

**Wirral Metropolitan Borough Council**

# **Wirral Environmental Sensitivity Study Executive Summary**

**Final Summary**  
Prepared by LUC  
November 2021



## Why was this study produced?

### The objectives of the study

**1.1** Wirral Metropolitan Borough Council (MBC) is seeking to meet the Borough's local housing and employment needs through the emerging Local Plan in line with the National Planning Policy Framework (NPPF).

**1.2** LUC was commissioned by Wirral MBC to develop an independent and robust environmental sensitivity study for Wirral's Peninsula. The study provides evidence for the emerging Wirral Local Plan on the sensitivity of Wirral's environmental assets to development.

**1.3** The key objectives of the study were to:

- Identify the current state of the environment across Wirral and the Borough's key assets.
- Identify existing and potential pressures that may affect the environmental assets in the future (including the effects of climate change).
- Determine the sensitivity of the environment to change. This study considered the significance of the assets (whether they are of international or local importance) and their vulnerability or capacity to withstand change.
- Assess whether some parts of the Borough vary in their potential to generate additional carbon emissions.

**1.4** Wirral is characterised by its distinctive peninsular landform. It is bound on three sides by the Mersey Estuary, the Irish Sea and the Dee Estuary. These coastal areas are home to overlapping national and international designations, due to their importance for biodiversity. The Peninsula is relatively narrow and already heavily urbanised with a tightly defined Green Belt surrounding the urban areas covering 47% of Wirral. There is very minimal land outside the urban areas that is not designated as Green Belt.

**1.5** There are significant environmental constraints, recreational pressures and existing strains on the environment within Wirral. All of these have the potential to limit future development.

### The concept of 'environmental limits'

**1.6** There are strong links between the concepts of ecosystem services, environmental limits and thresholds, and environmental sensitivity. However, they all rely on the important concept of 'acceptability'.

**1.7** It can be argued that the environmental 'limit' of a location to accommodate development occurs when the loss, damage or erosion of the environment turns from being

acceptable to being unacceptable. Acceptability is determined by society in a variety of ways, including through international or national policy, or at the local level – by engaging with local politicians, stakeholders and the general public.

**1.8** With this in mind, the purpose of the environmental sensitivity study is not to determine the exact point at which targets, standards and policy intent is likely to be compromised. Instead, it provides an objective view of how sensitive different areas of land within Wirral might be to further development.

**1.9** In some cases (but not all) it may be possible to mitigate and compensate for the impacts of development, which might ensure that environmental limits are not breached. This could be achieved, for example, by incorporating sustainable drainage systems to mitigate flood risk, the use of local materials to mitigate impact on landscape character, or the creation of new habitats.

**1.10** Ultimately, policies in Local Plans must be developed, tested, consulted upon and adopted. This study provides just one factor to take into account within this process and should be read in conjunction with the wider Local Plan evidence base.

### Use of the Document

The ESS is intended to be used by the Council to understand the sensitivity of Wirral's environmental assets.

This is a strategic level study and therefore should not be used to rank, or consider, the merits or development potential of individual sites. It only considers environmental sensitivity and should be used alongside wider evidence and additional assessments to help inform the Council's future decision making in relation to the potential suitability of areas within the Borough for development.

This study provides a view of environmental sensitivity across Wirral as a snapshot in time using available data. It is intended that the findings will be amended and updated accordingly as new and/or updated datasets become available.

## How was the study produced?

**1.11** Figure 1.1 details how sensitivity values were classified for each environmental asset identified through the study. Figure 1.2 outlines the six 'Core Themes' and further 'Sub Themes' used to structure this study – relating to the types of environmental asset present in Wirral. Figure 1.3 sets out how the seven key tasks for this study were organised.

1.12 Further detail on the methodology is provided within the full report. However, the below sets out a brief summary of the key tasks:

**Task 1: Identification and mapping of the Borough's environmental assets**

1.13 Spatial data was gathered from multiple sources and relevant environmental assets were mapped under each Sub Theme. Some areas of land were excluded from assessment as they form physical constraints to development. A review of policy documents also assisted in identifying the most relevant assets and in identifying current pressures on the environment.

