Cheshire West and Chester Local Plan Issues and Options

Habitats Regulation Assessment Initial Screening

Cheshire West and Chester Council

June 2025

Delivering a better world

Quality information

Prepared by	Checked by	Verified by	Approved by
Simon Gosling Ecologist	Jacqui North Associate HRA Consultant	Dr James Riley Technical Director	Dr James Riley Technical Director

Revision History

Revision	Revision date	Details	Authorized	Name	Position
1.0	13 June 2025	Issued to Client	JR	James Riley	Technical Director
1.1	20 June 2025	Reissue to client with resolved comments	JR	James Riley	Technical Director

Prepared for:

Cheshire West and Chester Council

Prepared by:

Simon Gosling
Ecologist

AECOM Limited
Midpoint, Alencon Link
Basingstoke
Hampshire RG21 7PP
United Kingdom

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

Table of Contents

Figures

Tables

1. Introduction

Background

1.1 Cheshire West and Cheshire Council (CW&C) are currently in the process of producing a new Local Plan which will create a single local plan document that updates and replaces all policies in the current Local Plan (Part One) Strategic Policies adopted in January 2015 and the current Local Plan (Part Two) Land Allocations and Detailed Policies adopted in July 2019. The new plan will guide development to achieve sustainable development. It will include housing, retail and employment uses and may allocate sites required to deliver the level of development needed.

1.2 As part of this process CW&C have issued an "issues and options" consultation document which indicates options for growth. Specific sites are not allocated in this document although options for broader areas to be developed are presented.

1.3 This Report provides an initial review of potential areas for growth and development and policy approaches and presents a summary of:

- Habitats Sites which need to be considered;
- Potential impact pathways to be considered in relation to those habitats; and
- An assessment of where policies or development areas have a potential for likely significant effects.

1.4 The Habitats Regulation Assessment (HRA) of the CW&C Local Plan (CW&C LP) will be required to determine if there are any realistic linking pathways present between a Habitats site and the policies within the Local Plan. Where Likely Significant Effects cannot be screened out, an analysis to inform Appropriate Assessment is undertaken to determine if adverse effects on the integrity of the Habitats sites will occur as a result of the Local Plan, alone or in combination with other projects and plans. Habitats sites are Special Areas of Conservation (SAC), Special Protection Areas (SPA) and as a matter of government policy Ramsar sites. Proposed SACs (pSAC) and (pSPA) are also considered Habitats Sites for the purposes of an HRA.

1.5 This report undertakes initial screening of the broad areas for development sites to identify potential pathways and make an initial assessment (Stage 1 of the HRA process).

1.6 After formal completion of Stage 1 of the HRA process and Stage 2 (Appropriate Assessment) will be undertaken once the Regulation 19 CW&C LP is available for assessment.

1.7 This short form report is provided to inform the decision process for selecting allocations and support the development of the CW&C LP.

Legislative Context

1.8 The UK left the European Union (EU) on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 ("the Withdrawal Act"). While the UK is no longer a member of the EU, a requirement for Habitats Regulations Assessment will continue as set out in the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

1.9 The HRA process applies the 'Precautionary Principle' to Habitats sites. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the Habitat (formally "European") site(s) in question. To ascertain whether or not site integrity will be affected, an Appropriate Assessment should be undertaken of the Plan or project in question. Figure 1 below sets out the legislative basis for Appropriate Assessment.

1.10 Plans and projects that are associated with potential adverse impacts on Habitats sites may still be permitted if there are no reasonable alternatives 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.

Conservation of Habitats and Species Regulations 2017 (as amended)

The Regulations state that:

"*A competent authority, before deciding to … give any consent, permission or other authorisation for, a plan or project which – (a) is likely to have a significant effect on a European site … (either alone or in combination with other plans or project) must make an appropriate assessment of the implications of the plan or project in view of the site's conservation objectives… The competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site*".

Figure 1: The legislative basis for Appropriate Assessment

1.11 Over time the phrase 'Habitats Regulations Assessment' (HRA) has come into wide currency to describe the overall process set out in the Regulations from screening through to IROPI. This has arisen in order to distinguish the process from the individual stage described in the law as an 'Appropriate Assessment'. Appropriate Assessment is not undertaken within this report.

1.12 In spring 2018 the 'Sweetman' European Court of Justice ruling[1] clarified that 'mitigation' (i.e., measures that are specifically introduced to avoid or reduce a harmful effect on a Habitats site that would otherwise arise) should **not** be taken into account when forming a view on Likely Significant Effects. Mitigation should instead only be considered at the Appropriate Assessment stage. This HRA is cognisant of that ruling. Mitigation is not considered at this stage, except where it can be achieved through avoidance of an activity or other legislation provides protection against impacts (e.g. legislation which prevents water pollution from construction).

Habitats site scope of the project

1.13 There is no pre-defined guidance that dictates the physical scope of an HRA of a Plan document. Current guidance suggests that the following Habitats Sites should be included in the scope of an HRA assessment:

- All Habitats Sites within the boundary of the CW&C LP;
- Habitats Sites located within 10km of the District boundary; and
- Habitats Sites located outside of the District boundary shown to be linked to development in the CW&C LP through a known 'pathway' (discussed below).

1.14 Generally, it is uncommon for development plans to be deemed to have significant impacts on Habitats Sites situated more than 10km from areas of growth. For example, most core recreational catchments (except for some coastal sites) are under 10km in size and the average vehicle commuting distance of a UK resident is approx. 10km. However, there are exceptions, and it should be noted that the presence of a conceivable impact pathway linking a Plan to a Habitats Site does not mean that Likely Significant Effects (LSEs) will occur.

1.15 In particular, development impacts can extend beyond 10km, particularly where hydrological pathways and surface water catchments are involved, which is why the source-pathway-receptor concept is also used to help determine whether there are potential pathways connecting development to Habitats Sites. This takes site-specific sensitivities into account, including issues such as nutrient neutrality or water levels, quantity and flow.

1.16 Briefly defined, impact pathways are routes by which the implementation of a policy within a Local Plan document can lead to an effect upon a Habitats Site. An example of this would be new residential development resulting in an increased population and thus increased recreational pressure, which could affect Habitats Sites through, for example, disturbance of ground-nesting birds. Guidance from the Ministry of Housing, Communities and Local Government (MHCLG, now the Department for Levelling Up, Housing and Communities (DLUHC)) states that the HRA 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' (MHCLG, 2006, p.6).

[1] People Over Wind and Sweetman v Coillte Teoranta (C-323/17)

1.17 This basic principle has also been reflected in court rulings. The Court of Appeal[2] has ruled that provided 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 planning permissions (rather than a Plan level document)[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'.

1.18 Habitats Sites discussed this HRA:

- Alyn Valley Woods SAC;
- Berwyn and South Clwyd Mountains SAC;
- Brown Moss SAC;
- Dee Estuary SAC, SPA & Ramsar;
- Deeside and Buckley Newt Sites SAC;
- Fenn's, Whixhall, Bettisfield, Wem and Cadney Mosses SAC;
- Halkyn Mountain SAC;
- Johnstown Newt Sites SAC;
- Liverpool Bay SPA;
- Manchester Mosses SAC;
- Mersey Estuary SPA and Ramsar;
- Mersey Narrows & North Wirral Foreshore Ramsar and SPA;
- Midlands Meres and Mosses Ramsar site (Phase 1 and Phase 2);
- Oak Mere SAC;
- Ribble & Alt Estuaries SPA and Ramsar site;
- River Dee & Bala Lake SAC;
- River Eden SAC;
- Rixton Clay Pits SAC;
- Sefton Coast SAC
- Rostherne Mere Ramsar; and
- West Midlands Mosses SAC.

1.19 The distribution of the above Habitats Sites in relation to Cheshire West and Chester District is shown in **Figure 3** in **Appendix A** and an introduction to the qualifying features (species and habitats), Conservation Objectives, and threats and pressures to the integrity of these Habitats Sites are set out in **Appendix B**.

Quality Assurance

1.20 This report was undertaken in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to establishing and maintaining our

[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

certification to the international standards BS EN ISO 9001:2008 and 14001:2004 and BS OHSAS 18001:2007. In addition, our IMS requires careful selection and monitoring of the performance of all sub-consultants and contractors.

1.21 All AECOM Ecologists working on this project are members (at the appropriate level) of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct (CIEEM, 2025)

2. Methodology

Introduction

2.1 This section sets out the approach and methodology for undertaking the Habitats Regulations Assessment (HRA).

The Process of HRA

2.1 This initial report has been carried out with reference to the general EC guidance on HRA[4] and in accordance with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, and published guidance from relevant Government departments (referenced when used).

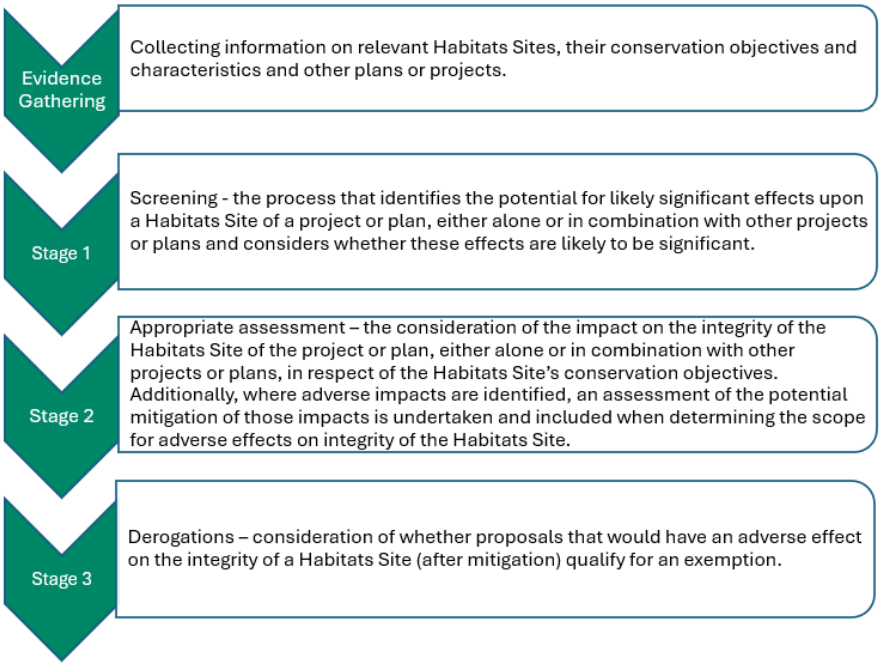

Plate 1. Three Stage Approach to Habitats Regulations Assessment[5].

2.2 Plate 1 above outlines the stages of HRA according to current Department for Environment, Food and Rural Affairs (DEFRA) 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 significant adverse effects remain. This initial report relates only to HRA Task 1: Screening (for Likely Significant Effects)

HRA Stage One: Test of Likely Significant Effects

2.3 Following evidence gathering, the first stage of any Habitats Regulations Assessment is a Test of Likely Significant Effect (LSEs) - essentially a brief, high-level 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 Habitat sites?*"

[4] European Commission (2001): Assessment of plans and projects significantly affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and 6(4) of the Habitats Directive.
[5] DEFRA 2023 Guidance: Habitats regulations assessments: protecting a European site available at https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site#how-to-carry-out-an-hra

2.4 The objective is to 'screen out' those plans and projects that can, without any detailed appraisal, be concluded to be unlikely to result in significant adverse effects upon Habitats sites, usually because there is no mechanism for an adverse interaction.

2.5 The LSEs screening is based on identification of the impact source, its pathway to receptors and an appraisal of the specific Habitat site receptors. These are normally designated features but also include habitats and species fundamental for designated features to achieve favourable conservation status (notably functionally linked habitats outside the Habitat site boundary).

2.6 In the Waddenzee case[6], the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive, including that:

- An effect should be considered 'likely', "if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site" (para 44);
- An effect should be considered 'significant', "if it undermines the conservation objectives" (para 48); and
- Where a plan or project has an effect on a site "but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned" (para 47).

2.7 The LSEs screening consists of two parts: Firstly, it should determine whether there are any policies that could result in negative impact pathways and secondly it establishes whether there are any Habitat sites that might be affected. It identifies Habitat sites that are most likely to be impacted by the Plan and the impact pathways that are most likely to require consideration.

2.8 It is important to note that LSEs screening must generally follow the precautionary principle as its main purpose is to determine whether the subsequent stage of AA (i.e., a more detailed investigation) is required.

The Geographic Scope

2.9 The Habitats sites included for assessment in this report and their approximate distance from the boundary of the CW&C are listed in **Table 2-1**.

Table 2-1. Physical Scope of the HRA - Habitats Sites of Interest

Habitat Site	Distance to CW&C Boundary
Alyn Valley Woods	10.8km west of CW&C Boundary
Berwyn and South Clwyd Mountains SAC	12.7km southwest of CW&C Boundary
Brown Moss SAC	5km southeast of CW&C Boundary
Dee Estuary SAC / SPA / Ramsar	Within the CW&C Boundary
Deeside and Buckley Newt Sites	4.6km west of CW&C Boundary
Fenn's, Whixhall, Bettisfield, Wem and Cadney Mosses SAC	4.8km south of CW&C Boundary
Halkyn Mountain SAC	7km southwest of CW&C Boundary
Johnstown Newt Sies SAC	11km west of CW&C Boundary
Liverpool Bay SPA	Within the CW&C Boundary
Manchester Mosses SAC	14km of CW&C Boundary
Mersey Estuary SPA / Ramsar	Within the CW&C Boundary

[6] Case C-127/0216

Habitat Site	Distance to CW&C Boundary
Mersey narrows and North Wirral Foreshore SPA / Ramsar	11.5km northwest of CW&C Boundary
Midland Meres and Mosses Ramsar (phase I)	4.4km east of CW&C Boundary
Midland Meres and Mosses Ramsar (phase II)	Within the CW&C Boundary
Oak Mere SAC	Within the CW&C Boundary
Ribble and Alt Estuaries SPA / Ramsar	18km northwest of CW&C Boundary
River Dee and Bala Lake SAC	Within the CW&C Boundary
River Eden SAC	112km north of CW&C (Included for possible hydrological connection to Haweswater Lake)
Rixton Clay Pits SAC	7km north of CW&C Boundary
Rostherne Mere Ramsar	7km east of CW&C Boundary
West Midlands Mosses SAC	Within the CW&C Boundary
Sefton Coast SAC	18.1 km northwest of CW&C Boundary

Confirming Other Plans and Projects That May Act 'In Combination'

2.10 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 Habitat site(s) in question.

2.11 When undertaking this part of the assessment it is essential to bear in mind the principal intention behind the legislation i.e., to ensure that those projects or plans (which in themselves have minor impacts) are not simply dismissed on that basis but are evaluated for any cumulative contribution they may make to an overall significant effect. In practice, in combination assessment is therefore of greatest relevance when the plan, policy or site allocation would otherwise be screened out because its individual contribution is inconsequential. The overall approach is to exclude the risk of there being unassessed likely significant effects in accordance with the precautionary principle. This was first established in the seminal Waddenzee[7] case.

2.12 For the purposes of this HRA, AECOM have determined that the key plans with a potential for in-combination effects are the Local Plans of surrounding authorities.

2.13 It should be noted that, while the broad potential impacts of these plans will be considered, this document does not carry out a full HRA of these Plans and projects. Instead, it draws upon existing HRAs that have been carried out on the Plans and projects.

3. Background to Impact Pathways

3.1 In carrying out an HRA it is important to avoid confining oneself to effectively arbitrary boundaries (such as Local Authority or parish boundaries), but to use an understanding of the various ways in which Land Use Plans can impact Habitat sites to evaluate whether development is connected with Habitat sites, in some cases many kilometres distant. Briefly defined, impact pathways are routes by which a change in activity

[7] Waddenzee case (Case C-127/02, [2004] ECR-I 7405)

associated with a development can lead to an effect upon a Habitat site. As highlighted earlier, it is also important to bear in mind MHCLG guidance which 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*'[8].

3.2 Based upon data available in the Designated Sites View[9] provided by Natural England Site Improvement Plans (SIPs), Supplementary Advice for Conservation Objectives and professional judgement, the impact pathways listed in **Table 3-1** require consideration when assessing site allocations in the CW&C LP.

Table 3-1. Possible impact pathways

Habitat Site	Possible Impact Pathways
Alyn Valley Woods SAC	Public access/disturbance (recreational pressure) Water quality[10] Water quantity
Berwyn and South Clwyd Mountains SAC	Urbanisation Drainage (water quantity, level and flow) Public access/disturbance (recreational pressure) Air pollution: Impact of atmospheric nitrogen deposition
Brown Moss SAC	Hydrological changes Water pollution (water quality) Air pollution: impact of atmospheric nitrogen deposition
Dee Estuary SAC, SPA and Ramsar	Public access/disturbance (recreational pressure) Water pollution (water quality) Loss of functionally linked habitat Air pollution: Impact of atmospheric nitrogen deposition Urbanisation
Deeside and Buckley Newt Sites SAC	Water quality Public access/disturbance (recreational pressure)
Fenn's, Whixhall, Bettisfield, Wem and Cadney Mosses SAC	Inappropriate water levels (water quantity, level and flow) Water pollution (water quality) Air pollution: Impact of atmospheric nitrogen deposition
Halkyn Mountain SAC	Human induced changes in hydraulic conditions (water quantity, level and flow) Pollution to groundwater (water quality)

[8] Ministry of Housing, Communities and Local Government. 2019. *Appropriate Assessment*. https://www.gov.uk/guidance/appropriate-assessment#:~:text=an%20appropriate%20assessment%20must%20identify,boundaries%20of%20that%20site%20and

[9] Available at https://designatedsites.naturalengland.org.uk/

[10] See "Background to Water Quality" later in this section for a description of the types of quality issues described.

Habitat Site	Possible Impact Pathways
Johnstown Newt Sites SAC	Water depth (water quantity, level and flow) Presence of pollution (water quality)
Liverpool Bay SPA	Water pollution (water quality) Loss of functionally linked habitat
Manchester Mosses SAC	Hydrological changes Air pollution: impact of atmospheric nitrogen deposition
Mersey Estuary SPA and Ramsar	Public access/disturbance (recreational pressure) Loss of functionally linked habitat Urbanisation Air pollution: Impact of atmospheric nitrogen deposition
Mersey Narrows and North Wirral Foreshore SPA and Ramsar	Public access/disturbance (recreational pressure) Water pollution (water quality) Air pollution: Impact of atmospheric nitrogen deposition Loss of functionally linked habitat
Midland Meres and Mosses Phase I and Phase II Ramsar	Drainage/reclamation for agriculture Eutrophication (water quality) Pollution – pesticides/agricultural runoff (water quality) Urbanisation
Oak Mere SAC	Water pollution (water quality) Hydrological changes (water quantity, level and flow) Air pollution: impact of atmospheric nitrogen deposition
Ribble and Alt Estuaries SPA and Ramsar	Air Pollution: impact of atmospheric nitrogen deposition Hydrological changes (water quantity, level and flow) Public access / disturbance (recreational pressure) Loss of functionally linked habitat
River Dee and Bala Lake SAC	Public access/disturbance (recreational pressure) Water pollution (water quality) Urbanisation
River Eden SAC	Hydrology (water quantity, level and flow)
Rixton Clay Pits SAC	Urbanisation

Habitat Site	Possible Impact Pathways
Rostherne Mere Ramsar	Eutrophication (water quality) Loss of functionally linked habitat Recreational disturbance
Sefton Coast SAC	Hydrology (water quantity, level and flow)
West Midland Mosses SAC	Water pollution (water quality) Hydrological changes (water quantity, level and flow) Air Pollution: impact of atmospheric nitrogen deposition Urbanisation

Background to Atmospheric Pollution

3.3 The main pollutants of concern for Habitats sites are oxides of nitrogen (NOx), ammonia (NH_3) and Sulphur dioxide (SO_2) and are summarised in **Table 3-2**.

Table 3-2. Main sources and effects of air pollutants on habitats and species.

Pollutant	Source	Effects on habitats and species
Sulphur dioxide (SO_2)	The main sources of SO_2 are electricity generation, and industrial and domestic fuel combustion. However, total SO_2 emissions in the UK have decreased substantially since the 1980's. Another origin of Sulphur dioxide is the shipping industry and high atmospheric concentrations of SO_2 have been documented in busy ports. In future years shipping is likely to become one of the most important contributors to SO_2 emissions in the UK.	Wet and dry deposition of SO_2 acidifies soils and freshwater and may alter the composition of plant and animal communities. The magnitude of effects depends on levels of deposition, the buffering capacity of soils and the sensitivity of impacted species. However, SO_2 background levels have fallen considerably since the 1970's and are now not regarded a threat to plant communities. For example, decreases in Sulphur dioxide concentrations have been linked to returning lichen species and improved tree health in London.
Acid deposition	Leads to acidification of soils and freshwater via atmospheric deposition of SO_2, NOx, ammonia and hydrochloric acid. Acid deposition from rain has declined by 85% in the last 20 years, which most of this contributed by lower sulphate levels. Although future trends in Sulphur (S) emissions and subsequent deposition to terrestrial and aquatic ecosystems will continue to decline, increased N emissions may cancel out any gains produced by reduced S levels.	Gaseous precursors (e.g., SO_2) can cause direct damage to sensitive vegetation, such as lichen, upon deposition. Can affect habitats and species through both wet (acid rain) and dry deposition. The effects of acidification include lowering of soil pH, leaf chlorosis, reduced decomposition rates, and compromised reproduction in birds / plants. Not all sites are equally susceptible to acidification. This varies depending on soil type, bed rock geology, weathering rate and buffering capacity. For example, sites with an underlying geology of granite, gneiss and quartz rich rocks tend to be more susceptible.

Pollutant	Source	Effects on habitats and species
Ammonia (NH_3)	Ammonia is a reactive, soluble alkaline gas that is released following decomposition and volatilisation of animal wastes and from some chemical processes and vehicle exhausts. It is a naturally occurring trace gas, but ammonia concentrations are directly related to the distribution of 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. Due to its significantly longer lifetime, NH_4+ may be transferred much longer distances (and can therefore be a significant trans-boundary issue). While ammonia deposition may be estimated from its atmospheric concentration, the deposition rates are strongly influenced by meteorology and ecosystem type.	The negative effect of NH_4+ may occur via direct toxicity when uptake exceeds detoxification capacity and via N accumulation. Its main adverse effect is eutrophication, leading to species assemblages that are dominated by fast-growing and tall species. For example, a shift in dominance from heath species (lichens, mosses) to grasses is often seen. 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. Half of NO_X emissions in the UK derive from motor vehicles, one quarter from power stations and the rest from other industrial and domestic combustion processes.	Direct toxicity effects of gaseous nitrates are likely to be important in areas close to the source (e.g. roadside verges). A critical level of NO_X for all vegetation types has been set to 30 ug/m^3. Deposition of nitrogen compounds (nitrates (NO_3), nitrogen dioxide (NO_2) and nitric acid (HNO_3)) contributes to the total nitrogen deposition and may lead to both soil and freshwater acidification. In addition, NOx contributes to the eutrophication of soils and water, altering the species composition of plant communities at the expense of sensitive species.
Nitrogen deposition	The pollutants that contribute to the total nitrogen deposition derive mainly from oxidized (e.g. NO_X) or reduced (e.g. NH_3) nitrogen emissions (described separately above). While oxidized nitrogen mainly originates from major conurbations or highways, reduced nitrogen mostly derives from farming practices. The N pollutants together are a large contributor to acidification (see above).	All plants require nitrogen compounds to grow, but too much overall N is regarded as the major driver of biodiversity change globally. Species-rich plant communities with high proportions of slow-growing perennial species and bryophytes are most at risk from N eutrophication. This is because many semi-natural plants cannot assimilate the surplus N as well as many graminoid (grass) species. 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 involving NO_X, volatile organic compounds (VOCs) and sunlight. These precursors are mainly released by the combustion of fossil fuels (as discussed above).	Concentrations of O_3 above 40 ppb can be toxic to both humans and wildlife and can affect buildings. High O_3 concentrations are widely documented to cause damage to

Pollutant	Source	Effects on habitats and species
	Increasing anthropogenic emissions of ozone precursors in the UK have led to an increased number of days when ozone levels rise above 40 parts per billion (ppb) ('episodes' or 'smog'). Reducing ozone pollution is believed to require action at international level to reduce levels of the precursors that form ozone.	vegetation, including visible leaf damage, reduction in floral biomass, reduction in crop yield (e.g. cereal grains, tomato, potato), reduction in the number of flowers, decrease in forest production and altered species composition in semi-natural plant communities.

Source: Information summarised from the Air Pollution Information System (http://www.apis.ac.uk/)

3.4 SO_2 emissions are overwhelmingly influenced by the output of power stations and industrial processes that require the combustion of coal and oil. As such, it is unlikely that material increases in SO_2 emissions will be associated with the MLP. NH_3 emissions are dominated by agriculture, with some chemical processes also making notable contributions.

3.5 NH3 can have a directly toxic effect upon vegetation, particularly at close distances to the source such as near road verges[11]. NOx can also be toxic at high concentrations (far above the annual average Critical Level) but generally only in the presence of elevated SO_2 which is very rare in the UK.

3.6 NO_x 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 NO_x (92%) will be made by the associated road traffic. Other sources, although relevant, are of minor importance (8%) in comparison[12]. Emissions of NO_x could therefore be reasonably expected to increase as a result of greater vehicle use due to the MLP. High levels of NO_x and NH_3 are likely to increase the total N deposition to soils, potentially leading to deleterious knock-on effects in resident ecosystems. Increases in nitrogen deposition from the atmosphere can, if sufficiently great, enhance soil fertility and lead to eutrophication. This often has adverse effects on community composition and the quality of semi-natural, nitrogen-limited terrestrial and aquatic habitats[13], [14].

3.7 According to the World Health Organisation, the critical NOx concentration (critical threshold) for the protection of vegetation is 30 μgm^{-3}. In addition, ecological studies have determined 'Critical Loads' (CLs)[15] of atmospheric N deposition (that is, NO_x combined with ammonia NH_3) for key habitats within Habitats sites.

3.8 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*"[16] (see Figure 2).

[11] http://www.apis.ac.uk/overview/pollutants/overview_NOx.htm.
[12] 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
[13] Wolseley, P. A.; James, P. W.; Theobald, M. R.; Sutton, M. A. **2006.** Detecting changes in epiphytic lichen communities at sites affected by atmospheric ammonia from agricultural sources. Lichenologist 38: 161-176
[14] Dijk, N. **2011.** Dry deposition of ammonia gas drives species change faster than wet deposition of ammonium ions: evidence from a long-term field manipulation Global Change Biology 17: 3589-3607
[15] The critical load is the rate of deposition beyond which research indicates that adverse effects can reasonably be expected to occur
[16] www.webtag.org.uk/archive/feb04/pdf/feb04-333.pdf

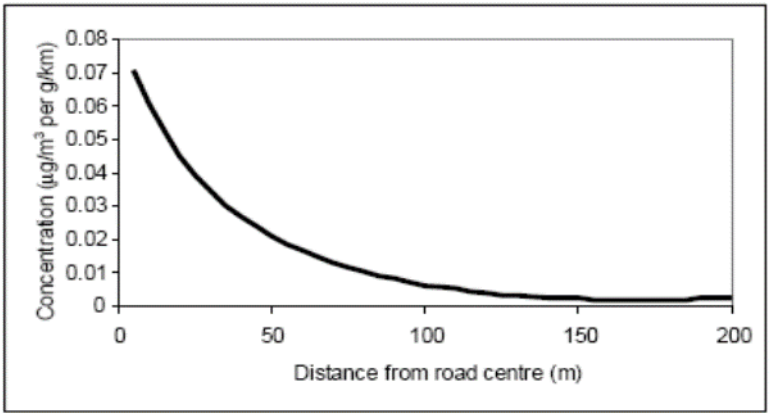

Figure 2: Traffic contribution to concentrations of pollutants at different distances from a road (Source: www.dft.gov.uk/ha/standards/dmrb/vol11/section3/ha20707.pdf)

Background to Loss of Functionally Linked Habitat

3.9 While most Habitats sites have been geographically defined to encompass the key features that are necessary for coherence of their structure and function, and the support of their qualifying features, this is not necessarily the case. A diverse array of qualifying species including birds, bats and amphibians are not always confined to the boundary of designated sites.

3.10 For example, the highly mobile nature of both wader and waterfowl species implies that areas of habitat of crucial importance to the integrity of their populations lie outside the physical limits of Habitats sites. Despite not being part of the formal designation, these habitats are integral to the maintenance of the structure and function of the designated site, for example by encompassing important foraging grounds. Therefore, land use plans that may affect such functionally linked habitat require further assessment.

3.11 There is now an abundance of authoritative examples of HRA cases on plans affecting bird populations, where Natural England recognised the potential importance of functionally linked habitat. For example, bird surveys in relation to a previous HRA established that approximately 25% of the golden plover population in the Somerset Levels and Moors SPA were affected while on functionally linked land, and this required the inclusion of mitigation measures in the relevant plan policy wording. Another important case study originates from the Mersey Estuary SPA / Ramsar, where adjacently located functionally linked land had a peak survey count of 108% of the 5 year mean peak population of golden plover. This finding led to considerable amendments in the planning proposal to ensure that the site integrity was not adversely affected.

3.12 The identification of an area as functionally linked habitat is not always a straightforward process. The importance of non-designated land parcels may not be apparent and thus might require the analysis of existing data sources (e.g. Bird Atlases or data from records centres) to be firmly established. In some instances, data may not be available at all, requiring further survey work.

3.13 An area may be considered as functionally linked if:

- It is of a type likely to be used by a receptor (for example, a bird species) such as grazing salt marsh;
- The area is within the usual foraging range of the bird species in question (as measured from the habitats site);
- The area consists of a sufficiently-useful habitat, or habitats, that the area is of value to a receptor. For example, the further a bird of a given species travels to an area, the more energy it has to expend. To be considered of value, the area the bird arrives at must have sufficient appropriate habitat to provide the bird with the possibility of recovering the energy it spent;
- The area conforms to other characteristics required by the receptor species, for example, clear line of site to avoid predation.

Background to Recreational Pressure

3.14 There is growing concern over the cumulative impacts of recreation on key nature conservation sites in the UK, as most sites must fulfil Conservation Objectives while also providing recreational opportunity. Various studies have provided compelling links between increases in housing development and access levels[17], and resulting impacts in Habitat sites[18] [19].

3.15 Recreational use of a site has the potential to:

- Cause disturbance to sensitive species such as ground-nesting birds and wintering wildfowl;
- Prevent appropriate management or exacerbate existing management difficulties;
- Cause damage through erosion, trampling and fragmentation; and
- Cause eutrophication due to dog fouling.

3.16 Different types of Habitat sites (e.g., heathland, freshwater, chalk grassland) have a range of vulnerabilities and are sensitive to different types of recreational pressures. Studies across a range of species have shown that the effects from recreation can be complex.

Bird Disturbance

3.17 Disturbance effects can have negative impacts on qualifying birds in various ways, with reduced chick provisioning and increased nest predation due to adults being flushed from the nest and deterred from returning. A literature review on the effects of human disturbance on breeding birds found that 36 out of 40 studies reported reduced breeding success due to disturbance[20]. The main reasons given for the reduction in breeding success were nest abandonment and increased predation of eggs or young. Studies of other species have shown that birds nest at lower densities in disturbed areas, particularly when there is weekday as well as weekend pressure[21]. Recreational disturbance effects on ground-nesting birds are particularly severe, with many studies concluding that urban sites support lower densities of key species, such as stone curlew (*Numenius Arquata*) and nightjar (*Caprimulgus europaeus*)[22] [23].

