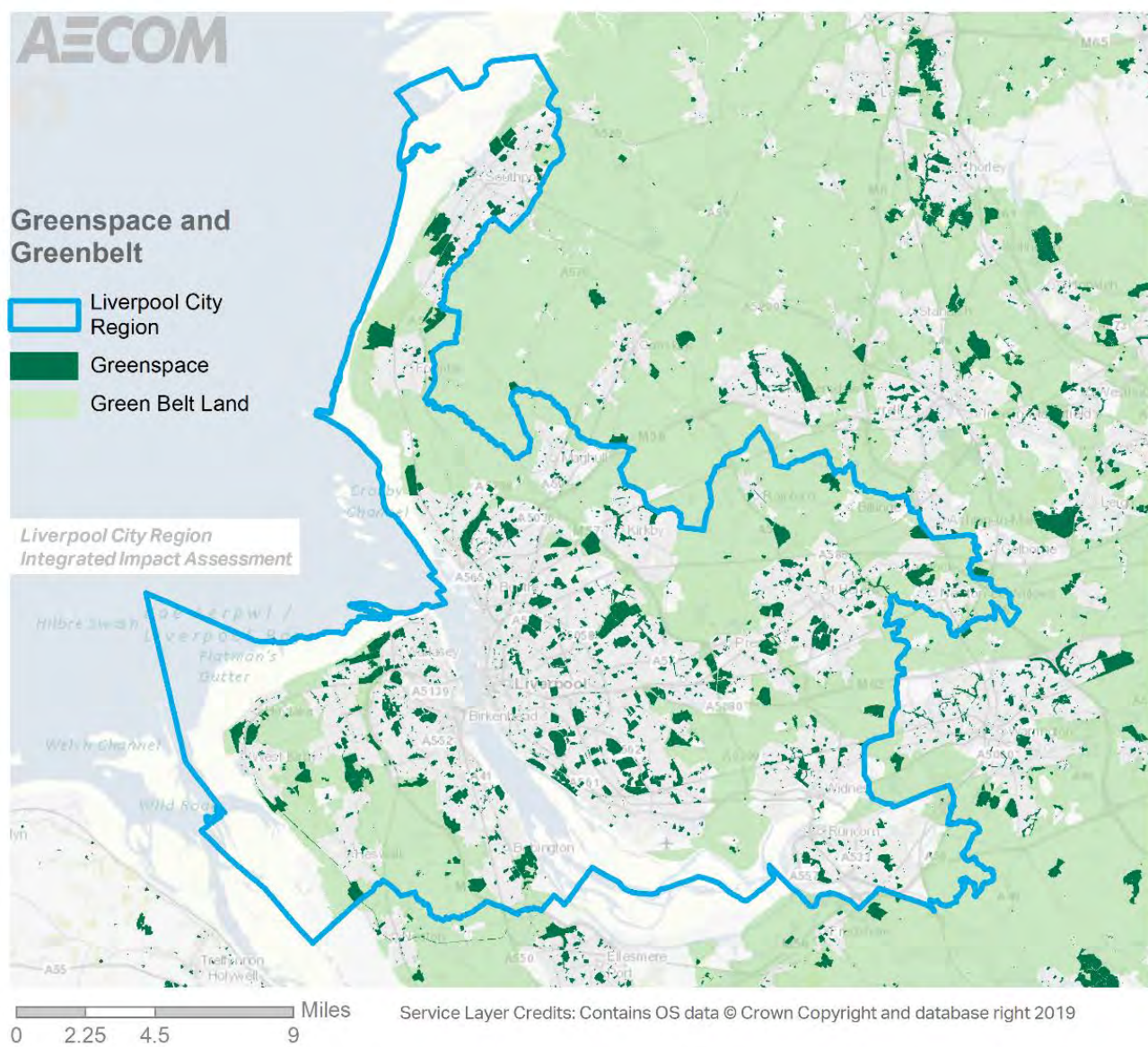
Green Belt

- 12.4.7 The Merseyside Green Belt emerged through long discussions about the need to curtail Liverpool's expansion and to protect areas of countryside. Subsequently, the Merseyside Green belt was 'formalised' in the 1983 Merseyside Green Belt Local Plan: Written Statement and accompanying map.



- 12.4.8 The extent of Green Belt has since remained relatively unchanged. However, several Local Authorities have considered and / or proposed changes to the Green Belt boundary in the latest round of Local Plan documents. It is evident that these areas will come under continuing pressure from development in the longer term.
- 12.4.9 The urban areas within the City Region are fairly tightly constrained by Green Belt. This includes within Merseyside itself, and also for neighbouring areas such as Cheshire and Lancashire (which are also surrounded by large areas of Green Belt). The result is a highly urbanised centre, with little physical space for outward growth. This is compounded by the coastal nature of much of the region, meaning that growth is 'restricted' in multiple directions.
- 12.4.10 Though there are greenspace locations in the urban areas, these are important for the health and wellbeing of communities living here.

Figure 13.2: Green Belt and Greenspace



Geodiversity

- 12.4.11 Geodiversity has been recognised as an integral part of the natural environment throughout the history of statutory nature conservation in England. Geological features of national importance are designated as SSSIs, whilst local and regionally important sites have also been identified and are protected through Local Plan policies.
- 12.4.12 Across the City region there are several such sites, which include disused quarries with exposed geological features, railway cuttings and parks. There are also a wealth of natural features such as sand dunes at Ainsdale and Formby (Sefton), tidal systems such as Hilbre Island (Wirral), river systems and features such as Kirkby Brook Waterfalls (St Helens) and Fazakerley Brook (Liverpool), and outcrops in a range of locations including Thurstaston Common (Wirral).

Trends

- 12.4.13 The table below sets out a brief summary of issues and trends for the local authorities in relation to landscape. Also provided is a summary of the conclusions reached in the relevant SA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Relevant Studies	Key Issues / Sensitivities	Conclusions from Local Plan SA documents
Liverpool	SA Report for the Submission Draft Local Plan, (Jan 2018)	Given that Liverpool is highly urbanised, the pressures on landscape are limited. There is no specific landscape character assessment study.	Significant positive effects are predicted for landscape and townscape, as the majority of allocated sites are brownfield and their development should bring about enhancement.
Wirral	Wirral Landscape Character Assessment October 2019 Wirral Green belt Review Wirral Issues and Options Consultation, Interim SA Report (Dec, 2019)	Coastal environments (particularly the more undeveloped areas) are important for nature, recreation and tourism. Climate change is likely to affect the nature of landscapes. For example, fires on heathland, flooding. Change in agricultural practices are altering traditional field patterns. Increasing pressure for residential/employment expansion onto rural agricultural land.	An urban focused approach is predicted as likely to have significant positive effects. However, the release of Green Belt land at a significant scale would be likely to generate significant negative effects. There is some scope for Green Belt release without having significant negative effects though .
Halton	Halton Landscape Character Assessment (2009) Delivery and Allocations	There are a range of landscape character types across the borough of varying degrees of sensitivity. Sensitive areas with lower capacity for change include the Upper Mersey Estuary, Preston	No proposed allocation sites have been identified as having the potential for a significant negative effect; however, some could generate minor negative effects.

Local Authority	Relevant Studies	Key Issues / Sensitivities	Conclusions from Local Plan SA documents
	Local Plan: SA Report. July, 2019	on the Hill Undulating Enclosed Farmland, .Daresbury Sandstone Escarpment,	
Sefton	Sefton Landscape assessment of proposed development sites within green belt / November 2014 Sefton Local Plan SA Report (2015)	None of the sites explored in the landscape assessment / Green Belt study were classified as being highly sensitive to development. However, broadly speaking, the least sensitive sites were taken forward in the Local Plan.	The SA concluded that the Local Plan largely directs development away from the most sensitive areas of landscape along the coast and in the open countryside. Therefore, no significant effects were identified for the Adopted Plan. However, the alternatives appraisal process suggested that higher scales of growth that would involve more green belt release could involve significant negative effects. Therefore, longer term growth requirements that converge on such areas could potentially bring about these effects.
St Helens	St Helens Landscape Character Assessment (2006) St Helens Local Plan Submission draft (2019) St Helens Local Plan SA Report (2019)	Consistently high landscape sensitivity to the north of the A580. Green Belt release has already been proposed in the Local Plan, and continued pressure in the long term is likely. This is evidenced by the fact that areas identified in the 2006 study as 'constraints to further development' have either already been developed upon, or are proposed for allocation in the local plan.	The SA concluded that minor negative effects are likely as a result of the proposed strategy. However, consideration of alternatives for higher levels of growth suggest that significant negative effect could occur if further Green Belt land is released. Furthermore, the scope for avoiding such effects could be relatively limited by the high sensitivity of remaining land.
Knowsley	Knowsley Landscape Character Assessment 2007 Knowsley and Sefton Green Belt Study (2012) Knowsley Core Strategy SA Report (2012)	The landscape character assessment from 2007 does not provide information about sensitivities or management recommendations. The Green Belt study identified parcels of lower performing land with potential to accommodate new development. There remains a surplus of these parcels that were not subsequently proposed for development.	Whilst the Adopted plan was predicted to have mostly positive or neutral effects in terms of landscape, there was considerable uncertainty about longer term effects, especially in relation to Green Belt land. This is also reflected in the appraisal of options, which found that Option C (Sustainable Urban Extensions in the Green Belt) could have a major negative impact on landscape.

12.5 Key issues

12.5.1 The following key issues emerge from the context and baseline review:

- There is a need to protect and enhance landscape and townscape character.
- The ability to experience attractive open and green space in urban and countryside settings is important to health and wellbeing.
- There is mounting pressure for development on Green Belt land. This could lead to significant negative effects upon landscape character, as suggested in the SA Reports for several Local Plan documents.
- Urban locations still present opportunities for growth, but there is a need to enhance access to greenspace in such areas.

12.6 Scoping outcome

12.6.1 Considering the key issues discussed above it is proposed that the topic of landscape should be **SCOPED IN** to the integrated Appraisal. The following objective and supporting questions are proposed as part of the IIA Framework.

IIA objective	Assessment questions (will the option/ proposal help to...)
Protect and enhance the character of landscapes and geological features and urban open space; whilst ensuring their multifunctional use and enjoyment by all.	<ul style="list-style-type: none"> • Preserve and strengthen areas of tranquillity throughout the region? • Protect and enhance access to high quality green and open space in urban areas? • Enhance poor quality landscapes and townscapes? • Protect land that makes a positive contribution to landscape character and provides recreational opportunities? • Maintain the distinctiveness of individual settlements?

13. Historic Environment

13.1 Introduction

13.1.1 The historic environment is defined in the NPPF as:

"All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora"

13.1.2 This section provides a strategic review of the policy context, literature, and baseline position in relation to the following relevant factors.

- Designated heritage assets
- Heritage at risk
- Trends

13.2 Context review

International

13.2.1 The **European Landscape Convention** of the Council of Europe promotes the protection, management and planning of the landscapes and organises international co-operation on landscape issues.¹³¹

13.2.2 The main purpose of the **Convention for the Protection of the Architectural Heritage of Europe** is to reinforce and promote policies for the conservation and enhancement of Europe's heritage.¹³² It also affirms the need for European solidarity with regard to heritage conservation and is designed to foster practical co-operation among the Parties. It establishes the principles of "*European co-ordination of conservation policies*" including consultations regarding the thrust of the policies to be implemented.

13.2.3 The **UNESCO World Heritage Convention**¹³³ sought to link the concepts of nature conservation and the preservation of cultural properties, recognising the way in which people interact with nature, and the fundamental need to preserve the balance between the two. The Convention defines the kind of natural or cultural sites which can be considered for inscription on the World Heritage List and how the World Heritage Fund is to be used and managed and under what conditions international financial assistance may be provided. It sets out the duties of State Parties in identifying potential sites and their role in protecting and preserving them. The Liverpool Maritime Mercantile City is a designated World Heritage Site in the LCR.

13.2.4 These Conventions are still relevant during the transitional period of Brexit, but for much of the remaining plan period the UK will be independent from EU law. The principles of these European statutes are reflected heavily in UK national law, strategy and policy though (see below).

13.2.5 The City of Liverpool played an important role in the growth of the British Empire. There are six areas in the historic centre and docklands, where a series of significant buildings sit. As such, this area has been designated as an UNESCO World heritage site designation named the Maritime Mercantile City.

¹³¹ Council of Europe (2019) Council of Europe Landscape Convention [online] available at: <<https://www.coe.int/en/web/landscape>> last accessed [28/08/19]

¹³² Council of Europe (2019) Convention for the Protection of the Architectural Heritage of Europe (Granada, 1985) [online] available at: <<https://www.coe.int/en/web/culture-and-heritage/granada-convention>> last accessed [28/08/19]

¹³³ UNESCO (1972) Convention Concerning the Protection of the World Cultural and Natural Heritage [online] <https://whc.unesco.org/archive/convention-en.pdf>

National

- 13.2.6 The **Planning (Listed Buildings & Conservation Areas) Act 1990** is a UK Act of Parliament relating to the granting of planning permission for building works, with a particular focus on listed buildings and conservation areas.¹³⁴ It created special controls for the demolition, alteration or extension of buildings, objects or structures of particular architectural or historic interest.
- 13.2.7 The **Ancient Monuments and Archaeological Areas Act (1979)**¹³⁵ allows the investigation, presentation and recording of matters of archaeological or historical interest and makes provision for the regulation of operations or activities which may affect ancient monuments and archaeological areas.
- 13.2.8 **Historic Environment for England (2010)**¹³⁶ sets out the Government's vision for the historic environment. It calls for those who have the power to shape the historic environment to recognise its value and to manage it in an intelligent manner in light of the contribution that it can make to social, economic and cultural life.
- 13.2.9 Key messages from the **National Planning Policy Framework**¹³⁷ (NPPF) include:
- Broadly, strategic policies should set out an overall strategy making provision for “*conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure.*”
 - Planning policies and decisions should ensure that developments are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation of change (such as increased densities).
 - Heritage assets should be recognised as an ‘irreplaceable resource’ that should be conserved in a ‘manner appropriate to their significance’, so that they can be enjoyed for their contribution to the quality of life.
 - Plans should set out a ‘positive strategy’ for the ‘conservation and enjoyment of the historic environment’, including those heritage assets that are most at risk. The strategy should take account of ‘the wider social, cultural, economic and environmental benefits’ of conservation, whilst also recognising opportunities to draw upon the contribution made by the historic environment to the character of a place.
 - When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss of less than substantial harm to its significance.
- 13.2.10 These messages are supported by the **National Planning Practice Guidance (NPPG)**¹³⁸ which itself includes the key message that local authorities should set out in their Local Plans a positive strategy for the conservation and enjoyment of the historic environment which recognises that conservation is not a passive exercise and that identifies specific opportunities for the conservation and enhancement of heritage assets.
- 13.2.11 Along with the policies contained within Chapter 2 ‘Recovering nature and enhancing the beauty of landscapes’, Goal 6 ‘Enhanced beauty, heritage and engagement with the natural

¹³⁴ UK Public General Acts (1990) Planning (Listed Buildings and Conservation Areas) Act 1990 [online] available at: <<https://www.legislation.gov.uk/ukpga/1990/9/contents>> last accessed [28/08/19]

¹³⁵ Ancient Monuments and Archaeological Act (1979) [online] <https://www.legislation.gov.uk/ukpga/1979/46>

¹³⁶ HM Government (2010) The Government's Statement on the Historic Environment for England [online] http://webarchive.nationalarchives.gov.uk/+http://www.culture.gov.uk/reference_library/publications/6763.aspx

¹³⁷ MHCLG (2019) National Planning Policy Framework [online] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_w eb.pdf

¹³⁸ Department for Communities and Local Government (2012) National Planning Practice Guidance [online] <http://planningguidance.communities.gov.uk/>

environment' of the Government's '**A Green Future: Our 25 Year Plan to Improve the Environment**'¹³⁹ directly relates to the historic environment.