**Task 2: Identification of sensitivity values for each environmental asset**

1.14 Each environmental asset was assessed for its environmental sensitivity. This was based on both:

- The **significance** of the asset.
- The asset's **vulnerability/capacity to withstand change**.

1.15 Each asset was then assigned one of three sensitivity ratings, as outlined in **Figure 1.1**.

- **Higher Sensitivity** (these areas are immediately ruled out from further consideration);
- **Moderate Sensitivity** (where mitigation would be required if development were to come forward) or
- **Lower Sensitivity** (where mitigation may be required if development were to come forward).

1.16 These assigned sensitivity ratings were consulted on with a wide range of professional and technical consultees to ensure that they were appropriate.

**Figure 1.1: How sensitivity values were classified for each identified environmental asset**

		Level of significance	
		Nationally/inter-nationally significant	Locally/less than nationally significant
Capacity to withstand change	Susceptible Either asset is fragile and would not recover within reasonable period OR if asset is not fragile, recovery from harm caused would be slow or would not take place at all.	<b>Higher sensitivity</b>	<b>Moderate sensitivity</b>
	More robust Either asset is not fragile OR if it is fragile, the asset is likely to regenerate strongly within a reasonable period (e.g. 5-10 years).	<b>Moderate sensitivity</b>	<b>Lower sensitivity</b>

**Task 3: Mapping of the sensitivity of environmental assets under each Core Theme**

1.17 Environmental Assets and their assigned sensitivity ratings were grouped together, based on their characteristics, into 'Core Themes' and further divided in 'Sub Themes'. A series of sensitivity maps were produced for each of the six Core Themes, based on the findings of Task 2.

1.18 Following this theme-by-theme assessment, an overall 'composite' map of environmental sensitivity in Wirral was produced. This map combined the sensitivity ratings for assets across all of the Core Themes. Where a number of moderate sensitivities were found to be present, they were 'layered up' to indicate different levels of sensitivities across different parts of the Borough. The composite map is shown in **Figure 1.4** and the theme-by-theme sensitivity maps can be found in the full report.

**Task 4: Landscape Sensitivity Assessment (LSA)**

1.19 A slightly different approach was taken to assessing the sensitivity of landscape assets, compared to the environmental assets assessed under tasks 2-3. This is because the methodology used to assess landscape sensitivity does not easily align with the method set out in **Figure 1.1**. As such, a separate assessment of landscape



sensitivity was 'layered' on top of the composite environmental sensitivity mapping.

**1.20** This desktop LSA exercise was undertaken during 2020/21 to identify the variations in landscape sensitivity within Wirral and supplements the findings of the Wirral Site Specific Landscape Sensitivity Assessment (2019). Areas of heightened sensitivity are shown on **Figure 1.4**.

**Task 5: Over-arching assessment of Wirral's environmental and landscape sensitivity**

**1.21** Based on the outputs of Tasks 3 and 4, an over-arching assessment of the environmental and landscape sensitivities across the Borough was undertaken. A brief overview of these results are included within this Executive Summary.

**Task 6: Assessment of potential for carbon emissions**

**1.22** This task analysed parts of the Borough that are likely to have greater implications for the generation of carbon emissions. This considered:

- the **accessibility** of different areas to key services using either public transport or active travel.
- the opportunities available for **renewable and low carbon energy** including district heating networks.

**Task 7: Assessment of Wirral's settlement areas**

**1.23** A more focused analysis of sensitivity around the edge of Wirral's settlement areas was undertaken. This assessment identified the relative sensitivity of land around these areas and used the findings of the composite sensitivity maps as a basis for analysis, alongside the summary of the accessibility considerations arising from Task 6.

**Please note:** This is a strategic study which identifies general levels of environmental sensitivity and accessibility to services across Wirral. Detailed studies will still be required at the local level to assess the potential impacts of development at specific sites.