3.18 Furthermore, there are numerous parameters (e.g. seasonality, type of recreational activity) that may reduce or exacerbate the magnitude of bird disturbance. For example, disturbance in winter may be more impactful because food shortages make birds more vulnerable at this time of year. In contrast, this may be counterbalanced by fewer recreational users in the winter months and lower overall sensitivity of birds outside the breeding season. Evidence in the literature suggests that the magnitude of disturbance clearly differs between different types of recreational activities. For example, dog walking leads to a significantly higher reduction in bird diversity and abundance compared to hiking[24]. Scientific evidence also suggests that key disturbance parameters, such as areas of influence and flush distance, are significantly greater for dog walkers than hikers[25]. In addition, dogs, rather than people, tend to be the cause of many management difficulties, notably by worrying grazing animals. A literature review summarised data on the use of semi-natural habitat by dogs26, indicating that the proportion of dog walkers using sensitive sites tends to be high (54%).

[17] Weitowitz D.C., Panter C., Hoskin R. & Liley D. 2019. The effect of urban development on visitor numbers to nearby protected nature conservation sites. *Journal of Urban Ecology* **5**. https://doi.org/10.1093/jue/juz019
[18] Liley D, Clarke R.T., Mallord J.W., Bullock J.M. (2006a). The effect of urban development and human disturbance on the distribution and abundance of nightjars on the Thames Basin and Dorset Heaths. Natural England / Footprint Ecology.
[19] Liley D., Clarke R.T., Underhill-Day J., Tyldesley D.T. (2006b). Evidence to support the appropriate Assessment of development plans and projects in south-east Dorset. Footprint Ecology / Dorset County Council.
[20] Hockin D.M., Oundsted M., Gorman D., Hill V. & Barker M.A. (1992). Examination of the effects of disturbance on birds with reference to its importance in ecological assessments. *Journal of Environmental Management* **36**: 253-286.
[21] Van der Zande A.N., Berkhuizen J.C., van Letesteijn H.C., ter Keurs W.J. & Poppelaars A.J. (1984). Impact of outdoor recreation on the density of a number of breeding bird species in woods adjacent to urban residential areas. *Biological Conservation* **30**: 1-39.
[22] Clarke R.T., Liley D., Sharp J.M. & Green R.E. (2013). Building development and roads: Implications for the distribution of stone curlews across the Brecks. *PLOS ONE*. https://doi:10.1371/journal.pone.0072984.
[23] Liley D. & Clarke R.T. (2003). The impact of urban development and human disturbance on the numbers of nightjar *Caprimulgus europaeus* on heathlands in Dorset, England. *Biological Conservation* **114**: 219-230.
[24] Banks P.B. & Bryant J.Y. (2007). Four-legged friend or foe? Dog walking displaces native birds from natural areas. *Biology Letters* **3**: 14pp.
[25] Miller S.G., Knight R.L. & Miller C.K. (2001). Wildlife responses to pedestrians and dogs. *Wildlife Society Bulletin* **29**: 124-132.
[26] Ibid.

3.19 Direct evidence for bird disturbance has been collected in many field studies. For example, observations of bird disturbance were undertaken by Footprint Ecology in North Kent in 2010 / 2011. The study focused on recreational disturbance to wintering waterfowl on intertidal habitats along the North Kent shoreline, stretching between Gravesend and Whitstable, and encompassing three SPAs. From 1,400 events (records of visitors in the bird survey areas) occurring within 200m of the birds, 3,248 species-specific observations were noted, which included no response (74% of observations), major flight (13%), minor flight (5%), short evasive walks away from the stimulus (5%) and alertness (3%).

3.20 Dog walking accounted for 55% of all major flight observations, with a further 15% attributed to walkers without dogs. After controlling for distance, major flights were more likely to occur when activities took place on the intertidal zone (compared to water-based or onshore events), when dogs were present, and a higher number of dogs were present in visitor groups. There were significant differences between species with curlew the species with the highest probability of major flight and teal and black-tailed godwit (*Limosa limosa*) the lowest. Tide state was also significant with major flights more likely at high tide, after controlling for distance. There was a significant interaction between distance and tide, indicating that the way in which birds responded varied according to tide. Inter-species differences in responses to disturbance stimuli are also evident from other studies. For example, one study found that there was a significant negative correlation between the degree of urban development and the number of nightjar territories in Dorset heathland sites, but no such impacts were found for woodlark (*Lullula arborea*) and Dartford warbler (*Curruca undata*)[27].

3.21 However, bird disturbance studies need to be treated with care. For instance, the magnitude of disturbance is not necessarily correlated with the impact of disturbance, i.e., the most easily disturbed species are not necessarily those that will suffer the greatest impacts. For example, it has been shown in some cases, that the most easily disturbed birds simply move to alternative feeding sites, while others remain (likely due to an absence of suitable alternative foraging areas) and thus suffer greater population-level impacts[28]. A recent literature review undertaken for the RSPB[29] also urges caution when extrapolating the results of disturbance studies because responses differ between species and may be impacted by local environmental conditions. This should be considered when predicting the potential impacts of future recreational pressure on Habitat sites.

3.22 It should also be emphasised that recreational use is not necessarily a problem. Many Habitat sites are also National Nature Reserves or nature reserves managed by Wildlife Trusts and the RSPB. At these sites, access is encouraged, and resources are deployed to ensure that recreational use is managed appropriately. Bird abundances in many of these sites remain stable or, in some cases, are increasing despite high visitor numbers.

Trampling Damage

3.23 Most terrestrial habitats (including heathland, grassland and woodland) can be affected by trampling and other mechanical damage, which dislodges individual plants, leads to soil compaction and erosion. A general effect of trampling on vegetation is reduced species and structural diversity, since only dominant and tolerant plant species persist[30]. However, many parameters (e.g. vegetation type, recreational activity, weather, and ground conditions) can have marked impacts on the degree of trampling damage. The following provides a brief overview of the impacts of trampling associated with different recreational activities in different habitats:

- A study on experimental trampling of different heathland types under varying weather conditions in Brittany (France) showed that dry heath was more resistant to trampling damage than wet heath[31]. Equally, both heathland habitats showed greater resilience to trampling under dry than wet conditions.

[27] Liley D. & Clarke R.T. (2002). Urban development adjacent to heathland sites in Dorset: The effect on the density and settlement patterns of Annex I bird species. English Nature Research Reports, No 463. English Nature, Peterborough. 33pp.
[28] Gill et al. (2001). Why behavioural responses may not reflect the population consequences of human disturbance. *Biological Conservation* **97**: 265-268.
[29] Woodfield & Langston. (2004). Literature review on the impact on bird population of disturbance due to human access on foot. *RSPB Research Report* No. 9.
[30] Santoro R. et.al. (2012). Effects of Trampling Limitation on Coastal Dune Plant Communities. Environmental Management DOI 10.1007/s00267-012-9809-6.
[31] Gallet S. & Roze F. (2002). Long-term effects of trampling on Atlantic heathland in Brittany (France): Influence of vegetation type, season and weather conditions. *Biological Conservation* **103**: 267-275.

- Wilson & Seney[32] examined the degree of track erosion caused by hikers, motorcyclists, horse riders and cyclists in 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[33] conducted experimental off-track trampling in 18 closed forest, dwarf scrub and meadow & grassland communities (each trampled between 0 – 500 times) over five mountain regions in the US. Vegetation cover was assessed two weeks and one year after trampling, and a negative correlation with trampling intensity was discovered. This relationship was weaker after one year than two weeks, indicating some vegetation recovery. Differences in plant morphology was found to explain more variation in response 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. The 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 considered least tolerant to regular trampling disturbance.
- Cole [34] conducted a follow-up study (across four vegetation types) in which shoe type (trainers or walking boots) and trampling 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 differential impact on vegetation cover.
- Cole & Spildie[35] experimentally compared the effects of off-track trampling by hikers and horse riders (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). Generally, it was shown that higher trampling intensities caused greater levels of disturbance. Horse trampling resulted in a larger reduction in vegetation cover than hiking. While the forb-dominated vegetation suffered greater disturbance impacts, it recovered rapidly.

3.24 In heathland sites, trampling damage can affect the value of a site to wildlife. For example, heavy use of sandy tracks loosens and continuously disturbs sand particles, reducing the habitat's suitability for invertebrates[36]. Species that burrow into flat surfaces such as the centres of paths, are likely to be particularly vulnerable, as the loose sediment can no longer maintain their burrow. In some instances, nature conservation bodies and local authorities resort to hardening paths to prevent further erosion. However, this is concomitant with the loss of habitat used by wildlife, such as sand lizards (*Lacerta agilis*) and burrowing invertebrates.

Nutrient Enrichment

3.25 A major concern for nutrient-poor terrestrial habitats such as dune systems is nutrient enrichment associated with dog fouling, which has been addressed in various reviews (e.g.,[37]). It is estimated that dogs will defecate within 10 minutes of starting a walk and therefore most nutrient enrichment arising from dog faeces will occur within 400m of a site entrance. In contrast, dogs will urinate at frequent intervals during a walk, resulting in a spread-out distribution of urine. For example, in Burnham Beeches National Nature Reserve it is estimated that 30,000 litres of urine and 60 tonnes of dog faeces are deposited annually[38]. While there

[32] 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.
[33] 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
[34] 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.
[35] 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
[36] Taylor K., Anderson P., Liley D. & Underhill-Day J.C. (2006). Promoting positive access management to sites of nature conservation value: A guide to good practice. English Nature / Countryside Agency, Peterborough and Cheltenham.
[37] Taylor K., Anderson P., Taylor R.P., Longden K. & Fisher P. (2005). Dogs, access and nature conservation. English Nature Research Report, Peterborough.
[38] Barnard A. (2003). Getting the facts – Dog walking and visitor number surveys at Burnham Beeches and their implications for the management process. *Countryside Recreation* **11**:16-19.

is little information on the chemical constituents of dog faeces, nitrogen is one of the main components[39]. Nutrient levels are the major determinant of plant community composition and the effect of dog defecation in sensitive habitats is comparable to a high-level application of fertiliser, potentially resulting in the shift to plant communities that are more typical of improved grasslands.

3.26 A recent study has published further compelling evidence on the relative impact of nitrogen (N) and phosphorus (P) deposition arising from dogs. Using 487 direct-count censuses from four peri-urban forests and nature reserves, the modelling data suggested that canine fertilisation rates amount to 11 kg N and 5 kg P per hectare per year respectively[40]. These amounts are significant when compared to atmospheric nitrogen deposition rates and the offsetting achievable through traditional habitat management techniques (e.g. cutting and removal of hay). The nitrogen deposition by dogs is particularly significant given the nitrogen Critical Load (CL) of 10-20 kg N/ha/yr provided for European dry heath and Northern Atlantic wet heath (qualifying feature of the Dorset Heaths SAC) on the Air Pollution Information System (APIS). This implies that the minimum CL of a site may be exceeded by N nitrogen deposition from dogs alone, before atmospheric sources are considered. Nutrient availability is the major determinant of plant community composition and the effect of dog defecation in sensitive habitats is comparable to a high-level application of fertiliser, potentially resulting in a shift towards plant communities that are more typical of improved grasslands.

Summary

3.27 Where increased recreational use is predicted to cause adverse impacts on a site, avoidance and mitigation should be considered. Avoidance of recreational impacts at Habitat sites involves locating new residential development further away (where possible). Strategic plans, such as Local Plans provide the mechanism for this. Where avoidance of impacts is not possible, mitigation will usually involve a mix of access management, habitat management and provision of alternative recreational space.

Background to Urbanisation

3.28 The natural environment is complex; most plants and wildlife rely on either a particular habitat type (e.g. broadleaved woodland, heathland) or a particular combination of habitats (habitat mosaic) to thrive. In addition to habitat type, habitat conditions and structure (e.g. south facing slope, dead standing wood, patches of bare soil, or areas of scrub adjacent to open areas of heathland etc.) are important factors for survival. Smaller organisms' (e.g. insects and fungi) immediate requirements are often on a more localised scale, for example a single tree, whereas other wildlife like birds may need vast areas for foraging in a single night.

3.29 Wildlife needs to be able to move around in order to find food and suitable places to live, breed and raise young; they must also be able to move in order to survive changes in their environment, for example disturbances caused by climate change or development. Movement is also important for the exchanging of genes, the building blocks for diversity and survival. Without this, generations of wildlife may become weaker and lack the ability to thrive.

3.30 Urbanisation essentially involves development encroaching on open spaces to such an extent that there is a regular background level of impact (whether recreational activity, cat predation, fly tipping of garden waste and other activities) due to the very close proximity of large amounts of housing. This can have a negative effect on wildlife causing them to retreat further into the body of a site and abandon the edge habitats, or impacting on their breeding success.

3.31 For the purposes of this assessment 'urbanisation' is used to refer to all potential impact pathways that stem from the close proximity new development other than those considered elsewhere in this report e.g. lighting, noise, cat predation, fly tipping, inadvertent arson and other pathways.

[39] Taylor K., Anderson P., Liley D. & Underhill-Day J.C. (2006). Promoting positive access management to sites of nature conservation value: A guide to good practice. English Nature / Countryside Agency, Peterborough and Cheltenham.
[40] De Frenne P., Cougnon M., Janssens G.P.J. & Vangansbeke P. (2022). Nutrient fertilization by dogs in peri-urban ecosystems. *Ecological Solutions and Evidence* **3**, https://doi.org/10.1002/2688-8319.12128

Background to Water Quality

3.32 The quality of the water that feeds Habitats 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 that 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.

3.33 The main risk associated with the CW&C Local Plan is the discharge of treated sewage effluent from Wastewater Treatment Works (WwTWs) serving the Plan area. This could increase the nutrient concentrations in the water feeding Habitats Sites that are hydrologically linked to waterbodies that receive treated wastewater.

Background to Water Quantity, Level and Flow

3.34 The water level, its flow rates and the mixing conditions are important determinants of the condition of Habitats sites and their qualifying features. Hydrological processes are critical in influencing habitat characteristics in wetlands, terrestrial systems that have hydrological associations (e.g. wet heath) and coastal waters, including current velocity, water depth, dissolved oxygen levels, salinity and water temperature. In turn these parameters determine the short- and long-term viability of plant and animal species, as well as overall ecosystem composition.

3.35 A highly cited review paper summarised the ecological effects of reduced flow in rivers and connected water-dependent ecosystems. Droughts (ranging in their magnitude from flow reduction to a complete loss of surface water) have both direct and indirect effects on dependent floral and faunal communities. For example, the unique nature of wetlands combines shallow water and conditions that are ideal for the growth of organisms at the basal level of food webs, which feed many species of birds, mammals, fish and amphibians.

3.36 Maintaining a steady water supply is of critical importance for many hydrologically dependent SPAs, SACs and Ramsars. For example, in many freshwater bodies and wetlands the hydrological regime is essential for sustaining a variety of foraging habitats for SPA / Ramsar waterfowl species. However, different species vary in their requirements for specific water levels. Splash and / or shallow flooding is required to provide suitable feeding areas and roosting sites for ducks and waders. In contrast, deeper flooding is essential to provide foraging and loafing habitats for Bewick's swans and whooper swans.

3.37 Wetland habitats rely on hydrological connections with other surface waters, such as rivers, streams and lakes. A constant supply of water is fundamental to maintaining the ecological integrity of sites. However, while the natural fluctuation of water levels within narrow limits is desirable, excess or too little water supply might cause the water level to be outside of the required range of qualifying birds, invertebrate or plant species. This might lead to the loss of the structure and functioning of wetland habitats. There are two mechanisms through which urban development might negatively affect the water level in Habitats Sites:

- The supply of new housing with potable water will require increased abstraction of water from surface water and groundwater bodies. Depending on the level of water stress in the geographic region, this may reduce the water levels in Habitats Sites sharing the same catchment.
- The proliferation of impermeable surfaces in urban areas increases the volume and speed of surface water runoff. As traditional drainage systems often cannot cope with the volume of stormwater, sewer overflows are designed to discharge excess water directly into watercourses.

Often this pluvial flooding results in downstream inundation of watercourses and the potential flooding of wetland habitats.

4. Test of Likely Significant Effects

Introduction

4.1 When seeking to identify relevant Habitat sites, consideration has been given primarily to identified impact pathways and the source-pathway-receptor approach, rather than adopting purely a 'zones'-based approach. The source-pathway-receptor approach is a standard tool in environmental assessment. In order for an effect to occur, all three elements of this mechanism must be in place, whereas the absence of one or more of the elements means there is no possibility for an effect. Furthermore, even where an impact is predicted to occur, it may not result in significant effects (i.e., those which undermine the Conservation Objectives of a Habitat site).

4.2 The likely zone of impact (also referred to as the likely Zone of Influence, ZoI) of a plan or project is the geographic extent over which significant ecological effects are likely to occur. The ZoI of a plan or project will vary depending on the specifics of a particular proposal and must be determined on a case-by-case basis with reference to a variety of criteria, including:

- the nature, size / scale and location of the plan;
- the connectivity between the plan and Habitat sites, for example through hydrological connections or because of the natural movement of qualifying species;
- the sensitivity of ecological features under consideration; and,
- the potential for in-combination effects.

Approach to Cheshire West and Chester Local Plan Potential Growth Areas and Policy Approaches Screening

4.3 This report screens the potential growth areas, spatial strategy policy options and policy approaches for potential impacts on the identified Habitats sites. Details of Spatial Strategy Options and Related Policies can be found in **Appendix C**.

4.4 There are no specific allocations so either the growth area (e.g. "Chester") or the development area (e.g. "CH01" have been assessed, as appropriate.

4.5 Broad guidelines are set for the assessment of impact pathways against growth areas etc, for example taking into account distance between the growth option and the habitats sites.

4.6 An initial assessment of the potential growth areas identified is made using the broad guidelines to determine potential impact pathways (if any) between the growth areas and each of the identified Habitats sites.

4.7 These are then explored for each growth area to apply the Test of Likely Significant Effects in relation to the Habitats sites identified for consideration.

4.8 Finally, the results are summarised for the purposes of comparing options and growth areas and assessing policies in relation to potential impacts.

Broad parameters for determining inclusion of Habitats sites for growth areas based on impact pathways

4.9 **Table 4-1** summarises the way in which impact pathways considered for impact on each Habitats site.

4.10 Policies which may result in impact pathways do so through:

- Allocation and development of sites (for residential or employment use)
- Development of infrastructure (particularly for transport) associated with the allocation of sites in the previous point.
- Development of a site for abstraction of natural resources (minerals)

4.11 The impact of policies within the issues and options document which are specific in location can be assessed through the site allocation assessments in **Table 4-1**. Note that although changes to infrastructure policies are under consideration there are no specific sites available for assessment at this stage.

4.12 Note that specifics of whether or not a site is vulnerable to a particular threat are considered at the next step of the assessment.

Table 4-1. Impact pathway parameters for considering the interaction between growth areas and Habitats sites.

Impact pathway	Inclusion parameters
Atmospheric pollution: SO_2 emissions	Habitats sites susceptible to this type of emission within any distance of a growth option where power stations or industrial processes requiring combustion of coal and oil.
Atmospheric pollution: NH_3	Growth areas where changes to levels of agriculture or increases in chemical production may result from a growth option (none identified)
Atmospheric pollution: NO_x	Growth areas where major vehicle commuting routes to the growth area come within 200m of a Habitats site. 75% of commuters travel less than 10 miles (16km)[41] so sites beyond this distance are screened out. At this screening stage, modelling of the impact of proximity to rail transport has not be modelled and is not considered at this screening stage. It may be a consideration for Appropriate Assessment.
Functionally Linked Land	Habitats sites with highly mobile species (birds / bats / otter) within a precautionary distance of 20km of the growth area
Recreational Pressure	An unpublished report by Footprint Ecology for the Merseyside Environmental Service to inform a recreation mitigation strategy for Habitats sites in the Liverpool City region[42] indicated that the mean distance for people in the Liverpool City region travelled a mean distance of 5.5km to reach the coast. Growth areas within 5.5km of a Habitats site have therefore been screened in for recreational pressure (irrespective of whether the Habitats site is coastal)

[41] Department of Transport (2022) *Transport Statistics Great Britain: 2022 Domestic Travel* Available at: https://www.gov.uk/government/statistics/transport-statistics-great-britain-2023/transport-statistics-great-britain-2022-domestic-travel [Accessed 05 June 2025]
[42] Available at chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://eas.merseysidebiobank.org.uk/wp-content/uploads/2023/10/LCR_RMS_EvidenceReport_v24_Optv2.pdf

Urbanisation	A footprint Ecology Review of Literature[43] indicated hunting ranges could be over 3km from the home of a domestic cat (one study) although other studies (six of) indicated hunting ranges which were typically smaller than this. It is AECOMs view that this 3km buffer is sufficient for other potential impacts of urbanisation, for example, lighting, sound and fly tipping impacts. A precautionary distance of 3km has been used to screen growth areas for LSE's as a result of this pathway.
Water quality	Where the Wastewater Treatment Works for a growth area are in the same catchment as Habitats sites, the growth area is further considered for screening purposes. Appropriate assessment of the impact of any LSEs will need to give due consideration to relevant water and wastewater management plans and the relevant HRA assessments of those.
Water Quantity, Level and Flow	Where the Wastewater Treatment Works for a growth area are in the same catchment as Habitats sites, the growth area is further considered for screening purposes. Appropriate assessment of the impact of any LSEs will need to give due consideration to relevant water and wastewater management plans and the relevant HRA assessments of those.

Initial Screening of Potential Growth Options

4.13 **Table 4-2** provides an initial assessment of the Habitats Sites to be screened for each growth area based on the pathway guidance provided in **Table 4-1** and possible impact pathways identified in **Table 3-1**.

Table 4-2. Initial assessment of growth area Options for inclusion in screening

4.14

Growth Area	Impact Pathway	Habitats Sites
Chester	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar The Dee Estuary SPA / SAC /Ramsar West Midland Mosses SAC
	Functionally Linked Land	Dee Estuary SPA / Ramsar Liverpool Bay SPA Mersey Estuary SPA / Ramsar
	Recreational Pressure	River Dee and Bala Lake SAC
	Urbanisation	River Dee and Bala Lake SAC
	Water quality	Alyn Valley Woods SAC Deeside and Buckley Newt Sites SAC Halkyn Mountain SAC Johnstown Newt Sites River Dee and Bala Lake SAC The Dee Estuary SPA / SAC /Ramsar

[43] Floydd, L. & Underhill-Day, J. "A literature review on the effects of pet cats on nearby protected wildlife sites" Available at: https://www.footprint-ecology.co.uk/reports/Floyd,%20L%20and%20Underhill-Day,%20J%20C%20-%202013%20-%20A%20literature%20review%20on%20the%20effects%20of%20pet%20cats%20on%20.pdf [Accessed 16/05/2025]

	Water Quantity, Level and Flow	Alyn Valley Woods SAC
		Berwyn and South Clwyd Mountains SAC
		Halkyn Mountain SAC
		Johnstown Newt Sites
		River Dee and Bala Lake SAC
		The Dee Estuary SPA / SAC /Ramsar
Ellesmere Port	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar
		Mersey Narrows and Noth Wirral Foreshore SPA / Ramsar
		Oak Mere SAC
		The Dee Estuary SPA / SAC /Ramsar
		West Midlands Mosses SAC
	Functionally Linked Land	Liverpool Bay SPA
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Ribble and Alt Estuaries SPA
		The Dee Estuary SPA / Ramsar
	Recreational Pressure	Mersey Estuary SPA / Ramsar
		The Dee Estuary SPA / Ramsar
	Urbanisation	Mersey Estuary SPA / Ramsar
	Water quality	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
	Water Quantity, Level and Flow	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
		Sefton Coast SAC
Northwich	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Manchester Mosses SAC
		Mersey Estuary SPA
		Oak Mere SAC
		West Midlands Mosses SAC
	Functionally Linked Land	Mersey Estuary SPA
		Rostherne Mere Ramsar
	Recreational Pressure	None

	Urbanisation	Midland Meres Phase II Ramsar
	Water quality	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
	Water Quantity, Level and Flow	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
		Sefton Coast SAC
Winsford	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Oak Mere SAC
		West Midland Mosses SAC
	Functionally Linked Land	Mersey Estuary SPA / Ramsar
		Rostherne Mere Ramsar
	Recreational Pressure	None
	Urbanisation	Midland Meres and Mosses Phase II Ramsar
		West Midlands Mosses SAC
	Water quality	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
	Water Quantity, Level and Flow	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
		Sefton Coast SAC
Cuddington and Sandiway	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar
		Oak Mere SAC
		West Midland Mosses SAC
	Functionally Linked Land	Mersey Estuary SPA / Ramsar
		Rostherne Mere Ramsar
	Recreational Pressure	None
	Urbanisation	Midland Meres and Mosses Phase II Ramsar

		West Midland Mosses SAC
	Water quality	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
	Water Quantity, Level and Flow	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
		Sefton Coast SAC
Farndon	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Berwyn and South Clwyd Mountains SAC
	Functionally Linked Land	None
	Recreational Pressure	None
	Urbanisation	None
	Water quality	Alyn Valley Woods SAC
		Deeside and Buckley Newt Sites SAC
		Halkyn Mountain SAC
		Johnstown Newt Sites
		River Dee and Bala Lake SAC
		The Dee Estuary SPA / SAC /Ramsar
	Water Quantity, Level and Flow	Alyn Valley Woods SAC
		Berwyn and South Clwyd Mountains SAC
		Halkyn Mountain SAC
		Johnstown Newt Sites
		River Dee and Bala Lake SAC
		The Dee Estuary SPA / SAC /Ramsar
Frodsham	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar
		Oak Mere SAC
		West Midlands Mosses SAC
	Functionally Linked Land	Mersey Estuary SPA / Ramsar
		Liverpool Bay SPA
	Recreational Pressure	Mersey Estuary SPA / Ramsar
	Urbanisation	Mersey Estuary SPA / Ramsar
	Water quality	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar

		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
	Water Quantity, Level and Flow	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
		Sefton Coast SAC
Helsby	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar
		Oak Mere SAC
		West Midlands Mosses SAC
	Functionally Linked Land	Liverpool Bay SPA
		Mersey Estuary SPA / Ramsar
		The Dee Estuary SPA / Ramsar
	Recreational Pressure	Mersey Estuary SPA / Ramsar
	Urbanisation	Mersey Estuary SPA / Ramsar
	Water quality	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
	Water Quantity, Level and Flow	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
		Sefton Coast SAC
Kelsall	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar
		Oak Mere SAC
		West Midlands Mosses SAC
	Functionally Linked Land	Mersey Estuary SPA / Ramsar
	Recreational Pressure	None
	Urbanisation	None
	Water quality	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II

		West Midlands Mosses SAC
	Water Quantity, Level and Flow	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
		Sefton Coast SAC
Malpas	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Brown Moss SAC
		Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses (SAC)
		West Midlands Mosses SAC
	Functionally Linked Land	None
	Recreational Pressure	None
	Urbanisation	None
	Water quality	Alyn Valley Woods SAC
		Deeside and Buckley Newt Sites SAC
		Halkyn Mountain SAC
		Johnstown Newt Sites
		River Dee and Bala Lake SAC
		The Dee Estuary SPA / SAC /Ramsar
	Water Quantity, Level and Flow	Alyn Valley Woods SAC
		Berwyn and South Clwyd Mountains SAC
		Halkyn Mountain SAC
		Johnstown Newt Sites
		River Dee and Bala Lake SAC
		The Dee Estuary SPA / SAC /Ramsar
Neston and Parkgate	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Alyn Valley Woods
		Deeside and Buckley Newt sites
		Mersey Estuary SPA / Ramsar
		The Dee Estuary SPA / SAC / Ramsar
	Functionally Linked Land	Liverpool Bay SPA
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Ribble and Alt Estuaries SPA / Ramsar
		The Dee Estuary SPA / Ramsar
	Recreational Pressure	River Dee and Bala Lake SAC
		The Dee Estuary SPA / SAC / Ramsar
	Urbanisation	River Dee and Bala Lake SAC
	Water quality	River Dee and Bala Lake SAC

		The Dee Estuary SPA / SAC /Ramsar
	Water Quantity, Level and Flow	Berwyn and South Clwyd Mountains SAC
		Halkyn Mountain SAC
		River Dee and Bala Lake SAC
		The Dee Estuary SPA / SAC /Ramsar
Tarporley	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Oak Mere SAC
		West Midlands Mosses SAC
	Functionally Linked Land	Mersey Estuary SPA / Ramsar
	Recreational Pressure	None
	Urbanisation	None
	Water quality	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II Ramsar
		West Midlands Mosses SAC
	Water Quantity, Level and Flow	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II Ramsar
		West Midlands Mosses SAC
		Sefton Coast SAC
Tarvin	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar
		Oak Mere SAC
		West Midland Mosses SAC
	Functionally Linked Land	Mersey Estuary SPA / Ramsar
		The Dee Estuary SPA / Ramsar
	Recreational Pressure	None
	Urbanisation	None
	Water quality	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II Ramsar
		West Midlands Mosses SAC
	Water Quantity, Level and Flow	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II Ramsar

		West Midlands Mosses SAC
		Sefton Coast SAC
Tattenhall	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Oak Mere SAC
		West Midlands Mosses SAC
	Functionally Linked Land	Mersey Estuary SPA / Ramsar
		The Dee Estuary SPA / Ramasar
	Recreational Pressure	None
	Urbanisation	None
	Water quality	Alyn Valley Woods SAC
		Deeside and Buckley Newt Sites SAC
		Halkyn Mountain SAC
		Johnstown Newt Sites
		River Dee and Bala Lake SAC
		The Dee Estuary SPA / SAC /Ramsar
	Water Quantity, Level and Flow	Alyn Valley Woods SAC
		Berwyn and South Clwyd Mountains SAC
		Halkyn Mountain SAC
		Johnstown Newt Sites
		River Dee and Bala Lake SAC
		The Dee Estuary SPA / SAC / Ramsar
Acton Bridge Station	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar
		Oak Mere SAC
		West Midland Mosses SAC
	Functionally Linked Land	Mersey Estuary SPA / Ramsar
		Rostherne Mere Ramsar
		Moss
	Recreational Pressure	None
	Urbanisation	None
	Water quality	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II Ramsar
		West Midlands Mosses SAC
	Water Quantity, Level and Flow	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II Ramsar
		West Midlands Mosses SAC
		Sefton Coast SAC

Capenhurst Station	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar The Dee Estuary SPA / Ramsar
	Functionally Linked Land	Liverpool Bay SPA Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar The Dee Estuary SPA / Ramsar
	Recreational Pressure	Mersey Estuary SPA / Ramsar
	Urbanisation	None
	Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar West Midlands Mosses SAC
	Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar West Midlands Mosses SAC Sefton Coast SAC
Delamere Station	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar Oak Mere SAC West Midland Mosses SAC
	Functionally Linked Land	Mersey Estuary SPA / Ramsar
	Recreational Pressure	None
	Urbanisation	Midland Meres and Mosses Phase I and Phase II Ramsar
	Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar West Midlands Mosses SAC
	Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar

		West Midlands Mosses SAC
		Sefton Coast SAC
Elton Station	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar
		The Dee Estuary SPA /Ramsar
		West Midlands Mosses SAC
	Functionally Linked Land	Liverpool Bay SPA
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		The Dee Estuary SPA /Ramsar
	Recreational Pressure	Mersey Estuary SPA / Ramsar
	Urbanisation	Mersey Estuary SPA / Ramsar
	Water quality	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
	Water Quantity, Level and Flow	Oak Mere SAC
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		West Midlands Mosses SAC
		Sefton SAC
Hooton Station	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		The Dee Estuary SPA /Ramsar
	Functionally Linked Land	Liverpool Bay SPA
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Ribble and Alt Estuaries SPA / Ramsar
		The Dee Estuary SPA /Ramsar
	Recreational Pressure	Mersey Estuary SPA / Ramsar
	Urbanisation	Mersey Estuary SPA / Ramsar
	Water quality	Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		Oak Mere SAC

		West Midlands Mosses SAC
	Water Quantity, Level and Flow	Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		Oak Mere SAC
		West Midlands Mosses SAC
		Sefton Coast SAC
Lostock Gralam Station	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Oak Mere SAC
		West Midlands Mosses SAC
	Functionally Linked Land	Mersey Estuary SPA / Ramsar
	Recreational Pressure	None
	Urbanisation	None
	Water quality	Liverpool Bay SPA
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		Oak Mere SAC
		West Midlands Mosses SAC
	Water Quantity, Level and Flow	Liverpool Bay SPA
		Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II
		Oak Mere SAC
		West Midlands Mosses SAC
		Sefton Coast SAC
Mouldsworth Station	Atmospheric pollution: SO2 emissions	None
	Atmospheric pollution: NH3	None
	Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar
		Oak Mere SAC
		West Midlands Mosses SAC
	Functionally Linked Land	Mersey Estuary SPA / Ramsar
		The Dee Estuary SPA /Ramsar
	Recreational Pressure	None
	Urbanisation	None
	Water quality	Mersey Estuary SPA / Ramsar
		Mersey Narrows and North Wirral Foreshore SPA / Ramsar
		Midland Meres and Mosses Phase II Ramsar
		Oak Mere SAC
		West Midlands Mosses SAC

	Water Quantity, Level and Flow	Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar Oak Mere SAC West Midlands Mosses SAC Sefton Coast SAC

Test of Likely Significant Effects (ToLSE) for Growth Options

Chester

4.15 **Table 4-3** applies the ToLSE to the Chester growth area for impact pathways and Habitats sites identified in **Table 4-3**.