- 13.2.12 The **UK 2070 Commission's Final Report 2020** on regional inequalities details the UK's need to dismantle the extremities of regional inequalities through large scale, long term and all-encompassing policies. The report recommends widespread commitments which see areas outside of London and the South East benefitting from investment and exploiting cultural capital to realise their potential. The report sets out a 10-point framework for action which includes harnessing cultural and environmental assets by focusing policy and funding towards areas and assets outside of London.
- 13.2.13 Historic England is the statutory body that helps people care for, enjoy and celebrate England's spectacular historic environment. Guidance and advice notes provide essential information for local planning authorities, neighbourhood groups, developers, consultants, landowners and other interested parties on historic environment considerations, and are regularly reviewed and updated in light of legislative changes.
- 13.2.14 In this respect, Conservation Area Designation, Appraisal and Management: Historic England Advice Note 1 (February 2019)¹⁴⁰ outlines ways to manage change that conserves and enhances historic areas in order to positively contribute to sustainable development. Principally, the advice note emphasises the importance of:
- Understanding the different types of special architectural and historic interest which underpin the designations; and
 - Recognising the value of implementing controls through the appraisal and/or management plan which positively contribute to the significance and value of Conservation Areas.
 - Clearly identifying those issues that threaten the area's character or appearance and that merit the introduction of management measures.
- 13.2.15 Sustainability Appraisal (SA) and Strategic Environment Assessment (SEA): Historic England Advice Note 8 (December 2016)¹⁴¹ provides support to all stakeholders involved in assessing the effects of certain plans and programmes on the historic environment. It offers advice on heritage considerations during each stage of the SA/SEA process and helps to establish the basis for robust and comprehensive assessments.
- 13.2.16 Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets (2nd Edition) (December 2017)¹⁴² provides general advice on understanding setting, and how it may contribute to the significance of heritage assets and allow that significance to be appreciated, as well as advice on how views can contribute to setting. Specifically, Part 2 of the advice note outlines a five stepped approach to conducting a broad assessment of setting:
- Step 1: Identify which heritage assets and their settings are affected;
 - Step 2: Assess the degree to which these settings contribute to the significance of the heritage asset(s) or allow significance to be appreciated;
 - Step 3: Assess the effects of the proposed development, whether beneficial or harmful, on that significance or on the ability to appreciate it;
 - Step 4: Explore ways to maximise enhancement and avoid or minimise harm; and
 - Step 5: Make and document the decision and monitor outcomes.

¹³⁹ HM GOV (2018) A Green Future: Our 25 Year Plan to Improve the Environment [online] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

¹⁴⁰ Historic England (2019): 'Conservation Area Designation, Appraisal and Management: Advice Note 1' [online] available from: <https://historicengland.org.uk/images-books/publications/conservation-area-appraisal-designation-management-advice-note-1/>

¹⁴¹ Historic England (2016): 'SA and SEA: Advice Note 8' [online] available at: <https://historicengland.org.uk/images-books/publications/sustainability-appraisal-and-strategic-environmental-assessment-advice-note-8/>

¹⁴² Historic England (2017): 'Setting of Heritage Assets: 2nd Edition' [online] available at: <https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/>

City Region

- 13.2.17 The Merseyside Historic Environment Record (HER) is maintained by the Merseyside environmental services and is one of a network of 85 HERs nationwide. The Merseyside HER records details on local archaeological sites and finds, historic buildings and historic landscapes across the five traditional Merseyside authorities. HERs provide a significant resource for informing planning decisions, at both a spatial and development and management scale.
- 13.2.18 The **Liverpool City Region Combined Authority (draft) Local Industrial Strategy (2020)** recognises the importance of the City Region's wealth of cultural and historic features as well as its people. Culture is therefore a key foundation of economic growth.
- 13.2.19 Historic Landscape Characterisation (HLC) can be used to help secure good quality, well designed and sustainable places. It is a method of identification and interpretation of the varying historic character within an area that looks beyond individual heritage assets as it brigades understanding of the whole landscape and townscape into repeating HLC Types. HLC for Merseyside was completed in 2011¹⁴³ covering Knowsley, Liverpool, St Helens, Sefton and Wirral.
- 13.2.20 The Draft North West Marine Plan (2020)¹⁴⁴ recognises the role of the historic environment in marine planning, particularly identifying the links to Liverpool Waterfront World Heritage Site and protected wreck sites.

Local

- 13.2.21 Table 14.1 below highlights the common themes, policy approaches and strategic priorities for heritage that are common to each of the six authorities. Locally specific issues have also been drawn out where they are of strategic importance.

Table 14.1: Key messages for the historic environment.

Key policies & principles	Source / Authorities
There is a need to ensure that new development is sensitive to the distinctive quality and sense of local places.	<ul style="list-style-type: none"> Adopted or emerging Local Plan documents for All Local Authorities.
Historic environments are facilitated by long term enhancement and conservation of local assets.	<ul style="list-style-type: none"> Adopted or emerging Local Plan documents for All Local Authorities.
Historic environment is recognised as important in terms of enhancing quality of life.	<ul style="list-style-type: none"> St Helens Local Plan 2020 – 2035 Knowsley Local Plan Core Strategy 2016 Halton Local Plan 2014-2037 (Draft) Liverpool Local Plan (2018) Sefton Local Plan (2017)
Merseyside Historic Environment Record (HER) should be consulted throughout proposals that may affect heritage assets	<ul style="list-style-type: none"> St Helens Local Plan 2020 – 2035 Sefton Local Plan 2017 Liverpool Local Plan 2013 – 2033 Wirral Local Plan 2020 – 2035 (Issues and Options)

¹⁴³ National Museums Liverpool (2012) Merseyside Historic Characterisation Project (MHCP) [online]

<https://www.liverpoolmuseums.org.uk/historic-character-of-merseyside>

¹⁴⁴ MMO (2020) North West Inshore and North West Offshore Marine Plan – Draft for consultation [online]

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/857301/DRAFT_NW_Marine_Plan.pdf

Key policies & principles	Source / Authorities
<p>Protect / manage the integrity and character of the Liverpool Maritime Mercantile City. In particular large / tall buildings will need to be carefully managed and designed.</p> <p>Key local views need to be protected.</p> <p>Architectural quality must be high.</p>	<ul style="list-style-type: none"> Liverpool Maritime Mercantile City World Heritage Site: Supplementary Planning Document (Oct, 2009)

13.2.22 The **Mayor of Liverpool’s Inclusive Growth Plan 2018** recognises that Liverpool has an abundance of high quality, historic parks and gardens. The plan also recognises that the City’s historic assets play an important role in maintaining the growing economy and that the City’s will continue to protect and conserve the world-class historic fabric.

13.3 Focused literature review

13.3.1 Historic environments are places where individuals are able to connect with, creating meaning and values. These meanings and values are prominent particularly on a localised scale, where residents and historic assets are directly linked. Several studies have investigated the linkage between historic nature and health and well – being.

Heritage assets can strengthen community spirit and social value

13.3.2 Historic England has identified that heritage can act as a healing mechanism for health and well - being in terms of heritage – triggered thinking, ‘meaning-making’ and cultural inclusion¹⁴⁵.

13.3.3 Power and Smyth (2016) examined the benefits of community – based heritage and found that many positive effects were derived from people who have been involved with heritage asset conservation. The effects of coming together with the community to research local historic assets resulted in many self – reported positive effects such as personal enrichment. The past can contribute to feelings of greater security and stability.

Heritage can stimulate positive emotions

13.3.4 Thomson, et. al. (2012) researched enhancing cancer patients wellbeing through non-pharmacological, heritage-focused intervention. It involved handling and discussing museum objects with female patients in oncology wards. The results revealed that positive emotions and wellbeing had increased post session.

13.3.5 Barton et. al. (2009) studies health benefits in particular changes in self-esteem and mood after walking in four different National Trust sites of nature and heritage value in the East of England. The study concluded that access to countryside and urban green spaces for lifestyle, recreation and fitness purposes positively impact physical and mental health.

13.3.6 Certain places or situations are perceived to be therapeutic by those that experience them, and this often involves those with a historic / cultural meaning (*Darvill, T. et al. 2019*).

13.3.7 Whilst acknowledging limitations with some of the evidence (*Pennington, A. et al, 2019*) undertook a comprehensive review of studies that sought to make links between heritage and wellbeing. The review suggests that heritage and culture can contribute positively to health and wellbeing in a range of settings, including:

¹⁴⁵ Reilly, S. Nolan, C. Monckton, L. Historic England. (2018). Wellbeing and the Historic Environment. [online] available at: <https://historicengland.org.uk/images-books/publications/wellbeing-and-the-historic-environment/wellbeing-and-historic-environment/>

- Benefits from access to and visitation of museums.
- Handling of heritage related materials in healthcare settings.
- Visiting museums, historic houses and other heritage sites.
- Heritage volunteering and social engagement activities.
- Activities in historic landscapes and parks.
- Community archaeology.
- Living in historic places.

Heritage can have particular benefits for older people

- 13.3.8 Heritage based community research can encourage excitement and achievement among elderly people. Interest in heritage can stem from anxiety of the present, including uncertainty felt by society about government, technology and global threats (*Power and Smyth, 2016*).
- 13.3.9 Heritage can trigger nostalgia and a sense of local place among older generations (*Lundgren, 2010*) (*Beaumont, 2013*).

13.4 Baseline review

Historical Significance

- 13.4.1 The Liverpool City Region has a rich history which has helped to sculpt the shape of the City Region now, providing a wide range of cultural assets and attracting large volumes of visitors each year.
- 13.4.2 Liverpool's port gave the city advantageous prominence as a trading hub and a link to the rest of the world; this asset acted as a catalyst for development and large scale population growth throughout the 18th Century. During the 19th and early 20th Century Liverpool's wealth had surpassed that of London and its built-form was characterised by institutions and large scale buildings which now shape the urban character, further 20th Century large scale expansion and development have sculpted the city as it is now. Key historical and cultural iconic factors associated with Liverpool are its trading port, historical buildings, music and football. Wirral saw its initial growth spurred on with its ship building and links to the trading ports in the 19th Century. Sefton's Southport had an early history as a resort destination, taking advantage of its seaside location, this contrasts to Bootle, which owes the majority of its growth to the industrial revolution and coastal position enabling trading activity at the ports. St Helens' has a history which has been shaped by the interplay between its towns, some of which dating back to the Domesday Book. Development was scaled up rapidly during the industrial revolution, with significant coal mining, locomotive manufacturing and glassmaking activities. Knowsley has a history which places Knowsley Park as a prominent feature, with the prominent Knowsley Hall located within it. The Development of Halton was spurred on by the cross-Mersey River links between Runcorn and Widnes dating back to the 12th Century. The area has an industrial heritage which includes the role of ports, chemical industry, shipbuilding, engineering and quarrying.

Designated assets

- 13.4.3 As Figure 14.1 shows, Liverpool city centre has the greatest concentration of nationally listed buildings in the Liverpool City Region; the area has its greatest concentration of listed buildings in the central core of the city and towards the docks.
- 13.4.4 The next largest clusters of listed buildings are located in Birkenhead, areas south of Birkenhead, Southport and near Gateacre; south east of Liverpool.
- 13.4.5 The overall trend highlights greater heritage assets in built-up areas, with Liverpool City Centre acting as the region's core for heritage assets at a strategic level.

- 13.4.6 The importance of heritage assets across the region are not restricted to urban areas though, with many important buildings, historic landscapes and features being found at the urban fringes and rural communities (albeit in much lower concentrations). Table 14.1 provides a 2019 snapshot of local authority profiles taken from Historic England's Heritage Counts.¹⁴⁶
- 13.4.7 There are too many to list at this sub-regional scale, but It is also important to note that there are a vast range of locally relevant, non-designated heritage assets that have been identified by individual local authorities. These are important features for the character of particular locations and need to be taken into consideration in the plan-making and development management processes.



- 13.4.8 Figure 14.2 highlights the City Regions Scheduled Monuments, Historical Parks and Gardens and Register Battlefields. Each of these designated assets plays an important role in contributing towards the City Region's sense of historical identity and enjoy protections as such. The City Region has a world renowned set of Historical Parks and Gardens, as well as a World Heritage Site around the docks and historic centre in Liverpool. Birkenhead Park has been recognised as the world's first publicly funded park and it enjoy international recognition, most prominently it influenced the design of Central Park, New York. The international recognised World Heritage Site recognises the role Liverpool played in the growth of moving goods and people around the world.

¹⁴⁶ Historic England (2019) Local Authority Profiles 2019 [online] available at: <https://historicengland.org.uk/research/heritage-counts/indicator-data/>

Figure 14.14.1: Density of listed heritage assets.

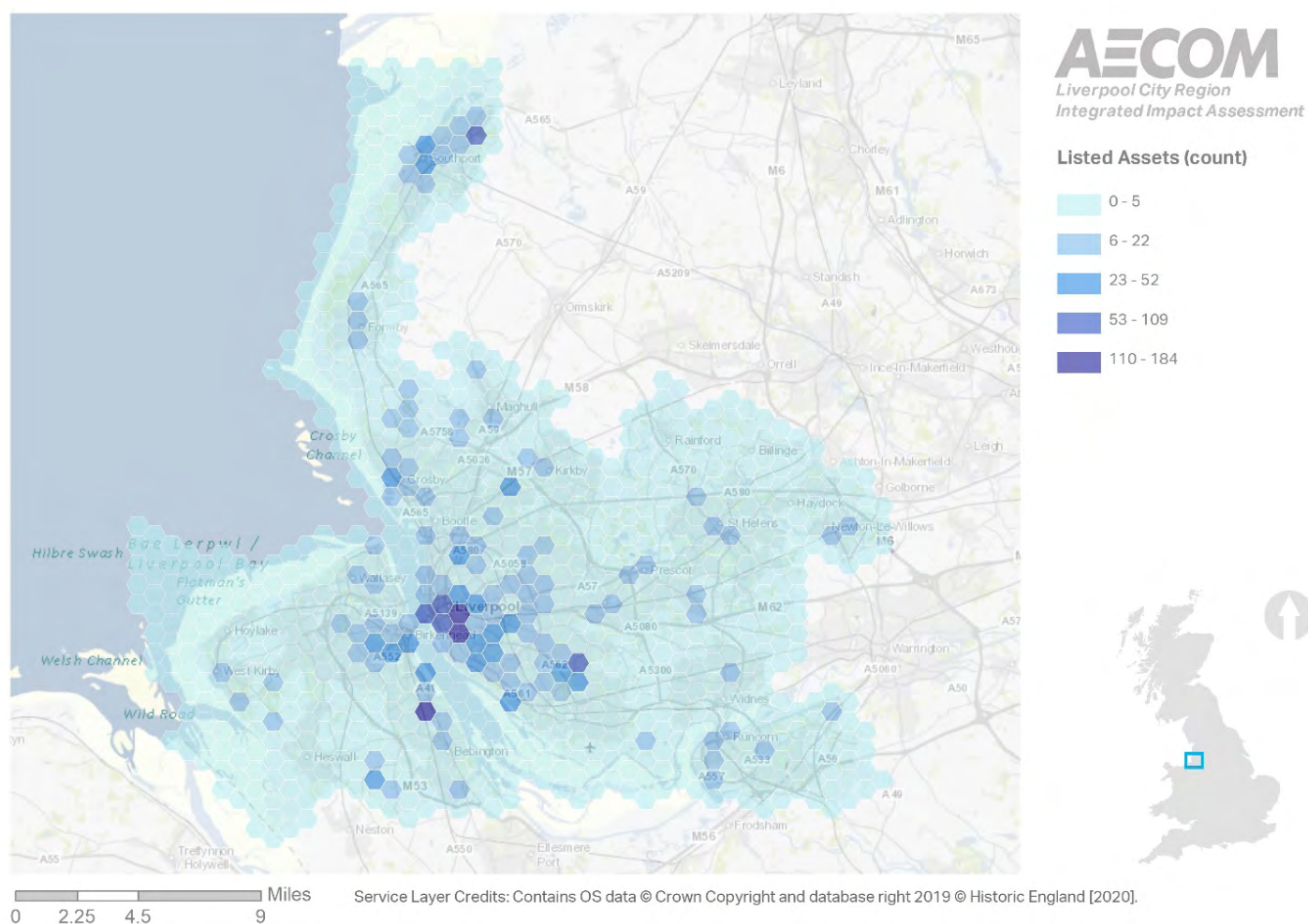
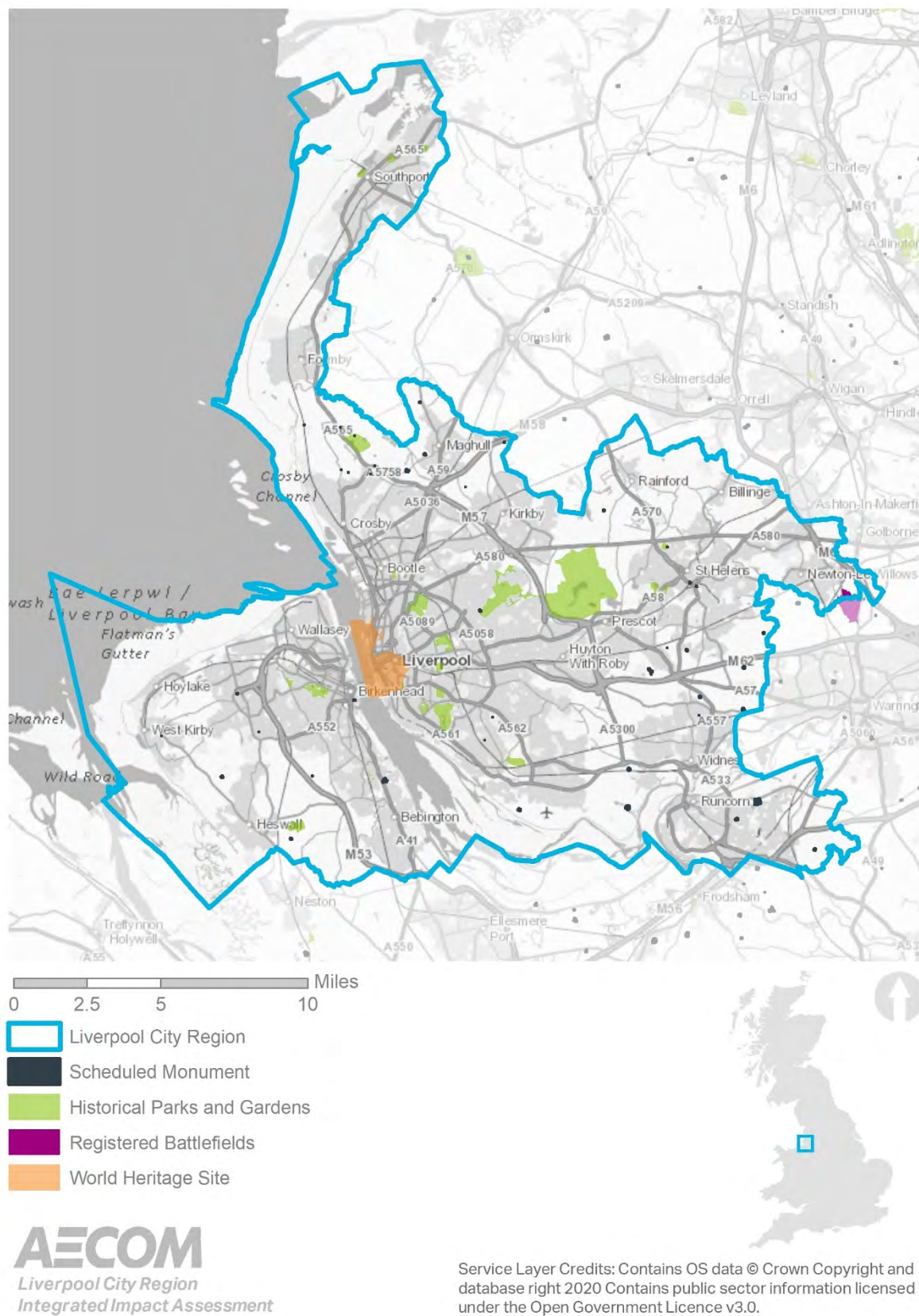