**Figure 1.2: Core themes and sub-themes used for this study**

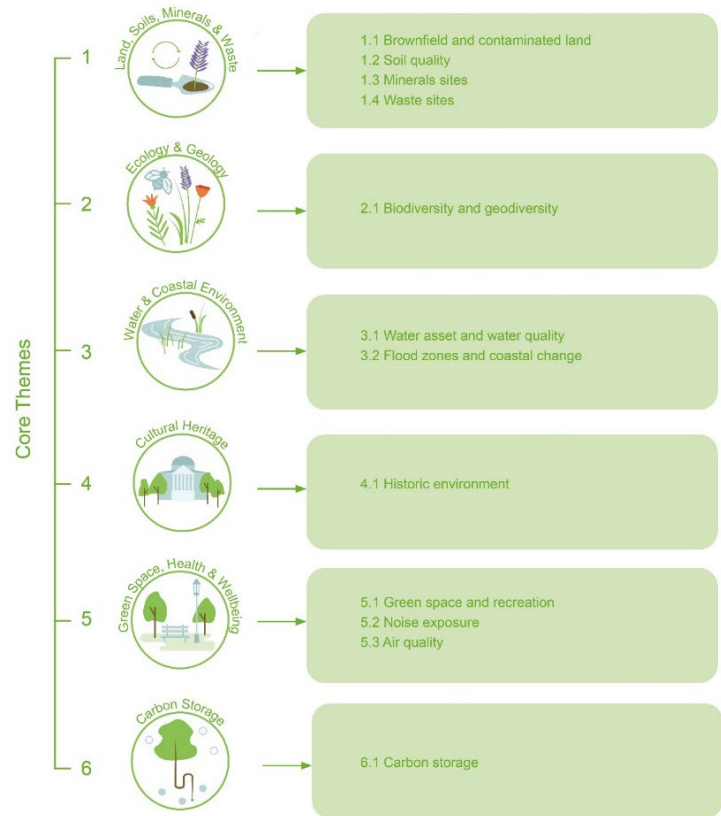
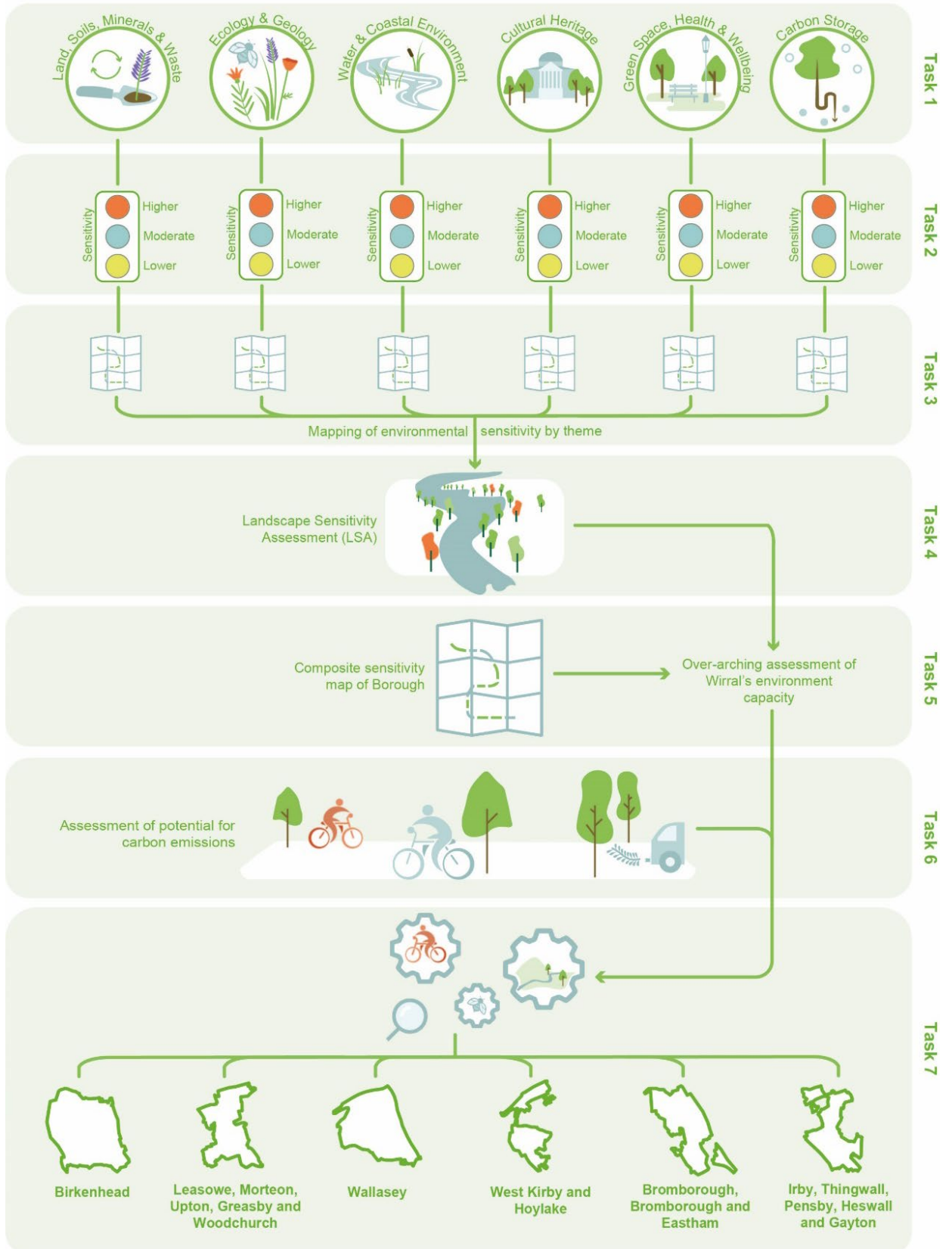