Table 4-3. ToLSE for the Chester growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	The Dee Estuary SPA / SAC /Ramsar	The A458 runs through Chester and is within 200m of these Habitats sites which are vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE.
Atmospheric pollution: NOx	West Midland Mosses SAC	No major roads come within 200m of this Habitats site. Screened out for LSE
Functionally Linked Land	Dee Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. Growth area options CH02, CH03, and CH04 are within 15km of these Habitats sites. Screened in for LSE
Functionally Linked Land	Liverpool Bay SPA	None of the qualifying species for this Habitats site forage inland. Screened out for LSE
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. Growth area options CH02, CH03, and CH04 are within 15km of these Habitats sites. Screened in for LSE

Recreational Pressure	River Dee and Bala Lake SAC	The growth area is within the catchment for this Habitat site which is vulnerable to recreational pressure. Screened in for LSE.
Urbanisation	River Dee and Bala Lake SAC	The growth area is within the catchment for this Habitat site which is vulnerable to urbanisation. Screened in for LSE.
Water quality	Deeside and Buckley Newt Sites SAC Halkyn Mountain SAC Johnstown Newt Sites SAC River Dee and Bala Lake SAC The Dee Estuary SPA / SAC /Ramsar	The growth area is within the catchment for these Habitats sites which are vulnerable to changes in water quality. Screened in for LSE.
Water Quantity, Level and Flow	Berwyn and South Clwyd Mountains SAC Halkyn Mountain SAC Johnstown Newt Sites SAC River Dee and Bala Lake SAC The Dee Estuary SPA / SAC /Ramsar	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Ellesmere Port

4.16 **Table 4-4** applies the ToLSE to the Ellesmere Port growth area for impact pathways and Habitats sites identified in **Table 4-4**.

Table 4-4. ToLSE for the Ellesmere Port growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The A41 comes within 200m of these Habitats sites and potentially links the growth area to the Habitats sites, These habitats sites are vulnerable to Air pollution: Impact of atmospheric nitrogen. Screened in for LSE
Atmospheric pollution: NOx	Mersey Narrows and North Wirral Foreshore SPA and Ramsar	This Habitats site is within 200m f the A41 which is within 16km of the growth area. Screened in for LSE
Atmospheric pollution: NOx	Oak Mere SAC	The shortest route to this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	The Dee Estuary SPA / SAC /Ramsar	A number of connecting roads come within 200m of this Habitats site and potentially link the growth area. This site is vulnerable to Air pollution: Impact of atmospheric nitrogen. Screened in for LSE
Atmospheric pollution: NOx	West Midlands Mosses SAC	No major roads come within 200m of this Habitats site.

		Screened out for LSE
Functionally Linked Land	Liverpool Bay SPA	None of the qualifying species for this Habitats site forage inland. Screened out for LSE
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. EP01, EP02, and EP03 are within 15km of these Habitats sites. Screened in for LSE
Functionally Linked Land	Mersey Narrows and North Wirral Foreshore SPA / Ramsar	The growth area is not within the inland foraging range of the qualifying species of this Habitats site. Screened out for LSE
Functionally Linked Land	Ribble and Alt Estuaries SPA	Several of the qualifying species for this Habitats site forage inland on farmland (up to 15km) however the nearest allocation option is 19km distant. Screened out for LSE.
Functionally Linked Land	The Dee Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. EP01, EP02, and EP03 are within 15km of these sites. Screened in for LSE
Recreational Pressure	Mersey Estuary SPA / Ramsar	These Habitats sites are vulnerable to Recreational disturbance. Screened in for LSE
Recreational Pressure	The Dee Estuary SPA / Ramsar	These Habitats sites are vulnerable to Recreational disturbance. Screened in for LSE
Urbanisation	Mersey Estuary SPA / Ramsar	These Habitats sites are vulnerable to Urbanisation. Screened in for LSE
Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Northwich

4.17 **Table 4-5** applies the ToLSE to the Northwich growth area for impact pathways and Habitats sites identified in **Table 4-5**.

Table 4-5. ToLSE for the Northwich growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Manchester Mosses SAC	This Habitats site is not within 200m of a major road. Screened out for LSE.
Atmospheric pollution: NOx	Mersey Estuary SPA	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	Oak Mere SAC	The A556 connects the growth area to the Habitats Site and is within 200m of the Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE.
Atmospheric pollution: NOx	West Midlands Mosses SAC	No major roads come within 200m of this Habitats site. Screened out for LSE
Functionally Linked Land	Mersey Estuary SPA	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site NOR09, NOR10, NOR11, NOR12 are within 15km of these Habitats sites. Screened in for LSE
Functionally Linked Land	Rostherne Mere Ramsar	The qualifying species for this Habitats site are unlikely to forage more than 500m from the site. Screened out for LSE
Urbanisation	Midland Meres Phase II Ramsar	These Habitats sites are vulnerable to Urbanisation. Screened in for LSE
Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

	Sefton Coast SAC	

Winsford

4.18 **Table 4-6** applies the ToLSE to the Winsford growth area for impact pathways and Habitats sites identified in **Table 4-5**.

Table 4-6. ToLSE for the Winsford growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Oak Mere SAC	The A54 connects the growth area to the Habitats Site and is within 200m of the Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE.
Atmospheric pollution: NOx	West Midland Mosses SAC	No major roads come within 200m of this Habitats site. Screened out for LSE
Functionally Linked Land	Mersey Estuary SPA / Ramsar	The Growth area options are greater than 15km from these Habitats Sites. Screened out for LSE.
Functionally Linked Land	Rostherne Mere Ramsar	The qualifying species for this Habitats site are unlikely to forage more than 500m from the site. Screened out for LSE
Urbanisation	Midland Meres and Mosses Phase II Ramsar	This Habitat site is vulnerable to urbanisation. Screened in for LSE
Urbanisation	West Midlands Mosses SAC	These Habitats sites are vulnerable to urbanisation. Screened in for LSE
Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Cuddington and Sandiway

4.19 **Table 4-7** applies the ToLSE to the Cuddington and Sandiway growth area for impact pathways and Habitats sites identified in **Table 4-7**.

Table 4-7. ToLSE for the Cuddington and Sandiway growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	Oak Mere SAC	The A556 connects the growth area to the Habitats Site and is within 200m of the Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE.
Atmospheric pollution: NOx	West Midland Mosses SAC	No major roads come within 200m of this Habitats site. Screened out for LSE
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site CUD001 – CUD005 are within 15km of these Habitats sites. Screened in for LSE
Functionally Linked Land	Rostherne Mere Ramsar	This Habitats site is significantly beyond the foraging range for the qualifying species of this Habitats site. Screened out for LSE
Urbanisation	Midland Meres and Mosses Phase II Ramsar	This Habitats site is vulnerable to urbanisation. Screened in for LSE
Urbanisation	West Midland Mosses SAC	This Habitats site is vulnerable to urbanisation. Screened in for LSE
Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Farndon

4.20 **Table 4-8** applies the ToLSE to the Farndon growth area for impact pathways and Habitats sites identified in **Table 4-8**.

Table 4-8. ToLSE for the Farndon growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Berwyn and South Clwyd Mountains SAC	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Water quality	Deeside and Buckley Newt Sites SAC Halkyn Mountain SAC Johnstown Newt Sites SAC River Dee and Bala Lake SAC The Dee Estuary SPA / SAC /Ramsar	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Berwyn and South Clwyd Mountains SAC Halkyn Mountain SAC Johnstown Newt Sites SAC River Dee and Bala Lake SAC The Dee Estuary SPA / SAC /Ramsar	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Frodsham

4.21 **Table 4-9** applies the ToLSE to the Frodsham growth area for impact pathways and Habitats sites identified in **Table 4-9**.

Table 4-9. ToLSE for the Frodsham growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The shortest route to this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	Oak Mere SAC	The A54//B5152 connect the growth area to this Habitats site. Connected major roads are within 200m of the Habitats site. The Habitats site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE.
Atmospheric pollution: NOx	West Midlands Mosses SAC	No major roads come within 200m of this Habitats site. Screened out for LSE
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from

		a roost site FRO01 to FRO03 are within 15km of these Habitats sites. Screened in for LSE
Functionally Linked Land	Liverpool Bay SPA	None of the qualifying species for this Habitats site forage inland. Screened out for LSE
Recreational Pressure	Mersey Estuary SPA / Ramsar	This Habitats site is vulnerable to recreational pressure. Screened in for LSE
Urbanisation	Mersey Estuary SPA / Ramsar	This Habitats site is vulnerable to urbanisation. Screened in for LSE
Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Helsby

4.22 **Table 4-10** applies the ToLSE to the Helsby growth area for impact pathways and Habitats sites identified in **Table 4-10**.

Table 4-10. ToLSE for the Helsby growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	Oak Mere SAC	The shortest route to this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	West Midlands Mosses SAC	No major roads come within 200m of this Habitats site. Screened out for LSE

Functionally Linked Land	Liverpool Bay SPA	None of the qualifying species for this Habitats site forage inland. Screened out for LSE
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site HEL01 to HEL03 are within 15km of these Habitats sites. Screened in for LSE
Functionally Linked Land	The Dee Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. HEL01 to HEL03 are within 15km of these sites. Screened in for LSE
Recreational Pressure	Mersey Estuary SPA / Ramsar	This Habitats site is vulnerable to recreational pressure. Screened in for LSE
Urbanisation	Mersey Estuary SPA / Ramsar	This Habitats site is vulnerable to urbanisation. Screened in for LSE
Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Kelsall

4.23 **Table 4-11** applies the ToLSE to the Kelsall growth area for impact pathways and Habitats sites identified in **Table 4-11**.

Table 4-11. ToLSE for the Kelsall growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	Oak Mere SAC	The A54 which comes within 200m of the Habitats Site and connects it to the

		growth area. This Habitats site is vulnerable to Air Pollution: impact of atmospheric nitrogen deposition Screened in for LSE
Atmospheric pollution: NOx	West Midlands Mosses SAC	This site is vulnerable to Air Pollution: impact of atmospheric nitrogen deposition but is not within 200m of any major roads. Screened out for LSE
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. KEL01 and KEL02 are within 15km of these sites. Screened in for LSE
Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Malpas

4.24 **Table 4-11** applies the ToLSE to the Malpas growth area for impact pathways and Habitats sites identified in **Table 4-11**.

Table 4-12. ToLSE for the Malpas growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Brown Moss SAC	This Habitats site is potentially connected to the growth area by the B5393 through Whitchurch and is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE
Atmospheric pollution: NOx	Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses SAC	The Habitats site is not within 200m of any major roads. Screened out for LSE.
Atmospheric pollution: NOx	West Midlands Mosses SAC	The Habitats site is vulnerable to Air pollution: Impact of atmospheric

		nitrogen deposition. However, there are no major roads within 200m of the site. Screened out for LSE.
Water quality	Deeside and Buckley Newt Sites SAC Halkyn Mountain SAC Johnstown Newt Sites SAC River Dee and Bala Lake SAC The Dee Estuary SPA / SAC /Ramsar	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Berwyn and South Clwyd Mountains SAC Halkyn Mountain SAC Johnstown Newt Sites SAC River Dee and Bala Lake SAC The Dee Estuary SPA / SAC /Ramsar	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Neston and Parkgate

4.25 **Table 4-13** applies the ToLSE to the Neston and Parkgate growth area for impact pathways and Habitats sites identified in **Table 4-13**.

Table 4-13. ToLSE for the Neston and Parkgate growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The A41 comes within 200m of these Habitats sites and potentially links the growth area to the Habitats sites, These habitats sites are vulnerable to Air pollution: Impact of atmospheric nitrogen. Screened in for LSE
Atmospheric pollution: NOx	The Dee Estuary SPA / SAC / Ramsar	The B5134 comes within 200m of this Habitats site and links it to the growth area. This site is vulnerable to Air pollution: Impact of atmospheric nitrogen. Screened in for LSE
Atmospheric pollution: NOx	Alywn Valley Woods SAC	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Functionally Linked Land	Liverpool Bay SPA	None of the qualifying species for this Habitats site forage inland. Screened out for LSE
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. NEP01 to NEP06 are within 15km of these sites.

		Screened in for LSE
Functionally Linked Land	Mersey Narrows and North Wirral Foreshore SPA / Ramsar	The growth area is not within the inland foraging range of the qualifying species of this Habitats site. Screened out for LSE
Functionally Linked Land	Ribble and Alt Estuaries SPA / Ramsar	Several of the qualifying species for this Habitats site forage inland on farmland (up to 15km) however the nearest allocation option is 19km distant. Screened out for LSE.
Functionally Linked Land	The Dee Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. NEP01 to NEP06 contain farmland and are within 15km of these sites. Screened in for LSE
Recreational Pressure	River Dee and Bala Lake SAC	This Habitats site is vulnerable to Recreational Pressure. Screened in for LSE
Recreational Pressure	The Dee Estuary SPA / SAC / Ramsar	This Habitats site is vulnerable to Recreational Pressure. Screened in for LSE
Urbanisation	River Dee and Bala Lake SAC	This Habitats site is vulnerable to Urbanisation. Screened in for LSE
Water quality	River Dee and Bala Lake SAC The Dee Estuary SPA / SAC / Ramsar	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	River Dee and Bala Lake SAC The Dee Estuary SPA / SAC / Ramsar	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Tarporley

4.26 **Table 4-14** applies the ToLSE to the Tarporley growth area for impact pathways and Habitats sites identified in **Table 4 14**.

Table 4-14. ToLSE for the Tarporley growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Oak Mere SAC	The A49/A54 Connects the growth area to this Habitats site which is within 200m of the site. The site is vulnerable to Air

		pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE.
Atmospheric pollution: NOx	West Midlands Mosses SAC	The site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. However, there are no major roads within 200m of the site. Screened out for LSE.
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site, however all site allocations in this growth area are more than 15km away from this Habitats Site. Screened out for LSE
Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Tarvin

4.27 **Table 4-15** applies the ToLSE to the Tarvin growth area for impact pathways and Habitats sites identified **Table 4-15**.

Table 4-15. ToLSE for the Tarvin growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	Oak Mere SAC	The A54 is within 200m of the Habitats site and connects it to the growth area. The site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition.

		Screened in for LSE.
Atmospheric pollution: NOx	West Midland Mosses SAC	The Habitats site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. However, there are no major roads within 200m of the site. Screened out for LSE.
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. TARV01 to TARV03 are within 15km of these sites. Screened in for LSE
Functionally Linked Land	The Dee Estuary SPA / Ramsar	Several of the qualifying species for this Habitats site forage inland on farmland (up to 15km) however the nearest allocation option is 19km distant. Screened out for LSE.
Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Tattenhall

4.28 **Table 4-16** applies the ToLSE to the Tattenhall growth area for impact pathways and Habitats sites identified **Table 4-16**.

Table 4-16. ToLSE for the Tattenhall growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Oak Mere SAC	The A54/A49, which is within 200m of the Habitats site, connects the growth area to this Habitats site. The site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE.
Atmospheric pollution: NOx	West Midland Mosses SAC	The site is vulnerable to Air pollution: Impact of atmospheric nitrogen

		deposition. However, there are no major roads within 200m of the site. Screened out for LSE.
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. TAT01 to TAT07 are within 15km of these sites. Screened in for LSE
Functionally Linked Land	The Dee Estuary SPA / Ramasar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. TAT01 to TAT07 are within 15km of these sites. Screened in for LSE
Water quality	Deeside and Buckley Newt Sites SAC Halkyn Mountain SAC Johnstown Newt Sites SAC River Dee and Bala Lake SAC The Dee Estuary SPA / SAC /Ramsar	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Berwyn and South Clwyd Mountains SAC Halkyn Mountain SAC Johnstown Newt Sites SAC River Dee and Bala Lake SAC The Dee Estuary SPA / SAC / Ramsar	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Acton Bridge Station

4.29 **Table 4-17** applies the ToLSE to the Acton Bridge Station growth area for impact pathways and Habitats sites identified **Table 4-17**.

Table 4-17. ToLSE for the Acton Bridge Station growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	Oak Mere SAC	The A54/A556, which is within 200m of the Habitats site, connects the growth area to this Habitats site. The site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE.
Atmospheric pollution: NOx	West Midland Mosses SAC	The site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. However, there are no major roads within 200m of the site.

		Screened out for LSE.
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. ACB01 to ACB05 are within 15km of these sites. Screened in for LSE
Functionally Linked Land	Rostherne Mere Ramsar	The qualifying species for this Habitats site are unlikely to forage more than 500m from the site. Screened out for LSE
Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Capenhurst Station

4.30 **Table 4-18** applies the ToLSE to the Capenhurst Station growth area for impact pathways and Habitats sites identified **Table 4-18**.

Table 4-18. ToLSE for the Capenhurst Station growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The A550, which is within 200m of the Habitats sites, connects the growth area to these Habitats sites. The site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE.
Atmospheric pollution: NOx	Mersey Narrows and North Wirral Foreshore SPA / Ramsar	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	The Dee Estuary SPA / Ramsar	The A550/A548 connects the growth area to this Habitats site. Major roads connected via this route are within 200m of the Habitats site. The site is

		vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE.
Functionally Linked Land	Liverpool Bay SPA	None of the qualifying species for this Habitats site forage inland. Screened out for LSE
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site.CAP01 and CAP02 are within 15km of these Habitats sites. Screened in for LSE
Functionally Linked Land	Mersey Narrows and North Wirral Foreshore SPA / Ramsar	The growth area is not within the inland foraging range of the qualifying species of this Habitats site. Screened out for LSE
Functionally Linked Land	The Dee Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. CAP01 and CAP02 contain farmland and are within 15km of these Habitats sites. Screened in for LSE
Recreational Pressure	Mersey Estuary SPA / Ramsar	This site is vulnerable to recreational pressure. Screened in for LSE
Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Delamare Station

4.31 **Table 4-19** applies the ToLSE to the Delamare Station growth area for impact pathways and Habitats sites identified **Table 4-19**.

Table 4-19. ToLSE for the Delamare Station growth area

Pathway	Habitats Site	ToLSE

Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	Oak Mere SAC	The A54/A556/B5152 connect the growth area to this Habitats site. Connected major roads are within 200m of the Habitats site. The Habitats site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE.
Atmospheric pollution: NOx	West Midland Mosses SAC	The Habitats site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. However, there are no major roads within 200m of the Habitats site. Screened out for LSE.
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. DEL01 is within 15km of these Habitats sites. Screened in for LSE
Recreational Pressure	Midland Meres and Mosses Phase I and Phase II Ramsar	This Habitats site is not vulnerable to recreational pressure. Screened out for LSE
Recreational Pressure	Oak Mere SAC	This Habitats site is not vulnerable to recreational pressure. Screened out for LSE
Recreational Pressure	West Midland Mosses SAC	This Habitats site is not vulnerable to recreational pressure. Screened out for LSE
Urbanisation	Midland Meres and Mosses Phase I and Phase II Ramsar	This Habitats site is vulnerable to urbanisation. Screened in for LSE
Urbanisation	Oak Mere SAC	This Habitats site is not vulnerable to urbanisation. Screened out for LSE
Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow.

	Midland Meres and Mosses Phase II Ramsar West Midlands Mosses SAC	Screened in for LSE.
Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Elton Station

4.32 **Table 4-20** applies the ToLSE to the Elton Station growth area for impact pathways and Habitats sites identified **Table 4-20**.

Table 4-20. ToLSE for the Elton Station growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	The Dee Estuary SAC/ SPA /Ramsar	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Functionally Linked Land	Liverpool Bay SPA	None of the qualifying species for this Habitats site forage inland. Screened out for LSE
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. ELT01 to ELT04 are within 15km of these Habitats sites. Screened in for LSE
Functionally Linked Land	Mersey Narrows and North Wirral Foreshore SPA / Ramsar	The growth area is not within the inland foraging range of the qualifying species of this Habitats site. Screened out for LSE
Functionally Linked Land	The Dee Estuary SPA /Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. However, these growth area options are greater than 15km from the Habitats site.

		Screened out for LSE
Recreational Pressure	Mersey Estuary SPA / Ramsar	This Habitats site is vulnerable to recreational pressure. Screened in for LSE
Urbanisation	Mersey Estuary SPA / Ramsar	This Habitats site is vulnerable to urbanisation. Screened in for LSE
Water quality	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Oak Mere SAC Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Hooton Station

4.33 **Table 4-21** applies the ToLSE to the Hooton Station growth area for impact pathways and Habitats sites identified **Table 4-21**.

Table 4-21. ToLSE for the Hooton Station growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Liverpool Bay SPA	This Habitats site is not vulnerable to Air Pollution: impact of atmospheric nitrogen deposition. Screened out for LSE
Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The A41 comes within 200m of this Habitats site and is directly connected to the growth area. Screened in for LSE.
Atmospheric pollution: NOx	Mersey Narrows and North Wirral Foreshore SPA / Ramsar	The Habitats site is not vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened out for LSE.
Atmospheric pollution: NOx	The Dee Estuary SPA /Ramsar	Various major roads connect the growth area to within 200m of this Habitats. The Habitats site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition.

		Screened in for LSE.
Functionally Linked Land	Liverpool Bay SPA	None of the qualifying species for this Habitats site forage inland. Screened out for LSE
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. HOO01 to HOO04 are within 15km of these Habitats sites. Screened in for LSE.
Functionally Linked Land	Mersey Narrows and North Wirral Foreshore SPA / Ramsar	The growth area is not within the inland foraging range of the qualifying species of this Habitats site. Screened out for LSE
Functionally Linked Land	Ribble and Alt Estuaries SPA / Ramsar	Several of the qualifying species for this Habitats site forage inland on farmland (up to 15km) however the nearest allocation option is 19km distant. Screened out for LSE.
Functionally Linked Land	The Dee Estuary SPA /Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. HOO01 to HOO04 are within 15km of these Habitats sites. Screened in for LSE
Recreational Pressure	Mersey Estuary SPA / Ramsar	This site is vulnerable to recreational pressure. Screened in for LSE
Urbanisation	Mersey Estuary SPA / Ramsar	This site is vulnerable to urbanisation. Screened in for LSE
Water quality	Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Oak Mere SAC West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Oak Mere SAC West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Lostock Gralam Station

4.34 **Table 4-22** applies the ToLSE to the Lostock Gralam Station growth area for impact pathways and Habitats sites identified **Table 4-22**.

Table 4-22. ToLSE for the Lostock Gralam Station growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Oak Mere SAC	The A54/A556 connect the growth area to this Habitats site. Connected major roads are within 200m of the Habitats site. The Habitats site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE.
Atmospheric pollution: NOx	West Midlands Mosses SAC	The Habitats site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. However, there are no major roads within 200m of the Habitats site. Screened out for LSE.
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. However, these growth area options are greater than 15km from the Habitats site. Screened out for LSE
Water quality	Liverpool Bay SPA Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Oak Mere SAC Rostherne Mere Ramsar West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Liverpool Bay SPA Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Oak Mere SAC Rostherne Mere Ramsar West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

Mouldsworth Station

4.35 **Table 4-23** applies the ToLSE to the Mouldsworth Station growth area for impact pathways and Habitats sites identified **Table 4-23**.

Table 4-23. ToLSE for the Mouldsworth Station growth area

Pathway	Habitats Site	ToLSE
Atmospheric pollution: NOx	Mersey Estuary SPA / Ramsar	The shortest route to within 200m of this Habitats site which is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition is greater than 16km. Screened out for LSE
Atmospheric pollution: NOx	Oak Mere SAC	The A54 and B5152 connect the growth area to this Habitats site which is within 200m of major roads. The Habitats site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. Screened in for LSE.
Atmospheric pollution: NOx	West Midlands Mosses SAC	The Habitats site is vulnerable to Air pollution: Impact of atmospheric nitrogen deposition. However, there are no major roads within 200m of the Habitats site. Screened out for LSE.
Functionally Linked Land	Mersey Estuary SPA / Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. MOU01 to MOU03 are within 15km of these Habitats sites. Screened in for LSE
Functionally Linked Land	The Dee Estuary SPA /Ramsar	Plover can use lowland farmland in winter and can forage up to 15 km from a roost site. However, these growth area options are greater than 15km from the Habitats sites. Screened out for LSE
Water quality	Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar Oak Mere SAC West Midlands Mosses SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.
Water Quantity, Level and Flow	Mersey Estuary SPA / Ramsar Mersey Narrows and North Wirral Foreshore SPA / Ramsar Midland Meres and Mosses Phase II Ramsar Oak Mere SAC West Midlands Mosses SAC Sefton Coast SAC	The growth area is within the catchment for these Habitats sites which are potentially vulnerable to changes in water quantity, level and flow. Screened in for LSE.

5. Summary of Screening

5.1 Fifty-nine policies, growth areas and growth strategies have been presented for screening within this HRA. Of the 59 assessed 21 have been screened in for further assessment and are listed below;

- SS1 Housing needs
- SS2 Employment needs
- SS3 Spatial strategy principles
- SS5 Spatial strategy options
- Option A – retain the green belt
- Option B - Follow current Local Plan level and distribution of development
- Option C - Sustainable transport corridors
- CH1: Chester
- EP1: Ellesmere Port
- EP2: Origin - Stanlow and Thornton Science Park
- EP3: Origin – Protos
- NO1: Northwich
- NO2: Gadbrook Park
- WI1: Winsford
- WI2: Winsford Industrial Estate
- FR1: Frodsham
- NP1: Neston and Parkgate
- MI1: Middlewich
- TA2: Local transport infrastructure priorities
- GT1: Gypsy and Traveller and Travelling Showpersons accommodation
- MS1: Minerals supply

5.2 The above policies, growth areas and growth strategies have been screened in for further assessment within an Appropriate Assessment due to them discussing net new residential development and/or net new employment development or other potentially impactful development and/or locations for the development. The information at this stage is high-level and therefore the assessment of likely significant effects is also high-level.

5.3 Table 5-1 summarises the growth areas which have been screened in for Appropriate Assessment for each of the option. Appropriate Assessment is not included in this report and will be undertaken once allocations for inclusion in the Regulation 18 Local Plan have been confirmed. Only screened in growth area / Habitats site / Option combinations which result in an LSE are included in this table.

5.4 Sites screened in at Task 1 of the HRA process do not necessarily result in a conclusion of likely significant effects following Appropriate Assessment. Further review of the allocations cannot be completed without a full draft of the Regulation 19 CW&C LP so no further conclusions can be drawn at this stage.

Table 5-1. Screened in growth areas by option.