Table 14.1: Local Authority Profiles

2019 Profile	Local authority						
	Halton	Knowsley	Liverpool	Sefton	St Helens	Wirral	
Number of Listed Buildings	Grade I	2	1	28	2	1	9
	Grade II*	17	4	106	21	14	31
	Grade II	108	96	1,397	543	133	683
Number of Scheduled Monuments	7	0	4	13	12	8	
Number of Registered Parks and Gardens	Grade I	0	0	2	0	0	1
	Grade II*	0	0	4	2	0	2
	Grade II	0	1	4	3	3	1
Number of World Heritage Sites	0	0	1	0	0	0	
Number of Registered Battlefields	0	0	0	0	1	0	
Number of Protected Wrecks	0	0	0	0	0	0	
Number of Heritage at Risk entries	6	2	19	10	12	13	

Figure 14.2 Other designated historic assets



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Heritage at risk

- 13.4.9 Figure 14.3 reveals the key heritage assets identified as 'at risk' according to Historic England's list at February, 2020.
- 13.4.10 Liverpool is highlighted as having the largest absolute number of heritage assets at risk, with St Helens, Sefton and Wirral all having similar numbers of heritage assets classified as at risk. The UNESCO World Heritage Site (WHS) has also been included on the 'List of World Heritage Sites in Danger' since 2012.¹⁴⁷ UNESCO identify urban development projects as the predominant threat to the site, more specifically the;
- Lack of overall management of new developments;
 - Lack of analysis and description of the townscape characteristics relevant to the Outstanding Universal Value of the property and important views related to the property and its buffer zone;
 - Lack of clearly established maximum heights for new developments, for the backdrops of the World Heritage areas as well as along the waterfront; and
 - Lack of awareness of developers, building professional and the wider public about the World Heritage property, its Outstanding Universal Value and requirements under the World Heritage Convention.
- 13.4.11 It is also recognised that the WHS, alongside coastal heritage, is under threat from rising sea levels and storm surges. More widely in relation to climate change, the historic environment faces the need to adapt to increase resilience (including refurbishment and retrofitting) whilst ensuring that such measures do not detract from the significance of assets.
- 13.4.12 Sefton has a high rate of conservation area's which are in a state of deterioration. When focusing on the number of listed buildings identified as at risk, in comparison to the number of listed buildings in each area (i.e. the proportion of assets at risk), the following listed assets at risk rates apply:
- Halton: 3.9%
 - St Helens: 2.7%
 - Knowsley and Wirral: 1%
 - Liverpool: 0.7%
 - Sefton: 0.5%.
- 13.4.13 This reveals Halton and St Helens as the areas with the highest rates of at risk listed buildings (as a proportion of total assets). The differences are fairly minor though.

¹⁴⁷ UNESCO (2020) List of World Heritage in Danger [online] available at: <https://whc.unesco.org/en/danger/>

Figure 14.3: Liverpool City Region heritage at risk.



Archaeology

- 13.4.14 There are thousands of recorded archaeological features across the city region, which would be illegible if mapped at a strategic level.
- 13.4.15 The Merseyside Historic Environment Record (HER) contains a wide range of information relating to archaeological sites, finds and other historic features that have been noted and recorded in the region. This can be interrogated to support the plan making and development management process. The HER is important in supporting economic development and planning processes, as early identification of archaeological potential helps to minimise risks to developers.

Trends

- 13.4.16 The table below sets out a brief summary of issues and trends for the local authorities in relation to heritage. Also provided is a summary of the conclusions reached in the relevant SA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Halton	Delivery and Allocations Local Plan: SA Report (July, 2019)	Relatively high rate of listed buildings at risk within the City Region. A schedule was adopted in 2007 seeking to ensure ten Conservation Areas	Policies within the Local Plan will protect and enhance features of historical and archaeological importance which contribute to the cultural and tourism offer of the Borough.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
		had up to date appraisals in place by 2016.	Some development locations have the potential to impact upon cultural heritage, but this will be dependent upon design.
Knowsley	Knowsley Core Strategy SA Report, (2012)	<p>Large 'Knowsley Park' is a Grade II designated historical Park</p> <p>Fifteen Conservation Areas, 3 of which have an Article-4 Direction in place which may restrict certain developments.</p> <p>CA appraisals range from 2005-2019, and some do not have a management plan.</p>	<p>Positive effects upon heritage assets were predicted, mainly due to several policies with requirements to protect environmental characteristics, as well as promoting regeneration in areas such as Prescot.</p> <p>However, there is some uncertainty about the effects on heritage on development at safeguarded / reserved locations (which are amongst those likely to be considered in the next plan period).</p>
Liverpool	SA Report: Submission Draft Local Plan, (Jan 2018)	<p>City centre and towards docks contains a strong concentration of listed buildings.</p> <p>Most number of listed buildings across the city region.</p> <p>36 conservation areas, covering 9% of the city area and protecting 19,000 properties.</p> <p>UNESCO World Heritage Site. The site has been included on the 'List of World Heritage Sites in Danger' since 2012.</p>	<p>The Local Plan is predicted to have a mix of effects upon the built environment and cultural heritage.</p> <p>The main concerns are related to development within the World Heritage Site, and whether these would respect existing character. There are considerable uncertainties though as much of this depends upon design.</p> <p>Other Plan policies seek to ensure high quality, sensitive design, and should therefore help to manage potential adverse effects. However, clearly a continued densification of the City could lead to effects upon its cultural heritage.</p>
Sefton	Sefton Local Plan SA Report (2015)	<p>There are 25 Conservation Areas, with many of the smaller areas not having an appraisal in place. There has been a recent update to several CAAs though.</p> <p>Southport is an important cultural and tourism location.</p> <p>High rate of conservation areas at risk.</p>	<p>The Local Plan is predicted as likely to have a protective effect upon cultural and historic features. In particular, policies ought to help protect the viability and character of town, district and local centres. Though development could have some effects upon the setting of heritage features, it is anticipated that mitigation measures would ensure that effects are neutralised or minor.</p>

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
St Helens	St Helens Local Plan: Submission Draft: SA Report (Jan 2019)	<p>High rate of listed buildings at risk.</p> <p>Eight conservation areas. Most have CA appraisals ranging between 2008-2011; with only Earlston having a recent appraisal in 2016.</p> <p>Battleground (Winwick) partly falls within the borough.</p>	<p>A continued focus on regeneration is likely to have positive effects with regards to the built environment. There are also a range of measures to protect and enhance heritage.</p> <p>However, some minor negative effects on heritage assets are likely to occur as a result of development on certain allocated sites.</p>
Wirral	Wirral Issues and Options Consultation, Interim SA Report (Dec, 2019)	<p>Birkenhead as a concentrated centre of listed buildings.</p> <p>The waterfront environment is an important backdrop to Liverpool UNESCO WHS.</p> <p>There are 26 Conservation Areas, each with an appraisal and management plan. Most of these pre-date 2010 though.</p> <p>Some evidence that the important Battle of Brunanburh may have taken place somewhere on the Wirral peninsula.</p> <p>Birkenhead Park has particular and internationally recognised historical significance.</p>	<p>An approach that focuses on urban regeneration (as proposed in the issues and options consultation) could have mixed effects with regards to heritage. In particular, there are important historic buildings and landscapes along the east Wirral coastline that could be affected by growth. Design and layout will be very important.</p> <p>In the longer term, should there be a need to release greenbelt land, it is probable that development would have adverse effects on historic landscapes and / or specific assets.</p>

13.5 Key issues

13.5.1 The following key issues emerge from the scoping exercise:

- The policy context makes it clear that the protection and enhancement of the historic environment is important. Historic features and cultural heritage can contribute towards sense of community and wellbeing. This extends designated assets to include non-designated and locally valued assets as well as their settings and historic landscape character.
- Liverpool has significantly more listed buildings than the other local authorities in the Liverpool City Region, these are clustered in the city centre and docklands area, including the UNESCO site. The City is an important cultural hub, economy and focus for development. Elsewhere, clusters of listed heritage assets can be found in built-up areas mostly, with Southport and Birkenhead both showing concentrations of buildings and features. It will be important to ensure that new development does not affect the significance of designated assets, non-designated assets and their settings.

- Halton and St Helens both have the highest proportions of listed buildings at risk, whilst Sefton has the greatest proportion of conservation areas at risk. Liverpool has the highest absolute numbers of heritage at risk and the Liverpool World Heritage Site has also been included on the 'List of World Heritage Sites in Danger' since 2012. Opportunities to support the conservation and on-going maintenance of heritage at risk should be capitalised upon through strategic planning.
- There is a need to update character appraisals for many of the settlements / Conservation Areas across the region.
- Consideration should be given to the re-use and suitable adaptation of historic buildings taking advantage of opportunities to contribute to climate change mitigation and resilience.

13.6 Scoping outcome

13.6.1 Considering the key issues discussed above it is proposed that the topic of historic environment should be **SCOPED IN** to the integrated Appraisal. The following objective and supporting questions are proposed as part of the IIA Framework.

IIA objective	Assessment questions (will the option/ proposal help to...)
Protect, maintain, conserve and enhance the historic environment, heritage assets, and cultural heritage.	<ul style="list-style-type: none"> • Conserve and enhance historic assets and their settings? • Ensure that growth sustains and enhances local character and distinctiveness across the LCR? • Recognise and promote the role of the historic environment in contributing to community identity and making the City Region a popular and attractive place to visit? • Value and protect the UNESCO World Heritage Site?

14. Waste

14.1 Introduction

- 14.1.1 Human activities use resources and create 'wastes'. Traditionally, much of this waste material was discarded and either sent to landfill or incineration. There is now a much stronger recognition that resources are finite and disposal of waste is problematic. Therefore, resources need to be managed sustainably, with a move to a 'circular economy'. This means using less natural resources, producing less waste, reusing and recycling materials and promoting more sustainable uses for residual material such as energy from waste.
- 14.1.2 This section provides a strategic review of the policy context, literature, and baseline position in relation to the following important factors.
- Waste generation
 - Waste management
 - Waste facilities

14.2 Context review

International

- 14.2.1 **UN Sustainable Development Goals** are 17 life changing goals outlined by the UN in 2015. The following are of direct relevance for waste and resources:
- Goal 12: Responsible Consumption: To foster eco-friendly production, reduce waste and boost recycling.
- 14.2.2 The Directive 2008/98/EC on waste, the so-called **Waste Framework Directive**, (Council of the European Union and European Parliament, 2008) introduces the basic concepts and definitions relating to waste management, such as types of waste, recycling and recovery. It establishes when waste ceases to be waste and becomes a secondary raw material (so-called end-of-waste criteria), and distinguishes between waste and by-products. The Directive lays down some basic waste management principles:
- 14.2.3 Another piece of legislation which is of paramount importance is the **Landfill Directive 1999/31/EC** (Council of the European Union, 1999). This Directive aims at significantly reducing landfilling. Landfilling is the worst option from an environmental and resource efficiency perspective.

National

- 14.2.4 Responsible authorities must ensure that waste is handled in a manner which protects human health and the environment through testing the suitability of proposed sites, against the policies and factors in the National Planning Policy for Waste. LPAs should also work with Environmental Health colleagues, Public Health England and the Environment Agency and ensure land raising or landfill sites are restored to beneficial after-uses (e.g. agriculture, biodiversity, forestry, amenity) at the earliest opportunity and to high environmental standards.
- 14.2.5 The **National Planning Policy for Waste (2014)** sets out detailed waste planning policies. These are mainly focussed on the responsibilities of waste planning authorities and include:
- Using a proportionate evidence base to plan new capacity and spatial distribution in terms of waste arisings locally and in a wider context;

- Consider the need for waste management facilities alongside other spatial planning concerns;
 - Identify the need for waste management facilities;
 - Identifying suitable sites and areas for new waste management facilities;
 - Policy on determining planning applications;
 - Monitoring to inform local plan preparation and the determination of planning applications
 - The factors that proposed sites should be considered to determine suitability.
- 14.2.6 The **National Waste Management Plan for England (2013)** is a high level document which is non-site specific. It provides an analysis of the current waste management situation in England, and evaluates how it will support implementation of the objectives and provisions of the revised Waste Framework Directive.
- 14.2.7 The **Clean Growth Strategy**²⁴ (2017) sets out a blueprint for a low carbon future by outlining proposals for decarbonising all sectors of the UK economy. Key aims include accelerating the shift to low carbon transport and homes and enhancing the benefits and value of natural resources by preserving and establishing new natural assets such as forests, minimising avoidable waste and managing emissions from landfill.
- 14.2.8 In the **Environmental Bill 2020 Policy Statement** there is a clear objective to move our economy away from the ‘take, make, use, throw’ system to a more circular economic model. The ambitions of the new bill are:
- Keep resources in use for longer and ensure that we extract the maximum value we can from them.
 - The clauses will set a minimum eco-design requirement for products and require provision of information to buyers of products that are more durable, repairable and recyclable products and banning those products that cannot be reused or recycled.
 - The bill will act on illegal waste activities. The government seeks to improve the management of waste and reduce the risk of economic, environmental and social harm that illegal activity often causes.

City Region

- 14.2.9 The **Joint Recycling and Waste Management Strategy for Merseyside** addresses resource efficiency. It aims to headline the strategic route map to deliver sustainable waste management on Merseyside, transform the waste agenda and move towards greater resource efficiency. The plan will support the following objectives:
- Promote behavioural health
 - Promote the use of renewable energy
 - Achieve high recycling rates
 - Promote resource efficiency
 - Provide sufficient capacity for waste management activity
- 14.2.10 The **Joint Merseyside & Halton Waste Local Plan**¹⁴⁸ was adopted by all six Merseyside Councils and came into effect on the 18th July 2013. This sets the framework for the management, reuse, recycling or disposal of waste / resources.
- 14.2.11 The **Skills for Growth Action Plan Low Carbon Economy 2018–2020**¹⁴⁹ plan seeks to reduce energy demand through efficiencies, and waste through the circular economy. Waste

¹⁴⁸ Waste Planning Merseyside (2013) Joint Waste Local Plan 2013 [online] available at: http://www.meas.org.uk/media/4981/ADP-001-WasteLocalPlan_Final_LoRes_opt.pdf

¹⁴⁹ LCRC (2018) Low Carbon Economy 2018 – 2020: Skills for a Growth Action Plan. [online] Available at: http://www.lcrskillsforgrowth.org.uk/uploadedfiles/documents/LCRC_SFGAP_LOWCARBON.pdf

collection, treatment and materials recovery are part of the Liverpool City Region Low Carbon Economy.