Figure 1.3: Methodology overview



## Key findings of the Study

### Wirral's environmental, ecological and landscape sensitivity

#### A brief summary of Wirral's environmental sensitivity

**1.24** There are very limited areas within the Borough which were identified as being of lower sensitivity. These lie within existing built-up areas.

**1.25** Areas identified as 'higher sensitivity' (in red on **Figure 1.4**) are generally:

- Areas of high flood risk (most widespread in the north).
- Designated biodiversity assets - such as SSSIs within the Heswall Dales and at Thurstaston Common.
- Designated heritage assets, such as the Conservation Areas at Birkenhead Park and Port Sunlight.
- Areas of protected ancient woodland, most expansive in the River Dibbin Valley.

**1.26** A number of areas across the Borough are identified as 'moderately' sensitive and often have multiple environmental sensitivities in one place. Such areas include Bidston Hill, wooded areas within West Kirby, parts of Arrowe Country Park, and parts of the River Birket corridor.

**1.27** More expansive areas of moderate sensitivity, (but with less multiple environmental sensitivities) are concentrated in the west and south of the Borough.

**1.28** Finally, the lightest blue areas on the map highlight areas with the least multiple environmental sensitivities – generally overlapping with existing urban areas, along with limited areas on the edge of built-up settlements.

#### A brief summary of Wirral's ecological sensitivity

**1.29** The composite mapping of environmental sensitivity includes biodiversity assets. However, while this is helpful in being able to identify areas of key sensitivity, it does not present the complete picture.

**1.30** This is because these sites do not function in isolation and surrounding habitats are required to connect between, and buffer around, these sites to ensure healthy ecosystem function, particularly where there is need for resilience to external pressures such as climate change.

**1.31** When considering ecological sensitivities in Wirral, it is important to bear in mind data limitations, in particular those relating to the following issues:

- **The role of 'functionally linked habitat'**: This refers to those wider habitats in Wirral which support the species

for which sites are designated. The best available data has been used to indicate the extent of these areas. However, further studies are awaited to clarify exactly where this land is and so it is likely that the extent of higher sensitivity areas of biodiversity identified in this study are an underestimate.

- **Recreational pressures**: there are a number of pressures facing the Wirral Peninsula's sensitive ecological assets and the wider ecological resource within Wirral, particularly from recreational users. This pressure is of greatest concern at the international designations surrounding the Wirral coast and the national designations at Thurstaston and Heswall Dales. Addressing these pressures requires careful management and the need to recognise that additional housing and development may exacerbate existing problems.

#### A brief summary of Wirral's landscape sensitivity

**1.32** The analysis undertaken through this study highlighted the coastal areas – and in particular the Dee Estuary – as the Borough's most sensitive landscapes. The central agricultural core of Wirral is judged as being less sensitive than coastal areas, however sensitivity is higher where the landscape plays an important role in the setting of historic villages.

