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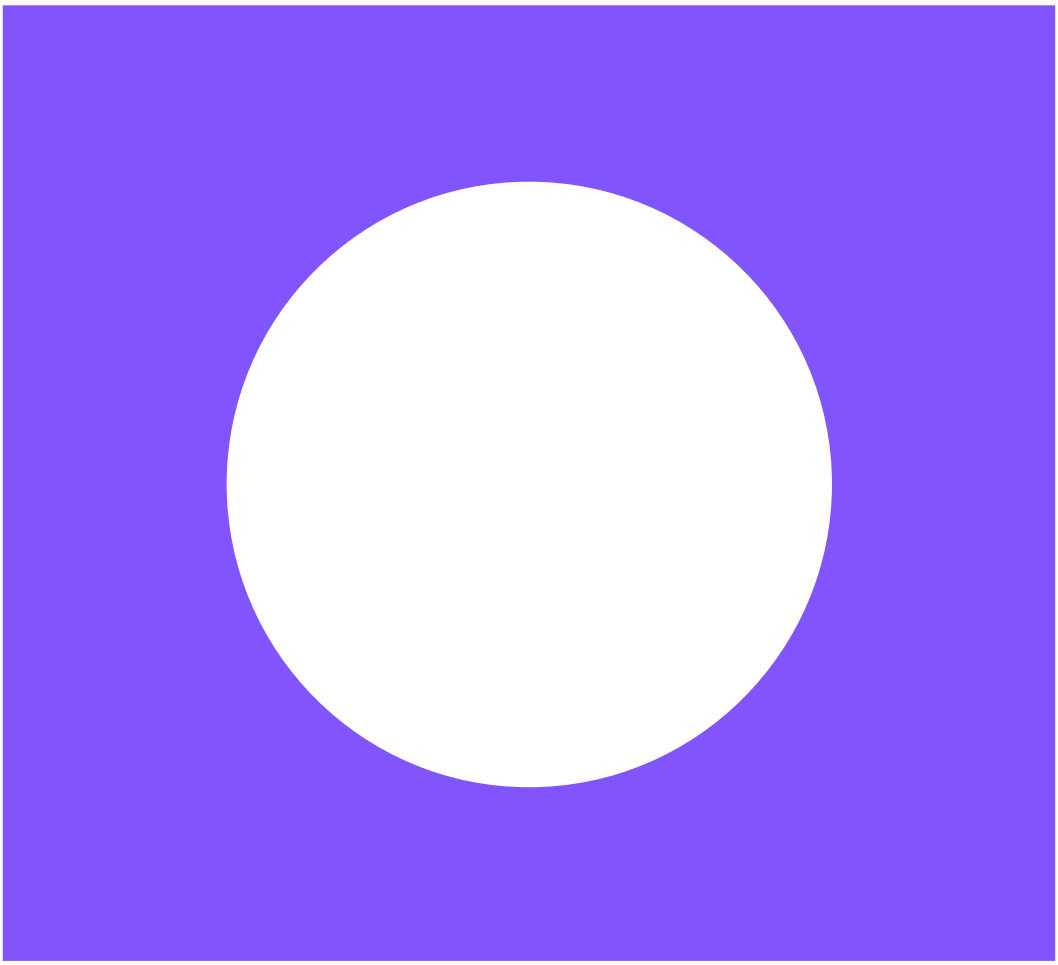

Cheshire West and Chester Local Transport Plan 4

Habitats Regulations Assessment

October 2025

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Habitats Regulations Assessment

October 2025

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Table of Acronyms

Acronym	Definition
AESI	Adverse Effects on Integrity
cSAC	Candidate Special Areas of Conservation
CSF	Catchment Sensitive Farming
CW&C	Cheshire West and Chester Council
DWPA	Diffuse water pollution from agriculture
EA	Environment Agency
ECJ	European Court of Justice
HLS	Higher Level Stewardship
ES	Environmental Stewardship
HRA	Habitats Regulations Assessment
INNS	Invasive Non-Native Species
LTP4	Local Transport Plan
LSE	Likely Significant Effects
MMO	Marine Management Organisation
NE	Natural England
NSN	National Site Network
NELMS	New Agri-environment LTP4
NWIFCA	North West Inshore Fisheries and Conservation Authorities
pSPA	Proposed Special Protection Area
SAC	Special Areas of Conservation
SNCB	Statutory Nature Conservation Body
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
TfN	Transport for the North
WFD	Water Framework Directive
ZoI	Zone of Influence

Executive Summary

This report presents the results of the Habitats Regulations Assessment (HRA) Stage 1 Screening (or 'Test of Likely Significance') undertaken for the Cheshire West and Chester Council (CW&C) Local Transport Plan 4 (LTP4) to deliver the duties upon Statutory Undertakers (in this case local council) with regard to ensuring that their plans comply with the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations').

The CW&C LTP4 comprises:

- Core Strategy – sets out the case for change, the LTP4 vision and key principles.
- Policy Papers – a series of Policy Papers, each of which sets out a more detailed policy position on how the vision will be achieved in relation to a specific mode of transport or topic area. Together, the Core Strategy and the Policy Papers form the overall 'Local Transport Plan Strategy', the Council's strategic approach to travel and transport.

CW&C are phasing the consultation and adoption of these documents. The Core Strategy was consulted upon in summer 2025, with adoption in late 2025. The Policy Papers will be consulted upon in early 2026, with adoption in later 2026. Therefore, this report currently only covers the Core Strategy. Once the Policy Papers are available the HRA Report will be updated to include them.

The report evaluates the potential effects of the proposed CW&C LTP4 Core Strategy on Designated Sites in the UK's National Site Network. These include Special Protection Areas (SPAs), Potential Special Protection Area (pSPA), Special Areas of Conservation (SACs), Candidate Special Areas of Conservation (cSAC), Ramsar sites and Proposed Ramsar sites.

After having examined all the potential impact pathways in relation to the conservation objectives of the Designated Sites found within the Zone of Influence (ZoI) of the plan, the HRA Stage 1 Screening concluded that the CW&C LTP4 Core Strategy would not, in isolation, result in Likely Significant Effects (LSE) on the integrity of any Designated Sites or their qualifying features. This is primarily because the core policies focus on the overarching vision of the plan, rather than specific transport infrastructure projects arising from it. While the policies themselves create no direct or immediate impact pathways, it is acknowledged that future projects originating from the implementation of the LTP4 are likely to require project-level HRA Screening.

Similarly, the assessment of in-combination effects associated with long-term, regional scale plans, expected to overlap with the lifetime of the CW&C LTP4 Core Strategy, also found no evidence of LSE. It is anticipated that project-level in-combination assessments will be required to evaluate such effects in relation to local scale, short-term plans and projects arising from the implementation of the LTP4 core policies. Therefore, at this stage, the proposed LTP4 Core Strategy for Cheshire West and Chester does not need to proceed to the next HRA Stage 2 Appropriate Assessment (AA), also known as the 'Integrity Test'.

The conclusions presented in this document are based on preliminary and indicative assumptions regarding the draft plan vision, as available at this time, and are primarily informed by accessible, appropriate desktop information. Further iterations of the plan will require revisions to this document, which may result in changes to the current conclusion. The updated HRA report will be sent to the relevant nature conservation authority, Natural England (NE), for consultation.

1 Introduction

1.1 Background

Cheshire West and Chester Council (CW&C) are committed to delivering a transformed transport network through the Local Transport Plan 4 (LTP4). The LTP4 will set out the Council's plans and proposals for improving local transport over the next 20 years.

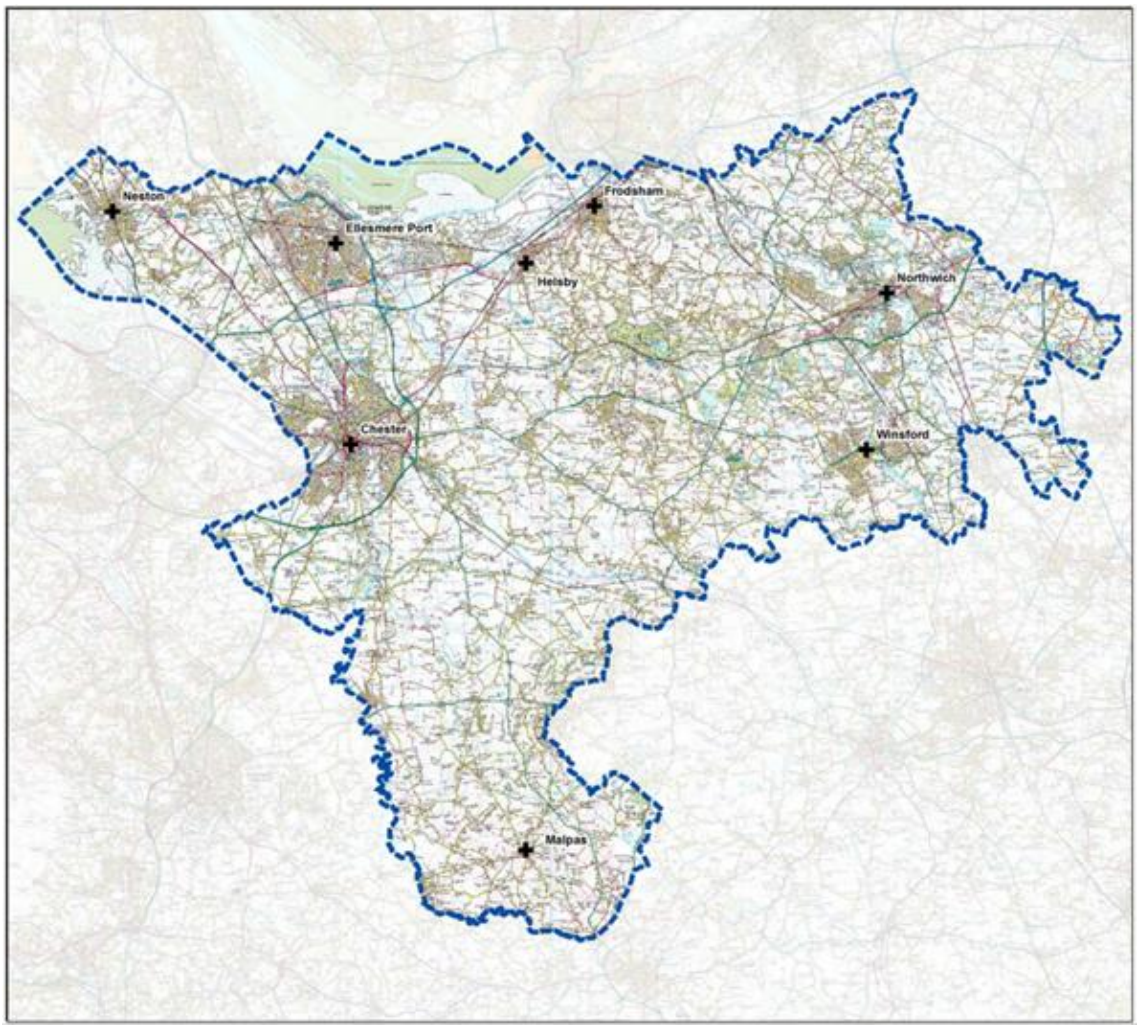
The CW&C LTP4 strategy comprises:

- Core Strategy – sets out the case for change, the LTP4 vision and key principles.
- Policy Papers – a series of Policy Papers, each of which sets out a more detailed policy position on how the vision will be achieved in relation to a specific mode of transport or topic area.

CW&C are phasing the consultation and adoption of these documents. The Core Strategy was consulted upon in summer 2025, with adoption in late 2025. The Policy Papers will be developed throughout 2025/2026. Therefore, this report currently only covers the Core Strategy. Once the Policy Papers are available the HRA Report will be updated to include them.

The LTP4 covers the area of Chester West and Chester Council as illustrated in Figure 1.1 and referred to as the ' CW&C LTP4 boundary' in this report.

Figure 1.1: CW&C LTP4 boundary (including settlements).



