

# Climate Change & The Environment

## Natural Environment and Green Infrastructure - Our Considerations

### 1. Issues and opportunities

- 1.1. The need to take action in response to the global climate and ecological emergencies is well documented. [Towards a Green Future for the Liverpool City Region](#)<sup>1</sup> sets out the key challenges and actions that we as a City Region can take, in particular:
- **Global warming** and how we enable effective climate resilience.
  - **Biodiversity loss** and how we arrest species decline and conserve / re-wild habitats.
- 1.2. Spatial planning can play an instrumental role in meeting these challenges, with land–use policies concerning the natural environment and Green Infrastructure capable of delivering positive change.
- 1.3. The Liverpool City Region (LCR) comprises 80% blue / green space, providing a unique and valuable asset estimated to be worth £100bn<sup>2</sup>. This diverse network of green and blue spaces or ‘Green Infrastructure’ is both urban and rural including agricultural land, woodland, coastal areas, rivers, parks and open spaces, playing fields, street trees, allotments and private gardens.
- 1.4. Green Infrastructure is multi-functional and provides a wide range of environmental and quality of life benefits. Work carried out by [The Mersey Forest](#) highlights the importance of the LCR’s Green Infrastructure as a significant asset, helping to support and deliver:
- **Economic growth** – providing an environment attractive to investment and jobs.
  - **Health and wellbeing** – contributing to improved physical and mental health, reduce health inequalities, reduce costs for the NHS<sup>3</sup> plus opportunities to increase cycling and walking.
  - **Climate Change resilience** – providing natural adaptation and mitigation measures.

---

<sup>1</sup>University of Liverpool Heseltine Institute (2019)

<sup>2</sup> Nature Connected: <http://www.natureconnected.org/key-message-2/>

<sup>3</sup> Natural Health Service: <https://naturalhealthservice.org.uk/wordpress/>

- **Recreation, leisure and tourism** – providing attractiveness and setting to support the visitor economy.
- **Ecology** – safeguarding and improving biodiversity and providing opportunities for creation of larger, more connected and better managed habitats.
- **The rural economy** – supporting food and energy production, jobs and rural diversification opportunities.

- 1.5. Predicted climate change effects for North West England are drier summers with more frequent and severe periods of drought, and wetter winters with increased rainfall<sup>4</sup>. Combined with rising sea levels, flooding (including surface water, coastal and rivers) is of key concern to the LCR with considerable properties potentially at risk<sup>5</sup>.
- 1.6. Planned, well designed, and managed Green Infrastructure can offer effective Climate Change adaptation and mitigation measures. For example managing flood risk naturally through [sustainable drainage systems](#) ('SuDS'), reducing run-off to '[slow the flow](#)' of rivers and streams across catchment areas, and managing coastal change. It can also offer urban cooling.
- 1.7. It is also important to ensure that Climate Change impacts do not further social and economic inequalities. Considering the ability of different communities to cope with and recover from impacts, such as flooding, can help inform approaches to climate change mitigation or adaption and reduce disadvantages. The concept of '[Climate Justice](#)' seeks to address this, with mapping tools such as [Climate Just](#) available to inform where vulnerable communities lie. This is something we will consider further in developing the SDS's policy approach.
- 1.8. The COVID-19 pandemic and lockdown measures have further emphasised the importance of accessible, safe and quality green and open spaces for our physical and mental health and wellbeing. It has also highlighted existing inequalities of provision— especially in urban and more deprived areas<sup>6</sup>. Whilst mapping data indicates a good overall level of access to formal open space and informal

---

<sup>4</sup> [The Mersey Forest \(2013\) 'LCR and Warrington Green Infrastructure Framework Technical Document'](#)

<sup>5</sup> Environment Agency Flood Risk data and Merseyside Flood & Coastal Erosion Risk Management (FCERM) Partnership, see: <https://thefloodhub.co.uk/your-local-area/merseyside/#section-2>

<sup>6</sup> RTPI (2020) 'Plan the World We Need'

recreation areas across the LCR, this does not take account of its quality<sup>7</sup>. Various local authority level studies detail the quantity, quality and accessibility of open space in their areas, informing appropriate local standards set by Local Plans.