**1.33** It is important to note that, while inland areas are generally less sensitive than coastal areas, elevated features such as the sandstone outcrops (at Bidston Hill, Thurstaston Hill and Caldry Hill) significantly heighten sensitivity, particularly because of the intervisibility they allow and the contribution to Wirral's sense of place.

#### What does this mean for overall sensitivity?

**1.34** While no definitive judgement can be made about whether Wirral is 'at environmental capacity', or that the Borough is unable to accommodate further development, the study offers a qualitative commentary of the pressures facing Wirral's natural assets, and what this means for Wirral's environment.

**1.35** Both the composite mapping of environmental and landscape sensitivity and the additional pressures outlined in the preceding text illustrate that Wirral is a highly constrained Borough - in both environmental and landscape terms. This is in part due to its peninsular form, with approximately 55% of the Borough already developed, and with the remaining countryside providing an important resource for both the inhabitants of Wirral and visitors beyond.

**1.36** The Borough plays host to some important yet vulnerable biodiversity assets. Protection of these vulnerable resources and the sense of place within Wirral is key to

maintaining a sustainable future. Too much additional development has the potential to erode Wirral's unique qualities.

**1.37** There are existing knowledge gaps concerning some of the areas that require protection within Wirral, due to data limitations. This study cannot therefore provide a definitive statement on all sensitive land at this time but will be updated as new data becomes available.

**1.38** However, identified sensitivities should be taken into account when planning land use change in Wirral. This relates in particular, for the need to identify the wider areas of habitat which support designated sites, and to safeguard the most vulnerable habitats from significant recreational pressures stemming from within the Borough and the wider Liverpool City Region (LCR). This study therefore recommends caution and further consideration of these issues when considering future land use change in Wirral.

**1.39** While areas of land within settlement boundaries are by no means free of environmental sensitivities, in broad terms these Urban Areas are identified as being generally less environmentally sensitive than areas within the countryside.

## Carbon emission findings

### Why does this study assess the potential for carbon emissions?

**1.40** The impact of rising carbon emissions on the integrity of the environment globally is now well documented. Increasing levels of greenhouse gases in the Earth's atmosphere are driving excessive global heating, leading to climatic instability.

**1.41** As the UK's Committee for Climate Change has urged, tackling carbon emissions will require a step change in how land is used in the UK. It will also require greater attention to where development is located and the travel behaviours those locations promote.

**1.42** In recent years, the UK has made significant progress in 'decarbonising' power generation. Decarbonisation of heat and travel remains a challenge. Greenhouse gas emissions from road transport make up around a fifth of UK greenhouse gas emissions and increased by 6% between 1990 and 2017<sup>1</sup>.

**1.43** The study discusses the routes for reducing emissions in Wirral including through the transport sector.

### Transport-related carbon emissions

**1.44** The study considered transport-related emissions and refers to the potential of the built environment to lead to car-dependent lifestyles and consequent carbon emissions. More specifically, it assesses the *accessibility* of locations to key services and destinations such as places of employment. It also discusses the potential for the generation of renewable energy and the establishment of district heating networks.

**1.45** Locating development close to local services and employment will, all other things being equal, reduce the need to travel and will allow the use of low carbon modes of transport, particularly walking and cycling.

**1.46** In order to assess accessibility to services in Wirral, a series of accessibility ratings were developed which were consistent with those used by MerseyTravel and in Wirral MBC's Draft Open Space Standards.

**1.47** These accessibility ratings were then layered to provide an overall view of accessibility to the services considered necessary for the daily life of residents. This overall accessibility mapping is shown in **Figure 1.5**.

### What does the assessment show?

**1.48** Land in the vicinity of Wirral's settlement areas is the most accessible to a range of services and employment opportunities. This is likely due to the proximity to town centres and local centres for retail, health and education services, as well as the availability of key public transport nodes such as MerseyRail stations, which allow access to key employment centres.