Source: CW&C Local Flood Risk Management Policy.

The LTP4 vision and priorities for are:

"A fairer and more sustainable transport system which enables a stronger, thriving future."

Five priority areas have been developed to support delivery of the vision:

PRIORITY 1. Tackling the climate emergency and making sure that our transport networks are able to cope with a rapidly changing environment. We want to reduce the emissions from transport and achieve a net zero carbon emissions from transport by 2045, delivering the Council's Climate Emergency Response Plan.

PRIORITY 2. Creating a fairer transport system. We're committed to making transport more affordable and inclusive by improving access to jobs, education and essential services, especially for communities who face barriers and exclusion due to poor transport links. This means offering real choices in how people travel, and ensuring the transport system works for everyone – including people on lower incomes, rural communities, young people, and those with additional mobility needs

PRIORITY 3. Enable people to live healthier and happier lives by giving us all the chance to be more active, reducing social exclusion, tackling air pollution and noise hotspots, eliminating deaths and serious injuries on our streets, and making our transport networks safer for everyone.

PRIORITY 4. Champion inclusive, sustainable economic growth. We want to see a better transport system which helps businesses thrive, supports reliable movement of goods and freight, and makes it easier for people to access work and training. This includes strengthening connections to regional and international gateways, supporting efficient freight movement, welcoming visitors and boosting our tourism economy — helping places across our borough prosper.

PRIORITY 5. Create and protect great places with attractive, connected, greener neighbourhoods. Transport and travel are about much more than a means of getting around. We want transport and travel networks to play their part in creating and protecting special, beautiful and lively places that people can enjoy spending time in, and enhancing access to green space and nature.

1.2 Purpose of this report

This report presents the HRA undertaken for the LTP4 Core Strategy. The HRA is a statutory requirement and has been undertaken for Chester West and Chester Council to deliver the duties upon Statutory Undertakers (in this case local council) with regard to ensuring that their plans comply with the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations'), by ensuring that the potential effects of the proposed LTP4 on Designated Sites are fully considered. The outcomes of the assessment will inform any likely impediments to the practicality or deliverability of the plan.

1.3 Consultation

Cheshire West and Chester Council, as the relevant Competent Authority have consulted with the Statutory Nature Conservation Body (SNCB – Natural England (NE)).

Comments received were reviewed, and if necessary, this HRA report was updated accordingly. It is important to note that if adverse effects on site integrity[1] cannot be ruled out, the Competent Authority will not be able to adopt the plan. In such cases, further consultation between the Competent Authority and NE, will be required and this report will form the basis for any future iterations of the HRA.

1.4 Assumptions and limitations

This HRA presents a number of distinct challenges in that it is attempting to assess a draft plan that does not contain spatial proposals or any nominated sites for strategic projects.

Given the high-level nature of the LTP4 Core Strategy, it is acknowledged that the assessment can only be based on data and information that can be reasonably gathered at this stage and so does not include, for example, project-specific survey data.

Information provided by third parties, including publicly available information and databases, is considered correct at the time of publication. Due to the dynamic nature of the environment, conditions may change in the period between the preparation of this report and the implementation of the plan. Future projects originating from the implementation of the plan may require project-level HRAs.

Any uncertainties surrounding, and limitations of, the assessment process are acknowledged and highlighted.

[1] The integrity of a site is defined as the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was designated.

2 Approach to Habitats Regulations Assessment

2.1 Habitats Regulations Assessment

As part of the environmental assessment process to support the development of the CW&C LTP4, the proposed LTP4 is subject to the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations'')[2].

Regulations 63 and 64 transposed the provisions of Articles 6(3) and 6(4) of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive') as they related to plans or projects in England and Wales.

Regulation 63 states that if a plan or project is *'(a) is likely to have a significant effect on a Designated Site[3] or a European offshore marine site (either alone or in combination with other plans or projects); and (b) is not directly connected with or necessary to the management of the site*' then the competent authority must *'… make an appropriate assessment of the implications for the site in view of that site's conservation objectives'* before giving consent or authorisation. The plan or project can only be given effect if it can be concluded (following an 'appropriate assessment') that it *'… will not adversely affect the integrity'* of a site unless the provisions of Regulation 64 are met.

The process of undertaking this assessment is known as an HRA. An HRA determines whether a plan or project may result in Likely Significant Effects (LSE) on any Designated Site as a result of the plan's implementation (either on its own or 'in combination' with other plans or projects)[4] and, if so, an Appropriate Assessment (AA) is undertaken to determine whether there will be any 'adverse effects on site integrity'[5]. If there may be such adverse effects on site integrity after mitigation, then there will need to be a further process under Regulation 64 of considering whether there are alternatives and, if none are identified, assessment of compensation measures and whether there are imperative reasons of overriding public interest why consent should be granted, or a plan published/approved notwithstanding. The Regulations define the nature and roles of statutory bodies, competent authorities, and the appropriate nature conservation body as well as the requirements for information to be submitted to these bodies to enable them to undertake the required assessments.

[2] Although the Habitats Regulations have been amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, due to the UK's exit from the EU, the effect of these amendments is largely related to wording, with requirements and processes remaining the same, as protection levels remain unchanged.

[3] The Habitats Regulations include measures to establish and maintain a network of sites protecting habitats which are valuable in themselves as well as for the species they support. These sites form a network of European sites in the Natura 2000 network, which domestically form part of the UK's National Site Network (NSN). The term 'European site' is currently retained in the EU Exit amendment to the Habitats Regulations and for all practical purposes the definition is essentially unchanged. European sites are therefore: any Special Area of Conservation (SAC) from the point at which the European Commission and the UK Government agreed the site as a 'Site of Community Importance' (SCI) (if this was before 31 Jan 2020); any classified Special Protection Area (SPA); and any candidate SAC (cSAC). However, the term is also commonly used when referring to potential SPAs (pSPAs), to which the provisions of Article 4(4) of Directive 2009/147/EC (the 'new wild birds directive') are applied; and to possible SACs (pSACs) and listed Ramsar Sites, to which the provisions of the Habitats Regulations are applied as a matter of Government policy (National Planning Policy Framework (NPPF) para. 181) when considering development proposals that may affect them. In this document the term 'Habitats Sites' is used as an umbrella term for all the above designated and listed sites, after the NPPF.

[4] The Stage 1 Screening assessment, sometimes known as the 'Test of Likely Significance'

[5] The Stage 2 Appropriate Assessment, sometimes known as the 'Integrity Test'

HRA guidance[6] clearly states that the HRA should be undertaken in three stages, each stage being informed by the one preceding, to ensure an iterative and objective assessment. If the conclusion of the HRA Stage 1 Screening assessment is that there will be no LSE on a Habitats Site, there is no requirement to undertake further stages. Similarly, if the HRA Stage 2 AA concludes that there will be no Adverse Effects on Site Integrity (AESI), then the assessment is concluded. The HRA stages are summarised within Table 2.1.

Table 2.1: Stages of the Habitats Regulations Assessment process.

Stage	Description
Stage 1: Screening	This stage first determines if the proposed LTP4 is directly connected with or necessary to the management of any Designated sites. If not, potential impacts upon Designated sites arising from the proposed plan or project (either alone or in combination with other plans or projects) are identified. Consideration is then given to whether these impacts are likely to be significant (i.e. identification of LSE).
Stage 2: AA	If the Stage 1 Screening identifies that the LTP4 (either alone or in combination with other plans or projects) may have a significant effect on any Designated sites, or if there is uncertainty, the Competent Authority must undertake a Stage 2 AA. This involves the consideration of the predicted adverse effects of the LTP4 (either alone or in combination with other plans or projects) on the integrity of the Designated site with respect to the site's structure and function and conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts is also required.
Stage 3: Derogation	If the mitigation measures prescribed at Stage 2 AA cannot avoid adverse effects on the integrity of a Designated site, this stage examines alternative ways of achieving the objectives of the plan or project that avoid adverse impacts on the integrity of any Designated sites. If no suitable alternative solutions are available, Stage 3 requires an assessment of compensatory measures where, in the light of an assessment of Imperative Reasons of Overriding Public Interest ("IROPI"), it is deemed that the LTP4 should proceed. In making this assessment, it is important to recognise that it will be appropriate to the likely scale, importance, and impact of the proposed LTP4. This is a last resort and should be avoided if possible.

Source: UK Government, 2023

This assessment has been undertaken following the above stages, with reference to best practice guidance and relevant case law, notably that provided by the Waddenzee case (ECJ, 2002) and Sweetman (ECJ, 2011) to inform the interpretation and therefore correct application of the terms 'likelihood, 'significance', and 'in combination'.

2.2 Stage 1 Screening methodology

2.2.1 Approach

The CW&C LTP4 has the potential to impact on ecological features such as habitats and/or species beyond the LTP4 boundary. All Designated Sites within a 15km Zone of Influence (ZoI) of the LTP4 boundary (Figure 1.1) were identified, as well as Designated Sites with a hydrological connection to the plan boundary.

The relevant information required to inform the HRA screening process were acquired, including:

[6] GOV.UK (2023) Guidance. Habitats regulations assessments: protecting a European site. Available online: https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site#derogation.

- Sites designated as Special Protection Areas (SPAs) or potential Special Protection Areas (pSPA), Special Areas of Conservation (SACs) or Candidate Special Areas of Conservation (cSAC), Ramsar sites or Proposed Ramsar sites, including any marine or marine elements of these sites within the potential ZoI, and any known areas of land outside the site boundary itself which plays an important role in supporting the site and its features of interest (functionally linked land).
- Potential effects resulting from the plan.
- The ZoI of these effects, noting this may extend some distance from the site and is not confined to activities on or adjacent to the site.
- Any viable pathways for the plan to impact the receptor (Designated sites themselves or functionally linked land).
- The features of interest of the Designated site(s) in question.
- The conservation objectives of the Designated site, including any site sensitivities given within any supplementary advice, site improvement plan, or equivalent document published by the relevant statutory nature conservation body (SNCB).

The above information was reviewed in respect of each feature of interest and potential development effect/impact pathway to inform an assessment of any Likely Significant Effects (LSE) or adverse effects on integrity (AESI). Key aspects and terms used in this assessment are defined below:

- **Likelihood**: Where an effect was considered to be potentially significant, the assessment of its occurrence was based on the likelihood of it occurring and not certainty that it would occur. Effects were scoped in unless there was evidence to the contrary demonstrating that they would not occur, e.g., there being no valid pathway, or the absence of the species in that area, at that time.
- **Significance**: The significance of any effect was considered objectively, against the scale and nature of the impact in relation to those of that particular feature or condition and in relation to the extent of that feature or condition over the entire Designated site. A significant effect within this assessment is one which, if it occurred, would lead to a decline in the quality or status of the habitats or distribution and/or abundance of feature(s) of interest.
- **In-combination:** The assessment of in-combination effects considered those projects or plans which:
  - are currently in operation
  - are actually proposed – defined by being a valid live planning application, or any referenced with a local plan where there is potential for them being undertaken within a reasonable time period, specified within that plan.

In line with relevant case law[7], this HRA Stage 1 Screening assessment is undertaken in the absence of mitigation (including any measures embedded into the provisionally preferred option where these are intended for the avoidance of effects). Where LSE have been identified (either alone or in combination with other projects or plans), the assessment has taken these effects through to HRA Stage 2 AA. Drawing on other relevant case law, the phrase ‘likely significant’ should be interpreted as ‘a credible risk that the conservation objectives will be undermined’.

2.2.2 Guidance

This assessment has been undertaken in accordance with the following guidance:

[7] Court of Justice for the European Union’s ruling on People Over Wind and Sweetman (‘Sweetman II’) vs Coillte Teoranta, Case C-323/17.