- 1.9. Tree planting and well-designed woodland creation in particular has been shown to deliver many benefits such as absorbing carbon dioxide and improving air quality<sup>8</sup>. In the LCR, significant levels of tree planting and woodland creation have already been achieved over the last 25 years through the work of the [Mersey Forest Partnership](#), delivering multiple social, economic and environmental benefits. The Mersey Forest Plan - [More From Trees](#) – seeks to build on this achievement setting out a long-term strategy for tree planting and woodland delivery in the City Region (with north Cheshire and Warrington).
- 1.10. Furthermore, potential to achieve even greater benefits at a sub-national scale exists in the creation of the [Northern Forest](#) with its ambition to plant 50 million trees across the north of England over the next 25 years. The Government has also set out its ambition to significantly increase tree establishment and woodland creation nationally as part of an emerging England Tree Strategy [England Tree Strategy](#).
- 1.11. The City Region's natural environment contains a wide range of sites, areas and reserves designated for their high biodiversity value including <sup>9</sup>:
- 4 international Ramsar Sites
  - 5 European Special Protection Areas
  - 3 National Nature Reserves
  - 19 Sites of Special Scientific Interest
  - 384 Local Wildlife Sites
  - 28 Local Nature Reserves
- 1.12. These biodiversity 'assets' in themselves serve many purposes such as providing important habitats for species, research opportunities, landscape value, leisure and recreation, health and wellbeing<sup>10</sup>.

---

<sup>7</sup> AECOM (2020) 'IIA Scoping Report'

<sup>8</sup> Forestry Commission (2020) 'Managing England's woodlands in a climate emergency'

<sup>9</sup> Nature Connected: <http://www.natureconnected.org/key-message-2/>

<sup>10</sup> AECOM (2020) 'IIA Scoping Report'

1.13. The well documented rate at which wildlife species are in decline – ‘biodiversity loss’ – has serious implications for humanity, who depend on a healthy natural environment for the provision of natural resources (such as food, pharmaceuticals, construction materials), a good physical environment (including air, soil and water quality), a functioning climate, and for general health and wellbeing<sup>11</sup>. This highlights the importance of protection, conservation and enhancement measures.

## **2. Why does the Spatial Development Strategy need to address this?**

- 2.1. The issue of Climate Change and its consequences is one of the matters to which the LCR Spatial Development Strategy (SDS) must have regard to in line with legislation<sup>12</sup>.
- 2.2. There is also a strong legislative and policy framework already established to protect and enhance biodiversity, with the need to reverse its decline being addressed through new legislation requiring ‘biodiversity net gain’ from new development as part of the Environment Bill (see below). Subsequent stages of the SDS’s drafting will also be supported by a [Habitats Regulations Assessment](#) in line with regulations to assess any potential impacts on European designated sites.
- 2.3. The [National Planning Policy Framework \(2019\)](#) expects plans to take a proactive approach to mitigating and adapting to climate change, taking account of long term implications for flood risk, coastal change, water and biodiversity, amongst other matters.
- 2.4. It sets out what strategic planning policies should cover to meet priorities, including: the conservation and enhancement of the natural environment and green infrastructure; planning measures to address climate change mitigation and adaptation; and infrastructure for flood risk and coastal change management. Plans should take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital.
- 2.5. [Planning Practice Guidance](#) further highlights the benefits provided by multi-functional green infrastructure and details the role of strategic policies in identifying locations and setting protection and enhancement measures. It also sets

---

<sup>11</sup> [RTPI \(2019\) ‘Biodiversity in Planning’](#)

<sup>12</sup> Greater London Authority Act 1999, Part viii as applied by Article 4(2) of the Liverpool City Region Combined Authority (Functions and Amendments) Order 2017, with modifications made by Part 1 of Schedule 1

out the key planning considerations relating to biodiversity, geodiversity and ecosystems and how 'biodiversity net gain' can be secured.