**1.49** It is anticipated that those living in the areas currently highlighted through lighter shades of blue are more likely to lead more car-dependent lifestyles

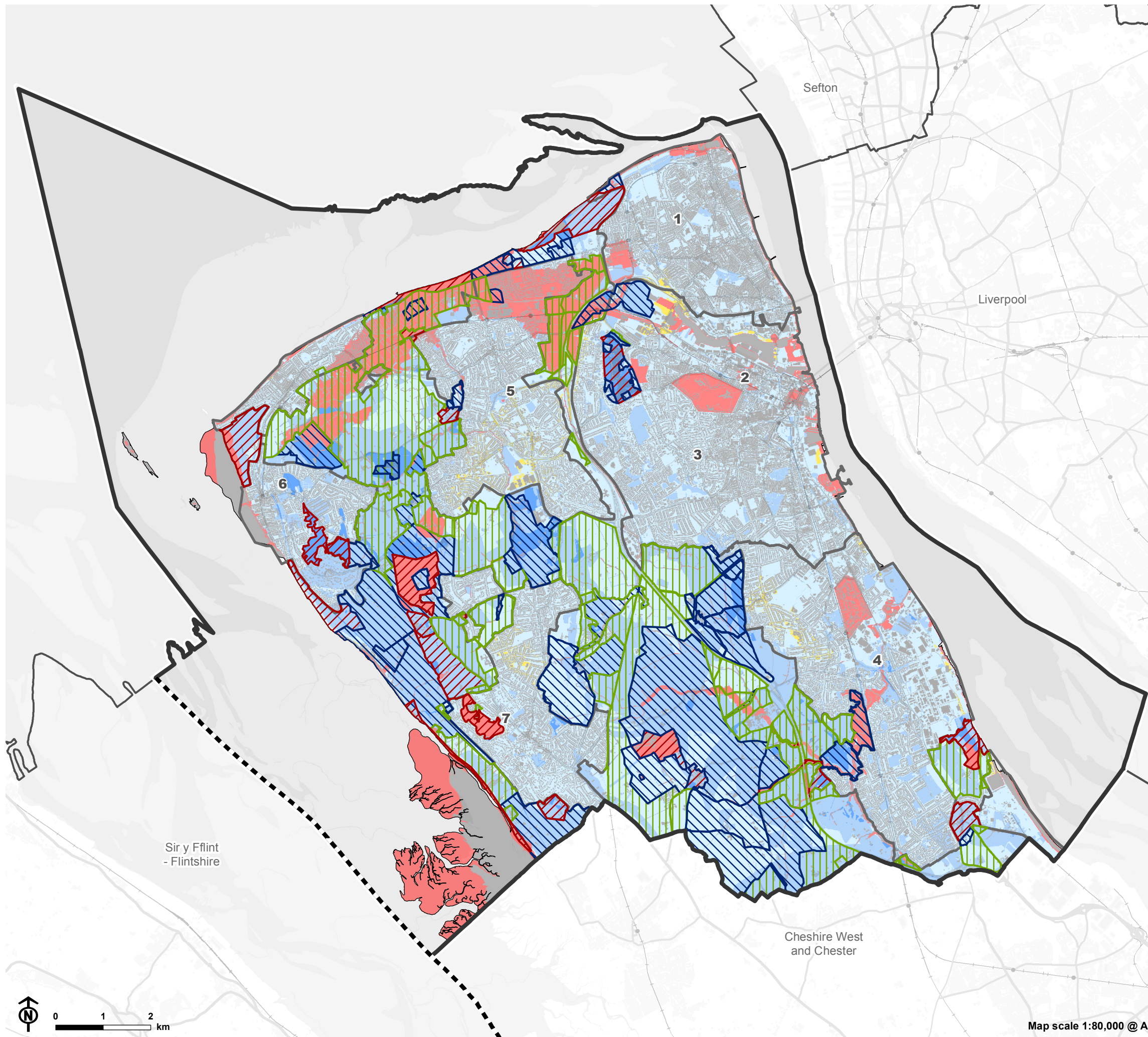
**1.50** The wider Birkenhead area performs particularly strongly in terms of accessibility, compared to settlement areas in the west such as Heswall and West Kirby. In these locations the full range of services assessed may either not be available or are some distance away from major populations.