Impact Pathway	Habitats Site	Option A	Option B	Option C
Air pollution: Impact of atmospheric nitrogen	Brown Moss SAC	Malpas	Malpas	Malpas
	Mersey Estuary SPA / Ramsar	None	Ellesmere Port Neston and Parkgate	Ellesmere Port Neston and Parkgate Capenhurst Station
	Mersey Narrows and North Wirral Foreshore SPA / Ramsar	None	Ellesmere Port	Ellesmere Port Hooton Station
	Oak Mere SAC	Northwich Winsford Cuddington and Sandiway Kelsall Tarporley Tarvin Tattenhall	Northwich Winsford Cuddington and Sandiway Frodsham Kelsall Tarporley Tarvin Tattenhall	Northwich Winsford Cuddington and Sandiway Frodsham Kelsall Tarporley Tarvin Tattenhall Acton Bridge Station Delamere Station Lostock Gralam Station Mouldsworth Station
	The Dee Estuary SPA / SAC /Ramsar	None	Chester Neston and Parkgate	Chester Neston and Parkgate Capenhurst Station Hooton Station
Loss of Functionally Linked Land	Mersey Estuary SPA / Ramsar	Ellesmere Port Cuddington and Sandiway Kelsall Tarvin Tattenhall	Chester Ellesmere Port Northwich Cuddington and Sandiway Frodsham Helsby Kelsall Neston and Parkgate Tarvin Tattenhall	Chester Ellesmere Port Northwich Cuddington and Sandiway Frodsham Helsby Kelsall Neston and Parkgate Tarvin Tattenhall Acton Bridge Station Capenhurst Station

				Delamere Station Elton Station Hooton Station Mouldsworth Station
	The Dee Estuary SPA / SAC /Ramsar	Ellesmere Port Tattenhall	Chester Ellesmere Port Helsby Tattenhall	Chester Ellesmere Port Helsby Tattenhall Capenhurst Station
Recreational Pressure	Mersey Estuary SPA / Ramsar	None	Ellesmere Port Frodsham Helsby	Ellesmere Port Frodsham Helsby Capenhurst Station Elton Station Hooton Station
	River Dee and Bala Lake SAC	None	Cheshire Neston and Parkgate	Cheshire Neston and Parkgate
	The Dee Estuary SPA / SAC /Ramsar	None	Ellesmere Port Neston and Parkgate	Ellesmere Port Neston and Parkgate Hooton Station
Urbanisation	Mersey Estuary SPA / Ramsar	None	Ellesmere Port Frodsham Helsby	Ellesmere Port Frodsham Helsby Elton Station Hooton Station
	Midland Meres Phase I Ramsar	None	None	Delamere Station
	Midland Meres Phase II Ramsar	Northwich Cuddington and Sandiway	Northwich Cuddington and Sandiway	Northwich Cuddington and Sandiway Delamere Station
	Oak Mere SAC	Cuddington and Sandiway	Cuddington and Sandiway	Cuddington and Sandiway Delamere Station
	River Dee and Bala Lake SAC	None	Chester	Chester
	West Midlands Mosses SAC	Winsford Cuddington and Sandiway	Winsford Cuddington and Sandiway	Winsford Cuddington and Sandiway

Water Quality	Alyn Valley Woods SAC	Farndon	Chester	Chester
		Malpas	Farndon	Farndon
		Tattenhall	Malpas	Malpas
			Neston and Parkgate	Neston and Parkgate
			Tattenhall	Tattenhall
	Deeside and Buckley Newt Sites SAC	Farndon	Chester	Chester
		Malpas	Farndon	Farndon
		Tattenhall	Malpas	Malpas
			Neston and Parkgate	Neston and Parkgate
			Tattenhall	Tattenhall
	Halkyn Mountain SAC	Farndon	Chester	Chester
		Malpas	Farndon	Farndon
		Tattenhall	Malpas	Malpas
			Neston and Parkgate	Neston and Parkgate
			Tattenhall	Tattenhall
	Johnstown Newt Sites	Farndon	Chester	Chester
		Malpas	Farndon	Farndon
		Tattenhall	Malpas	Malpas
			Neston and Parkgate	Neston and Parkgate
			Tattenhall	Tattenhall
	Mersey Estuary SPA / Ramsar	Ellesmere Port	Ellesmere Port	Ellesmere Port
		Northwich	Northwich	Northwich
		Winsford	Winsford	Winsford
		Cuddington and Sandiway	Cuddington and Sandiway	Cuddington and Sandiway
		Kelsall	Frodsham	Frodsham
		Tarpoley	Helsby	Helsby
		Tarvin	Kelsall	Kelsall
			Tarpoley	Tarpoley
			Tarvin	Tarvin
				Acton Bridge Station
				Capenhurst Station
				Delamere Station
				Elton Station
				Hooton Station
				Lostock Gralam Station
				Mouldsworth Station

Mersey Narrows and North Wirral Foreshore SPA / Ramsar	Ellesmere Port Northwich Winsford Cuddington and Sandiway Kelsall Tarpoley Tarvin Lostock Gralam Station Mouldsworth Station	Ellesmere Port Northwich Winsford Cuddington and Sandiway Frodsham Helsby Kelsall Tarpoley Tarvin	Ellesmere Port Northwich Winsford Cuddington and Sandiway Frodsham Helsby Kelsall Tarpoley Tarvin Acton Bridge Station Capenhurst Station Delamere Station Elton Station Hooton Station Lostock Gralam Station Mouldsworth Station
Midland Meres and Mosses Phase I and Phase II	Ellesmere Port Northwich Winsford Cuddington and Sandiway Kelsall Tarpoley Tarvin	Ellesmere Port Northwich Winsford Cuddington and Sandiway Frodsham Helsby Kelsall Tarpoley Tarvin	Ellesmere Port Northwich Winsford Cuddington and Sandiway Frodsham Helsby Kelsall Tarpoley Tarvin Acton Bridge Station Capenhurst Station Delamere Station Elton Station Hooton Station Lostock Gralam Station Mouldsworth Station
Oak Mere SAC	Ellesmere Port Northwich Winsford Cuddington and Sandiway	Ellesmere Port Northwich Winsford Cuddington and Sandiway	Ellesmere Port Northwich Winsford Cuddington and Sandiway

	Kelsall	Frodsham	Frodsham
	Tarpoley	Helsby	Helsby
	Tarvin	Kelsall	Kelsall
		Tarpoley	Tarpoley
		Tarvin	Tarvin
			Acton Bridge Station
			Capenhurst Station
			Delamere Station
			Elton Station
			Hooton Station
			Lostock Gralam Station
			Mouldsworth Station
River Dee and Bala Lake SAC	Farndon	Chester	Chester
	Malpas	Farndon	Farndon
	Tattenhall	Malpas	Malpas
		Neston and Parkgate	Neston and Parkgate
		Tattenhall	Tattenhall
The Dee Estuary SPA / SAC /Ramsar	Farndon	Chester	Chester
	Malpas	Farndon	Farndon
	Tattenhall	Malpas	Malpas
		Neston and Parkgate	Neston and Parkgate
		Tattenhall	Tattenhall
West Midland Mosses SAC	Ellesmere Port	Ellesmere Port	Ellesmere Port
	Northwich	Northwich	Northwich
	Winsford	Winsford	Winsford
	Cuddington and Sandiway	Cuddington and Sandiway	Cuddington and Sandiway
	Kelsall	Frodsham	Frodsham
	Tarpoley	Helsby	Helsby
	Tarvin	Kelsall	Kelsall
		Tarpoley	Tarpoley
		Tarvin	Tarvin
			Acton Bridge Station
			Capenhurst Station
			Delamere Station
			Elton Station
			Hooton Station
			Lostock Gralam Station

				Mouldsworth Station
Water Quantity, Level and Flow	Alwyn Valley Woods	Farndon	Chester	Chester
		Malpas	Farndon	Farndon
		Tattenhall	Malpas	Malpas
			Neston and Parkgate	Neston and Parkgate
			Tattenhall	Tattenhall
	Berwyn and South Clwyd Mountains SAC	Farndon	Chester	Chester
		Malpas	Farndon	Farndon
		Tattenhall	Malpas	Malpas
			Neston and Parkgate	Neston and Parkgate
			Tattenhall	Tattenhall
	Johnstown Newt Sites	Farndon	Chester	Chester
		Malpas	Farndon	Farndon
		Tattenhall	Malpas	Malpas
			Neston and Parkgate	Neston and Parkgate
			Tattenhall	Tattenhall
	Mersey Estuary SPA / Ramsar	Ellesmere Port	Ellesmere Port	Ellesmere Port
		Northwich	Northwich	Northwich
		Winsford	Winsford	Winsford
		Cuddington and Sandiway	Cuddington and Sandiway	Cuddington and Sandiway
		Kelsall	Frodsham	Frodsham
		Tarpoley	Helsby	Helsby
		Tarvin	Kelsall	Kelsall
			Tarpoley	Tarpoley
			Tarvin	Tarvin
				Acton Bridge Station
				Capenhurst Station
				Delamere Station
				Elton Station
				Hooton Station
				Lostock Gralam Station
				Mouldsworth Station
	Mersey Narrows and North Wirral Foreshore SPA / Ramsar	Ellesmere Port	Ellesmere Port	Ellesmere Port
		Northwich	Northwich	Northwich
		Winsford	Winsford	Winsford
		Cuddington and Sandiway	Cuddington and Sandiway	Cuddington and Sandiway
		Kelsall	Frodsham	Frodsham

	Tarpoley	Helsby	Helsby
	Tarvin	Kelsall	Kelsall
		Tarpoley	Tarpoley
		Tarvin	Tarvin
			Acton Bridge Station
			Capenhurst Station
			Delamere Station
			Elton Station
			Hooton Station
			Lostock Gralam Station
			Mouldsworth Station
Midland Meres and Mosses Phase I and Phase II	Ellesmere Port	Ellesmere Port	Ellesmere Port
	Northwich	Northwich	Northwich
	Winsford	Winsford	Winsford
	Cuddington and Sandiway	Cuddington and Sandiway	Cuddington and Sandiway
	Kelsall	Frodsham	Frodsham
	Tarpoley	Helsby	Helsby
	Tarvin	Kelsall	Kelsall
		Tarpoley	Tarpoley
		Tarvin	Tarvin
			Acton Bridge Station
			Capenhurst Station
			Delamere Station
			Elton Station
			Hooton Station
			Lostock Gralam Station
			Mouldsworth Station
Oak Mere SAC	Ellesmere Port	Ellesmere Port	Ellesmere Port
	Northwich	Northwich	Northwich
	Winsford	Winsford	Winsford
	Cuddington and Sandiway	Cuddington and Sandiway	Cuddington and Sandiway
	Kelsall	Frodsham	Frodsham
	Tarpoley	Helsby	Helsby
	Tarvin	Kelsall	Kelsall
		Tarpoley	Tarpoley
		Tarvin	Tarvin
			Acton Bridge Station

			Capenhurst Station
			Delamere Station
			Elton Station
			Hooton Station
			Lostock Gralam Station
			Mouldsworth Station
River Dee and Bala Lake SAC	Farndon	Chester	Chester
	Malpas	Farndon	Farndon
	Tattenhall	Malpas	Malpas
		Neston and Parkgate	Neston and Parkgate
		Tattenhall	Tattenhall
The Dee Estuary SPA / SAC /Ramsar	Farndon	Chester	Chester
	Malpas	Farndon	Farndon
	Tattenhall	Malpas	Malpas
		Neston and Parkgate	Neston and Parkgate
		Tattenhall	Tattenhall
West Midland Mosses SAC	Ellesmere Port	Ellesmere Port	Ellesmere Port
	Northwich	Northwich	Northwich
	Winsford	Winsford	Winsford
	Cuddington and Sandiway	Cuddington and Sandiway	Cuddington and Sandiway
	Kelsall	Frodsham	Frodsham
	Tarpoley	Helsby	Helsby
	Tarvin	Kelsall	Kelsall
		Tarpoley	Tarpoley
		Tarvin	Tarvin
			Acton Bridge Station
			Capenhurst Station
			Delamere Station
			Elton Station
			Hooton Station
			Lostock Gralam Station
			Mouldsworth Station
Sefton Coast SAC	Ellesmere Port	Ellesmere Port	Ellesmere Port
	Northwich	Northwich	Northwich
	Winsford	Winsford	Winsford
	Cuddington and Sandiway	Cuddington and Sandiway	Cuddington and Sandiway

Kelsall	Frodsham	Frodsham
Tarpoley	Helsby	Helsby
Tarvin	Kelsall	Kelsall
	Tarpoley	Tarpoley
	Tarvin	Tarvin
		Acton Bridge Station
		Capenhurst Station
		Delamere Station
		Elton Station
		Hooton Station
		Lostock Gralam Station
		Mouldsworth Station

Appendix A Figures

Figure 3 Habitats sites in relation to the CW&C unitary authority area

Appendix B Background to Habitat Sites

Alyn Valley Woods SAC

Introduction

5.5 The site predominantly occupies the steep Carboniferous Limestone escarpment alongside the river Alyn, together with adjoining areas. The site supports a large stand of semi-natural broadleaved woodland namely the SAC feature 'Tilio – Acerion forests of slopes, screes and ravines', arising along the steep gorge of the river Alyn and the Alyn's tributaries Nant Gain and Aber Eilun. Narrow woodland strips along the valley bottom and on the wetter ground of the floodplain around Aber Eilun are dominated by wet woodland corresponding to the SAC feature 'Alluvial forest with *Alnus glutinosa* and *Fraxinus excelsior* (Alno – *Padion, Alnion incanae, Salicion alvae*)'.

5.6 Several small areas of species rich calcicolous grassland constitute the third SAC feature 'Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco – Brometalia*)'[44].

Conservation Objectives[45]

5.7 The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species.

- The conservation status of a natural habitat will be taken as favourable when: • Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable.

5.8 The conservation status of a species is the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as 'favourable' when:

- population dynamics data on the species indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."

Qualifying Features[46]

5.9 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following habitats listed in Annex I:

- H9180 Tilio-Acerion forests of slopes, screes and ravines;
- H6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites); and

[44] https://naturalresources.wales/media/638421/SSSI_0241_Map0022df4.pdf [Accessed 29/05/2025]
[45] *ibid*
[46] *ibid*

- H91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*).

Environmental Vulnerabilities

5.10 Threats and pressures defined by the core management plan are:

- Invasive species;
- Non-native species;
- Livestock grazing;
- Recreational pressure;
- Water quality;
- Water quantity; and
- Scrub encroachment.

Brown Moss SAC

Introduction

5.11 The Eden is an outstanding floristically rich, northern river on sandstone and hard limestone. The catchment includes headwaters running off the Yorkshire Dales, the North Pennines and the eastern fells of the Lake District and the major standing water body of Ullswater. Streams flowing from limestone are calcareous, whilst those flowing off the Pennines and the Lake District fells are more acidic. The nutrient status gradually changes along the Eden's length as nutrient loadings naturally increase in the lower reaches[47].

Conservation Objectives[48]

5.12 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;

5.13 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.

Qualifying Features[49]

5.14 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following species listed in Annex I:

[47] https://publications.naturalengland.org.uk/file/6126323676217344 [Accessed 13/0/2025]
[48] https://publications.naturalengland.org.uk/file/5498402913910784 [Accessed 02/06/2025]
[49] https://publications.naturalengland.org.uk/file/6126323676217344 [Accessed 13/0/2025]

- S 1831 Floating water-plantain *Luronium natans*

Environmental Vulnerabilities

5.15 With regards to the Site Improvement Plan for Brown Moss SAC (SIP031)[50], the following are listed as environmental vulnerabilities:

- Hydrological changes;
- Water pollution;
- Invasive species;
- Siltation; and
- Air Pollution: impact of atmospheric nitrogen deposition.

Berwyn and South Clwyd Mountains SAC

Introduction

5.16 The Berwyn and South Clwyd Mountains SAC is a large upland site (27,132 ha), the largest area of blanket bog and European dry heath in Wales. It comprises three discrete sites, Berwyn SSSI, Llandegla Moor SSSI and Ruabon and Llantysilio Mountains and Minera SSSI. All of these sites are predominantly a mixture of dry heath and blanket bog vegetation with patches of transition mires and quaking bogs vegetation found as an intricate mosaic, usually on acidic rock types, and can together be described as upland moorland[51].

Conservation Objectives[52]

5.17 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;

5.18 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.

Qualifying Features[53]

5.19 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following habitats listed in Annex I:

- H4030 European dry heaths;
- H7130 Blanket bogs;

[50] https://publications.naturalengland.org.uk/file/4968513861058560 [Accessed 02/06/2025]
[51] https://naturalresources.wales/media/670888/Berwyn%20man%20plan%20(E)%20(table%20revis%2010.09.09).pdf [Accessed 29/05/2025]
[52] ibid
[53] ibid

- H6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites);
- H7140 Transition mires and quaking bogs;
- H8120 Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*); and
- H8210 Calcareous rocky slopes with chasmophytic vegetation.

Environmental Vulnerabilities

5.20 With regards to the Site Improvement Plan for the Dee Estuary SAC54, the following are listed as environmental vulnerabilities:

- Fire;
- Grazing;
- Stock distribution;
- Heather management;
- Tree/scrub encroachment;
- Drainage;
- Peat digging;
- Recreational disturbance;
- Atmospheric deposition (N);
- Heather beetle;
- Invasive species;
- Game management;
- Climate change;
- Drainage (water table);
- Nutrient enrichment;
- Quarrying; and
- Predation.

Dee Estuary SAC

Introduction

5.21 The Dee Estuary / Aber Dyfrdwy Special Area of Conservation (SAC) includes the Dee Estuary itself and areas of intertidal flats on the north-west coast of the Wirral (North Wirral Foreshore) and on the north east Wales coast, east of Prestatyn (Gronant Dunes and Talacre Warren). Gronant Dunes and Talacre Warren also includes the largest remaining area of a once extensive dune system along this section of Welsh coast The SAC has been designated because of its size and biological interest including its saltmarshes, intertidal mudflats and sandflats, sand dunes, drift line vegetation and sea cliffs, the presence of petalwort Petalophyllum ralfsii, and sea lamprey Petromyzon marinus and river lamprey Lampetra fluviatilis that migrate through the area[55].

[54] https://publications.naturalengland.org.uk/file/5140799320752128 [Accessed 29/05/2025]
[55] https://publications.naturalengland.org.uk/file/4614138265337856 [Accessed 29/05/2025]

Conservation Objectives[56]

5.22 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;

5.23 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.

Qualifying Features[57]

5.24 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following habitats listed in Annex I:

- H1140 Mudflats and sandflats not covered by seawater at low tide;
- H1310 Salicornia and other annuals colonizing mud and sand
- H1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae)
- H1130 Estuaries
- H1210 Annual vegetation of drift lines
- H1230 Vegetated sea cliffs of the Atlantic and Baltic Coasts
- H2110 Embryonic shifting dunes
- 2120 "Shifting dunes along the shoreline with Ammophila arenaria (""white dunes"")"
- 2130 "Fixed coastal dunes with herbaceous vegetation (""grey dunes"")" * Priority feature
- 2190 Humid dune slacks

5.25 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following species listed in Annex I:

- S1095 Sea lamprey *Petromyzon marinus;*
- S1099 River lamprey *Lampetra fluviatilis; and*
- S1395 Petalwort *Petalophyllum ralfsii*;

Environmental Vulnerabilities

5.26 With regards to the Site Improvement Plan for the Dee Estuary SAC58, the following are listed as environmental vulnerabilities:

- Public Access/Disturbance;

[56] https://publications.naturalengland.org.uk/file/5834949009866752 [Accessed 29/05/2025]
[57] https://sac.jncc.gov.uk/site/UK0030131 [Accessed 29/05/2025]
[58] https://publications.naturalengland.org.uk/file/5140799320752128 [Accessed 29/05/2025]

- Changes in species distributions;
- Invasive species;
- Climate change;
- Coastal squeeze;
- Inappropriate scrub control;
- Water pollution;
- Fisheries: Commercial marine and estuarine;
- Inappropriate coastal management;
- Overgrazing;
- Direct Impact from third party;
- Marine litter;
- Predation;
- Planning permission, general;
- Marine consents and permits;
- Wildfire/ arson;
- Air pollution: Impact of atmospheric nitrogen deposition and
- Transportation and service corridors.

Dee Estuary Ramsar and SPA

Introduction

5.27 The Dee Estuary lies on the border between England and Wales on the north-west coast of Britain. It is a large, funnel-shaped, sheltered estuary, which supports extensive areas of intertidal sand and mudflats and saltmarsh. Where agricultural reclamation has not occurred, the saltmarshes grade into transitional brackish and swamp vegetation on the upper shore. The site also includes the three sandstone islands of Hilbre, with their important cliff vegetation and maritime heathland and grassland. The two shorelines of the estuary show a marked contrast between the industrialised usage of the coastal belt in Wales and residential and recreational usage in England. The site is of major importance for waterbirds; during the winter the intertidal flats, saltmarshes and fringing habitats including coastal grazing marsh/fields, provide feeding and roosting sites for internationally important numbers of ducks and waders; in summer the site supports nationally important breeding colonies of two species of tern. The site is also important during migration periods, particularly for wader populations moving along the west coast of Britain and for Sandwich terns post-breeding.

Conservation Objectives[59]

5.28 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;

[59] https://publications.naturalengland.org.uk/file/5008539580104704 [Accessed 29/05/2025]

- The population of each of the qualifying features, and,
- The distribution of qualifying features within the site.

Qualifying Features

5.29 With regard to the SPA[60], the site is designated as an SPA for the following features:

- Waterfowl assemblage (20,000 birds)
- Wintering Birds
- Bar-tailed godwit (*Limosa lapponica*),
- Black-tailed godwit (*Limosa limosa islandica*),
- Curlew (*Numenius arquata*),
- Dunlin (*Calidris alpina alpina*),
- Grey plover (*Pluvialis squatarola*),
- Knot (*Calidris canutus*),
- Oystercatcher (*Haematopus ostralegus*),
- Pintail (*Anas acuta*),
- Redshank (*Tringa totanus*),
- Shelduck (*Tadorna tadorna*),
- Teal (*Anas crecca*),
- Breeding Birds
- Common tern (*Sterna hirundo*),
- Little tern (*Sterna albifrons*),
- Passage
- Sandwich tern (*Sterna sandvicensis*)

5.30 With regard to the Ramsar[61], the site is designated for the following features:

Ramsar Criteria 1
Extensive intertidal mud and sand flats (20 km by 9 km) with large expanses of saltmarsh towards the head of the estuary.

Ramsar Criteria 5
Species with peak counts in winter; Non-breeding season regularly supports 120,726 individual waterbirds

Ramsar Criteria 6
Species with peak counts in spring/autumn:

- Redshank (*Tringa totanus*)

Species with peak counts in winter:

- Teal (*Anas crecca*),
- Shelduck (*Tadorna tadorna*),
- Oystercatcher (*Haematopus ostralegus*),
- Curlew (*Numenius arquata*),
- Pintail (*Anas acuta*),

[60] https://assets.publishing.service.gov.uk/media/5def7657ed915d15f3113d2f/Dee_Estuary_SPA_and_SAC_Factsheet.pdf [Accessed 02/06/2025]
[61] https://rsis.ramsar.org/RISapp/files/RISrep/GB298RIS.pdf [Accessed 02/06/2025]

- Grey plover (*Pluvialis squatarola*),
- Knot (*Calidris canutus*),
- Dunlin (*Calidris alpina alpina*),
- Bar-tailed godwit (*Limosa lapponica*); and
- Black-tailed godwit (*Limosa limosa islandica*).

Environmental Vulnerabilities

5.31 With regards to the Site Improvement Plan for the Dee Estuary SPA[62], the following are listed as environmental vulnerabilities:

- Public Access/Disturbance;
- Changes in species distributions;
- Invasive species;
- Climate change;
- Coastal squeeze;
- Inappropriate scrub control;
- Water pollution;
- Fisheries: Commercial marine and estuarine;
- Inappropriate coastal management;
- Overgrazing;
- Direct Impact from third party;
- Marine litter;
- Predation;
- Planning permission, general;
- Marine consents and permits;
- Wildfire/ arson;
- Air pollution: Impact of atmospheric nitrogen deposition and
- Transportation and service corridors.

Deeside and Buckley Newt Sites SAC

Introduction

5.32 This composite site in north-east Flintshire is situated on the coastal slopes overlooking the Dee Estuary. The solid geology of the site consists of deposits of Carboniferous Middle Coal Measures. These include siltstone, mudstone, sandstone, fireclay and coal. The clay and coal mineral deposits have been commercially exploited. These are in part overlain by glacial boulder clay. Soils are predominantly loamy to clayey and slowly permeable.[63].

Conservation Objectives[64]

[62] https://publications.naturalengland.org.uk/file/5140799320752128 [Accessed 29/05/2025]
[63] https://naturalresources.wales/media/671740/Deeside_and_Buckley_WES32_Plan_English.pdf [Accessed 29/05/2025]
[64] Ibid

5.33 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;

5.34 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.

Qualifying Features[65]

5.35 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following habitats listed in Annex I:

- H91AO Old sessile woodland with *Ilex* and *Blechnum*.

5.36 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following species listed in Annex I:

- S1166 Great crested newt *Triturus cristatus*.

Environmental Vulnerabilities

5.37 With regards to the Deeside and Buckley Newt Sites SAC[66], the following are listed as environmental vulnerabilities:

- Water quality;
- Invasive species;
- Predation;
- Obstacles to movement; and
- Recreational use.

Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses SAC

Introduction

5.38 This is a large lowland raised bog that straddles the English/Welsh border. It is amongst the largest and most southerly raised bogs in the UK. Although much of the site has been subject to peat extraction, areas of partially-cut and uncut mire still remain. In areas formerly subject to commercial peat-cutting, conservation management has led to the regeneration of bog forming vegetation. Mire vegetation includes the bog-mosses *Sphagnum papillosum*, *Sphagnum magellanicum*, and *Sphagnum pulchrum*, all three British species of sundew *Drosera spp*., cranberry *Vaccinium oxycoccos*, bog asphodel *Narthecium ossifragum*, royal fern Osmunda regalis, white beak-sedge *Rhynchospora alba* and bog-rosemary

[65] Ibid
[66] Ibid

Andromeda polifolia, together with the nationally scarce moss *Dicranum affine*. Over 1,700 invertebrate species have been recorded here, including 29 nationally rare species.[67].

Conservation Objectives[68]

5.39 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;

5.40 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.

Qualifying Features[69]

5.41 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following habitats listed in Annex I:

- H7110 Active raised bogs; and
- H7120 Degraded raised bogs still capable of natural regeneration.

Environmental Vulnerabilities

5.42 With regards to the Site Improvement Plan SAC[70], the following are listed as environmental vulnerabilities:

- Inappropriate water levels;
- Water pollution;
- Air pollution: Impact of atmospheric nitrogen deposition;
- Inappropriate scrub control;
- Overgrazing;
- Planning permission, general;
- Peat extraction; and
- Invasive species.

Halkyn Mountain SAC

Introduction

5.43 The majority of the site is located 4km to the northwest of Mold in Flintshire, and lies at between 100-300m. The site comprises predominantly common land situated on an elongated plateau of Lower

[67] https://publications.naturalengland.org.uk/file/4815134182604800 [Accessed 29/05/2025]
[68] https://publications.naturalengland.org.uk/file/5216910757330944 [Accessed 29/05/2025]
[69] https://publications.naturalengland.org.uk/file/4815134182604800 [Accessed 29/05/2025]
[70] https://publications.naturalengland.org.uk/file/6095339759075328 [Accessed 29/05/2025]

Carboniferous Limestone which trends north-south, with the Dee Estuary to the east and the Clwydian Hills to the west. The site supports many former mineral workings including metalliferous mine spoil tips along with small chert and limestone quarries. Three large quarries currently operate on Halkyn Common, two of which are included within Halkyn Common and Holywell Grasslands SSSI for their mineral interest[71].

Conservation Objectives[72]

5.44 The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species.

- The conservation status of a natural habitat will be taken as favourable when: • Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable.

5.45 The conservation status of a species is the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as 'favourable' when:

- population dynamics data on the species indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."

Qualifying Features[73]

5.46 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following habitats listed in Annex I:

- H6130: Calaminarian grassland of the *Violetalia calaminariae* type;
- H4030: European dry heath;
- H6210: Semi-natural dry grassland and scrubland facies on calcareous substrates;
- H6410: Molinia meadows on calcareous peaty or clayey-silt-laden soils (*Molinion caeruleae*); and
- S1166: Great crested newt (Triturus cristatus).

Environmental Vulnerabilities

5.47 Threats and pressures defined by the standard data form (UK0030163[74]) are:

- Soil pollution and solid waste (excluding discharges),
- Grazing,
- Human induced changes in hydraulic conditions,
- Outdoor sports and leisure activities, recreational activities,

[71] https://naturalresources.wales/media/672548/Halkyn%20SAC%20Plan%20_Eng_.pdf [Accessed 29/05/2025]
[72] *ibid*
[73] *ibid*
[74] Available at: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030163.pdf [Accessed 29/05/2025]

- Hunting and collection of wild animals (terrestrial),
- Mining and quarrying,
- Fire and fire suppression,
- Problematic native species,
- Pollution to groundwater (point sources and diffuse sources),
- Invasive non-native species,
- Utility and service lines, and
- Biocenotic evolution, succession.

Johnstown Newt Sites SAC

Introduction

5.48 The site is located in the environs of the village of Johnstown, south west of Wrexham, at an altitude of 130m above mean sea level. It is of special interest for its population of the great crested newt Triturus cristatus. This species has suffered a marked decline throughout Great Britain and Continental Europe as a result of habitat loss. Great Britain is considered to support one of the strongholds for this species in Western Europe.

5.49 The Bettisfield Formation feldspathic sandstone and coal measures underlie the site and a number of capped mine shafts are present within the boundaries of the site. Where present, natural soils are of over-consolidated till (boulder clay) origin. The majority of the water bodies originated following the cessation of mineral extractive industries including coal mining and quarrying for clay and associated industrial developments. Certain ponds, particularly at Hafod, were specifically created for amphibian conservation purposes.

5.50 Surrounding areas of land support a mosaic of scrub and planted trees, grassland, and tall ruderal vegetation. These form important foraging and over wintering areas for adult and juvenile amphibians[75].

Conservation Objectives[76]

5.51 The conservation status of a natural habitat is the sum of the influences acting on it and its typical species that may affect its long-term natural distribution, structure and functions as well as the long term survival of its typical species.

- The conservation status of a natural habitat will be taken as favourable when: • Its natural range and areas it covers within that range are stable or increasing, and
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- The conservation status of its typical species is favourable.

5.52 The conservation status of a species is the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as 'favourable' when:

- population dynamics data on the species indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and

[75] https://naturalresources.wales/media/672594/Johnstown%20Newt%20Site%20Management%20Plan%20April%202008%20_English_.pdf [Accessed 29/05/2025]
[76] *ibid*

- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."

Qualifying Features[77]

5.53 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following species listed in Annex I:

- S1166 Great crested newt *Triturus cristatus*.

Environmental Vulnerabilities

5.54 Threats and pressures defined by the standard data form (UK0030163[78]) are:

- Extent of habitat;
- Macrophyte plant cover;
- Water depth;
- Presence of pollution;
- Extent of shading;
- Extent and quality of terrestrial habitat;
- Dispersal routes
- Presence of fish;
- Presence of water and wildfowl; and
- Presence of non-native aquatic plant species, especially *Crassula helmsii.*

Liverpool Bay SPA

Introduction

5.55 The Liverpool Bay / Bae Lerpwl SPA is in the east of the Irish Sea, bordering northern England and north Wales, and running as a broad arc from Morecambe Bay to the east coast of Anglesey.

5.56 The seabed of Liverpool Bay / Bae Lerpwl SPA contains a wide range of mobile sediments. Sand is the most common substrate, with a concentrated area of gravelly sand located off the Mersey Estuary. Tidal currents within the Bay are generally weak and do not exceed 2 m/sec. This in conjunction with an extended tidal range of 6–8 m facilitates deposition of sediments and encourages mud and sand belts to accumulate.

5.57 The population estimates and important usage areas for non-breeding red-throated diver, common scoter, little gull were identified from data collected using visual aerial survey over five winter seasons (2004/05, 2005/06, 2006/07, 2007/08 and 2010/11). The waterbird assemblage feature was also identified based on these data. Important foraging areas for little tern were identified from shore and boat-based surveys (2009, 2010, 2011) undertaken around the Dee Estuary SPA; while important usage areas for common tern around the Mersey Narrows and North Wirral Foreshore SPA were identified from models of common tern foraging behaviour generated from visual tracking surveys at selected colonies around the UK. The population of little tern expected to forage within the boundary is determined by the population size (a 5-year mean of Apparently Occupied Nests based on data from 2010–2014) at Gronant Beach.

[77] *ibid*
[78] Available at: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030163.pdf [Accessed 29/05/2025]

Conservation Objectives[79]

5.58 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 qualifying features within the site.

Qualifying Features

5.59 With regard to the SPA[80], Natural England has stated that the following species should be considered as likely qualifying species:

- Non-breeding
- Red-throated diver (*Gavia stellata*);
- Common scoter (*Melanitta nigra*)
- Little gull (Hydrocoloeus minutus)
- Breeding
- Little tern (Sternula albifrons)
- Common tern (*Sterna Hirundo*); and
- Waterbird assemblage.

Environmental Vulnerabilities

5.60 The Site Improvement Plan for Liverpool Bay (SIP123)[81] lists the following threats and pressures:

- Fisheries: Commercial marine and estuarine;
- Transportation and service corridors;
- Fisheries: Recreational marine and estuarine;
- Extraction: non-living Threat Natural England resources;
- Siltation; and
- Water pollution.

Manchester Mosses SAC

Introduction

5.61 Mossland formerly covered a very large part of Greater Manchester, Merseyside, south Lancashire and north Cheshire, and provided a severe obstacle to industrial and agricultural expansion. While most has been converted to agriculture or lost to development, several examples have survived as degraded raised bog, such as Risley Moss, Astley and Bedford Mosses, and Holcroft Moss on the Mersey floodplain. Their surfaces are now elevated above adjacent land due to shrinkage of the surrounding tilled land, and all except Holcroft Moss have been cut for peat at some time in the past. While past drainage has produced

[79] https://publications.naturalengland.org.uk/file/6428729689767936 [Accessed 02/06/2025]
[80] https://publications.naturalengland.org.uk/file/6035363693068288 [Accessed 02/06/2025]
[81] https://publications.naturalengland.org.uk/file/5321001921413120 [Accessed 02/06/2025]

dominant purple moor-grass *Molinia caerulea*, bracken *Pteridium aquilinum* and birch Betula spp.scrub or woodland, wetter pockets have enabled peat-forming species to survive.[82].

Conservation Objectives[83]

5.62 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;

5.63 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.

Qualifying Features[84]

5.64 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following habitats listed in Annex I:

- H7120 Degraded raised bogs still capable of natural regeneration.