- 14.2.12 Through the (draft) **Local Industrial Strategy** (2020) LCRCA will work towards a Circular Economy approach to sustainable resource production and consumption across all sectors to enable the reduction of waste, the re-use of products and materials and the efficient conversion of waste from one process into raw materials for another.

Local

- 14.2.13 Table 15.1 below highlights the common themes, policy approaches and strategic priorities for waste that are common to each of the six authorities. Locally specific issues have also been drawn out where they are of strategic importance.

Table 15.1. Key messages for waste.

Key policies & principles	Source / Authorities
Waste will be managed in a sustainable manner in accordance with the waste Hierarchy.	Adopted and / or emerging Local Plans for all authorities
Encourage the sustainable transport of waste.	
Contribute towards meeting the sub-regional waste management needs.	Mayor of Liverpool's Inclusive Growth Plan (2018).
Ensure that waste management does not cause negative effects on the environment and communities.	Joint Merseyside & Halton Waste Local Plan (2013).

14.3 Focused literature review

- 14.3.1 Human activities generate large amounts of waste which needs to be handled, stored, collected and disposed of in a way that does not cause risks to human health and the environment (Zhu et. al. 2008, Public Health England, 2018).

Poor management of waste can cause serious environmental and health risks

- 14.3.2 Unscientific disposal of waste can cause serious environment and health risks (Gupta et. al. 1998) (Kansal et al. 1998). This tends not to be as much of an issue in developed countries such as the UK, but polluting activities can still occur.

- 14.3.3 Public Health England (2018) suggests that 80% of waste related damage to the environment (and subsequent human health) could be avoided through more thoughtful decisions about design, choice of materials and chemicals used.

- 14.3.4 Inadequately disposed of or untreated waste may cause serious health problems for populations surrounding the area of disposal. Other nuisances caused by uncontrolled or mismanaged waste disposal which may affect citizens negatively include impacts at local level, such as landscape deterioration, local water and air pollution, as well as littering, noise and other amenity concerns (World Health Organisation, 2015).

- 14.3.5 There is 'convincing evidence' that gastrointestinal symptoms result from bathing in sewage contaminated recreational waters (Saffron, L. et al, 2003). Pollution events such as flooding and direct effluence into rivers and the sea can contribute to such situations.

Improved management of waste is beneficial to the environment, with knock-on benefits to health

- 14.3.6 The appropriate disposal of waste has a beneficial impact not only on the economy but the environment and population health. Increasing environmental practices throughout the

industry can reduce impacts on the environment such as air and water pollution. Ultimately this improves health and wellbeing. (WHO, 2003).

Communities in close proximity to waste management plants can be adversely affected

14.3.7 The populations living in proximity of waste disposal plants are often more deprived than general population, which invokes environmental health inequalities.

14.3.8 The Environment Agency (2005) commented on a range of studies that sought to find links between waste facilities and human health. There are some correlating factors, but strong causative links have not been established and further research is required. For example:

- Mental health could suffer for those in areas where waste facilities are planned or already exist (though this could be complicated by the presence of social deprivation).
- A large UK study has reported a small excess risk of congenital abnormalities for babies born to mothers residing within 2 km of landfill sites, compared with mothers residing further than 2 km
- Exposure to bioaerosols associated with composting can cause respiratory problems, particularly within a 250m buffer zone.

14.4 Baseline review

Waste generation

Total waste production

14.4.1 In terms of the total amounts of waste being produced, Liverpool was ahead of the other authorities in the City Region for 2018/2019. However, the picture is somewhat different when looking at the amount generated per capita; with Liverpool having the lowest percentage.

Figure 15.1: Total local authority collected waste.

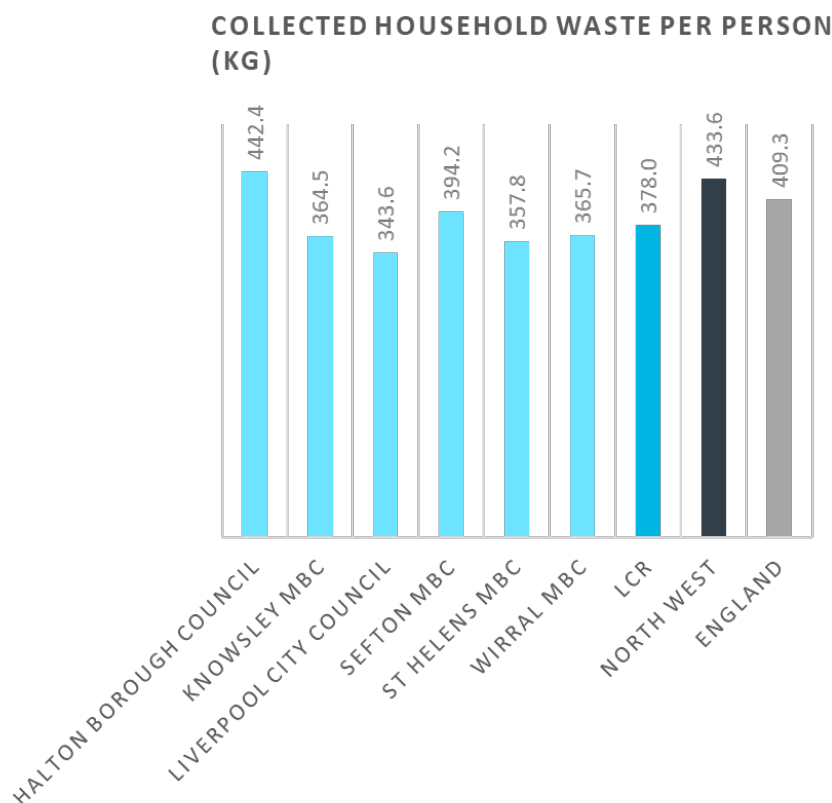


Data from 2018/2019 on total (household and non-household collected waste) (source: <https://www.gov.uk/government/statistical-data-sets/env18-local-authority-collected-waste-annual-results-tables>)

Per capita waste generation

- 14.4.2 Figure 15.2 shows how overall; the Liverpool City Region has lower levels of household waste person than the regional and national equivalent figures (2018/2019). Liverpool has the lowest amount of household waste person in the region, whereas Halton stands out as creating the most household waste per person.

Figure 15.2: Household waste in the Liverpool City Region. *Contains public sector information licensed under the Open Government Licence v3.0.*

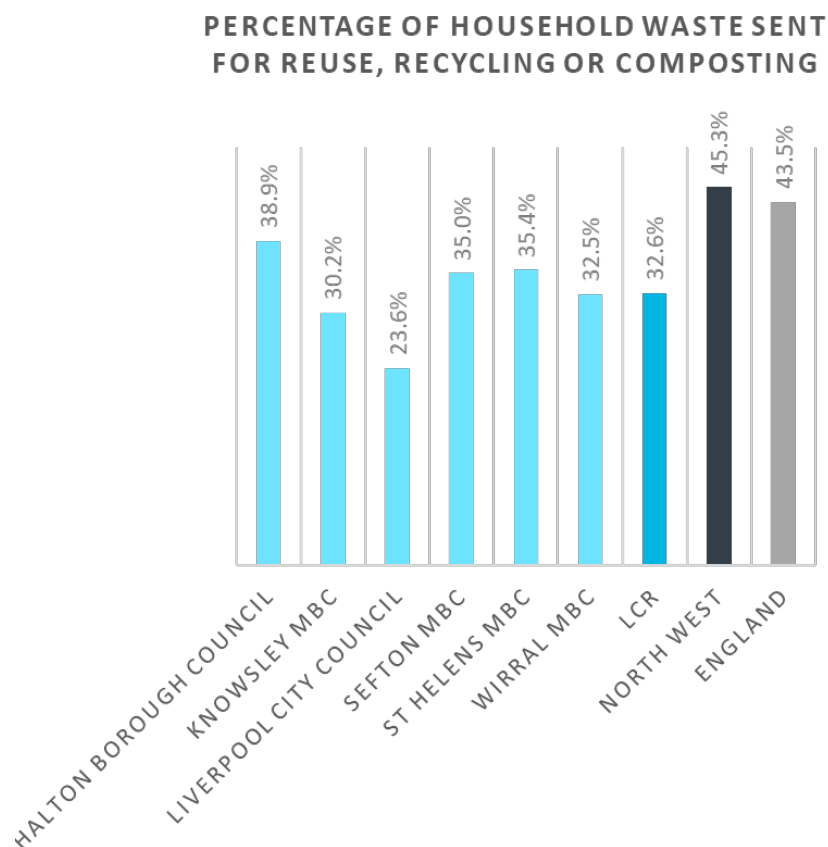


Waste management

- 14.4.3 A range of dry recyclable materials are collected by each local authority, and these are transferred primarily to Materials Recovery Facilities at Bidston (Wirral) and Gillmoss (Liverpool). Here, mixed dry recyclable waste is sorted by the use of mechanical separation techniques and the resulting materials are then sent to a range of end users.
- 14.4.4 Non-recyclable waste is referred to as 'residual waste'. All of Merseyside and Halton's residual waste is sent to an Energy from Waste (EfW) plant in Teeside. This burns waste to generate electricity for the national grid and high pressure steam for local industrial use.
- 14.4.5 Figure 15.3 reveals that the Liverpool City Region has low rates of recycling compared to regional and national equivalents; the overall city region's recycling rate is 12.7 percentage points lower than rates in the North West. Where Halton creates the most household waste per person, they have the highest recycling rates in the city region. Liverpool has the lowest recycling rates, at almost 50% of the North West's average.

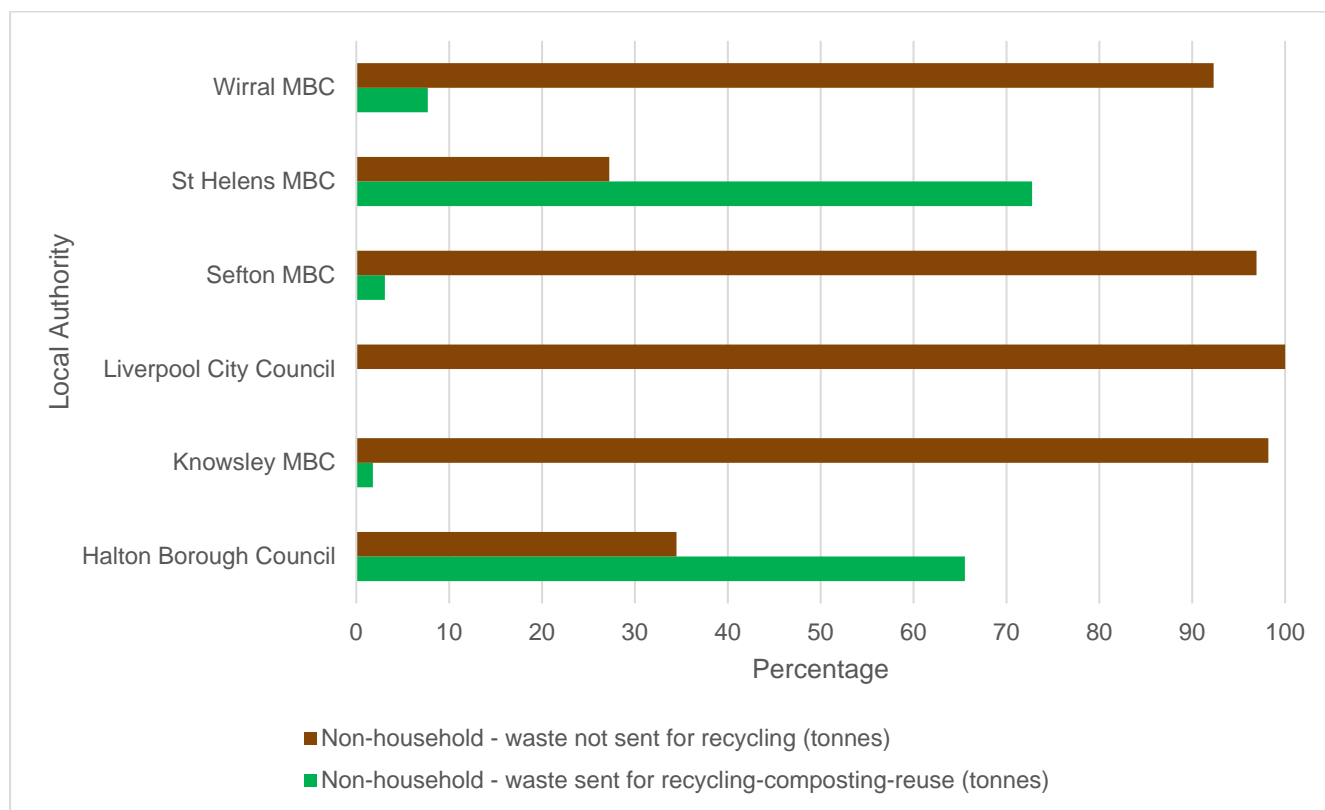
The 2018-19 monitoring report for the Joint Waste Local Plan¹⁵⁰ identifies that over the monitoring period 2018 to 2019 eight waste management facilities were consented, yielding 400,000tpa capacity. Four recycling facilities and 4 ‘other recovery’ (e.g. energy from waste) facilities were also consented. The report further indicates that the recycling rate for the Plan Area continues to fall from 41.1% in 2016-17 to 37.9% in 2018-19.

Figure 15.3: Household waste recycling rates (2018/2019). *Contains public sector information licensed under the Open Government Licence v3.0.*



¹⁵⁰ Waste Planning Merseyside (2020) Implementation and Monitoring Report 2018-19 Joint Merseyside and Halton Waste Local Plan [online] available at: <http://www.meas.org.uk/media/9130/wlp-monitoring-report-2018-2019.pdf>

Figure 15.4: Industry and commercial waste *Data from 2018/19 on all LA collected waste - this includes construction and demolition waste, as well as parks etc* <https://www.gov.uk/government/statistical-data-sets/env18-local-authority-collected-waste-annual-results-tables>)



14.4.6 The picture for industrial and commercial waste is somewhat different. As can be seen in figure 15.4, the vast majority of these waste streams are not sent for recycling, composting or reuse. Only St Helens and Halton buck this trend.

Access to waste recycling facilities

14.4.7 There are several waste recycling centres / transfer stations in each of the local authorities within the City Region; a total of sixteen.

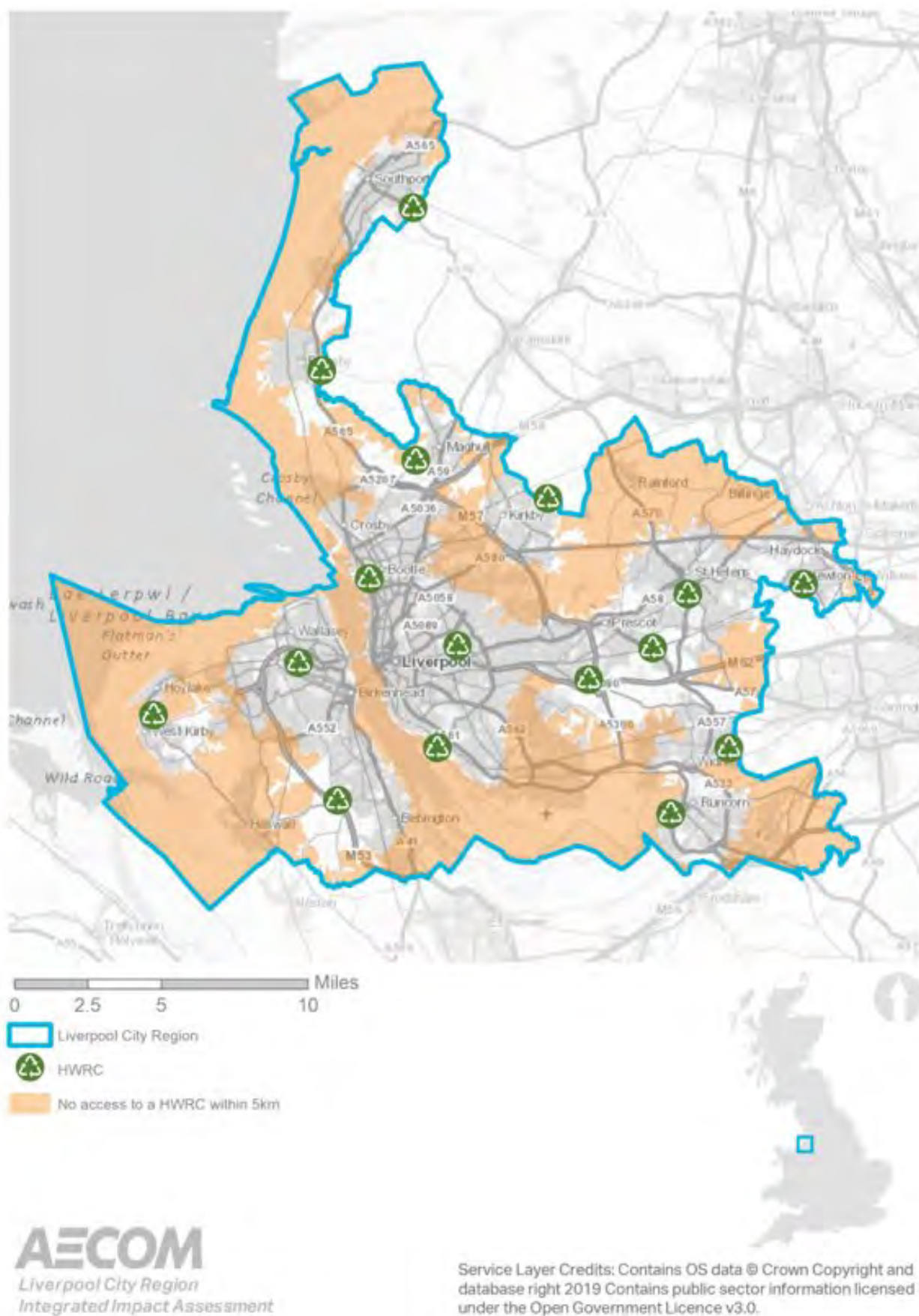
14.4.8 Having good access to facilities is important as it reduces the length of trips required to be made when residents have excess 'waste'.

