St. Helens Local Plan 2018-2033 Preferred Options December 2016

Habitats Regulations Assessment

St. Helens Metropolitan Borough Council

December 02 2016

Quality information

Prepared by	Checked by	Approved by
Isla Hoffmann Heap Consultant Ecologist	Dr James Riley Associate Director	Dr James Riley Associate Director

Revision History

Revision	Revision date	Details	Authorized	Name	Position
0	02/12/16	Draft for comment	JR	James Riley	Associate Director (Ecology)

Prepared for:

St Helens Council

Prepared by:

AECOM Limited
Midpoint
Alencon Link
Basingstoke
Hampshire RG21 7PP
UK

T: +44(0)1256 310200
aecom.com

Table of Contents

Figures

Tables

1. Introduction

AECOM has been appointed by St. Helens Metropolitan Borough Council (hereafter referred to as "the Council") to assist in undertaking Habitats Regulations Assessment (HRA) of the potential effects of St. Helens Local Plan 2018-2033 Preferred Options December 2016 (hereafter referred to as the "Plan") on the Natura 2000 network and Ramsar sites.

The HRA is required to evaluate the Likely Significant Effects of the Plan on internationally important wildlife sites within the zone of influence, and determine if there are any relevant connecting pathways.

The objective of this assessment is to:

- Identify any aspects of the Plan that would cause a likely significant effect on Natura 2000 sites, otherwise known as European sites or internationally designated sites; and,
- To advise on appropriate policy mechanisms for delivering mitigation where such effects are identified.

1.1 Legislation

The need for HRA is set out within Article 6 of the EC Habitats Directive 1992, and interpreted into British law by the Conservation of Habitats & Species Regulations 2010 (**Box 1**). The ultimate aim of the Habitats Directive is to "*maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest*" (Habitats Directive, Article 2(2)). This aim relates to habitats and species, not the European sites themselves, although the sites have a significant role in delivering favourable conservation status. European sites (also called Natura 2000 sites) can be defined as actual or proposed/candidate Special Areas of Conservation (SAC) or Special Protection Areas (SPA). It is also Government policy for sites designated under the Convention on Wetlands of International Importance (Ramsar sites) to be treated as having equivalent status to Natura 2000 sites.

The Habitats Regulations applies the precautionary principle to Natura 2000 sites (SAC and SPA). As a matter of UK Government policy, Ramsar sites are given equivalent status. For the purposes of this assessment candidate SACs (cSACs), proposed SPAs (pSPAs) and proposed Ramsar (pRamsar) sites are all treated as fully designated sites. In this report we use the term "European designated sites" to refer collectively to the sites listed in this paragraph.

The Habitats Directive applies the precautionary principle to protected areas. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the site(s) in question. This is in contrast to the SEA Directive which does not prescribe how plan or programme proponents should respond to the findings of an environmental assessment; merely that the assessment findings (as documented in the 'environmental report') should be 'taken into account' during preparation of the plan or programme. In the case of the Habitats Directive, plans and projects may still be permitted if there are no alternatives to them and there are Imperative Reasons of Overriding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network.

All the European sites mentioned in this document are illustrated in **Appendix A, Figure A1.** In order to ascertain whether or not site integrity will be affected, an Appropriate Assessment should be undertaken of the plan or project in question:

Box 1: The legislative basis for Appropriate Assessment

Habitats Directive 1992

"*Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives*."

Article 6 (3)

Conservation of Habitats and Species Regulations 2010 (as amended)

"*A competent authority, before deciding to … give any consent for a plan or project which is likely to have a significant effect on a European site … must make an appropriate assessment of the implications for the site in view of that sites conservation objectives … The authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site*".

Regulation 61 (1)

1.2 This Report

Chapter 2 of this report explains the process by which the HRA has been carried out. **Chapter 3** explores the relevant pathways of impact. **Chapter 4** undertakes the Test of Likely Significance (Screening) of the policies and site allocations of the Plan considered 'alone'. **Chapter 5** undertakes explores in combination effects resulting from the Plan. Both chapters also include recommendations for amendments to policy that would ensure the delivery of mechanisms to achieve no likely significant effects. **Chapter 6** contains the summary of recommendations.

2. Methodology

2.1 Introduction

This section sets out the approach and methodology for undertaking the Habitats Regulations Assessment (HRA). HRA itself operates independently from the Planning Policy system, being a legal requirement of a discrete Statutory Instrument. Therefore there is no direct relationship to the National Planning Policy Framework (NPPF) and the 'Tests of Soundness'.

2.2 A Proportionate Assessment

Project-related HRA often requires bespoke survey work and novel data generation in order to accurately determine the significance of effects. In other words, to look beyond the risk of an effect to a justified prediction of the actual likely effect and to the development of avoidance or mitigation measures.

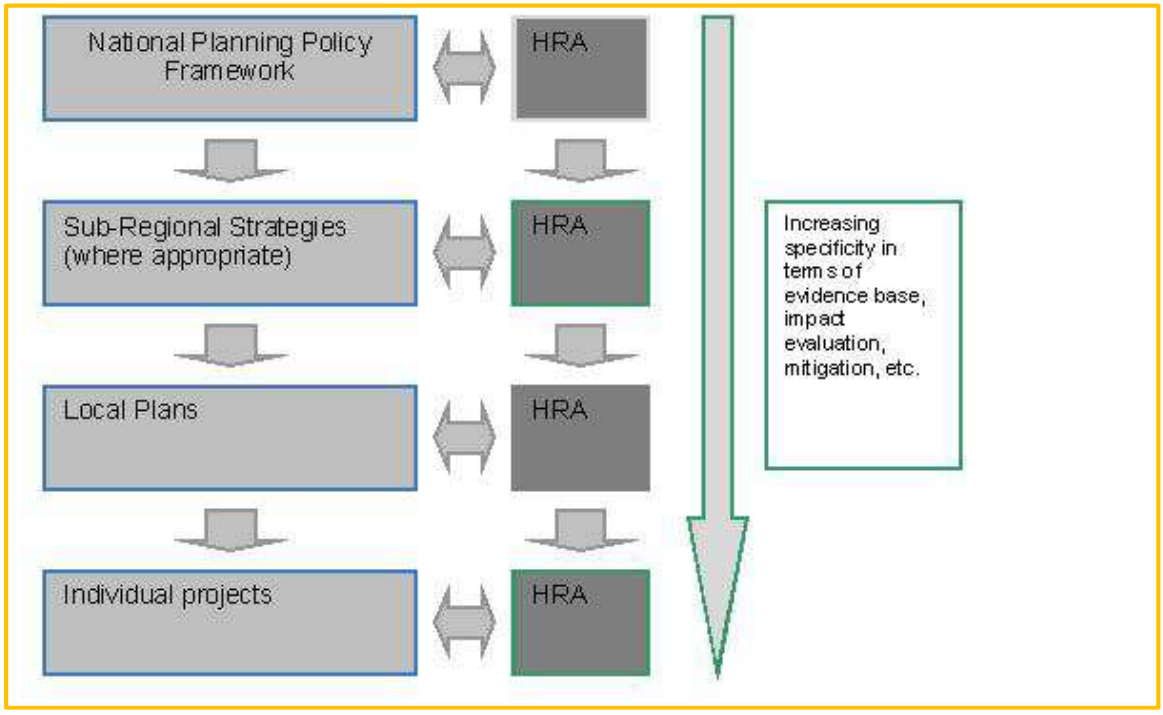
However, the draft DCLG guidance[1] (described in greater detail later in this chapter) makes it clear that when implementing HRA of land-use plans, the Appropriate Assessment (AA) should be undertaken at a level of detail that is appropriate and proportional to the level of detail provided within the plan itself:

"The comprehensiveness of the [Appropriate] assessment work undertaken should be proportionate to the geographical scope of the option and the nature and extent of any effects identified. An AA need not be done in any more detail, or using more resources, than is useful for its purpose. It would be inappropriate and impracticable to assess the effects [of a strategic land use plan] in the degree of detail that would normally be required for the Environmental Impact Assessment (EIA) of a project."

More recently, the Court of Appeal[2] ruled that providing the Council (competent authority) was duly satisfied that proposed mitigation could be "*achieved in practice"* to satisfy that the proposed development would have no adverse effect, then this would suffice. This ruling has since been applied to a planning permission (rather than a Core Strategy)[3]. In this case the High Court ruled that for "*a multistage process, so long as there is sufficient information at any particular stage to enable the authority to be satisfied that the proposed mitigation can be achieved in practice it is not necessary for all matters concerning mitigation to be fully resolved before a decision maker is able to conclude that a development will satisfy the requirements of reg 61 of the Habitats Regulations"*.

In other words, there is a tacit acceptance that AA can be tiered and that all impacts are not necessarily appropriate for consideration to the same degree of detail at all tiers as illustrated in **Box 2**.

[1] DCLG (2006) Planning for the Protection of European Sites, Consultation Paper
[2] No Adastral New Town Ltd (NANT) v Suffolk Coastal District Council Court of Appeal, 17th February 2015
[3] High Court case of R (Devon Wildlife Trust) v Teignbridge District Council, 28 July 2015



Box 2: Tiering in HRA of Land Use Plans

For a Local Plan the level of detail concerning the developments that will be delivered is usually insufficient to make a highly detailed assessment of significance of effects. For example, precise and full determination of the impacts and significant effects of a new settlement will require extensive details concerning the design of the new housing sites, including layout of greenspace and type of development to be delivered in particular locations, yet these data will not be decided until subsequent stages.

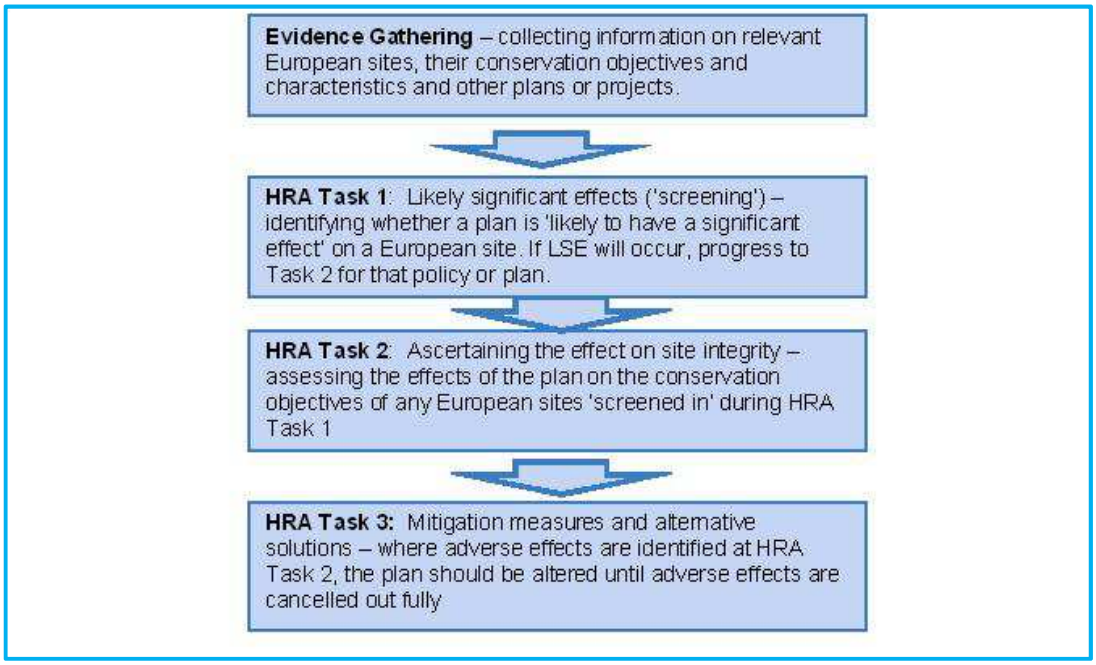
The most robust and defensible approach to the absence of fine grain detail at this level is to make use of the precautionary principle. In other words, the plan is never given the benefit of the doubt (within the limits of reasonableness); it must be assumed that a policy/measure is likely to have an impact leading to a significant adverse effect upon an internationally designated site unless it can be clearly established otherwise.

2.3 The Process of HRA

The HRA is being carried out in the continuing absence of formal central Government guidance. DCLG released a consultation paper on AA of Plans in 2006[4]. As yet, no further formal guidance has emerged from DCLG. However, Natural England has produced its own informal internal guidance and Natural Resources Wales has produced guidance for Welsh authorities on "the appraisal of plans under the Habitats Regulations" as a separate guidance document aimed at complementing and supplementing the guidance/advice provided within Technical Advice Note 5: Nature Conservation and Planning[5]. Although there is no requirement for an HRA to follow either guidance, both have been referred to in producing this HRA.

Box 3 outlines the stages of HRA according to current draft DCLG guidance (which, as government guidance applicable to English authorities is considered to take precedence over other sources of guidance). The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations and any relevant changes to the plan until no likely significant effects remain.

[4] DCLG (2006) Planning for the Protection of European Sites, Consultation Paper
[5] Welsh Government. Technical Advice Note 5, Nature Conservation and Planning (2009) http://gov.wales/topics/planning/policy/tans/tan5/?lang=en [accessed 01/12/2016]



Box 3: Four-Stage Approach to Habitats Regulations Assessment

In practice, this broad outline requires some amendment in order to feed into a developing land use plan such as a Local Plan. The four staged approach shows for simplicity a basic progression from step to step, but it is quite usual for the process to be more iterative and cyclical, with each stage being fed back to the local authority to inform further amendments to the plan which are then re-assessed for implications on internationally designated sites. The following process has been adopted for carrying out the subsequent stages of the HRA.

2.4 Task One: Test of Likely Significant Effect

The first stage of any Habitats Regulations Assessment is a Likely Significant Effect test - essentially a high level risk assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:

"*Is the Plan, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon European sites*?"

In evaluating significance, AECOM have relied on professional judgment and experience of working with the other Merseyside local authorities on similar issues. The level of detail concerning developments that will be permitted under land use plans is rarely sufficient to make a detailed quantification of effects. Therefore, a precautionary approach has been taken (in the absence of more precise data) assuming as the default position that if an adverse effect cannot be confidently ruled out, avoidance or mitigation measures must be provided. This is in line with draft DCLG guidance that the level of detail of the assessment, whilst meeting the relevant requirements of the Habitats Regulations, should be "appropriate" to the level of plan or project that it addresses (see **Box 3** for a summary of this "tiering" of assessment).

2.5 The Scope

There is no pre-defined guidance that dictates the physical scope of a HRA of a Local Plan. Therefore, in considering the physical scope of the assessment we were guided primarily by the identified impact pathways rather than by arbitrary "zones", i.e. a source-pathway-receptor approach. Current guidance suggests that the following European sites be included in the scope of assessment:

- All sites within the St. Helens Metropolitan Borough boundary; and
- Other sites shown to be linked to development within the Borough boundary through a known "pathway" (discussed below).

Briefly defined, pathways are routes by which a change in activity within the Local Plan area can lead to an effect upon a European site. In terms of the second category of European site listed above, DCLG guidance states that the AA should be "*proportionate to the geographical scope of the* [plan policy]" and that "*an AA need not be done in any more detail, or using more resources, than is useful for its purpose*" (CLG, 2006, p.6[6]).

No European sites fall within the St. Helens boundary. Eight European sites are considered to have pathways that link to development resulting from the Plan. These are identified in **Table 1**. Locations of European designated sites are illustrated in **Appendix A, Figure A1**, and full details of all European designated sites discussed in this document can be found in **Appendix B**. Note that the inclusion of a European sites or pathway in the table below does not indicate that an effect is expected but rather than these are pathways for investigation.

Table 1: Physical Scope of the HRA

European Designated Site	Reason for Inclusion (Potential Impact Pathways Present)
Mersey Estuary SPA and Ramsar site	Located 4.8km south west of the borough. • Recreational pressure • Reduction in water quality
Manchester Mosses SAC (including Astley & Bedford Mosses, Holcroft Moss and Risley Moss),	Located 5.5km east of the borough. The SAC is located immediately adjacent to the M62 which forms a major route from eastern Merseyside (north of the river) and Greater Manchester. Other Merseyside HRAs have considered this site due to its air quality sensitivity where they may contribute (through the delivery of new housing over the same period) to an increase in the use of the M62 and associated atmospheric nitrogen deposition. The M62 passes through the borough of St. Helens and it is conceivable that people from St. Helens would use this route on the way to Manchester.
Martin Mere SPA and Ramsar site	Located 11.5km north of the borough. • Recreational pressure • Changes to hydrology • Loss of functionally linked land
Ribble & Alt Estuaries SPA and Ramsar site	Located 13.8km west of the borough. • Recreational pressure and disturbance to qualifying species • Atmospheric pollution • Loss of habitat/ functionally linked land outside the site boundary
Liverpool Bay SPA and pSPA[7]	13.9km west of the borough. • Loss of water quality resulting in harm to benthic communities via waterborne pollution entering the Mersey Estuary (and later flowing into Liverpool Bay), in turn from the Sankey Brook catchment (e.g. increase in heavy metals from sewage and/or industry)/ sediments • In-combination disturbance of birds through increase in ship movements and recreational pressure
Mersey Narrows & North Wirral Foreshore SPA and Ramsar site	Located 14.3km west of the borough • Loss of water quality resulting in harm to benthic communities via waterborne pollution entering the Mersey

[6] Now DCLG.
[7] Also referred to as Liverpool Bay SPA extension.

	Estuary (and later flowing into the Mersey Narrows), in turn from the Sankey Brook catchment (e.g. increase in heavy metals from sewage and/or industry)/ sediments • In-combination disturbance of birds through increase in ship movements and recreational pressure
Sefton Coast SAC	Located 14.6km west of the borough. The SAC is potentially vulnerable to increased recreational pressure and atmospheric pollution
Bala Lake and River Dee SAC	Whilst located more than 24km from St. Helens, this SAC is potentially vulnerable to changes in water flows as a result of a potential increased need for abstraction to accommodate new development as a result of the Plan

2.5.1 Liverpool Bay SPA / Bae Lerwpl SPA with Marine Component and Proposed Extension to the SPA

The designation for Liverpool Bay SPA features and extent are changing as set out in a recent consultation by Natural England. The bay stretches from Anglesey in Wales to the Lancashire coast and was classified for its non-breeding aggregations of red-throated diver *Gavia stellata* and common scoter *Melanitta nigra*. For the most part the Proposed Extension to the SPA would extend the SPA further out to sea. However, the Proposed Extension to the SPA would also bring the physical area covered by the SPA up the River Mersey to the entrance to Birkenhead Docks. The Proposed Extension would afford protection to little gull *Hydrocoloeus minutus*, and cover important foraging areas for little tern *Sterna albifrons* (colony at Gronant) and common tern *Sterna hirundo* (colony at Seaforth). The Proposed Extension would also add red-breasted merganser *Mergus serrator* and cormorant *Phalacrocorax carbo* as named features of the assemblage for which the SPA is designated.

Table 2: European Designated Sites Considered at the Initial Evidence Gathering Stage, but Scoped Out

European Designated	Reasons for Exclusion
Rixton Clay Pits SAC	Located 7.6km south east of the borough. This SAC is surface water fed and managed for amenity indicating it is not vulnerable to increased recreational pressure. Or changes in hydrology as a result of the Plan. There are no impact pathways present linking to the Plan.
Midland Meres and Mosses Phase 1 Ramsar site	Located 15.5km south of the borough. Whilst this site is vulnerable to invasive non-native species, due to the distances involved, there is no realistic impact pathway linking the Plan to this site. This site is also vulnerable to eutrophication from agricultural runoff, but again, due to the distances involved, there is no realistic impact pathway linking the Plan to the Ramsar site.
Dee Estuary SAC	Located 15.5km west of the borough. Whilst this site has potential to be vulnerable in the introduction of non-native invasive species, recreational pressure and changes in biotic and abiotic conditions from water pollution, due to the location of the site on the north west of the Wirral peninsula and its distance from St. Helens, it can be considered that there are no realistic impact pathways present.
Rostherne Mere Ramsar site	Located 15.6km south east of the borough. This site is vulnerable to changes in water quality from agricultural runoff. Due to the distances involved, there is no

	realistic impact pathway linking the Plan to the Ramsar site, and this site can be scoped out from further consideration.
West Midland Mosses SAC (Abbots Moss)	Located 19.1km south of the borough. This SAC is vulnerable to changes in water quality and nutrient enrichment from its catchment. However, due to the distance of the SAC from the Plan area, there are no realistic linking impact pathways present.
Midland Meres and Mosses Phase 2 Ramsar site	Located 19.7km south of the borough. Whilst this site is vulnerable to invasive non-native species, due to the distances involved, there is no realistic impact pathway linking the St. Helens Plan to this site. This site is also vulnerable to changes in hydrological conditions including water levels and water pollution. Whilst the reasons for these changes in hydrology are still under investigation, it is anticipated that the changes in water levels are due to local factors. This includes a nearby gravel pit resulting in a large water gradient in the groundwater levels resulting in a reduction in water levels and an outflow pipe. Existing changes to water quality are likely to be linked to eutrophication from agricultural runoff. Due to the distances involved and the nature of the Plan document, there is no realistic impact pathway linking the Plan to the Ramsar site.
Oak Mere SAC	Located 19.7km south of the borough. Whilst this site is vulnerable to invasive non-native species, due to the distances involved, it is considered that this is not a realistic impact pathway linking the Plan to this site. This site is also vulnerable to changes in hydrological conditions including water levels and water pollution. Whilst the reasons for these changes in hydrology are still under investigation, it is anticipated that the changes in water levels are due to local factors. This includes a nearby gravel pit resulting in a large water gradient in the groundwater levels resulting in a reduction in water levels and an outflow pipe. Existing changes to water quality are likely to be linked to eutrophication from agricultural runoff. Due to the distances involved and the nature of the Plan document, there is no realistic impact pathway linking the Plan to the SAC site.

2.6 The “In Combination” Scope

It is a requirement of the Regulations that the impacts and effects of any land use plan being assessed are not considered in isolation but in combination with other plans and projects that may also be affecting the European designated site(s) in question. In practice, “in combination assessment” is of greatest importance when a Plan would otherwise be screened out because the individual contribution is inconsequential. It is neither practical nor necessary to assess the “in combination” effects of the Plan within the context of all other plans and projects within the region. The principal other plans and projects considered:

2.6.1 Projects

- Mersey Ports Masterplan (Interim Consultation Report, 2012[8]), including the Port expansion into Seaforth Nature Reserve and the Seaforth River Terminal (a deepwater container port expansion in Sefton is currently under construction and due for completion imminently), new opportunities for renewable energy, development of single and multi-user port centric warehousing and of new processing facilities for imported commodities. potentially leading to the Liverpool SuperPort – An integrated port, airport, intermodal terminal, freight and commercial network based upon the Port

[8] https://www.peelports.com/media/1535/interim-con-report.pdf [accessed 29/11/2016]

of Liverpool, the Manchester Ship Canal, Liverpool John Lennon Airport and the Mersey Multimodal Gateway (Liverpool City Region)

- Peel Waters: Wirral and Liverpool Waters – This project is the development of currently run down dockland areas both on the Wirral and Liverpool side of the River Mersey. This includes the construction of houses, retail and commercial developments. The construction of these two developments will have a direct impact on the Mersey Narrows and North Wirral Foreshore SPA due to loss of habitat, barrier impacts for birds in flight and significant disturbance issues during construction
- Sandon Dock Waste Water Treatment Works outfall extension - to reduce adverse effects on estuary marshes the work to extend the outfall will take place on the opposite bank to the Egremont Shore section of the Mersey Narrows and North Wirral Foreshore Ramsar and SPA site (containing Mersey Narrows SSSI) but may still have an impact on the designated features of the SPA through the construction of the extended pipe. There may be issues relating to changes in sedimentation patterns altering the position of sand banks
- A556 Knutsford to Bowdon Scheme
- Burbo Bank and Extension – Burbo Bank offshore windfarm comprises 25 turbines and is situated on the Burbo Flats in Liverpool Bay at the entrance to the River Mersey, approximately 6.4km (4.0 miles). The proposed Burbo Bank Extension offshore wind farm development consists of an area of 40 km² 8.5 km from Crosby beach. Significant work has been done to identify the potential impact of these projects on qualifying bird species.

2.6.2 Plans

- Wigan Local Plan Core strategy (adopted 2013);
- Draft Greater Manchester Spatial Framework (October 2016);
- Sefton Local Plan – Proposed Modifications (June 2016);
- Liverpool Local Plan. – emerging. Latest version consulted upon in late 2016;
- Wirral Local Plan Core Strategy – emerging. A revised proposed submission draft is expected to be published for public comment in 2017;
- Knowsley Local Plan Core Strategy (adopted January 2016);
- Halton Local Plan Core Strategy (adopted April 2013);
- Joint Merseyside & Halton Waste Local Plan (adopted 2013);
- Greater Manchester Joint Waste Plan (updated 2015);
- West Lancashire Local Plan (adopted 2013);
- Warrington Local Plan Core Strategy (adopted 2014), but a High Court Challenge removed elements relating to housing in 2015;
- North West of England Regional Spatial Strategy to 2021 (2008);
- Salford Draft Local Plan (November 2016);
- Part 1 North West River Basin District River Basin Management Plan (updated 2015);
- Alt / Crossens Catchment Flood Management Plan (adopted 2009); and
- United Utilities Water Resources Management Plan (2015).

For the purposes of this assessment, we have determined that, due to the nature of the identified impacts, the key plans and projects that are likely to result in “in-combination” effects with the Plan relate to additional housing and commercial/industrial policy and allocations proposed for other Merseyside and West Lancashire authorities over the lifetime of the Plan (see

Table 3).