- UK Government (2023). Guidance. Habitats regulations assessments: protecting a European site.
- Highways England (2020). LA 115. Habitats Regulations assessment, Design Manual for Roads and Bridges (DMRB).
- European Commission (EU, 2018). Managing Natura 2000 sites – The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

Relevant HRA case-practices include:

- **Waddenzee 2002 (Case C-127/02)[8]:** The European Court of Justice (ECJ) ruled that a plan or project that could potentially affect the conservation objectives of a Natura 2000 site must be subject to a thorough assessment of its likely significant effects, even if the impact was not direct. This case established the principle that even indirect impacts could be considered "significant" if they could affect the site's conservation status and reinforced the precautionary principle, stating that the assessment process should be triggered by the likelihood of potential impact, not certainty.
- **Sweetman 2011 (Case C-258/11)[9]:** The ECJ ruled that any plan or project leading to the permanent loss of a priority habitat, which is the basis for the designation of a protected site, constitutes an adverse effect on the integrity of the site. The Court emphasised that the "integrity" of a site refers to the lasting preservation of its essential characteristics, particularly those linked to its conservation objective. This judgment reinforced the precautionary principle in environmental assessments.
- **People over Wind 2017 (Case C-323/17)[10]:** This judgment determined that mitigation measures cannot be considered during HRA Stage 1 Screening under Article 6(3) of the Habitats Directive.

The potential effects considered in this assessment are summarised in Table 2.2. Proposed distances are also provided following the same guidance to ascertain if, where a pathway has been identified, the impact is likely to affect the qualifying habitats or species of a Designated Site.

Table 2.2: Potential effects and proposed ZoI.

Broad categories of potential effects	Examples of activities resulting in effects and proposed ZoI
Physical loss Destruction (including offsite effects) e.g. foraging habitat, smothering	**Development of built infrastructure associated with the plan leading to the conversion of natural or semi-natural habitats to man-made surfaces, e.g., new roads and access routes**[11]**.** Physical loss is only likely to be significant where the boundary of the transport infrastructure projects originating from the LTP4 extend within the boundary of the Designated Site, or within an offsite area of known foraging, roosting, breeding habitat (that supports species for which a Designated Site is designated or where natural processes link the project to the site, such as through hydrological connectivity downstream, or the project affects the linking habitat).
Physical damage Habitat degradation	**Construction or operational activities of new transport infrastructure leading to permanent or temporary habitat damage.**

[8] Landelijke Vereniging tot Behoud van de Waddenzeecase/ Nederlandse Vereniging tot Bescherming van Vogels, European Court of Justice, Case C-127/02 ‘Waddenzee 2002’.

[9] Sweetman et al. v An Bord Pleanála, European Court of Justice, Case C-258/11 ‘Sweetman 2011’.

[10] People over Wind/Sweetman v Coiltte Teorante, European Court of Justice Case C-323/17 ‘People over Wind 2017’

[11] It is acknowledged that infrastructure associated with the construction of the reservoirs may have an impact on Habitats Sites. However, for the purposes of this HRA, only the construction footprint of the reservoir itself has been used to determine the potential for significant effects.

Broad categories of potential effects	Examples of activities resulting in effects and proposed ZoI
Erosion Trampling Fragmentation Severance/barrier effects Edge effects	Physical damage may result in significant effects where transport infrastructure projects originating from the LTP4 are located within or directly adjacent to the boundary of a Designated Site, within functionally linked land or where natural processes link the project to the Designated Site, such as through hydrological connectivity and coastal processes.
Non-physical disturbance Noise Visual presence Light pollution	**Noise from construction activities** Taking into consideration the noise level generated from general building activity (c. 122dB(A)), and considering the lowest noise level identified in guidance as likely to cause disturbance to waterbird species (although this guidance is designed primarily for estuarine birds, it was considered appropriate to use for this plan), it is concluded that noise effects could be significant up to **1km** from the boundary of the Designated Site. **Noise from vehicular traffic during the construction of built infrastructure associated with the LTP4** Noise from construction traffic may be significant where the transport route to and from the option is within **500m** of the boundary of the Designated Site(s). **Plant and personnel involved in operation of new transport hubs** These effects (noise, visual/human presence) may be significant where the boundary of the built infrastructure associated with the project extends within or is adjacent to an offsite area of known foraging, roosting, breeding habitat that support species for which a Designated Site is designated. **New transport infrastructure that might include artificial lighting, e.g., roads and/or construction compounds.** Effects from light pollution are more likely to be significant where the boundary of the project is within **500m** of the boundary of the Designated Site.
Water availability Drying Flooding/storm water Changes to surface water levels and flows	**Changes to natural hydrological processes from surface water interception** Transport infrastructure can alter drainage patterns and intercept surface water flows, causing localised drying and alteration of ecosystems. Roads near watercourses may redirect flows, while paved areas can accelerate stormwater runoff, increasing flood risks downstream. These effects are only likely to be significant where the boundary of the transport infrastructure projects originating from the LTP4 extends within the same ground or surface water catchment as the Designated Site. However, these effects are dependent on hydrological continuity between the location of the projects and the Designated Site and whether the construction works are located upstream or downstream from the Designated Site.
Toxic contamination Water pollution Soil contamination Air pollution	**Water pollution and soil contamination associated with vehicular traffic** Road infrastructure can lead to water pollution and soil contamination through runoff carrying heavy metals, oil, microplastics, and tyre residues into waterways and nearby habitats. These effects are only likely to be significant where the boundary of the of the LTP4 associated with the plan extends within the same ground or surface water catchment as the Designated Site. However, these effects are dependent on hydrological continuity between the projects arising from the LTP4 and the Designated Site, and whether the projects are located upstream or downstream from that site. **Air emissions associated with plant and vehicular traffic during construction and operation of infrastructure projects originating from the LTP4**.

Broad categories of potential effects	Examples of activities resulting in effects and proposed ZoI
	The effect of dust is only likely to be significant where the site is within or in close proximity to the boundary of a Designated site. Without mitigation may be deposited/spread by vehicles on roads up to 500m from large sites, 200m from medium sites and 50m from small sites as measured from the site exit. Effects of road traffic emissions from the transport route to be taken by the LTP4 traffic are only likely to be significant where the Designated Site falls within 200 metres of the edge of a road affected.
Non-toxic contamination Nutrient enrichment (e.g. of soils and water) Algal blooms Changes in turbidity Changes in sedimentation/silting Air pollution (dust)	Road infrastructure can impact water and air quality through runoff, nutrient enrichment, sedimentation, and air pollution (dust). Non-toxic contaminants like road salts and organic debris can alter water composition, while nitrogen and phosphorus from vehicles contribute to nutrient buildup, leading to algal blooms and oxygen depletion. Road works and erosion can increase turbidity and sedimentation in nearby watercourses, disrupting aquatic habitats. Airborne dust from roads can further affect air and water quality These effects are only likely to be significant where the boundary of the LTP4 extends within the same ground or surface water catchment as the designated site. However, these effects are dependent on hydrological continuity between the LTP4 and the Designated site and sometimes whether the LTP4 is up or downstream from that site.
Biological Disturbances Direct mortality Changes to habitat availability Changes in species abundance or distribution Out-competition by non-native species Introduction of disease Introduction of invasive species	**Killing or injury due to construction activity.** Likely to be a risk where the boundary of the projects originating from the LTP4 extends within or is directly adjacent to the boundary of the Designated Site or is within/adjacent to an offsite area of known foraging, roosting, breeding habitat (that supports species for which a designated site is designated). **Changes in habitat availability, such as reductions habitat fragmentation from road infrastructure.** These effects are only likely to be significant where the boundary of the project extends within the same ground or surface water catchment as the Designated Site. However, these effects are dependent on hydrological continuity between the project and the Designated Site and whether the project is located upstream or downstream from that site. **Creation of new pathway for spread of non-native invasive species.** This effect is only likely to be significant where the project originating from the LTP4 is situated within the Designated Site or an upstream tributary of the Designated site.

Source: Mott MacDonald, 2025 adapted from UKWIR (2021).

3 HRA Stage 1: Screening

3.1 Pathways

To test whether a plan or project could result in LSE, a useful approach is to apply the 'impact-pathway' approach[12], which examines how the plan's content and implementation may affect a Designated Site and its qualifying features. In this approach, a 'pathway' refers to the mechanism through which effects can reach a Designated Site, such as through hydrological connectivity. The 'impact', on the other hand, refers to changes in site integrity, condition, supporting processes, or ecological structure and functions, which may be caused by factors such as pollution, noise and light disturbance, habitat fragmentation, or increased human activity.

The CW&C LTP4 Core Strategy is a strategic plan and does not contain spatial proposals or any nominated sites for transport infrastructure projects. Therefore, at this stage, it is not possible to determine which specific Designated Sites may be affected by projects arising from LTP4. Impacts are most likely to occur at Designated Sites located adjacent to or within 15km of any projects resulting from the plan. Therefore, following the precautionary principle, all Designated Sites located within 15km of the LTP4 boundary have been included in this HRA Stage 1 Screening.

Based on NE's Site Improvement Plans (SIPs) and a general assessment of the sites' ecological features, the following potential broad types of impact pathways have been identified in relation to the LTP4:

- Air pollution
- Water pollution
- Habitat fragmentation
- Invasive Non-native Species
- Transport, infrastructure and service corridors
- General human disturbance
- Visual and noise disturbance

Table 3.1 summarises all impact pathways and effects identifiable at this stage. However, this assessment cannot account for all possible effects arising from the implementation of LTP4. Additional pathways may emerge when assessing specific projects originating from the LTP4 core policies, once spatial analysis becomes feasible. In the meantime, the impact-pathway approach provides a valuable tool for identifying potential risks to Designated Sites and informing future project-specific HRAs.

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Table 3.1: Potential impact pathways linked to the CW&C LTP4.

Impact pathway	Discussion
Air pollution	An improvement in transportation infrastructure could increase the number of vehicles using the roads which in turn could increase atmospheric pollution levels compared to a no development scenario. However, if transport behaviours are altered to advocate sustainability, through working with schools, developers and major employers, pollution from vehicles could reduce. Vehicle pollutants (e.g. NOx ammonia) may be deposited on Designated Sites through precipitation or wind. The impact on Designated Sites is dependent upon their qualifying features. For example, the Dee Estuary Ramsar sites/ SPA is in close proximity to a variety of air pollution sources from the industrial areas adjacent to the estuary and nitrogen deposition already exceeds the site relevant critical overloads. This is the case for several Designated Sites in close proximity to the LTP4. An increase in vehicle pollutants could further increase nitrogen deposition within the sites already exceeding critical loads of Nitrogen deposition.
Water pollution	The improvements in transport infrastructure may lead to a loss of greenfield sites and as a result increase the amount impermeable surfaces within the local area. This has the potential to increase runoff, resulting in altered hydrological regimes in nearby designated sites which lie within or adjacent to the LTP4 boundary. If inappropriate drainage is also designed, this may lead to increased surface run off both during and post construction. The impact of Designated sites can vary depending on their qualifying features. West midland & Mosses SAC is designated for its acid peat-stained lakes and ponds. Features historically and continue to be threatened by changes in water regimes, quality and nutrient enrichment from the surrounding catchment. The LTP4, could change water regimes and in turn impact Designated sites in close proximity to the LTP4.
Habitat fragmentation	The LTP4 plan may cause the increased habitat fragmentation between Designated sites surrounding Chester and Cheshire West. Developing new road networks may impact the behaviour of birds present at Ramsar sites and SPAs and change the way in which these species use these Designated sites. However, core policies to not support or promote new road building LTP4s or highway capacity expansion projects may minimise the impact of habitat fragmentation on Designated sites, if adhered to.
Invasive non-native species	Invasive non-native species, both terrestrial and freshwater are negatively impacting the species present at designated sites. The LTP4 may lead to the construction of new roads, cycleways pathways etc…which comes with the risk of spreading Invasive Non-Native Species (INNS). Encouraging changes in transport behaviours may also increase recreational use of designated sites which may lead to the increase spread of INNS.
General human disturbance	Increased transportation links may lead to increased visitor numbers to designated sites are access, walking, cycling, public transport and traffic are improved. Most sites are impacted by noise and disturbance from reactional activities, in particular dog walking, due to the sensitivity of qualifying bird species. The behavioural changes encouraged by the core policy may lead to greater use of coastal cycle and footways, increasing the level of disturbance for bird species. The Dee Estuary Ramsar site/ SPA/ SAC already faces pressure from the use of coastal cycle of footways, exacerbating coastal erosion in some areas due to its continued development and use for recreation.
Visual and noise disturbance	The LTP4 can result in development in order to provide more sustainable means of public transport and to meet future demands. In sites such as the Dee Estuary Ramsar/SPA/SAC, Mersey Narrows and North Wirral Foreshore SPA and Liverpool Bay SPA, designated for birds, qualifying species are likely to be disturbed through several mechanisms. Species sensitivity, proximity to disturbance and timing/duration of disturbance is important to consider. During any construction phase as a result of the LTP4, noise disturbance can impact on qualifying species, changing behaviours and their use of a Designated site, depending on the extent of the disturbance. Post-construction, increased noise pollution because of the LTP4, for example, increased use of roads by buses, can impact qualifying species. Likewise, the introduction of operational lighting into areas not previously lit can cause disturbance of species in Designated sites or those that rely on functionally linked habitat.