14.4.9 The distribution of centres means that 77% of the population in the Liverpool City Region live within 5km of one of these centres. This is illustrated on figure 15.5.

14.4.10 Some of the more peripheral parts of the LCR have poorer accessibility. However, it is noted that there are facilities in neighbouring areas such as Skemersdale, Gatewarth in Warrington and at Neston.

14.4.11 However, these facilities are also more than 5km distance for most communities in the LCR, and for some (for example Neston) a permit is needed.

Figure 15.5 Accessibility to Household Waste Recycling Centres



Trends

14.4.12 The table below sets out a brief summary of issues and trends for the local authorities in relation to waste. Also provided is a summary of the conclusions reached in the relevant SA documents (prepared in support of adopted / emerging local plans). These are helpful markers of the potential impacts that could occur in the next 20 years and beyond.

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
Halton	<p>Delivery and Allocations Local Plan: SA Report (July, 2019).</p> <p>Joint Merseyside & Halton Waste Local Plan (2013).</p>	<p>Halton has higher amounts of household waste produced than the LCR average.</p> <p>Second largest % of commercial waste sent for recycling of all authorities in the City Region.</p>	<p>The Plan policies are predicted to have mostly limited effects with regards to waste and recycling. This is to be expected given that the Plan does not deal with detailed waste matters.</p> <p>The main impacts are associated with increased growth in homes. However, this is not a significant departure from the baseline position (which would still see an increase in development).</p>
Knowsley	<p>Knowsley Core Strategy SA Report, (2012).</p> <p>Joint Merseyside & Halton Waste Local Plan (2013).</p>	<p>Slightly lower levels of waste generated per capita compared to the city region average.</p> <p>Relatively low level of domestic waste sent for recycling.</p> <p>Very small proportion of commercial waste sent for recycling.</p>	<p>Positive effects are identified in relation to policies that promote effective waste management and recycling. However, there was <u>uncertainty</u> about the effect that new development would have on waste generation and whether this would be offset by mitigation requirements.</p>
Liverpool	<p>SA Report: Submission Draft Local Plan, (Jan 2018).</p> <p>Joint Merseyside & Halton Waste Local Plan (2013).</p>	<p>Liverpool produces the lowest amount of waste per household in the LCR. However, has relatively low recycling rates.</p> <p>The vast majority of residents can access a waste recycling centre within 5km.</p>	<p>Negative effects are discussed in relation to new development and the inevitable waste that it generates. However, it is also acknowledged that much development is on brownfield land whereby materials could be - reused and the need for virgin materials is lesser. New development also provides opportunities for design and specifications that encourage sustainable waste management.</p>
Sefton	<p>Sefton Local Plan SA Report (2015).</p> <p>Joint Merseyside & Halton Waste Local Plan (2013).</p>	<p>Sefton has higher amounts of household waste produced than the LCR average.</p>	<p>Overall, neutral effects are predicted with regards to waste as the Plan policies are largely reflective of the existing policy framework. The alternatives assessment process suggests that higher levels of growth would have negative impacts though due to increased use of resources.</p>

Local Authority	Key studies / evidence	Issues and trends	Conclusions from Local Plan SA documents
St Helens	Sefton Local Plan SA Report (2019). Joint Merseyside & Halton Waste Local Plan (2013).	Largest % of commercial waste sent for recycling of all authorities in the City Region.	Overall, the effects of the Plan are predicted to be neutral; acknowledging that high levels of growth can affect the use of natural resources, but the efficiency of resource use and waste generation ought to be improved
Wirral	Wirral Issues and Options Consultation, Interim SA Report (Dec, 2019). Joint Merseyside & Halton Waste Local Plan (2013).	Residents in the Heswall area have relatively poor access to a HWRC in terms of distance.	Waste generation and efficiency was scoped out of the SA process as it was considered that significant effects relating to the Plan were unlikely.

14.5 Key issues

- 14.5.1 Overall, the Liverpool City Region produces significant less waste per household than regional and national equivalents, with Liverpool producing the least.
- 14.5.2 When focusing on recycling, the Liverpool City Region has lower rates than regionally and nationally, with Liverpool demonstrating the lowest rates by a large margin. However, the majority of residual waste is sent for incineration at an energy from waste plant (providing electricity and heat for other uses).
- 14.5.3 With regards to emerging or Adopted Local Plans, the SA findings reveal similar outcomes for each authority. Broadly speaking, development could lead to an increase in waste generation and resource use. However, this would not be a significant departure from the baseline policy situation. Furthermore, there is a collective objective across the LCR authorities to implement sustainable waste management practices. At accelerated levels of growth though, impacts in terms of waste generation, the need for new facilities, and potential impacts on human health would need to be carefully managed.
- 14.5.4 Though not conclusive, evidence suggests that waste management facilities can have actual or perceived adverse impacts on the environment and human health (particularly in close proximity to facilities). However, with adequate mitigation, such effects can usually be managed successfully.
- 14.5.5 The transport and treatment of recyclable materials is generally undertaken within the City Region; though some processed resources are shipped further afield. Residual waste is transferred relatively far away to Teeside; but helps to generate electricity and heat.

14.6 Scoping outcome

14.6.1 Considering the key issues discussed above it is proposed that the topic of waste should be **SCOPED IN** to the integrated Appraisal. The following objective and supporting questions are proposed as part of the IIA Framework.

IIA objective	Assessment questions (will the option/ proposal help to...)
Minimise waste generation and support the circular economy by implementing the waste hierarchy.	<ul style="list-style-type: none">• Reduce waste generation associated with new development?• Promote the use of secondary materials?• Support the management of waste close to sources of generation?• Ensure that negative health impacts associated with waste management are avoided?

15. Minerals

15.1 Introduction

- 15.1.1 Mineral resources are vital to the production of energy, buildings, infrastructure and technology. As such they form a key part of the economy and the UK's industrial heritage. Due to the nature of mineral deposits though, they are only present in certain locations and are not a finite resource. Identifying, safeguarding and sustainable extraction of minerals are therefore vital components of a successful economy.
- 15.1.2 This section provides a strategic review of the policy context, literature, and baseline position in relation to the following important factors.
- Mineral resources

15.2 Context Review

National

- 15.2.1 The NPPF states that "It is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs. Since minerals are a finite natural resource, and can only be worked where they are found, best use needs to be made of them to secure their long-term conservation".
- 15.2.2 Planning Practice Guidance (PPG) states that Mineral planning authorities should plan for the steady and adequate supply of minerals, with an important role to identify and protect areas for future minerals working.

City Region

- 15.2.3 The Evidence Base for **Minerals Planning in Merseyside – Final Report** (2008) is not a minerals plan in itself, but it presents an evidence base "to be used during the development of a minerals planning policy framework in Merseyside".⁵² The report was prepared by Greater Manchester Geological Unit, and it identifies potentially viable mineral deposits along with potential constraints on the exploitation of these. It does not appear that either a regional or Borough-wide minerals plan has subsequently been prepared.

Local

- 15.2.4 The authorities within the LCR each consider minerals matters within their own individual Local Plans (whether Adopted or emerging). Table 1461 below highlights the common themes, policy approaches and strategic priorities for heritage that are common to each of the six authorities. Locally specific issues have also been drawn out where they are of strategic importance.

Table 15.1. Key messages for minerals

Key policies & principles	Source / Authorities
Important minerals infrastructure and resources must be safeguarded to ensure a steady and secure supply.	Adopted and / or emerging Local Plans for all authorities.
The environmental and social impacts of mineral extraction must be managed.	
To minimise the need for minerals extraction, the use of recycled, secondary and substitute materials will be encouraged	

15.3 Focused literature review

- 15.3.1 Restoration of former mineral works can lead to havens for nature conservation and recreation; both of which have direct benefits to health in terms of access to green space and physical activity (RSPB, 2006).
- 15.3.2 An excellent example in the LCR is Bold Forest Park in St Helens, which saw the transformation of colliery spoil heaps into an important community asset.

15.4 Baseline review

Mineral resources

- 15.4.1 There is a limited amount of sand and gravel extraction in the Liverpool City Region. However, the Ports of Liverpool are important in terms of the landing of marine-dredged material, and this relies on the wharves and supporting transport infrastructure being safeguarded.
- 15.4.2 Greater Manchester, Merseyside and Halton, and Warrington work together to manage local aggregates in the sub-region. An important piece of evidence is the Joint Local Aggregate Assessment. The latest, produced in January 2019, covers aggregate supply in the sub-region in 2017. Some key facts and trends are noted as follows:
- the North West region is a net exporter of sand and gravel and a net importer of crushed rock.
 - whilst there are six active crushed rock aggregate quarries in the sub-region, the assessment identifies that *“sales do not match consumption levels for materials required to service Greater Manchester, Merseyside, Halton and Warrington, with consumption rates continuing to be significantly higher, placing a greater demand on imports to meet the needs of the sub-region”*.
 - it is likely that imports of primary aggregate material into the sub-region will continue to be important. It is also likely that secondary and recycled aggregates will continue to complement primary aggregate extraction in the sub-region.
 - Bold Heath Quarry is the only facility in the LCR with active planning consent for production of crushed rock (sandstone) aggregate.

Trends

- 15.4.3 Liverpool is a densely developed urban area and therefore, there is little scope for minerals extraction within the City. Liverpool has no remaining workable deposits of minerals for commercial extraction.
- 15.4.4 Mineral extraction opportunities are fairly limited in Sefton, but there is potential for energy mineral exploration and/or extraction, including oil, gas and hydraulic fracturing of shale gas
- 15.4.5 Knowsley has a long history of extraction of minerals such as coal and clay for brick making. With the exception of those at Cronton Clay Pit, the operations have now ceased.
- 15.4.6 St.Helens Borough has been a location of significant minerals production in the past, including the extraction of coal (both deep-mined and open cast), clay, sandstone and sand and gravel. Whilst reserves of these minerals remain, much of this activity has now ceased. There is now only one quarry site in the Borough with an active planning consent – Bold Heath Quarry – that produces crushed sandstone for use in the construction industry. In addition, there is active permission for methane extraction from the workings of the former Sutton Manor Colliery near Union Bank Farm.
- 15.4.7 There are currently no operational mineral sites in Halton Borough and there is limited evidence of previous activity
- 15.4.8 Wirral has one active site for Clay extraction, and some limited resources of sand and gravel. However, these lie in sensitive locations. There are important existing infrastructure assets though such as wharves, transport infrastructure and processing facilities.

15.5 Key issues

- 15.5.1 There are some limited resources that need to be safeguarded to help ensure a steady supply of minerals.
- 15.5.2 The City Region is a net importer of minerals for construction, including sand and gravel, and aggregates such as crushed rock.
- 15.5.3 The efficient use and recycling of minerals is important to reduce reliance on imports.
- 15.5.4 Parts of the City Region may be suitable for energy minerals exploration, but there is a need to ensure that sensitive environmental receptors are protected.

15.6 Scoping outcome

- 15.6.1 Considering the key issues discussed above it is proposed that the topic of minerals should be **SCOPED IN** to the integrated Appraisal. The following objective and supporting questions are proposed as part of the IIA Framework.

IIA objective	Assessment questions (will the option/ proposal help to...)
Ensure a steady and stable supply of minerals whilst promoting their efficient use and sustainable methods of extraction.	<ul style="list-style-type: none"> • Encourage the use of secondary and recycled materials rather than virgin minerals? • Ensure that mineral workings do not have unacceptable impacts upon human health or the environment? • Safeguard existing infrastructure that contributes to minerals extraction and transportation?

16. The IIA Framework

16.1.1 The IIA framework is presented in full below. It consists of sixteen core objectives, which are supported by a range of guiding questions.

16.1.2 As demonstrated in the previous chapters of this report, the IIA framework has been developed through a consideration of the policy context, focused literature and baseline conditions in relation to each aspect of sustainability.

Table 17.1: The Integrated Appraisal Framework

IIA objective	Assessment questions (will the option/ proposal help to...)
<p>Ensure places are designed to allow public health and safety measures to be employed effectively.</p>	<ul style="list-style-type: none"> • Ensure that development does not increase flood risk on site or elsewhere? • Ensure places are designed to allow public health and safety measures to be employed effectively? • Ensure that critical infrastructure is resilient to the effects of climate change? • Locate development in appropriate locations?
<p>Facilitate and contribute to the move towards a zero carbon Liverpool City Region; whilst improving social equity of access to energy.</p>	<ul style="list-style-type: none"> • Avoid the sterilisation of renewable energy opportunities by locating incompatible development in areas with greatest suitability for generation? • Support the continued growth in renewable energy generation across the Liverpool City Region? • Continue to drive down greenhouse gas emissions associated with transport, housing and business? • Reduce energy consumption? • Decouple energy consumption and affluence? • Ensure affordable access to energy for all members of the community? • Lead to greater self-sufficiency in energy provision?
<p>Support healthy lifestyles for all community groups, whilst seeking to close 'inequality gaps' and improve resilience to health issues.</p>	<ul style="list-style-type: none"> • Ensure that places are designed to support improved access to recreation opportunities and natural greenspace? • Ensure that places are designed that allow social distancing measures to be employed effectively? • Improve access to suitable housing and employment opportunities? • Reduce inequalities in health between the most and least affluent communities? • Support active travel? • Will there be a change in demand for or access to health and social care services?
<p>Improve mental health and wellbeing, particularly in areas of greatest need.</p>	<ul style="list-style-type: none"> • Strengthen protective factors for mental health such as socio-economic and environmental conditions and community support networks? • Ensure access to good quality, affordable food? • Provide opportunities for people to pursue meaningful activities?

IIA objective	Assessment questions (will the option/ proposal help to...)
<p>Ensure that everyone has access to suitable, safe and secure housing accommodation in sustainable locations.</p>	<ul style="list-style-type: none"> • Secure the delivery of affordable housing? • Ensure that those in greatest need can benefit from access to affordable housing? • Improve housing condition for existing poor quality stock? • Ensure that new development is of a high basic standard and seeks to deliver exceptional design? • Meet the specific needs of different community groups? • Be designed to meet the changing needs of householders?
<p>Achieve a sustainable and inclusive economy in the city region that builds upon current strengths and the opportunities offered by investment and innovation.</p>	<ul style="list-style-type: none"> • Respond to the 'grand challenges' and transformational opportunities as outlined in the draft LCR LIS? • Build upon the City Region's strong tourism sector? • Facilitate growth in attractive locations with excellent accessibility via sustainable modes of transport? • Make the most of the opportunities offered by the Northern Powerhouse? • Provide high quality, sustainable jobs whilst ensuring education and skills are improved through demand-led approaches? • Support businesses to grow by enabling the development of the right economic infrastructure and of innovation assets? • Create a paradigm shift in economic growth that eradicates inequalities and decouples economic activity from environmental degradation? • Creates resilience to future economic shocks?
<p>Improve accessibility and transport networks, whilst reducing the negative impacts of vehicular travel and supporting a greater shift to active and sustainable modes of travel.</p>	<ul style="list-style-type: none"> • Reduce the impact of increased freight traffic on the road networks? • Reduce emissions of greenhouse gases and pollutants associated with vehicular travel? • Consider cross boundary implications of long distance travel? • Encourage and enable greater amounts of walking and cycling? • Support greater patronage of public transport? • Manage congestion at peak times and pressured locations?
<p>Ensure that everybody has equity and justice and that diversity is embraced; allowing all people to fulfil their potential in life.</p>	<ul style="list-style-type: none"> • Tackle inequalities between different communities? • Ensure that those with 'protected characteristics' are not disproportionately affected negatively by development? • Retain community identities whilst encouraging diversity and strengthening relationships between different groups?