Environmental Vulnerabilities

5.65 With regards to the Manchester Mosses SAC Site Improvement pan[85], the following are listed as environmental vulnerabilities:

- Hydrological changes; and
- Air pollution: impact of atmospheric nitrogen;

Mersey Estuary Ramsar and SPA

Introduction

5.66 The special protection area (SPA) covers an estuarine area of 50.23 km2 including large areas of saltmarsh and extensive intertidal sand and mudflats, with limited areas of brackish marsh, rocky shoreline and boulder clay cliffs, within a rural and industrial environment. The intertidal flats and saltmarshes provide feeding and roosting sites for large populations of waterbirds. During the winter, the site is of major importance for ducks and waders. The site is also important during the spring and autumn migration periods, particularly for wader populations moving along the west coast of Britain.

Conservation Objectives[86]

5.67 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:

[82] https://publications.naturalengland.org.uk/file/4802857651929088f [Accessed 29/05/2025]
[83] https://publications.naturalengland.org.uk/file/6584230239010816 [Accessed 29/05/2025]
[84] https://publications.naturalengland.org.uk/file/4802857651929088f [Accessed 29/05/2025]
[85] https://publications.naturalengland.org.uk/file/6266576827318272 [Accessed 29/05/2025]
[86] https://publications.naturalengland.org.uk/file/5759726675820544 [Accessed 02/06/2025]

- 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 qualifying features within the site.

Qualifying Features

5.68 With regard to the SPA, Natural England has stated that the following species should be considered as likely qualifying species[87]:

- Golden plover (*Pluvialis apricaria*);
- Shelduck (*Tadorna tadorna*);
- Teal (*Anas crecca*);
- Pintail (*Anas acuta*);
- Dunlin (*Calidris alpina alpina*);
- Black-tailed godwit (*Limosa limosa islandica*);
- Redshank (*Tringa totanus*); and
- Water bird assemblage of greater than 20,00 individuals.

5.69 With regard to the Ramsar, the site is qualified for the following criterion[88]:

- Large areas of saltmarsh, and intertidal sand and mudflats, with limited areas of brackish marsh, boulder clay cliffs and rocky shore.
- Internationally important numbers of waterfowl feed and roost on the site in winter and nationally important numbers occur during passage periods. Including:
- Common ringed plover (*Charadrius hiaticula*);
- Redshank (*Tringa totanus*); and
- Dunlin (*Calidris alpina alpina*).
- Regularly supports over 20,000 waterfowl in winter. Including internationally important numbers of:
- Shelduck (*Tadorna tadorna*);
- Teal (*Anas crecca*); and
- Pintail (*Anas acuta*);
- The site also supports nationally important wintering numbers of:
- Eurasian wigeon (*Anas penelope*);
- Grey plover (*Pluvialus squatarola*);
- Black-tailed godwit (*Limosa limosa islandica*); and
- Curlew (*Numenius arquata*).

Environmental Vulnerabilities

5.70 The Site Improvement Plan for Liverpool Bay (SIP138)[89] lists the following threats and pressures:

- Changes in species distribution;

[87] https://publications.naturalengland.org.uk/file/6485318211469312 [Accessed 02/06/2025]
[88] https://rsis.ramsar.org/RISapp/files/RISrep/GB785RIS.pdf [Accessed 02/06/2025]
[89] https://publications.naturalengland.org.uk/file/6470778514046976 [Accessed 02/06/2025]

- Invasive species; and
- Public Access/Disturbance.

Mersey Narrows and North Wirral Foreshore Ramsar and SPA

Introduction

5.71 The site comprises intertidal habitats at Egremont foreshore, man-made lagoons at Seaforth Nature Reserve and the extensive intertidal flats at North Wirral Foreshore. Egremont is most important as a feeding habitat for waders at low tide whilst Seaforth is primarily a high-tide roost site, as well as a nesting site for terns. North Wirral Foreshore supports large numbers of feeding waders at low tide and includes important high-tide roost sites. The most notable feature of the site is the exceptionally high density of wintering turnstone.

Conservation Objectives[90]

5.72 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 qualifying features within the site.

Qualifying Features

5.73 With regard to the SPA, the following are qualifying species[91]:

- Bar-tailed godwit (*Limosa lapponica*);
- Common tern (*Sterna Hirundo*);
- Little Gull (*Hydrocoloeus minutus*); and
- Knot (*Calidris canutus islandica*).

5.74 With regard to the Ramsar the following are qualifying criterion[92]:

- Criterion 4
- Regularly supports plant and/or animal species at a critical stage in their life cycles or provides refuge during adverse conditions. (Non-breeding little gulls and common terns)
- Criterion 5
- Regularly supports 20,000 or more waterbirds
- Criterion 6
- Regularly supports >1% of individuals in the populations of *islanda* subspecies and *lapponica species*

Environmental Vulnerabilities

[90] https://publications.naturalengland.org.uk/file/4650102664986624 [Accessed 02/06/2025]
[91] https://publications.naturalengland.org.uk/file/5360161602404352 [Accessed 02/06/2025]
[92] https://rsis.ramsar.org/RISapp/files/RISrep/GB2202RIS.pdf [Accessed 02/06/2025]

5.75 With regards to the Site Improvement Plan for the Mersey Narrows and North Wirral Foreshore SPA[93], the following are listed as environmental vulnerabilities:

- Public Access/Disturbance;
- Changes in species distributions;
- Invasive species;
- Climate change;
- Coastal squeeze;
- Inappropriate scrub control;
- Water pollution;
- Fisheries: Commercial marine and estuarine;
- Inappropriate coastal management;
- Overgrazing;
- Direct Impact from third party;
- Marine litter;
- Predation;
- Planning permission, general;
- Marine consents and permits;
- Wildfire/ arson;
- Air pollution: Impact of atmospheric nitrogen deposition; and
- Transportation and service corridors.

Midland Meres and Mosses Ramsar (Phase 1 and Phase 2)

Introduction

5.76 A series of lowland open water and peatland sites set in depressions in glacial drift left by receding ice sheets. The 16 component sites include nutrient-rich water bodies (meres), associated fringing habitats of reed swamps, fen, carr and damp pasture, and floating quaking bog (schwingmoor). The wide range of resulting habitats supports numerous rare species of plants and invertebrates.

Conservation Objectives

5.77 Ramsar sites do not have conservation objectives.

Qualifying Features

5.78 With regard to the Ramsar the following are qualifying criterion[94]:

- Criterion 2a

[93] https://publications.naturalengland.org.uk/file/5140799320752128 [Accessed 29/05/2025]
[94] https://publications.naturalengland.org.uk/file/6341545577938944 [Accessed 02/06/2025]

- 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 nationally scarce bryophytes.

Environmental Vulnerabilities

5.79 The Ramsar citation[95] lists the following as adverse factors affecting the ecological value of the site;

- Vegetation succession;
- Drainage/reclamation for agriculture;
- Eutrophication;
- Introduction of invasive or exotic animal species;
- Introduction of invasive or exotic plant species; and
- Pollution – pesticides/agricultural runoff.

Oak Mere SAC

Introduction

5.80 Oak Mere is a shallow lake formed in glacial drift some 15,000 years ago. It is unique because of its unusual water chemistry which gives rise to an outstanding assemblage of aquatic plants, including shore weed *Littorella uniflora* and narrow small-reed Calamagrostis stricta, together with a wide diversity of invertebrate groups. Associated with the main lake are a number of surrounding boggy pools and basin mires. The hydrology of the whole site is complex, resulting in fluctuations in water levels which periodically leave wide draw-down zones.

Conservation Objectives[96]

5.81 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 qualifying features within the site.

Qualifying Features

5.82 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following habitats listed in Annex I[97]:

- H3110 Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)
- H7140 Transition mires and quaking bogs

Environmental Vulnerabilities

[95] https://publications.naturalengland.org.uk/file/6341545577938944 [Accessed 02/06/2025]
[96] https://publications.naturalengland.org.uk/file/6099038630051840 [Accessed 02/06/2025]
[97] https://publications.naturalengland.org.uk/file/5022779573272576 [Accessed 13/0/2025]

5.83 With regards to the Site Improvement Plan for Oak Mere (SIP158)[98], the following are listed as environmental vulnerabilities:

- Water pollution;
- Invasive species;
- Hydrological changes; and
- Air Pollution: impact of atmospheric nitrogen deposition.

Ribble and Alt Estuaries Ramsar and SPA

Introduction

5.84 The Ribble and Alt Estuaries special protection area (SPA) lies on the coast of Lancashire and Sefton in northwest England. The SPA overlaps the Ribble Estuary site of special scientific interest (SSSI) and Sefton Coast SSSI. The site consists of extensive areas of sandflats and mudflats, as well as large areas of saltmarsh, particularly in the Ribble. There are also areas of coastal grazing marsh.

Conservation Objectives[99]

5.85 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 qualifying features within the site.

Qualifying Features

5.86 With regard to the SPA[100], the following are qualifying species:

- Ruff (*Philomachus pugnax*);
- Common Tern (*Sterna Hirundo*);
- Bewick's Swan (*Cygnus columbianus bewickii*);
- Whooper Swan (*Cygnus cygnus*);
- Golden Plover (*Pluvialis apricaria*);
- Bar-tailed Godwit (*Limosa lapponica*);
- Lesser Black-backed Gull (*Larus fuscus graellsii*);
- Ringed Plover (*Charadrius hiaticula*);
- Sanderling (*Calidris alba*);
- Redshank (*Tringa totanus*);
- Pink-footed Goose (*Anser brachyrhynchus*);
- Shelduck (*Tadorna tadorna*);
- Wigeon (*Anas penelope*);

[98] https://publications.naturalengland.org.uk/file/5420717696876544 [Accessed 02/06/2025]
[99] https://publications.naturalengland.org.uk/file/5617578676584448 [Accessed 02/06/2025]
[100] https://publications.naturalengland.org.uk/file/4937627014791168 [Accessed 02/06/2025]

- Teal (*Anas crecca*);
- Pintail (*Anas acuta*);
- Oystercatcher (*Haematopus ostralegus*);
- Grey Plover (*Pluvialis squatarola*);
- Knot (*Calidris canutus islandica*);
- Sanderling (*Calidris alba*);
- Dunlin (*Calidris alpina alpina*);
- Black-tailed Godwit (*Limosa limosa islandica*); and
- Waterbird assemblage of greater than 20,000 birds.

5.87 With regard to the Ramsar[101], the following are qualifying criterion:

- Criterion 2
- This site supports up to 40% of the Great Britain population of natterjack toads *Bufo calamita*. As plant species: *Petalophyllum ralfsii* (Conservation status: European Red List: Vulnerable; EC Habitats Directive: Annex II)
- Criterion 5
- Species with peak counts in winter (222,038 waterfowl)
- Criterion 6
- Species with peak counts in spring/autumn:
- Black-tailed godwit (*Limosa limosa islandica*);
- Dunlin (*Calidris alpina alpina*);
- Grey plover (*Pluvialis squatarola*);
- Knot (*Calidris canutus islandica*);
- Sanderling (*Calidris alba*); and
- Ringed plover (*Charadrius hiaticula*).
- Species with peak counts in winter
- Bar-tailed godwit (*Limosa lapponica*);
- Oystercatcher (*Haematopus ostralegus*);
- Teal (*Anas crecca*);
- Wigeon (*Anas penelope*);
- Pintail (*Anas acuta*);
- Pink-footed goose (*Anser brachyrhynchus*);
- Bewick's Swan (*Cygnus columbianus bewickii*);
- Whooper swan (*Cygnus cygnus*);

Environmental Vulnerabilities

5.88 With regards to the Site Improvement Plan for Sefton Ribble (SIP212)[102], the following are listed as environmental vulnerabilities:

- Coastal squeeze;
- Air Pollution: impact of atmospheric nitrogen deposition;

[101] https://rsis.ramsar.org/RISapp/files/RISrep/GB325RIS.pdf [Accessed 02/06/2025]
[102] https://publications.naturalengland.org.uk/file/6387486347493376 [Accessed 02/06/2025]

- Inappropriate scrub control;
- Invasive species;
- Hydrological changes;
- Public access / disturbance;
- Inappropriate coastal management;
- Fisheries: Commercial marine and estuarine;
- Changes to site conditions; and
- Shooting/ scaring.

River Dee and Bala Lake SAC

Introduction

5.89 The River Dee has its source in Snowdonia at the outflow of Llyn Tegid and it includes the Ceiriog, Meloch, Tryweryn and Mynach tributaries. Its catchment contains a wide spectrum of landscape from high mountains around Bala, rugged peaks near Llangollen, steep sided wooded valleys, and the plains of Cheshire, Flintshire, north Shropshire and Wrexham. There is a tidal influence as far upstream as Farndon and high tides regularly exceed the Chester weir crest level. The aquatic plant community includes Wirtgen's water-crowfoot *Ranunculus x bachii* and pond water-crowfoot *R. peltatus* and also floating water-plantain *Luronium natans*. Watercrowfoot forms extensive beds along the whole length of the Dee where flow conditions are suitable. Other aquatic plants which occur within the site include intermediate water-starwort *Callitriche hamulata*, alternate-flowered water-milfoil *Myriophyllum alterniflorum* and bryophytes including *Rhynchostegium riparoides* and *Fontinalis antipyretica*. Marginal vegetation consists mainly of reed canary-grass *Phalaris arundinacea* with occasional branched bur-reed *Sparganium erectum*. There is good tree cover along the banks of the River Dee and the tributaries, with the Ceiriog being tree lined on both banks along much of its length. The dominant species are alder *Alnus glutinosa* and willow *Salix spp*., with occasional ash *Fraxinus excelsior* and oak *Quercus spp*. Where sections of the riverbank have been fenced off the vegetation tends to be dominated by bramble *Rubus fruticosus agg*., nettles *Urtica dioica* and other tall ruderals. The River Dee is recognised as one of North Wales' premier rivers for Atlantic salmon Salmo salar. The Mynach, Meloch and Ceiriog tributaries are the most important salmon spawning tributaries in the Dee catchment. Other migratory fish utilising the river system include river lamprey *Lampetra fluviatilus* and sea lamprey *Petromyzon marinus*. The Dee also supports important populations of non-migratory fish including bullhead *Cottus gobio* and brook lamprey *Lampetra planeri*. The otter *Lutra lutra* is well established throughout the river system, especially where appropriate bank side cover exists.

Conservation Objectives[103]

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

5.91 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.

[103] https://publications.naturalengland.org.uk/file/5851750921928704 [Accessed 02/06/2025]

Qualifying Features[104]

5.92 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following habitats listed in Annex I:

- H3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation

Environmental Vulnerabilities

5.93 With regards to the Site Improvement Plan for River Dee and Bala Lake SAC (SIP)[105], the following are listed as environmental vulnerabilities:

- Population – Adult run;
- Water quality;
- Environmental disturbance.

River Eden SAC

Introduction

5.94 The Eden is an outstanding floristically rich, northern river on sandstone and hard limestone. The catchment includes headwaters running off the Yorkshire Dales, the North Pennines and the eastern fells of the Lake District and the major standing water body of Ullswater. Streams flowing from limestone are calcareous, whilst those flowing off the Pennines and the Lake District fells are more acidic. The nutrient status gradually changes along the Eden's length as nutrient loadings naturally increase in the lower reaches.

Conservation Objectives[106]

5.95 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;

5.96 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.

Qualifying Features[107]

5.97 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following habitats listed in Annex I:

[104] https://sac.jncc.gov.uk/site/UK0030252 [Accessed 02/06/2025]
[105] https://naturalresources.wales/media/673374/river_dee___bala_lake_32_plan.pdf [Accessed 02/06/2025]
[106] https://publications.naturalengland.org.uk/file/5304322711879680 [Accessed 02/06/2025]
[107] https://sac.jncc.gov.uk/site/UK0012643 [Accessed 13/0/2025]

- H3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*
- H3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation
- H91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*)
- S1092 White-clawed (or Atlantic stream) crayfish *Austropotamobius pallipes*
- S1095 Sea lamprey *Petromyzon marinus*
- S1096 Brook lamprey *Lampetra planeri*
- S1099 River lamprey *Lampetra fluviatilis*
- S1106 Atlantic salmon *Salmo salar*
- S1163 Bullhead *Cottus gobio*
- S1355 Otter *Lutra lutra*

Environmental Vulnerabilities

5.98 With regards to the Site Improvement Plan for River Eden SAC[108], the following are listed as environmental vulnerabilities:

- Water pollution;
- Agricultural management practices;
- Physical modification;
- Invasive species;
- Changes in species distributions;
- Forestry and woodland management;
- Hydrological changes;
- Air Pollution: impact of atmospheric nitrogen deposition; and
- Disease.

Rixton Clay Pits SAC

Introduction

5.99 Situated east of Warrington, this site comprises parts of an extensive disused brickworks quarry excavated in glacial boulder clay. The excavation has left a mosaic of water-filled hollows and clay banks. Long-abandoned areas have undergone natural succession to scrub and woodland while more recently worked areas support calcareous grassland. The site is important for great crested newt Triturus cristatus and holds the county's largest known breeding population[109].

Conservation Objectives[110]

5.100 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;

[108] https://publications.naturalengland.org.uk/publication/5920746052255744 [Accessed 02/06/2025]
[109] https://publications.naturalengland.org.uk/file/4827854495809536 [Accessed 29/05/2025]
[110] https://publications.naturalengland.org.uk/file/6277527941414912 [Accessed 29/05/2025]

5.101 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.

Qualifying Features[111]

5.102 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following species listed in Annex I:

- S1166 Great crested newt Triturus cristatus.

Environmental Vulnerabilities

5.103 With regards to the Manchester Mosses SAC Site Improvement plan (SIP200)[112], the following are listed as environmental vulnerabilities:

- Direct Impact from 3rd Party (urbanisation)

Rostherne Mere Ramsar

Introduction

5.104 The mere is the deepest, one of the largest and most northerly of the meres of the Cheshire Plain. It lies in a hollow surrounded by thick deposits of glacial drift overlying Triassic marls and saltbeds. It is internationally important for its birds.

Conservation Objectives

5.105 Conservation objectives are not defined for Ramsar sites.

Qualifying Features

5.106 With regard to the Ramsar[113], the following are qualifying criterion:

- Criterion 1
- Good representative example of the meres of the Shropshire-Cheshire Plain.
- Criterion 3c
- Over winter this site regularly supports nationally important numbers of:
- Shoveler (*Anas clypeata*)
- Pochard (*Aythya ferina*)

Environmental Vulnerabilities

[111] https://publications.naturalengland.org.uk/file/4827854495809536 [Accessed 29/05/2025]
[112] https://publications.naturalengland.org.uk/publication/5186918258049024 [Accessed 29/05/2025]
[113] https://rsis.ramsar.org/RISapp/files/RISrep/GB221RIS.pdf [Accessed 02/06/2025]

5.107 With regards to the Site Improvement Plan for River Eden SAC[114], the following are listed as environmental vulnerabilities:

- Eutrophication; and
- Invasive species.

Sefton Coast SAC

Introduction

5.108 Sefton Coast is a large sand dune system (the fourth largest in Britain, Ratcliffe 1977) in north-west England, stretching over 20 km from Southport in the north (at the mouth of the Ribble estuary) and Crosby in the south (at the mouth of the Mersey). The majority of the dune system site lies within the Sefton Coast National Character Area (NCA 57), but at the southern end its landward margin abuts the Merseyside Conurbation NCA (NCA 58). Ravenmeols Hills LNR also lies within Sefton Coast SAC.

5.109 Much of the SAC has public access and includes Ainsdale Sand Dunes and Cabin Hill National Nature Reserves and Ainsdale and Birkdale Sandhills Local Nature Reserves. There are 5 championship golf courses within the SAC and a military training camp at Altcar. The remainder of the land is owned and managed by the Wildlife Trust, the National Trust and one private owner. This means that most of the SAC has either full public access or is adjacent to public rights of way. The location, adjacent to the Merseyside conurbation, means that there are areas of high public use (around car parks) and the SAC is already at risk from recreational disturbance. This may increase in magnitude as further developments arise.

5.110 The site displays both rapid erosion and active shifting dunes. A substantial stretch of the dune system is fronted by shifting dunes. Marram *Ammophila arenaria* usually dominates the mobile dunes, amidst considerable areas of blown sand. Where rates of sand deposition decline, lyme grass *Leymus arenarius,* sea-holly *Eryngium maritimum* and cat's-ear *Hypochaeris radicata* occur, with red fescue *Festuca rubra* and spreading meadow-grass *Poa humilis* present on the more sheltered ridges. Sea spurge *Euphorbia paralias* and the nationally scarce dune fescue *Vulpia fasciculata* are frequent, while sea bindweed *Calystegia soldanella* is very local. The area of dunes around Formby Point has been eroding since 1906 while areas north and south of this are accreting (where the nature of the coast allows). The rapid erosion is therefore reducing the area of shifting dunes at Formby, and high, steep eroding dunes abut the beach with extensive areas of blown sand immediately inland.

Qualifying Features[115]

5.111 The site is designated as a SAC for its:

Qualifying Annex I habitats:

- Atlantic decalcified fixed dunes (*Calluno-Ulicetea*). (Coastal dune heathland)*
- Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*). (Dunes with creeping willow)
- Embryonic shifting dunes
- Fixed dunes with herbaceous vegetation ("grey dunes"). (Dune grassland)*
- Humid dune slacks
- Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"). (Shifting dunes with marram)

Annex I priority habitats are denoted by an asterisk (*).

5.112 Qualifying Annex II species:

- Great crested newt *Triturus cristatus*
- Petalwort

[114] https://publications.naturalengland.org.uk/publication/5920746052255744 [Accessed 02/06/2025]
[115] www.publications.naturalengland.org.uk/publication/6588974160150528 [Accessed 02/06/2025]

Conservation Objectives[116]

5.113 "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;

5.114 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 habitats of qualifying species rely*
- *The populations of qualifying species, and,*
- *The distribution of qualifying species within the site."*

Environmental Vulnerabilities

5.115 The Site improvement Plan[117] identifies the following pressures and threats to the SAC:

- Coastal squeeze
- Air pollution: risk of atmospheric nitrogen deposition
- Inappropriate scrub control
- Invasive species
- Hydrological changes
- Public access/disturbance
- Inappropriate coastal management
- Change to site conditions

West Midlands Mosses SAC

Introduction

5.116 The West Midlands Mosses comprise four sites supporting large basin mires which have developed as quaking bogs, known as Schwingmoors, together with a variety of associated hollows and pools showing various types and stages of mire development. This complexity of habitats gives rise to a diverse assemblage of associated plants and invertebrates of national significance, in particular at Clarepool Moss where the water quality is unusual for this type of site in being base-rich.

Conservation Objectives[118]

5.117 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;

5.118 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;

[116] https://publications.naturalengland.org.uk/file/5246658212528128 [Accessed 02/06/2025]
[117] www.publications.naturalengland.org.uk/publication/6274126599684096 [Accessed 02/06/2025]
[118] https://publications.naturalengland.org.uk/file/6061488964108288 [Accessed 02/06/2025]

- 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.

Qualifying Features[119]

5.119 With regard to the SAC, the site is designated under article 4.2 of the EC Directive 79/409 as it hosts the following habitats listed in Annex I:

- H3160 Natural dystrophic lakes and ponds
- H7140 Transition mires and quaking bogs

Environmental Vulnerabilities

5.120 With regards to the Site Improvement Plan for West Midlands Mossses SAC (SIP261)[120], the following are listed as environmental vulnerabilities:

- Water pollution;
- Hydrological changes;
- Air Pollution: impact of atmospheric nitrogen deposition;
- Inappropriate scrub control;
- Game management: pheasant rearing;
- Forestry and woodland management; and
- Habitat fragmentation.

[119] https://sac.jncc.gov.uk/site/UK0013595 [Accessed 02/06/2025]
[120] https://publications.naturalengland.org.uk/file/5747088459563008 [Accessed 02/06/2025]

Appendix C Spatial Strategy Options and Draft Policy Approaches

Table 5-2 Draft spatial strategy options

Draft Policy Reference	Draft Policy Text	Test of Likely Significant Effects Assessment
SS1	**Housing needs** The suggested policy approach is that the Council plans to deliver a minimum of 1,914 new homes each year, over the plan period.	Potential likely significant effects. The policy regards delivering net new residential development. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.
SS2	**Employment needs** The suggested policy approach is that the Council plans to deliver a minimum of 9.9 employment land each year, over the plan period.	Potential likely significant effects. The policy regards delivering net new employment development. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.
SS3	**Spatial strategy principles**	Potential likely significant effects.

	The spatial strategy will follow the principle of directing new development and allocating land, towards previously developed sites within settlements first, as they are the most sustainable locations with best access to services and facilities. Redeveloping urban sites comes with a range of choices, especially concerning density and the height of buildings. This approach will require a strong commitment to high quality design to ensure that there is adequate private and shared open space, there are services and access to facilities and issues regarding car parking and travel are resolved. **Urban extensions** Where there are not enough planning permissions and opportunities for redevelopment within urban areas and towns, the approach will be to develop on the edge of existing settlements in locations with the best access to public transport and existing services and infrastructure, as the next best sustainable option. Depending on the settlement this may require the release of Green Belt land.	The policy regards directing the location of net new development. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.
SS4	**Settlement hierarchy** The new Local Plan will set out a settlement hierarchy, based on their status and role in providing local infrastructure and services for their relatively larger populations and the surrounding hinterland, for the following places: • Chester (city) • Ellesmere Port (main town) Northwich (main town) • Winsford (main town) • Neston and Parkgate (market town) • Frodsham (market town) An individual place-based policy for each settlement will set out the vision, core features, key issues and clear strategy for what development will take place in each settlement. The following settlements have a level of facilities and services that mean they can meet the day-to-day needs of their residents and those living in surrounding areas: Cuddington and Sandiway; Farndon; Helsby; Kelsall; Malpas; Tarporley; Tattenhall; and Tarvin. Depending on the spatial strategy option selected (see SS 5 'Spatial strategy options' A-C) for the new Local Plan, these settlements may be amended. It is recognised that smaller settlements which have a lower level of services and access to public transport could acceptably accommodate infill development and small previously developed sites to meet local needs. In smaller settlements development should be appropriate in scale and design to conserve that settlements' character and setting and should not exceed the capacity of existing services and infrastructure unless the required improvements can be made.	No likely significant effect. This policy sets out the settlement hierarchy and does not allocate development within the settlements.
SS5	**Spatial strategy options** We have devised three growth options for where development could be located, that would mean updating Local Plan (Part One) policy STRAT 2. To be clear, no decisions have yet been taken about where development might be located. This is a consultation to hear your views about where the new homes and employment land we need to provide for, should be located. Further technical work to assess the suitability and appropriateness of locations and sites will be necessary to determine the most suitable spatial strategy. The three initial options for growth that we have identified are as follows:	Potential likely significant effects. The policy regards directing the location of net new development.

	• Option A – Retain the Green Belt • Option B – Follow current Local Plan level and distribution of development • Option C – Sustainable transport corridors These options are set out in more detail below. There is no right or wrong answer in respect of these options. Each option generates different impacts and has a range of pros and cons. Each of the three alternatives is illustrative only – they indicate the possible pattern and scale of development which might be required and use a diagram base map to give a visual impression of where growth might take place but without identifying specific locations or sites for development. All options are capable of accommodating at least 29,000 new homes and 149 hectares of employment land. A place identified on the plan indicates a potential capacity across a range of different sites – and would not be necessarily delivered as a single site. It should not be assumed that places identified on the plan for '500-1,500 homes', for example, are expected to accommodate as much as 1,500 (it could be significantly less). Where an option indicates that the development of sites outside of a settlement might be necessary (possibly in the Green Belt and/or the countryside), some potential growth areas are identified in section 5.1 'Potential growth areas'. However, it must be noted that the examiner's report[(i)] into the Local Plan (Part One) concluded that additional release of Green Belt land around Chester would have a significant adverse effect on the purposes of including land within the Green Belt including to the historic setting, and that the amended Green Belt boundary proposed was capable of enduring and would not need to be altered at the end of the plan period (2030). It is recognised there may be other options/ approaches that could be taken and this consultation provides the opportunity for suggesting amendments to the options proposed or suggesting new options.	There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.
Option A - Retain the Green Belt	Green Belt covers about 42% of Cheshire West across the north of the borough surrounding Chester, Ellesmere Port, Neston and Parkgate, Helsby and Frodsham and the edges of Northwich, Tarvin, Kelsall, and Cuddington and Sandiway. Not all countryside (greenfield land) in the borough is covered by Green Belt as identified on the map accompanying this option. Government advice is that the Green Belt can only be altered in exceptional circumstances, so it is important to demonstrate that all other reasonable options for meeting needs have been fully explored first, such as using brownfield sites in settlements, increased densities and assessing the potential for growth in neighbouring areas. This approach therefore assumes that any new development areas are located outside the Green Belt. For housing development it includes: • Major development in and to the south of Northwich of just over 5,000 homes. • Significant urban extensions to the south/west of Winsford of more than 11,000 homes. • Growth around places that are not located in the Green Belt, such as Tarporley, Tattenhall, Malpas and Farndon. • More limited development to the south/east of Tarvin, Kelsall and Cuddington and Sandiway on sites that are not in the Green Belt. For employment development it includes:	Potential Likely Significant Effects This option sets out retaining the green belt which is environment positive, whoever the strategy does also provide options for where to locate development outside of the greenbelt. Dependent on the location of these there may be linking impact pathways to Habitats Sites. Therefore, this option has been screened in.

	• Refurbishment and redevelopment of sites in existing employment areas, retaining key employment locations of: Origin, Ellesmere Port; Winsford Industrial Estate; Woodford Park; Gadbrook Park; Chester West/Sealand Industrial Estate. • For new large scale industrial/warehousing provision, if this did not deliver enough sites for employment needs, then explore greenfield extensions not located in Green Belt. Indicative locations include: south/ west Gadbrook Park; north/east of Winsford Industrial Estate; west Woodford Park; and east of Protos. • For office development, focus primarily on town centres or established business parks, including Gadbrook Park. • Outside of the main settlements and market towns, potential for smaller scale employment or mixed use development, appropriate to the scale and function of the settlement, to meet local employment needs. Potential growth areas for both housing and employment outside of these settlements are shown in section 5.1 'Potential growth areas'.	
Option B - Follow current Local Plan level and distribution of development	This approach follows the existing Local Plan strategy and settlement hierarchy set out in Local Plan (Part One) Policy STRAT 2, which locates most new development in, or on the edge of the main urban areas, and an appropriate level of new development focused on the smaller settlements which have adequate services and facilities and access to public transport. A key difference between the Local Plan (Part One) and the new Local Plan is that there is a much more limited supply of previously developed land to accommodate new development, and unlike the last plan, larger areas of Green Belt and/or countryside are likely to be needed. In developing this option, the government's new housing target of 28,170 homes has been distributed according to the relative proportions of the existing local plan housing requirement of 22,000 homes as set out in the Local Plan (Part One). This option would need to ensure that peripheral development has good sustainable connectivity and design relating to existing built form. While a proportion of development can be accommodated within existing settlements, much of the new development under this option would need to be located within the Green Belt and/or countryside. For housing development it includes: • Large urban extensions around: Chester; Ellesmere Port; Northwich and Winsford. • Total Green Belt release of sites to deliver 11,000 homes. • Relatively limited development in Cuddington and Sandiway; Farndon; Frodsham; Helsby; Kelsall; Malpas; Neston and Parkgate; Tarporley; Tarvin; and Tattenhall of 3,000 homes in total. • 2,500 homes across the rest of the rural area, including both Green Belt and non-Green Belt • land. • For employment development it includes: • Refurbishment and redevelopment of sites in existing employment areas, retaining key employment locations of: Origin, Ellesmere Port; Winsford Industrial Estate; Woodford Park; Gadbrook Park; Chester West/Sealand Industrial Estate; and commercial sites in the Green Belt at Urenco and Chester Business Park.	Potential Likely Significant Effects This option sets out where to locate development within and outside of the greenbelt. Dependent on the location of these there may be linking impact pathways to Habitats Sites. Therefore, this option has been screened in.