Source: Mott MacDonald, 2025.

3.2 Identification of Designated Sites requiring screening

The Stage 1 Screening identified 27 Designated Sites within the 15km ZoI of the CW&C LTP4 boundary. These sites either meet the criteria based on proximity or are considered functionally linked to the proposed LTP4 boundary.

The Designated Sites within the ZoI are listed below:

- Alyn Valley Woods SAC (approximately 10.7km from the LTP4 boundary)
- Berwyn and South Clwyd Mountains SAC (approximately 12.6km from the CW&C LTP4 boundary)
- Brown Moss SAC (approximately 5.2km from the LTP4 boundary)
- Dee Estuary SAC site (within the LTP4 boundary)
- Dee Estuary SPA site (within the LTP4 boundary)
- Deeside and Buckley Newt sites SAC (approximately 4.8km from the LTP4 boundary)
- Fenn's, Whixhall, Bettisfield, Wern and Cadney Mosses SAC (approximately 4.6km from the LTP4 boundary)
- Halkyn mountain SAC (approximately 7.7km from the LTP4 boundary)
- Johns town Newt sites SAC (approximately 11.3km from the LTP4 boundary)
- Liverpool Bay SPA (approximately 7.0km from the LTP4 boundary)
- Manchester Mosses SAC (approximately 14.4km from the LTP4 boundary)
- Mersey Estuary Ramsar site (within the LTP4 boundary)
- Mersey Estuary SPA (within the LTP4 boundary)
- Mersey Narrow and North Wirral Foreshore Ramsar site (approximately 11.5km from the LTP4 boundary)
- Mersey Narrow and North Wirral Foreshore SPA (approximately 11.5km from the LTP4 boundary)
- Midland Mere and Mosses Phase 1 Ramsar site (approximately 6.3km from the LTP4 boundary)
- Midland Mere and Mosses Phase 2 Ramsar site (within the LTP4 boundary)
- Oak Mere SAC (within the LTP4 boundary)
- Ribble & Alt Estuaries Ramsar site (approximately 17.5km from the LTP4 boundary)
- Ribble & Alt Estuaries SPA (approximately 17.5km from the LTP4 boundary)
- River Dee and Bala Lake SAC (within the LTP4 boundary)
- River Eden SAC (approximately 13.8km from the LTP4 boundary)
- Rixton Clay Pits SAC (approximately 7.0km from the LTP4 boundary)
- Rostherne Mere Ramsar site (approximately 6.8km from the LTP4 boundary)
- Sefton Coast SAC (approximately 17.9km from the LTP4 boundary)
- The Dee Estuary Ramsar site (within the LTP4 boundary)
- West Midlands Mosses SAC (within the LTP4 boundary)

Appendix A provides relevant information about these Designated Sites, including their qualifying features, conservation objectives, and the threats and pressures affecting site integrity. The location of Designated Sites in relation to the plan boundary is presented in Appendix B.

3.3 Assessment of LSEs – Core policies

The LTP4 establishes a policy framework that facilitates the implementation of various transport infrastructure projects. These projects may entail land use changes, potentially resulting on significant effects on Designated Sites.

A review of the LTP4 core policies was undertaken to determine which policies could result in projects leading to potential effects on Designated Sites. Policies were screened-out if they did not involve development activities, as these were deemed unlikely to cause significant effects. On the other hand, policies involving development activities were screened-in for further appraisal.

The outcome of this screening assessment is provided in Table 3.2.

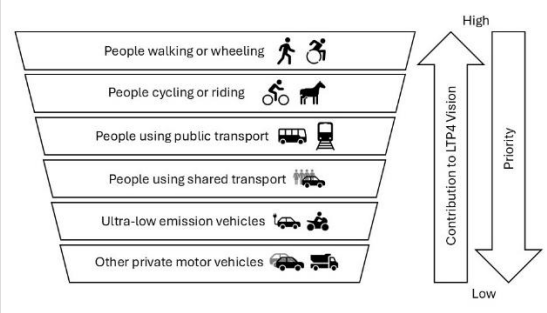
While the LTP4 core policies focus on the overarching vision of the plan, rather than specific projects arising from it, it is acknowledged that future projects originating from these policies may require project-level HRA Screening. This is particularly applicable for the following policies:

- **Core Policy 2:** Projects brought forward by this policy may result in LSE on Designated Sites by promoting co-location of developments, community services, and sustainable transport hubs.
- **Core Policy 4:** Projects originating from this policy may result in LSE on Designated Sites through the creation of multimodal hubs or engineering improvements to reduce interchange times.
- **Core Policy 5:** Projects arising from this policy may result in LSE on Designated Sites due to transport infrastructure upgrades, improvement initiatives, and maintenance works.

Table 3.2: Screening of the CW&C LTP4 Core Policies.

Core policy	Designated sites screened in/out	Core policy description	Screening - likelihood of significant effect
Core Policy 1 – Putting the vision at the heart of decisions	Out	Our Local Transport Plan 4 vision will be at the heart of all our transport decisions and plans within Cheshire West and Chester. Working with stakeholders and partners, we will ensure: ● that all transport initiatives we deliver or endorse move us towards achieving our vision and priorities, and accommodate a future where this vision is realised; and, ● that the steps we take to deliver on this vision remain dynamic, informed by ongoing monitoring and evaluation, with flexibility to intensify activity or 'change tack' where necessary to bring us closer to achieving our ambition. In addition, we will not: ● deliver or support initiatives which take us further away from achieving our vision (as a whole), even where this may benefit one of our priorities in isolation.	**No LSE. This policy is screened out.** The policy relates to the 'vision' which aims to create 'a fairer and more sustainable transport system which enables a stronger, thriving future'. The aim of the policy is for all future transport solutions, policies and programmes to deliver the vision through a dynamic approach, informed by ongoing monitoring and evaluation. In practice, iterations of the LTP will attempt to plot a pathway towards the vision rather than mitigating predicted future pressures. A scenario where this is achieved will be defined by reduced reliance on single-occupancy cars, and significantly increased numbers of public transport, walking, wheeling and cycling trips. The core policy itself will have no construction implications and relates to the vision. The vision may lead to improvements in public transport capacity and walking, wheeling and cycling routes, which may lead to improvements in air quality. Projects which originate from the core policy will require a project-level HRA Screening. The policy will not create any impact pathways and therefore it is unlikely to have LSE.
Core Policy 2 – Smarter places, smarter travel	Out	We will use our understanding of how people travel and why to improve accessibility within Cheshire West and Chester, and reduce the need to use our transport networks at the busiest times. This will involve: ● Encouraging new developments to be located close to community services and sustainable transport hubs, including providing these facilities where appropriate; ● Ensuring everyone has access to digital opportunities, both in terms of infrastructure and skills; ● Supporting changes to daily routines to reduce the travel during peak hours; and, ● Prioritising travel by sustainable modes, in line with Core Policy 3.	**No LSE. This policy is screened out.** The policy relates to promoting opportunities to reduce the need to travel and planning local transport systems to support access to new developments, community services, and transport hubs, ensuring developments achieve a high level of integrated, sustainable connectivity. The policy focuses on empowering schools, developers and major employers to create and implement travel plans to effectively promote the use of sustainable modes of transport and reduce the need for trips to be made during peak hours. The core policy itself will have no construction implications and relates to the future approach for planning future transport

Core policy	Designated sites screened in/out	Core policy description	Screening - likelihood of significant effect
		To support these efforts, we will conduct research to better understand the travel habits and needs of people traveling in Cheshire West and Chester.	systems. Projects which originate from the core policy will require a project-level HRA Screening. The policy will not create any impact pathways and therefore it is unlikely to have LSE.
Core Policy 3 – Real choices in how we travel	Out	When developing transport initiatives, we will prioritise ways of travelling which help us to achieve a fairer and more sustainable transport system. This applies to both passenger and freight transport, reducing reliance on single occupancy private car use (particularly in petrol and diesel cars) and promoting efficient and sustainable movement of goods. In order of priority, this will be as follows: ● People walking or wheeling (includes powered or unpowered wheelchairs, mobility scooters and rollators) ● People cycling or riding (including cargo bikes, micromobility, and e-bikes) ● People using public transport (bus, coach, rail and community transport) ● People using shared transport (car clubs, carpooling and car share) ● Ultra-low emission vehicles, including electric cars and vans (including private, business and taxi and public hire vehicles) ● Other private motor vehicles, including petrol and diesel cars and vans (including private, business and taxi and public hire vehicles) Any proposals which provide benefits to modes at the bottom of this hierarchy will need to demonstrate how they also enable greater benefits for higher-priority modes.	**No LSE. This policy is screened out** The policy outlines a prioritisation for the provision of transport infrastructure, with people walking or wheeling as of highest importance and private petrol and diesel motor vehicles of lowest importance. New development of community services and sustainable transport hubs for both passengers and freight transport aims to promote efficient and sustainable movement of goods. Projects which originate from the core policy will require a project-level HRA Screening. In practice, the delivery of this core strategy would prioritise sustainable transport modes when planning transport projects. The core policy itself will have no construction implications and relates to the future approach for planning future transport systems. If the policy, and subsequent intervention plans are successful the reduced use of personal cars may lead to improvements in air quality. The policy will not create any impact pathways and therefore unlikely to have LSE.

Core policy	Designated sites screened in/out	Core policy description	Screening - likelihood of significant effect
			
Core Policy 4 – Let's join things up: a 'One System' approach	Out	We will work closely with operators and partners to make travel through our borough seamless and convenient. By facilitating better integration of different transport modes and operators, we will promote a single coordinated transport system which offers smooth and connected journeys for everyone. This One System approach should span all transport modes and networks, from highways and parking, to rail and public rights of way. The services, networks and systems that comprise our transport system should provide a safe and attractive and accessible environment for travel, while reducing delays when switching between different types of transport. However, a 'joined up' network is about more than infrastructure and service design; it must also feel connected, smooth and easy to use. This can be achieved through solutions such as combined ticketing, seamless digital journey planning and coordinating communications, making your travel experience as smooth as possible.	**No LSE. This policy is screened out.** The policy promotes a One system approach to transport networks, maximising links between different modes of transport to create a 'joined up' network. The approach within the core policy aims to make development of key transport hubs as efficient and attractive interchanges between transport modes and ensure new developments are connected to existing settlements. In theory, the core policy will explore development of a coordinated network brand for transport across Cheshire West and Chester, working with bus and rail operators to facilitate multi-operator ticketing solutions. The policy itself relates to the approach to planning transport infrastructure and the core policy itself will have no construction implications. Projects which originate from the core policy will require a project-level HRA Screening. Expanding public transport hubs and improving connectivity will encourage daily changes in travel patterns may have a positive impact on air pollution, reducing the number of private cars on the roads and consequently reduce air pollution effects on designated sites. The policy will not create any impact pathways and therefore unlikely to have LSE.