Table 3: Housing to be delivered within relevant neighbouring authorities under most recent published proposals (housing numbers may be subject to change)

Local Authority	Total housing under most recent published proposals
Knowsley	8,100 new dwellings between 2010 and 2028[9]
Halton	9,930 between 2010 and 2028[10]
West Lancashire	4,860 between 2012 and 2027[11]
Wigan	15,000 between 2011 and 2026 (1,000 per year) [12]
Warrington	10,500 between 2006 and 2027. [13]
Sefton	11,520 between 2012 and 2030[14]
Liverpool	29,600 between 2013 and 2033[15]
Salford	34,900 between 2015 and 2035[16]
Greater Manchester	55,300 and 2035[17]

It should be noted that, while the broad potential impacts of these other projects and plans will be considered, we do not propose carrying out full HRA on each of these plans – we will however draw upon existing HRA that have been carried out for surrounding regions and plans.

[9]Knowsley Local Plan Core Strategy Adopted January 2016
[10] Halton Core Strategy Local Plan Adopted April 2013
[11] West Lancashire Local Plan Adopted 2013
[12] Wigan Local Plan Core strategy Adopted September 2013.
[13]Note: a High Court Challenge removed elements relating of the Plan relating to housing in February 2015.
[14] Sefton Local Plan Proposed Modifications June 2016
[15] Draft Liverpool Local Plan. Subject to consultation late 2016
[16] Salford Draft Local Plan (November 216)
[17] Draft Greater Manchester Spatial Framework. Draft for Consultation (October 2016)

3. Pathways of Impact

The following indirect pathways of impact are considered relevant to the HRA of the Plan:

- Recreational pressure and disturbance,
- Reduction in water resources
- Reduction in water quality
- Atmospheric pollution
- Loss of functionally linked land outside the designated site.

3.1 Recreational Pressure and Disturbance

Concern regarding the effects of disturbance on birds stems from the fact that they are expending energy unnecessarily and the time they spend responding to disturbance is time that is not spent feeding (this will apply all year round)[18]. Disturbance therefore risks increasing energetic output while reducing energetic input, which can adversely affect the "condition" and ultimately survival of the birds. In addition, displacement of birds from one feeding site to others can increase the pressure on the resources available within the remaining sites, as they have to sustain a greater number of birds[19]. Moreover, the more time a breeding bird spends disturbed from its nest, the more its eggs are likely to cool and the more vulnerable they, or any nestlings, are to predators.

The potential for disturbance may be less in winter than in summer, in that there are often a smaller number of recreational users. In addition, the consequences of disturbance at a population level may be reduced because birds are not breeding. However, activity outside of the summer months can still cause important disturbance, especially as birds are particularly vulnerable at this time of year due to food shortages. Disturbance which results in abandonment of suitable feeding areas can have severe consequences for those birds involved and their ability to find alternative feeding areas. Several empirical studies have, through correlative analysis, demonstrated that out-of-season (October-March) recreational activity can result in quantifiable disturbance:

- Tuite et al[20] found that during periods of high recreational activity, bird numbers at Llangorse Lake decreased by 30% as the morning progressed, matching the increase in recreational activity towards midday. During periods of low recreational activity, however, no change in numbers was observed as the morning progressed. In addition, all species were found to spend less time in their 'preferred zones' (the areas of the lake used most in the absence of recreational activity) as recreational intensity increased;
- Underhill et al[21] counted waterfowl and all disturbance events on 54 water bodies within the South West London Water Bodies Special Protection Area and clearly correlated disturbance with a decrease in bird numbers at weekends in smaller sites and with the movement of birds within larger sites from disturbed to less disturbed areas;
- Evans & Warrington[22] found that on Sundays total water bird numbers (including shoveler and gadwall) were 19% higher on Stocker's Lake LNR in Hertfordshire, and attributed this to observed greater recreational activity on surrounding water bodies at weekends relative to week days displacing birds into the LNR. However, in this study, recreational activity was not quantified in detail, nor were individual recreational activities evaluated separately; and

[18] Riddington, R. *et al*. 1996. The impact of disturbance on the behaviour and energy budgets of Brent geese. *Bird Study* 43:269-279
[19] Gill, J.A., Sutherland, W.J. & Norris, K. 1998. The consequences of human disturbance for estuarine birds. *RSPB Conservation Review* 12: 67-72
[20] Tuite, C. H., Owen, M. & Paynter, D. 1983. Interaction between wildfowl and recreation at Llangorse Lake and Talybont Reservoir, South Wales. *Wildfowl* 34: 48-63
[21] Underhill, M.C. et al. 1993. Use of Waterbodies in South West London by Waterfowl. An Investigation of the Factors Affecting Distribution, Abundance and Community Structure. Report to Thames Water Utilities Ltd. and English Nature. Wetlands Advisory Service, Slimbridge
[22] Evans, D.M. & Warrington, S. 1997. The effects of recreational disturbance on wintering waterbirds on a mature gravel pitlake near London. International Journal of Environmental Studies 53: 167-182

- Tuite et al[23] used a large (379 site), long-term (10-year) dataset (September – March species counts) to correlate seasonal changes in wildfowl abundance with the presence of various recreational activities. They found that shoveler was one of the most sensitive species to disturbance. The greatest impact on wildfowl numbers during these months was associated with sailing/windsurfing and rowing.

More recent research has established that human activity including recreational activity can be linked to disturbance of wintering waterfowl populations[24] [25].

A study on recreational disturbance of the Humber Estuary SPA/Ramsar[26] was commissioned following a decline in numbers of some bird species from the Humber. This was considered necessary within the context of a likely future increase in residential development and an identification of the requirement for improved coastal access in order to inform future policies/management plans. The study collated on-site visitor survey data, targeted interviews with user groups, driving transects, car park counts and vantage point counts to identify the most visited areas of the SPA/Ramsar. These data were correlated with bird data (i.e. key locations for particular qualifying bird species within the SPA/Ramsar and therefore those areas likely to be considered particularly sensitive). This information was used to identify potentially key areas where conflicts were considered likely to arise between key recreational activities and bird interest. Key activities which were found to likely cause disturbance to qualifying bird species (as already mentioned in this section) included: airborne activities; bait digging; beach activities; dog walking; fishing; horse riding; kite surfing; walking; wildfowling; and wildlife watching. This study serves to support the case of likely recreational disturbance on qualifying bird species through data collected on a relatively local and similar European Site, subject to similar pressures as the Sefton Coast. This is discussed in greater detail in **Chapter 5**).

Human activity can affect birds either directly (e.g. through causing them to flee) or indirectly (e.g. through damaging their habitat). The most obvious direct effect is that of immediate mortality such as death by shooting, but human activity can also lead to behavioural changes (e.g. alterations in feeding behaviour, avoidance of certain areas *etc.*) and physiological changes (e.g. an increase in heart rate) that, although less noticeable, may ultimately result in major population-level effects by altering the balance between immigration/birth and emigration/death[27].

The degree of impact that varying levels of noise will have on different species of bird is poorly understood except that a number of studies have found that an increase in traffic levels on roads does lead to a reduction in the bird abundance within adjacent hedgerows - Reijnen et al (1995) examined the distribution of 43 passerine species (i.e. 'songbirds'), of which 60% had a lower density closer to the roadside than further away. By controlling vehicle usage they also found that the density generally was lower along busier roads than quieter roads[28].

A recent study on recreational disturbance on the Humber[29] assesses different types of noise disturbance on waterfowl referring to studies relating to aircraft (see Drewitt 1999[30]), traffic (Reijnen, Foppen, & Veenbaas 1997)[31], dogs (Lord, Waas, & Innes 1997[32]; Banks & Bryant 2007[33]) and machinery (Delaney et al. 1999; Tempel & Gutierrez 2003). These studies identified that there is still relatively little work on the effects of different types of water based craft and the impacts from jet skis,

[23] Tuite, C.H., Hanson, P.R. & Owen, M. 1984. Some ecological factors affecting winter wildfowl distribution on inland waters in England and Wales and the influence of water-based recreation. *Journal of Applied Ecology* 21: 41-62
[24] Footprint Ecology. 2010. Recreational Disturbance to Birds on the Humber Estuary
[25] Footprint Ecology, Jonathan Cox Associates & Bournemouth University. 2010. Solent disturbance and mitigation project – various reports.
[26] Helen Fearnley Durwyn Liley and Katie Cruickshanks (2012) Results of Recreational Visitor Survey across the Humber Estuary produced by Footprint Ecology
http://humberems.co.uk/downloads/Footprint%20Ecology%20Humber%20Visitor%20Report%206th%20July%202012.pdf
[27] Riley, J. 2003. Review of Recreational Disturbance Research on Selected Wildlife in Scotland. Scottish Natural Heritage.
[28] Reijnen, R. et al. 1995. The effects of car traffic on breeding bird populations in woodland. III. Reduction of density in relation to the proximity of main roads. Journal of Applied Ecology 32: 187-202
[29] Helen Fearnley Durwyn Liley and Katie Cruickshanks (2012) Results of Recreational Visitor Survey across the Humber Estuary produced by Footprint Ecology
[30] Drewitt, A. (1999) Disturbance effects of aircraft on birds. English Nature, Peterborough.
[31] Reijnen, R., Foppen, R. & Veenbaas, G. (1997) Disturbance by traffic of breeding birds: evaluation of the effect and considerations in planning and managing road corridors. Biodiversity and Conservation, 6, 567-581.
[32] Lord, A., Waas, J.R. & Innes, J. (1997) Effects of human activity on the behaviour of northern New Zealand dotterel Charadrius obscurus aquilonius chicks. Biological Conservation, 82,15-20.
[33] Banks, P.B. & Bryant, J.V. (2007) Four-legged friend of foe? Dog-walking displaces native birds from natural areas. Biology Letters, 3, 611-613.

kite surfers, windsurfers etc. (see Kirby et al. 2004[34] for a review). Some types of disturbance are clearly likely to invoke different responses. In very general terms, both distance from the source of disturbance and the scale of the disturbance (noise level, group size) will both influence the response (Delaney et al. 1999[35]; Beale & Monaghan 2005[36]). On UK estuaries and coastal sites, a review of WeBS data showed that, among the volunteer WeBS surveyors, driving of motor vehicles and shooting were the two activities most perceived to cause disturbance (Robinson & Pollitt 2002)[37].

Other Disturbing activities are on a continuum. The most disturbing activities are likely to be those that involve irregular, infrequent, unpredictable loud noise events, movement or vibration of long duration. Birds are least likely to be disturbed by activities that involve regular, frequent, predictable, quiet patterns of sound or movement or minimal vibration. The further any activity is from the birds, the less likely it is to result in disturbance.

3.1.1 Mechanical/abrasive damage and nutrient enrichment

Most types of aquatic or terrestrial European site can be affected by trampling, which in turn causes soil compaction and erosion:

- Wilson & Seney (1994)[38] examined the degree of track erosion caused by hikers, motorcycles, horses and cyclists from 108 plots along tracks in the Gallatin National Forest, Montana. Although the results proved difficult to interpret, it was concluded that horses and hikers disturbed more sediment on wet tracks, and therefore caused more erosion, than motorcycles and bicycles.
- Cole et al (1995a, b)[39] conducted experimental off-track trampling in 18 closed forest, dwarf scrub and meadow & grassland communities (each tramped between 0 – 500 times) over five mountain regions in the US. Vegetation cover was assessed two weeks and one year after trampling, and an inverse relationship with trampling intensity was discovered, although this relationship was weaker after one year than two weeks indicating some recovery of the vegetation. Differences in plant morphological characteristics were found to explain more variation in response between different vegetation types than soil and topographic factors. Low-growing, mat-forming grasses regained their cover best after two weeks and were considered most resistant to trampling, while tall forbs (non-woody vascular plants other than grasses, sedges, rushes and ferns) were considered least resistant. Cover of hemicryptophytes and geophytes (plants with buds below the soil surface) was heavily reduced after two weeks, but had recovered well after one year and as such these were considered most resilient to trampling. Chamaephytes (plants with buds above the soil surface) were least resilient to trampling. It was concluded that these would be the least tolerant of a regular cycle of disturbance.
- Cole (1995c)[40] conducted a follow-up study (in 4 vegetation types) in which shoe type (trainers or walking boots) and trampler weight were varied. Although immediate damage was greater with walking boots, there was no significant difference after one year. Heavier tramplers caused a greater reduction in vegetation height than lighter tramplers, but there was no difference in effect on cover.

[34] Kirby, J.S., Clee, C. & Seager, V. (1993) Impact and extent of recreational disturbance to wader roosts on the Dee estuary: some preliminary results. Wader Study Group Bulletin, 68, 53-58.
[35] Delaney, D.K., Grubb, T.G., Beier, P., Pater, L.L.M. & Reiser, H. (1999) Effects of Helicopter Noise on Mexican Spotted Owls. The Journal of Wildlife Management, 63, 60-76.
[36] Beale, C.M. & Monaghan, P. (2005) Modeling the Effects of Limiting the Number of Visitors on Failure Rates of Seabird Nests. Conservation Biology, 19, 2015-2019.
[37] Robinson, J.A. & Pollitt, M.S. (2002) Sources and extent of human disturbance to waterbirds in the UK: an analysis of Wetland Bird Survey data, 1995/96 to 1998/99: Less than 32% of counters record disturbance at their site, with differences in causes between coastal and inland sites. Bird Study, 49, 205.
[38] Wilson, J.P. & J.P. Seney. 1994. Erosional impact of hikers, horses, motorcycles and off road bicycles on mountain trails in Montana. Mountain Research and Development 14:77-88
[39] Cole, D.N. 1995a. Experimental trampling of vegetation. I. Relationship between trampling intensity and vegetation response. Journal of Applied Ecology 32: 203-214
Cole, D.N. 1995b. Experimental trampling of vegetation. II. Predictors of resistance and resilience. Journal of Applied Ecology 32: 215-224
[40] Cole, D.N. 1995c. Recreational trampling experiments: effects of trampler weight and shoe type. Research Note INT-RN-425. U.S. Forest Service, Intermountain Research Station, Utah.

- Cole & Spildie (1998)[41] experimentally compared the effects of off-track trampling by hiker and horse (at two intensities – 25 and 150 passes) in two woodland vegetation types (one with an erect forb understorey and one with a low shrub understorey). Horse traffic was found to cause the largest reduction in vegetation cover. The forb-dominated vegetation suffered greatest disturbance, but recovered rapidly. Higher trampling intensities caused more disturbance.

Walkers with dogs contribute to pressure on sites through nutrient enrichment via dog fouling and also have potential to cause greater disturbance to fauna as dogs are less likely to keep to marked footpaths and also tend to move in a more erratic manner. Motorcycle scrambling and off-road vehicle use can cause more serious erosion, as well as disturbance to sensitive species. Boats can also cause some mechanical damage to intertidal habitats through grounding.

3.2 Atmospheric pollution

The main pollutants of concern for European sites are oxides of nitrogen (NOx), ammonia (NH3) and sulphur dioxide (SO_2). NOx can have a directly toxic effect upon vegetation. In addition, greater NOx or ammonia concentrations within the atmosphere will lead to greater rates of nitrogen deposition to soils. An increase in the deposition of nitrogen from the atmosphere to soils is generally regarded to lead to an increase in soil fertility, which can have a serious deleterious effect on the quality of semi-natural, nitrogen-limited terrestrial habitats.

Table 4: Main sources and effects of air pollutants on habitats and species

Pollutant	Source	Effects on habitats and species
Acid deposition	SO_2, NOx and ammonia all contribute to acid deposition. Although future trends in Sulphur (S) emissions and subsequent deposition to terrestrial and aquatic ecosystems will continue to decline, it is likely that increased Nitrogen (N) emissions may cancel out any gains produced by reduced S levels.	Can affect habitats and species through both wet (acid rain) and dry deposition. Some sites will be more at risk than others depending on soil type, bed rock geology, weathering rate and buffering capacity.
Ammonia (NH_3)	Ammonia is released following decomposition and volatilisation of animal wastes. It is a naturally occurring trace gas, but levels have increased considerably with expansion in numbers of agricultural livestock. Ammonia reacts with acid pollutants such as the products of SO_2 and NO_X emissions to produce fine ammonium (NH_4+) containing aerosol which may be transferred much longer distances (can therefore be a significant trans-boundary issue.)	Adverse effects are as a result of nitrogen deposition leading to eutrophication. As emissions mostly occur at ground level in the rural environment and NH_3 is rapidly deposited, some of the most acute problems of NH_3 deposition are for small relict nature reserves located in intensive agricultural landscapes.
Nitrogen oxides NO_x	Nitrogen oxides are mostly produced in combustion processes. About one quarter of the UK's emissions are from power stations, one-half from motor vehicles, and the rest from other industrial and domestic combustion processes.	Deposition of nitrogen compounds (nitrates (NO_3), nitrogen dioxide (NO_2) and nitric acid (HNO_3)) can lead to both soil and freshwater acidification. In addition, NO_x can cause eutrophication of soils and water. This alters the species composition of plant communities and can eliminate sensitive species.

[41] Cole, D.N., Spildie, D.R. 1998. Hiker, horse and llama trampling effects on native vegetation in Montana, USA. Journal of Environmental Management 53: 61-71

Nitrogen (N) deposition	The pollutants that contribute to nitrogen deposition derive mainly from NO_X and NH_3 emissions. These pollutants cause acidification (see also acid deposition) as well as eutrophication.	Species-rich plant communities with relatively high proportions of slow-growing perennial species and bryophytes are most at risk from N eutrophication, due to its promotion of competitive and invasive species which can respond readily to elevated levels of N. N deposition can also increase the risk of damage from abiotic factors, e.g. drought and frost.
Ozone (O_3)	A secondary pollutant generated by photochemical reactions from NO_x and volatile organic compounds (VOCs). These are mainly released by the combustion of fossil fuels. The increase in combustion of fossil fuels in the UK has led to a large increase in background ozone concentration. Reducing ozone pollution is believed to require action at international level to reduce levels of the precursors that form ozone.	Concentrations of O_3 above 40 ppb can be toxic to humans and wildlife, and can affect buildings. Increased ozone concentrations may lead to a reduction in growth of agricultural crops, decreased forest production and altered species composition in semi-natural plant communities.
Sulphur Dioxide SO_2	Main sources of SO_2 emissions are electricity generation, industry and domestic fuel combustion. May also arise from shipping and increased atmospheric concentrations in busy ports. Total SO_2 emissions have decreased substantially in the UK since the 1980s.	Wet and dry deposition of SO_2 acidifies soils and freshwater, and alters the species composition of plant and associated animal communities. The significance of impacts depends on levels of deposition and the buffering capacity of soils.

Sulphur dioxide emissions are overwhelmingly influenced by the output of power stations and industrial processes that require the combustion of coal and oil as well as (particularly on a local scale) shipping.

Ammonia emissions are dominated by agriculture, with some chemical processes also making notable contributions. As such, it is unlikely that material increases in SO_2 or NH_3 emissions will be associated with Local Plans. NOx emissions, however, are dominated by the output of vehicle exhausts (more than half of all emissions). Within a 'typical' housing development, by far the largest contribution to NOx (92%) will be made by the associated road traffic. Other sources, although relevant, are of minor importance (8%) in comparison[42]. Emissions of NOx could therefore be reasonably expected to increase as a result of greater vehicle use as an indirect effect of the Local Plan.

According to the World Health Organisation, the critical NOx concentration (critical threshold) for the protection of vegetation is 30 μgm^{-3}; the threshold for sulphur dioxide is 20 μgm^{-3}. In addition, ecological studies have determined "critical loads"[43] of atmospheric nitrogen deposition (that is, NOx combined with ammonia NH_3).

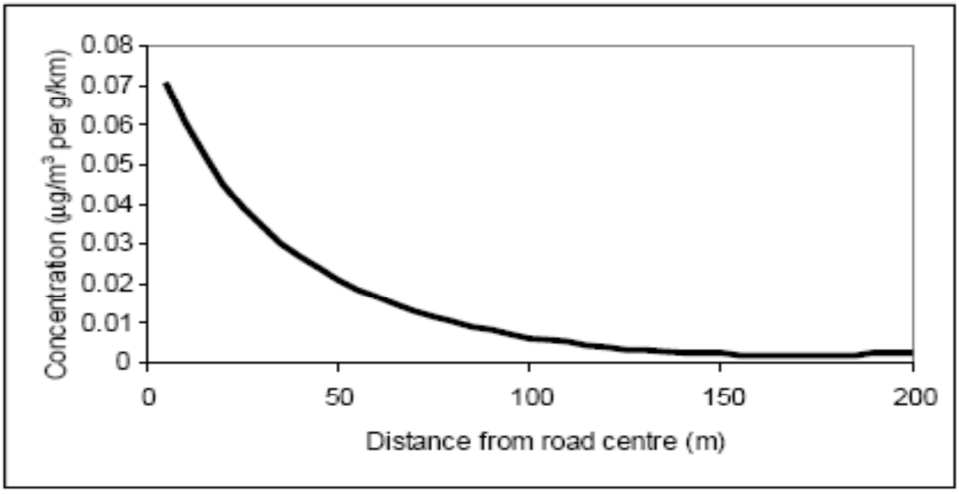
3.2.1 Local air pollution

According to the Department of Transport's Transport Analysis Guidance, "*Beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant*"[44]. This is

[42] Proportions calculated based upon data presented in Dore CJ et al. 2005. UK Emissions of Air Pollutants 1970 – 2003. UK National Atmospheric Emissions Inventory. http://www.airquality.co.uk/archive/index.php
[43] The critical load is the rate of deposition beyond which research indicates that adverse effects can reasonably be expected to occur
[44] www.webtag.org.uk/archive/feb04/pdf/feb04-333.pdf

because traffic exhausts are situated only a few inches above the ground and are horizontal to it, such that the vast majority of emitted pollutants are never dispersed far and are very quickly deposited. This distance is also related to the mix of the exhaust gases, the small dimension of the exhausts and the velocity of the exhaust gases leaving the exhaust.

Figure 1: Traffic contribution to concentrations of pollutants at different distances from a road (Source: DfT)



This is therefore the distance that has been used throughout this HRA in order to determine whether European sites are likely to be significantly affected by traffic generated by development under the Plan.

3.3 Water resources

The North West is generally an area of low water stress as is North Wales, which is a major source of potable water for north-west England.

St. Helens is located within United Utilities' Integrated Resource Zone which serves 6.5 million people in St. Helens, south Cumbria, Lancashire, Greater Manchester, Merseyside and most of Cheshire. The Integrated Resource Zone constitutes a large integrated supply network that enables substantial flexibility in distributing supplies within the zone. The construction of the 'west to east link' will further aid this flexibility and thus break the traditional division in which Greater Manchester received water from Cumbria and Merseyside received water from the River Dee (which lies partly in England and partly in Wales) and from purely Welsh sources (e.g. Lake Vyrnwy).

During earlier iterations of HRA work for St Helens, United Utilities identified that approximately 75% of potable water supply for St Helens was historically abstracted from the River Dee, 20% was historically abstracted from Lake Vyrnwy and 5% was historically abstracted from sites in Cumbria. The River Dee flows into the Dee Estuary which is also designated as an SAC as well as an SPA and Ramsar site. Four water companies abstract from sources that affect the River Dee including United Utilities (UU), Dee Valley Water, Welsh Water and Severn Trent Water. The potential for excessive abstraction from the Dee to result in sufficient drawdown of water to damage the interest features of the River Dee and Bala Lake SAC has been considered in this HRA process. If this does occur, damage could occur through desiccation, fish entrainment or deterioration in water quality due to the lower proportion of freshwater to sediment. This, in turn, could reduce freshwater flows into the Dee Estuary to such a degree as to damage the interest features of that site through an increase in salinity. These risks are identified in the Environment Agency's Review of Consents process for these sites.

The United Utilities Water Resource Management Plan (WRMP) (2015) indicates that without the reductions in demand from a free meter option programme and water efficiency programmes there would be a supply demand deficit in the Integrated Resource Zone of 107 Ml/d by 2040.

However, from reading the WRMP it appears that increased abstraction from the Dee or any other European sites beyond the current licensed volumes is not part of United Utilities' intended future

supply strategy, which depends on a mixture of demand management and increased abstraction from groundwater. Further, the United Utilities HRA of the WRMP: Assessment of Feasibility and Preferred Options (2013)[45] identified that no likely significant effect would result from the WRMP.

In addition, risk of abstraction at inappropriate times of the year (such as periods of low flow) will be prevented within England by the Environment Agency's licencing regime and Review of Consents process and within Wales by the Natural Resources Wales who holds the responsibility for abstraction licences within Wales. As such water resources as a pathway are not considered further in this HRA.

3.4 Water quality

The quality of the water that feeds European sites is an important determinant of the nature of their habitats and the species they support. Poor water quality can have a range of environmental impacts:

- At high levels, toxic chemicals and metals can result in immediate death of aquatic life, and can have detrimental effects even at lower levels, including increased vulnerability to disease and changes in wildlife behaviour.
- Eutrophication, the enrichment of plant nutrients in water, increases plant growth and consequently results in oxygen depletion. Algal blooms, which commonly result from eutrophication, increase turbidity and decrease light penetration. The decomposition of organic wastes which often accompanies eutrophication deoxygenates water further, augmenting the oxygen depleting effects of eutrophication. In the marine environment, nitrogen is the limiting plant nutrient and so eutrophication is associated with discharges containing available nitrogen.
- Some pesticides, industrial chemicals, and components of sewage effluent are suspected to interfere with the functioning of the endocrine system, possibly having negative effects on the reproduction and development of aquatic life. Some male fish in UK rivers, for example, have demonstrated the physiological symptoms expected of oestrogen-mimicking chemicals - symptoms which have been linked to exposure to female hormones (synthetic and natural) in sewage effluent.

The Waste Water Treatment Works (WwTW) that serve the Plan area are Warrington North, St. Helens, Billinge South, and Widness. Warrington North WwTW discharge into the Whittle Brook, St. Helens WwTW discharges into Sankey Brook, and Billinge South WwTW discharges into Black Brook; all of which are part of the Sankey Brook catchment that ultimately flows into the River Mersey. Widness WwTW discharges directly into the River Mersey. All waste water from St. Helens will enter the Mersey Estuary SPA and Ramsar site, albeit some distance from the point of discharge. **Appendix C** includes illustrations of the Sankey Brook and Mersey River catchments.