**1.51** However, it should be noted that some of the areas currently shown as less accessible may become accessible through improvements in service and infrastructural provision. This may include new bus services, GP surgery's, primary or secondary schools or sources of employment provided within walking distance and new provision of publicly accessible green space delivered alongside new development.

<sup>1</sup> ONS (2019) 'Road transport and air emissions' [Online] Available at: <https://www.ons.gov.uk/economy/environmentalaccounts/articles/roadtransportandairemissions/2019-09-16>



**Figure 1.4: Composite mapping of environmental sensitivity in Wirral (including areas of heightened Landscape Sensitivity)**



- Wirral boundary
- Other Local Authority boundary
- England - Wales boundary
- Landform edge
- Settlement Area boundary
- Physical constraint

**Sensitivity value**

- Higher
- Moderate (13-14)
- Moderate (10-12)
- Moderate (7-9)
- Moderate (4-6)
- Moderate (1-3)
- Lower

**Landscape sensitivity rating**

- High
- Moderate-High
- Moderate

**Note**

Physical constraints include roads, railways, buildings, water courses, waterbodies, flood defences, areas of coastal erosion and permitted waste sites.

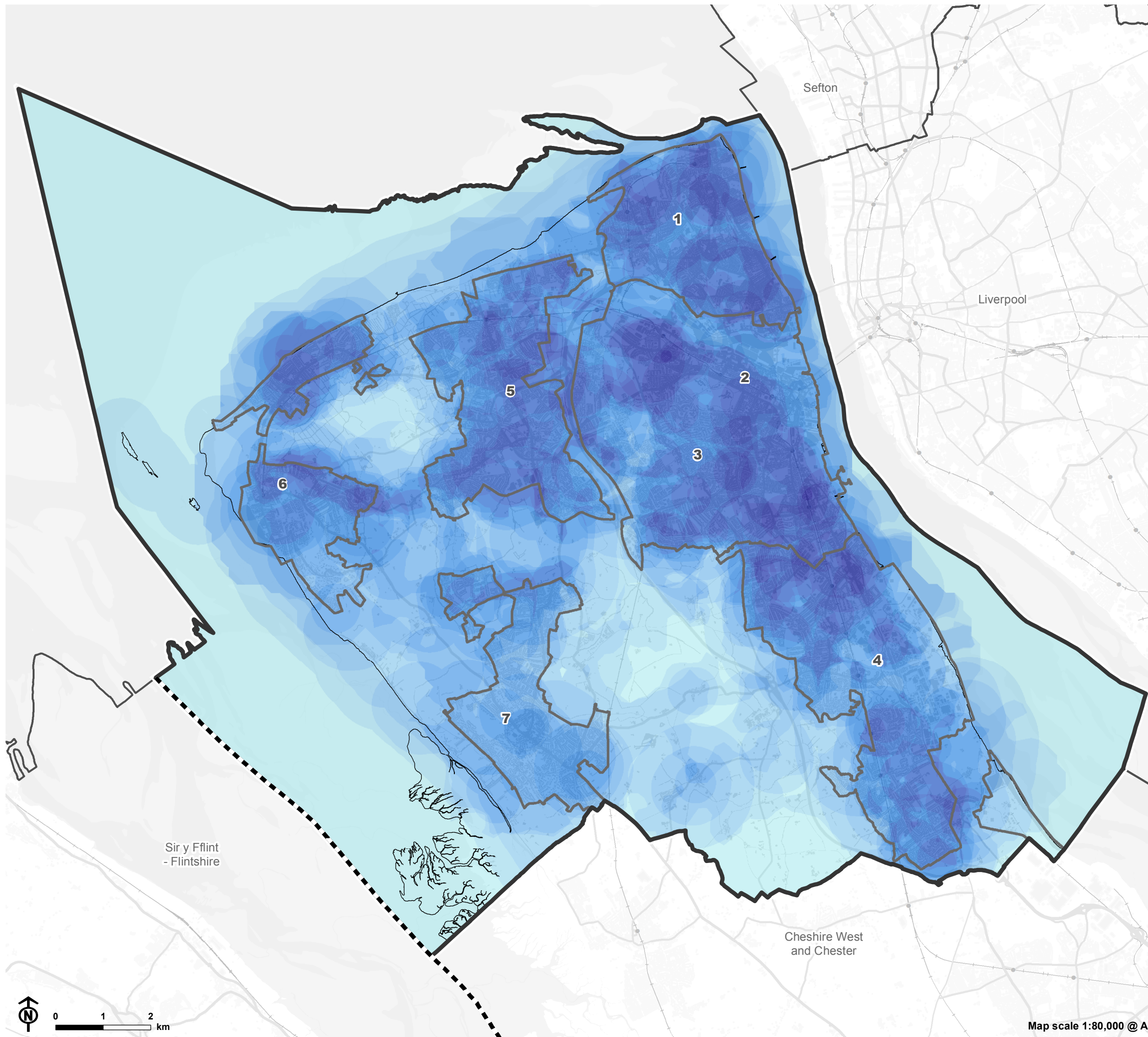
1. Wallasey
2. Birkenhead Commercial Core / 3. Suburban Birkenhead
4. Bebington, Bromborough and Eastham
5. Leasowe, Moreton, Upton, Greasby and Woodchurch
6. West Kirby and Hoylake
7. Irby, Thingwall, Pensby, Heswall and Gayton