IIA objective	Assessment questions (will the option/ proposal help to...)
<p>Avoid unacceptable impacts upon species and habitats; whilst ensuring the strengthening of ecological networks and an overall net gain in biodiversity value.</p>	<ul style="list-style-type: none"> • Avoid unacceptable harm to key habitats? • Avoid severing ecological corridors? • Improve the resilience of ecosystems to climate change and other pressures? • Achieve net gain in biodiversity value? • Ensure new development and growth in the Ports / along waterside environments does not have a detrimental impact upon habitats and wildlife? • Recognise the multiple ecosystem services that biodiversity provides?
<p>Achieve cleaner air across the City region, whilst protecting the environment and people from the effects of poor air quality.</p>	<ul style="list-style-type: none"> • Achieve a reduction in emissions from vehicular travel? • Avoid and mitigate the effects of poor air quality on human health? • Improve air quality through enhancements to green infrastructure in urban areas? • Target air quality measures towards the most vulnerable receptors?
<p>Ensure the sustainable management of water resources, helping to protect and enhance value with regards to the environment, human health and economic growth.</p>	<ul style="list-style-type: none"> • Support improvements to the ecological quality of waterbodies in line with WFD requirements? • Maintain areas with excellent / good water quality and make improvements where necessary? • Promote the role of water resources for their recreational and economic benefits without compromising environmental quality? • Promote the integration of blue infrastructure into new developments? • Ensure the timely phasing of wastewater and drainage infrastructure improvements to support new development?
<p>Promote the effective use of land and soil; ensuring that the best and most versatile agricultural land resources are preserved and used effectively by prioritising brownfield development and the remediation of contaminated land.</p>	<ul style="list-style-type: none"> • Promote the use of previously developed land where this exists as a viable alternative to greenfield development? • Avoid the loss of the highest quality agricultural land (particularly, where there are poorer quality alternatives)? • Promote the effective use of agricultural land for temporary uses where soil quality can be retained? • Promote community food growing and greater self-sufficiency? • Promote the timely remediation of contaminated land?
<p>Protect and enhance the character of landscapes and urban open space; ensuring their multifunctional use and enjoyment by all.</p>	<ul style="list-style-type: none"> • Preserve and strengthen areas of tranquillity throughout the region? • Protect and enhance access to high quality green and open space in urban areas? • Enhance poor quality landscapes and townscapes? • Protect land that makes a positive contribution to landscape character and provides recreational opportunities? • Maintain the distinctiveness of individual settlements?

IIA objective	Assessment questions (will the option/ proposal help to...)
<p>Protect, maintain, conserve and enhance the historic environment, heritage assets, and cultural heritage.</p>	<ul style="list-style-type: none"> • Conserve and enhance historic assets and their settings? • Ensure that growth sustains and enhances local character and distinctiveness across the LCR? • Recognise and promote the role of the historic environment in contributing to community identity and making the City Region a popular and attractive place to visit? • Value and protect the UNESCO World Heritage Site?
<p>Minimise waste generation and support the circular economy by implementing the waste hierarchy.</p>	<ul style="list-style-type: none"> • Reduce waste generation associated with new development? • Promote the use of secondary materials? • Support the management of waste close to sources of generation? • Ensure that negative health impacts associated with waste management are avoided?
<p>Ensure a steady and stable supply of minerals whilst promoting their efficient use and sustainable methods of extraction.</p>	<ul style="list-style-type: none"> • Encourage the use of secondary and recycled materials rather than virgin minerals? • Ensure that mineral workings do not have unacceptable impacts upon human health or the environment? • Safeguard existing infrastructure that contributes to minerals extraction and transportation?

16.2 Appraisal methods

Determining significance

- 16.2.1 The appraisal will use the criteria in Schedule 1 of the SEA Regulations to guide decisions on the significance of effects. This includes:
- the probability, duration, frequency and reversibility of the effects;
 - the cumulative nature of the effects;
 - the transboundary nature of the effects;
 - the risks to human health or the environment (for example, due to accidents);
 - the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected);
 - the value and vulnerability of the area likely to be affected due to special natural characteristics or cultural heritage; exceeded environmental quality standards or limit values; or intensive land-use; and the effects on areas or landscapes which have a recognised national, community or international protection status.
- 16.2.2 In many instances it may not be possible to predict significant effects, but it is possible to comment on merits (or otherwise) in more general terms.
- 16.2.3 In determining whether effects are significant, the focus will be upon the differences that a policy approach will have when compared to the projected baseline position. Therefore, despite a plan measure being positive in its nature, it might not necessarily bring about a significant change compared to the measures that are already in place in the absence of the Plan. Likewise, the avoidance of negative effects might simply be a neutral effect if those effects would be unlikely to occur anyway.
- 16.2.4 Every effort is made to predict effects accurately; however, this is inherently challenging given the strategic nature of the LCR Spatial Development Strategy.
- 16.2.5 The ability to predict effects accurately is also affected by the limitations of the baseline data. Because of the uncertainties involved, there is a need to exercise caution when identifying and evaluating significant effects and ensure assumptions are explained in full. As such, all predictions will be transparent and justified using the available evidence.

Sources of information

- 16.2.6 The appraisal will draw upon a range of information sources to assist in the determination of the nature of impacts and their significance. This includes:
- The baseline information set out within this scoping report.
 - Professional opinion and experience of the project team.
 - Sources of GIS data gathered from open source data, the LCRCA, and constituent Local Authorities in the Liverpool City Region.
 - Detailed technical studies for specific topics.
 - Academic research.
 - Empirical evidence of how development and policy affects sustainability factors.

Working with relevant stakeholders

- 16.2.7 An important part of the integrated appraisal process is to achieve effective engagement with relevant stakeholders. This allows for expert input, local knowledge and different perspectives to be factored into the process at key stages. Ultimately this leads to a more transparent and robust appraisal.
- 16.2.8 Given the current pandemic, methods of engagement are likely to be different to what might usually occur. However, every effort will be made to ensure effective and early involvement in the process.
- 16.2.9 The following key stakeholders have been identified at this stage:
- Liverpool City Region Combined Authority Lead Officers for: Economy (LIS), Housing, Environment, Transport, Fairness & Social Inclusion, Health Policy & Public Health Specialty Registrar.
 - LCR Local Authorities and Merseyside Environmental Advisory Service (MEAS)
 - The LCR Fairness and Social Justice Advisory Board (FASJAB)
 - The University of Liverpool (Peer Review)
 - Real Worth (Social Value consultants)
- 16.2.10 It is also important to engage with the wider public and other interested parties such as those with an interest in land and development. Comments will be invited from a comprehensive range of stakeholders at subsequent stages of the IIA process (as determined by legislative requirements and best practice).

Assumptions

- 16.2.11 It is important to set out the assumptions related to an impact assessment. This makes it clear what the focus of the assessment is, and what factors are not being considered (or cannot be considered). This is particularly relevant given the strategic nature of the Plan.
- This is a strategic plan
- 16.2.12 The appraisal is focused upon strategic issues, and therefore, information gathered to support the appraisals (i.e. scoping) should not cover detailed and locally specific issues and information that are not being dealt with at this level of plan-making.
- The precautionary principle
- 16.2.13 Even where there are constraints to development, it is possible (with good layout, design and scheme details) to avoid negative effects or even achieve a positive outcome. However, this level of detail is not available at a strategic level, so impact assessments need to take account of the 'unmitigated' situation. Therefore, when determining impacts at a strategic level, a precautionary approach is taken.
- Mitigation and enhancement
- 16.2.14 Any recommendations that are made will need to be appropriate to the scope of the Plan and the factors that it deals with and influences. In this instance, the Plan will not deal with site specific or development management issues. Therefore, such measures will not be appropriate with regards to mitigation and enhancement.
- Uncertainty
- 16.2.15 Given the high level nature of the plan (and appraisal), there are always going to be elements of uncertainty relating to the nature and extent of impacts. Where such

uncertainties exist, they will be made clear in the assessments. To ensure that appraisals are robust and uncertainties are limited, predictions will be made in relation to the established baseline position and supported by evidence.

Project level detail

- 16.2.16 The spatial strategy is not identifying particular sites for growth, nor is it including detailed development management policies. Therefore, there is an assumption that these issues will be addressed in Local Authority Plan reviews (including SA/SEA) and through project level assessments which involve Environmental Impact Assessment (EIA) for example.

17. Next steps

17.1 Consultation on the Scoping Report

- 17.1.1 The Regulations relating to SA / SEA require consultation with statutory consultation bodies. The statutory consultation bodies are the Environment Agency, Historic England and Natural England. These bodies were contacted directly for a five week period between June and August, 2020.
- 17.1.2 In addition to the requirements of SA / SEA, the EqlA and HIA processes are also characterised by engagement and consultation with interested bodies. Therefore, the draft scoping report was also targeted towards stakeholders including:
- Liverpool Region Combined Authority Lead Officers for : Economic (LIS), Housing, Environment, Transport, Fairness & Social Inclusion, Health Policy & Public Health Speciality Registrar.
 - The LCR Fairness and Social Justice Advisory Board (FASJAB).
 - Merseyside Environmental Advisory Service (MEAS).
 - LCR Local Authority Planning Policy Leads.
- 17.1.3 All comments received have been considered and updates have been made to the draft Report accordingly. Appendix C sets out a summary of responses received and how they were dealt with.
- 17.1.4 Whilst the official 'consultation' period has ended, scoping is iterative, and so further comments on the updated Scoping Report are being welcomed. These should be sent by email due to current COVID-19 measures:

LCRCA Spatial Planning Team

Email address: planning@liverpoolcityregion-ca.gov.uk

- 17.1.5 Proportionate updates to the scope may be made throughout the ISA process, especially if new data becomes available or significant changes in policy occur.

17.2 Subsequent stages for the Integrated Appraisal

- 17.2.1 The five key stages of the Integrated appraisal process¹⁵¹ are identified below. Scoping (the current stage) is the second stage of the process.
- i. Screening;
 - ii. **Scoping;**
 - iii. Assess reasonable alternatives, with a view to informing preparation of the draft SDS plan;
 - iv. Assess the draft plan and prepare the Integrated Appraisal Report with a view to informing consultation and plan finalisation; and
 - v. Publish a 'statement' at the time of plan adoption in order to 'tell the story' of plan-making / Integrated Appraisal (and present 'measures concerning monitoring').
- 17.2.2 The next stage will involve consideration of the different strategic / policy options that exist for achieving the aims and objectives of the SDS. This will mean assessing important policy choices relating to the scale, location and form of growth that occurs.
- 17.2.3 Integrated Appraisal is an iterative process, so it may also be necessary to provide ongoing updates to the scope on a proportionate basis.

¹⁵¹ In accordance with the stages set out in the National Planning Practice Guidance.

Appendix A: Stage 2 EqIA Framework

Nature of significant effect identified through the IA Framework	For which groups have potentially significant effects been identified and why?	Further evidence to support assessment	Will the issues be different for those not sharing protected characteristics?	Mitigation and residual impacts
	<i>Race / sex / age / disability / religion / pregnancy / sexual orientation</i>			
Example: Potential negative effects on health as a result of poorer air quality in deprived areas.	Age – young and older people in areas of deprivation could be more likely to suffer serious issues with respiratory illnesses.	<i>Gather further information on respiratory illness in young and old people in areas likely to be affected. Pinpoint locations of concern if possible.</i> <i>Identify impact pathways and vulnerabilities in greater detail.</i>	There are other groups with protected characteristics living within deprived areas. These too would be likely to be negatively affected. However, younger and older people generally presented greater vulnerabilities. Therefore inequalities could be widened in this respect.	Air quality zones could be introduced where traffic is restricted. With mitigation in place, significant effects may be lowered.

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Appendix C: Comments Received on draft Scoping Report

General	
Comment	Response
The Environment Agency	
It should be noted the Merseyside Joint Waste Local Plan is shown on 2 tiers; 'Local Plans' and other 'Local Planning Drivers' on Figure 1.2 (page 4).	Updated
Knowsley Council	
It would be helpful to consider the potential impact that Brexit may have in terms of loss of access to EU funding programmes and migration policy which could impact on the availability of skilled technical professionals.	Agree, but this is beyond the scope of the project at this stage given it is a major issue that only arose towards the end of the scoping stage.
It is recommended that the baseline information should include key numbers and statistics for each section, as appropriate, to effectively communicate an overview of risk / issue by each local authority area where such information is available e.g. number of homes at risk of flooding / number of listed buildings etc.	Information not provided consistently for each authority at this stage.
Climate change mitigation	
Comment	Response
The Environment Agency	
Figure 3.1 (page 29), provides a useful indication of renewable energy generation of each LCR local authority. It would be useful context to note what the percentage of renewable energy generated is compared to non-renewable energy generated for each Authority. This would highlight the challenges ahead.	More data required, to consider at a later stage.
Merseyside Environmental Advisory Service	
With regard to climate change resilience and climate change mitigation, I consider there needs to be more emphasis on reducing the impacts on climate change from development for example, through stronger mitigation and policy. The Local Plan policies are not strong on this, and developers frequently resist going beyond the requirements of the Building Regulations Part L. To make society, the environment and development more resilient a strong strategic direction would be helpful	Changes made.
Local Industrial Strategy/Economic Policy Feedback	
Could there be a stronger link/cross-reference here between climate mitigation and the circular economy, which is currently central to the waste section. Achieving a circular economy will be important in climate change mitigation – it goes beyond clean energy.	Noted, no changes made.
Knowsley Council	
Climate Change Action Plans for each local authority	Not all publicly available. To include if provided.

Health and wellbeing	
Comment	Response
Dr Andrew Turner- Health Policy Lead & Public Health Specialty Registrar	
Liverpool City Council and the Liverpool City Region Combined Authority have recently published economic recovery plans. The 'Build Back Better' principles in the latter are particularly relevant to health and wellbeing in future policy.	Changes made.
Work is ongoing within the Merseyside Resilience Forum to highlight how Covid-19 will likely exacerbate existing inequalities across Merseyside and how this can be mitigated, and a report will be produced and disseminated at some point.	Will await final report and incorporate.
Further policy briefs have been and will continue to be published by the Heseltine Policy Institute.	Changes made.
Erik Bichard- Director at Realworth	
A greater focus on wellbeing would be useful- some focus on how happy or discontented the population are would be beneficial. (noted that data can be hard to find on this)	Changes made.
Commentary and review on the distribution of social infrastructure in the City Region would be beneficial. The importance of these features on wellbeing is well established and should have been described in more detail.	Require GIS data from Local Authorities to undertake this analysis.
The Environment Agency	
We very much welcome access to greenspace has been identified as a relevant factor in paragraph 4.1.2 (page 42).	Noted.
Considering LCR has an accessible stretch of coast for sport and recreation we would add blue infrastructure to the first bullet point under paragraph 4.5.1 (page 67).	Changes made.
Merseyside Environmental Advisory Service	
The Health and Wellbeing section refers to the benefits of greenspaces to health, but this is not followed through in the assessment questions. It would be useful to include improving access to green space as part of the assessment.	Changes made.
Local Industrial Strategy/Economic Policy Feedback	
Given the particularly poor health outcomes in the City Region, it is important to bring in the COVID-19 context here. There is a need to acknowledge that a lot of the already negative trends will have accelerated and so this needs to take particular prominence – the City Region did not enter the pandemic from a position of strength. There could also be more an explicit connection here between health and wellbeing and the achievement of an inclusive economy – something that we tried to do through the LIS.	Agreed, however this is beyond the scope of the work. Initial findings of Covid-19 effects have been included, but a lack of peer reviewed evidence and fast moving issues prevent further detail at this stage.
Knowsley Council	
Joint Health and Wellbeing Strategy of each Borough	Changes made,
ASC Market Position Statement of each local authority	Please provide this to us and we can summarise.
ASC Local Account of each local authority	See above.
https://www.gov.uk/government/publications/a-method-for-monetising-the-mental-health-costs-of-flooding	Changes made.