Core policy	Designated sites screened in/out	Core policy description	Screening - likelihood of significant effect
Core Policy 5 – Making the most of our existing streets	Out	Investment in our highways network will be primarily focused on maximising use and efficiency of the existing asset (including upgrading it to replace obsolete assets, reduce delays and enable modal shift in line with Core Policy 3), improving resilience to the consequences of climate change, and carrying out essential maintenance activities. As a general principle, we will not support or promote new road building projects or any project which adds physical highway capacity for general traffic.	**No LSE present. This policy is screened out.** The policy relates to maximising the use of existing highway assets and discouraging new road building. The policy will discourage new road building and consequently prevent further habitat fragmentation and produce positive impacts for Designated sites. In the case where road building is permitted, the policy states the LTP4 should not adversely impact sites of significant ecological or heritage values, and therefore it is assumed no impact to Designated sites will occur. Projects which originate from the core policy will require a project-level HRA Screening. The policy will not result in an increase in urban surfacing, traffic, recreational levels or construction processes. Therefore, the impact pathways of air pollution, water pollution, habitat fragmentation and noise/visual pollution are all screened out from Appropriate Assessment.
Core Policy 6 – Local issues, local voices	Out	We will work in partnership with stakeholders, operators and local communities to improve our transport system. We will involve the people affected by proposed changes when designing transport policy and services. This includes local residents, businesses, local interest groups and other key stakeholders. We aim to ensure we get a true picture of the community's views, including under-represented groups and minorities, and ensure all feedback is taken into account in decision-making. Beyond times of change, we will carry out ongoing communication campaigns to keep our communities informed about existing transport options, and support behaviour change. We will also empower and enable communities to play their part in their local transport networks, offering the opportunity to help shape their neighbourhoods and contribute to developing a fairer and more sustainable transport system.	**No LSE present. This policy is screened out.** The policy relates to engagement with the public and changing habits and behaviours. The council recognises it cannot deliver its vision in isolation and therefore aims to work alongside key stakeholders, operators and local communities to design transport policy and services as well as enabling communities to take responsibility for their local transport networks . In doing so, a picture of the views of the local community will be collated and aid to create travel plans which promote the use of sustainable modes of transport and meet the needs of key stakeholders who regularly use local transport systems whilst fulfilling the vision. The policy will not create any impact pathways and therefore unlikely to have LSE.

Core policy	Designated sites screened in/out	Core policy description	Screening - likelihood of significant effect
Core Policy 7 – Protecting our people, our neighbourhoods and our environment	Out	All new transport proposals will give due regard to environmental and social considerations, with appropriate sustainability appraisals carried out to inform decision-making. In developing transport initiatives, we will seek to ensure that new proposals: ● Protect important landscapes, designated sites, habitats and species, and cultural and heritage sites; ● Enhance environmental quality, by creating green spaces and biodiverse habitats, improving access to nature, and improve climate resilience; ● Promote inclusivity, facilitating social interaction and inclusion, boosting affordability of travel across all modes, and increasing opportunities for physical activity; and, ● Improve road safety, public safety, and address community severance, to ensure healthy and accessible transport for all. Equality Analysis will be carried out to identify whether our policies and practices have the potential to have a negative effect on different groups or communities.	**No LSE present. This policy is screened out.** The policy relates to sustainability targets, and regard for environmental and social considerations. The policy aims to protect environmentally important habitats, enhance inclusivity, health and environmental quality and ensure inclusive transport systems. Improving access to nature and greenspace is particularly important for some urban areas of our borough, with communities in Ellesmere Port, Chester and Winsford particularly deprived in this regard. There are a range of environmental and social considerations which should be taken into account in the design and development of new proposals, including: ● Climate Change and Air Quality ● Biodiversity, Flora and Fauna – including requirement for biodiversity net gain ● Water ● Land Resources ● Health and Wellbeing ● Infrastructure ● Equality ● Landscape, Townscape, Heritage and the Historic Environment The policy will not result in an increase in urban surfacing, traffic, recreational levels or construction processes. Therefore, the impact pathways of air pollution, water pollution, habitat fragmentation and noise/visual pollution are all screened out from AA.

Source: Mott MacDonald, 2025.

3.4 Assessment of LSEs – Designated Sites

The CW&C LTP4 Core Strategy does not contain spatial proposals or any nominated sites for strategic transport infrastructure projects. Therefore, uncertainty remains at this stage regarding which Designated Sites or qualifying features may be subject to LSE from projects originating from the implementation of the plan.

Following a precautionary approach, the list of Designated Sites identified within the 15km ZoI of the LTP4 has been reviewed against the broad impact pathways identified in Section 3.1 to determine potential LSEs on Designate Sites and inform future project-specific HRAs.

In line with European Commission and NE Guidance (see Section 2.2.2), this HRA Stage 1 Screening assessment was undertaken in the absence of mitigation, including any measures embedded into the LTP4 where these are intended for the avoidance of effects.

A summary of the HRA Stage 1 Screening assessment is given below in Table 3.3**.**

Table 3.3: Screening of Designated Sites identified within the ZoI.

Designated Site	Distance from CW&C LTP4 boundary	Qualifying feature	Likelihood of significant effect	Potential for LSE
The Dee Estuary Ramsar Site	Within the LTP4 boundary	**Ramsar Criterion 1:** Habitats Directive Annex I features present on the SAC include: Estuaries, Mudflats and sandflats not covered by seawater at low tide, Annual vegetation of drift lines, Vegetated Sea cliffs of the Atlantic and Baltic coasts, Salicornia and other annuals colonising mud and sand, Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*); Embryonic shifting dunes, Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"), Fixed dunes with herbaceous vegetation ("grey dunes"), Humid dune slacks **Ramsar Criterion 2:** Natterjack Toad (*Epidalea calamita)* **Ramsar Criterion 5: Waterfowl** (120,726 individuals) supported in non-breeding season. **Ramsar Criterion 6**: Species with peak counts in spring/autumn: Redshank (*Tringa tetanus*) Species with peak counts in winter: Teal *(Anas crecca*), Shelduck (*Tadorna tadorna*), Oystercatcher (*Haematopus ostralegus*), Curlew (*Numenius Arquata*), Pintail (*Anas acuta*), Grey plover (*Pluvialis squatarola*), Knot (Calidris canutus islandica), Dunlin (*Calidris alpina alpina*) (breeding), Black-tailed godwit (*Limosa limosa islandica*) (breeding), Bar-tailed godwit (*Limosa lapponica*) (wintering), Redshank (*Tringa tetanus*)	The overarching policy positions define the new approach to transport planning and aim to steer how the Council and its partners deliver transport and travel services over the next Local Transport Plan period. No construction activities are anticipated as a direct result of the core policies. Although the Dee Estuary Ramsar is located within the LTP4 boundary, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including Estuaries, Mudflats and sandflats not covered by seawater at low tide, natterjack toad, and qualifying bird species during policy implementation.	No
Mersey Estuary Ramsar	Within the LTP4 boundary	**Ramsar Criterion 5**: Waterfowl (89576 individuals) with peak counts in winter **Ramsar Criterion 6**: Species with peak counts in spring/autumn: Common shelduck (*Tadorna tadorna*), Black-tailed godwit (*Limosa limosa islandica*), Common redshank (*Tringa totanus tetanus*) Species with peak counts in winter: Eurasian teal (*Anas crecca*), Northern pintail (*Anas acuta*), Dunlin (*Calidris alpina alpina*)	No construction activities are anticipated as a direct result of the core policies. Although the Mersey Estuary Ramsar is located within the LTP4 boundary, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including qualifying bird species during policy implementation.	No

Designated Site	Distance from CW&C LTP4 boundary	Qualifying feature	Likelihood of significant effect	Potential for LSE
Midland Meres and Mosses Phase 1 Ramsar Site	6.3km from the LTP4 boundary	**Ramsar Criterion 1** is met because the site comprises a diverse range of habitats from open water to raised bog **Ramsar Criterion 2** is met because the site supports a number of rare species of plants associated with wetlands.	No construction activities are anticipated as a direct result of the core policies. Midland Meres and Mosses Phase 1 Ramsar lacks direct hydrological connectivity and no impact pathways for water pollution were identified. The designated site lies outside the 500m buffer for traffic noise impacts and 200m buffer for emission pollution (Section 2.3.4). Therefore, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including open water, raised bog habitats and rare flora species during policy implementation.	No
Midland Meres and Mosses Phase 2 Ramsar Site	Within the LTP4 boundary	**Ramsar Criterion 1** is met because the site comprises a diverse range of habitats from open water to raised bog. **Ramsar Criterion 2** is met because the site supports a number of rare species of plants: Cowbane (*Cicuta virosa*), Elongated sedge (*Carex elongata*), *Dicranum affine*, *Sphagnum pulchrum*, Moth (*Glyphipteryx lathamella*), Caddisfly (*Hagenella clathrate*), Sawfly (*Trichiosoma vitellinae*)	No construction activities are anticipated as a direct result of the core policies. Although the Midland Meres and Mosses Phase 2 Ramsar is located within the LTP4 boundary, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including qualifying open water, raised bog habitats and rare plant species during policy implementation.	No
Dee Estuary SPA	Within the LTP4 boundary	Common shelduck (Non-breeding) (*Tadorna tadorna*), Eurasian teal (Non-breeding) (*Anas crecca)*, Northern pintail (Non-breeding) (*Anas acuta*), Eurasian oystercatcher (Non-breeding) (*Haematopus ostralegus*), Grey plover (Non-breeding) (*Pluvialis squatarola*), Red knot (Non-breeding) (*Calidris canutus*), Dunlin (Non-breeding) (*Calidris alpina alpina*), Black-tailed godwit (Non-breeding) (*Limosa limosa islandica*), Bar-tailed godwit (Non-breeding) (*Limosa lapponica*), Eurasian curlew (Non-breeding) (*Numenius arquata*), Common redshank (Non-breeding) (*Tringa tetanus*), Sandwich tern (Non-breeding) (*Sterna sandvicensis*), Common tern (Breeding) (*Sterna hirundo*), Little tern (Breeding) (*Sterna albifrons*), Waterbird assemblage	No construction activities are anticipated as a direct result of the core policies. Although the Dee Estuary SPA is located within the LTP4 boundary, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including qualifying bird species during policy implementation.	No

Designated Site	Distance from CW&C LTP4 boundary	Qualifying feature	Likelihood of significant effect	Potential for LSE
Mersey Estuary SPA	Within the LTP4 boundary	Common shelduck (*Tadorna tadorna*) (Non-breeding) Eurasian teal (*Anas crecca)* (Non-breeding) Northern pintail (*Anas acuta*) (Non-breeding) European golden plover (*Pluvialis apricaria*) (Non-breeding) Dunlin (*Calidris alpina alpina*) (Non-breeding) Black-tailed godwit (*Limosa limosa islandica*) (Non-breeding) Common redshank (*Tringa tetanus*) (Non-breeding) Waterbird assemblage	No construction activities are anticipated as a direct result of the core policies. Although the Mersey Estuary SPA is located within the LTP4 boundary, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including qualifying bird species during policy implementation.	No
Dee Estuary SAC	Within the LTP4 boundary	Estuaries, Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats, Annual vegetation of drift lines, Vegetated Sea cliffs of the Atlantic and Baltic coasts; Vegetated Sea cliffs, Salicornia and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand. Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*); Atlantic salt meadows, Embryonic shifting dunes; Shifting dunes, Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes with marram Fixed dunes with herbaceous vegetation ("grey dunes"); Dune grassland, Humid dune slacks Sea lamprey (*Petromyzon marinus*), River lamprey (*Lampetra fluviatilis*), Petalwort (*Petalophyllum ralfsii*)	No construction activities are anticipated as a direct result of the core policies. Although the Dee Estuary SAC is located within the LTP4 boundary, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including mudflats, fixed dunes, sea lamprey and petalwort during policy implementation.	No
River Dee and Bala Lake SAC	Within the LTP4 boundary	Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation; Rivers with floating vegetation often dominated by water-crowfoot Sea lamprey (*Petromyzon marinus*) River lamprey (Lampetra fluviatilis) Atlantic salmon (*Salmo salar*) Bullhead (Cottus gobio) Brook lamprey (*Lampetra planeri*) Otter (*Lutra lutra*) Floating water-plantain (*Luronium natans*)	No construction activities are anticipated as a direct result of the core policies. Although the River Dee and Bala Lake SAC is located within the LTP4 boundary, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including water courses of plain to montane levels, protected fish species, otter and floating water-plantain during policy implementation.	No