	• For new large scale industrial/warehousing provision, if this did not deliver enough sites for employment needs, then explore greenfield extensions. Indicative locations include: south/west Gadbrook Park; north/east of Winsford Industrial Estate; west of Woodford Park; and east of Protos;. In the Green Belt, explore the potential around: Wincham; south of Ellesmere Port; and north of Clayhill Industrial Estate, Neston. • For office development, focus on primarily on town centres or established business parks, including: Chester Business Park and Gadbrook Park. • Outside of the main settlements and market towns, the potential for smaller scale employment or mixed use development, appropriate to the scale and function of the settlement, to meet local employment needs. Potential growth areas for both housing and employment outside of these settlements are shown in section 5.1 'Potential growth areas'.	
Option C - Sustainable transport corridors	This option would see new homes focused in and around settlements on the railway network, and on main bus route corridors (based on those routes with a bus service frequency of at least one per hour). Focusing development in locations currently well-served by trains and buses would maximise opportunities for sustainable travel choices and could support future improvements to services, frequency and hours. In this scenario there would also be brownfield opportunities at all main urban areas including locations where transport hubs could be improved such as at stations and smaller settlements with stations and/or bus connectivity, including long term aspirations for a new rail station at Gadbrook Park. This approach could have a greater impact on the Green Belt if multiple developments took place along corridors potentially adding to the impression of urban sprawl and the merging of settlements. For housing development it includes: • A more distributed pattern of development. • More modest urban extensions around: Chester; Ellesmere Port; Northwich; and Winsford • Smaller settlements with a rail station, such as: Cuddington and Sandiway; Helsby; Frodsham; and Neston and Parkgate would take a bigger role in accommodating development. • Total Green Belt release of sites to deliver more than 12,000 homes. • Potential for further development in the rural area and in places along bus corridors including: Farndon; Malpas; Tarporley; Tarvin; and Tattenhall. • Potential for an enhanced role around rural rail stations including: Acton Bridge; Capenhurst; Delamere; Elton; Hooton; Lostock Gralam; and Mouldsworth. • For employment development it includes; • Refurbishment and redevelopment of sites in existing employment areas, retaining key employment locations of: Origin, Ellesmere Port; Winsford Industrial Estate; Gadbrook Park; and commercial sites in the Green Belt at Urenco, Capenhurst. • For new large scale industrial/warehousing provision, if this did not deliver enough sites for employment needs, then explore greenfield extensions, particularly with multi-modal opportunities (port/rail) for	Potential Likely Significant Effects This option sets out where to locate development within and outside of the greenbelt. Dependent on the location of these there may be linking impact pathways to Habitats Sites. Therefore, this option has been screened in.

	freight, or locations close to existing or planned railway stations for passengers. Indicative locations include: Origin eastern employment area; south/west Gadbrook Park incorporating a new railway station; Wincham, Lostock Gralam; south/east of Winsford Industrial Estate; and north of Clayhill Industrial Estate, Neston. • For office development, focus primarily on town centres or established business parks. This could include well connected sites such as: Chester Business Quarter; and Gadbrook Park subject to a new railway station south/west of Gadbrook Park. • Outside of the main settlements and market towns, the potential for smaller scale employment or mixed use development close to local railway stations, appropriate to the scale and function of the settlement, to meet local employment needs. Potential growth areas for both housing and employment outside of these settlements are shown in section 5.1 'Potential growth areas'.	
SD1: Sustainable development	New developments must, where relevant: Mitigating climate change 1. Maximise opportunities to secure significant reductions in carbon emissions through low carbon design, embodied carbon and energy consumption; 2. Maximise opportunities to generate energy from renewable sources and to re-balance the grid through energy storage. All new buildings should include solar panels unless it can be shown that this is impractical or not viable. Strategic sites should be connected to a district heat network. Where this is not currently feasible, new homes should be built with the necessary infrastructure in place to enable such connections to be easily integrated in the future. Opportunities should be sought to connect commercial development producing sufficient levels of waste heat, with residential development or other developments with demand for heating, where they are located within close proximity; 3. Be designed to make walking, wheeling and cycling as safe and easy as possible. Providing for sustainable transport choices to create healthy and inclusive communities, whilst reducing the need to travel. Incorporating electric vehicle (EV) charging points in every new home with off-street parking, and outside new commercial developments, village halls, community facilities and services; 4. Deliver high quality, interconnected and multifunctional green and blue infrastructure, which will be designed to provide sequester carbon, improve air quality and enhance biodiversity. Tree planting and other carbon sequestering habitat types should be incorporated into new developments; and 5. Maximise resource efficiency and supporting the transition to a circular economy by minimising waste, maximising the reuse of materials, and prioritising low embodied carbon materials. Adapting to climate change 6. Be designed to be resilient and adaptive to the future impacts of climate change. Schemes should minimise the risk of overheating and buildings must be able to withstand the impact of extreme conditions, such as from flooding and heat exposure; 7. Be located in accordance with the Sequential Test and the Exceptions Test (where appropriate) and have regard to the Strategic Flood Risk Assessment. Areas at risk of flooding, both now and in future, should be avoided and development should contribute to reducing flood risk on site without exacerbating flood risk elsewhere. Natural flood management features such as Sustainable Drainage Systems (SuDS) should be incorporated into design of schemes and should also provide amenity value and / or biodiversity improvements;	No likely significant effects. This policy discusses sustainable development and states that it is a requirement of development to protect, enhance or improve the natural environment and seeking opportunities for habitat creation. This is an environment positive policy.

	8. Incorporate water efficiency, water recycling and rainwater harvesting measures to mitigate the impact of drought and reduce resource and associated energy consumption. Additional environmental and social requirements • Protect, enhance or improve the natural and historic environment whilst enhancing or restoring degraded and despoiled land and seeking opportunities for habitat creation; • Encourage the use and redevelopment of previously developed land and buildings and minimising the development of greenfield land as much as possible; • Avoid development in locations of high environmental value and on high-grade agricultural land ; and • Support development that achieves regeneration of the most deprived areas of the borough. The Council will always work proactively with applicants where proposals are not in accordance with the Plan to find solutions which mean that proposals can be made sustainable and approved wherever possible. However, proposals that fundamentally conflict with the above principles or policies within the Local Plan will be refused.	
CH 1: Chester	The suggested approach will reflect the One City Plan to recognise the uniqueness of the city and the opportunity to build on the city's cultural and heritage offer and Chester's strength as a compact, connected centre surrounded by accessible neighbourhoods including: • promoting opportunities for sustainable travel. • increasing opportunities for people to live in the heart of the city through the right mix of housing and creating high quality places. • supporting a vibrant city centre and Chester's role as a sub-regional centre. • providing quality office space. The new Local Plan will set out the level and location of new development with protection of the historic environment and special character of the city remaining the priority. The overall content of Local Plan (Part One) policy STRAT 3 and Local Plan (Part Two) policy CH 1 will be retained, relating to development in Chester and protecting the historic and special character of the city including areas identified as strategic open space. The content of Local Plan (Part Two) policy CH4 for the University of Chester will be retained. The approach will retain Local Plan (Part Two) policies CH 5 and CH 6 to protect the heritage of Chester with the addition of reference to Chester Rows Design Guide. For relevant development proposals within Chester, include the requirement to consult the Chester Archaeological Plan which defines Areas of Archaeological Significance and the Primary and Secondary Archaeological Character Zones (formerly part of Local Plan (Part Two) policy DM 50).	Potential likely significant effects The policy discusses key allocations for development in Chester. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.

Amend policies relating to parking to encourage new residential and other uses in the city centre and surrounding area.

Retain and update content of Local Plan (Part Two) policy GBC 1.A - Chester Zoo - for zoological purposes.

Retain and update content of Local Plan (Part Two) policy GBC 1.B - Countess of Chester Health Park - for medical and associated purposes.

Key Allocations / Policies

Policies will seek to support a vibrant city centre and seek to support and retain uses, including cultural, that contribute to the attractiveness of the city as a place to live and visit.

Retain and update content of Local Plan (Part Two) policy CH 2.B Commonhall Street and policy CH 2.C Chester Castle and Riverside Area.

Update or replace Local Plan (Part Two) policy CH 3 regarding employment allocations:

- Dale Barracks (mixed use) – set out level and type of development and identify areas to be protected and other requirements taking account of local community aspirations set out in the Upton Neighbourhood Plan. Update Local Plan.(Part Two) policy GBC 1.C.
- Chester Gateway (mixed use) (part of Local Plan Part Two) policy CH 2.A) – allocate land for mixed uses including residential where compatible with protecting employment uses and incorporate other aims and try and link in development requirements for provision of infrastructure.
- Chester Business Quarter – currently identified for some apartment accommodation but primarily for 44,000 sq. m of high-quality office space of which 7,800 sq. m has been developed for office. There has been a hotel development granted (3,700 sq. m permitted) with balance of 32,500 sq. m undeveloped. The consultation is seeking views on future allocation of the area for office uses.
- Northgate Phase 2 – current Local Plan (Part Two) policy CH 2.A - anticipated policy approach will be for the next phase to be predominantly residential-led mixed-use development.
- Chester Business Park – current Local Plan (Part One) policy ECON 1 and Local Plan (Part Two) policy GBC 1.D identifies Chester Business Park as a safeguarded strategic employment location for office uses located in the Green Belt.
- Chester West Employment Park and Sealand Industrial Estate – current Local Plan (Part One) policy ECON 1 existing employment land and premises are retained and protected for employment use. Qualitative improvements within these areas will be supported.
- Other sites identified will depend on the chosen spatial strategy (see SS 5 'Spatial strategy options').

Transport and infrastructure

Subject to TA 2 'Key local transport infrastructure priorities' the suggested policy approach will identify the key transport priorities for Chester, which may include:

- Improvements to the A56 Hoole Road Corridor

	• Allocating land for a 5th park and ride site • Supporting capacity improvements at Chester Station Appropriate provision should be made for access and parking in line with a review of parking standards and parking zones as set out in TA 1 'Transport and accessibility', where there is a concentration of services, increased sustainable transport options and lower levels of car ownership. Approach to Chester Business ParkLand to the east of Wrexham Road, Chester will continue to identified as an established business park within the Green Belt. Development proposals for office development, Use Class E(g)(i), within the area defined on the policies map will be supported where they are in line with the suggested policy approach set out in EG 1 'Economic growth, employment and enterprise' and providing: 1. they provide for a high-quality development in a parkland setting; and 2. the traffic/transport requirements generated by the development can be safely and satisfactorily accommodated on the highways network. Proposals for the refurbishment of vacant office premises for continued economic use would be supported. Proposals for the change of use of vacant office floorspace to an alternative use, would be assessed against he suggested policy approach set out in EG 1 'Economic growth, employment and enterprise'. The policy approach could consider if flexible employment uses that support jobs (such as research and development, educational or health related use), may be acceptable where there is evidence of long-term vacancy and where this would maintain the vibrancy of the business park. Additional safety/security measures should be provided where appropriate. New residential development within Chester Business Park would not be permitted.	
EP 1: Ellesmere Port	Development in Ellesmere Port has the potential to deliver substantial economic growth, through continued and new investment in the Origin area, the reuse/redevelopment of vacant or redundant sites and the regeneration of the town centre. Further housing will be delivered to complement the settlement's role as a key employment location and support the vitality of the town centre. The new Local Plan will set out the level and location of new development and regeneration, economic growth, industrial decarbonisation and new housing will be priorities. Key allocations/ policies Locations will be identified to deliver strategic development needs for new housing and employment development, linked to section 5 'Spatial strategy' of the Plan. Ellesmere Port Origin is a strategic employment cluster with four distinct zones; Western Advanced Manufacturing Zone; Automotive and related industries, logistics and distribution (covering current Hooton Park Local Plan (Part Two) policy EP 4 and adjacent areas)	Potential likely significant effects The policy discusses key allocations for development in Ellesmere Port. There is minimal information and likely needs further detail to be assessed fully at the next stage.

	Central industrial area; industrial and warehousing development (M53 corridor, includes New Bridge Road and Stanlow West in current Local Plan (Part One) policy ECON 1) Stanlow and Thornton; important for petrochemical and related industries, low carbon technology, research and development (Stanlow operational areas and Thornton Science Park, current Local Plan (Part Two) policies EP 4 and EP 5) Eastern Growth Zone; glass manufacturing, environmental and low-carbon technology, energy and waste resource recovery (Encirc, Protos current Local Plan (Part Two) policy EP 6, and former CF Fertilisers site excluding Green Belt and countryside locations) Urenco and Capenhurst Technology Park: located in the Green Belt, close to the Ellesmere Port settlement boundary. The chosen spatial strategy will determine whether Green Belt boundaries will be amended, it is proposed to retain a policy for the site to allow for a continuation of current uses and for operational improvements within the site. The approach to the use, design and location of developments in proximity to hazardous installations or pipelines is set out in section 21 'Health and wellbeing'. In exceptional cases it may be necessary to strike a balance between the need for investment and regeneration within the existing urban area and the degree of risk involved. Transport and Infrastructure • Subject to TA 2 'Key local transport infrastructure priorities' the suggested policy approach will identify the key transport priorities for Ellesmere Port, which may include: • Maximising opportunities for freight transport on the rail network or via the Manchester Ship Canal • Encouraging new links to rail and waterway networks • Supporting improved transport links (including pedestrian and cycle) between the town centre, the Waterfront, Stanlow and Rossfield Park Appropriate provision should be made for access and parking in line with a review of parking standards and parking zones as set out in TA 1 'Transport and accessibility', where there is a concentration of services, increased sustainable transport options and lower levels of car ownership. All developments will be required to support physical and landscape improvements to the gateways, corridors and green spaces within Ellesmere Port including along the M53/Shropshire Union Canal Corridor.	Therefore, this policy has been screened in.
EP 2: Origin - Stanlow and Thornton Science Park	Land at Stanlow (to be identified on the policies map) will be safeguarded for nationally significant petrochemical and related industries. New developments are encouraged to support the low carbon energy transition, and where appropriate include measures to decarbonise heavy industrial processes (see section 28 'Energy' and approach to low carbon fuel). The redevelopment of any surplus vacant, under-used or derelict land for employment or related sui generis uses will be supported. All development proposals must include public safety and security measures and will be required to meet health and safety advice. Proposals involving freight movements, warehousing and logistics should maximise opportunities to transport products by non-road modes of transport including the Manchester Ship Canal and rail network.	Potential likely significant effects The policy discusses key allocations for development at Stanlow and Thornton Science Park. There is minimal information and likely

	Development must minimise and mitigate any impacts on the local environment, health, residential amenity, potential for pollution, noise generation, visual impact and flood risk. Thornton Science Park is located within Stanlow and identified for research and development. The central landscape area is important for the character and quality of the science park and should be retained and enhanced with any development proposals.	needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.
EP 3: Origin - Protos	Land at Protos (to be identified on the policies map) will be safeguarded for the following; • Multi-modal development in connection with resource recovery and waste, reducing carbon emissions and sustainable energy generation. See sections 29 'Managing waste' and 28 'Energy' • Existing and planned port and rail infrastructure, to maximise opportunities for freight movements on the Manchester Ship Canal or rail network and safeguard minerals infrastructure The current policies map will be reviewed and where necessary updated in line with extant consented developments at Protos. The policy approach will seek to ensure development is comprehensively planned and takes account of other operational, planned or consented development in Origin and the surrounding area. The ecological mitigation areas and landscaping that form part of the consented resource recovery park are retained. See section 25 'Green infrastructure, biodiversity and geodiversity' Development should make provision for public access (including public transport), having regard to operational needs of businesses and public safety. Development must minimise and mitigate any local impacts on the local environment, health, residential amenity, potential for pollution, noise generation, visual impact and flood risk.	Potential likely significant effects The policy discusses new development at Protos. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.
NO 1: Northwich	The suggested approach will reflect the objectives and projects identified in the Northwich Town Centre Development Framework and Northwich Transport Strategy recognising the town's potential to reuse/redevelop vacant or redundant sites and the regeneration of the town centre. The intention is to retain the overall policy content of current Local Plan (Part One) policy STRAT 5 and Local Plan (Part Two) policy N1 relating to development in Northwich and safeguarding the character and individuality of the settlements that form the wider built-up area of Northwich. The new Local Plan will set out the level and location of new development within Northwich and the surrounding settlements which make up the Northwich urban area. The key settlement gaps identified under Local Plan (Part Two) policy GBC 3 will be retained to avoid coalescence and the identity function of the gap, see also section 24 'Landscape'. Key sites and land allocations will be identified to deliver strategic development needs for new housing and employment development (linked to section 5 'Spatial strategy' and the chose spatial strategy of the new Local Plan). Local Plan (Part Two) policies N 3 and N 4 will be retained accordingly and updated as needed to reflect allocations that have been completed and/ or require a new approach. Local Plan (Part Two) policy N 2 for the Northwich regeneration areas (Weaver Square (Local Plan (Part Two) policy N 2.A), Winnington Works (TATA) (Local Plan (Part Two) policy N 2.B), and Wincham (Local	Potential likely significant effects The policy discusses key allocations for development in Northwich. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.

	Plan (Part Two) policy N 2.C), are all proposed to be retained. The boundaries will be reviewed and amended where necessary. The content of Local Plan (Part Two) policy N 6 which protects the unique heritage assets and character of Northwich conservation area, town centre and its outskirts, would be retained. Key allocations/policies • Wincham Urban Village • Northwich Town Centre e.g. Weaver Square, Northwich Market, Barons Quay • Winnington Works (TATA) • Gadbrook Park Other sites to be identified will depend on the chosen spatial strategy. Transport and infrastructure Subject to TA 2 'Key local transport infrastructure priorities' the suggested policy approach will identify the key transport priorities for Northwich, which may include: • Winnington/Barnton Swing Bridge corridor • Improving evening bus services and providing better bus links between the town and the railway station • Providing more dedicated walking and cycling routes from residential areas to the town centre; Appropriate provision should be made for access and parking in line with a review of parking standards and parking zones as set out in TA 1 'Transport and accessibility', where there is a concentration of services, increased sustainable transport options and lower levels of car ownership.	
NO 2: Gadbrook Park	Gadbrook Park and the surrounding area, to be identified on the policies map, will be safeguarded and retained for employment use falling within use classes E(g), B2 and B8. All development proposals within this area must be comprehensively planned and meet the criteria in section 16 'Economic growth, employment and enterprise' regarding new employment development. Proposals for the refurbishment of vacant office premises for continued economic use would be supported. Proposals for the change of use of vacant office floorspace to an alternative use, would be assessed against section 16 'Economic growth, employment and enterprise'. The policy approach could consider if flexible employment uses that support jobs, such as educational or health related use, may be acceptable where there is evidence of long-term vacancy and where this would maintain the vibrancy of the business park. Additional safety/ security measures should be provided where appropriate. New residential development within the policy area would not be permitted. The Council may also take forward Article 4 Directions to remove permitted development rights for residential or other use in the future. Land to the south-west of Gadbrook Park	Potential likely significant effects The policy discusses key allocations for development in Gadbrook Park. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.

	Land to the south-west of Gadbrook Park is identified for large-scale logistics, warehousing and distribution (as currently allocated under existing Local Plan (Part Two) policy N 4.F). Development should be brought forward in line with an agreed development brief that addresses the following, and meets other relevant policies of the new Local Plan: 1. Access, highways and transport infrastructure, 2. Access by walking, cycling and public transport, incorporating active travel measures with the surrounding area 3. Improvements and enhancements to the rail network and safeguards sufficient land for a railway station 4. Landscape and visual impacts 5. High quality design, being of a suitable scale, density, form, massing, height and materials with regard to surrounding landscape character and topography 6. Integrate and enhance ecological networks, green infrastructure and provide biodiversity net gain 7. Minimise and mitigate flood risk Gadbrook Park Railway Station The re-opening of the Sandbach to Northwich line to passenger traffic has previously been identified as a potential scheme to improve connectivity between Cheshire West and the surrounding area. The reinstatement of this service and the potential for a station at Gadbrook Park is to be recognised in the new Local Plan, through the safeguarding of land for a fully accessible new railway station within the area defined on the policies map, subject to further detailed assessment. The layout and design of development proposals should allow for provision for public transport services throughout the site.	
WI 1: Winsford	The suggested policy approach is to reflect the objectives and projects identified in the Winsford Neighbourhood Plan and Winsford Development Framework recognising the town's potential to reuse/redevelop vacant or redundant sites, with a focus on regeneration of the town centre and old High Street, promoting opportunities for town centre living, improvements to open space, the waterfront and leisure routes and improving accessibility to the railway station. The new Local Plan will set out the level and location of new development. The overall content of Local Plan (Part One) policy STRAT 6 and Local Plan (Part Two) policy W 1, relating to development in Winsford, will be retained along with the Station Quarter allocation (allocated through the Winsford Neighbourhood Plan), promoting good design and accessibility, which is also proposed to be retained. Key sites and land allocations will be identified to deliver strategic development needs for new housing and employment development (linked to 5 'Spatial strategy' of the new Local Plan). Local Plan (Part Two) policies W 1 and W 2 will be retained accordingly and updated as needed to reflect allocations that have been completed and/ or require a new approach, and either retain, replace or identify new employment land allocations to meet borough wide needs. Woodford Park Woodford Park is an established employment area and will be safeguarded to meet a range of sizes and types of small-medium business needs. Additional growth areas will be explored around north and west of Woodford Park for a mix of uses.	Potential likely significant effects The policy discusses key allocations for development in Winsford. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.

	Key allocations/ policies • Station Quarter • Town centre regeneration • Old High Street • Winsford Industrial Estate • Winsford Gateway • Winsford Waterfront • Woodford Park • Improvements to open/green space/leisure routes with enhanced access to The Flashes and River Weaver • Improved accessibility to the railway station Other sites to be identified will depend on the chosen spatial strategy. Transport and infrastructure Subject to TA 2 'Key local transport infrastructure priorities' the suggested policy approach will identify the key transport priorities for Winsford, which may include: • Improving journey times between Winsford/Middlewich and link to M6 • Safeguarding land between A54 Winsford Railway Station to Stanthorne in Winsford for road/junction improvements • Improvements around Winsford rail station Appropriate provision should be made for access and parking in line with a review of parking standards and parking zones as set out in TA 1 'Transport and accessibility', where there is a concentration of services, increased sustainable transport options and lower levels of car ownership.	
WI 2: Winsford Industrial Estate	Winsford Industrial Estate Winsford Industrial Estate is a strategic employment location for a range of sizes and types of business falling in use classes E(g), B2 and B8. The refurbishment of premises for continued employment use will be supported. Land within Winsford Industrial Estate will be retained to meet the needs for small, medium and larger enterprises, and expansions needs for specific employers. Additional growth areas will be explored around the east and north of Winsford Industrial Estate to meet large scale industrial, warehouse and distribution needs. These areas would be protected from alternative forms of development. Development proposals for B2/B8 uses should incorporate sufficient space for lorry parking for their anticipated use. The design and location of parking and servicing should minimise visual impact on the street scene. Development must mark the ‘gateway’ into Winsford through appropriately high quality development.	Potential likely significant effects The policy discusses development in Winsford Industrial Estate. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.
FR 1: Frodsham	Identify Frodsham as a market town in the new Local Plan settlement hierarchy. Set out the level and location of new development in and around the town – depending on the final potential growth option (see SS 5 'Spatial strategy options'), this may require the release of Green Belt land.	Potential likely significant effects

	The policy approach will generally reflect the objectives and projects identified in the Frodsham Neighbourhood Plan, including: • allocating sites FRO/0010, FRO/0038, FRO/0039, S/01, S/07, S/10 for development • providing a mix of new homes, especially affordable housing for young people/families, starter homes, and smaller properties enable downsizing and meeting the needs of older residents • protecting existing and promoting new employment and business opportunities, maintaining the vitality and viability of the retail centre • ensuring new development respects the character of Frodsham in terms of design, materials and scale • protecting the appearance, setting and character of the Frodsham and Helsby Hill ASCV • supporting the development of Frodsham's tourism and visitor economy • protecting and enhancing the network of accessible green and open spaces • managing the potential impact on designated habitats sites • facilitating easy and safe access within the town, for walking, wheeling and cycling, that is designed for the needs of an ageing population • supporting the use of electric vehicles and providing adequate vehicle and cycle parking	The policy discusses key allocations for development in Frodsham. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.
NP 1: Neston and Parkgate	Identify Neston and Parkgate as a market town in the new Local Plan settlement hierarchy. Set out the level and location of new development in and around the town – depending on the final potential growth option (see SS 5 'Spatial strategy options' A-C), this may require the release of Green Belt land. The policy approach will generally reflect the objectives and projects identified in the Neston Neighbourhood Plan, including: • providing a mix of new homes, especially affordable market and social housing for young people, students, families, starter homes, and smaller properties to enable downsizing and meeting the needs of older residents • reviewing the neighbourhood plan policy NNE1 employment allocations for potential inclusion in the new Local Plan • protecting and supporting the development of Clayhill Industrial Estate as a location for employment uses, and reflecting new Class E(g) Commercial Business and Service use class • addressing long term vacancies and supporting the vitality and viability of the town centre • protecting the appearance, setting and character of the Dee Coastal Area ASCV • ensuring new development respects the character of Neston and Parkgate in terms of design, materials and scale • supporting the development of Neston and Parkgate's tourism and visitor economy, recognising the key visitor attractions of Parkgate Parade, Ness Botanic Gardens, the Burton Marsh Greenway and the Wirral Way • protecting and enhancing the network of accessible green and open spaces • managing the potential impact on designated habitats sites • improving transport infrastructure by creating a network of safe walking and cycling connections throughout the area	Potential likely significant effects The policy discusses development in Neston and Park Gate. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.

	• protecting existing car parks from development and extended where possible within and adjacent to Parkgate Parade University of Liverpool, Leahurst Campus Located on the outskirts of Neston, in the Green Belt. The policy approach will define a boundary and set out policy for the development of the site for its continued use for education, research and development.	
MI 1: Middlewich	Continue close working and collaboration with Cheshire East in relation to future development needs and infrastructure. Take a pragmatic approach to avoid delays to plan-making to enable land in Cheshire West to meet future needs in Middlewich.	Potential likely significant effects The policy discusses development in Middlewich. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.
GB 1: Green Belt and countryside	Countryside The suggested approach includes the potential to add in other uses appropriate to countryside but will need to ensure the protection of the intrinsic character and beauty the borough's countryside. In addition, it will need to ensure that the protection of rural character is picked up in any update to Local Plan (Part One) policy STRAT 9, or elsewhere, to incorporate elements of Local Plan (Part Two) policies DM 1 and DM 19 (rural character/not urbanise) and that replacement buildings should be for the same use unless policy compliant. The supporting text to Local Plan (Part One) policy STRAT 9 can be amended to delete reference to settlement boundaries and Local Plan (Part Two) as going forward the new Local Plan will be prepared as a single plan. Green Belt The current Local Plan (Part One) policy STRAT 9 may need to be updated if required to set out approach to grey belt and to reflect Green Belt review evidence (to be prepared) in terms of overall approach and to inset areas/washed over settlements. The supporting text to Local Plan (Part One) policy STRAT 9 can be reduced as does not need to quote NPPF or to refer to future work in Local Plan (Part Two). Delete Local Plan (Part Two) policy GBC 1 and cover the commercial sites listed in the policy within the Chester and Ellesmere Port policy sections of the plan, retaining policy requirements if relevant to the site.	No likely significant effects. This is a development management policy which discusses appropriate uses of the greenbelt and countryside and does not allocate development.
TA 1: Transport and accessibility	The overall approach is to minimise the need for travel, particularly travel by solo occupancy cars and vans, by locating development so it is accessible to local services and facilities by a range of transport modes, following a vision-led approach and a sustainable transport hierarchy.	No likely significant effects.

Local Transport Plan Vision
A fairer and more sustainable transport system which enables a stronger, thriving future for all communities of Cheshire West and Chester by 2040, prioritising:

- tackling the climate emergency
- tackling the poverty emergency
- improving health and wellbeing
- boosting our local economy
- creating great places to live

Sustainable transport hierarchy
1. People walking or wheeling
2. People cycling or riding
3. People using public transport
4. People driving ultra-low emission and shared vehicles
5. Delivery and logistics in internal combustion engine vehicles
6. People driving other private motor vehicles

New development
New development will be encouraged in more sustainable locations, recognising that the approach to transport will vary depending on site location.

Fundamentally, developments and places should maximise any opportunities for people to be able to meet their regular day to day needs within a reasonable (10 minute/800 metres) walking distance of their homes, as well as being able to travel outside of their settlements by a range of sustainable travel choices.

New developments will be designed to accommodate and shape future travel demand in a scenario where our LTP vision is achieved, with reduced reliance on private cars, and significantly increased numbers of public transport, walking, wheeling and cycling trips, following the sustainable transport hierarchy.

Applicants will be required to demonstrate through a transport assessment, how their proposal meets our vision, and through a Travel Plan set out plans to monitor and take action where the vision is not being met.

Transport corridors and infrastructure
Current and disused transport corridors and infrastructure, including roads, railway lines, sidings and stations, will be safeguarded from development which would preclude their future transport use.

Opportunities will be sought to extend and improve access to local footpath and cycle networks, including greenways, canal towpaths and the Public Rights of Way networks.

Proposals for new industrial, warehousing, energy and waste development should maximise opportunities to transport materials and waste products by non-road modes of transport and make suitable provision for lorry parking. Sites alongside the Manchester Ship Canal, Weaver Navigation and rail network may be particularly suitable for freight use and these opportunities should be integrated into development proposals where feasible.

Rail lines and stations

This is a development management policy which discusses minimising need for solo travel and promoting sustainable travel. This policy does not allocate development merely encourage development in sustainable locations to enable sustainable approaches to transport.

	Proposals for new, re-opening or the enhancement of railway stations, including the expansion and/or improvement of facilities, the provision of cycle and car parking, and the provision of interchange or rail freight facilities will be supported. Parking Sufficient parking should be provided as part of the integrated vision-led approach to transport on development sites. We will review current standards in the Parking Standards SPD and the role of current parking zones, to meet a number of key criteria, including: • Supporting town centre economies and vitality • Minimising congestion • Supporting the uptake of sustainable transport modes • Enhancing the quality of place • Adhering to LTP 4 principles, including the sustainable transport hierarchy • Providing a flexible approach which adapts to the varying levels of non-car connectivity across the borough and leaves room for changes to connectivity levels in future	
TA 2: Local transport infrastructure priorities	Key local transport infrastructure priorities The suggested policy approach is to review the existing transport infrastructure priorities, and consider if any of the schemes need to be amended or deleted in the new Local Plan, or if there are any additional schemes that should be included. Table 14.1 Current identified transport policies and priorities	Potential likely significant effects. Policy discussing upgrading the A550 and other improvements and bridges etc Dependent on the locations of this development in relation to Habitats Sites, there could be linking impact pathways. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.