Housing	
Comment	Response
Merseyside Environmental Advisory Service	
Linking the housing and economy chapters to energy efficiency and low carbon technologies would also be useful in integrating climate change resilience and mitigation into the SDS.	Noted, no action taken.
Knowsley Council	
Knowsley 2012 SHLAA update: Found here	Update accordingly
LCR Housing Statement	Changes made.
Important factors- does supported housing need to be included in particular in relation to the ageing population.	Agreed, however information must be consistent for all LAs.
Housing supply – does the appraisal need to include supply of social housing through the letting of the existing social stock (may not be within the scope of the appraisal)	Agreed, however information must be consistent for all LAs.
Homelessness- rough sleeping figures given would figures for homelessness presentations to LAs and use of temporary accommodation also be used (again maybe beyond the scope of the appraisal).	Agreed, however information must be consistent for all LAs.
Affordability – do affordability ratios based on incomes / earnings need to be included	Changes made.
Economy	
Comment	Response
Merseyside Environmental Advisory Service	
Linking the housing and economy chapters to energy efficiency and low carbon technologies would also be useful in integrating climate change resilience and mitigation into the SDS.	Noted
Local Industrial Strategy/Economic Policy Feedback	
This is a very thorough a well put together document. I do feel that the labour market and economic data will need updating in places to highlight a more current picture of the key issues we face as a City Region going forward. There is reference to the pandemic but I do feel there could be more acknowledgement of how this may fundamentally change the economy, and how in turn this impacts on planning. In terms of the data, we have local intelligence through both the LIS and recovery planning evidence bases should they be required	Covid-19 effects is at this stage beyond the scope of the work.
National Sector Deals could be looked at (or at least referenced) which link into City Regional sector strategies.	Changes made.
I don't think the City Region Growth Strategy needs highlighting – it's now been super-ceded by the LIS and it is not used in local policy discourse. In my view the LIS needs to be at the top of this list, given that it is the strategic document for the City Region and that other activities will flow from. There should be more prominence given to the LIS' other priorities and identified transformational opportunities here. These are critical in shaping and informing the investment decisions for the City Region in the medium to long term.	Changes made.
This needs to be updated so that recovery is framed in the context of the LCR Economic Recovery Plan, rather than the Heseltine Institute's work, which although useful and informative, is not policy. This has been developed since AECOM's report, and is the City Region's agreed way forward for medium term recovery and growth. Note that	More information needed- i.e. the LCR Economic Recovery Plan.

there is also LCC's own Recovery Plan submitted to government. The two documents align.	
The baseline review covers many of the bases but in terms of the narrative, could there be a closer connection to that which is in the LIS and developed in the LIS evidence base? At the moment it's a bit too descriptive and the context is not necessarily strong enough. This could impact how SDS policies are developed.	Scoping is a separate exercise to the SDS policy development
Getting the context right around deprivation is important. For instance, the description in 6.4.1 around the deprivation map is more complicated than how it is described in the text, as it impacts so much of the City Region and is deeply structural – it goes beyond Liverpool and Birkenhead.	Changes made.
6.2 text: there needs to be a broader message emerging that that the skills gap has closed significantly over the last 10 years, but as a City region we are still lagging behind in both high skilled qualifications and those with no qualifications or low skilled.	Update text
6.5 text: the key message around the prominence of health issues within the inactive population is so important here and could be brought out more strongly (it is central to the people section of the LIS evidence base). This is a huge issue for LCR and has also impacted on the disproportionately high CV-19 death rates.	No change
When the text discusses business growth, it should make more of the importance of the city centre here as the draw for Liverpool. But it doesn't necessarily mean that it detracts from other areas, as there will be knowledge spill-overs and linkages. Each place has its function and this needs to be recognised. However perhaps we also need to outline the uncertainty over the future demand for work space (particularly office space within city centres) and what this means for SDS policies and agility in response.	Changes made.
I would have thought there would be more coverage and depth on sectors unless this is the next stage of the process? At the moment this is rather limited. It will be important in terms of planning and the LIS extensively covers this – not just sectors but more importantly clustering of cross-sector activity (based on our transformational opportunities) which drives agglomeration impacts. This in turn, will impact on SDS policies and priorities.	Scoping is deliberately at a strategic scale taking into consideration the scale and nature of the Plan.
Not sure how relevant the town centre data is now; it does seem very dated. Given the developments throughout the pandemic, is there more recent information or intelligence? The nature of high streets are going to completely change and this will require new and imaginative ways in which they are designed and cater for communities and businesses. This needs recognition.	More information needed
Similarly to above, is there more recent data or intelligence on the visitor economy? This is particularly important given the strategic importance of the sector in terms of employment, and how badly it has been impacted during the pandemic. We may have information which may be useful around this.	More information needed
It's good that the implications of Brexit are highlighted. I would argue there should be a specific focus on manufacturing here in particular. Local feedback suggests that the uncertainty means that there could be significant	More information needed to support assertion

impacts on decision making and demand in the sector, which would have implications for planning.	
We need to get the phrasing consistent – the IIA Objective for Economy states ‘inclusive economic growth.’ This should be inclusive economy as they are actually two different things. An inclusive economy is the term used in the LIS.	Changes made.
Grand Challenges from the LIS: good that this has been picked out but there should also be focus on the transformational opportunities that the LIS identifies: industrial digitalisation for a sustainable future; open health innovation; global cultural capital; social innovation.	Changes made.
Tourism and VE: we need to acknowledge that things have changed due to the pandemic and this should also be about recovery of a sector has been deeply damaged.	Changes made.
Northern Powerhouse: is this terminology right given that it is not mentioned much at present in policy circles? I would encourage more of a focus on ‘levelling up’.	Noted, no changes made.
High quality jobs: certainly key – but perhaps also add in sustainable jobs whilst improving skills through demand led approaches.	Changes made.
I would also add to the assessment questions something akin to: Supporting businesses to grow and deliver these high quality and sustainable jobs, through enabling the development of the right economic infrastructure and of innovation assets.	Changes made.
Knowsley Council	
LCR Economic Recovery Plan	Changes made.
Updated retail studies / bespoke town centre data were available for Knowsley	Consistent updates required for each authority.

Transportation

Comment	Response
Knowsley Council	
Include: TransportFeasibilityStudy TransportModellingReport	Changes made.
Page 122 of the document refers to A52 being a major road but it is not in Knowsley. Should be the A562 and/or A57.	Changes made.
Knowsley has limited regular bus services between the different centres which restricts access to jobs.	Changes made.
Public transport access to Knowsley Industrial Park is limited.	Changes made.

Equality and Diversity

Comment	Response
Erik Richard- Director at Realworth	
The report does cover some age-related issues in the research undertaken for Section 8, including the importance of services for the young and the old. However, the review is less forthcoming about the distribution of age-supportive services and infrastructure throughout the City-Region and this would have made a stronger argument for inclusion in the Strategy.	GIS data required to map social infrastructure
Knowsley Council	
Knowsley Council Equality policy statement 2017-20	Changes made.

Biodiversity	
Comment	Response
The Environment Agency	
City Region (page 154) should also refer to the Nature Connected (LCR Local Nature Partnership) work currently Chaired by Colm Bowe (John Moores University) to develop a LCR Natural Capital baseline (which should be used as baseline information). This links directly to the SEA objective (paragraph 9.6.1, page 164) and specifically the Assessment Question, 'Achieve a net gain in biodiversity value?' Would there be value setting out a minimal total percentage of biodiversity net gain?	Partnership mentioned in context review. RE. net gain, this is not something a scoping report would usually cover- especially without supporting evidence.

Air Quality	
Comment	Response
The Environment Agency	
We welcome paragraph 10.8.1 (page 173) states 'Air Quality' is to be scoped in and an Assessment Question asking if the option will / proposal help to 'Improve air quality through enhancements to green infrastructure in urban areas?'	Noted.
Knowsley Council	
Clean Air Strategy 2019 • Clean Air Act 1993 (and emerging new one) • Environmental Permitting Regulations 2016	Changes made.
10.2.2 – "UN Sustainable Development Goals are 17 life changing goals outlined by the UN in 2015. The following is of some relevance for air quality: Goal 13: Climate Action: Urgent action is needed, by regulating emissions and promoting renewable energy" – whilst there are shared impacts and measures, Climate Change actions form a different regime than those with Air Quality (although I would; agree that they should be linked where possible)	Noted
10.3.5 "Broadly speaking, more than 80% of people who reside in urban areas are exposed to air quality levels that exceed the WHO limits (WHO,2016)" Globally, and in large cities perhaps – in Knowsley the latest results indicate that all areas are below the annual mean.	Local information needed.
10.3.9 "However some trees and plants release pollens that aggravate allergies, having a negative effect on some people's health and wellbeing." - pollen which aggravates allergies is different than air pollutants (although they can form PM). Trees and plants can however emit other substances such as VOCs, which do impact on local air quality	Changes made.
Table 10.2 – - Nitrogen Dioxide isn't a Greenhouse Gas - PM isn't just chemical constituent – it can be entirely natural - Ozone – "A secondary pollutant following reactions between NO2" and O2	Changes made.
There are comments about PM2.5 being the worst pollutant, however whilst there is transport (Electric or otherwise) there will be emissions of PM2.5, and the change to EV's may results in a lower decrease than expected, therefore there should be increased emphasis on reducing trips and promoting sustainable methods (I realise	Noted.

<p>this is mentioned in 10.2.10). There needs to be a huge improvement in cycling routes which are safe, accessible and promoted across Merseyside, and this should be monitored and assessed against the WHO annual limits of 10µg/m3 (and potentially the 24-hr limit if needed).</p>	
<p>There is no mention in the document about other sources of air pollutants, such as Industrial Processes, or even solid fuel appliances. These can have a huge impact on air quality, and likely will if the trend of installing wood burning stoves continues (albeit there is a new Clean Air Act due)</p>	<p>Update accordingly.</p>

Water	
Comment	Response
The Environment Agency	
<p>Paragraph 11.2.3 (page 176) should be expanded to highlight the importance of waterbodies reaching ‘good ecological status or potential’ rather than focussing only on ‘water efficiency and sustainable drainage’.</p>	<p>Changes made.</p>
<p>Water Resources- The consideration of groundwater protection and the enhancement of controlled waters is a key consideration and warrants further mention. Groundwater is a regional resource and a holistic approach to its protection can be more effective at the strategic planning stage. The proactive protection of groundwater resources is key to providing improvements to the water environment and protecting water resources for future use.</p> <p>The Environment Agency’s Groundwater protection position statements outlines our groundwater position statements for a wide range of development types.</p> <p>Our groundwater protection position statements are available to download from;</p> <p>https://www.gov.uk/government/publications/groundwater-protection-position-statements</p> <p>There are several source protection zones located within the Liverpool City Region this data is available from;</p> <p>https://data.gov.uk/dataset/09889a48-0439-4bbe-8f2a-87bba26fbbf5/source-protection-zones-merged</p>	<p>Changes made.</p>
<p>Do not assume utilities companies will plan for eventualities (paragraph 11.4.23 (page185)), especially where large scale growth may occur, as significant investment to upgrade may take time and/or not fall within the timelines of proposed growth. LPAs may very well have undertaken these discussions to inform allocations, however we still recommend you consider utility companies as an essential consultee and commence discussions with them well in advance to ensure growth aspirations link with their asset plans. We also add there needs to be a degree of contribution from developers to improve all water related infrastructure.</p>	<p>Noted.</p>
<p>In paragraph 11.6.1 (page 186) the first Assessment Question asks will the option/proposal help to ‘Maintain areas with excellent / good water quality and make improvements where necessary?’ As previously discussed</p>	<p>Changes made.</p>

<p>this needs to explicitly link to waterbodies reaching 'good ecological status or potential' to ensure consistency with the Northwest River Basin Management Plan (Water Framework Directive).</p>	
<p>Knowsley Council</p>	
<p>Include the following documents:</p> <ul style="list-style-type: none"> - National FCERM Strategy (2020) HERE - Flood Policy Statement (2020) HERE - Knowsley and Sefton Strategic Flood Risk Assessment – Part 1 HERE - Knowsley and Sefton Strategic Flood Risk Assessment - Part 1 (Includes Appendix D) HERE - Knowsley Strategic Flood Risk Assessment – Level 2 HERE - EB16 - Preliminary Flood Risk Assessment HERE - Knowsley Local Flood Risk Management Strategy (LFRMS) HERE - Merseyside FCERM Partnership Business Plan HERE - Merseyside Natural Flood Management Opportunity Mapping (request from Wirral Council LLFA) - Lower Mersey Catchment Plan HERE - Alt Crossens Catchment Plan HERE - ADDITIONAL DATA: Areas at risk of Surface Water Flooding (from Environment Agency) - ADDITIONAL DATA: Groundwater flooding (from Environment Agency and British Geological Survey) - ADDITIONAL DATA: Liverpool, Wirral and Sefton all have more detailed localised surface water mapping in their Surface Water Management Plans – request from their LLFAs. - ADDITIONAL DATA: Sefton Council has groundwater borehole monitoring information. - PROGRAMME: Flood and Coastal Erosion Risk Management (FCERM) Investment Programme 	<p>Changes made.</p> <p>Any additional data will require input from LCA to provide.</p>

Soil and Land	
Comment	Response
<p>The Environment Agency</p>	
<p>Based on the Context Review it is not clear what this chapter is focusing on, although key messages suggests protecting agricultural land. Paragraph 12.2.2 highlights key messages from the National Planning Policy Framework with regards to land contamination, ensuring safe and healthy living environments and making use of brownfield land. As such we are a little surprised more is not made of this within table 12.1 Key Messages for soil and land, which appears to focus heavily on agricultural land.</p>	<p>Changes made.</p>
<p>It should be noted protecting surface water and groundwater from land contamination often requires work over and above that required to make the land suitable for the proposed development and to protect human health to accommodate a 'safe and healthy living environment'.</p>	<p>Noted.</p>
<p>Could the IIA objective (paragraph 12.6.1(page194)) also link to achieving remedial targets and delivering sites identified within the brownfield register?</p>	<p>Changes made.</p>
<p>As far as we are aware Neston Waste recycling facility serves residents of Cheshire West and Chester through a permit issued by the Council (Paragraphs 15.4.10 and 15.4.11 (page 223)). As such it should not be considered</p>	<p>This comment seems to be addressed in the report in the text associated with 'Access to Waste Recycling Facilities' on page 223.</p>

as access to waste recycling facility for residents of the Liverpool City Region in the context of this Scoping Report. Indeed no non LCR facilities should be considered in the context of access for LCR residents and businesses.	The site is not included on the map on page 224.
Paragraph 15.4.12 – The Joint Merseyside & Halton Waste Local Plan forms part of each LPA Local Plan and may contain relevant information to inform issues and trends. You may wish to consider including it within the trends table.	Changes made.

Landscape

Comment	Response
Merseyside Environmental Advisory Service	
In section 13 (Landscape) reference is made in paragraph 13.2.6 to Merseyside Archaeological Advisory Service, whilst this reference is correct, the service no longer exists, so the end of the sentence needs amending. The service closed 31 March 2011	Changes made.
Knowsley Council	
Landscape character assessment for Knowsley	Reference to LCAs made at a general level. Specific studies not singled out for individual authorities.

Historic Environment

Comment	Response
Merseyside Environmental Advisory Service	
Paragraph 14.2.12, refers to Merseyside environmental services – this should read Merseyside Environmental Advisory Service.	Update accordingly.
Historic England	
Policy context: <i>International/European:</i> UNESCO World Heritage Convention 1972. The European Convention of the Protection of Archaeological Heritage (Valetta Convention) <i>National:</i> Historic England has a series of good practice advice/notes that might be useful to respond to. <i>Regional:</i> Historic Landscape Characterisation NW Marine Plans	Changes made.
Policy context: In addition it would be worth outlining the NPPF's requirements on the need for an adequate, up-to-date evidence base for the historic environment (which would be used to assess the significance of heritage assets and the contribution they make to the environment). This would also tie in with references made to out-of-date conservation area appraisals further on in the document. Should the Spatial Development Strategy (SDS) chose to allocate preferable areas for development then in terms of the NPPF, reference should also be made to the need to identify areas where development would be inappropriate because of its (environmental) or historic significance.	Noted.
We welcome the reference to the importance of the historic environment in wellbeing including community spirit, social value, emotional attachment and older people. This should be included within the assessment questions for the IIA objective.	No change required.
This section should include an introduction which describes the historic environment of the Liverpool City Region, its	Changes made.