Designated Site	Distance from CW&C LTP4 boundary	Qualifying feature	Likelihood of significant effect	Potential for LSE
Oak Mere SAC	Within the LTP4 boundary	Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*); Nutrient-poor shallow waters with aquatic vegetation on sandy plains Transition mires and quaking bogs; Very wet mires often identified by an unstable `quaking` surface	No construction activities are anticipated as a direct result of the core policies. Although the Oak Mere SAC is located within the LTP4 boundary, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including oligotrophic waters, transition mires and quaking bogs during policy implementation.	No
West Midlands Mosses SAC	Within the LTP4 boundary	Natural dystrophic lakes and ponds; Acid peat-stained lakes and ponds Transition mires and quaking bogs; Very wet mires often identified by an unstable `quaking` surface	No construction activities are anticipated as a direct result of the core policies. Although the West Midlands Mosses SAC is located within the LTP4 boundary, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including natural dystrophic lakes and ponds, transition mires and quaking bogs during policy implementation.	No
Rostherne Mere Ramsar Site	6.8km from the LTP4 boundary	**Ramsar Criterion 1** – Rostherne Mere is one of the deepest and largest of the meres of the Shropshire-Cheshire Plain. Its shoreline is fringed with common reed (*Phragmites australis*)	No construction activities are anticipated as a direct result of the core policies. Rostherne Mere Ramsar lacks direct hydrological connectivity and no impact pathways for water pollution were identified. The designated site lies outside the 500m buffer for traffic noise impacts and 200m buffer for emission pollution (Section 2.3.4). Therefore, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including mere habitat and common reed during policy implementation.	No
Mersey Narrow and North Wirral Foreshore Ramsar Site	11.5km from the LTP4 boundary	**Ramsar Criterion 4** is met because the site regularly supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions: Little gull (*Hydrocoloeus minutus*) Common tern (*Sterna hirundo*)	No construction activities are anticipated as a direct result of the core policies. Although Mersey Narrow and North Wirral Foreshore Ramsar is hydrologically connected to the LTP4 boundary through the marine environment, no impact pathways have been identified through which the core polices could result in LSEs on this	No

Designated Site	Distance from CW&C LTP4 boundary	Qualifying feature	Likelihood of significant effect	Potential for LSE
		Bar-tailed godwit (*Limosa lapponica*) – 2.8% of the W Europe/NW Africa (non-breeding) population **Ramsar Criterion 5:** Waterfowl (32,402 individuals) with peak counts in the winter **Ramsar Criterion 6**: Species with peak counts in winter: Black-tailed godwit (*Limosa limosa islandica*) – 2.4% of the population Knot (*Calidris canutus*) – W Europe/Waddensea/Britain/Ireland (non-breeding) population	Designated Site or its qualifying features, including qualifying bird species during policy implementation.	
Mersey Narrow and North Wirral Foreshore SPA	11.5km from the LTP4 boundary	Bar-tailed godwit (*Limosa lapponica*) (non-breeding) Little gull (*Hydrocoloeus minutus*) (non-breeding) Knot (*Calidris canutus islandica*) (non-breeding) Common tern (*Sterna hirundo*) (non-breeding) Common tern (*Sterna hirundo*) (breeding) Waterbird assemblage	No construction activities are anticipated as a direct result of the core policies. Although Mersey Narrow and North Wirral Foreshore SPA is hydrologically connected to the LTP4 boundary through the marine environment, no impact pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including qualifying bird species during policy implementation.	No
Brown Moss SAC	5.2km from the LTP4 boundary	Floating water-plantain (*Luronium natans*)	No construction activities are anticipated as a direct result of the core policies. Brown Moss SAC lacks direct hydrological connectivity and no impact pathways for water pollution were identified. The designated site lies outside the 500m buffer for traffic noise impacts and 200m buffer for emission pollution (Section 2.3.4). Therefore, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, floating water-plantain, during policy implementation.	No
Fenn's, Whixhall, Bettisfield, Wem and Cadney Mosses SAC	4.6km from the LTP4 boundary	Active raised bogs Degraded raised bogs still capable of natural regeneration; Degraded raised bog	No construction activities are anticipated as a direct result of the core policies. Fenn's, Whixhall, Bettisfield, Wem and Cadney Mosses SAC lacks direct hydrological connectivity and no impact pathways for water pollution were identified. The	No

Designated Site	Distance from CW&C LTP4 boundary	Qualifying feature	Likelihood of significant effect	Potential for LSE
			designated site lies outside the 500m buffer for traffic noise impacts and 200m buffer for emission pollution (Section 2.3.4). Therefore, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including active raised bog and degraded raised bog, during policy implementation.	
Manchester Mosses SAC	14.4km from the LTP4 boundary	Degraded raised bogs still capable of natural regeneration	No construction activities are anticipated as a direct result of the core policies. Manchester Mosses SAC lies upstream of the LTP4 boundary and no impact pathways for water pollution were identified. The designated site lies outside the 500m buffer for traffic noise impacts and 200m buffer for emission pollution (Section 2.3.4). Therefore, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, degraded raised bog, during policy implementation.	No
Rixton Clay Pits SAC	7.0km from the LTP4 boundary	Great crested newt (*Triturus cristatus*)	No construction activities are anticipated as a direct result of the core policies. Rixton Clay Pits SAC lies upstream of the LTP4 boundary and no impact pathways for water pollution were identified. The designated site lies outside the 500m buffer for traffic noise impacts and 200m buffer for emission pollution (Section 2.3.4). Therefore, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, great crested newt, during policy implementation.	No
Liverpool Bay SPA	7.0km from the LTP4 boundary	Red-throated diver (*Gavia stellata*) (Non-breeding) Common scoter (*Melanitta nigral)* (Non-breeding) Little gull (*Hydrocoloeus minutus*) (Non-breeding) Common tern (*Sterna hirundo*) (Breeding)	No construction activities are anticipated as a direct result of the core policies. Although Liverpool Bay SPA is hydrologically connected to the LTP4 boundary through the marine	No

Designated Site	Distance from CW&C LTP4 boundary	Qualifying feature	Likelihood of significant effect	Potential for LSE
		Little tern (*Sternula albifrons*) (Breeding) Waterbird assemblage	environment, no impact pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including qualifying bird species during policy implementation.	
Berwyn and South Clwyd Mountains SAC	12.55km from the LTP4 boundary	European dry heaths Blanket bogs Semi-natural dry grasslands and scrubland facies on calcareous substrate (*Festuco-Brometalia*) Transition mires and quaking bogs Calcareos and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*) Calcareous rocky slopes with chasmophytic vegetation	No construction activities are anticipated as a direct result of the core policies. Berwyn and South Clwyd Mountains SAC lies upstream of the LTP4 boundary and no impact pathways for water pollution were identified. The designated site lies outside the 500m buffer for traffic noise impacts and 200m buffer for emission pollution (Section 2.3.4). Therefore, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including dry heaths, transition mires and quaking bogs and semi natural dry grasslands during policy implementation.	No
Halkyn Mountain SAC	7.68km from the LTP4 boundary	*Calaminarian* grasslands of the *Violetalia calaminariae* European dry heaths Semi-natural dry grasslands and scrublands facies on calcareous substrates (*Festuco-Brometalia*) Monlinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) Great crested newt (*Triturus cristatus*)	No construction activities are anticipated as a direct result of the core policies. Halkyn Mountain SAC lies upstream of the LTP4 boundary and no impact pathways for water pollution were identified. The designated site lies outside the 500m buffer for traffic noise impacts and 200m buffer for emission pollution (Section 2.3.4). Therefore, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including dry heaths, great crested newt and semi natural dry grasslands during policy implementation.	No
Alyn Valley Woods SAC	10.72km from the LTP4 boundary	Tilio-Acerion forests of slopes, screes and ravines Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) Alluvial forests with Alnus glutinosa and Fraxinus excelsior (*Alno-Padion, Alnion incanae, Salicion albae*)	No construction activities are anticipated as a direct result of the core policies. Alyn Valley Woods SAC lies upstream of the LTP4 boundary and no impact pathways for water pollution were identified. The designated site lies outside the	No

Designated Site	Distance from CW&C LTP4 boundary	Qualifying feature	Likelihood of significant effect	Potential for LSE
			500m buffer for traffic noise impacts and 200m buffer for emission pollution (Section 2.3.4). Therefore, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including screes and ravines, semi-natural dry grasslands and alluvial forests during policy implementation.	
Deeside and Buckley Newt sites SAC	4.79km from the LTP4 boundary	Old sessile oak woods with Ilex and Blechnum in the British Isles Great crested newt (*Triturus cristatus*)	No construction activities are anticipated as a direct result of the core policies. Although Deeside and Buckley Newt sites SAC is hydrologically connected to the LTP4 boundary via Wepre Brook, no impact pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including old sessile oak woods and great crested newt during policy implementation.	No
Johns Town Newt sites SAC	11.32km from the LTP4 boundary	Great crested newt (*Triturus cristatus*)	No construction activities are anticipated as a direct result of the core policies. Johns Town Newt sites SAC lies upstream of the LTP4 boundary and no impact pathways for water pollution were identified. The designated site lies outside the 500m buffer for traffic noise impacts and 200m buffer for emission pollution (Section 2.3.4). Therefore, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, great crested newt, during policy implementation	No
River Eden SAC	138km from the LTP4 boundary	Oligotrophic to mesotrophic standing water with vegetation Water courses of plain to montane levels with *R. fluitantis* Alluvial woods with *A. glutinosa*, *F. excelsior* Freshwater crayfish (*Austropotamobius pallipes*) Sea lamprey (*Petromyzon marinus*) Brook lamprey (*Lampetra planer*i)	No construction activities are anticipated as a direct result of the core policies. River Eden SAC is hydrologically connected to the LTP4 boundary via Haweswater Lake, which is likely to form part of the future water supply for Cheshire West and Chester (AECOM, 2018). Although hydrologically connected, no impact pathways have been	No

Designated Site	Distance from CW&C LTP4 boundary	Qualifying feature	Likelihood of significant effect	Potential for LSE
		River lamprey (*Lampetra fluviatilis*) Atlantic salmon (*Salmo salar)* Bullhead (*Cottus gobio*) Otter (*Lutra lutra*)	identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including Oligotrophic to mesotrophic standing water, alluvial woods, protected fish species and otter during policy implementation.	
Sefton Coast SAC	17.98km from the LTP4 boundary	Embryonic shifting dunes Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes with marram Fixed dunes with herbaceous vegetation ("grey dunes"); Dune grassland* Atlantic decalcified fixed dunes (*Calluno-Ulicetea*); Coastal dune heathland* Dunes with Salix repens ssp. argentea (*Salicion arenariae*); Dunes with creeping willow Humid dune slacks Great crested newt (*Triturus cristatus*) Petalwort (*Petalophyllum ralfsii*)	No construction activities are anticipated as a direct result of the core policies. Sefton Coast SAC is located within Merseyside and linked to development in Cheshire West and Chester through recreational pressure and water quality (AECOM, 2018)Sefton Coast SAC lacks direct hydrological connectivity and no impact pathways for water pollution were identified. The designated site lies outside the 500m buffer for traffic noise impacts and 200m buffer for emission pollution (Section 2.3.4). Therefore, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including shifting dunes, great crested newt and petalwort during policy implementation.	No
Ribble & Alt Estuaries Ramsar Site	17.54km from the LTP4 boundary	**Ramsar Criterion 2** is met because the site supports up to 40% of the Great Britain population of natterjack toads *Bufo calamita* **Ramsar Criterion 5** is met because the site supports assemblages of international importance: Waterfowl - 222038 waterfowl (5-year peak mean 1998/99-2002/2003) **Ramsar Criterion 6** is met because the site has species/populations occurring at levels of international importance. Qualifying species regularly supported during the breeding season: Ringed plover, (*Charadrius hiaticula*), Grey plover, (*Pluvialis squatarola*), Red knot, (*Calidris canutus islandica*), Sanderling, (*Calidris alba*), Dunlin, (*Calidris alpina alpina*), Black-tailed	No construction activities are anticipated as a direct result of the core policies. Ribble & Alt Estuaries Ramsar Site is located within Merseyside and linked to development in Cheshire West and Chester through recreational pressure and water quality (AECOM, 2018). Ribble & Alt Estuaries Ramsar lacks direct hydrological connectivity and no impact pathways for water pollution were identified. The Designated Site lies outside the 500m buffer for traffic noise impacts and 200m buffer for emission pollution during operation (Section 2.3.4). Therefore, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including natterjack	No