Increased amounts of housing or business development can lead to reduced water quality of rivers and estuarine environments. Sewage and industrial effluent discharges can contribute to increased nutrients in European sites leading to unfavourable conditions. In addition, diffuse pollution, partly from urban run-off has been identified during an Environment Agency Review of Consents process, as being a major factor in causing unfavourable condition of European sites.

For sewage treatment works close to capacity, further development may increase the risk of effluent escape into aquatic environments. In many urban areas, sewage treatment and surface water drainage systems are combined, and therefore a predicted increase in flood and storm events could increase pollution risk.

However, it is also important to note that the situation is not always simple. For sites designated for waterfowl a STW discharge can actually be a useful source of food and birds will often congregate around the outfall. In addition, while nutrient enrichment does cause considerable problems on the south coast (particularly in the Solent) due to the abundance of smothering macroalgae that is produced, it is not necessarily a problem in other areas where the macroalgae are broken up by tidal wave action and where colder and more turbid water limit the build-up in the first place.

Coastal and estuarine sites rely on water of sufficient quality to support plant and invertebrate species that in addition to being of innate value in themselves, also support birds, reptiles, fish, amphibians

[45] AMEC (2013). United Utilities Habitats Regulations Assessment of the Water Resource Management Plan: Assessment of Feasibility and Preferred Options

and mammals for which such sites may be designated. The Mersey Estuary SPA and Ramsar site is designated for birds species that are reliant on good quality water to support their existence. This site could be vulnerable to pollution arising from sewerage generated through development in St. Helens, if adequate infrastructure is not in place.

3.5 Loss of Functionally Linked Land Outside of the European Site Boundary

While most European sites have been geographically defined in order to encompass the key features that are necessary for coherence of their structure and function, this is not the case for all such sites. Due to the highly mobile nature of waterfowl, it is inevitable that areas of habitat of crucial importance to the maintenance of their populations are outside the physical limits of the European site for which they are an interest feature. However, this area will still be essential for maintenance of the structure and function of the interest feature for which the site was designated and land use plans that may affect this land should still therefore be subject to further assessment.

This topic has been subject to ongoing work by Merseyside Environmental Advisory Service which is seeking to identify sensitive areas for Bewick's swan, whooper swan and pink-footed goose in relation to agricultural land in Merseyside and West Lancashire (these being the main SPA species that are known to extensively utilise fields outside the SPA boundary). The State of Lancashire's Birds (2013) [46] identifies areas of sensitivity for Bewick's swan, whooper swan and pink-footed goose. For the purpose of this assessment it is the area that pink footed goose occupy that is used, as it is this species that is most widely spread and most abundant within Lancashire.

The following reports have also been referenced to inform this HRA:

- Natural England Commissioned Report NECR172. 2015. Waterbird population trend analysis of the Mersey Estuary SPA, Mersey Narrows & North Wirral Foreshore pSPA and Ribble & Alt Estuaries SPA;
- Natural England Commissioned Report NECR173. 2015. Review and Analysis of Changes in Waterbird Use of the Mersey Estuary SPA, Mersey Narrows & North Wirral Foreshore pSPA and Ribble & Alt Estuaries SPA;
- Assessment of Supporting Habitat (Docks) for Use by Qualifying Features of Natura 2000 Sites in the Liverpool City Region, Ornithology Report, TEP Version 3.0, Ref 4157 005. August 2015; and
- Wintering Bird Survey, Wirral Waters, May 2008, TEP.

The locations of the areas sensitive to Bewick's swan, whooper swans and pink-footed goose are located adjacent to the current urban areas of St. Helens and within the wider rural areas. This bird species utilises arable and grassland fields to graze in during the winter months. As such, any loss of these habitats could have a likely significant effect upon the features of the designated sites within functionally linked land.

[46] White, S.J. (Ed.), McCarthy, B., Dunstan, S., Martin, S.J., Harris, R.J., Hulme, G. and Marsh, P.J. (2013). The State of Lancashire's Birds: An atlas survey of the breeding and wintering birds of Lancashire and North Merseyside, 2007-2011. Lancashire and Cheshire Fauna Society, Rishton. http://www.lacfs.org.uk/Lancs%20Birds.html [accessed 01/12/2016]

4. HRA –Test of Likely Significant Effects "Alone"

4.1 Introduction

The detailed screening of the Plan policies is presented in **Appendix D.** whilst **Appendix E** contains the screening for site allocations included within policy. This chapter presents an overview of the assessment since multiple policies can contribute to the same overall effect.

The following Sections of this report set out the HRA Test of Likely Significant Effects of the Plan, as they relate to the implications of the plan 'alone'. Chapter 5 discusses Likely Significant Effects 'in combination' with other projects and plans. Each European designated site is discussed in relation to potential linking impact pathways below.

4.2 Mersey Estuary SPA and Ramsar site

The initial scoping of European designated sites illustrated in **Table 1** identified that the Mersey Estuary SPA and Ramsar site is potentially vulnerable to:

- Recreational pressure, and,
- Reduction in water quality.

4.2.1 Recreational Pressure

The following Plan policies have potential to result in an increase in recreational pressure:

- LPA05: Meeting St. Helens Housing Needs. Provides for the quantum of new housing to be provided within St. Helens to 2033.
- LPD11: Health and Wellbeing. Encourages outdoor recreational activities.

In recent years a number of visitor surveys of coastal European sites in other parts of England have been undertaken. These cover a range of European sites in various situations and can therefore serve as a broad indicator for European sites around Merseyside provided that they are used with care:

- Exe Estuary SPA/Ramsar site - visitor surveys were undertaken by Footprint Ecology[47]. Most visitors (around 60%) had travelled by car and at least a further 29% travelled on foot. Foot visitors tended to be very local, whereas car-borne visitors were travelling considerable distances: 51% of those interviewed (taking only those visiting from home on a short visit/day trip rather than holidaymakers) had come from within a 10km radius of the interview location and 75% with 20km.
- Humber Estuary SAC/SPA/Ramsar site - Visitor survey work on the Humber Estuary has now been completed by Footprint Ecology[48]. Eighty-eight percent of visitors interviewed were local residents visiting on a short trip or day trip from home. Most (70%) of interviewees arrived at sites by car. Home postcodes indicated people travelling from their home lived a median distance of 4.4km from the survey point. 50% of interviewed visitors on foot lived within 0.95km and 50% of visitors who travelled by car lived within 8.4km, after which points of origin became more dispersed.
- North Kent Estuaries – Surveys of the North Kent European sites (Medway Estuary & Marshes SPA/Ramsar site, The Swale SPA/Ramsar site and Thames Estuary & Marshes SPA/Ramsar site) by Footprint Ecology[49] identified that the majority of regular visitors to the sites live within 6km, after which points of origin became more dispersed.

[47] Liley, D. & Cruickshanks, K. (2010). Exe Visitor Survey, 2010. Teignbridge District Council / Footprint Ecology
[48] Fearnley, H., Liley, D. & Cruickshanks, K. (2012). Humber Management Scheme Visitor Survey. Footprint Ecology, unpublished report for Humber Management Scheme
[49] Fearnley, H. & Liley, D. (2011). North Kent Visitor Survey Results. Footprint Ecology.

- Solent Maritime SAC and overlapping Special Protection Areas – Data on visitor activity in the Solent complex was obtained through the Solent Disturbance and Mitigation Project[50]. Terrestrial (rather than water-based) visitors undertook a wide range of activities, with walking (without a dog) and dog walking the two most frequently recorded activities. Taking the data for non-holiday makers only, visitors were roughly evenly divided between those who arrived by car and those who arrived on foot. Ninety percent of all visitors arriving on foot lived within 2km. Almost eighty percent of all visitors arriving by car (excluding holiday makers) lived within 10km.

It can be seen that there is variation from site to site so they cannot be directly transferred to the Mersey Estuary, but they indicate that coastal estuarine sites typically have a fairly large core recreational catchment of up to c. 10km and potentially up to 20km. This is logical, since frequent regular journeys longer than 10km are likely to be off-putting to many recreational visitors.

At its closest the Plan area is located 4.8km from the Mersey Estuary SPA/Ramsar site and as such is located within the probable core recreational catchment of the site. Due to the distances involved it is unlikely that the Plan, considered alone, would result in likely significant effects from increased recreational pressure; however the effect in combination with other projects and plans needs further consideration. This impact pathway is investigated further in **Chapter 5, section 5.2**.

4.2.2 Reduction in Water Quality

The following Plan policies have potential to result in a decrease in water quality from treated wastewater discharges:

- LPA04: A Strong and Sustainable Economy
- LPA05:Meeting St. Helens Housing Needs

The Mersey Estuary has a high load of nutrients mainly from diffuse sources, with levels for phosphate and nitrogen decreasing from point sources. Recent modelling has shown that due to the natural turbidity of the water, there is only a low risk of excessive algal growth. However, a conservation objective of the Mersey Estuary SPA is to maintain populations of qualifying species (see **Appendix B**), and in turn to maintain a reference level of benthic invertebrate communities. These aquatic invertebrates are dependent upon good water quality, as well as appropriate patterns of erosion and deposition and as such water quality requires further investigation. Water quality in the European sites is essentially an 'in combination' issue and is therefore investigated in **Chapter 5, section 5.3**

4.3 Manchester Mosses SAC

The initial scoping of European designated sites illustrated in **Table 1** identified that the Manchester Mosses SAC potentially vulnerable to:

- Atmospheric pollution

4.3.1 Atmospheric Pollution

The following Plan policies have potential to result in atmospheric pollution:

- LPA04: A Strong and Sustainable Economy
- LPA05:Meeting St. Helens Housing Needs
- LPA10: Development of Strategic Rail Freight Interchange (Parkside)

Manchester Mosses SAC is designated for its degraded raised bogs still capable of natural regeneration. The Critical Load for this habitat type is 5-10kg N/ha/yr. The current nitrogen deposition rate is between 18.04-20.16kg N/ha/yr[51] which identifies that the SAC is already subject to levels of nitrogen deposition in excess of the Critical Load for this habitat.

[50]Stillman, R. A., West, A. D., Clarke, R. T. & Liley, D. (2012) Solent Disturbance and Mitigation Project Phase II: Predicting the impact of human disturbance on overwintering birds in the Solent. Report to the Solent Forum
[51] APIS http://www.apis.ac.uk [accessed 30/11/2016]

Due to the distance of the SAC from the borough boundary (5.5km) it is unlikely that the Plan will result in likely significant effects alone upon the SAC as a result of atmospheric pollution. However, there is potential for in combination impacts to result from the Plan in combination with surrounding plans and projects and large schemes within St Helens (i.e. those leading to a potential change in two-way flows on the M62 past the SAC exceeding 1,000 Annual Average Daily Traffic) could result in a likely significant effect, which would have to be modelled on a case-by-case basis. This is discussed in **Chapter 5, section 5.4.**

4.4 Martin Mere SPA and Ramsar site

The initial scoping of European designated sites illustrated in **Table 1** identified that the Martin Mere SPA and Ramsar site potentially vulnerable to:

- Recreational pressure
- Changes in hydrology
- Loss of functionally linked land outside of the designated site

4.4.1 Recreational Pressure

This European designated site is specifically geared towards attracting visitors and during discussion with Natural England over the St. Helens Core Strategy HRA[52] there was a general view that recreation was sufficiently well managed on this site that recreational pressure was not an issue. As such this impact pathway can be screened out from further consideration both alone and in combination with other projects or plans.

4.4.2 Changes in Hydrology

The site is vulnerable to changes in hydrology. These changes stem from local activities such as agricultural activities and land drainage and are no linked the Plan. There are no linking impact pathways present that could cause in the Plan to result in a likely significant effect alone or in combination with other projects or plans.

4.4.3 Loss of Habitat/ Functionally Linked Land Outside The European Site Boundary

Whilst the Plan area is located 11.5km from the European designated site at its closest, the Lancashire Bird Atlas[53] identifies that parts of the borough are utilised by pink footed goose, a designated feature of the site. Any loss of functionally linked land that supports a significant population of designated pink footed goose could result in a likely significant effect upon the SPA and Ramsar site feature. The following Strategic Policies have potential to result in loss of functionally linked land:

- LPA04: A Strong and Sustainable Economy
- LPA04.1: Strategic Employment Sites
- LPA05:Meeting St. Helens Housing Needs
- LPA05.1: Strategic Housing Sites
- LPA06: Extent of the Green Belt and Safeguarded Land

Combined, the above Strategic Policies provide for the following site allocations that are located within areas that have been identified in the Lancashire Bird Atlas to support populations of pink footed goose and, based on desk analysis, appear to contain suitable habitat. Loss of this habitat alone or in combination with other projects or plans could result in a likely significant effect upon the designated population, if the layout of the development would result in the loss of fields of importance for SPA/Ramsar birds:

[52] Scott Wilson (2009). Appropriate Assessment of the St. Helens Core Strategy Development Plan Document.
[53] http://www.lacfs.org.uk/Lancs%20Birds.html [accessed 30/11/2016]

4.4.3.1 Employment sites

- EA2 Florida Farm North, Slag Lane, Haydock
- EA6 Land to the West of Haydock Industrial Estate, Haydock
- EA7 Land west of Millfield Lane, south of Liverpool Road and north of Clipsley Brook, Haydock
- EA10 Land to the West of Sandwash Close, Rainford

4.4.3.2 Residential allocations including Gypsy, Traveller and Travelling Showpeople.

- HA1 Land adjoining Ash Grove Farm, Beacon Road, Billinge
- HA2 Land South of Billinge Road, east of Garswood Road and west of Smock Lane, Garswood
- HA3 Land at Florida Farm (south of A580), Slag Lane, Blackbrook
- HA9 Higher Barrowfield Farm, Houghton's Lane, Eccleston
- HA14 Land south east of Lords Fold, Rainford
- HA15 Land South of Higher Lane and east of Rookery Lane, Rainford
- HA16 Land south of A580 between Houghtons Lane and Crantock Grove, Windle

4.4.3.3 Safeguarded sites

- HS01 Land north of Strange Road and west of Camp Road, Garswood
- HS02 Land south of Leyland Green Road, North of Billinge Road and East of Garswood Road, Garswood
- HS08 Land south of Burrows Lane, Eccleston
- HS09 Land south of Howards Lane / east of Gillars Lane, Eccleston
- HS10 Land south of former Central Works, Ballerophon Way, Haydock
- HS11 Land south of Station Road, Haydock
- HS18 Land east of Higher Lane / South of Muncaster Drive / at White House Lane, Rainford
- HS19 Land south of Bushey Lane / Red Delph Farm, Red Delph Lane, Rainford
- HS20 Land south of Higher Lane and west of Mill Lane, Rainford
- HS21 Land south of Rookery Lane and east of Pasture Lane, Rainford
- HA16 Land south of A580 between Houghtons Lane and Crantock Grove, Windle

As a result, this impact pathway cannot be screened out either alone or in combination with other projects or plans**.**

In line with the approach being undertaken in Sefton, it is recommended that the Plan includes appropriate mechanisms to ensure the loss of functionally linked land is adequately assessed and mitigated as part of planning applications. This is relevant to both site allocations identified above and any windfall sites that occur within areas identified in the Lancashire Bird Atlas as supporting designated bird features. If functionally linked land is lost or subject to new levels of disturbance this could result in a likely significant effect upon designated site features. This is a development site-specific issue and therefore cannot be investigated in further detail at the plan level (since it requires detailed information regarding the design and layout of a given development). The plan can put a policy framework in place to ensure that detailed studies are undertaken and that, where necessary, appropriate mitigation is provided.

To ensure no likely significant effect result, the applicant will be required to provide evidence that the development will not result in a likely significant effect. To prove this, a survey will be required to determine habitats and current site use of the site to verify if the site is in fact suitable to support a significant population[54] of designated bird features. Where habitats are

[54] A significant population is classified as a site that regularly used by more than 1% of the population of qualifying bird species

suitable, non-breeding bird surveys will be required to determine if the site and neighbouring land constitute a significant area of supporting habitat. In line with other Merseyside Authorities, surveys will be required to be undertaken during autumn, winter and spring. If habitat within the site or adjacent land are identified to support significant populations of designated bird features avoidance measures and mitigation will be require and the planning application will likely need to be supported by a project specific Habitats Regulations Assessment to ensure that the development does not result in likely significant effects.

With the above recommendation incorporated into the plan, it could be concluded that appropriate mechanisms are in place adequately assess and mitigate loss of functionally linked land and no likely significant effect will result.

Note that, although this issue has been discussed at length in relation to Martin Mere, the same development sites could also result in a similar effect on the other coastal Merseyside SPAs and the protective policy mechanism identified above would also address those European sites.

4.5 Ribble & Alt Estuaries SPA and Ramsar site

The initial scoping of European designated sites illustrated in **Table 1** identified that the Ribble & Alt Estuaries SPA and Ramsar site potentially vulnerable to:

- Recreational pressure and disturbance to qualifying species
- Atmospheric pollution
- Loss of habitat/ functionally linked land outside the site boundary

4.5.1 Recreational Pressure and Disturbance

The following Plan policies have potential to result in an increase in recreational pressure:

- LPA05: Meeting St. Helens Housing Needs. Provides for the quantum of new housing to be provided within St. Helens to 2033.
- LPD11: Health and Wellbeing. Encourages outdoor recreational activities.

The Ribble and Alt Estuaries are among the most popular holiday destinations in Britain, with Blackpool as the largest resort and Southport increasing in visitors. Leisure activities include watersports such as sailing and windsurfing; fishing and shooting; bird watching; land yachting; and generally relaxing at the coast. It draws tourists from across the country due to its proximity to Blackpool. These tourists' activities are focused on the Ribble Estuary which is furthest from St. Helens. With regard to visitors from Merseyside the southern part of the site (i.e. that largely contiguous with the Sefton Coast SAC) is of greater relevance.

Both the key species and the habitats that support SPA and Ramsar site birds and natterjack toad are susceptible to recreational pressure arising both from the land (particularly dog walking) and from waterborne recreation. As a result the same policies described for impacts relating to recreational pressure for the Mersey Estuary SPA and Ramsar site (see **section 4.2.1**) also have potential to result in increased recreational pressure upon the Ribble and Alt Estuaries SPA and Ramsar site.

The Plan area is located 13.8km east of the estuaries. The visitor surveys undertaken for other estuarine European sites suggest that core visitor catchments are often up to 10km and can be greater. Due to the distances involved it is considered unlikely that development and tourism proposed within the Plan will result in likely significant effect alone; however, in combination effects are discussed in **Chapter 5, section 5.2**

4.5.2 Atmospheric Pollution

The following Plan policies have potential to result in atmospheric pollution:

- LPA04: A Strong and Sustainable Economy
- LPA05:Meeting St. Helens Housing Needs

- LPA10: Development of Strategic Rail Freight Interchange (Parkside)

Whilst the SPA and Ramsar site have been identified as being sensitive to atmospheric pollution, due to the distances involved, it can be considered that there is no realistic impact pathway present, either alone or in combination with other projects or plans.

4.5.3 Loss of Habitat/ Functionally Linked Land Outside The European Site Boundary

Similar to Martin Mere discussed in **section 4.4.3** the Plan area is located some distance from the European designated site (13.8km at its closest). The Lancashire Bird Atlas[55] identifies that parts of the borough are utilised by pink footed goose, a designated feature of the site. Any loss of functionally linked land that supports a significant population of designated pink footed goose could result in a likely significant effect upon the SPA and Ramsar site feature. Strategic Policies and Site Allocations identified in **section 4.4.3** have potential to result in loss of functionally linked land.

Provided recommendations in section 4.4.3 are incorporated into the Plan, it can be concluded that the Plan will not result in likely significant effects alone or in combination.

4.6 Liverpool Bay SPA, and SPA Extension

The initial scoping of European designated sites illustrated in **Table 1** identified that the Liverpool Bay SPA, and SPA extension potentially vulnerable to:

- Changes to water quality via water pollution entering the Mersey Estuary, in turn from the Sankey Brook catchment (e.g. increase in heavy metals from sewage and/or industry)/ sediments
- Recreational pressure and disturbance.

4.6.1 Water Quality

The following Plan policies have potential to result in a decrease in water quality:

- LPA04: A Strong and Sustainable Economy
- LPA05:Meeting St. Helens Housing Needs

Whilst this site has potential to be vulnerable to changes in water quality as a result of the Plan, due to the distances involved, this is not considered to be a realistic impact pathway either alone or in combination with other projects or plans. As such, this impact pathway can be screened out from further consideration.

4.6.2 Recreational Pressure and Disturbance

The following Plan policies have potential to result in an increase in recreational pressure:

- LPA05: Meeting St. Helens Housing Needs. Provides for the quantum of new housing to be provided within St. Helens to 2033.
- LPD11: Health and Wellbeing. Encourages outdoor recreational activities.

The visitor surveys undertaken for other estuarine European sites suggest that core visitor catchments are often up to 10km and can be greater. At its closest St. Helens is located 13.8km from Liverpool Bay SPA and SPA extension and as such the potential for it to be located within the recreational catchment of the site cannot be dismissed. Whilst it is unlikely that the Plan would result in significant impacts from increased recreational pressure alone, the impact in combination with other projects and plans needs further consideration. This impact pathway will be subject to further investigation in **Chapter 5**, **section 5.2.**

4.7 Mersey Narrows & North Wirral Foreshore SPA and Ramsar site

[55] http://www.lacfs.org.uk/Lancs%20Birds.html [accessed 30/11/2016]

Similar to Liverpool Bay designated sites, the initial scoping of European designated sites illustrated in **Table 1** identified that the Mersey Narrows & North Wirral Foreshore SPA and Ramsar site is potentially vulnerable to:

- Changes to water quality via water pollution entering the Mersey Estuary, in turn from the Sankey Brook catchment (e.g. increase in heavy metals from sewage and/or industry)/ sediments
- Recreational pressure and disturbance.

4.7.1 Water Quality

The following Plan policies have potential to result in a decrease in water quality:

- LPA04: A Strong and Sustainable Economy
- LPA05:Meeting St. Helens Housing Needs

Whilst this site has potential to be vulnerable to changes in water quality as a result of the Plan, due to the distances involved, this is not considered to be a realistic impact pathway either alone or in combination with other projects or plans. This impact pathway can be screened out from further consideration.

4.7.2 Recreational Pressure and Disturbance

The following Plan policies have potential to result in an increase in recreational pressure:

- LPA05: Meeting St. Helens Housing Needs. Provides for the quantum of new housing to be provided within St. Helens to 2033.
- LPD11: Health and Wellbeing. Encourages outdoor recreational activities.

The visitor surveys undertaken for other estuarine European sites suggest that core visitor catchments are often up to 10km and can be greater. At its closest the Plan area is located 14.3km from the Mersey Narrows and North Wirral Foreshore SPA/Ramsar and as such the potential for it to be located within the recreational catchment of the site cannot be dismissed. However, the site is located on the western bank of the River Mersey, and it is unlikely that that a significant number of visitors to the site will stem from St. Helens. Cumulative impacts in combination with other projects and plans cannot be screened out, and these are discussed in **Chapter 5, section 5.2**.

4.8 Sefton Coast SAC

The initial scoping of European designated sites illustrated in **Table 1** identified that the Sefton Coast SAC is potentially vulnerable to:

- Recreational pressure
- Atmospheric pollution

4.8.1 Recreational Pressure

Sand dunes are vulnerable to recreational trampling in that excessive physical disturbance can retard or set back the dune development process and lead to a reduction in habitat diversity. However, at the same time some recreational trampling is beneficial in that it ensures that the dune vegetation does not all succeed to the same late stage of development and thereby actually helps to preserve diversity.

The following Plan policies have potential to result in an increase in recreational pressure:

- LPA05: Meeting St. Helens Housing Needs. Provides for the quantum of new housing to be provided within St. Helens to 2033.
- LPD11: Health and Wellbeing. Encourages outdoor recreational activities.

The visitor surveys undertaken for other estuarine European sites suggest that core visitor catchments are often up to 10km and can be greater. At its closest the Plan area is located 14.6km

from the Sefton Coast SAC and as such the potential for it to be located within the recreational catchment of the site cannot be dismissed. Whilst it is unlikely that the Plan would result in significant impacts from increased recreational pressure alone, the impact in combination with other projects and plans needs further consideration. This impact pathway will be subject to further investigation in **Chapter 5, section 5.2**.

4.8.2 Atmospheric Pollution

The following Plan policies have potential to result in atmospheric pollution:

- LPA04: A Strong and Sustainable Economy
- LPA05:Meeting St. Helens Housing Needs
- LPA10: Development of Strategic Rail Freight Interchange (Parkside)

Whilst the SAC is has been identified as being sensitive to atmospheric pollution, due to the distances involved (the SAC is located 14.6km from the Plan area), it can be considered that there is no realistic impact pathway present, either alone or in combination with other projects or plans.

4.9 Conclusion of HRA Screening of St Helens Local Plan "Alone"

Due to the distances separating St Helens from the closest European sites it is considered that Likely Significant Effects will not arise from the development set out in the St Helens Local Plan when considered on its own, except with regard to potential loss of functionally-linked habitat for birds (particularly pink-footed geese but also other species) associated with the coastal European sites (Mersey Estuary SPA/Ramsar, Ribble & Alt Estuaries SPA/Ramsar, Mersey Narrows & North Wirral Foreshore SPA/Ramsar) and Martin Mere SPA.

However, development in St Helens Local Plan also needs to be considered "in combination" with other project and plans and particularly with the development being proposed by the other Merseyside Local Plans. That is the subject of Chapter 5.

5. "In Combination" Effects

This chapter investigates in combination impacts. **Section 5.1** discusses pertinent projects and plans as identified in **section 2.6.1**. **Sections 5.2 to 5.4** investigate in combination impact pathways.

5.1 Projects and plans

5.1.1 Mersey Ports Masterplan

Whilst it is acknowledged that this is a large scheme with potential for far reaching in combination impact pathways. However, due to the distances involved and the locations of the individual schemes themselves (i.e. non are within the Plan area), it is considered that there are no realistic impact pathways with potential to interact with the Plan present.