Map scale 1:80,000 @ A3



**Figure 1.5: Accessibility to key services and open space in Wirral**



**Legend**

- Wirral boundary
- Other Local Authority boundary
- England - Wales boundary
- Landform edge
- Settlement Area boundary
- Physical constraint

**Accessibility to key services and open space facilities rating**

- Highest accessibility
- Lowest accessibility

**Note**  
Physical constraints include roads, railways, buildings, water courses, waterbodies, flood defences, areas of coastal erosion and permitted waste sites.

- 1. Wallasey
- 2. Birkenhead Commercial Core / 3. Suburban Birkenhead
- 4. Bebington, Bromborough and Eastham
- 5. Leasowe, Moreton, Upton, Greasby and Woodchurch
- 6. West Kirby and Hoylake
- 7. Irby, Thingwall, Pensby, Heswall and Gayton

Map scale 1:80,000 @ A3

## What are the Next Steps?

**1.52** As indicated above, no definitive judgement can be made about whether Wirral is 'at environmental capacity', or that the Borough is unable to accommodate further development. However, the findings do illustrate that Wirral is a highly constrained Borough - in both environmental and landscape terms.

**1.53** There are some pockets of less heavily constrained land within the Borough. If development options outside of settlement areas are considered at any point in the future, the Council would need to take into account a number of other considerations, that lie beyond the scope of this study. These include:

- Potential harm to the Green Belt.
- Further consideration of access to services, capacity of existing services and access to public transport.
- Infrastructural constraints.
- Viability and deliverability issues.
- A more granular review of environmental constraints and mitigation, including factors not covered by this study – such as the potential for impacts on the setting of heritage assets.
- Sustainability Appraisals (SA) and Strategic Environmental Assessments (SEA), as required for all Local Plans.

### Next steps

**1.54** This study recognises that significant work is being carried out to update data sets relating to environmental assets in Wirral and the wider Liverpool City Region (LCR). As such, this report should remain a 'live' document – meaning it should be reviewed when updated datasets are available to consider.

**1.55** In particular, this study recommends that future versions should include any implications relating to the following:

- Updated Phase 1 Habitat data.
- Detailed assessment of Agricultural Land quality.
- The extent of 'functionally linked habitat' in Wirral following the completion of Natural England's study (due in 2021).
- Information on Irreplaceable Habitats as part of the Local Nature Recovery Strategy (LNRS) baseline work.
- The forthcoming LCR Recreation Mitigation Strategy (RMS), the evidence base for which is in the process of

being published throughout 2021/22, with the RMS itself currently due to be published in 2023. The policy is anticipated to require mitigation for recreational disturbance from new residential development within a minimum 5km of the coast.

- Any updates to the LCR Natural Capital baseline data.
- Finalised locally designated Local Green Spaces (LGS).

**1.56** The nature of these updated data sets may lead to changes in the 'sensitivity values' assigned to particular areas. These in turn should be used to revise the sensitivity maps included in this study where required.