Designated Site	Distance from CW&C LTP4 boundary	Qualifying feature	Likelihood of significant effect	Potential for LSE
		godwit, (*Limosa limosa islandica*), Common redshank, (*Tringa totanus tetanus*), Lesser black-backed gull, (*Larus fuscus graellsii)* Species with peak counts in winter: Tundra swan, (*Cygnus columbianus bewickii*), Whooper swan, (*Cygnus cygnus*), Pink-footed goose, (*Anser brachyrhynchus*), Common shelduck, (*Tadorna tadorna*), Eurasian wigeon, (*Anas penelope*), Eurasian teal, (*Anas crecca*), Northern pintail, (*Anas acuta*), Eurasian oystercatcher, (*Haematopus ostralegus ostralegus*), Bar-tailed godwit, (*Limosa lapponica lapponica*)	toad and qualifying bird species during policy implementation.	
Ribble & Alt Estuaries SPA	17.54km from the LTP4 boundary	Bewick's swan (*Cygnus columbianus bewickii*) (Non-breeding) Whooper swan (*Cygnus cygnus)* (Non-breeding) Pink-footed goose (*Anser brachyrhynchus)* (Non-breeding) Common shelduck (*Tadorna tadorna)* (Non-breeding) Eurasian wigeon (*Anas Penelope)* (Non-breeding) Eurasian teal (*Anas crecca)* (Non-breeding) Northern pintail (*Anas acuta)* (Non-breeding) Eurasian oystercatcher (*Haematopus ostralegus)* (Non-breeding) Ringed plover (*Charadrius hiaticula)* (Non-breeding) European golden plover (*Pluvialis apricaria*) (Non-breeding) Grey plover (*Pluvialis squatarola*) (Non-breeding) Red knot (*Calidris canutus*) (Non-breeding) Sanderling (*Calidris alba*) (Non-breeding) Dunlin (*Calidris alpina alpina*) (Non-breeding) Ruff (*Philomachus pugnax*) (Breeding) Black-tailed godwit (*Limosa limosa islandica*) (Non-breeding) Bar-tailed godwit (*Limosa lapponica*) (Non-breeding) Common redshank (*Tringa tetanus*) (Non-breeding) Lesser black-backed gull (*Larus fuscus*) (Breeding) Common tern (*Sterna hirundo*) (Breeding) Waterbird assemblage Seabird assemblage	No construction activities are anticipated as a direct result of the core policies. Ribble & Alt Estuaries SPA is located within Merseyside and linked to development in Cheshire West and Chester through recreational pressure and water quality(AECOM, 2018). Ribble & Alt Estuaries SPA lacks direct hydrological connectivity and no impact pathways for water pollution were identified. The designated site lies outside the 500m buffer for traffic noise impacts and 200m buffer for emission pollution (Section 2.3.4). Therefore, no pathways have been identified through which the core polices could result in LSEs on this Designated Site or its qualifying features, including natterjack toad and qualifying bird species during policy implementation.	No

Source: Mott MacDonald, 2025.

3.5 Assessment of in-combination effects

The in-combination assessment aims to identify any potential significant cumulative or in-combination effects of the CW&C LTP4 Core Strategy, with other plans or projects, on the Designated sites outlined in Section 3.2.

Owing to the high-level, strategic nature of the CW&C LTP4 Core Strategy, the potential for cumulative or in-combination effects may vary both spatially (i.e., between potential development sites) and temporally (i.e., over the lifetime of the plan). It is therefore considered proportionate for this plan-level HRA that the in-combination assessment only assesses long-term regional scale plans that will overlap with the lifetime of the LTP4.

It is expected that the in-combination effects will be revisited as more detailed information becomes available on projects arising from implementation of the LTP core policies. The project-level in-combination assessment will evaluate the potential for such effects in relation to local scale, short-term plans and projects.

Table 3.4 outlines the national and regional plans assessed for their potential to result in cumulative or in-combination effects with the LTP4 on the identified Designated Sites.

Table 3.4: Regional scale plans considered for the potential to affect Designated sites, in-combination with the LTP4 Core Strategy

Plan	Key policies or objectives	Assessment of in-combination effects	In combination LSE?
Transport for the North – Transport Decarbonisation Strategy – 2021	The Transport for the North (TfN) – Transport Decarbonisation Strategy sets out the role of TfN in measuring and reducing the emissions from surface transport, and from the construction and operation of the proposed LTP4s within their Investment Programme. The primary vision of outlined within the document is 'of a thriving North of England, where modern transport connections drive sustainable economic growth and support an excellent quality of life.' The plan includes policies to have a 96% reduction in emissions from 2018 to 2040, reflecting longer-term decarbonisation measures, such as a high proportion of zero-emissions vehicles in the vehicle fleet, as well as being close to zero carbon by 2045.	The area covered within the Transport for the North (TfN) – Transport Decarbonisation Strategy) is immediately within the LTP4 area. Therefore, there is potential for in-combination effects on Designated sites located with the ZoI. The strategy relates to the planning approach to measure and reduce emissions from transportation systems in the North. The nature of this strategy will not directly result in development and relates to targets to improve infrastructure particularly regarding EV charging infrastructure and creating a more effective, integrated and comprehensive public/ shared/ active transport systems. Consequently, no significant in-combination effects with the LTP4 are anticipated.	No
Cheshire West and Cheshire Air Quality Strategy: Low emissions strategy – 2021	Cheshire West and Cheshire Air Quality Strategy outlines the steps to reduce and manage is vehicle emissions. In the short-term objective of this strategy is to deliver the maximum improvements in local air quality with the limited resources available and therefore the primary focus of this strategy will be on reducing emissions from traffic. Planning policy should be used to minimise the impact of new development on air quality and create more sustainable communities. The strategy also aims to improve the vehicle technology to reduce emissions and specifically low emission vehicles and improve public transport facilities and connectivity to new developments	The area covered within the Cheshire West and Cheshire Air Quality Strategy is immediately within the LTP4 area. Therefore, there is potential for in-combination effects on Designated sites located with the ZoI. The strategy relates to the approach to ensuring the reduction and management of vehicle emissions. The strategy states new developments should comply with policy requirements outlined within the Cheshire West and Cheshire Local Plan. Should any new developments be proposed, additional assessment will be undertaken regarding the specific development. The Cheshire West and Cheshire Air Quality Strategy itself will have no construction implications and relates to the approach for planning future transport systems and air quality. Consequently, no significant in-combination effects with the LTP4 are anticipated.	No
Cheshire Region: Biodiversity action plan – 2007	Cheshire Region: Biodiversity action plan denotes whether each species is currently included on the revised (2007) UK List of Priority Species and Habitats	The area covered within the Cheshire Region: Biodiversity action plan is immediately within the LTP4 area. Therefore, there is potential for in-combination effects on Designated sites located with the ZoI. However, the purpose of the Biodiversity action plan is to improve habitats and biodiversity, with the conservation of protected areas (including Designated Sites) specified as a major objective. Consequently, no significant in-combination effects with the BCCAP are anticipated.	No

Plan	Key policies or objectives	Assessment of in-combination effects	In combination LSE?
Cheshire West and Cheshire Local Plan (Part One) Strategic Policies – 2015	The Cheshire West and Cheshire Local Plan (Part One) sets out policies on development and land usage in the local area. One of the key policies is to "Provide and develop reliable, efficient transport networks that support sustainable growth and improve accessibility to jobs and services". The plan also sets out aims to safeguard and enhance biodiversity and geodiversity through identification of designated sites and priority habitats, including that development should seek to provide net gains.	The area covered within the Cheshire West and Cheshire Local Plan (Part One) is immediate within the LTP4 boundary. Therefore, there is potential for in-combination effects on Designated sites located with the Zol. An HRA was undertaken for the local plan, and it concluded the increase in population as a result of the level of development proposed in Cheshire West and Chester could lead to recreational impacts on Designated sites within and beyond the borough boundary. It has suggested that Green Infrastructure in the borough can be used to avoid negative impacts by providing alternative recreational open space which may help to attract recreational users away from sensitive Designated Sites and reduce additional pressure on them. The plan states that development proposals which may have an adverse impact will need to be subject to a HRA at the project level to ensure that any LSE have been assessed and measures to avoid these effects have been identified and are deliverable. All new development which will have an adverse impact upon a site with one or more international designations will not be permitted. Consequently, no significant in-combination effects with the LTP4 are anticipated.	No
Cheshire West and Cheshire Local Plan (Part Two) Land Allocations and Detailed Policies – 2019	Cheshire West and Cheshire Local Plan (Part Two) provides a framework for the decision maker and provides the detailed policies and land allocations required to deliver the overall policy for Cheshire West and Chester for the period to 2030. One of the key policies is to ensure where development has the potential to impact on protected sites, habitats or species (directly or indirectly) the Council will require the submission of a detailed ecological assessment.	A HRA has been undertaken to ensure that there are no significant adverse effects of the Local Plan (Part Two) on Designated sites). The HRA has discounted all impacts except for a risk to air quality, and recreational disturbance from new residential and employment development. However, the purpose of the local plan is to protect and enhance the natural environment, within the conservation of protected areas (including Designated sites) specified as a major objective. Consequently, no significant in-combination effects with the LTP4 are anticipated.	No
Cheshire West and Cheshire Inclusive Economy Prospectus and Action Plan – 2021	Cheshire West and Cheshire Inclusive Economy Prospectus and Action Plan a strategy for an inclusive economy prioritises reducing poverty and inequality, combating the climate emergency, supporting community wellbeing, and enhancing the vibrancy of our Borough.	The area covered within the Cheshire West and Cheshire Inclusive Economy Prospectus and Action Plan is immediately within the LTP4 boundary. Therefore, there is potential for in-combination effects on Designated Sites located with the Zol.	No