5.1.2 Peel Waters: Wirral and Liverpool Waters

Due to its location, it is not considered any realistic impact pathways exist that could act in combination with the Plan

5.1.3 Sandon Dock Waste Water Treatment Works outfall extension

Due to its location, it is not considered any realistic impact pathways exist that could act in combination with the Plan

5.1.4 A556 Knutsford to Bowdon Scheme

Following a screening report, Natural England were satisfied that the project would not result in likely significant effects upon European designated sites alone or in combination with other projects or plans.

5.1.5 Burbo Bank and Extension

Following HRA and Appropriate Assessment, the Secretary of State was satisfied of no likely significant effects in combination upon European designated sites

5.2 Recreational Pressure

Mersey Estuary SPA and Ramsar site has potential to be impact upon by increased recreational pressure from residential development provided within the Plan and in combination with other projects and plans. The following European designated sites have potential to be impact upon by increased recreational pressure in combination with other projects or plans:

- Ribble and Alt Estuaries SPA and Ramsar site
- Mersey Narrows and North Wirral Foreshore SPA and Ramsar site
- Liverpool Bay SPA and SPA extension
- Sefton Coast SAC.

In combination effects from increased tourism and residential development are known. Existing management and strategic mitigation and avoidance measures are in place.

5.2.1 Mersey Estuary SPA and Ramsar site

As previously identified the Mersey Estuary has potential to be vulnerable to increases in recreational pressure from the Plan alone, but also in combination with other projects and plans such as the Local Plan documents for the councils of Halton and Liverpool.

The following St Helens Local Plan policies have potential to divert some level of recreational pressure away from European designated sites:

- LPA09: Green Infrastructure. This policy provides for improvements to the borough's Green Infrastructure. This has potential to divert recreational pressure away from European designated sites.

'The Council will protect, manage, enhance and where appropriate expand the Green Infrastructure network…'

- LPC05: Open Space, Sports and Recreation. This policy provides for open space, sports and recreation. Appropriate open space and recreational facilities have potential to divert recreational pressure away from sensitive European designated sites.

'The Council will protect, manage and enhance open spaces, sporting and recreational facilities…'

- LPD03: Open Space and Residential Development. A positive policy providing for open space and residential development.

'Open space freely open to the public can divert recreational activity away from sensitive European designated sites…'

However, these policies do not provide the strategic framework ensure that no likely significant effect will result from the Plan alone or in combination as this is mainly associated with managing recreational activity within the European site. **To provide this strategic framework it is recommended that a similar approach is taken to that of Halton and Liverpool Councils for the same European site. The Council should to commit to working with the other Merseyside Authorities, MEAS, Natural England, Natural Resources Wales and other partners to devise a framework for the delivery of enhanced access management to the Mersey Estuary SPA/Ramsar sites, to be informed by the collation of visitor survey data.**

It is understood that since the Mersey Estuary SPA/Ramsar does not lie within St Helens, St Helens would not be able to lead on this strategy. However, as with the Sefton Coast Plan mentioned below, the Local Plan should commit the Council to participating in the delivery of the access management plan, commensurate with the scale of its contribution to visitor pressure in the SPA/Ramsar site.

Examples of measures that may be deployable include temporary footpath/access closures during sensitive periods (e.g. the winter, when wintering birds are a key feature), rerouting of footpaths away from key hotspots for waterfowl, introducing enhanced wardening, introducing improved signage to encourage dogs to be kept on a lead or walked in areas that are away from key waterfowl hotspots or screening of key locations for recreational activity. With regard to the use of watercraft, on some sites this can be achieved through zoning of activities by site managers or the introduction of permitting systems limiting the amount of watercraft using the available space, although it is uncertain at this stage whether that would be feasible in the Mersey Estuary.

Provided that a commitment to this framework is incorporated within the Plan it can be considered that recreational pressure from the Plan area will not result in likely significant effect upon the Mersey Estuary as a result of increased recreational pressure both alone and in combination.

5.2.2 Other European Designated Sites (Ribble and Alt Estuaries SPA and Ramsar site, Mersey Narrows and North Wirral Foreshore SPA and Ramsar site, Liverpool Bay SPA and SPA extension, and the Sefton Coast SAC).

The Sefton Coast (for the purposes of this discussion, taken to include not only Sefton Coast SAC but the Ribble and Alt Estuaries, the Sefton parts of the Mersey Narrows and North Wirral Foreshore, and the Sefton parts of Liverpool Bay), as a reflection of its existing high appeal for visitors and high conservation value, has a suite of plans and strategies which are overseen by the Sefton Coast Partnership (SCP; formerly the Sefton Coast Management Scheme). Two notable examples are the Nature Conservation Strategy and Beach Management Plan.

The Sefton Coast Management Scheme was established in 1978. It initially only covered the dune coast and was concerned mainly with nature conservation and recreation. The SCP covers the whole coast from the docks at Seaforth to Sefton's boundary north of Southport, and its scope has extended to embrace beach management, woodland management, coastal engineering issues and environmental quality.

Currently the SCP includes twelve partner organisations and up to 2011 was led and coordinated by Sefton Council. In recent years the cooperative approach to management has helped to give greater protection to rare habitats and wildlife and has also enabled new recreation facilities and attractions such as the coastal footpath, Antony Gormley's "Another Place" the Iron Men statues at Crosby beach) and the Crosby Lakeside Adventure Centre to be developed. Some achievements of the SCP, include:

- the creation of a permanent Ranger Service for the coast by Sefton Council, followed by on-going amalgamation of coastal operational services to develop one of the only of its type;
- the establishment of a coastal footpath running the length of the coast and the promotion of public transport and a Sefton's Natural Coast brand;
- a review of beach management, and the implementation of a new zoning scheme;
- Major habitat improvement schemes and maintaining the SSSI in good condition but not in favourable condition;
- Acquiring coastal land at Formby, Ravenmeols, Hightown and Freshfield by a number of organisations including National Trust, Sefton Council and Lancashire Wildlife Trust;
- RSPB established presence in Sefton at Marshside;
- A Sefton Coast Woodlands Forest Plan – currently under review;
- The implementation of a Beach Management Plan in 1993
- Sefton Coast *Life* project
- A Sefton Coast Nature Conservation Strategy 2007-2015;
- A Sefton's Natural Coast Tourism and Marketing Plan;
- Establishment of the Biodiversity and Access Inclusion Project;
- Adaptation Strategy; and
- Heritage Lottery Funding Sefton Coast Landscape Partnership Scheme.

The Sefton Coast Partnership is currently producing an updated Sefton Coast Plan. That document is intended to provide a clear policy framework for the delivery of (among other things) effective and positive recreational management along the Sefton Coast, via a Visitor Management Strategy. Although still being prepared, the Sefton Coast Plan is likely to include reference to beach management, production of responsible visitor codes, visitor facility investment and management, events management and associated evidence gathering and monitoring. This policy framework is specifically (in part) intended to ensure that no adverse effect on the European sites in Sefton arises via recreational pressure, including an increased population. As such, a mechanism already exists to control the impacts of increased visitors to the SAC, provided it can be adequately resourced to deliver the increased management likely to be required. Clearly, the Sefton Coast Partnership and Sefton Council cannot be expected to resource management of impacts arising across the Merseyside authorities and therefore each contributing authority will need to contribute to development and delivery of the relevant actions in the Sefton Coast Plan, commensurate with its contribution to the impact.

As detailed above in the above section, the Plan does contain policy that has potential to divert some level of recreational pressure away from European designated sites, however the Plan policy does not provide a framework to ensure that likely significant effects upon these designated sites does not occur.

To ensure likely significant effect do not result in combination, it is recommended that policy is included within the Plan in line with other Merseyside Authorities to ensure that no likely significant effect result upon the Sefton Coast, Ribble and Alt Estuaries, Mersey Narrows and North Wirral Foreshore, and Liverpool Bay European designated sites from increased recreational pressure in combination with other projects or plans. It is recommended that the Plan includes a commitment to work with neighbouring authorities and Natural England to deliver the actions of the Mersey Estuary Management Plan and the emerging Sefton Coast Plan and to generally manage the "in combination" increase in recreational pressure that has

been predicted to occur within European sites in Merseyside over the plan period as a result of increased residential development across Merseyside. St Helen's contribution would be commensurate with its contribution to visitor pressure within the European site(s) as it is recognised that its contribution to the issue is likely to be smaller than that of some other Merseyside authorities.

With the above recommendations in place, it could be concluded that appropriate mechanisms are in place to ensure that no likely significant effect result in combination as a result of increased recreational pressure stemming from the Plan.

5.3 Water Quality

Mersey Estuary SPA and Ramsar site has potential to be vulnerable to increased water pollution both alone and in combination with other projects or plans. Due to the fact that water resourcing acts across Council boundaries the Plan has potential to result in in combination effects with neighbouring authorities. Impacts upon the Mersey Estuary SPA and Ramsar site via Sankey Brook have potential result in cumulative impacts from development in the neighbouring authorities of Wigan and Warrington.

Water pollution has been an issue for the Mersey estuary since at least the 18th century, with "*increased wastes from [the] textile, tanning, metal processing, chemical… and petrochemical industries…, discharge of domestic waste water, sewage and surface runoff from a large populated area*"[56]". The problem of water pollution "*was probably at its worst in the 1960's*," and major improvements to water quality have been realised since the formation of the Mersey Basin Campaign in 1985'[57].

The Sankey Brook flows from St. Helens, Wigan and Warrington into the Mersey Estuary. The brook represents approximately 10% of the riverine water flow of the Mersey Estuary. Further, the St. Helens WwTW discharges into Sankey Brook. Any increase in effluent output as a result of increase in employment, industry and residential sites has potential to further reduce water quality within Sankey Brook. Further WwTW associated with Wigan, Warrington and Halton also discharge into the brook.

The 2009 HRA for St. Helens Core Strategy[58] identified that even with major infrastructure improvements, water quality in the Mersey estuary is still an issue, with pollution sources from industry, agriculture, shipping, treated sewage and contaminated runoff. The 2011 Water Cycle Study[59] identifies that the ecological status of Sankey Brook is 'Poor'. The Environment Agencies Catchment Data Explorer identifies the current and future Water Framework Directive (WFD) targets for the watercourses within the Sankey catchment (see **Table 5**).

Table 5: Sankey Brook Water Framework Direct Targets[60]

Waterbody	Location	WFD Target 2015	WFD Target 2027
Millingford (Newton) Brook	Within St. Helens	Moderate	Good[61]
Blackbrook (Mersey Estuary)	Within St. Helens	Moderate	Good[62]
Rainford Brook	Within St. Helens	Moderate	Good[63]
Hardshaw (Windle) Brook	Within St. Helens	Moderate	Good[64]

[56] Langston, WJ; Chesman, BS; Burt, GR (2006). Marine Biological Association. The Mersey estuary Special protected Area. Marine Biological Association Occasional Publication No. 18
[57] Ibid
[58] Scott Wilson (2009). Appropriate Assessment of the St. Helens Core Strategy Development Plan Document.
[59] Entec (2011). Mid Mersey Water Cycle Study (Outline Phase) On Behalf of Warrington Borough Council, St. Helens Borough Council and Halton Borough Council Final Report.
[60] Environment Agency. Catchment Data Explorer. Sankey. http://environment.data.gov.uk/catchment-planning/WaterBody/GB112069060990 [accessed 30/11/2016]
[61] Achievability of 2027 target: Cause of adverse impact unknown (disproportionately expensive, technically infeasible), disproportionate burdens (disproportionately expensive, technically infeasible)
[62] Ibid
[63] Ibid
[64] Achievability of 2027 target: Disproportionate burdens (disproportionately expensive)

Sankey Brook (Hardshaw Brook to Rainford Brook)	Within St. Helens	Moderate	Good[65]
Sankey Brook (Rainford Brook to Mersey)	Within St. Helens and downstream	Poor[66]	Not Available
Whittle Brook (Mersey Estuary)	Within St. Helens and downstream	Moderate	Good[67]

Table 5 shows that in general the quality of the watercourses within St. Helens Plan area are of Moderate condition and have targets of 'Moderate by 2027'. However, Sankey Brook (Rainford Brook to Mersey), has a WFD target of Poor to 2015, indicating that this watercourse remains in poor condition.

Plan policy LPC12: Flood Risk and Water Management includes the following text that provides protection against deterioration in water quality:

"Water Quality: Development which could adversely affect the quality or quantity of water in watercourses or groundwater will not be permitted unless measures are included which would overcome any threat, to the satisfaction of the Council, in consultation with the Environment Agency (or equivalent) and other appropriate authorities.

New development will be required to enhance and protect the water quality of existing water resources, such as watercourses and groundwater.'

Further, this policy also states that with regards to SuDS '*On large sites it may be necessary to ensure the drainage proposals are part of a wider, holistic strategy which coordinates the approach to drainage between phases*".

Policy LPA05: Meeting St. Helens Housing Needs states that:

"*4. The development of allocated and non-allocated housing sites may be phased at planning application stage if evidence emerges that infrastructure needs to be improved to cope with the development. This needs to occur before construction occurs or before a certain number of dwellings are completed. In such cases, when granting planning permission for housing sites the commencement of construction of the dwellings in the initial or subsequent phases may be restricted until the infrastructure issues are resolved.*"

Policy LPA03: Development Principles includes text that resources such as water are used in an "*efficient and effective way"*

With the above policy text in place the Plan acknowledges that there are potential issues relating to reduction in water quality as a result of the St. Helens Plan.

Ultimately it is the duty of United Utilities to provide sufficient infrastructure to treat waste water to appropriate levels and it the Environment Agency that consents discharge volumes of these sewage treatment works. However, the water company is obliged to service development once that development is consented within its catchment area. Therefore, local authorities have a key role to play in ensuring that the pace of delivery of new development is in line with the provision of any necessary infrastructure enhancements to treat wastewater to an acceptable standard.

To ensure no likely significant effects result it is recommended that the Plan acknowledges the following in line with 4.3.4 of the Water Cycle Study (WCS):

The WCS identifies that further investigation by United Utilities (UU) is required to determine headroom availability within its existing WwTW now and looking forward to future growth levels (such as that identified with in the Plan). Whilst it is acknowledged that Plan policy does contain reference to the requirement for phasing of development, it is pertinent to provide direct reference to the need for phased development with reference to waste water treatment.

[65] Ibid
[66] Achievability of 2027 target: Cause of adverse impact unknown (disproportionately expensive, technically infeasible), disproportionate burdens (disproportionately expensive, technically infeasible)
[67] Achievability of 2027 target: Disproportionate burdens (disproportionately expensive)

IT is recommended that development is phased in line with headroom availability at the relevant WwTW and in line with the provision of any required new infrastructure required to treat waste water to an adequate standard to protect the coastal and estuarine designated sites. It is also recommended that the Plan includes reference to the fact the Council will work together with UU to ensure sufficient headroom exists in the locations required for the future levels and locations of development identified within the Plan.

The Council will require clarification from the Environment Agency in relation to its position of revising discharge consents into the River Mersey and Sankey Brook.

Provided the essence of the above recommendations are incorporated within the Plan, it can be concluded that this impact pathway upon the Mersey Estuary SPA and Ramsar site can be screened out from further consideration.

With the above recommendation in place, it could be concluded that appropriate policy framework is in place to ensure that no likely significant effect result from changes in water quality as a result of the Plan or in combination.

5.4 Atmospheric Pollution

In combination effects of increased atmospheric pollution upon Manchester Mosses SAC are considered. The SAC is located adjacent to the M62 and the Liverpool to Manchester rail line and to the former Parkside colliery at which an inter-modal rail freight terminal will be constructed (LPA10: Development of Strategic Rail Freight Interchange (Parkside)).

As detailed within the St. Helens Core Strategy HRA[68], in general, increased rail freight would result in a reduction in HGV movements and thus a positive outcome for air quality.

In 2004 the Department of Transport made the following comment on air quality issues as they relate to the transfer of freight movements from road to rail: "*It should be noted that in terms of total transport emissions, rail transport accounts for less than 1% of the total. Therefore, even with the most rail orientated transport options, perhaps doubling the rail kilometres, the potential for any significant impact on emissions will lie mainly with the saving in emissions from road transport brought about by modal transfer, rather than those generated by rail. Hence, it is suggested that emissions from rail sources can be scoped out in most cases*." It is therefore possible to screen out impacts from policy LPA10: Development of Strategic Rail Freight Interchange (Parkside) in combination with other projects and plans.

However, impacts from the 10,830 new homes and 306ha of new employment space within St. Helens have potential to impact upon the SAC in combination with surrounding authorities.

The M62 passes through the authorities of (west to east) Liverpool, Knowsley, St. Helens, Warrington, Salford towards Greater Manchester. As such, it is feasible that increased employment and residential development in any of these authorities has potential to act in combination with St. Helens. The Local Plans for the following boroughs located along the M62 corridor provide the expected level of future development:

- Liverpool: 29,600 between 2013 and 2033Knowsley: 8,100 new dwellings between 2010 - 2028
- Warrington: 10,50 new dwellings between 2006 - 2027
- Salford: 34,900 new dwellings between 2015 - 2035

The following Plan policies aim to reduce atmospheric emissions via a variety of pathways:

- LPD09: Air Quality: A positive policy dedicated to reducing atmospheric emissions from existing and future development.

"1. Development proposals must demonstrate that they will not: Hinder the achievement of Air Quality Management Area (AQMA) objectives and the measures set out in an Air Quality Management Area Action Plan; or Hinder the revocation of an Air Quality Management Area by: introducing significant new sources of air pollutants, or Introducing new development whose users will be especially

[68] Scott Wilson (2009). Appropriate Assessment of the St. Helens Core Strategy Development Plan Document.

susceptible to air pollution; or Lead to the declaration of an Air Quality Management Area; or Lead to a material decline in air quality.

2. Where appropriate Major developments must incorporate appropriate measures to reduce air pollution and minimise exposure to harmful levels of air pollution to both occupiers of the site and occupiers of neighbouring sites."

- LPA03: Development Principles: A positive policy ensuring that new development protects, conserves and enhances the natural environment and protects and enhances air quality.

"New development in St. Helens will be expected to support development principles: … 4c) Protecting, conserving, and/or enhancing the Borough's natural, built and historic environments; 4 d) Protecting and enhancing the quality of the Borough's natural resources including water, air, land and biodiversity; …"

- LPA07: Transport and Travel: A positive policy promoting the use of sustainable transport methods that have potential to reduce atmospheric pollution.

"1. New development should: Be located where there is potential for good access to existing and proposed public transport services or be developed to allow access by public transport; Actively promote sustainable modes of transport including where practicable electric vehicles and vehicle charging; Provide for safe and adequate pedestrian, cycle and vehicular access to, ..."

- LPC13: Renewable and Low Carbon Development: A positive policy supporting use of renewable energy whist providing protection for biodiversity, and air.

"1 The Council will support proposals that will produce and distribute decentralised, low carbon and renewable energy, provided that they do not cause significant harm (in terms of their number, scale, siting or cumulative impacts) to: a) Natural resources, biodiversity, geodiversity, water and air quality and, landscape character…"

- LPC14: Minerals: Planning criteria relating to managing air quality and pollution.

"Planning and environmental criteria to be taken into account when considering planning applications for minerals development will include:… air and water quality…"

- LPD01: Ensuring Quality Development in St. Helens:

"All proposals for development within the Borough will be expected to meet the following standards, where appropriate, as a minimum: …iii. Minimise and mitigate to acceptable levels against the effects of air, light and water pollution (including contamination of soil, surface water and groundwater resources) and noise, vibration, smells, dust and electromagnetic fields caused by the development…"

- LPD11: Health and Wellbeing: Provides for managing air quality and pollution from a health point of view.

"Development should help maximise opportunities to improve quality of life to make it easier for people in St. Helens to lead healthy, active lifestyles, by: …managing air quality and pollution."

These are all positive measures that will contribute to improving air quality and are in line with the policies set out in other Merseyside Local Plan HRAs to tackle the same issue. However, there is also the need to ensure that project-level analysis of potential air quality impacts (and if necessary, project-level mitigation) is provided for through policy. The approach to this form of assessment is set out in the Design Manual for Roads and Bridges[69]. This states that if the change in flows on a relevant road due to a given scheme is less than 200 Heavy Duty Vehicles per day or 1,000 Average Annual Daily Traffic then the air quality contribution is essentially imperceptible, the air quality effect is neutral and no further investigation is required. If the change in flows exceeds 1,000 AADT then air quality modelling would be required to establish whether an adverse effect would result and, if so, to devise scheme specific mitigation.

[69] Design Manual for Roads and Bridges, Volume 11, Section 3 Part 1 (HA207/07) and subsequent Interim Advice Notes, coupled with reference to Air Quality Technical Advisory Group (AQTAG) and Institute of Air Quality Management guidance

It is recommended that the procedure for managing air quality impacts that is being applied in other Merseyside authorities (such as Sefton with regard to Sefton Coast SAC) is incorporated into the St. Helens Local Plan as well. This would require developments that would result in a change in flows on the M62 past Manchester Mosses SAC of more than 1000 Average Annual Daily Traffic or 200 Heavy Duty Vehicles per day will require a Transport Assessment to determine if they are likely to result in a likely significant effect upon the SAC. In practice this will only affect a small number of very large development proposals. This could be incorporated into policy LPD09: Air Quality.

With the above recommendation in place, it could be concluded that appropriate policy framework is in place to ensure that no likely significant effects result from potential increased atmospheric pollution as a result of the Plan in combination with other projects or plans.

5.5 Conclusion of HRA Screening of St Helens Local Plan "In Combination"

This chapter explores in combination impacts of recreational pressure, water quality and atmospheric pollution resulting from the Plan. The Plan currently contains an insufficient framework to ensure that no likely significant effects result in combination with other projects and plans via these impact pathways. This chapter includes recommendations for the inclusion of changes to policy text to ensure that likely significant effects do not result. These recommendations are summarised in **Chapter 6.**

6. Conclusions and Summary of Recommendations

The following contains a summary of recommendations included within this document. Provided these recommendations are incorporated within plan, it can be concluded that the Plan will not result in any likely significant effect either alone or in combination with other projects or plans.

6.1 Loss of Functionally Linked Land

It is recommended that the Plan includes appropriate mechanisms to ensure the loss of functionally linked land is adequately assessed and mitigated as part of planning applications. This is relevant to both site allocations identified above and any windfall sites that occur within areas identified in the Lancashire Bird Atlas as supporting designated bird features.

To ensure no likely significant effect result, the applicant will be required to provide evidence that the development will not result in a likely significant effect. To prove this, a survey will be required to determine habitats and current site use of the site to verify if the site is in fact suitable to support a significant population[70] of designated bird features. Where habitats are suitable, non-breeding bird surveys will be required to determine if the site and neighbouring land constitute a significant area of supporting habitat. In line with other Merseyside Authorities, surveys will be required to be undertaken during autumn, winter and spring. If habitat within the site or adjacent land are identified to support significant populations of designated bird features avoidance measures and mitigation will be require and the planning application will likely need to be supported by a project specific Habitats Regulations Assessment to ensure that the development does not result in likely significant effects.

With the above recommendation in place, it could be concluded that appropriate mechanisms are in place adequately assess and mitigate loss of functionally linked land and no likely significant effect will result.

6.2 Recreational Pressure

6.2.1 Mersey Estuary SPA and Ramsar site

To provide the strategic framework ensure that no likely significant effect will result from the Plan alone or in combination as this is mainly associated with managing recreational activity within the Mersey Estuary SPA/Ramsar site it is recommended that a similar approach is taken to that of Halton and Liverpool Councils for the same European site. The Council should to commit to working with the other Merseyside Authorities, MEAS, Natural England, Natural Resources Wales and other partners to devise a framework for the delivery of enhanced access management to the Mersey Estuary SPA/Ramsar sites, to be informed by the collation of visitor survey data.

Provided that a commitment to this framework is incorporated with the Plan it can be considered that recreational pressure from the Plan area will not result in likely significant effect upon the Mersey Estuary as a result of increased recreational pressure both alone and in combination.

6.2.2 Other European Designated Sites (Ribble and Alt Estuaries SPA and Ramsar site, Mersey Narrows and North Wirral Foreshore SPA and Ramsar site, Liverpool Bay SPA and SPA extension, and the Sefton Coast SAC.

To ensure likely significant effect do not result in combination, it is recommended that policy is included within the Plan in line with other Merseyside Authorities to ensure that no likely significant effect result upon the Sefton Coast, Ribble and Alt Estuaries, Mersey Narrows and North Wirral Foreshore, and Liverpool Bay European designated sites from increased recreational pressure in combination with other projects or plans. It is recommended that the Plan includes a commitment to work with neighbouring authorities and Natural England to deliver the actions of the Mersey Estuary Management Plan and the emerging Sefton Coast Plan and to generally manage the “in combination” increase in recreational pressure that has been predicted to occur within European sites in Merseyside over the plan period as a result of increased residential development across Merseyside.

[70] A significant population is classified as a site that regularly used by more than 1% of the population of qualifying bird species

St Helen's contribution would be commensurate with its contribution to visitor pressure within the European site(s) as it is recognised that its contribution to the issue is likely to be smaller than that of some other Merseyside authorities.

With the above recommendations in place, it could be concluded that appropriate mechanisms are in place to ensure that no likely significant effect result in combination as a result of increased recreational pressure stemming from the Plan.

6.3 Water Quality

To ensure no likely significant effects result it is recommended that the Plan acknowledges the following in line with 4.3.4 of the Water Cycle Study (WCS):

The WCS identifies that further investigation by United Utilities (UU) is required to determine headroom availability within its existing WwTW now and looking forward to future growth levels (such as that identified with in the Plan). Whilst it is acknowledged that Plan policy does contain reference to the requirement for phasing of development, it is pertinent to provide direct reference to the need for phased development with reference to waste water treatment. IT is recommended that development is phased in line with headroom availability at the relevant WwTW and in line with the provision of any required new infrastructure required to treat waste water to an adequate standard to protect the coastal and estuarine designated sites. It is also recommended that the Plan includes reference to the fact the Council will work together with UU to ensure sufficient headroom exists in the locations required for the future levels and locations of development identified within the Plan.