Current Policy	Priority
STRAT 7 Middlewich	Potential for improving journey times along A54 between J18 of the M6 and Winsford
STRAT 10 Transport and accessibility	• Chester Transport Strategy (Phase 1) • Chester Bus Interchange • Safeguards New Bridge Road/A5117 link road alignment
EP 1 Ellesmere Port settlement area	• New railway bridge crossing between Rossmore and the town centre • Partnership working with National Highways to achieve M53 smart motorway improvements and upgrading A550
N 5 Gadbrook Park	• Reintroduction of passenger services on the Sandbach Northwich line • Safeguarding of a site for a new station at Gadbrook Park
T 1 Local road network improvement schemes	Focus for s106 contributions: • Chester Western Relief Road • Winsford/Middlewich link to M6

	• Northwich Swing Bridge Safeguards land between A54 Winsford Railway Station to Stanthorne in Winsford for road/junction improvements
T 2 A56 Hoole Road Corridor	• Route of the A56 Hoole Road Corridor • Allocates land for 5thpark and ride sites at the junction of the M53/A56
T 3 Railway stations	Safeguards land for expansion/ infrastructure improvements around the following rail stations: • Winsford • Hartford • Northwich • Greenbank • Frodsham • Helsby • Lostock Gralam • Delamere • Acton Bridge • Cuddington
T 4 Rail corridors	Identifies disused rail corridors safeguarded from development at: • Mickle Trafford-Shotton • Helsby/Mouldsworth • Adjacent New Warrington Road • Tattenhall-Whitchurch
T 5 Parking and access	Identifies the parking standards zone boundaries, as defined in the Parking Standards SPD, at: • Chester – City Centre • Chester – Intermediate Zone • Ellesmere Port • Northwich • Winsford
DM 37 Recreational routeways	Identifies the following strategic recreational routeways: • Shropshire Union Canal • The Delamere Loop • The Sandstone Trail • The Baker Way

	• River Dee Corridor • Bishop Bennett Way • The Whitegate Way • North Cheshire Way • The Weaver Way and Weaver Parkway • Longster Trail • The Wirral Way • Trent and Mersey Canal	
ID 1: Infrastructure and developer contributions	The suggested approach is to amend the Local Plan (Part One) policy STRAT 11 to ensure educational needs, including contributions to school transport provision will be required. Net zero goals will be embedded, by upgrading and improving our existing transport network to encourage sustainable transport links like cycleways and bus routes to reduce car dependency and support the 2050 net zero target, and requiring low carbon essential infrastructure, such as EV charging networks and renewable energy connections. Local Plan (Part One) policy STRAT 11 will be strengthened to include greater environmental protections and climate resilience by ensuring we can react to the infrastructure needs of water and sewerage providers, as well as including flood defences. Update and incorporate the requirements and guidance in existing Local Plan (Part Two) policy DM 18 for the provision, expansion and enhancement of electronic communications networks including high-speed broadband. Provide greater detail regarding safeguarding social infrastructure, including village halls and community centres through including elements of Local Plan (Part Two) policy DM 39, and continue with the approach in Local Plan (Part Two) policy DM 39 in relation to public art but consider whether off-site contributions may be appropriate. The policy approach will clarify that where infrastructure is needed to sustain a new development, that off-site contributions may not be acceptable and that the Council will not be expected to fund any shortfall in provision. Local Plan (Part One) policy STRAT 11 will be updated to link with 16 'Economic growth, employment and enterprise', to ensure developments adhere to an employment strategy by maximising employment opportunities for residents, particularly those who are unemployed/under-employed.	No likely significant effects This is a development management policy and does not allocate development.
EG 1: Economic growth, employment and enterprise	The Council will promote sustainable economic growth in the borough and wider sub-region, supporting existing businesses, encouraging indigenous business growth and attracting new inward investment. The creation of new job opportunities across a range of sectors will be supported. The Local Plan will promote competitive town centre environments and bring forward sites to meet a range of town centre uses including commercial, retail, leisure, culture and office uses. Employment land supply	No likely significant effects This is a development management policy and does not allocate development.

To meet future employment land needs across the borough identified in the spatial strategy, a flexible supply of employment land allocations will be identified to cater for a range of types and size of business. These will cover use class B including B2 (General Industrial), B8 (storage or distribution) and Class E (Commercial Business and Service), primarily E(g) (Offices, Research and Development and industrial processes). This supply will be met through extant planning commitments, vacant/previously developed land in established employment areas, expansion land for specific employers or new allocations identified to meet strategic development needs.

A minimum of 40% of the employment land provision established in the plan strategy will contribute towards large scale industrial, warehousing or distribution use. Additional locations for economic use may be identified on the edge of settlements, dependent on the chosen plan strategy..

Established strategic employment locations are identified and safeguarded as essential to meeting the future economic strategy of the plan.

Proposals for new or expanded distribution centres should make provision for sufficient lorry parking to cater for their anticipated use.

In line with current Local Plan (Part One) policy ECON 2, commercial, business and service uses falling within Class E will primarily be directed to town centre locations. The following key employment locations are also safeguarded as being suitable for use class E(g):

- Chester Business Park – see suggested policy approach 6 'Chester'
- Gadbrook Business Park – see suggested policy approach 8 'Northwich'
- Cheshire Oaks Business Park

There are other established employment areas and land allocations that will be identified and protected to meet a range of sizes and types of small-medium business needs.

Protection of employment land and premises
Proposals for alternative uses on allocated employment land must not limit the range, type, choice and quality of employment land available to meet future employment needs.

The refurbishment and enhancement of existing sites and premises for continued employment use will be supported. Redevelopment to non-employment uses will be permitted where;

- the proposal would not limit the range, choice and quality of land or floorspace available in the locality;
- it can be demonstrated that the continued use of the premises for employment use is no longer commercially viable or environmentally acceptable;
- reasonable attempts must have been made (and evidenced) to continuously let or sell the premises for employment use for at least 12 months at a reasonable rate and there is no reasonable prospect of the site being re-used for employment uses; and
- the development is necessary to secure additional employment development that would not otherwise be viable.

Local labour and skills

	The Council will support initiatives and accessibility to further/higher education facilities in the borough including the University of Chester, West Cheshire College and Mid-Cheshire College, improving skills and links to main employers.	
TC 1: Town centres	Retain approach to town centre hierarchy and town centre first Proposals for retail, leisure and other main town centre uses should be located within a town centre, unless demonstrated that no sites are suitable and available through a sequential test. Development should be of an appropriate scale that reflects the size and role of each centre and should not have an unacceptable impact on other centres. Maintaining healthy town centres • Commercial uses with an active frontage should be retained (including shop windows) on street and in Chester at Row level. • Non-commercial uses that support the town centre, such as residential should not lead to the loss of active frontages and should therefore be located on upper floors or the rear of the buildings. • Diversity in goods and services should be provided with no dominance of one type of Main Town Centre Use (excluding shops). Health and community facilities and other uses that promote vibrant and diverse centres will be supported. Applications that involve the loss of a retail and other uses from a town centre will need to demonstrate the unit has been vacant continuously for 12 months, adequately marketed and does not harm the criteria above. Shops, commercial and community uses in District and Local Retail Centres should be retained and allowed to help meet a local community's day-to-day needs. Development of main town centre uses must be consistent with the scale and function of the Local Retail Centre (including village centres) and not undermine the vitality and viability of a centre higher in the hierarchy. Proposals that positively contribute towards creating attractive, vibrant and safe centres that offer a diverse mix of uses that can also extend the time when centres are active will be supported, especially cultural, civic and family activities. Alfresco dining/outdoor seating will be supported (subject to other policy requirements) where this would be located directly in front of a café, restaurant or drinking establishment. Considerations should be made to neighbouring uses, ensuring their compatibility and new residential development must not prejudice the operation of other town centre uses such as nightclubs and live venues. Sequential test The policy will set out the approach to the sequential test to ensure town centre locations are used first and then edge of centre locations. In terms of edge and out-of-centre proposals, preference will be given to accessible sites that are well connected to the town centre. Flexibility should be made in terms of size and format. Where there are no sequentially preferable sites available, existing land and buildings with planning permission for main town centre uses that fall within the catchment area of any new proposal should be considered in the first instance. Impact assessment	No likely significant effects This is a development management policy and does not allocate development. Any sites or development schemes brought forward in the future under this policy would be subject to a policy level HRA.

	Planning applications for main town centre uses outside of existing centres will require an impact assessment according to the following thresholds (gross external floorspace): • Chester and Northwich greater than 1,000 sqm • Ellesmere Port, Winsford, Frodsham and Neston greater than 500 sqm • Local Centres, greater than 200 sqm While small-scale rural developments outside of identified settlements will not be subject to the sequential test (above), they must demonstrate a requirement for a countryside location, be in connection with the land-based business, would not undermine the vitality and viability of local shops or retail centres, and be less than 200 sqm gross external floorspace.	
VE 1: Visitor economy	The expansion of existing tourism assets or the creation of new tourism opportunities will be supported where this would enhance the existing tourism offer, benefit the local economy and be of a suitable design, scale and type for its location. Major leisure, tourism, cultural attractions and visitor accommodation, which will attract a significant number of visitors, should be located within or accessible to Chester, Northwich, Ellesmere Port and Winsford town centres to support the vitality of these centres. Elsewhere in the borough, proposals for visitor attractions or visitor accommodation will be supported in line with other relevant policies of the plan and with regard to NPPF paragraph 88. Caravan and Camping sites Camping and caravan sites are forms of tourism development, which will be supported where there is an unmet need. In addition to the above, proposals should also: • be small in scale to limit impact on neighbouring amenity • utilise or be well related to existing buildings • incorporate existing landscape features and provide open areas into the layout, provide screening and landscape buffers • be capable of connecting to existing utility services • provide ancillary appropriate facilities (such as toilets, showers, drinking water supply) for users of the site Visitor Attractions The following are significant visitor attractions, identified on the policies map. Development proposals will be supported subject to criteria below: • Chester Zoo – zoological purposes a. Refer to Green Belt and Chester policies b. Proposals should be comprehensively planned in line with an agreed development strategy for the wider site • Ellesmere Port Historic Canal Port – National Waterways Museum a. Improve links to and from Ellesmere Port, particularly for pedestrians, cyclists and by public transport b. Development proposals should be supported by a heritage impact assessment Oulton Park – motor sports	No likely significant effects This is a development management policy and does not allocate development. Any sites or development schemes brought forward in the future under this policy would be subject to a policy level HRA.

	a. New development is ancillary to the use of the site for motor sports b. Conditions limiting hours of use, if an increase in the level or duration of noise is likely c. Impacts on air quality are assessed and mitigated d. New built development must be sited either near to existing buildings on the site or in locations where its impact on biodiversity and residential amenity would be reduced	
HO 1: Mix and type of housing in new developments and specialist housing	Current Local Plan (Part One) policy SOC 3 and Local Plan (Part Two) policy DM 20 will be substantially amended to reflect the evidence of the Housing Needs Assessment (to be prepared). The new policy approach will provide detailed policy requirements e.g. % of 1-2 bed dwellings including by tenures; % of plots for self-build and custom housebuilding; requirements to meet the needs of an ageing population and meeting the needs of residents with disabilities. If justified by the evidence a new policy will be brought in to require national space standard to be met for internal space in new homes. Specialist Accommodation The content of Local Plan (Part Two) policy DM 26 concerning the future requirements for extra care, older persons and accessible and adaptable homes in new developments will be incorporated into the overall policy approach to mix and type but locational requirements will be kept ensuring these developments are in accessible areas with good accessibility to range of facilities. The suggested policy approach will resist extra care developments in the countryside outside of settlements. Student accommodation Local Plan (Part One) policy SOC 3 and Local Plan (Part Two) policy DM 27 will be amended to reflect any future needs identified through the Housing Needs Assessment (to be prepared). Local Plan (Part One) policy SOC 3 in relation to support for specialist student accommodation in areas accessible to the University of Chester is proposed to be retained. The suggested policy approach will continue to link to policy for the University of Chester, proposed to be taken forward in CH 1 'Chester', and other Local Plan policy requirements in relation to location and accessibility in terms of walking distance to campus and cumulative impact of proposals. Requirements for standard of accommodation, management plans and future reuse will be retained.	No likely significant effects This is a development management policy and does not allocate development.
HO 2: Delivering affordable housing	The suggested policy approach will replace Local Plan (Part One) SOC 1 and Local Plan (Part Two) DM 23, and will set out the % of affordable housing required across the borough including potentially by sub-area. The approach intends to reflect the government's requirement for housing sites in the Green Belt to provide at least 50% affordable housing. The policy approach will specify the type of affordable housing required. Affordable housing will be required on all sites of 10 or more dwellings but in designated rural areas, the requirement will be triggered by three or more dwellings. This requirement is applicable to all self-contained units, including older persons and student accommodation. Affordable homes will be sought within all new development that include the provision of new homes, unless there are exceptional circumstances which can be demonstrated to justify off site contributions, providing that: • Affordable homes must be indistinguishable from market housing, achieving high quality design and must be dispersed throughout the site. • Provision must be made for affordable homes to remain affordable in perpetuity.	No likely significant effects This is a development management policy and does not allocate development.

HO 3: Proposals for residential development	Local Plan (Part Two) policy DM 19 will either be retained as a separate policy or the general principles incorporated into other policies of the new Local Plan. For residential development in settlements, the approach to protecting garden land and character should continue to be reflected in the new plan, along with criteria relating to development in the countryside, as to where residential development will be allowed. The suggested policy approach is to largely retain Local Plan (Part Two) policies DM 21 and DM 22 with only minor amendments.	No likely significant effects This is a development management policy and does not allocate development.
HO 4: Essential rural workers dwellings	The suggested policy approach is to retain Local Plan (Part Two) policy DM 25 including the requirement that should the need cease, that the dwelling remains available to meet affordable housing needs. Further detail may be added to how the property should remain affordable in the future considering consultation responses. Cross referencing to other planning requirements are proposed to be deleted.	No likely significant effects This is a development management policy and does not allocate development.
HO 5: Rural exception sites	Retain the overall approach in Local Plan (Part One) policy SOC 2 to sites being small in scale and on the edge of identified rural settlements, and be modest and in keeping with the form and character of the settlement. Retain the current approach in Local Plan (Part Two) policy DM 24 to ensure that there is a genuine local need to be identified through an independent assessment prepared or commissioned by the Parish Council. Schemes will need to remain affordable in perpetuity. In addition, the current approach in Local Plan (Part Two) policy DM 24 would be retained to ensure that once a need has been established, a thorough assessment of sites is undertaken led by the Parish Council and in consultation with the local community. This assessment should be evidenced and relate to need identified. This suggested policy approach would keep criteria ensuring that alternative sites within a settlement aren't available to meet the need including on sites for market housing where affordable housing is provided. Add that other sites may be identified through the Brownfield Land Register and Land Availability Assessment. The current restrictions and local connection test would be retained as follows but also that this may differ where set out in a neighbourhood plan: 1. currently live in the parish and have been living there continuously for at least five years; or 2. have permanent employment in the parish; or 3. have close family members (defined as children, parents, siblings only) who have been residing in the parish continuously for at least five years; or 4. people who have previously lived in the parish for a continuous period of at least 10 years.	No likely significant effects This is a development management policy and does not allocate development.
HO 6: Houses in Multiple Occupation	The policy approach will take forward Local Plan (Part Two) policy DM 28 which sets out criteria for when the change of use from a dwelling to a House in Multiple Occupation (HMO) will be supported, where it would: • not increase the concentration of HMOs with 50 metres more than 15% total number of dwellings • not sandwich an existing household between HMOs • meet the Council's amenity standards (Physical Property Standards - Shared houses/flats 2012) • make provision for cycle parking, and waste and recycling facilities	No likely significant effects This is a development management policy and does not allocate development.

	• protect the overall character of an area • be supported by evidence there is no reasonable demand for the existing dwellinghouse	
GT 1: Gypsy and Traveller and Travelling Showpersons accommodation	The new policy will need to set out the criteria for the location of sites and identify sites/areas to meet the needs established through the Gypsy Traveller Accommodation Needs Assessment (GTANA) (in preparation). The policy will set out set out how needs identified in the GTANA will be met for the first five years of the plan, and remainder of the plan period, including potentially requiring provision on larger residential sites. The policy may need to include provision for Travelling Showpeople including for the safe storage and maintenance of equipment.	Potential likely significant effects This policy discusses identifying sites/areas to meet the need for Gypsy and Traveller accommodation. Dependent on where these sites are located there could be linking impact pathways. There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.
HW 1: Health and well being	To meet the health and wellbeing needs of our residents, proposals will be supported that provide new or improved health facilities across the borough, supports improved links to healthcare in rural areas and promotes safe and accessible environments and developments. Proposals should also aim to promote high quality access to green space across the borough that will support opportunities to widen and strengthen the boroughs cultural, sport, recreation and leisure offer. Development proposals that give rise to significant adverse impacts on health and quality of life including residential amenity, will not be supported. Where the Council considers it likely that the proposal will result in significant adverse environmental effects during the construction phase a Construction Environmental Management Plan (CEMP) will be required. Health impacts of new developments Development proposals should take every reasonable opportunity to promote and positively contribute to the health of the borough by submitting a statement considering the health implications of new build commercial and residential development. Developments should support and protect cultural, sport, recreation and leisure facilities that are valued by the local community. Where development is likely to have a significant impact, including any cumulative impacts on public health, it must be demonstrated how health and wellbeing has been considered through an assessment	No likely significant effects This is a development management policy and does not allocate development.

Applications that are likely to have a significant health impact must make a positive contribution to health and wellbeing and any negative impacts need to be mitigated.

Impact on residential amenity
All proposals for new development will be expected to safeguard the quality of life for residents within the development and those nearby. Development will only be supported where it does not result in a significant adverse impact upon the residential amenity of the occupiers of existing properties or future occupiers of the proposed development.

Issues impacting residential amenity include, but are not limited to outlook, privacy, light, noise and odour.

Residential development must include an appropriate quantity and quality of outdoor private amenity space, having regard to the type and size of the proposed development.

Noise
Development which generates noise or is sensitive to it, will only be permitted where it does not have an unacceptable adverse impact on human health or quality of life.

It is expected that demolition and construction work shall be carried out during normal working hours, unless it can be demonstrated that significant adverse impact on residential amenity is unlikely.

The Council must be satisfied that the proposed location of any construction or demolition site compound will minimise the noise impact on neighbouring residential uses.

Air quality
Development must not give rise to significant adverse impacts on health and quality of life from air pollution. An air quality assessment will be required for development proposals that have the potential for significant air quality impacts, including those which are classed as major development with the potential for significant emissions and those that are likely to expose people to existing sources of air pollutants.

Applicants must demonstrate that appropriate mitigation will be provided to ensure that the new development is appropriate for its location and unacceptable risks are avoided.

Land contamination and instability
Development proposals on land known or suspected to be unstable or contaminated must demonstrate that they will not give rise to significant adverse impacts on health, controlled waters, ecological receptors, property and quality of life.

Development on previously developed sites, adjacent to suspected contaminated land or adjoining/adjacent to a landfill site may need to be supported by an appropriate contamination assessment that clearly demonstrates that the risk from contamination can be successfully mitigated and managed over the lifetime of the development.

In areas of potential land instability, an assessment should be made to ensure that the land is suitable for the proposed development and that development can be undertaken, occupied and used without risk to people and property resulting from underground conditions. Areas of potential land instability will include those of vulnerable topography or geology, with evidence of brine and salt extraction, past or potential future natural subsidence due to salt erosion and coal mining.

	Development must not result in an increased risk of subsidence or land instability on the site or in the surrounding area. Please refer to section MS 1 'Minerals supply' for further policy guidance relating to the supply of land-won aggregate and for guidance as to where mineral applications which may impact land contamination and stability will be supported. Hazardous installations – development and extensions Hazardous substances consent or development proposals in the vicinity of hazardous installations which creates new hazardous installations, extends existing hazardous installations will be supported providing that they do not result in a significant increase in the number of people being subjected to threshold levels of risk. Applications for underground hazardous waste storage will be supported providing it is demonstrated that it is the most sustainable option, that ground stability would not be affected and that mineral reserves would not be sterilised.	
OS 1: Open space, sport and recreation	The suggested approach is to retain Local Plan (Part One) policy SOC 6, and combine with elements of Local Plan (Part Two) policies DM 35, DM 36 and DM 37. The policy approach will continue to protect, manage and enhance existing open spaces, sport and recreation facilities to provide a network of diverse, multi-functional open spaces, ensuring that any policy wording will continue to: 1. Support proposals that improve the quality and quantity of accessible open space, sport and recreation. This should include the improvement of the network of existing open spaces and improving accessibility to green corridors, and enhancing biodiversity in line with the suggested policy approach in GI 1 'Green infrastructure, biodiversity and geodiversity' 2. Prevent development if it results in substantial harm to or total loss of an existing open space, sport and recreation facility. 3. Outline the circumstances where development involving the loss of existing open space, sport and recreation facilities will be supported. This should include where there is a better replacement, surplus, or compensatory facilities are provided. 4. Require that all major residential development makes provision for open space in accordance with the current open space quantity and accessibility standards and onsite thresholds as set out in current Local Plan (Part Two) policy DM 35 (including that all forms of residential development, including older person, student and extra-care schemes should make provision for open space). 5. Developer contributions will be required for playing pitches based on the additional demand generated by new residential development having regard to Sport England's planning tools and the latest Playing Pitch Strategy. 6. Open space provision in new developments should be sought in the following order: on site, off-site, a financial contribution. Recreational routeways The suggested approach is to retain and update where necessary the current approach in Local Plan (Part Two) policy DM 37 which protects the range of recreational routeways in Cheshire West from any harmful impacts arising from new development. Proposals that enhance public access and the recreation value of the recreational routeway network will be supported.	No likely significant effects This is a development management policy and does not allocate development.

	Strategic recreational routeways of particular importance within the borough, will be identified on the policies map.	
OS 2: Cultural and community facilities	The suggested approach is to retain and update, where necessary, Local Plan (Part Two) DM 39 ensuring that any policy wording will continue to: 1. Avoid the loss of community and cultural facilities 2. Support proposals for new or improved community facilities and cultural or local services that serve the local community 3. Provide an appropriate mechanism for schools (and other community facilities) to secure pay and play community access for sport and recreation through a community use agreement. 4. Outline and clarify the circumstances where development involving the loss of existing community facilities, cultural or local services will be supported. This should include: where there is a surplus; the facility is no longer capable for use; the facility forms part of a larger community scheme; and/or compensatory facilities are provided.	No likely significant effects This is a development management policy and does not allocate development.
FW1: Flood risk and water management	Flood risk • Where relevant all development must consider its vulnerability to flooding, taking account of all sources of flood risk and the impacts of climate change. • Apply a borough wide Sequential Test where required in line with the National Planning Policy Framework (NPPF) and the Planning Practice Guidance (PPG). Proposals for development must seek to utilise land at lowest risk of flooding from all sources. • In the application of the sequential test the search for alternative sites should be borough-wide and should not be restricted to sites only capable of accommodating the proposed scale of development. Opportunities to provide development on more than one, sequentially preferable site should be explored where suitable. More guidance on the application of the sequential test is anticipated in future updates to the Flood Risk and Coastal Change PPG. • Where development is necessary in areas of greater flood risk, the development should be made safe for its lifetime without increasing flood risk elsewhere. • Where required, the Exception Test will also be applicable in line with the NPPF and the PPG. Flood resilient construction should be utilised to manage any residual risk. • For development proposals where only part of the site is affected by flooding, including any future flood risk, a sequential approach should be applied to the layout of development avoiding vulnerable uses and site accesses being located in areas at higher risk. If this is achieved, a sequential test may not be necessary and will be subject to case by case assessment. • The assessment of flood risk in relation to any proposed development, should take into account the Cheshire West and Chester Strategic Flood Risk Assessment (SFRA) update (in preparation at the time of writing) and its mapping in addition to the updated mapping provided nationally through the national flood risk assessment (NaFRA2) (Environment Agency). Flood Risk Assessment • The policy will set out the requirements for a site-specific flood risk assessment in line with NPPF and PPG. Sustainable Drainage The policy will detail the standards and requirements to manage surface water drainage effectively and reduce the risk of flooding elsewhere including:	No likely significant effects This is a development management policy and does not allocate development.

	• how surface water runoff should be appropriately managed (in accordance with the Cheshire West and Chester Sustainable Drainage Systems (SuDS) Guidance or any subsequent replacement standards; • how development proposals should manage and discharge surface water through a sustainable drainage system (SuDS). The preference will be for new development to incorporate surface level SuDS with multi-functional benefits, as opposed to underground tanked storage systems, for the management of surface water; • the requirement for approved development proposals to be supplemented by appropriate maintenance and management regimes for surface water drainage schemes; • that development proposals should not result in the loss of open watercourse, and culverts should be opened wherever possible; • the use of SuDS to enhance the site design and sense of place and where it is incorporated in open space, provide a safe naturalised system without the need for fencing or barriers in line with the Design Code. Flood Storage • The outputs from the SFRA update will be used to identify the need for additional flood storage areas in liaison with the LLFA and EA. Natural flood management The policy will detail the standards and requirements to deliver natural flood management solutions in accordance with the Local Nature Recovery Strategy (LNRS) including: • the design and layout of the SuDS to prioritise nature-based solutions and be designed to incorporate surface water management features as green and blue infrastructure wherever possible; maximising multifunctional benefits for biodiversity, amenity, cooling and water quality; • the requirement for natural flood management features such as SuDS to be incorporated into design of schemes providing amenity value and / or biodiversity improvements; • the requirement for watercourses and riverside habitats to be conserved and enhanced, where necessary through management and mitigation measures. Water quality, supply and treatment • The current policy requirements to ensure that development proposals do not cause unacceptable deterioration to water quality or have an unacceptable impact on water quantity (including drinking water supplies, water for industry and managing drought) or wastewater infrastructure capacity will be retained.	
LA 1: Landscape	The suggested approach is to retain Local Plan (Part One) policy ENV 2, and combine with elements of Local Plan (Part Two) policy GBC 3 ensuring that any policy wording will continue to: 1. Protect and, wherever possible, enhance landscape character and local distinctiveness; 2. Prevent development in previously identified key gaps, as currently defined in Local Plan (Part Two) policy GBC 3 between settlements outside the Green Belt, proposals should only be supported where it does not harm the settlement separation and identity functions of the gap. Development within key settlement gaps will only be supported where it would not lead to coalescence, increase the intervisibility between settlement edges, harm the undeveloped character or materially alter historic form of the settlements; 3. Support the designation of Local Green Space and protect the character of the borough's estuaries and undeveloped coast;	No likely significant effects This is a development management policy and does not allocate development.

	4. Support proposals that take full account of the characteristics of the development site, its relationship with its surroundings and views into, over and out of the site; 5. Recognise, retain and incorporate features of landscape quality into the design of new developments, taking account of the Council's borough-wide Design Code. The identification of additional/ new key settlement gaps may be considered. Consider the best approach to any future National Landscape designation.	
LA 2: Areas of Special County Value	The suggested approach is to retain and update, where necessary, Local Plan (Part Two) GBC 2 ensuring that any policy wording will continue to: 1. Protect and, wherever possible, enhance existing Areas of Special County Value (ASCV) as currently defined in Local Plan (Part Two) policy GBC 2; 2. Ensure development in or affecting the setting of an Area of Special County Value integrates into the landscape character of the area, is designed to take account of guidance in the Landscape Strategy and improves the landscape character and appearance. ASCVs would continue to be identified on the policies map and are designated for their special landscape character and scenic value. Consider the best approach to any future National Landscape designation.	No likely significant effects This is a development management policy and does not allocate development.
GI 1: Green infrastructure, biodiversity and geodiversity	The suggested approach is to combine Local Plan (Part One) policies ENV 3 and ENV 4, with elements of Local Plan (Part Two) policies DM 44 and DM 45, to create a single new green infrastructure, biodiversity and nature policy. The new policy will continue to safeguard and enhance biodiversity, geodiversity, green infrastructure and protect designated sites. Any policy wording should ensure that proposals for new development must: 1. Not result in any net loss of natural assets and deliver a net gain, in line with national policy. 2. Continue to protect designations of international, national and local importance, irreplaceable habitats. 3. Continue to protect protected/priority species and geodiversity. 4. Be accompanied by sufficient information that complies with industry best practice and guidance. The new policy wording should also remove reference to the Borough's ecological network and set a focus for contributions to be led by the Local Nature Recovery Strategy (LNRS). Biodiversity The new policy should detail what is expected in terms of the protection and enhancement of protected sites, habitats and species, to be supported by sufficient information and following the mitigation hierarchy. A link to the LNRS will be included with the following outputs providing policy sections: 1. Local Nature Recovery Network - Ensure that proposals within or adjacent (within a 15 metre buffer) to either areas of opportunity or designated areas identified in the LNRS, developers will need to look at opportunities for nature recovery in line with the LNRS. The Opportunity Areas and Designated Areas will be included as part of the policies map. 2. Peat - Additional policy wording to include that peat should be protected from disturbance or loss from new development, to avoid the release of carbon into the atmosphere. Development proposals on areas of known or suspected peat will require ground investigation as part of the planning application process. Any peat near to the surface with the potential to be restored must be protected. In areas of deep peat, peatland must be protected from compaction and drying out.	No likely significant effects This is a development management policy and does not allocate development. P

	3. SUDs and Natural Flood management - The new policy will detail the standards and requirements to deliver natural flood management solutions in accordance with the LNRS in order to manage flood risk, enhance biodiversity, improve water quality and promote amenity spaces. This will link to policy approach FW 1 'Flood risk and water management'. 4. Tree cover - The suggested policy approach will retain parts of Local Plan (Part Two) policy DM 45 relating to the replacement tree ratio and add detail such as tree species and quantity. New policy wording will broaden the current policy approach and improve and maintain tree canopy cover within the borough on a strategic level. This would refer to a 'league table' of wards with low tree cover, where development in these wards will need to provide additional green space as would normally be required, with low performing wards prioritised for new tree planting. The aim is to get all wards to a minimum of 16% tree cover. 5. Hedgerows - The new policy will require that all external edges of all new development have hedgerows as part of a comprehensive landscape scheme, this would be secured with an agreement specifying type/species and nature of hedgerow. 6. Invasive species - The new policy will provide a list of invasive species that present a risk to local biodiversity, and would require developers to investigate and deal with invasive species where present on new development sites. 7. Agricultural land - The new Local Plan would seek to discourage the loss of higher grade agricultural land as a result of development. The policy should continue to protect the best and most versatile agricultural land.	
HE 1: Historic environment	The policies contained within the existing Local Plan (Part One and Part Two) continue to be suitable and relevant, reflecting national policy. Any local detail and actions from the Cheshire West and Chester Heritage Strategy can be included once this has been finalised. The policy wording will continue to: • Preserve and enhance the historic environment (including its setting) for its inherent value, and for the enjoyment of residents and visitors; • Support proposals that positively and proactively, conserve and enhance the historic environment. This includes safeguarding assets and supporting appropriate, viable and sustainable uses that conserve their significance; • Prevent development if it results in substantial harm to or total loss of the significance of a designated heritage asset, unless it is demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss; • Ensure that where development does take place, proposals will be high quality, sensitively designed and integrated with the historic context; • Pay particular attention to the conservation of those elements which contribute most to distinctive character and sense of place of the area. These include: a. Designated Heritage Assets b. Non-designated Heritage Assets c. Heritage at Risk d. Historic Townscapes and street scene (and any areas/projects identified in the Heritage Strategy and/or Design Code) e. Historic landscapes f. Registered Parks and Gardens and Battlefields In relation to archaeology, remove any repetition with National Planning Policy Framework. For development proposals within Chester, the Chester Archaeological Plan must be consulted.	No likely significant effects This is a development management policy and does not allocate development.