- 2.6. The Government's [25 Year Environment Plan](#) seeks to put the environment at the heart of planning and development to create better places for people to live and work. It embeds a 'net environmental gain' principle for new development to deliver environmental improvements. It outlines how the '[natural capital approach](#)' - looking at the sum of the components of nature that either directly or indirectly bring benefit to people - will be taken to make choices and decisions. It aims to reduce the risks of flooding through expanding the use of natural flood management solutions.
- 2.7. The [Environment Bill 2020](#) sets out the statutory changes to implement the 25 Year Environment Plan. Key measures include:
- **Biodiversity net gain:** A mandatory requirement for housing and development to achieve at least a 10% net gain in value for biodiversity - habitats for wildlife must be left in a measurably better state than before the development. If net gain is not achievable on-site, the biodiversity gain plan will need to include off-site habitat enhancements.
  - **Local Nature Recovery Strategies:** New mandatory strategies for nature recovery that will identify opportunities and priorities for enhancing biodiversity and supporting wider objectives such as mitigating or adapting to climate change in an area.
- 2.8. The Government's [Planning White Paper – 'Planning for the Future' \(2020\)](#) proposes significant reforms to the planning system. Central to the proposals is a move towards an interactive map and development 'rules' based approach to land-use planning, supported by identification of renewal, growth and protection areas. It places emphasis on the use of digital technology and tools in plan making.
- 2.9. It would retain the principle of environmental protection recognising the 'vital role' of plans in identifying environmental designations. It also seeks to further the planning system's role in proactively promoting environmental recovery to meet the 25 Year Environment Plan's ambitions. It envisages planning playing a 'strong part' in efforts to mitigate and adapt to climate change as well as making our towns and cities more liveable through better green spaces and tree cover.

- 2.10. The Government are also assessing the extent to which their policies and processes for managing flood risk may need to be strengthened, along with developing a national framework of green infrastructure standards. Development of the SDS will therefore need to be mindful of these changes where relevant.

### 3. What is being done by the Combined Authority?

- 3.1. The LCR Metro Mayor has set out his vision for the City Region to be the cleanest and greenest in the country and at the forefront of environmental conservation and sustainability.
- 3.2. The Combined Authority (CA) declared a [Climate Emergency](#) in June 2019 with the target of making the LCR net carbon neutral by 2040. Following the 2019 LCR Year of the Environment and Environmental Summit, the [LCR Climate Partnership](#) has been set up to co-ordinate the City Region's response to the climate and ecological emergency.
- 3.3. The draft [LCR Local Industrial Strategy](#) recognises the City Region's unique natural environment as a valued asset, emphasising its importance in the making of a thriving and distinctive place. It sets the ambition to enhance this 'natural capital' through a partnership approach, creating and sustaining green spaces.
- 3.4. In response to the COVID-19 pandemic, the Economic Recovery Plan for the City Region - [Building Back Better](#) – embeds environmental sustainability as one of six principles guiding recovery initiatives. The Plan outlines the opportunities and imperative for a 'greener recovery' committing to engaging with Government on the devolution of tree planting and conservation in alignment with Mersey Forest Partnership's programme to 'Grow Back Greener'.
- 3.5. Work commissioned by the CA and undertaken collaboratively by the LCR Natural Capital Working Group<sup>13</sup> on the creation of a LCR '[Natural Capital Baseline](#)' is nearing completion. This will provide an evidence base in the form of 'spatial dataset' or map based tool to support the implementation of the natural capital approach in the City Region. The tool enables the measuring and monitoring of natural capital levels across the City Region allowing an understanding of the range of goods and services this provides (known as 'ecosystem services'). For

---

<sup>13</sup> A subgroup of '[Nature Connected](#)' (the LCR Local Nature Partnership).



example, woodland that sequesters and stores carbon contributes towards climate change regulation; or parks and open space provide access to nature giving mental and physical health benefits. It also allows us to model where the natural environment has capacity to provide certain ecosystem services alongside the areas where they are in demand<sup>14</sup>.

- 3.6. This baseline can be utilised to estimate environmental net gains from proposals and plans and to inform and identify where any strategic improvements / investments should be focussed to provide greatest benefit or meet greatest needs.