The Council will require clarification from the Environment Agency in relation to its position of revising discharge consents into the River Mersey and Sankey Brook.

Provided the essence of the above recommendations are incorporated within the Plan, it can be concluded that this impact pathway upon the Mersey Estuary SPA and Ramsar site can be screened out from further consideration.

With the above recommendation in place, it could be concluded that appropriate policy framework is in place to ensure that no likely significant effect result from changes in water quality as a result of the Plan or in combination.

6.4 Air Quality: Manchester Mosses SAC

It is recommended that the procedure for managing air quality impacts that is being applied in other Merseyside authorities (such as Sefton with regard to Sefton Coast SAC) is incorporated into the St. Helens Local Plan as well. This would require developments that would result in a change in flows on the M62 past Manchester Mosses SAC of more than 1000 Average Annual Daily Traffic or 200 Heavy Duty Vehicles per day will require a Transport Assessment to determine if they are likely to result in a likely significant effect upon the SAC. In practice this will only affect a small number of very large development proposals. This could be incorporated into policy LPD09: Air Quality.

With the above recommendation in place, it could be concluded that appropriate policy framework is in place to ensure that no likely significant effects result from potential increased atmospheric pollution as a result of the Plan in combination with other projects or plans.

Appendix A : Figure A1 and Figure A2

Appendix B European Designated Sites

B.1 Dee Estuary SAC

Introduction

The Dee Estuary is a large funnel shaped estuary which lies between the Wirral Peninsula, England and Flintshire, North East Wales. It was formerly much more extensive but large scale reclamation of intertidal land has occurred, principally at the head of the estuary. This followed the canalisation of the River Dee in the eighteenth century when an attempt was made to secure the continuation of Chester as a port. The estuary contains extensive areas of intertidal sand and mudflats, which support a variable but characteristic benthic fauna depending on the nature of the substrate. Large areas of saltmarsh also occur at its head and along part of its north-eastern shore. The estuary continues to accrete and further saltmarshes are developing, particularly on the English shoreline. Locally, on the Welsh shoreline, saltmarsh continues to erode, particularly between Greenfield and Flint. Within the estuary, the three small sandstone islands of Hilbre, Middle and Little Eye provide the only hard natural rock coast habitat along this section of coastline. A large shingle ridge occurs at the Point of Ayr. Although yellow embryo dunes occur at its western end, these are susceptible to erosion from wave action.

Qualifying Features[71]

Designated for the following Annex I habitats

- Mudflats and sandflats not covered by seawater at low tide
- Salicornia and other annuals colonizing mud and sand
- Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
- Estuaries
- Annual vegetation of drift lines
- Vegetated sea cliffs of the Atlantic and Baltic Coasts
- Embryonic shifting dunes
- "Shifting dunes along the shoreline with Ammophila arenaria (""white dunes"")"
- "Fixed coastal dunes with herbaceous vegetation (""grey dunes"")" * Priority feature
- Humid dune slacks
- Coastal lagoons
- Spartina swards (Spartinion maritimae)
- European dry heaths

Designated for the following Annex II species:

- Sea lamprey *Petromyzon marinus*
- River lamprey *Lampetra fluviatilis*
- Petalwort *Petalophyllum ralfsii*

Conservation Objectives[72]

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed), and subject to natural change;

[71] http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0030131.pdf [accessed 24/11/2016]
[72] http://publications.naturalengland.org.uk/file/6002788709433344 [accessed 24/11/2016]

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Environmental Vulnerabilities

- Recreational pressure
- Invasive species
- Changes in abiotic conditions
- Changes in biotic conditions

B.2 Liverpool Bay SPA, and SPA Extension

Introduction

Liverpool Bay is located broadly between Morecambe Bay and the east coast of Anglesey. The sea bed comprises a broad bed of mobile sediment including muddy sand, gravel, sand, and sandbanks. The Bay has a large tidal range facilitating sediment deposition. The seabed supports internationally important populations of birds.

Qualifying Features

Designated as an **SPA** for the following Annex I species[73]:

In any season:

- Red throated diver *Gavia stellate*

Migratory species

- Common scoter *Melanitta nigra*

Designated as a **pSPA** (SPA extension) for the following Annex I species: [74]

- Non-breeding waterbird assemblages
- Little gull *Larus minutus*
- Common tern *Sterna hirundo*
- Little tern *Sterna albifrons*
- Red-breasted merganser *Mergus serrator*
- Cormorant *Phalacrococorax carbo*

Draft Conservation Objectives[75]

Feature 1: Non-breeding population of common scoter Melanitta nigra

[73] http://publications.naturalengland.org.uk/file/5306888513126400 [accessed 18/11/2016]
[74] http://publications.naturalengland.org.uk/file/5454464860291072 [accessed 18/11/2016]
[75] http://publications.naturalengland.org.uk/file/5910991877963776 [accessed 18/11/2016]

- The size of the non-breeding population should be stable or increasing, allowing for natural variability, and sustainable in the long term. The non-breeding population of common scoter should be stable or increasing. If approved the site would be classified for a mean of peaks of 56,679 individuals (2004/05 – 2010/11).
- There should be sufficient habitat, of sufficient quality, to support the non-breeding population in the long term. The marine foraging habitat of this species should not decrease significantly, and its quality should remain unaffected by anthropogenic factors.
- Factors affecting the population or its foraging habitat should be under appropriate control Actions or events likely to impinge on the sustainability of the non-breeding population are under control.

Feature 2: Non-breeding population of red-throated diver Gavia stellate

- The size of the non-breeding population should be stable or increasing, allowing for natural variability, and sustainable in the long term. The non-breeding population of red-throated diver should be stable or increasing. If approved the site would be classified for a mean of peaks of 1,171 individuals (2004/05 – 2010/11).
- There should be sufficient habitat, of sufficient quality, to support the non-breeding population in the long term. The marine foraging habitat of this species should not decrease significantly, and its quality should remain unaffected by anthropogenic factors.
- Factors affecting the population or its foraging habitat should be under appropriate control Actions or events likely to impinge on the sustainability of the non-breeding population are under control.

Feature 3: Non-breeding waterbird assemblage[76]

- The size of the waterbird assemblage should be stable or increasing, allowing for natural variability, and sustainable in the long term. The non-breeding population of component species should be stable or increasing. If approved the site would be designated for a mean of peaks of 69,687 individuals (2004/05 – 2010/11).
- There should be sufficient habitat, of sufficient quality, to support the non-breeding population in the long term. The marine foraging habitat for component species should not decrease significantly, and its quality should remain unaffected by anthropogenic factors.
- Factors affecting the waterbird population or its foraging habitat should be under appropriate control Actions or events likely to impinge on the sustainability of the non-breeding population are under control.

Feature 4: Non-breeding population of little gull Hydrocoleus minutus

- The size of the non-breeding population should be stable or increasing, allowing for natural variability, and sustainable in the long term. The non-breeding population of Little gull should be stable or increasing. If approved the site would be designated for a mean of peaks of 319 individuals (2004/05 – 2010/11).
- There should be sufficient habitat, of sufficient quality, to support the non-breeding population in the long term. The marine foraging habitat of this species should not decrease significantly, and its quality should remain unaffected by anthropogenic factors.
- Factors affecting the population or its foraging habitat should be under appropriate control Actions or events likely to impinge on the sustainability of the non-breeding population are under control.

Feature 5: Breeding population of little tern Sternula albifrons

- The size of the population should be stable or increasing, allowing for natural variability, and

[76] The main components of the waterbird assemblage (i.e. a species exceeding 1% of the GB total or 2,000 individuals) include all of the non-breeding qualifying features (common scoter, red-throated diver and little gull) as well as red-breasted merganser and great cormorant. Other species contributing to the assemblage total in numbers less than 1% of their respective GB populations or less than 2,000 individuals include: black-headed gull, common gull, common eider, fulmar, great black-backed gull, great crested grebe, common guillemot, northern gannet, herring gull, black-legged kittiwake, lesser black-backed gull, great northern diver, Atlantic puffin, razorbill, shag and velvet scoter.

sustainable in the long term. The breeding population of little tern should be stable or increasing. If approved the site would be designated for 69 pairs (1995 – 1999).

- The distribution of the population should be being maintained, or where appropriate increasing. The range and distribution of terns within the SPA and beyond is not constrained or hindered.
- There should be sufficient habitat, of sufficient quality, to support the population in the long term. The extent of functionally linked land used by terns is stable or increasing. Functionally linked land is of sufficient quality to support the ecological requirements of breeding terns. There are appropriate and sufficient food sources for terns within access of the SPA.
- Factors affecting the population or its foraging habitat should be under appropriate control Actions or events likely to impinge on the sustainability of the breeding population are under control.

Feature 6: Breeding population of common tern Sterna hirundo

- The size of the population should be stable or increasing, allowing for natural variability, and sustainable in the long term. The breeding population of Common tern should be stable or increasing. If approved the site would be designated for 180 pairs (2011 – 2015).
- The distribution of the population should be being maintained, or where appropriate increasing. The range and distribution of terns within the SPA and beyond is not constrained or hindered.
- There should be sufficient habitat, of sufficient quality, to support the population in the long term. The extent of functionally linked land used by terns is stable or increasing. Functionally linked land is of sufficient quality to support the ecological requirements of breeding terns. There are appropriate and sufficient food sources for terns within access of the SPA.
- Factors affecting the population or its foraging habitat should be under appropriate control Actions or events likely to impinge on the sustainability of the breeding population are under control.

Environmental Vulnerabilities

- Loss of water quality through sewage discharges
- Dredging and disturbance of sediments/benthic habitats following port expansion
- Disturbances to bird species through shop movements and recreational pressure.

B.3 Manchester Mosses SAC

Introduction

This site is made up of three Sites of Special Scientific Interest (SSSI). Astley & Bedford Mosses SSSI, Holcroft Miss SSSI and Risley Moss SSSI. Astley & Bedford SSSI represents one of the largest remaining fragments of Chat Moss, a lowland raised mire some 25 square kilometres in extent developed over tills and Late-glacial flood gravels overlying Triassic sandstones of the Sherwood Sandstones Group. The major habitats present are modified mire communities, heathland, woodland and acidic grassland, all developed over the cut peat surface and subject to variations of wetness according to the residual topography or drainage patterns. Holcroft Moss SSSI occupies several small depressions in the Upper Terrace of the Mersey Valley and is an isolated remnant of the once extensive area of mossland formerly associated with this valley. Risley Moss SSSI contains derelict mires, as well as intact lowland raised mires, are rare habitats and Risley Moor is one of only 2 examples in Cheshire where the water level has been raised and steps taken to encourage the regeneration of an active mire surface.

Qualifying Features[77]

Designated as an SAC for its Annex I habitat:

- Degraded raised bogs still capable of natural regeneration

[7777] http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0030200.pdf [accessed 18/11/2016]

Conservation Objectives[78]

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and,
- The supporting processes on which qualifying natural habitats rely

Environmental Vulnerabilities

- Hydrological changes
- Atmospheric pollution

B.4 Martin Mere SPA and Ramsar site

Introduction

Martin Mere is a low-lying wetland complex of open-water, marsh and grassland habitats overlying deep peat. It is situated to the north of Burscough and occupies part of the site of the old Martin Mere which, prior to drainage, was probably the largest lake in Lancashire. Following acquisition by the Wildfowl Trust in 1974, the rough-grazed pasture of a decade ago has been transformed by positive management techniques into a reserve of international importance for waterfowl.

Qualifying Features

Designated as an **SPA** for the following Annex II species[79]:

- Pintail *Anas acuta*
- Wigeon *Anas penelope*
- Pink footed goose *Anser brachyrhynchus*
- Tundra swan *Cygnus columbianus bewickii*
- Whooper swan *Cygnus cygnus*
- Waterfowl assemblage

Designated as a **Ramsar** site under the following criterion:

Ramsar criterion 5: Assemblages of international importance: Species with peak counts in winter: 25306 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar criterion 6: species/populations occurring at levels of international importance.

Qualifying Species/populations (as identified at designation):

Species with peak counts in spring/autumn:

- Pink footed goose *Anser brachyrhynchus*

Species with peak counts in winter:

- Tundra swan *Cygnus columbianus bewickii*
- Whooper swan *Cygnus cygnus*
- Pintail *Anas acuta*

[78] http://publications.naturalengland.org.uk/file/5089863191756800 [accessed 18/11/2016]
[79] http://jncc.defra.gov.uk/pdf/SPA/UK9005111.pdf [accessed 18/11/216]

- Wigeon *Anas penelope*

Conservation Objectives[80]

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

Environmental Vulnerabilities

- Pollution to groundwater (point sources and diffuse sources)
- Invasive non-native species
- Human induced changes in hydraulic conditions

B.5 Mersey Estuary SPA and Ramsar site

Introduction

The Mersey Estuary is an internationally important site for wildfowl and consists of large areas of intertidal sand and mudflats. The site also includes an area of reclaimed marshland, salt-marshes, brackish marshes and boulder clay cliffs with freshwater seepages. The Manchester Ship Canal forms part of the southern boundary of the site and separates a series of pools from the main estuary. These pools together with Hale Marsh are important roosting sites for wildfowl and waders at high tide. Throughout the winter the estuary supports large numbers of wildfowl and waders. The birds feed on the rich invertebrate fauna of the intertidal sediments as well as plants and seeds from the salt-marsh and adjacent agricultural land. The estuary is also a valuable staging post for migrating birds in spring and autumn.

Qualifying Features

Qualifies as an **SPA** for the following Annex II species: [81]

Wintering:

- Pintail *Anas acuta*
- Wigeon *Anas penelope*
- Dunlin *Calidris alpina*
- Black-tailed godwit *Limosa limosa*
- Curlew *Numenius arquata*
- Golden plover *Pluvialis apricaria*
- Grey plover *Pluvialis squatarola*
- Great crested grebe *Podiceps cristatus*
- Shelduck *Tadorna tadorna*
- Redshank *Tringa totanus*

[80] http://publications.naturalengland.org.uk/file/4654948105060352 [accessed 18/11/2016]
[81] http://jncc.defra.gov.uk/pdf/SPA/UK9005131.pdf [accessed 18/11/2016]

- Lapwing *Vanellus vanellus*

Concentration:

- Ringed plover *Charadrius hiaticula*
- Redshank *Tringa totanus*

Qualifies as a **Ramsar** site under the following criterion: [82]

Ramsar Criterion 5: Assemblages of international importance. Species with peak counts in winter:

89576 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar Criterion 6: species/populations occurring at levels of international importance.

Species with peak counts in spring/ autumn:

- Common shelduck *Tadorna tadorna*
- Black-tailed godwit *Limosa limosa islandica*
- Common redshank *Tringa totanus totanus*

Species with peak counts in winter:

- Eurasian teal *Anas crecca*
- Northern pintail *Anas acuta*
- Dunlin *Calidris alpina alpina*

Conservation Objectives[83]

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

Environmental Vulnerabilities

- Invasive species
- Recreational pressure
- Water quality and sedimentation

B.6 Mersey Narrows & North Wirral Foreshore SPA and Ramsar site

Introduction

The Mersey Narrows is located at the mouth of the Mersey Estuary and comprises Seaforth on the north bank and Egremont Foreshore on the south. The two areas are separated by approximately 2 km, but considered to be an integral site on the basis of the constant interchange of bird populations. Whilst Egremont Foreshore is particularly important as a feeding site a low tide, Seaforth is

[82] http://jncc.defra.gov.uk/pdf/RIS/UK11041.pdf [accessed 18/11/2016]
[83] http://publications.naturalengland.org.uk/file/5396006325714944 [accessed 18/11/2016]

particularly important as a high tide roost site, particularly during high spring tides when rocky shores and man-made structures closer to the feeding areas are submerged and not available as roosting sites.

Qualifying Features

Designated as an **SPA** for the following Annex I species[84]:

Wintering:

- Knot *Calidris canutus*
- Dunlin *Calidris alpina*
- Sanderling *Calidris alba*
- Oyster catcher *Haematopus ostralegus*
- Bar-tailed godwit *Limos lapponica*
- Cormorant *Phalacrocorax carbo*
- Grey plover *Pluvialis squatarola*
- Redshank *Tringa totanus*

Concentration:

- Little gull *Larus minutus*
- Common tern *Sterna hirundo*

Reproducing:

- Common tern *Sterna hirundo*

Designated as a **Ramsar** under the following criterion[85]:

Ramsar Criterion 4: Regularly supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions: During 2004/05 - 2008/09 the Mersey Narrows and North Wirral Foreshore Ramsar site supported important numbers of non-breeding little gulls and common terns.

Ramsar Criterion 5: Regularly supports 20,000 or more waterbirds: During the winters 2004/05 - 2008/09, the Mersey Narrows and North Wirral Foreshore Ramsar site supported an average peak of 32,402 individual waterbirds

Ramsar Criterion 6: regularly supports 1% of the individuals in the populations of the following species or subspecies of waterbird in any season:

- Knot *Calidris canutus*
- Bar-tailed godwit *Limos lapponica*

Conservation Objectives[86]

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features

[84] http://jncc.defra.gov.uk/pdf/SPA/UK9020287.pdf [accessed 18/11/2016]
[85] http://jncc.defra.gov.uk/pdf/UK11042.pdf [accessed 18/11/2016]
[86] http://publications.naturalengland.org.uk/file/6609347727589376 [accessed 18/11/2016]

- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

Environmental Vulnerabilities

- Recreational disturbance
- Invasive species
- Climate change
- Coastal squeeze
- Water pollution
- Fisheries
- Inappropriate coastal management
- Marine litter, predation
- Development
- Physical modification

B.7 Midland Meres and Mosses Phase 1 Ramsar site

Introduction

The Meres & Mosses form a geographically discrete series of lowland open water and peatland sites in the north-west Midlands of England. These have developed in natural depressions in the glacial drift left by receding ice sheets which formerly covered the Cheshire/Shropshire Plain. The 16 component sites include open water bodies (meres), the majority of which are nutrient-rich with associated fringing habitats; reed swamps, fen, carr & damp pasture. Peat accumulation has resulted in nutrient poor peat bogs (mosses) forming in some sites in the fringes of meres or completely infilling basins. In a few cases the result is a floating quaking bog or schwingmoor. The wide range of resulting habitats support nationally important flora & fauna.

Qualifying Features[87]

Designated as a Ramsar site under the following criterion:

Ramsar criterion 1: The site comprises a diverse range of habitats from open water to raised bog.

Ramsar criterion 2: Supports a number of rare species of plants associated with wetlands including five nationally scarce species together with an assemblage of rare wetland invertebrates (three endangered insects and five other British Red Data Book species of invertebrates).

Environmental Vulnerabilities

- Eutrophication
- Invasive non-native species

B.8 Midland Meres and Mosses Phase 2 Ramsar site

Introduction

The Meres and Mosses form a geographically diverse series of lowland open water and peatland sites in the north-west Midlands of England and north-east Wales. These have developed in natural depressions in the glacial drift left by receding ice sheets which formerly covered the Cheshire/Shropshire Plain. The 18 component sites include open water bodies (meres), the majority of which are nutrient-rich with associated fringing habitats, reed swamp, fen, carr and damp pasture.

[87] http://jncc.defra.gov.uk/pdf/RIS/UK11043.pdf [accessed 21/11/2016]

Peat accumulation has resulted in the nutrient-poor peat bogs (mosses) forming in some sites on the fringes of the meres or completely infilling basins. In a few cases the result is a floating quaking bog or schwingmoor. The wide range of resulting habitats support nationally important flora and fauna.

Qualifying Features[88]

Designated as a Ramsar site under the following criterion:

Ramsar criterion 1: The site comprises a diverse range of habitats from open water to raised bog.

Ramsar criterion 2: Supports a number of rare species of plants associated with wetlands, including the nationally scarce cowbane *Cicuta virosa* and, elongated sedge *Carex elongata*. Also present are the nationally scarce bryophytes *Dicranum affine* and *Sphagnum pulchrum*. Also supports an assemblage of invertebrates including several rare species. There are 16 species of British Red Data Book insect listed for this site including the following endangered species: the moth *Glyphipteryx lathamella*, the caddisfly *Hagenella clathrata* and the sawfly *Trichiosoma vitellinae*.

Environmental Vulnerabilities

- Eutrophication
- Invasive non-native species
- Pollution from pesticides/ agricultural runoff.

B.9 Oak Mere SAC

Introduction

There are more than 60 open water bodies known as ‘meres’ or ‘pools’ within the north west Midlands which form a nationally important series of open water sites. These have developed in natural depressions in the glacial drift left by the ice sheets which covered Cheshire and north Shropshire, with a small number of outlying in adjacent parts of Staffordshire and Clwyd. Oak Mere, a shallow lake formed where three kettle holes coalesced, is unique among the Midland Meres. The water is acidic (pH 4.5 approximately), but compared to other acidic lakes is slightly nutrient-rich (mesotrophic). Because of its unusual water chemistry it contains an outstanding assemblage of aquatic plants and animals, including species more typical of upland waters on acid rocks, a number of which are regionally and naturally rare.

Qualifying Features[89]

- Nutrient-poor shallow waters with aquatic vegetation on sandy plains
- Very wet mires often identified by an unstable ‘quaking’ surface

Conservation Objectives[90]

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the ‘Qualifying Features’ listed), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats;
- The structure and function (including typical species) of qualifying natural habitats; and
- The supporting processes on which qualifying natural habitats rely

Environmental Vulnerabilities

- Pollution to ground water, point sources and diffuse sources

[88] http://jncc.defra.gov.uk/pdf/RIS/UK11080.pdf [accessed 24/11/2016]
[89] http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0012970 [accessed 29/11/2016]
[90] http://publications.naturalengland.org.uk/publication/4577218189590528 [accessed 29/11/2016]

- Air pollution, airborne pollutants
- Human induced changes in hydraulic conditions
- Introduction of non-native invasive species

B.10 Ribble & Alt Estuaries SPA and Ramsar site

Introduction

The site is of special interest for intertidal mud and sandflats, embryonic shifting dunes, mobile dunes, dunes with creeping willow *Salix arenaria*, humid dune slacks, fixed dunes, dune grasslands and dune heat. Small areas of saltmarsh are also present. Its assemblages of vascular and non-vascular plants, in particular the nationally rare grey hair grass *Corynephorus canescens*, nationally scarce liverwort *Petalophyllum ralfsii* and nationally rare moss *Bryum neodamense*, are also of special interest.

The site is of special interest for its populations of internationally important wintering waterfowl and its nationally and, in some cases, internationally important populations of individual waders. Its populations of sand lizard *Lacerta agilis*, natterjack toad *Bufo calamita* and great-crested newt *Triturus cristatus* are also of special interest, along with the populations of the Red Data Book species, sandhill rustic moth *Luperina nickerlii gueneei*

Qualifying Features

Designated as an **SPA** for its Annex II species[91]:

Wintering:

- Pintail *Anas acuta*
- Teal *Anas crecca*
- Wigeon *Anas penelope*
- Pink footed goose *Anser brachyrhynchus*
- Scaup *Aythya marila*
- Dunlin *Calidris alpina*
- Sanderling *Calidris alba*

[91] http://jncc.defra.gov.uk/pdf/SPA/UK9005103.pdf [accessed 18/11/2016]

- Knot *Calidris canutus*
- Bewick's swan *Columbianus bewickii*
- Whooper swan *Cygnus cygnus*
- Oyster catcher *Haematopus ostralegus*
- Bar-tailed godwit *Limosa lapponica*
- Black-tailed godwit *Limosa limosa islandica*
- Common scoter *Melinitta nigra*
- Curlew *Numenius arquata*
- Cormorant *Phalacrocorax carbo*
- Golden plover *Pluvialis apricaria*
- Grey plover *Pluvialis squatarola*
- Common shelduck *Tadorna tadorna*
- Common redshank *Tringa totanus totanus*

Concentration:

- Sanderling *Calidris alba*
- Ringed plover *Charadrius hiaticula*
- Whimbrel *Numenius phaeopus*
- Common redshank *Tringa totanus totanus*
- Lapwing *Vanellus vanellus*

Reproducing:

- Lesser black-backed gull *Larus fuscus*
- Black-headed gull *Larus ridibundus*
- Ruff *Philomachus pugnax*
- Common tern *Sterna hirundo*

Designated under the following **Ramsar** Criterion[92]:

Ramsar criterion 2:

- Natterjack toads *Bufo calamita*

Ramsar criterion 5: Assemblages of international importance: Species with peak counts in winter: 222038 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar criterion 6: species/populations occurring at levels of international importance.

Species regularly supported during the breeding season:

[92] http://jncc.defra.gov.uk/pdf/RIS/UK11057.pdf [accessed 18/11/216]

- Lesser black-backed gull *Larus fuscus*

Species with peak counts in spring/autumn:

- Grey plover *Pluvialis squatarola*
- Ringed plover *Charadrius hiaticula*
- Knot *Calidris canutus*
- Dunlin *Calidris alpina*
- Sanderling *Calidris alba*
- Black-tailed godwit *Limosa limosa islandica*
- Lesser black-backed gull *Larus fuscus*
- Common redshank *Tringa totanus totanus*

Species with peak counts in winter:

- Tundra swan *Cygnus columbianus bewickii*
- Whooper swan *Cygnus cygnus*
- Pink footed goose *Anser brachyrhynchus*
- Shelduck *Tadorna tadorna*
- Wigeon *Anas penelope*
- Teal *Anas crecca*
- Northern pintail *Anas acuta*
- Oystercatcher *Haematopus ostralegus ostralegus*
- Bar-tailed godwit *Limosa lapponica lapponica*

Conservation Objectives[93]

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

Environmental Vulnerabilities

- Recreational pressure
- Fisheries
- Invasive species

B.11 River Dee and Bala Lake SAC

[93] http://publications.naturalengland.org.uk/file/6685913048416256 [accessed 18/11/216]

Qualifying features[94]

The site is designated for its Annex I habitats:

- Watercourses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation

The site is designated for its Annex II species:

- Atlantic salmon *Salmo salar*
- Floating water-plantain *Luronium natans*
- Sea lamprey *Petromyzon marinus*
- Brook lamprey *Lampetra planeri*
- River lamprey *Lampetra fluviatilis*
- Bullhead *Cottus gobio*
- Otter *Lutra lutra*

Conservation Objectives[95]

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site

Environmental Vulnerabilities

- Deterioration in water quality and changes in flow rates due to ex-industrial runoff, discharge of treated sewage effluent (which contains elevated nitrates) and agricultural runoff;
- Risk of excessive abstraction resulting in a decrease in freshwater flows and an increase in sediment loading of water such that dehydration of interest features may occur;
- Fish entrainment through abstraction intakes;
- Barriers to migration;
- Overfishing of Atlantic salmon; and
- Introduction of invasive species.