<p>growth, identity and key elements which makes it unique. The report should also identify the built environment and its character and distinctiveness and refer to the historic environment. This appears to be missing, whilst it identifies areas where there are concentrations of heritage assets, there is no further information that identifies the region specifically.</p>	
<p>Baseline information should describe the current and future state of the historic environment, providing the basis for identifying sustainability issues, predicting and monitoring effects and alternative ways of dealing with them. It can use both quantitative and qualitative information and should be kept up to date. It is important that meaningful conclusions can be drawn from the baseline information; what it means for the Plan and how the historic environment is to be dealt with.</p>	Noted.
<p>The baseline information in the scoping report on the historic environment should include all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged. This not only involves undesignated (or local heritage assets) but the potential for unrecorded archaeology, and historic landscape character areas for example.</p>	Noted.
<p>The NPPF recognises the importance of undesignated heritage assets and therefore this should be included within the baseline data. The source of this information should be included within the scoping report; references made to them and recognise the opportunities for their enhancement and contribution to other aspects of the Plan area.</p>	Need the data. It is acknowledged, but too many to include at strategic scale.
<p>The importance of local character and identity including the landscape and townscape of an area is an important consideration and this has been excluded from the report. The scoping report should recognise the importance of this and the source of this information should be included (e.g. historic landscape characterisation), with reference made to them in key issues and opportunities.</p>	Covered elsewhere.
<p>A table showing the breakdown of assets for the region/local authorities including conservation areas (Historic England provides this data via Heritage Counts (https://historicengland.org.uk/research/heritage-counts/)).</p>	Changes made.
<p>Archaeology – A Registered Park and Garden is a designated heritage asset and not an archaeological feature. Likewise, Scheduled Monuments are titled as such and are not an archaeological feature (as described in 14.4.10). The report needs to clearly distinguish between them and non-designated archaeology. Both of which are not classed as ‘features’. This section would benefit from a table outlining the distribution of scheduled monuments across the region.</p>	Changes made.
<p>Battlefields are also a designation on their own and are not classed as an archaeological feature. Again – a table outlining the statistics for this would make it clear.</p>	Changes made.
<p>In terms of the table on trends – it is worth pointing out that the for the Liverpool Local Plan, the historic environment is wider than the World Heritage Site but includes the City as a whole with its high concentration of heritage assets and the need to conserve and enhance its whole historic</p>	Noted.

<p>environment and manage future development including proposals for tall buildings.</p>	
<p>The bulleted list (Para 14.5.1) represents a list of statements rather than a list of the key issues for the Region. Why is the fact that there are clusters of listed buildings in Liverpool, Southport or Birkenhead an issue that needs addressing? In terms of conservation area appraisals is the issue that a certain percentage (high?) are out of date. This could be phrased better? What other issues are there for the historic environment? Is a particular asset type at risk in the region for example? What about key elements of the regions' local character and distinctiveness that could be lost? (This is linked in to the need to better articulate the historic environment for the region (see comments above).</p>	<p>Changes made.</p>
<p><i>Smaller points to address:</i> What about other issues (some of which are included elsewhere in the report) such as:</p> <ul style="list-style-type: none"> • Integrating climate change mitigation and adaptation measures in to the historic environment appropriately • Tourism and the historic environment is also important – is it worth mentioning it here? • Areas of significant loss or erosion of landscape/townscape character or quality? • What about the protection and management of the character and appearance of landscapes/townscapes maintaining and strengthening local distinctiveness and sense of place. • Risks to or conserving particular types of assets e.g. maritime, industrial or rural? • The impact of traffic congestion/air quality/noise pollution and other problems affecting the historic environment? • Accommodating change and growth whilst sustaining and enhancing the significance of heritage assets and the valued character of place? • The impact of tourism/culture? • The energy efficiency of buildings? • Heritage and wellbeing – it is mentioned in the literature review but does not appear as an issue? 	<p>Requires consistent information from all authorities and/or information covered elsewhere in the report.</p>
<p>It is important that the role the historic environment plays in sustainable development and the contribution it makes to delivering social, cultural, economic and environmental benefits is recognised. The historic environment underpins sustainable development and therefore, it may warrant including in other objectives including the need for specific reference to landscape character.</p>	<p>Must be dealt with proportionately, no action.</p>
<p>The proposed IIA objective needs further refinement to ensure that the historic environment is mentioned as well as heritage assets. In addition, in line with the NPPF, the objective should be to also conserve them in addition to the protection, maintenance and enhancement of. It is unclear what 'natural history' is? This should be removed. In addition, whilst we welcome the inclusion of cultural heritage, this chapter needs to identify it more. Therefore, the proposed IIA Objective should be mentioned to read: 'Protect, maintain, conserve and enhance the historic environment, heritage assets, and cultural heritage'.</p>	<p>Changes made.</p>
<p>Protect historic assets and their setting - This contradicts the IIA objective and that of the NPPF, in that it only seeks</p>	<p>Changes made.</p>

<p>to protect heritage assets. This should be reworded accordingly.</p>	
<p>Support patterns of growth that are in keeping with settlement character - The IIA objective only refers to the historic environment. Indeed the supporting text to this chapter does not talk about the character and distinctiveness of the region nor settlement patterns yet there appears to be a question on this. Whilst we would welcome its inclusion it does need to be backed up with evidence within the report to support it. In terms of its reference – would it be better to ensure that growth (or new development?) sustains and enhances local character and distinctiveness across the region rather than that only of settlement character (how is this defined?).</p>	<p>Changes made.</p>
<p>Value and protect the world heritage site - Can this not be covered in the bullet on the historic environment? It is not clear what ‘value and protect the world heritage site’ means? World Heritage sites are defined by their outstanding universal value (OUV). In addition the world heritage site is not described in the chapter.</p>	<p>Changes made.</p>
<p>In addition to the above, what about other issues such as:</p> <ul style="list-style-type: none"> - Climate change and sustainability - Cultural heritage and tourism - Achievement of high quality and sustainable design for buildings - It’s role in economic regeneration and the viability of town centres 	<p>Noted, covered in other sections.</p>
<p>Historic England strongly advises that you engage conservation, archaeology and urban design colleagues at the local and county level to ensure you are aware of all the relevant features of the historic environment and that the historic environment is effectively and efficiently considered as part of the Plan for the Liverpool City Region, and in the preparation of the SEA. They are also best placed to advise on local historic environment issues and priorities, including access to data held in the HER (formerly SMR). They will be able to provide you with the Historic Environment Records for the area including any relevant studies, and ensure a joined-up and robust approach is undertaken.</p>	<p>Noted. No action needed.</p>
<p>Knowsley Council</p>	
<p>Further reports and considerations:</p> <ul style="list-style-type: none"> - Merseyside Historic Landscape Characterisation Study - National Character Area Profiles (crossover with Landscape) - Liverpool WHS has been included on the “List of World Heritage Sites in Danger” since 2012 HERE - HERE offers Northwest data broken down by Local Authority. The report should acknowledge the limitations of the data (as it does not include Grade II listings other than ecclesiastical or in conservation areas), and so the quantum of heritage at risk in the LCR is greater than the national register identifies. - Heritage at Risk HERE - Heritage Counts & Indicator data (produced annually by Historic England) HERE and HERE - “Heritage and Society 2019” by Historic England HERE - “Heritage and the Economy” HERE draw together broader statistical evidence about the varied benefits of heritage - Economic data: HERE 	<p>Proportionate updates made – overlaps with HE comments.</p>

<p>- Heritage Counts 2019 - There's No Place Like Old Homes: Re-Use and Recycle to Reduce Carbon HERE</p>	
<p>There should be acknowledgement of the contribution non-designated heritage makes to the character of the region.</p>	<p>Too many to list at this level, plus need the data to do this. No action suggested.</p>
<p>The wording needs improving in reference to the Planning (Listed Buildings and Conservation Areas Act). This Act was more of a consolidation of pre-existing rules, rather than introducing new laws. This section also infers conservation areas are still dealt with under this Act, but the Enterprise and Regulatory Reform Act 2013 resulted in some key provisions being amended and moved to the Town and Country Planning Act 1990.</p>	<p>Changes made.</p>
<p>The wording derived from the NPPF should be reviewed</p> <ul style="list-style-type: none"> - The first bullet is directly from para 20 which is a broad reference to all environmental issues, other than the excerpt misses out the reference to climate change. - Wording in the 3rd bullet is a combining of text from para 184 & 185(b)) – and its meaning has become distorted as a result. - The 4th bullet is key here, as it relates to para 185 (a-d) which sets out how heritage should be taken into account in strategic plans. I would recommend this be quoted and considered more fully. 	<p>Changes made.</p>
<p>This section could usefully give a bit of flavour about what the designated and undesignated assets in the region are through identifying themes/key places e.g. the model village of Port Sunlight which contains a very high concentration of listed buildings, the Liverpool-Manchester Railway, the first passenger railway in the world; 18C Leeds-Liverpool Canal; Southport's famous verandas along Lord Street, shrimpers cottages on the coast, Country houses and estate villages such as Knowsley, Crosby and Ince Blundell, several conservation areas centred on designed Victorian suburbs, and others on historic villages with ancient origins – some subsumed by suburban expansion, others retaining a rural setting.</p>	<p>Agree, and this is something HE suggested. However, there is a risk the list becomes very large.</p>
<p>Statistics on how many conservation areas have up-to-date Conservation Area Appraisals in place could be included (though 5 yearly reviews are generally recommended, timescales for review vary depending on the pace of change). Knowsley has up-to-date appraisals for 7 of its 15 conservation areas.</p>	<p>If this data is available for all authorities then yes. But it didn't seem to be readily available.</p>
<p>Statistics on the adoption of Local Listing across the LCR would be useful. Knowsley has committed to developing a Local List but does not currently have one. How does LCR compare with other areas in this regard?</p>	<p>Data/information needed consistently from all LAs.</p>
<p>Clearer data and greater focus should be on Heritage at Risk, exploring what types of heritage are at risk, where and why? Knowsley does not have a regularly updated survey of Buildings at Risk, however I am aware of 3 listed buildings that would be considered 'at risk' but which don't qualify for inclusion on the national register (Grade II but not in Conservation Area).</p>	<p>This information needs to be provided by each authority to be able to include.</p>
<p>Currently the literature review seems narrowly focussed on the health and well-being benefits of heritage. Other benefits should be acknowledged and referenced also. For example, the economic benefits of heritage are not just</p>	<p>The literature review is not a requirement of an SA Report. It was deliberately focused on health.</p>

<p>based on tourism spend, there is also significant economic activity centred on the occupation of historic buildings and their repair and maintenance. Historic buildings in good repair often attract a property premium and higher rents. In terms of specialist and skilled repair and restoration work, this supports higher value jobs in construction.</p>	
<p>Consideration of the threats to heritage from climate change and opportunities for heritage to contribute to mitigating climate change should be included.</p> <ul style="list-style-type: none"> - E.g. there is evidence that significant parts of Liverpool City Region are under threat from rising sea levels and storm surges, and this includes a threat to the WHS and coastal heritage. - Re-use and adaptation of existing historic buildings has the potential to significantly contribute to Climate change mitigation strategies see here research indicates that using a ‘whole life’ assessment model carbon emissions are reduced by more than 60% as a result of refurbishment and retrofit options, as opposed to demolition and new build. - There is however nothing simple about such refurbishment works. There is much evidence that poorly considered ‘standard’ adaptations to historic buildings (for example with the aim of improving energy efficiency, or damp proofing) can lead to damage both the physical fabric and the appearance of historic buildings. here 	<p>Changes made.</p>
<p>The terminology used needs to be carefully monitored to ensure its clear what is meant, e.g. there is reference to “locally relevant heritage assets that have been identified by individual local authorities” – is this a nod to non-designated heritage? Or is it a reference to conservation areas (which are designated assets)? Or both?</p>	<p>Changes made.</p>
<p>The wording in relation to baseline information seems a bit mixed up in places: 14.4.10 seems to erroneously incorporate discussion about Registered Historic Parks and Gardens within a section about archaeology.</p>	<p>Changes made.</p>
<p>Archaeology section should identify that the HER is important in supporting economic development and planning processes, as early identification of archaeological potential helps to minimise risks to developers.</p>	<p>Changes made.</p>
<p>I suggest Parks and Gardens be listed and discussed as a separate point – as comparable to other regions I believe the northwest has a particularly abundant and high quality selection of historic parks and gardens. Internationally renowned landscape gardeners were responsible for the design and laying out of many of the principle parks and cemeteries in the 19C. For example Birkenhead Park was the first ever public funded park in the world, and served as the template for others across the world (notably Central Park NYC).</p>	<p>Changes made.</p>
<p>Information about grant funding in the region would be useful, including the scale of awards granted to the LCR, match funding, opportunities available, difficulties in accessing grants (e.g. competitive approach to grant allocations & costs and complexities of developing projects & access to suitable specialists). Unfortunately there is little comprehensive data that I am aware of however:</p> <ul style="list-style-type: none"> - This gives an overview of the grant funding landscape (however Covid-19 has led to changes since) 	<p>This isn’t typically included within SA Reports.</p>

<ul style="list-style-type: none"> - Open Data is available on Heritage Lottery Grants given out 2013-2019. This can be viewed/manipulated to extract some information. here - Knowsley Council is now benefitting from a grant for Prescott High Street Heritage Action Zone, the scheme overall funding totals £3.1m. At the moment it is the only project benefitting from this funding stream in the LCR here - Knowsley Council area has been identified as having a low uptake of National Lottery Heritage 	
<p>Trends section has incorrect information about Knowsley's Conservation Area Appraisals – the most recent one was adopted in 2019 (not 2017)</p>	<p>Changes made.</p>
<p>14.5.1 first bullet – this is a bit vague, and doesn't recognise the legislative context / statutory obligations that apply to most designated heritage assets.</p>	<p>Changes made.</p>
<p>2nd bullet- in addition to a recognition of the value of heritage to wellbeing and community, should also recognise the broad ranging contributions heritage makes to the economy, and in establishing a sense of place etc.</p>	<p>Changes made.</p>
<p>The contribution that re-use and suitable adaptation of buildings can make to climate change mitigation should be highlighted</p>	<p>Changes made.</p>
<p>3rd and 4th bullets – expand on what these clusters might mean for management of these areas?</p>	<p>Changes made.</p>
<p>There should be a recognition of the many difficulties and resources needed to tackle the regions 'At Risk' heritage. In summarising the scale of issue the types of heritage which are 'at risk' and the nature of the risks should be explained as well as benchmarking against national rates. Currently the wording omits to mention that Liverpool has the highest absolute numbers of heritage at risk.</p>	<p>Updates made.</p>
<p>The Trends section identifies that in most cases the allocations in Local Plans and sites likely to be brought forward in future, together with some regeneration projects, have the potential to result in harm historic landscapes and heritage assets.</p> <ul style="list-style-type: none"> - Heritage-led regeneration has been important and continues to be important in growing the City Region's economy and improving the perception of places. Support is however needed to help resource developing submissions for these programs, heritage based schemes tend to require a substantial level of detail and information, and applications for grants are often in the form of bids in a competitive process. The changing landscape of funding after Brexit and Covid is very much uncertain. 	<p>Beyond the scope of the plan</p>
<p>The number of Conservation Officers has dwindled in the LCR over the last decade or so. However there is an ongoing need for suitable professionals and resources to support management of heritage across the LCR. Establishing suitable provision of Conservation and Archaeological Advice across the City Region is a key and strategic issue. The IHBC (Institute of Historic Building Conservation) has published some resources which explain the skills needed and issues presented by under-resourcing. http://www.ihbc.org.uk/skills/england/#appendix</p>	<p>Beyond the scope of the plan</p>

Waste	
Comment	Response
Merseyside Environmental Advisory Service	
<p>Section 15 on waste could generally have more reference to the Merseyside and Halton Joint Waste Local Plan (WLP) which itself is a strategic document for the city region, albeit with specific development management policies included. Therefore, greater interaction between the waste elements of the SDS and WLP should be made.</p> <p>For example, paragraph 15.4 is misleading as it only refers to commercial and industrial (C&I) waste collected by the Local Authority. In reality, most of the C&I waste is managed by the industry and a much higher level of recycling takes place. There is more information on this within the Waste Local Plan and its Monitoring Reports which can be found here: http://www.meas.org.uk/1090 I would be happy to provide further advice on this if needed</p>	Changes made.
Knowsley Council	
Annual waste collection data for each local authority (may be provided collectively by MWRA or from DEFRA gov site)	To include if data is available.

Minerals	
Comment	Response
Merseyside Environmental Advisory Service	
<p>Section 16 on Minerals could do with more emphasis and further guidance can be sought in the Local Aggregates Assessments which are produced annually. For example, paragraph 16.4.2 bullet point 2 refers to secondary/recycled aggregates competing with primary aggregates. Secondary and recycled aggregates are an essential part of the supply chain and therefore complementary to primary aggregate production, not in competition.</p>	Changes made.
<p>Little emphasis is given to the importance of mineral and aggregates in the Local Plans, in the LCR area, there is very little aggregate produced and the area is heavily reliant on imports. Without an adequate supply of aggregates, much of the proposed infrastructure could not be built, therefore providing some strategic direction on minerals would be particularly helpful in the SDS. Marine won aggregates will become increasingly important but this relies on the wharves and transport infrastructure being safeguarded to enable it to be landed and moved to where it is needed.</p>	Changes made.