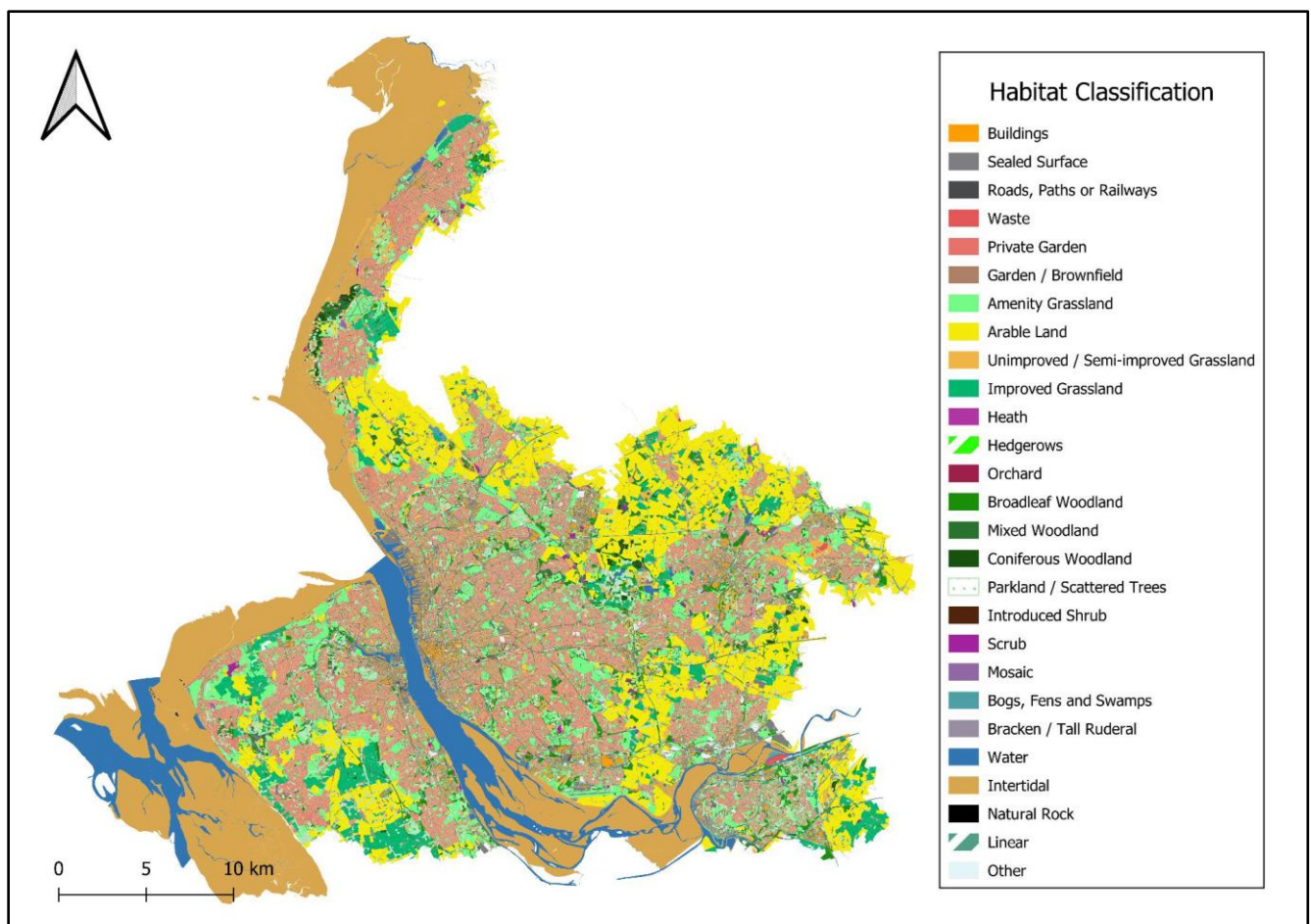


Figure 1. LCR Natural Capital Baseline

<sup>14</sup> See: <http://www.natureconnected.org/wp-content/uploads/2020/06/Liverpool-City-Region-Natural-Capital-Baseline-June-2020.pdf>

Building on the existing [LCR Ecological Network](#) and Nature Improvement Areas, the baseline can contribute towards development of a Nature Recovery Network.

- 3.7. The Combined Authority also intends to commission work on assessing flood risk (from all sources) at a strategic level in the City Region with advice from EA and other partners in order to further develop policy.