B.12 Rixton Clay Pits SAC

Introduction

The site comprises parts of an extensive disused brickworks quarry excavated in glacial boulder clay deposits east of Warrington. It is of importance for its calcareous grassland communities and because the site supports the county's largest known breeding population of great crested newts *Triturus cristatus.* The Clay pits are not fed by ground water but by surface water.

[94] http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030252 [accessed 01/12/2016)
[95] http://publications.naturalengland.org.uk/file/4781078349873152 [accessed 01/12/2016]

Qualifying Features[96]

Designated as an SAC for its Annex I species:

- Great crested newts *Triturus cristatus*

Conservation Objectives[97]

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of the habitats of qualifying species
- The structure and function of the habitats of qualifying species
- The supporting processes on which the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site

Environmental Vulnerabilities

- Urbanisation

B.13 Rostherne Mere Ramsar site

Introduction

There are more than 60 open water bodies known as 'meres' or 'pools' within the north west Midlands which form a nationally important series of open water sites. These have developed in natural depressions in the glacial drift left by the ice sheets which covered Cheshire and north Shropshire, with a small number of outlying in adjacent parts of Staffordshire and Clwyd. Rostherne Mere is the deepest ad one of the largest meres. It lies in a deep hollow in glacial drift to the south-west of Altrincham. It is a natural lake of high fertility which over the years has been increased by the accumulation of nutrients received from the inflow streams and surrounding farmland.

Qualifying Features[98]

Ramsar criterion 1: The site contains a representative, rare, or unique example of a natural or near-natural wetland type found within appropriate biogeographic region. Rostherne Mere is one of the deepest and largest of the meres of the Shropshire-Cheshire Plain. Its shoreline is fringed with common reed *Phragmites australis*.

Environmental Vulnerabilities

- Eutrophication
- Introduction of non-native invasive species

B.14 Sefton Coast SAC

Introduction

The site is of special interest for intertidal mud and sandflats, embryonic shifting dunes, mobile dunes, dunes with creeping willow *Salix arenaria*, humid dune slacks, fixed dunes, dune grasslands and dune heat. Small areas of saltmarsh are also present. Its assemblages of vascular and non-vascular plants,

[96] http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0030265.pdf [accessed 18/11/2016]
[97] http://publications.naturalengland.org.uk/file/6329864151891968 [accessed 18/11/2016]
[98] http://jncc.defra.gov.uk/pdf/RIS/UK11060.pdf [accessed 29/11/2016]

in particular the nationally rare grey hair grass *Corynephorus canescens*, nationally scarce liverwort *Petalophyllum ralfsii* and nationally rare moss *Bryum neodamense*, are also of special interest.

The site is of special interest for its populations of internationally important wintering waterfowl and its nationally and, in some cases, internationally important populations of individual waders. Its populations of sand lizard *Lacerta agilis*, natterjack toad *Bufo calamita* and great-crested newt *Triturus cristatus* are also of special interest, along with the populations of the Red Data Book species, sandhill rustic moth *Luperina nickerlii gueneei*

Qualifying Features[99]

Designated as an SAC for the following Annex I habitats:

- Embryonic shifting dunes
- "Shifting dunes along the shoreline with Ammophila arenaria (""white dunes"")"
- "Fixed coastal dunes with herbaceous vegetation (""grey dunes"")"
- Dunes with Salix repens ssp. argentea (Salicion arenariae)
- Humid dune slacks

Designated as an SAC for the following Annex II species

- A petalwort *Petalophyllum ralfsii*
- Great crested newt *Triturus cristatus*

Conservation Objectives[100]

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Environmental Vulnerabilities

- Atmospheric pollution
- Invasive species
- Hydrological changes
- Recreational pressure

B.15 West Midland Mosses SAC

[99] http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0013076.pdf [accessed 18/11/216]
[100] http://publications.naturalengland.org.uk/file/5485439221760000 [accessed 18/11/216]

Introduction

West Midlands Mosses SAC is made up of the component Abbots Moss, Chartley Moss, Clarepool Moss and Wybunbury Moss SSSI. The meres and mosses of the north-west Midlands form a geographically discrete series of nationally important lowland open water and peatland sites. They have developed in natural depressions in glacial drift (sands and boulder clays) left by the ice sheets as they retreat from the Cheshire-Shropshire Plain some 15,000 years ago. Peat accumulation has resulted in nutrient poor peat bogs (mosses) forming across the component sites with a range of successional habitats forming from open water to woodland formed on solid peat. In addition to this quaking bogs or schwingmoors have formed within some sites. The wide range of resulting habitats support nationally important flora & fauna.

Qualifying Features[101]

Designated for the following Annex I habitats;

- Acid peat-stained lakes and ponds
- Very wet mires often identified by an unstable 'quaking' surface

Conservation Objectives[102]

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats;
- The structure and function (including typical species) of qualifying natural habitats; and
- The supporting processes on which the qualifying natural habitats rely.

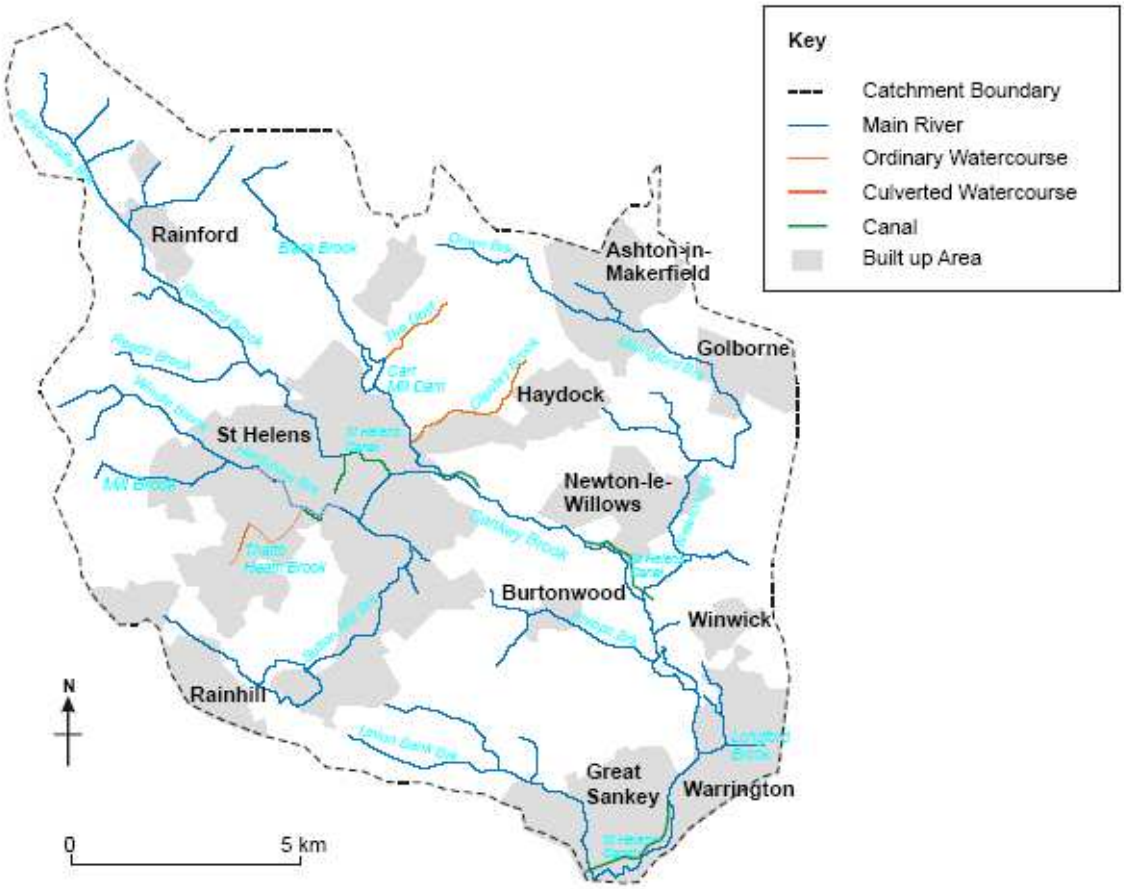
Environmental Vulnerabilities

- Human induced changes in hydraulic conditions
- Hunting and collecting animals, including damage caused by game e.g. excessive density
- Air pollution, airborne pollutants
- Pollution to ground water, point sources and diffuse sources
- Biocenotic evolution, succession

[101] http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0013595 [accessed 29/11/2016]
[102] file:///C:/Users/ameken/Downloads/UK0013595-West-Midlands-Mosses-SAC-V2.pdf [accessed 29/11/2016]

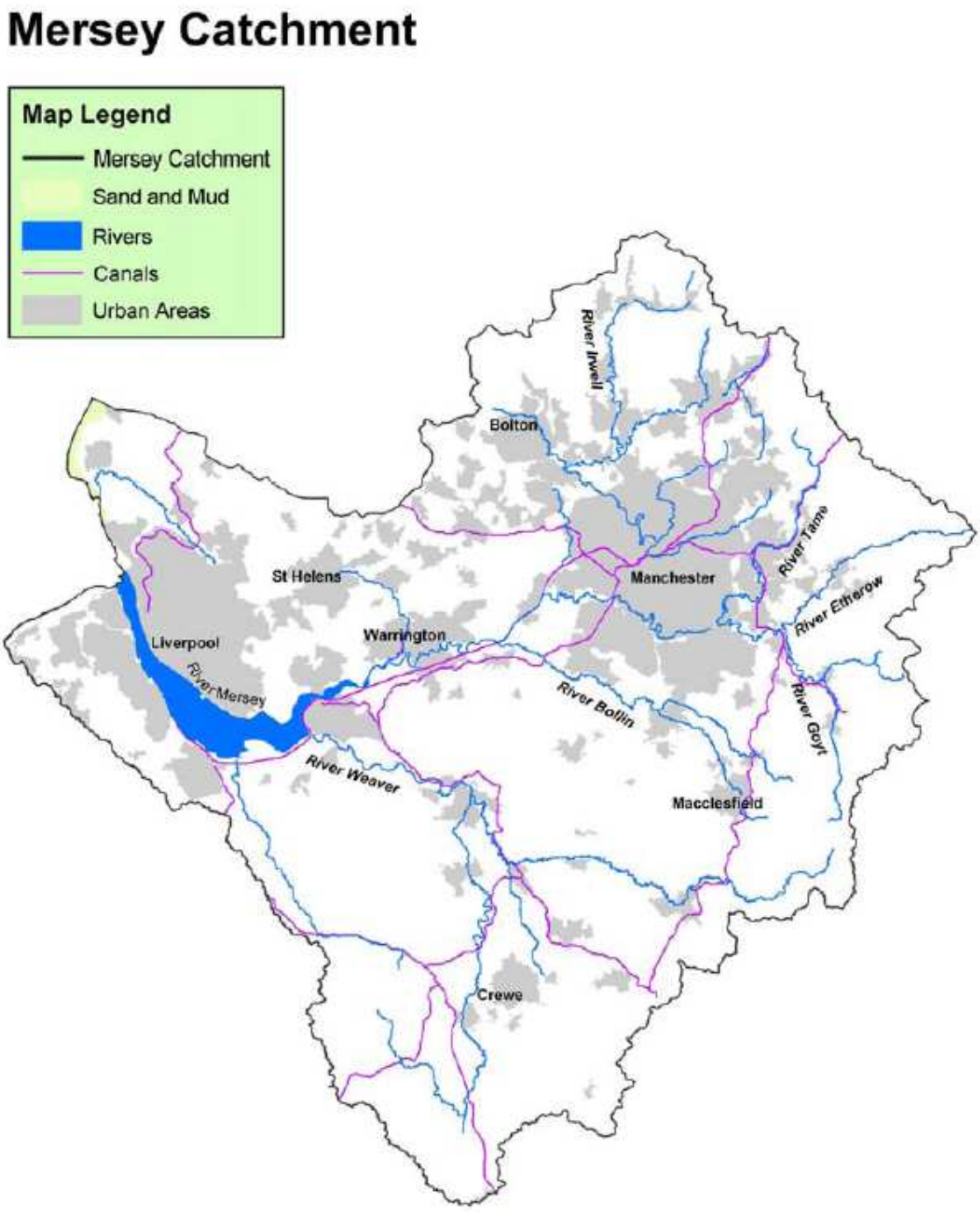
Appendix C The Catchments of The Sankey Brook and Mersey Estuaries

Sankey Brook Catchment



Source: Dunbar *Ed.*, 2002[103]

[103] Dunbar, Michael *Ed.* (2002). *Heavily Modified Waters in Europe: Case Study on the Sankey Catchment*.



Source: Mersey Basin Campaign, 2004[104]

[104] Mersey Basin Campaign (2004). *River Mersey*.

Appendix D : Screening of the Plan Policies.

Policies identified in green in the "HRA outcome" column do not provide for impact pathways that could link to a European designated site. Policies identified in orange in the "HRA outcome" column have potential to provide for impact pathways that could link to a European designated site and as such are discussed within this document.

Table 6: Screening Assessment of St. Helen Local Plan Strategic Policies.

Policy	Policy Summary	HRA outcome
LPA01: Presumption in Favour of Sustainable Development	In line with national planning guidance, there will be a presumption in favour of sustainable development. The Council will work proactively with applicants to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the Borough.	No HRA implications. Sustainable development would be definition not result in likely significant effects upon European designated sites. There are no impact pathways present.
LPA02: Spatial Strategy	The regeneration and growth of St. Helens through to 2033 and beyond to meet the changing needs of the Borough will be delivered through distributing development across the Borough to sustainable locations to address the needs of all Key Settlements, supporting regeneration activity within the Key Settlements and rural economic diversification in the Green Belt. The Key Settlements are: St. Helens Core Area; Blackbrook and Haydock; Newton-le-Willows and Earlestown; Rainford; Billinge; Garswood; Development will be directed to locations appropriate to the scale and nature of the development and that are sustainable or that will be made sustainable in terms of a choice of means of transport and access to key services. It also provides for the reuse of previously developed land in sustainable locations, removes land from the Green Belt and allocates it for housing and employment development to enable the housing target and employment land targets to be met in full over the plan period (2018/19 to 2032/33 inclusive). Land is also removed from the Green Belt and Safeguarded to meet housing and employment development needs for the following 15 years (2033/34 to 2047/48). Employment development (excluding town centre uses) will be largely focussed on large sites capable of accommodating large employment opportunities in close proximity to the strategic road network of the M6 and M62 and better road, public transport and active travel links will be provided between residential areas in the Key Settlements, St. Helens Town Centre will continue to perform as the Borough's principal town centre with	No HRA implications. This policy provides for broad locations of both residential and employment development within Key Settlements, the Green Belt, along the M6 and M62 corridors, and for the safeguarding of land for future transport infrastructure. Whilst this policy supports development, it is the special strategy and does not identify specific locations, quantum or type of development. There are no impact pathways present.

	Earlestown serving as a town centre,. The policy provides for the quality of life, health and wellbeing of St. Helens residents, workers and visitors and the quality of the natural environment will be protected and enhanced, the existing active travel, public transport and road transport infrastructure will be protected through preventing development that would cause significant adverse impacts. It also provides for safeguarding of l and required for proposed transport improvements in existing or emerging transport plans..	
LPA03: Development Principles	New development in St. Helens will be expected to support development principles relating to: • Providing for a mix of types and tenures of quality homes to meet the needs and aspirations of all existing and future residents in sustainable locations; maintaining and where possible enhancing accessibility to a good range of services and facilities; and providing and contributing to assessed infrastructure and service requirements where appropriate. • Contributing to the creation and retention of a range of employment and training opportunities which are accessible to St. Helens residents, particularly local unemployed and disadvantaged people; contributing to the reduction of socio-economic inequality including health inequalities within St. Helens, and between St. Helens and other parts of the UK; and contributing to and complimenting the regeneration of the Borough. • Seeking to address the requirements of an ageing population, particularly in terms of housing, health and wellbeing; children, young people and families; people with special needs, including those with a disability; and needs of minority groups in the Borough, including Gypsies, Travellers and Travelling Showpeople. • Securing high quality design in all development and a high standard of amenity; accounting for the Borough's landscape character, townscape, roles and settings; protecting, conserving, and/or enhancing the Borough's natural, built and historic environments protecting and enhancing the quality of the Borough's natural resources including water, air, land and biodiversity; and making effective use of land (including the remediation of contaminated land), buildings and existing infrastructure. • Minimise the need to travel and maximise the use of sustainable transport by guiding development to sustainable and accessible locations or locations that can be made sustainable and accessible; encouraging a shift towards more sustainable modes of transport for people, goods and freight and encouraging the use of lower carbon transport; encouraging safe and sustainable access for	No HRA implications This is a development management policy providing development principles. It does not identify any specific location, type or extent of development. This is a positive policy. It provides the need to minimise the need to travel and to maximise sustainable transport use. This has potential to reduce contributions to atmospheric pollution. It also provides for the protection of the borough's natural environments including enhancing the quality of the borough's natural resources of water, air and biodiversity. There are no impact pathways present.

all, particularly by promoting the use of public transport, walking and cycling between homes and employment; and supporting the provision and retention of shared space, community facilities and other local services (such as local shops, health facilities, education provision, meeting places, sports venues, cultural buildings, public houses and places of worship).

- Lower St. Helens' carbon footprint and adapt to the effects of climate change by meeting appropriate standards for sustainability and energy efficiency and promoting the use of renewable energy and sustainable construction; assessing and addressing the impact of climate change through mitigation and/or adaption measures; using water, energy, minerals and waste resources in an efficient and effective way; and ensuring that all new development addresses flood risk mitigation/adaptation.

LPA04: A Strong and Sustainable Economy

The Council will facilitate the provision of new jobs by ensuring a flexible supply of new high quality employment floorspace, utilising existing employment areas and St. Helens' strategic location for logistics development. This will be achieved by:

1. Catering for New B Class Employment

The Council will allocate a minimum of 306 ha of employment land up to 2038. The following sites as shown on the Policies Map are allocated for development:

Policies Map Site Reference Number	Site Name	Indicative Site Area (Hectares)	Appropriate Use(s)[105]
EA1	Omega South Western Extension, Phase 1, Land north of Finches Plantation, Bold	31.2	B2, B8
EA2	Florida Farm North, Slag Lane, Haydock	35.17	B2, B8

Potential HRA implications.

Provides for a minimum of 306ha of new Class B employment space at specific site allocations see **Appendix E, Table 7** for screening of individual sites). This policy is designed to result in an increase in economic activity.

Potential impact pathways include:

- Loss of functionally linked land
- Atmospheric pollution
- Water quality
- Water volume

[105] B1 use = Business
B2 use = General business
B8 use = Storage and Distribution
SRFI = Strategic Rail Freight Interchange

EA3	Land North of Penny Lane, Haydock	11.05	B2, B8
EA4	Land North East of Junction 23 M6, south of Haydock Racecourse, Haydock	42.31	B2, B8
EA5	Land South of Penny Lane, Haydock	2.16	B2, B8
EA6	Land to the West of Haydock Industrial Estate, Haydock	7.75	B2, B8
EA7	Land west of Millfield Lane, south of Liverpool Road and north of Clipsley Brook, Haydock	20.58	B2, B8
EA8	Parkside East, Newton-le-Willows	64.55	SRFI
EA9	Parkside West, Newton-le-Willows	79.57	B2, B8
EA10	Land to the West of Sandwash Close, Rainford	6.96	B2, B8
EA11	Land at Lea Green Farm West, Thatto Heath	3.84	B1, B2, B8
EA12	Gerards Park, Phases 2 and 3,	0.95	B1, B2, B8

	College Street, St. Helens Town Centre	
TOTALS	306.9	

2. Protecting Existing Employment Areas

Sites and premises last used for employment and sui generis use including the business and industrial areas listed in Appendix 4 will be protected for B1, B2, B8 and closely related sui generis uses.

3. Supporting the reuse, reconfiguration or redevelopment of sites and premises last used for B1,B2 or B8 purposes for B1, B2 or B8 uses.
4. The allocation of 130ha of land at Parkside East and West for the development of a Strategic Rail Freight Interchange, in line with Policy LPA10.
5. Promoting a more intensive use of existing sites
6. Supporting appropriate proposals to help diversify the rural economy.
7. Supporting the protection, creation, enhancement and expansion of tourism resources and facilities, by favourably considering proposals which are appropriate to the local context
8. Supporting the creation of and expansion of small businesses;
9. Supporting the use of local suppliers of goods and services and the creation of apprenticeships and training opportunities for local people in accordance with the requirements of the Local Economy SPD;
10. Continuing to work with the St. Helens Chamber of Commerce and the local business community to promote growth and ensure infrastructure is provided to support business needs;
11. Maximising the economic opportunities presented by the Borough's location on the North West's strategic transport corridors; and
12. Continuing to work with Liverpool City Region partners to help deliver the City Region's economic growth, job creation and skills development aspirations and to maximise the economic opportunities presented by devolution.

LPA04.1: Strategic Employment Sites	Strategic Employment Development • EA1: Omega South Western Extension, Phase 1, Land north of Finches Plantation, Bold;	Potential HRA implications. This policy provides for specific Strategic Employment Sites (see **Appendix E, Table 7** for screening of

- EA2: Land at Florida Farm North, Slag Lane, Haydock;
- EA4: Land north east of Junction M6 J23, south of Haydock Racecourse, Haydock;
- EA7: Land west of Millfield Lane, south of Liverpool Road and north of Clipsley Brook, Haydock;
- EA8: Parkside East, Newton-le-Willows; and
- EA9: Parkside West, Newton-le-Willows.

They are required to provide:

- A masterplan of the site, including phasing, to be agreed in writing by the Local Planning Authority;
- high quality soft landscaping which creates a strong sense of place;
- A robust and implementable Travel Plan for the entire site to address the provision of, and promote access to, frequent public transport services, pedestrian and cycling links;
- Measures to address the potential flood risk and surface water drainage issues on the site and assist in reducing flood risk downstream to the satisfaction of the Environment Agency, United Utilities and the Lead Local Flood Authority;
- Highly energy efficient developments which where viable, provide a minimum of 10% of the development's energy requirements through the on-site generation of renewable or low carbon energy, or district energy network; and

Strategic sites would have to comply with the relevant policies of the Local Plan

High Level Site Specific Requirements

<u>EA1: Omega South Western Extension, Phase 1, Land north of Finches Plantation, Bold</u>

Appropriate highway provision, enhancement work required to M62 Junction 8, improved bus services and pedestrian and cycle links from St. Helens to the site; and allow for connections to future phases of development.

<u>EA2: Land at Florida Farm North, Slag Lane, Haydock</u>

Appropriate highway provision including access via an upgraded junction at East Lancashire Road A580 / Haydock Lane; enhancement work required to M6 Junction 23; seek to connect well to Haydock Industrial Estate and to allocated sites EA6 and EA7; and a 25 metre easement required from Clipsley Brook. The development

individual sites)

Potential impact pathways include:

- Loss of functionally linked land
- Atmospheric pollution
- Water quality
- Water volume

	should incorporate measures to "slow the flow" to reduce the risk of flooding downstream and enhance biodiversity. EA4: Land north east of Junction M6 J23, south of Haydock Racecourse, Haydock Appropriate highway provision; enhancement work required to M6 Junction 23; seek to mitigate and minimise impacts, including traffic flow, on Haydock Racecourse to the north of the site. EA7: Land west of Millfield Lane, south of Liverpool Road and north of Clipsley Brook, Haydock Appropriate highway provision; enhancement work required to M6 Junction 23 to mitigate the impacts from the proposed development; seek to connect well to Haydock Industrial Estate and to allocated sites EA2 and EA6; and a25 metre easement required from Clipsley Brook. The development should incorporate measures to "slow the flow" to reduce the risk of flooding downstream and enhance biodiversity. EA8: Parkside East, Newton-le-Willows See Policy LPA10 EA9: Parkside West, Newton-le-Willows Appropriate highway provision including necessary enhancement and upgrade to mitigate the impacts from the proposed development; Design and layout should seek to mitigate and minimise impacts on residential development located to the west of the site; and Safeguarding of land for SRFI	
LPA05:Meeting St Helens Housing Needs	From 1 April 2014 to 31 March 2033 a minimum of 10,830 net additional dwellings will be provided in the Borough of St. Helens, equating to an indicative annual average of 570 dwellings. The housing requirement will be met from the following sources: (i) Housing allocations shown on the Policies Map and listed in table X accompanying this policy; (ii) Sites with planning permission for housing development; (iii) Sites without planning permission identified in the Strategic Housing Land Availability Assessment (SHLAA); and (iv) "Windfall" housing gains, including development on small sites not	HRA implications This policy provides for residential site allocations and a total of 10,830 new dwellings within the Plan period. Individual site allocations are assessed in **Appendix E, Table 8**. Potential impact pathways include: • Recreational pressure • Loss of functionally linked land • Atmospheric pollution • Water quality

identified in the SHLAA, sub-division of dwellings, conversions and changes of use.

The development of allocated and non-allocated housing sites may be phased at planning application stage if evidence emerges that infrastructure needs to be improved to cope with the development. This needs to occur before construction occurs or before a certain number of dwellings are completed. In such cases, when granting planning permission for housing sites the commencement of construction of the dwellings in the initial or subsequent phases may be restricted until the infrastructure issues are resolved.

The delivery of housing will be monitored to ensure that adequate supply is coming forward in a timely manner and maintaining a five year supply of housing land.