DS 1: High quality design	The new Local Plan will promote sustainable, high quality design and construction. Development should, where appropriate: • Respect local character and achieve a sense of place through appropriate layout and design • Provide high quality public realm • Be sympathetic to heritage, environmental and landscape assets • Ensure ease of movement and legibility, with priority for pedestrians and cyclists • Promote safe, secure environments and access routes • Reduce opportunities for crime and disorder and the fear of crime • Make the best use of high quality materials • Provide for the sustainable management of waste • Promote diversity and a mix of uses • Meet applicable nationally described standards for design and construction and any locally prepared Design Guides or Design Codes including those prepared by neighbourhood planning groups Relevant and appropriate design standards and guidance should be used to help guide development across the borough including: • National Design Guide • National Model Design Code • Manual for Streets • Nationally Described Space Standards The Area of Special Control of Advertisements, as shown on the policies map, places additional restrictions on applications for advertisement consent with the designated area.	No likely significant effects This is a development management policy and does not allocate development.
DS 2: Sustainable construction	The policy approach aims to encourage high sustainability standards in buildings and promote the application of the energy hierarchy with the aim of achieving carbon net zero in new residential and commercial developments. Development should be resilient to, and adapt to the future impacts of climate change through the inclusion of a range of appropriate measures. The reuse of buildings are expected to improve overall energy performance. Energy hierarchy The National Design Guide 2019 identifies the need for new developments to follow the energy hierarchy to: 1. Reduce the need for energy through passive measures, including form, orientation and fabric 2. Use energy efficient mechanical and electrical systems, including heat pumps, heat recoveryand LED lights; and 3. Maximise renewable energy especially through decentralised sources, including on-site generation and community-led initiatives New development All new build developments will be required to demonstrate how they meet the requirements of the energy hierarchy by considering each of the following in turn: 1. Energy efficiency - The policy would seek more energy efficient buildings by setting a % target improvement of a building's Target Emission Rate (of CO2 emissions per sqm floorspace) in the Building Regulations Part L, and/or set a target for the Fabric Energy Efficiency of the building. An alternative approach could be to set an Energy Use Intensity (a measure of how much energy a building uses per sqm	No likely significant effects This is a development management policy and does not allocate development.

	floorspace) target and/or a target for space heat demand (i.e. how much heat energy is needed to keep a building at a desired temperature) for the building. 2. Efficient, fossil-free and renewable energy supply - The policy would set a target and require on-site renewable energy generation as part of new development. Where appropriate, development proposals should be designed and incorporate measures to enable connections to a district heat network to be made now or in the future 3. Carbon/energy offsetting - As a last resort, the policy could allow for a financial contribution to offset any remaining residual carbon or energy. 4. Embodied Carbon - This is carbon that was emitted during the production, transport and assembly of a building, infrastructure, vehicle or other product, before the product is in use. The policy could require carbon reporting and/or set a target that new buildings must meet. 5. Water efficiency - New dwellings will be required to meet the optional higher National Housing Standard for water consumption of 110 litres per person per day. All non-residential development must achieve at least the BREEAM excellent standard for the 'Wat 01' water category. Alternative compliance As an alternative to the sustainable construction requirements (1-5) set out above, positive weight will be given to development proposals that: • For residential development, will be certified PassivHaus standard • For non-residential development, achieve a BREEAM rating of 'Excellent' In these cases, a full sustainable design statement/ evidence demonstrating compliance with policy requirements (1-5), will not be required and it will be sufficient to submit the technical information required to demonstrate that the relevant standard can be achieved.	
DS 3: Climate adaptation	The policy approach will expect developments to include site and building-level measures to be resilient to future climate change impacts and provide for the comfort, health, and wellbeing of current and future occupiers and the surrounding environment over the lifetime of the development. These measures should be integral to the layout and design of new development and should take the vulnerability of the building occupants into account. Site-level adaptations Development should be designed, through its layout, form and massing and through the use of green/blue infrastructure, to: • Minimise the overheating of buildings; • Provide comfortable external spaces in hot weather; and • Conserve water supplies and minimise the risk and impact of flooding. The use of green/blue infrastructure should provide multifunctional benefits in relation to climate change adaptation. Where appropriate to its context, this should include the use of living roofs with a sufficient substrate depth to maximise cooling benefits. Building-level adaptations Building designs and building-integrated measures should: • Mitigate the risk of overheating, ensuring that cooling needs are met sustainably • Conserve water supplies; and	No likely significant effects This is a development management policy and does not allocate development.

	• Avoid responses to climate impacts which lead to increases in energy use and carbon dioxide emissions. Adaptation strategy Proposals for development should demonstrate through an adaptation strategy how these issues will be addressed. This should include technical modelling and assessment of the risk of overheating in current and future climate change scenarios. In considering the likely impact of climate change over the lifetime of the development (particularly in relation to overheating), reference should be made to the most recent climate change projections.	
EN 1: Energy supplies and energy related developments	Proposals for developments providing new energy supplies or energy related development will be supported where they meet the following criteria: 1. Wherever possible, schemes should be located on previously developed land and/or in industrial areas and in areas close to existing users/demand or supplier of the energy, fuel and/or heat. 2. The proposals do not limit the range and choice of employment land in the area; 3. The proposals do not adversely impact on neighbouring land users, or on the commercial / operational requirements of surrounding businesses; 4. Where development is proposed on agricultural land, site investigations must be undertaken and the best and most versatile land must be avoided in favour of lesser quality land. Proposals must demonstrate how the site can be reinstated to its previous use and condition once the operational lifespan of the development has been reached; 5. The cumulative impacts of existing and proposed developments on the landscape, natural environment and surrounding users will be acceptable; 6. Wherever possible, the proposals use existing power lines, structures and infrastructure. Where it can be demonstrated that this is not possible and new power lines and pipelines are proposed, their impact on the landscape must be minimised; 7. Associated developments such as access roads, security fencing, lighting and any buildings must be designed to minimise visual impact, whilst ensuring that the development causes no risk to public safety; 8. Where biomass is proposed to be used for energy generation, it must be sustainably sourced. Applicants will be required to provide information about the type and source of material to be used in the biomass plant. Proposals for biomass installations will not be permitted within or adjacent to Air Quality Management Areas; and 9. Proposals include appropriate arrangements for decommissioning and reinstatement of the site when its operational lifespan has ended.	No likely significant effects This is a development management policy and does not allocate development.
EN 2: Wind energy	Proposals for wind energy will be supported where they meet the following criteria (in addition to relevant criteria in EN 1 'Energy supplies and energy related developments'): 1. Proposals take account of the Landscape Sensitivity Study and Guidance on Wind and Solar Photovoltaic Developments (2016). They should be directed to the least sensitive locations and avoid areas identified as highly sensitive to wind development (based on the proposed turbine height). They must have regard to the general design guidance principles set out in appendix B of the study; 2. Proposals avoid key settlement gaps and Areas of Special County Value and their settings; 3. An assessment is provided as part of the application of any potential shadow flicker or flashes of reflected light which might affect properties or nearby land uses, including playing fields. Where potential exists for these effects, appropriate measures to mitigate and reduce the impacts must be identified as part of the planning application; and 4. The application is supported by a landscape appraisal or, in the case of development requiring Environmental Impact Assessment, a Landscape and Visual Impact Assessment, the scope of which should	No likely significant effects This is a development management policy and does not allocate development. Any future proposals brought forward under this policy would be subject to the HRA process.

	be agreed at the outset with the Council. Any cumulative impacts of renewable energy schemes should be carefully considered as part of this assessment.	
EN 3: Solar energy	Proposals for ground mounted solar energy developments will be supported where they meet the following criteria (in addition to relevant criteria in EN 1 'Energy supplies and energy related developments'): 1. Proposals take account of the Landscape Sensitivity Study and Guidance on Wind and Solar Photovoltaic Developments (2016). They should be directed to the least sensitive locations and avoid areas identified as highly sensitive to the proposed scale of solar development. They must have regard to the general design principles set out in appendix B of the study; 2. Proposals minimise and adequately mitigate glint and glare effects; 3. Where development is proposed on greenfield land, the land around the structures should be used for livestock grazing, other agricultural use or another use beneficial to the environment or biodiversity. Use of agri-voltaics will be supported; 4. The application is supported by a landscape appraisal or, in the case of development requiring Environmental Impact Assessment, a Landscape and Visual Impact Assessment, the scope of which should be agreed at the outset with the Council. Any cumulative impacts of renewable energy schemes should be carefully considered as part of this assessment; 5. Hedgerows, trees, field patterns and strong boundary features are used where possible, to mitigate visual impacts. Proposals for building mounted solar energy developments will be supported where the solar equipment is designed and sited, so far as is practicable, to minimise the effect on the external appearance of the building and the amenity of the area.	No likely significant effects This is a development management policy and does not allocate development.
EN 4: Sustainable energy and heat	Proposals will be supported that: 1. provide zero carbon energy or net negative carbon energy; 2. make provision for electricity storage; 3. contribute to the provision of Smart Local Energy Systems or Local Area Energy Plans; 4. enable the establishment or expansion of district heat networks; 5. create supply or connect into a district heat network; and/or 6. involve community-led energy generation, storage or district heat network schemes; and/or 7. reduce the use of fossil fuels to provide energy or heat wherever possible. Any proposals involving heat generation should include an assessment of the potential for heat recovery and/or power generation. Where possible, excess heat or power should be used on site, or nearby, or in a district heat network. All major schemes and schemes involving significant generation or use of heat should explore opportunities for linking to district heat networks or other users/providers of heat. All major schemes should consider the potential to use ground source heat from private or public green spaces or water source heat solutions to contribute to heating requirements. All schemes requiring provision of heat should consider use of air source heat pumps or ground source heat pumps as an alternative to fossil fuel based heat sources.	No likely significant effects This is a development management policy and does not allocate development.
EN 5: Low carbon fuel and carbon capture	Proposals for developments relating to low-carbon fuels will be supported where they meet the following criteria: 1. Proposals involving production of hydrogen involve:	No likely significant effects

	• ‘green hydrogen’ (generated via electrolysis of water and the electrolysis process is powered by renewable energy or another form of low-carbon electricity); • ‘blue hydrogen’ (generated from natural gas and the carbon will be captured and used and / or stored) or other forms of hydrogen production that do not release significant amounts of carbon. • Proposals involving grey hydrogen (from methane or coal and where the carbon is not captured or stored) will not be supported; 2. Proposals involving the use of waste or waste products to generate fuels should ensure that the waste has followed the waste hierarchy and is being used for the most beneficial purpose; 3. Proposals for carbon capture and use or storage should wherever possible, enable opportunities to capture carbon from other existing and proposed developments to maximise opportunities to reduce the overall carbon emissions in the borough; 4. Carbon dioxide use is preferable to storage where possible, as long as it does not result in significant carbon emissions. Proposals involving carbon dioxide creation or capture and storage should link to potential users of carbon dioxide in the borough or elsewhere, if possible; 5. Any inputs and outputs of the fuel production process or carbon should maximise opportunities for sustainable modes of transport; 6. Any proposals involving creation of salt or brine caverns for storage purposes must ensure sustainable use of the extracted salt/brine; and 7. Any proposals should also meet relevant criteria set out in policies MS 4 'Oil and gas developments' and MS 5 'Restoration'.	This is a development management policy and does not allocate development.
MW 1: Managing waste	To achieve sustainable waste management: • Existing waste management facilities are safeguarded against redevelopment for non-waste uses that would sterilise the infrastructure or prejudice its waste use, throughput and/or capacity; • Plots/sites with consented capacity for waste management uses at Protos (Ellesmere Port) and Lostock Works (Northwich) are safeguarded against alternative development that would prejudice its waste use, throughput and/or capacity; • Existing waste management facilities and sites with planning permission for waste uses are safeguarded against the encroachment of incompatible uses. Proposed non-waste developments must not prejudice the current or future waste use of the waste management facility site in terms of capacity and/or throughput. Any potential impacts must be minimised and if, after applying the ‘agent of change’ principle, there is still some risk of constraint to the waste operation, the development will only be supported if the merits of the development clearly outweigh the effect on the safeguarded site; • Waste management plans are required for proposals that are expected to generate significant volumes or specific types of waste (e.g. equestrian development and dog parks); • The Council will encourage the use of sustainable construction techniques that promote the reuse and recycling of building materials, maximise opportunities for the recycling and composting of waste on all new development proposals (residential and non-residential) and reduce CO2 emissions; • Existing and planned port and rail infrastructure are safeguarded, in order to maximise opportunities for sustainable transport on the Manchester ship canal and rail network. Redevelopment of all or part of a safeguarded site to a non-waste use will only be supported if: • the waste management facility is no longer needed; or • the waste management capacity can be relocated or provided and delivered elsewhere in an appropriate and sustainable location.	No likely significant effects This is a development management policy and does not allocate development.

	All proposals for waste management facilities, or extensions/alterations to such facilities must: • Demonstrate that waste is being managed at the highest achievable level within the waste hierarchy; • Maximise opportunities to share infrastructure (e.g. sustainable transport options or pipelines) with other waste developments or other facilities; • Provide information on the type and source of the waste being managed, the distance travelled and proposed methods of transport for importation and exportation of material. When assessing proposals the Council will take into account the desirability to manage waste close to its source, reduce the need for waste to travel and to maximise opportunities for use of sustainable modes of transport; • Integrate into the existing network of waste management sites in the borough and maximise opportunities for co-location with other waste management operations, where this would not result in intensification of uses that would cause significant adverse harm to the environment or communities in the local area; • Demonstrate how they meet the locational criteria set out in the National Planning Policy for Waste (Appendix B) or any revisions to this document; and • Set out arrangements for the management and operation of the facility, including hours of operation. Energy recovery development should be used to divert residual waste from landfill and will only be permitted where: • Other waste treatment options further up the waste hierarchy are not feasible; • The development provides for uses of both heat and power; and • The development maximises the use of and provides sustainable management arrangements for waste treatment residues arising from the facility. Proposals for biomass plants and other facilities which use waste material to produce heat or combined heat and power should wherever possible be located close to existing or potential users of heat outputs. Farm scale anaerobic digestion plants will be supported, particularly where they allow for sharing of facilities between linked farms. Inputs of material should be derived primarily from farm wastes which arise from the farm unit. Energy and other outputs from the process should also primarily be used on the farm unit. Where additional inputs and outputs of material and energy are required to make the facility viable, they should come from, and be used within, the local area. The location of facilities on farms should avoid high quality agricultural land.	
MS 1: Minerals supply	Cheshire West and Chester will make provision for the adequate, steady and sustainable supply of sand, gravel, salt and brine, contributing to the sub-national guidelines for aggregate land-won sand and gravel, whilst ensuring the prudent use of our important natural finite resources. Sustainable minerals use and extraction In order to ensure sustainable use and extraction of minerals, the Council will: • support proposals which enable the use of secondary and recycled mineral resources, reducing the reliance on primary aggregate extraction where appropriate; • support the retention of and proposals for fixed construction, demolition and excavation waste recycling sites in appropriate locations across the borough; • support environmentally acceptable proposals which enable the use of locally sourced building stone for architectural and heritage purposes;	Potential likely significant effects. The policy discusses additional mineral supply need which will potentially result in identification of new sites. Dependent on where these are there is the potential that they

- ensure the sustainable and prudent use of all natural mineral resources.

Aggregate sand and gravel supply
The Council will maintain a steady and adequate supply of aggregate sand and gravel over the Plan period and will maintain a minimum seven-year landbank. Provision will be made for the extraction of at least 16 million tonnes over the plan period (0.8 million tonnes per annum). The requirement to provide a minimum seven-year supply beyond the plan period would result in an additional requirement of at least 5.6 million tonnes. This is a total requirement of at least 21.6 million tonnes.

This will be achieved by:
A. the continued provision of sand and gravel from the permitted reserves at the following existing sites – Cheshire Sands, Oakmere and Forest Hill, Sandiway.
B. the identification of a Preferred Area at Moss Farm and north of the railway forming an extension to Forest Hill, Sandiway.
C. the identification of an Area of Search.

Any proposed minerals developments within the Preferred Area would need to consider potential impacts on the nearby Local Wildlife Site, SSSI, Ramsar Site and SAC, for example in terms of groundwater and provide mitigation measures, if necessary, to avoid any significant detrimental impacts on biodiversity.

Proposals for new sites within the Area of Search, as identified on the policies map, will only be supported where it has been demonstrated that permitted reserves, allocated site and/or Preferred Area cannot meet the required level of provision set out in this policy.

Proposals for any other sand and gravel sites outside the existing sites, allocated site, Preferred Area and Area of Search will only be supported where it has been demonstrated that the required level of provision set out in this policy cannot be met from within these areas.

Salt and brine supply
The Council will maintain a steady and adequate supply of salt and brine. To do this, salt and brine will continue to be provided from:
A. the existing operations at Winsford Rock Salt Mine (South Bostock). The site is safeguarded for salt extraction as identified on the policies map.
B. controlled brine pumping at the Holford Brinefields (existing permitted site). The site is safeguarded for brine extraction as identified on the policies map.

Any proven additional requirements for salt extraction during the plan period will, subject to planning permission, be met from within the Preferred Area for rock salt extraction at Winsford Rock Salt Mine, as identified on the policies map.

Any proven additional requirements for salt extraction in the form of brine, during the plan period will, subject to planning permission, be met from within the Preferred Areas for controlled brine extraction at Holford Brinefield A, B, C and D, as shown on the policies map.

Any proposals involving production or use of brine and salt must ensure sustainable use of this resource.

Salt or brine proposals within the Preferred Areas will be supported where it has been demonstrated that they accord with relevant development plan policies. Any proposals outside the permitted sites or preferred areas

could have linking impact pathways.

There is minimal information and likely needs further detail to be assessed fully at the next stage. Therefore, this policy has been screened in.

	will only be supported where it has been demonstrated that the required level of provision cannot be met from within these areas. Silica sand supply A steady and adequate supply of silica sand will be maintained throughout the plan period. This will be achieved by: A. the continued provision of silica sand from the permitted reserves at Rudheath Lodge, New Platt Lane, Cranage. The existing Rudheath Lodge site, as identified on the policies map, will be safeguarded against non-mineral development that prejudices its ability to supply industrial sand. Proposals for silica sand extraction outside this site will be supported provided that: 1. there is a demonstrable need for silica sand of a specific quality and quantity that will be met by the proposal; and 2. the proposal will contribute to maintaining a stock of permitted reserves of at least 10 years for individual sites and 15 years for sites where significant new capital is required, to support the level of actual and proposed investment required for new or existing plant and equipment.	
MS 2: Proposals for minerals development	Proposals for minerals development (sand and gravel or silica sand) will be supported where: 1. They are designed to minimise impact on the landscape and do not have a significant long-term detrimental impact on the landscape. This should take account of the operational requirements of the mineral extraction process, as well as landscape character assessment and proposed restoration; 2. They are appropriately screened from public view, if required, and would not have an unacceptable impact on visual amenity. Natural landforms and landscape features should be used to help screen developments as far as practicable. Additional landscape screening in the form of tree or hedgerow planting and/or suitable screen mound formation may be required to reduce visual impacts of the proposal; 3. It can be ensured that any odour, dust or particle emissions are controlled, mitigated or removed at source and will not have a significant detrimental impact on residential amenity or human health; 4. It can be ensured that any unavoidable noise and/or vibration is controlled, mitigated or removed at source so that proposed noise and/or vibration levels are acceptable and will not have a significant detrimental impact on residential amenity or human health. Where there is potential for a proposal to result in noise or vibration impacts which affect residential properties, or other sensitive receptors, the applicant must undertake a noise / vibration impact assessment. Some noisy short-term activities, which may otherwise be regarded as unacceptable, are unavoidable to facilitate minerals extraction. Proposals must, however, seek to minimise noise levels and apply best practice in noise reduction; 5. Illumination levels and siting and design of lighting are acceptable and do not cause a detrimental impact on residential amenity, wildlife or highway safety, whilst allowing safe operation of activities on site; 6. Environmentally preferable alternatives to road travel are considered and used, where appropriate, to transport materials to and from the site; 7. It will not result in an unacceptable adverse impact on tip- or quarry-slope stability; 8. The cumulative impact on local communities and the environment with existing or proposed development of a similar kind in the same or adjoining areas is considered acceptable; and 9. Any plant or building: i. is designed and located within the site to minimise visual intrusion and impact on landscape; ii. is appropriately finished and coloured to assimilate into their surroundings; iii. will be removed from the site as soon as practicable and within twelve months of the cessation of mineral extraction unless there are overriding advantages in retention in connection with a related extraction proposal and the primary use is directly associated with the mineral extraction	No likely significant effects This is a development management policy and does not allocate development.

	at the site. Planning permission to extend a site will normally be conditioned so that the extension area can only be worked once mineral working within the existing site has largely been completed, unless it has been demonstrated that there are operational reasons why this is not practicable.	
MS 3: Safeguarding	Minerals safeguarding areas (MSAs) will safeguard Cheshire West and Chester's extent of finite natural resources from incompatible development. The cover areas of sand and gravel and salt and brine. Within an MSA, as identified on the policies map, non-mineral development will only be supported if the applicant can demonstrate that: 1. mineral sterilisation will not occur; or 2. the mineral can be extracted satisfactorily prior to the incompatible development taking placeand will be used on site or transported for processing or use off-site; or 3. the incompatible development is of a temporary nature and can be completed and the site restored to a condition that does not inhibit extraction within the timescale that the mineral is likely to be needed and does not permanently sterilise the mineral; or 4. the nature of the site (for example proximity to existing residential uses) means that prior extraction is not viable or would have unacceptable impacts on nearby occupiers; or 5. there is an overriding need for the incompatible development and the material planning benefits of the non-mineral development would outweigh the material planning benefits of the underlying or adjacent material; or 6. the development comprises one of the exempt types of development listed in the explanation. A Mineral Resource Assessment should be submitted alongside any major non-mineral developments within MSAs, to provide a thorough assessment of the opportunities for prior extraction and use of the sand and gravel from within the site. Sand and gravel should be extracted from the site and re-used as part of the development or transported for off-site processing and use wherever possible. This is to ensure that important mineral resources are not unnecessarily sterilised and are used wherever possible. A minerals management plan should be submitted as part of major planning applications within MSAs. The two existing sand and gravel sites (Cheshire Sands, Oakmere and Forest Hill, Sandiway, including their permitted extensions) are safeguarded against non-mineral development that prejudices their ability to supply sand and gravel. The existing silica sand site at Rudheath Lodge is safeguarded against non-mineral development that prejudices its ability to supply silica sand. Proposed non-minerals developments in close proximity to these quarries must avoid or minimise potential impacts on mineral extraction and if, after applying the 'agent of change principle, there is still some risk of constraint to mineral extraction, the development will only be supported if the merits of the development clearly outweigh the effect on the safeguarded site. Significant infrastructure that supports the supply of minerals in CWaC will also be safeguarded from incompatible development. Non-mineral development (excluding the development types identified in the policy explanation) with the potential to impact on a mineral infrastructure safeguarded site used for mineral processing, handling, and transportation will not be supported unless it can be demonstrated that: 1. the non-mineral development would not unduly restrict the use of the mineral infrastructure site; 2. the material planning benefits of the non-mineral development would outweigh the material planning benefits of the mineral infrastructure site; 3. the mineral infrastructure can be relocated; or 4. alternative capacity can be provided elsewhere.	No likely significant effects This is a development management policy and does not allocate development.

MS 4: Oil and gas developments	Proposals for all stages of oil and gas development (exploration, appraisal and production) will be supported where: 1. it can be ensured that any odour, dust or particle emissions are controlled, mitigated or removed at source and will not have a significant detrimental impact on residential amenity or human health; 2. gas emissions from exploration, appraisal or production operations and from associated transport methods are controlled and minimised using the best available technology. Gas emissions must not have a significant detrimental impact on air quality, residential amenity or the environment; 3. it can be ensured that any noise and/or vibration is controlled, mitigated or removed at source so that proposed noise and/or vibration levels are acceptable and will not have a significant detrimental impact on residential amenity or human health; 4. where there is potential for a proposal to result in noise or vibration impacts which affect residential properties, or other sensitive receptors, the applicant must undertake a noise/vibration impact assessment. Proposals must, seek to minimise noise levels and apply best practice in noise reduction; 5. illumination levels and siting and design of lighting are acceptable and do not cause a detrimental impact on residential amenity, wildlife or highway safety, whilst allowing safe operation of activities on site; 6. above ground structures and facilities are minimised as much as practicable, by using pipelines and/or existing facilities where feasible and economically viable. Above ground activity should be directed to the least sensitive location within the site and appropriately screened from public view if required. Above ground structures and facilities should be grouped where possible and are appropriately finished and coloured. This is in order to reduce impacts on local residents and the environment; 7. environmentally preferable alternatives to road travel (including pipelines) are considered and used, where appropriate, to transport materials to and from the site; 8. anticipated levels of traffic resulting from the proposal will not result in a significant detrimental impact on residential amenity; 9. the cumulative impact on local communities and the environment with existing or proposed development of a similar kind in the same or adjoining areas is considered acceptable; 10. well pads and associated plant, buildings and other structures are removed from the site within six months of the cessation of oil or gas extraction, unless required for ongoing safety or monitoring purposes.	No likely significant effects This is a development management policy and does not allocate development.
MS 5: Restoration	Proposals for minerals development and oil and gas development will be supported where it can be demonstrated that the scheme includes an appropriate phased sequence of extraction, restoration and after use and aftercare which will enable long-term enhancement of the environment. Proposals for restoration and aftercare of minerals and oil and gas sites, including proposals for review of restoration strategies and plans, will be supported where: 1. proposals for restoration and aftercare are sufficiently comprehensive, detailed, practicable and achievable within the proposed timescales; 2. the land affected at any one time by the minerals or oil or gas operation would be minimised by including phased working and by restoration at the earliest possible opportunity; 3. the amount of imported backfill would be the minimum necessary to achieve the satisfactory restoration of the site; 4. differential settlement of quarry backfill is avoided; 5. the restoration is appropriate to the location and is sympathetic to and informed by landscape character and the historic environment; 6. opportunities for restoration to improve or enhance habitats, biodiversity, landscape, agricultural land quality, historic environment or community use would be maximised; and 7. the aftercare provision would be sufficient to secure high quality and sustainable restoration of the site.	No likely significant effects This is a development management policy and does not allocate development.

	Restoration proposals will be subject to a minimum five-year period of aftercare. Where proposals or elements of proposals, such as features of biodiversity interest, require a longer period of management the proposal will only be permitted if it includes details of the period of extended aftercare and how this will be achieved.	
MISC 1: Safeguarded areas around aerodromes	Set criteria for considering development proposals in safeguarded areas around aerodromes to ensure development does not adversely affect the operational integrity or safety of an airport or aircraft operations. Identify the safeguarded areas around Liverpool John Lennon, Manchester and Hawarden airports.	No likely significant effects This is a development management policy and does not allocate development.
MISC 2: Jodrell Bank	Support development proposals that would not impair the efficiency of the Jodrell Bank Radio Telescope. Identify the Jodrell Bank Radio Telescope Consultation Zone on the policies map.	No likely significant effects This is a development management policy and does not allocate development.
MISC 3: Waterways and mooring facilities	To support development proposals adjacent to waterways that can provide positive regeneration benefits in the urban areas of Chester, Ellesmere Port, Northwich and Winsford. To establish criteria and design principles for developments affecting the borough's waterways. To safeguard the structural and operational integrity of the waterways. To support public access and recreational use of the waterways, in line with the policy approach in HW 1 'Health and wellbeing'. To ensure development proposals make a positive contribution towards biodiversity and ecological networks. To set criteria for the development of new mooring facilities, including extensions to existing facilities, and to consider the cumulative impacts that may arise from further development.	No likely significant effects This is a development management policy and does not allocate development.

Table 5-3 Growth Options

Growth Option	Development Area	Option
Cheshire	CH01 (Mixed Use)	B, C
	CH02 (Housing)	B, C
	CH03 (Housing)	B, C
	CH04 (Housing)	B, C
Ellesmere Port	EP01 (Mixed housing /employment)	A, B, C
	EP02 (Housing)	B, C
	EP03 (Housing)	B, C
	EP04 (Mixed employment, waste or energy use)	B, C
Northwich	NOR01 (Housing)	B, C
	NOR02 (Housing)	B, C
	NOR03 (Employment)	B, C
	NOR04 (Employment)	A, B, C
	NOR05 (Employment)	A, B, C
	NOR06 (Housing)	A, B, C
	NOR07 (Housing)	A, B, C
	NOR08 (Housing)	A, B, C

	NOR09 (Housing)	B, C
	NOR10 (Housing)	B, C
	NOR11 (Housing)	B, C
	NOR12 (Housing)	B, C
Winsford	WIN01 (Employment)	A, B
	WIN02(A) (Employment)	A, B
	WIN02(B) (Employment)	A, B, C
	WIN03 (Housing)	A, B, C
	WIN04 (Housing)	A, B, C
	WIN05 (Housing)	A, C
	WIN06 (missed housing / employment use)	A, B
	WIN07 (Housing)	A, B, C
Cuddington and Sandiway	CUD01 (Housing)	B, C
	CUD02 (Housing)	A, B, C
	CUD03 (Mixed Use – housing, retail, commercial)	A, B, C
	CUD04 (Housing)	B, C
	CUD05 (Housing)	B, C
Farndon	FAR01 (Housing)	A, B, C

	FAR02 (Housing)	A, B, C
	FAR03 (Housing)	A, B, C
Frodsham	FRO01 (Housing)	B, C
	FRO02 (Housing)	B, C
	FRO03 (Housing)	B, C
Helsby	HEL01 (Housing)	B, C
	HEL03 (Housing)	B, C
	HEL03 (Housing)	B, C
Kelsall	KEL01	A, B, C
	KEL02	B, C
Malpas	MAL01 (Housing)	A, B, C
	MAL02 (Housing)	A, B, C
	MAL03 (Housing)	A, B, C
	MAL04 (Housing)	A, B, C
	MAL05 (Housing)	A, B, C
Neston and Parkgate	NEP01 (Housing)	B, C
	NEP02 (Mixed housing/ employment use)	B, C

	NEP03 (Housing)	B, C
	NEP04 (Housing)	B, C
	NEP05 (Housing)	B, C
	NEP06 (Housing)	B, C
Tarporley	TARP01 (Housing)	A, B, C
	TARP02 (Housing)	A, B, C
	TARP03 (Housing)	A, B, C
	TARP04 (Housing)	A, B, C
	TARP05 (Housing)	A, B, C
Tarvin	TARV01 (Housing)	B, C
	TARV02 (Mixed housing / community use)	A, B, C
	TARV03 (Housing)	B, C
Tattenhall	TAT01 (Housing)	A, B, C
	TAT02 (Housing)	A, B, C
	TAT03 (Mixed housing / community use)	A, B, C
	TAT04 (Housing)	A, B, C
	TAT05 (Housing)	A, B, C
	TAT06 (Housing)	A, B, C

	TAT07 (Housing)	A, B, C
Action Bridge Station	ACB01 (Housing)	C
	ACB02 (Housing)	C
	ACB03 (Housing)	C
	ACB04 (Housing)	C
	ACB05 (Housing)	C
Capenhurst Station	CAP01 (Housing)	C
	CAP02 (Housing)	C
Delamere Station	DEL01 (Housing)	C
Elston Station	ELT01 (Employment)	C
	ELT02 (Housing)	C
	ELT03 (Housing)	C
	ELT04 (Housing)	C
Hooton Station	HOO01 (Housing)	C
	HOO02 (Housing)	C
	HOO03 (Mixed housing/ employment use)	C
	HOO04 (Housing)	C
Lostock Gralam Station	LOS01 (Housing)	C

	LOS01 (Housing)	C
	LOS01 (Housing)	C
	NOR03 (Employment)	N/A
Mouldsworth Station	MOU01 (Housing)	C
	MOU02 (Housing)	C
	MOU03 (Housing)	C

aecom.com