## 4. What you told us

- 4.1. Responses to our previous SDS public engagement '[LCR Listens: Our Places](#)' highlighted the following challenges and opportunities in relation to the natural environment, Green Infrastructure, and climate impacts including flooding:

### Challenges

- Protecting and maintaining our green and open spaces such as parks for their importance to health and wellbeing.
- Increasing people's access of green spaces.
- When targeting spending for climate change adaptation, it is crucial we are guaranteeing that the communities most at risk of the effects of climate change (e.g. flooding) are prioritised.
- Habitat loss is the biggest threat to biodiversity – we need to stop the decline of wildlife populations.
- Mitigating climate emergency impacts, including proactively managing flood risk.
- The Liverpool City Region has a significant flood risk and is particularly vulnerable to the risk of surface water flooding due to its urban nature and impermeable surfaces generating surface water flows.
- Tree cover is low in the LCR, this needs to be addressed.
- Need to reprioritise planning to create a sustainable balance of land uses to the benefit of people, nature and the environment.

### Opportunities

- Creating more opportunities for people to experience nature by improving access to and provision of parks, green spaces, woodlands, habitats, the coast, rivers and canals (green and blue infrastructure).



- Making sure we have better integration of Green Infrastructure into development.
- The protection, conservation and enhancement of the natural assets of the LCR should be a key focus within the SDS and it should advocate net gain for biodiversity (or even more progressively for natural capital).
- Identify open space assets and habitats of sub-regional value that should be protected / enhanced / managed.
- Put in place infrastructure (including green and blue) to help limit negative impacts from extreme weather.
- Making space for water - this is a vital and increasingly important part of sustainable water management on a catchment scale.
- The City Region should adopt an ambitious tree planting target and identify land for tree planting. Increasing tree cover and green spaces to capture more carbon naturally.
- The LCR is well-placed to tackle the climate and biodiversity emergencies and move this forward at pace because of existing collaborations, partnerships and evidence.
- Work collaboratively to deliver natural capital investment and opportunities in LCR and adopt the Natural Capital Baseline as spatial evidence base.

## 5. How we could respond?

5.1. Based on the above considerations and feedback we have received, a suggested strategic policy approach to cover this subject is set out below.

To plan strategically for the natural environment and Green Infrastructure, taking account of climate change, we suggest a policy approach that would:

- Seek to ensure that Green Infrastructure is planned, designed and managed in an integrated way to achieve multiple benefits.
- Embed the 'natural capital approach' into plan and decision making, securing lasting benefits offered by the natural environment. This would utilise the LCR Natural Capital Baseline to prioritise and identify strategic opportunities for Green Infrastructure and habitat provision or improvement, and act as a consistent measure for achieving environmental net gain from new development.

- Support and identify opportunities for strategic tree planting and woodland creation in the City Region and ensure its lasting management.
- Reinforce the protection of the LCR's network of green and open spaces and promote its improvement, ensuring new provision is accessible to communities and is of a high standard with lasting management in place.
- Reinforce the protection of the LCR's sites of biodiversity and geodiversity value and promote their conservation and enhancement.

It would also:

- Set out a strategic approach to water management, flooding and flood risk informed by updated strategic level flood risk information for the City Region.

5.2. We welcome your views on this. Comments received will help us in drafting a policy. We will review and refine this suggested policy approach in response to any further details that emerge following the Planning White Paper and as we develop our evidence base.

## **6. Which Objectives will this approach help to achieve?**

6.1. The suggested policy approach will help achieve the following SDS objectives:



Tackling Climate Change and creating a greener City Region



Delivering an Inclusive Economy



Addressing health inequalities and creating a healthier City Region



Embedding Social Value in all aspects of development

## 7. How can we make sure this approach would work?

7.1. Suggested ways and resources could include:

- LCR Natural Capital Baseline to plan, measure and monitor environmental improvements.
- Utilising [digital tools](#) (e.g. [SCATTER](#), [Climate Just](#)) to plan, measure and monitor climate mitigation / adaptation improvements.
- Utilising the [LCR Ecological Network](#) evidence base (Merseyside Environmental Advisory Service) on habitats / biodiversity.
- Mapping and monitoring accessibility to open and green space.
- Measuring and monitoring tree cover and levels of carbon sequestration.
- Evidence and data on flood risk and coastal management (multiple sources including Environment Agency) plus any updated strategic flood risk assessment for LCR.