Housing Allocations listed in Table x

Allocation reference	Site names	Area	Estimated delivery (2018-2033)
HA1	Land adjoining Ash Grove Farm, Beacon Road, Billinge	8.70	163
HA2	Land South of Billinge Road, east of Garswood Road and west of Smock Lane, Garswood	9.58	179
HA3	Land at Florida Farm (south of A580), Slag Lane, Blackbrook	22.29	502
HA4	Land East of Chapel Lane and south of Walkers Lane, Sutton Manor	4.25	95
HA5	Land South of Gartons Lane and former St. Theresa's Social Club, Gartons Lane, Bold	19.80	446
HA6	Land south of Reginald Road / Bold Road - Northern Section (Phase 1), Bold	10.50	197
HA7	Land between Vista Road and Ashton	17.00	350

- Water volume

	Road, Newton -le-Willows		
HA8	Eccleston Park Golf Club, Rainhill Road, Eccleston	49.67	585
HA9	Higher Barrowfield Farm, Houghton's Lane, Eccleston	0.78	8
HA10	Land south west of M6 J23 between Vista Road and Lodge Lane, Haydock	28.46	520
HA11	Land at Moss Bank Farm, Moss Bank Road, Moss Bank	2.68	50
HA12	Former Newton Community Hospital (Simms Ward), Bradlegh Road, Newton-le-Willows	2.01	20
HA13	Former Red Bank Community Home, Winwick Road, Newton-le-Willows	8.03	150
HA14	Land south east of Lords Fold, Rainford	2.45	55
HA15	Land South of Higher Lane and east of Rookery Lane, Rainford	11.62	174
HA16	Land south of A580 between Houghtons Lane and Crantock Grove, Windle	54.27	585
TOTAL			4093

LPA05.1: Strategic Housing Sites	Strategic Housing Development Sites as shown on the Policies Map: • HA3: Land at Florida Farm South, Slag Lane, Blackbrook • HA5: Land South of Gartons Lane and former St. Theresa's Social Club, Gartons Lane, Bold • HA7: Land between Vista Road and Ashton Road, Earlestown • HA8: Land at Eccleston Park Golf Club, Rainhill Road, Eccleston • HA10: Land south west of M6 J23 between Vista Road and Lodge Lane, Haydock	HRA implications This policy provides for Strategic Housing Sites. Individual site allocations are assessed in **Appendix E, table 8**. Potential impact pathways include: • Recreational pressure • Loss of functionally linked land

- HA16: Land south of A580 between Houghton's Lane and Crantock Grove, Windle

All strategic development sites will be required to deliver:

- A masterplan of the site, including phasing, to be agreed in writing by the Local Planning Authority;
- A robust and implementable Travel Plan for the entire site to address the provision of, and promote access to, frequent public transport services, pedestrian and cycling links;
- Measures to address the potential flood risk and surface water drainage issues on the site and assist in reducing flood risk downstream to the satisfaction of the Environment Agency, United Utilities and the Lead Local Flood Authority; and
- High levels of energy efficiency in all new development. Where viable development will be required to deliver energy efficiency measures 10% above what is required by the most up to date Building Regulations.

Comply with the relevant policies of the Local Plan.

Financial contributions or the provision of on-site infrastructure may be required towards open space provision; this will be subject to further assessment before the Publication Stage of the Local Plan.

High Level Site Specific Requirements

HA3: Land at Florida Farm South, Blackbrook

Appropriate highway provision; satisfactory pedestrian and cycleway access onto Slag Lane leading onto Haydock Lane; a 25 metre easement required from Clipsley Brook. The development should incorporate measures to "slow the flow" to reduce the risk of flooding downstream and enhance biodiversity; and

HA4: Land South of Gartons Lane and former St. Theresa's Social Club, Gartons Lane, Bold

The masterplan should seek to incorporate the former St. Teresa's Social Club (HA4.1); Appropriate highway provision; integrates well into the Bold Forest Park setting and provides satisfactory pedestrian, bridleway and cycleway access into the Forest Park;

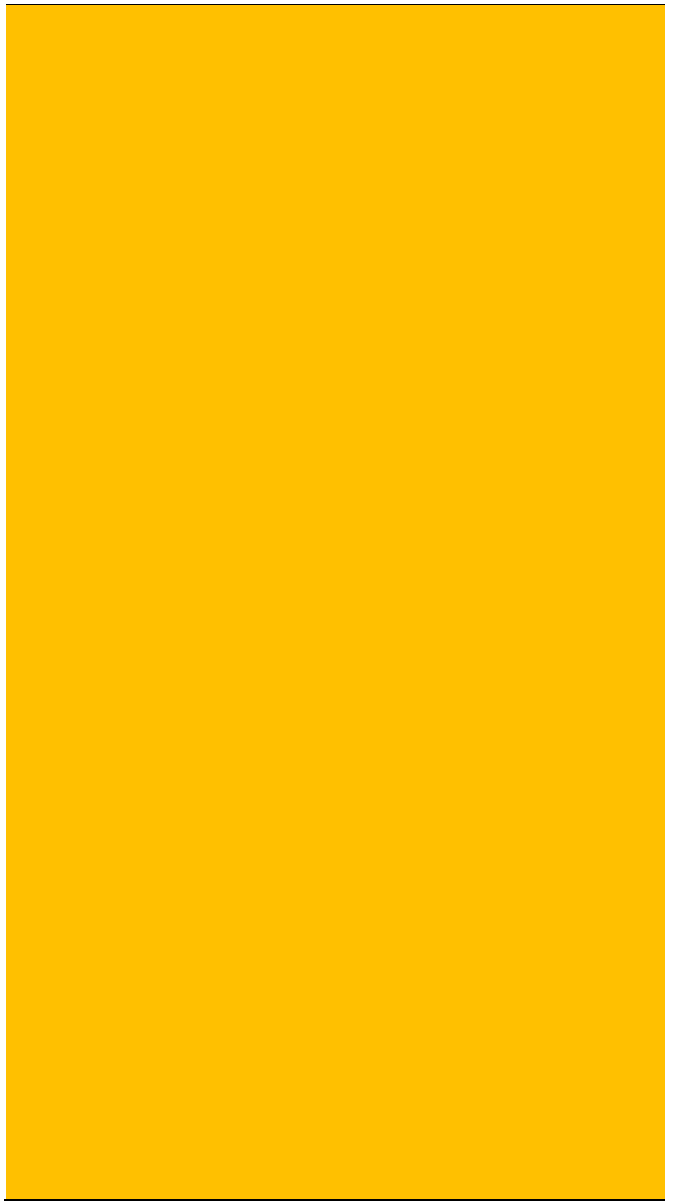
HA7: Land between Vista Road and Ashton Road, Earlestown; and

HA10: Land south west of M6 J23 between Vista Road and Lodge Lane, Haydock

- Atmospheric pollution
- Water quality
- Water volume

	Appropriate highway provision including appropriate financial contributions; provision of new playing pitches to meet the shortfall; creation of a green gap to provide a separation between Haydock and Newton-le-Willows and an extension to the Lyme and Woods Pits Country Park; create high quality pedestrian and cycleways to connect the sites to Lyme and Woods Pits Country Park, Haydock Industrial Estate and where feasible to land north east of M6 Junction 23 (EA4) along Penny Lane; a 25 metre easement required from the Ellam's Brook and the Local Wildlife Site. 15 metre easement required from other open watercourses. The development should incorporate measures to "slow the flow" to reduce the risk of flooding downstream and enhance biodiversity. HA8: Land at Eccleston Park Golf Club, Rainhill Road, Eccleston Appropriate highway provision; make suitable provision for bus service; safe pedestrian and cycle access to Eccleston Park Station; consider the potential for park and ride facilities; a 25 metre easement required from the open watercourse and the development should incorporate measures to "slow the flow" to reduce the risk of flooding downstream and enhance biodiversity. HA16: Land south of A580 between Houghton's Lane and Crantock Grove, Windle & Eccleston Appropriate highway provision; make suitable provision for bus services; a 25 metre easement required from Windle Brook and the development should incorporate measures to "slow the flow" to reduce the risk of flooding downstream and enhance biodiversity.	
LPA06: Extent of the Green Belt and Safeguarded Land	The Green Belt boundary for St. Helens is identified on the Policies Map. Policies LPA04 and LPA05 set out the sites to be removed from the Green Belt and allocated to meet the housing and employment development targets set out in this Plan. Within the Green Belt national Green Belt planning policy will be applied. Inappropriate development in Green Belt will not be approved except in very special circumstances. Removal of land for strategic allocations including safeguarding of land This policy also identifies land that is to be safeguarded for employment and residential use as follows: **Site allocation number and name** **Expected use and area**	HRA implications This policy provides for safeguarding strategic sites for housing and employment use. Individual site allocations are assessed in **Appendix E, table 9**. Potential impact pathways include: • Recreational pressure • Loss of functionally linked land • Atmospheric pollution • Water quality • Water volume

ES-01 Omega North Western Extension, Bold	29.98ha of employment land
ES-02 Omega South - Western Extension Phase 2, Land north of Booth's Wood, Bold	22.84ha of employment land
HS01 Land north of Strange Road and west of Camp Road, Garswood	83 dwellings
HS02 Land south of Leyland Green Road, North of Billinge Road and East of Garswood Road, Garswood	240 dwellings
HS03 Bold Forest Garden Suburb: land south of Reginald Road / Bold Road / Traver's Entry, west of Neil's Road, north of Gorsey Lane and east of Crawford Street, Bold	2200 dwellings
HS04 Land north of Bell Lane and south-west of Milton Street (individual plots), Bold	80 dwellings
HS05 Land to west of Bridge Road and Sweet Brier Court, off Clock Face Road, Bold	113 dwellings
HS06 Land off Common Road / Swan Road, Newton-le-Willows	107 dwellings
HS07 Parcel B (Housing), Land between Ashton Road and M6, Earlestown, Newton-le-Willows	113 dwellings



HA08 Eccleston Park Golf Club, Rainhill Road, Eccleston	383 dwellings
HS08 Land south of Burrows Lane, Eccleston (Note: this is an allocated site, not a safeguarded site)	*131* dwellings
HS09 Land south of Howards Lane / east of Gillars Lane, Eccleston	678 dwellings
HS10 Land south of former Central Works, Ballerophon Way, Haydock	120 dwellings
HS11 Land south of Station Road, Haydock	85 dwellings
HS12 Land at Martindale Road, Carr Mill, Moss Bank	25 dwellings
HS13 Land at Old Hey Farm, south of Tyrer Road, Newton-le-Willows	225 dwellings
HS14 Land east of Newlands Grange, Newton-le-Willows	291 dwellings
HS15 Land east of Rob Lane and rear of Castle Hill, Newton-le-Willows	105 dwellings
HS16 Land to rear of 6 Ashton Road and Elms Farm and west of Rob Lane, Newton-le-Willows	110 dwellings

HS17 Land west of Winwick Road and south of Wayfarers Drive, Newton-le-Willows	255 dwellings
HS18 Land east of Higher Lane / South of Muncaster Drive / at White House Lane, Rainford	206 dwellings
HS19 Land south of Bushey Lane / Red Delph Farm, Red Delph Lane, Rainford	151 dwellings
HS20 Land south of Higher Lane and west of Mill Lane, Rainford	415 dwellings
HS21 Land south of Rookery Lane and east of Pasture Lane, Rainford	138 dwellings
HS22 Land at Hanging Bridge Farm, Elton Head Road, Rainhill	300 dwellings
HS23 Land south of Mill Lane, west of Hall Lane, east of Norlands Lane and north of M62, Rainhill	701 dwellings
HS24 Land south of Elton Head Road (from Nutgrove Road to St.John Vianney Primary School), Thatto Heath	248 dwellings
HA16 Land south of A580 between Houghtons Lane and Crantock Grove, Windle (Note: this is an allocated site, not a safeguarded site)	*392* dwellings

LPA07: Transport and Travel	Provides for development to be located where public transport can be easily accessed, promotion of sustainable transport including electric vehicles and charging points, safe and adequate pedestrian, cycle and vehicle access to the site, adequate on-site parking, maintaining a safe and sufficient traffic flow on the surrounding highway network. Provides for the requirement of Transport Assessments or Transport Schemes, seeks to minimise the negative impacts of transport including air and noise pollution through requiring developers to implement Travel Plans in accordance with the requirements of the Ensuring a Choice of Travel SPD, places restrictions of direct access to key routes and the Strategic Road Network, preference for new sites that will result in large quantities of freight are preferably served by rail connections, and that the Council's priorities for the transport network in St. Helens during the Plan period will be set out in the Merseyside Local Transport Plan 3, Liverpool City Region Combined Authority A Transport Plan for Growth (or equivalent) and in Transport for the North's strategies.	No HRA implications. This is a development management policy relating to transportation and travel. This policy does note specific development schemes, but no location or extent of development is identified. There are no impact pathways present.
LPA08: Infrastructure Delivery and Funding	Provides for the protection, enhancement and provision of infrastructure including emergency services, community facilities and institutions. Provides for funding via developer contributions where appropriate of the provision of on-site or directly ancillary infrastructure to support new development; and the provision of strategic infrastructure to support local communities and Borough wide development, as identified in the Infrastructure Delivery Plan. Where the delivery of development is dependent upon key infrastructure provision, that development will be phased to coincide with the release of additional infrastructure or service capacity as set out in the Infrastructure Delivery Plan. Provides for Economic Viability and a Hierarchy of Developer Contributions.	No HRA implications. This is a development management policy relating to the funding and delivery of infrastructure. It is a positive policy as it provides for phasing of development in line with the delivery of appropriate infrastructure. There are no impact pathways present.
LPA09: Green Infrastructure	Provides for the protection, management, enhancement and where appropriate extension of the Green Infrastructure network as per the following policies: • LPC05: Open Space and Outdoor Sports Facilities; • LPC06: Biodiversity and Geodiversity; • LPC07: Greenways; • LPC08: Ecological Network; • LPC09: Landscape Protection and Enhancement; • LPC10: Trees and Woodlands; and • LPC12: Flood Risk and Water Management.	No HRA implications. This is a positive development management policy that provides for improvements to the borough's Green Infrastructure. This has potential to divert recreational pressure away from European designated sites. There are no impact pathways present.

	Provides for standards for open space provision, the requirement of new development to contribute to the expansion and/ or improvement of Green Infrastructure, promote accessibility of open space within walking distance of housing, health, employment and education facilities, the creation of new Local nature Reserves, the bold Forest Park Area Action Plan, contributes to the development and implementation of a Sankey Catchment Hydrology Plan, and the development of Sankey Valley as a multifunctional green corridor.	
LPA10: Development of Strategic Rail Freight Interchange (Parkside)	Identifies that strategic location for Strategic Rail Freight Interchange (SRFI) development located to the east and west of the M6 including part of the former Parkside Colliery site. The Council supports the delivery of a SRFI in this location as it has been identified as a site of national significance and regional importance in the Transport for the North Northern Freight and Logistics Report, 2016. The environmental impact of development proposals for a SRFI will be assessed against other policies within this Plan. This policy provides development management policy relating to this site.	Potential HRA implications This policy provides for the Strategic Rail Freight Interchange allocation. Beyond the site allocation, this policy contains development management policy. It also ensures that the environmental impact of the development is assessed against other policies within this Plan. Potential impact pathways present include: • Atmospheric pollution from increased road traffic/ rail traffic (if not electric engines)
LPB01: St Helens Town Centre and Central Spatial Area	Promotes and provides for the Central Spatial Area around St Helens Town Centre as an accessible and welcoming destination for shopping, leisure, culture, tourism, employment and housing with an emphasis on creating a high quality built environment.	Potential HRA implications. This is a development management policy. Whilst it does not identify any exact locations of development, it does promote and provide for shopping, leisure, tourism, employment and housing which have potential to create impact pathways linking to the Plan. Potential impact pathways present include: • Recreational pressure • Atmospheric pollution • Water quality • Water volume
LPB02: Earlstown Town Centre	The Council will safeguard the function and role of Earlestown Town Centre as the second town centre within the Borough by defining the Town Centre boundary and Primary Shopping Area and producing and implementing an Area Action Plan or Town Centre Masterplan.	No HRA implications. This is a development management policy relating to safeguarding the function of Earlstown Town Centre. There are no impact pathways present.
LPC01: Housing Mix	New housing, both market and affordable, must be well designed to address local housing need incorporating a range of different types, tenures and sizes of homes	No HRA implications This is a development management policy relating to

<table>
<tr><td></td><td>consistent with the Borough's latest Strategic Housing Market Assessment.
This policy provides for percentage provision of Market Housing and Lifetime Homes, how the Council will work with partners to provide specialist and supported housing for elderly and vulnerable people, and the provision of sheltered housing, extra care housing, retirement accommodation and residential care homes will be supported in sustainable locations.
The Council will maintain a live Self-Build and Custom Build Register and will support the delivery of self and custom build schemes in the Borough, details the requirements if an applicant believes they cannot comply with the above requirements.</td><td>housing mix. It does not provide for any location or quantum of development
There are no impact pathways present.</td></tr>
<tr><td>LPC02: Affordable Housing Provision</td><td>Provides for the delivery of Affordable Housing.</td><td>No HRA implications
This is a development management policy relating to the delivery of Affordable Housing. It does not provide for any location or quantum of development
There are no impact pathways present.</td></tr>
<tr><td>LPC03: Gypsies, Travellers and Travelling Showpeople</td><td>Provides for the following site allocations:
<table><tr><th>Site ref</th><th>Site location</th><th>Size (Hectares)</th><th>Type of site</th><th>Indicative number of pitches</th></tr><tr><td>GTA01</td><td>Land north of Sherdley Road and west of Sutton Heath Road, Sherdley Road, Thatto Heath</td><td>0.39</td><td>Permanent</td><td>8</td></tr><tr><td>GTA02</td><td>Land adjacent to land east of Sherdley Road Caravan Park, Sherdley Road, Thatto Heath</td><td>0.09</td><td>Transit (limited length of stay)</td><td>3</td></tr></table>Avoids the loss of Gypsy and Traveller site or pitches and Travelling Showpeople site or plots unless certain criteria are met. The remainder of this policy is development management policy</td><td>No HRA implications.
Whilst this policy provides for new residential site allocations, the level of development identified is small (a total of 11 pitches in total). The sites are assessed in Appendix E, Table 8.
There are no impact pathways present.</td></tr>
<tr><td>LPC04: Retail and Town Centres</td><td>Proposals for retail, leisure and other Main Town Centre uses will be directed towards the Borough's defined centres as listed below and as shown on the Policies Map:</td><td>No HRA implications.
This is a development management policy relating to retail and town centres. It does not provide for any</td></tr>
</table>

	Principal Town Centre: St. Helens. *Town Centre*: Earlestown. *District Centres*: Rainhill and Thatto Heath. *Local Centres*: Billinge; Chain Lane; Clipsley Lane; Denton's Green; Eccleston; Fingerpost; Marshall's Cross; Newton-le-Willows; Newtown; Rainford; and Sutton. It provides development management policy relating to retail and town centres	type, location, or quantum of development. There are no impact pathways present.
LPC05: Open Space, Sports and Recreation	Provides for the protection, management and enhancement of open spaces, sporting and recreational facilities. It supports the delivery of programmes and strategies to provide and enhance open space and sports and recreation provision such as allotments, sports facilities and youth and children's play facilities, and promotes the improvement of accessibility of open space within walking distance of housing, health, employment, and education facilities. This policy requires new development to provide for appropriate open space provision in accordance with draft Policy LPD03 (Open Space and Residential Development) and draft Policy LPA08 (Infrastructure Delivery and Funding).	No HRA implications. This is a positive development management policy that provides for open space, sports and recreation. Appropriate open space and recreational facilities have potential to divert recreational pressure away from sensitive European designated sites. There are no impact pathways present.
LPC06: Biological and Geological Conservation.	Development on or outside a proposed or designated Site of Special Scientific Interest which is likely to have a detrimental effect (either singly or in combination with other developments) will not be permitted unless the benefits of the development can clearly be demonstrated to outweigh the impacts it is likely to have on the features for which the site has been designated. Development directly or indirectly affecting sites of local nature conservation interest (Local Wildlife Sites, Local Geological Sites or Local Nature Reserves) which are shown on the Policies Map and listed in Appendix 6 will only be permitted if the Council is satisfied that the ecological or geological features, and additionally, in the case of Local Nature Reserves, educational features can be safeguarded. If necessary this may require appropriate conditions and/or seeking legal agreements. Development will not be permitted where the Council is satisfied that it would have an adverse effect on priority wildlife species listed under Section 41 of the Natural Environment and Rural Communities Act 2006 or Sections 2,5 & 8 of the Wildlife and Countryside Act (1981 as amended). Where the benefits of development outweigh the nature conservation interests of a site, the Council will require mitigation measures to be agreed and implemented. Where impacts cannot be mitigated, compensation habitat creation on or off-site, on a 3:1 ratio, will be required. Mitigation and compensation features must be linked to a 25 year management and implementation plan. Irrespective of any need for mitigation or compensation measures, small scale –	No HRA implications This is a positive development management policy relating to biodiversity and geological conservation. There are no impact pathways present.

	large scale major developments must provide an overall net increase in the biodiversity resource of the Borough and where appropriate, contribute to strengthening the ecological framework of the Borough. Further guidance on impacts, mitigation, compensation and enhancement can be found in the Biodiversity SPD.	
LPC07: Greenways	Provides for the protection of the strategic network of Greenways. They will be safeguarded and enhanced. Development proposals affecting Greenways will only be permitted provided certain criteria are satisfied.	No HRA implications This is a development management policy relating to greenways. There are no impact pathways present.
LPC08: Ecological Network	St. Helens natural assets should continue to contribute to the Borough's sense of place, local distinctiveness and quality of life for those living, working, investing and spending their leisure time in the Borough. Development proposals and other initiatives should help achieve this. A hierarchical approach will be taken to the protection and enhancement of St. Helens' natural assets, according to their designation and significance. Development should seek to protect and manage the natural assets (including natural habitats, sites and ecological network and green infrastructure) and where possible: restore, enhance or extend natural assets; create new habitats and green infrastructure; and secure their long-term management. Where it has been demonstrated that appropriate protection or retention of natural assets cannot be achieved, and there are no alternatives, mitigation and/or as a last resort compensatory provision will be required.	No HRA implications. A development management policy relating to the ecological network (this does not include European designated sites). There are no impact pathways present.
LPC09: Landscape Protection and Enhancement	Provides criteria that development must meet regarding landscape. Where impacts on landscape character are agreed to be unavoidable, the Council will require mitigation measures to reduce the scale of impacts to acceptable levels. Where this cannot be achieved, but the overall value of the development outweighs the impacts, the Council will require compensation measures. If unacceptable harm cannot be avoided, suitably mitigated or compensated, planning permission will not be granted.	No HRA implications. A development management policy relating to landscape. There are no impact pathways present.
LPC10: Trees and Woodland	Provides for the protection and enhancement of trees, woodlands and hedgerows.	No HRA implications A development management policy relating to trees, woodlands and hedgerows. There are no impact pathways present.
LPC11: Historic Environment	Provides for the protection, conservation and enhancement of St. Helens' historic built environment including Scheduled Monuments, Listed Buildings Conservation	No HRA implications A development management policy relating to St

	Area, Non-designated heritage assets and archaeological sites.	Helen's historic environment. There are no impact pathways present.
LPC12: Flood Risk and Water Management	Flood Risk New Development that may cause an unacceptable risk of flooding on the site or elsewhere will not be permitted. This policy provides for the full assessment of flood risks and provision of mitigation as required, and the need to have regard for existing strategic flood risk documents. It provides for the need for a Flood Risk Assessment in certain circumstances. Water Quality Development which could adversely affect the quality or quantity of water in watercourses or groundwater will not be permitted unless measures are included which would overcome any threat, to the satisfaction of the Council, in consultation with the Environment Agency (or equivalent) and other appropriate authorities. New development will be required to enhance and protect the water quality of existing water resources, such as watercourses and groundwater Sustainable Drainage Systems In accordance with the hierarchy below, surface water will be expected to be managed at source and not transferred. Applicants will be required to clearly demonstrate that all alternative options have been thoroughly investigated before discharging surface water, directly or indirectly, into a public sewerage network. A discharge to groundwater or watercourse may require the consent of the Environment Agency. Applicants wishing to discharge to public sewer will need to submit clear evidence demonstrating why alternative options are not available.	No HRA implications A positive development management policy relating to flood risk and water management including water quality and SuDS. There are no impact pathways present.
LPC13: Renewable and Low Carbon Development	Supports proposals that will produce and distribute decentralised, low carbon and renewable energy, provided that they do not cause significant harm (in terms of their number, scale, siting or cumulative impacts) to: a) Natural resources, biodiversity, geodiversity, water and air quality and, landscape character; Proposals resulting in an unacceptable impact must be mitigated by appropriate measures agreed by the Council. Proposals must be accompanied by information that shows how the local environment will be protected, and how the site will be restored when energy production ends. Provides for the delivery of high levels of energy efficiency in all new development including targets.	No HRA implications This is effectively a positive development management policy. Whilst it encourages wind energy developments, it also acknowledges potential ecologically sensitive receptors. There are no impact pathways present.

	If an applicant considers that the requirements set out by this policy are not viable on a specific site, then this will need to be justified through an independent site-specific viability assessment. A wind energy suitability map will be prepared for the Local Plan Publication Draft which will identify areas the Council considers most suitable and unsuitable for wind energy development following an assessment of environmental and landscape designations; and proximity to sensitive receptors, including	
LPC14: Minerals	The Council will seek to achieve a steady and adequate supply of minerals to ensure that the Borough contributes towards sub-regional needs. To minimise the need for primary mineral extraction, provision of substitute, secondary or recycled sources will be encouraged in preference to land-won resources. This will include temporary materials-recycling facilities on the sites of major demolition or construction projects and provision of permanent recycling plants for construction and demolition waste in appropriate locations. Mineral Safeguarding Areas will be defined around deposits of coal, clay (including brick clay and fire clay) and sandstone, considered to be of current or future economic importance. Within Mineral Safeguarding Areas, proposals for non-mineral related development will only be permitted under certain circumstances. Planning and environmental criteria will be taken into account when considering planning applications for minerals development including: air and water quality; traffic, including air and rail, and access; flood risk and drainage; and ecology, including habitats, species and designated sites and particularly the internationally important nature sites. Proposals for the development of onshore oil and gas resources (including coal bed methane, coal mine methane and shale gas and oil) must clearly demonstrate that the highest levels of environmental, health and social protection and benefit consistent with prevailing national policy and regulation, including Environmental Impact Assessment and Habitats Regulations Assessment, will be provided	No HRA implications. This is a development management policy relating to minerals. It does not provide for any location, quantum or type of development. This policy provides explicit protection for internationally important nature sites and the requirement for HRA. There are no impact pathways present.
LPC15: Waste	The Council will promote the sustainable management of waste in accordance with the waste hierarchy and to comply with the Joint Merseyside and Halton Waste Local Plan. Waste management facilities are developed whilst minimising any negative impacts on the environment and communities of the Borough	No HRA implications. This is a development management policy relating to waste. It does not provide for any location, type or extent of development. It does provide for the minimisation of any negative impacts on environmental communities. There are no impact pathways present.

LPD01: Ensuring Quality Development in St Helens	All proposals for development within the Borough will be expected to meet the following standards, where appropriate, as a minimum: quality of the built environment, environmental quality and resource management. This includes provision for the protection of watercourses from encroachment, modification and degradation and to return modified and degraded water bodies to sustainable, natural environments where appropriate and feasible; and minimise and mitigate to acceptable levels against the effects of air, light and water pollution (including contamination of soil, surface water and groundwater resources) and noise, vibration, smells, dust and electromagnetic fields caused by the development; and to include satisfactory arrangements for the disposal of foul sewage, liquid waste, trade effluent and contaminated surface water.	No HRA implications. A positive development management policy that provides for the minimisation of atmospheric and water pollution and to ensure that satisfactory arrangement are made for sewage and effluent. There are no impact pathways present.
LPD02: Design and Layout of New Housing	Provides for the development of policy relating to new residential development as follows: Be well designed and not lead to substandard layouts; Preserve existing levels of amenity and meet minimum separation distances; Demonstrate how it will incorporate a housing mix to help to meet identified local housing need; Provide adequate outdoor amenity space; Integrate into its surroundings by reinforcing existing connections and creating new ones, particularly in relation to pedestrians and cyclists; Respect existing buildings and land uses; Create a place with a locally inspired or otherwise distinctive character, Take advantage of existing topography, landscape features (including water courses), wildlife habitats, existing buildings, site orientation and microclimates; Be designed and positioned with landscaping and POS to define and enhance streets and spaces and are buildings designed to turn street corners well; Make it easy to find your way around; Have streets designed in a way that encourage low vehicle speeds, prioritise pedestrians and cyclists, and allow them to function as social spaces; Provide sufficient levels of resident and visitor parking which is well integrated so that it does not dominate the street; Respect the appearance, scale, mass, height and pattern of surrounding buildings, spaces and streets; and Create safe and secure environments and reduce opportunities for crime and minimise the fear of crime. St. Helens New Residential Development SPD (2011) will be updated as necessary to incorporate any changes to the Council's requirements for the design and layout of new housing as the new Local Plan is prepared	No HRA implications. This is a development management policy relating to design and layout of new housing. It does not provide for any location or quantum if new housing. There are no impact pathways present.
LPD03: Open Space and Residential Development	Provides for the need for high quality public open space and the amount required.	No HRA implications. A positive development management policy providing for open space and residential development. Open space freely open to the public can divert

		recreational activity away from sensitive European designated sites. There are no impact pathways present.
LPD04: Householder Developments	The Council will develop a policy relating to the requirements of householder developments to include: respect the scale, design, character and appearance of the original dwelling in question; respect the character of its neighbours and local setting; maintenance of reasonable standards of light and privacy for the dwelling in question and its affected neighbours (including, in both cases, garden privacy); avoids unacceptable intrusiveness, overshadowing and dominance at close quarters in respect of both homes and gardens; and adequate provision for motor cars and other common domestic needs, including outdoor pursuits, so as to maintain unimpeded visibility for all road users, the safe and free flow of traffic, pedestrian safety and appropriate levels of visual amenity. The St. Helens Householder Development SPD (2011) will be updated as necessary to incorporate any changes to the Council's requirements for the design and layout of new housing as the new Local Plan is prepared.	No HRA implications A development management policy relating to householder developments. It does not provide for any type, location or quantum of development. There are no impact pathways present.
LPD05: Extension, Alteration or Replacement of Buildings or conversion to dwellings in the Green Belt	Providing for the development of policy relating to extension, alteration or replacement of buildings or conversion to dwellings in the Green Belt.	No HRA implications. A development management policy relating to development within the Green Belt. Whilst this policy implies new residential development will occur, it is expected that this will be of a small scale. There are no impact pathways present.
LPD06: Development in Prominent Gateway Locations or Character Areas	The Council will develop policy relating to development in prominent Gateway Locations or Character Areas.	No HRA implications. This is a development management policy relating to Development in Prominent Gateway Locations or Character Areas. There are no impact pathways present.
LPD07: Digital Communications	The Council will prepare policy relating to digital communications developments.	Potential HRA implications. Whilst this policy does not identify any location for digital communications infrastructure, the location of a new mast or tower could impact upon flight lines of European designated bird features. **It is recommended that any formulation for digital communications policy includes reference to the**

		need to account for potential impacts upon European designated sites.
LPD08: Advertisements	The Council will prepare an advertisements policy that clarifies the Council's expectations in relation to amenity and safety.	No HRA implications. A development management policy relating to advertisements. There are no impact pathways present.

LPD09: Air Quality	Development proposals must demonstrate that they will not:
	• Hinder the achievement of Air Quality Management Area (AQMA) objectives and the measures set out in an Air Quality Management Area Action Plan; or
	• Hinder the revocation of an Air Quality Management Area by:
	  • introducing significant new sources of air pollutants, or
	  • Introducing new development whose users will be especially susceptible to air pollution; or
	• Lead to the declaration of an Air Quality Management Area; or
	• Lead to a material decline in air quality.
	Where appropriate Major developments must incorporate appropriate measures to reduce air pollution and minimise exposure to harmful levels of air pollution to both occupiers of the site and occupiers of neighbouring sites.
		No HRA implications.
		A positive development management policy relating to air quality. Development proposals should not lead to a 'material decline in air quality'.
		There are no impact pathways present.

LPD10: Hot Food Takeaways	Planning permission for hot food takeaways will only be granted under certain circumstances.	No HRA implications. A development control policy relating to hot food takeaways. There are no impact pathways present.
LPD11: Health and Wellbeing	Development should help maximise opportunities to improve quality of life to make it easier for people in St. Helens to lead healthy, active lifestyles. This includes: • Designing easy to maintain, safe and attractive public areas which minimise the opportunity for crime and reduce the fear of crime, and which promote social cohesion; • Encouraging people to take physical exercise by providing opportunities for walking, cycling, outdoor recreation and sport; and • Managing air quality and pollution	Potential HRA implications A development management policy relating to health and wellbeing. It provides attractive public areas, the management of air quality and pollution, and encourages outdoor recreation. Whilst generally a positive development management policy, encouraging outdoor recreational activity could increase recreational pressure upon European designated sites. Potential impact pathways present: • Recreational pressure

Appendix E : Screening of the Plan Site Allocations.

Site allocations identified in green in the “HRA outcome” column do not provide for impact pathways that could link to a European designated site. Policies identified in orange in the “HRA outcome” column have potential to provide for impact pathways that could link to a European designated site and as such are discussed within this document.

Table 7: Screening Assessment of St. Helen Local Plan Employment Site Allocations.

Site allocation number and name	Type of development	Potential impact pathways
EA1 Omega South Western Extension, Phase 1, Land north of Finches Plantation, Bold	31.2 hectares of B2, B8	No HRA implications Not located in an area used by pink-footed goose. There are no impact pathways present
EA2 Florida Farm North, Slag Lane, Haydock	35.17 hectares B2, B8	Potential HRA implications Located within an area known to be used by pink footed goose. Site allocations EA2, EA6, EA7 are all located adjacent to each other. From reviewing aerial photography the sites appear to be arable land parcels. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
EA3 Land North of Penny Lane, Haydock	11.05 hectares of B2, B8	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
EA4 Land North East of Junction 23 M6, south of Haydock Racecourse, Haydock	42.31 hectares of B2, B8	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present

EA5 Land South of Penny Lane, Haydock	2.16 hectares of B2, B8	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
EA6 Land to the West of Haydock Industrial Estate, Haydock	7.75 hectares of B2, B8	Potential HRA implications Located within an area known to be used by pink footed goose. Site allocations EA2, EA6, EA7 are all located adjacent to each other. From reviewing aerial photography the sites appear to be arable land parcels. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
EA7 Land west of Millfield Lane, south of Liverpool Road and north of Clipsley Brook, Haydock	20.58 hectares of B2, B8	Potential HRA implications Located within an area known to be used by pink footed goose. Site allocations EA2, EA6, EA7 are all located adjacent to each other. From reviewing aerial photography the sites appear to be arable land parcels. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
EA8 Parkside East, Newton-le-Willows	64.55 hectares for SRFI	No HRA implications Not located in an area used by pink-footed goose. There are no impact pathways present
EA9 Parkside West, Newton-le-Willows	79.57 hectares of B2, B8	No HRA implications Not located in an area used by pink-footed goose. There are no impact pathways present
EA10 Land to the West of Sandwash Close, Rainford	6.96 hectares of B2, B8	Potential HRA implications. Located in an area used by pink footed goose. From reviewing aerial photography, the site comprises grassland

		and It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
EA11 Land at Lea Green Farm West, Thatto Heath	3.84 hectares of B1, B2, B8	No HRA implications Not located in an area used by pink-footed goose. There are no impact pathways present
EA12 Gerards Park, Phases 2 and 3, College Street, St. Helens Town Centre	0.95 hectares of B1, B2, B8	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present

Table 8: Screening Assessment of St. Helen Local Plan Residential Site Allocations

Site allocation number and name	Type of development	Distance to nearest European designated site	Potential impact pathways
Residential site allocations			
HA1 Land adjoining Ash Grove Farm, Beacon Road, Billinge	163 dwellings	Located more than 15km from Manchester Mosses SAC	Potential HRA implications Located in an area used by pink footed goose. From aerial photography the site comprises arable land It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
HA2 Land South of Billinge Road, east of Garswood Road and west of Smock	179 dwellings	Located more than 13km from Manchester Mosses SAC	Potential HRA implications Located in an area known to support pink footed goose, from reviewing aerial photography the site comprises arable land. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is

Lane, Garswood			recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
HA3 Land at Florida Farm (south of A580), Slag Lane, Blackbrook	502 dwellings	Located more than 12km from Manchester Mosses SAC	Potential HRA implications Whilst located in an area used by pink footed goose, from aerial photography the site comprises arable land. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
HA4 Land East of Chapel Lane and south of Walkers Lane, Sutton Manor	95 dwellings	Located 6.9 km from the Mersey Estuary SPA and Ramsar site	No HRA implications Not located in an area used by pink-footed goose. There are no impact pathways present
HA5 Land South of Gartons Lane and former St. Theresa's Social Club, Gartons Lane, Bold	446 dwellings	Located 7.3km from the Mersey Estuary SPA and Ramsar site	No HRA implications Not located in an area used by pink-footed goose. There are no impact pathways present
HA6 Land south of Reginald Road / Bold Road - Northern Section (Phase 1), Bold	197 dwellings	Located 9.4km from the Mersey Estuary SPA and Ramsar site	No HRA implications Not located in an area used by pink-footed goose. There are no impact pathways present
HA7 Land between Vista Road and Ashton Road,	350 dwellings	Located 9.7km from Manchester Mosses SAC	No HRA implications. Not located in a pink footed goose area.

Newton -le-Willows			There are no impact pathways present
HA8 Eccleston Park Golf Club, Rainhill Road, Eccleston	585 dwellings	Located 8.4km from the Mersey Estuary SPA and Ramsar site	No HRA implications Not located in an area used by pink-footed goose. There are no impact pathways present
HA9 Higher Barrowfield Farm, Houghton's Lane, Eccleston	8 dwellings	Located more than 12km from the Mersey Estuary SPA and Ramsar site	Potential HRA implications Located in an area used by pink footed goose. From review of aerial photography the site comprises arable land. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
HA10 Land south west of M6 J23 between Vista Road and Lodge Lane, Haydock	520 dwellings	Located more than 12km from Manchester Mosses SAC	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HA11 Land at Moss Bank Farm, Moss Bank Road, Moss Bank	50 dwellings	Located more than 13km from the Mersey Estuary SPA and Ramsar site	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HA12 Former Newton Community Hospital (Simms Ward), Bradlegh Road, Newton-le-Willows	20 dwellings	Located 8.9km from Manchester Mosses SAC	No HRA implications Not located in an area used by pink-footed goose. There are no impact pathways present

HA13 Former Red Bank Community Home, Winwick Road, Newton-le-Willows	150 dwellings	Located 7.4km from Manchester Mosses SAC	No HRA implications Not located in an area used by pink-footed goose. There are no impact pathways present
HA14 Land south east of Lords Fold, Rainford	55 dwellings	Located more than 13 km from Martin Mere SPA and Ramsar site	Potential HRA implications Whilst located in an area used by pink footed goose, from aerial photography the site comprises arable land. At this desk study stage it is not possible to conclude that the site is unsuitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so a non-breeding bird survey will be required to determine if a significant population of pink footed goose are present.
HA15 Land South of Higher Lane and east of Rookery Lane, Rainford	174 dwellings	Located more than 15km from Martin Mere SPA and Ramsar site	Potential HRA implications Located in an area used by pink footed goose, from aerial photography the site comprises arable land. At this desk study stage it is not possible to conclude that the site is unsuitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so a non-breeding bird survey will be required to determine if a significant population of pink footed goose are present.
HA16 Land south of A580 between Houghtons Lane and Crantock Grove, Windle	585 dwellings	Located 7.8km from the Mersey Estuary SPA and Ramsar site	Potential HRA implications Located in an area used by pink footed goose. From review of aerial photography the site comprises arable land. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.

Gypsy, Traveller and Travelling Showpeople allocations

GTA01 Land north of Sherdley Road and west of Sutton Heath Road, Sherdley Road, Thatto Heath	8 permanent pitches	Located 9.8km from the Mersey Estuary SPA and Ramsar site	No HRA implications Not located in an area used by pink-footed goose. There are no impact pathways present
GTA02 Land adjacent to land east of Sherdley Road Caravan Park, Sherdley Road, Thatto Heath	3 transitory pitches	Located 9.9km from the Mersey Estuary SPA and Ramsar site	No HRA implications Not located in an area used by pink-footed goose. There are no impact pathways present

Table 9: Screening Assessment of St. Helen Local Plan Safeguarded Land Site Allocations

Site allocation number and name	Expected use and area	Potential impact pathways
ES-01 Omega North Western Extension, Bold	29.98ha of employment land	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
ES-02 Omega South - Western Extension Phase 2, Land north of Booth's Wood, Bold	22.84ha of employment land	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HS01 Land north of Strange Road and west of Camp Road, Garswood	83 dwellings	Potential HRA implications Located in an area used by pink footed goose. From reviewing aerial photography the site comprises a portion of arable land and unmanaged tussocky grassland with scattered scrub. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if

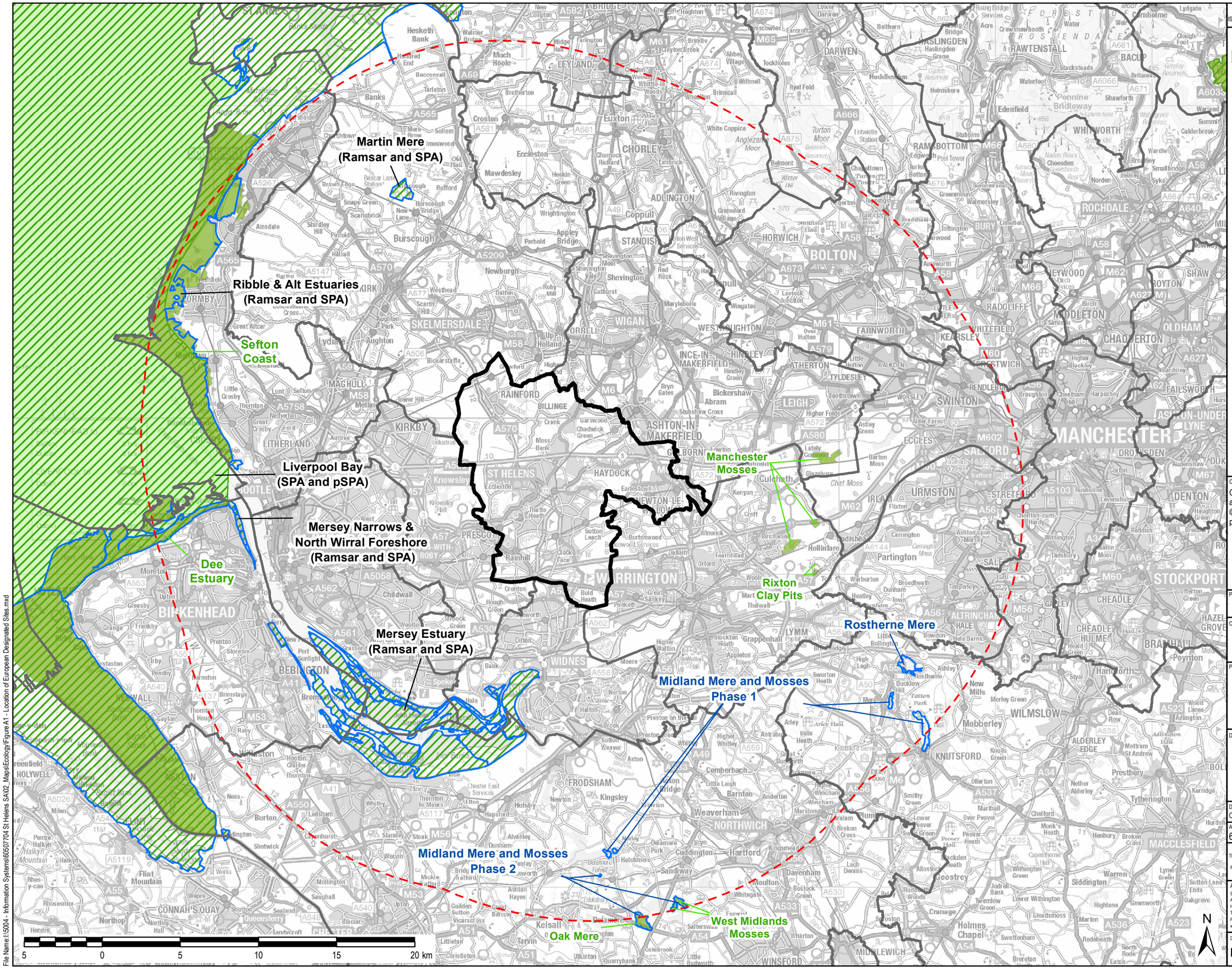
		habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
HS02 Land south of Leyland Green Road, North of Billinge Road and East of Garswood Road, Garswood	240 dwellings	Potential HRA implications Located in an area known to support pink footed goose, from reviewing aerial photography the site comprises arable land. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
HS03 Bold Forest Garden Suburb: land south of Reginald Road / Bold Road / Traver's Entry, west of Neil's Road, north of Gorsey Lane and east of Crawford Street, Bold	2200 dwellings	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HS04 Land north of Bell Lane and south-west of Milton Street (individual plots), Bold	80 dwellings	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HS05 Land to west of Bridge Road and Sweet Brier Court, off Clock Face Road, Bold	113 dwellings	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HS06 Land off Common Road / Swan Road, Newton-le-Willows	107 dwellings	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HS07 Parcel B (Housing), Land between Ashton	113 dwellings	No HRA implications.

Road and M6, Earlestown, Newton-le-Willows		Not located in a pink footed goose area. There are no impact pathways present
HA08 Eccleston Park Golf Club, Rainhill Road, Eccleston	383 dwellings	No HRA implications Not located in an area used by pink-footed goose. There are no impact pathways present
HS08 Land south of Burrows Lane, Eccleston (Note: this is an allocated site, not a safeguarded site)	*131* dwellings	Potential HRA implications This site is located in an area used by pink footed goose. From reviewing aerial photography the site comprises arable land. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
HS09 Land south of Howards Lane / east of Gillars Lane, Eccleston	678 dwellings	Potential HRA implications This site is located in an area used by pink footed goose. From reviewing aerial photography the site comprises arable land. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
HS10 Land south of former Central Works, Ballerophon Way, Haydock	120 dwellings	Potential HRA implications This site is located in an area used by pink footed goose. From reviewing aerial photography the site comprises arable land. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.

HS11 Land south of Station Road, Haydock	85 dwellings	Potential HRA implications This site is located in an area used by pink footed goose. From reviewing aerial photography the site comprises tussocky grassland and scrub. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
HS12 Land at Martindale Road, Carr Mill, Moss Bank	25 dwellings	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HS13 Land at Old Hey Farm, south of Tyrer Road, Newton-le-Willows	225 dwellings	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HS14 Land east of Newlands Grange, Newton-le-Willows	291 dwellings	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HS15 Land east of Rob Lane and rear of Castle Hill, Newton-le-Willows	105 dwellings	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HS16 Land to rear of 6 Ashton Road and Elms Farm and west of Rob Lane, Newton-le-Willows	110 dwellings	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present

HS17 Land west of Winwick Road and south of Wayfarers Drive, Newton-le-Willows	255 dwellings	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HS18 Land east of Higher Lane / South of Muncaster Drive / at White House Lane, Rainford	206 dwellings	Potential HRA implications Located in an area used by pink footed goose. From reviewing aerial photography the site includes White House Farm buildings and is used for grazing and arable land. Due to existing levels of disturbance it is unlikely that the site will support a significant population of pink footed goose, however from this desk study it is not possible to definitively conclude this. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so a non-breeding bird survey will be required to determine if a significant population of pink footed goose are present.
HS19 Land south of Bushey Lane / Red Delph Farm, Red Delph Lane, Rainford	151 dwellings	Potential HRA implications Located in an area used by pink footed goose. From reviewing aerial photography the site includes Red Delph Farm and associated small fields of arable and grass land. From this desk study it is not possible to determine if the site is suitable for pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so a non-breeding bird survey will be required to determine if a significant population of pink footed goose are present.
HS20 Land south of Higher Lane and west of Mill Lane, Rainford	415 dwellings	Potential HRA implication Located in an area used by pink footed goose. From reviewing aerial photography the site comprises two large arable fields. Whilst the site is bounded on three sides by roads (B5205, Mill Lane and Sandwash Close), the site has sight lines into other fields in the surrounding area that could potentially support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
HS21 Land south of Rookery Lane and east of Pasture Lane, Rainford	138 dwellings	Potential HRA implications Located in an area used by pink footed goose. From reviewing aerial photography the site

		contains Rookery Farm buildings, arable land and an area of scrub. It is not possible to determine if this site is unsuitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.
HS22 Land at Hanging Bridge Farm, Elton Head Road, Rainhill	300 dwellings	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HS23 Land south of Mill Lane, west of Hall Lane, east of Norlands Lane and north of M62, Rainhill	701 dwellings	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HS24 Land south of Elton Head Road (from Nutgrove Road to St.John Vianney Primary School), Thatto Heath	248 dwellings	No HRA implications. Not located in a pink footed goose area. There are no impact pathways present
HA16 Land south of A580 between Houghtons Lane and Crantock Grove, Windle (Note: this is an allocated site, not a safeguarded site)	*392* dwellings	Potential HRA implications Located in an area used by pink footed goose. From review of aerial photography the site comprises arable land. It is not possible to determine if the site is suitable to support a significant population of pink footed goose. It is recommended that a Phase 1 habitat survey is undertaken to determine if habitats present on site are suitable to support pink footed goose, and if so that a non breeding bid surveys are conducted to determine if the site supports a significant pink footed goose population.



THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- St Helens Boundary
- District Boundaries
- 20km Surrounding Area of St Helens Boundary
- Ramsar
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Liverpool Bay (pSPA)

Purpose of Issue: FINAL

Client: ST HELENS LP HRA

Project Title: ST HELENS LOCAL PLAN 2018-2033 PREFFERED OPTIONS DECEMBER 2016

Drawing Title: LOCATIONS OF EUROPEAN DESIGNATED SITES

Drawn	Checked	Approved	Date
CN	JW	IHH	25/11/2016

AECOM Internal Project No.	Scale @ A3
60507704	1:220,000

AECOM
Scott House
Alencon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (01256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number: FIGURE A1

Rev: 01

File Name:I:\5004 - Information Systems\60507704 St Helens SA\02_Maps\Ecology\Figure A1 - Location of European Designated Sites.mxd

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- St Helens Boundary
- District Boundaries

Sites for Appraisal

- Development of Strategic Rail Freight Interchange
- Employment
- Safeguarded Employment
- Gypsy and Traveller
- Housing
- Safeguarded Housing

Purpose of Issue: FINAL

Client: ST HELENS LP HRA

Project Title: ST HELENS LOCAL PLAN 2018-2033 PREFFERED OPTIONS DECEMBER 2016

Drawing Title: SITE ALLOCATIONS

Drawn	Checked	Approved	Date
CN	JW	IHH	28/11/2016

AECOM Internal Project No.: 60507704
Scale @ A3: 1:65,000

AECOM
Scott House
Alencon Link, Basingstoke
Hampshire, RG21 7PP
Telephone (0 1256) 310200
Fax (01256) 310201
www.aecom.com

Drawing Number: FIGURE A2
Rev: 01

1 0 1 2 3 4 5 km

N

File Name:I:\5004 - Information Systems\60507704 St Helens SA\02_Maps\Ecology\Figure A2 - Site Allocations.mxd