Plan	Key policies or objectives	Assessment of in-combination effects	In combination LSE?
	The strategy states the 'vision for West Cheshire is to achieve a thriving and inclusive economy which is greener, fairer and stronger – one that enables all of its people, enterprises and places to flourish.' Targets include researching links between transport exclusion, deprivation and social isolation as well as explore innovative approaches to develop new connections in the places and at times where required to enable greater inclusion.	However, the strategy relates to the approach to creating an inclusive economy, including creating an inclusive transportation system. The Cheshire West and Cheshire Inclusive Economy Prospectus and Action Plan itself will have no construction implications and relates to the approach for planning future transport systems and improving connectivity to employment opportunities, leisure, culture and community assets. Consequently, no significant in-combination effects with the LTP4 are anticipated.	
Cheshire and Warrington Strategic Economic Plan	Cheshire and Warrington Strategic Economic Plan outlines a need for setting out the priority transport investments at a local and strategic level. This includes improvements and additions to the road and rail network and better, more coordinated public transport services The strategy recognises that exploiting the economic benefits of connectivity, especially between core economic centres, and creating greater multimodal connectivity cross Cheshire and Warrington, linked to the delivery of major projects such as HS2 and Northern Powerhouse Rail, is key. Relevant targets include: ● Sustainable Transportation and Connectivity – a step change in smart urban transportation ● Accessible Business and Employment Areas – jobs close to where people live and at strategic transport interchanges	The area covered within the Cheshire and Warrington Strategic Economic Plan is immediately within the LTP4 boundary. Therefore, there is potential for in-combination effects on Designated Sites located with the Zol. The strategy provides a high-level planning approach for improvements required to transportation systems to provide economic benefits. The plan itself will have no construction implications and relates to the approach for planning future transport systems to provide sustainable transportation and connectivity as well as providing strategic transport interchanges. Any major infrastructure projects such as HS2 and Northern Powerhouse Rail will be subject to their own screening and AA of Designated Sites and European Protected Species from potentially adverse developments. Consequently, no significant in-combination effects with the LTP4 are anticipated.	No
A Plan for the Borough 2024-2028	Plan for the Borough 2024-2028 aims to create 'a stronger future where we all play our part in thriving, caring and sustainable communities.' The plan sets out strategic policies to improve local communities such as increasing neighbourhood pride and creating greener communities. The plan outlines a need to enhance biodiversity and create new habitats, unlocking much needed development whilst benefiting our local ecological network, wider landscapes and contributing towards better places for people live and work. This includes increasing opportunities for sustainable and healthy transport.	The area covered within the Plan for the Borough 2024-2028 is immediately within the LTP4 boundary. Therefore, there is potential for in-combination effects on Designated Sites located with the Zol. The one of the major purposes of the plan is to create and enhance biodiversity, whilst creating sustainable and healthy transport for all generations. The plan focuses on the approach to future development, with no direct construction impacts anticipated. Consequently, no significant in-combination effects with the LTP4 are anticipated.	No

Plan	Key policies or objectives	Assessment of in-combination effects	In combination LSE?
Highways Asset Management Strategy – 2019	Highways Asset Management Strategy is a long-term plan that sets out an approach to managing and maintain highway assets within the Cheshire West and Cheshire local area. This also includes the reactive repairs and routine maintenance of streetlights, traffic signals, footpaths, bridges, structures and the road carriageways.	Highways Asset Management Strategy encompasses the LTP4 boundary. Therefore, there is potential for in-combination effects on Designated Sites. The plan outlines the approach for planning effective management and maintenance of highway assets. In practice, the plan itself has no direct implications for construction and focuses upon the approach to planning, with objectives focused upon resident satisfaction with roads, reducing road injuries and improvement of resident access to services. Consequently, no significant in-combination effects with the LTP4 are anticipated.	No
Electric Vehicle Charging Infrastructure Strategy	Electric Vehicle Charging Infrastructure Strategy outlines policies for the Council's future role in supporting the delivery of electric vehicle charging infrastructure. On the key policies outlines prioritising town centre locations, key amenities and residential areas with limited off streetcar parking for the installation of electric vehicle charging points. Any new development proposals from June 2023 will require one electric vehicle charging point per new or refurbished residential dwelling, and one charge point for every ten parking spaces in non-residential buildings.	Electric Vehicle Charging Infrastructure Strategy encompasses the LTP4 area. Therefore, there is potential for in-combination effects on Designated Sites. The plan outlines the approach for supporting the delivery of electric vehicle charging infrastructure. In practice, the plan itself has no direct implications for construction. Any new developments will require planning permission, and the Cheshire West and Cheshire Local Plan (Part Two) Land Allocations and Detailed Policies affords protection to Designated site from potentially adverse developments. Consequently, no significant in-combination effects with the LTP4 are anticipated.	No
Cheshire West and Cheshire Local Cycling and Walking Infrastructure Plan 2020-2030.	The local cycling and walking infrastructure plan identifies cycling and walking infrastructure improvements for future investment in the short, medium and long term and make the case for future investment and funding for walking and cycling infrastructure.	The local cycling and walking infrastructure plan encompasses the LTP4 boundary. Therefore, there is potential for in-combination effects on Designated sites. The plan outlines a need for improvements in infrastructure particularly in regards to active travel, improving, enhancing and extending the network of pavements, footpaths and cycle routes. The plan itself will have no construction implications and relates to the approach for planning future transport systems Consequently, no significant in-combination effects with the LTP4 are anticipated.	No
West Cheshire bus service improvement plan	West Cheshire bus service improvement plan outlines key aims to improve bus services. These include:	West Cheshire bus service improvement plan encompasses the LTP4 boundary. Therefore, there is potential for in-combination effects on Designated Sites.	No

Plan	Key policies or objectives	Assessment of in-combination effects	In combination LSE?
	● Makes bus the mode of choice through quicker, more reliable, and more accessible services. ● Improves connectivity for all, reducing transport-related social exclusion and supporting mode shift to public transport and ● Supports the Council's strategic priorities, the objectives of its fourth Local Transport Plan, and the six objectives of the borough plan.	The strategy outlines a structured plan for the necessary improvements to enhance bus services within West Cheshire. The plan itself will have no construction implications and relates to the approach for planning future transport systems in order to provide sustainable transportation and connectivity as well as providing strategic transport interchanges. Any infrastructure projects such as upgrades to bus stops and carriage ways will be subject to their own HRA from potentially adverse developments. Consequently, no significant in-combination effects with the LTP4 are anticipated.	
Chester One City Plan	The One City Plan is a framework, underpinned by a set of ambitions and actions, to which a collective of public, private and community sectors will sign up to. This will ensure everyone works towards a shared goal of achieving the One City Plan's vision by 2045. One of the series of 45 actions relates to sustainability working with the public and private sectors to rise to the challenge of delivering on the United Nations Sustainable Development Goals. The plan also aims to make Chester an accessible city with transportation links that provide safe passage in and around the city for all modes of transport, improving accessibility and quality of life for its communities	Chester One City Plan encompasses the LTP4 boundary. Therefore, there is potential for in-combination effects on Designated sites. The improvements outlined within the plan may lead to development in order to create more accessible transport links in and around Chester. However, one the key goals of the Chester One City Plan is to achieve the sustainable development goals, which promotes the protection, restoration and sustainable use of ecosystems and halt/ reverse land degradation and stop biodiversity loss. Consequently, no significant in-combination effects with the LTP4 are anticipated.	No
Cheshire West and Cheshire Heritage Strategy - draft	Cheshire West and Cheshire Heritage Strategy sets out a high-level plan for achieving long term heritage objectives and proposes a framework for the future, setting out a course of action. The vision of the strategy is to 'Work in partnership with people and communities to safeguard, enhance and celebrate heritage in all its forms for the future' Within the strategy five key actions are identified: ● Safeguard heritage for the future ● Champion diverse heritage for a diverse borough ● Support local heritage, connections and placemaking. ● Using heritage resources to tackle climate change.	The local cycling and walking infrastructure plan encompasses the LTP4 boundary. Therefore, there is potential for in-combination effects on Designated sites. The strategy outlines high level aims and the approach which should be considered when planning for the future use of heritage sites in the borough. Preserving natural heritage will also help to protect ecosystems, endangered species, and valuable habitats. It promotes sustainable practices and raises awareness about the importance of biodiversity and the environment. The plan itself will have no construction implications and therefore impact on Designated Sites are considered unlikely.	No

Plan	Key policies or objectives	Assessment of in-combination effects	In combination LSE?
	● Unlock the economic potential of our heritage.	Consequently, no significant in-combination effects with the LTP4 are anticipated.	

Source: Mott MacDonald, 2025.

3.6 Screening Assessment summary

The HRA Stage 1 Screening concluded that the core policies of the CW&C LTP4 would not result in LSE on the integrity of any Designated Sites or their qualifying features alone. This is primarily because the policies focus on the overarching vision of the plan, rather than specific projects arising from it. While the policies themselves create no direct or immediate impact pathways, it is acknowledged that future projects originating from these policies may require project-level HRAs.

Similarly, the assessment of in-combination effects associated with long-term, regional scale plans, expected to overlap with the lifetime of the LTP4, found no evidence of LSE. It is anticipated that project-level in-combination assessments will be conducted to evaluate such effects in relation to local scale, short-term plans and projects arising from the implementation of the LTP4. Therefore, at this stage, the proposed LTP4 for Cheshire West and Chester does not need to progress to the next HRA Stage 2 AA.

4 Conclusions

After having examined all the potential impact pathways, the HRA Stage 1 Screening concluded that the core policies of the CW&C LTP4 would not result in LSE on the integrity of any Designated Sites or their qualifying features alone. This is primarily because the policies focus on the overarching vision of the plan, rather than specific projects arising from it. While the policies themselves create no direct or immediate impact pathways, it is acknowledged that future projects originating from these policies may require project-level HRA Screening. It should be noted that this report currently only covers the Core Strategy. Once the Policy Papers are available the HRA Report will be updated to include them.

Similarly, the assessment of in-combination effects associated with long-term, regional scale plans, expected to overlap with the lifetime of the CW&C LTP4, found no evidence of LSE. It is anticipated that project-level in-combination assessments will be conducted to evaluate such effects in relation to local scale, short-term plans and projects arising from the implementation of the plan. Therefore, at this stage, the proposed LTP4 for Cheshire West and Chester does not need to progress to the next HRA Stage 2 AA.

The conclusions presented in this document are based on the draft plan vision assumptions, as available at this time, and are primarily informed by accessible, appropriate desktop information. Further iterations of the plan will require revisions to this document, which may result in changes to the current conclusion. The updated HRA report will be sent to the relevant nature conservation authority, NE, for consultation.

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A. Appendix A - Designated site information

A.1 Summary of Designated Sites The Dee Estuary Ramsar Site (UK11082)

A.1.1 Description

The Dee is a large funnel-shaped sheltered estuary and is one of the top ten estuaries in the UK for wintering and passage waterfowl populations. The estuary supports internationally important numbers of waterfowl and waders. The estuary still supports extensive areas of intertidal sand and mudflats as well as saltmarsh. Where land-claim has not occurred, the saltmarshes grade into transitional brackish and freshwater swamp vegetation, on the upper shore. The site includes the three sandstone islands of Hilbre with their important cliff vegetation and maritime heathland/grassland, the sand dune system between the Point of Ayr and Prestatyn in Wales and Red Rocks in England, various Welsh coastal fields historically reclaimed from the estuary but used by the Dee Estuary wintering waterfowl populations, freshwater lagoons and reedbeds at Shotton supporting the largest common tern breeding colony in Wales and freshwater lagoons at Inner Marsh Farm used by waterfowl throughout the year but particularly in winter. 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.

A.1.2 Qualifying features

Ramsar Criterion 1 is met because the site has Extensive intertidal mud and sand flats (20 km by 9 km) with large expanses of saltmarsh towards the head of the estuary. Habitats Directive Annex I features present on the SAC include:

- H1130 Estuaries H1140 Mudflats and sandflats not covered by seawater at low tide
- H1210 Annual vegetation of drift lines
- H1230 Vegetated sea cliffs of the Atlantic and Baltic coasts
- H1310 Salicornia and other annuals colonising mud and sand
- H1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- H2110 Embryonic shifting dunes
- H2120 Shifting dunes along the shoreline with *Ammophila arenaria* (“white dunes”)
- H2130 Fixed dunes with herbaceous vegetation (“grey dunes”)
- H2190 Humid dune slacks

Ramsar Criterion 2 is met because the site supports breeding colonies of the vulnerable Natterjack Toad, *Epidalea calamita*

Ramsar Criterion 5 is met because the site supports assemblages of international importance:

- Waterfowl (120,726 individuals) supported in non-breeding season.

Ramsar Criterion 6 is met because the site supports species/populations occurring at levels of international importance.

- Species with peak counts in spring/autumn:
  - Redshank (*Tringa tetanus*) – 5.9% of the Eastern Atlantic population
- Species with peak counts in winter:

- Teal (*Anas crecca*) – 1.3% of the population
- Shelduck (*Tadorna tadorna*) – 2.6% of the population
- Oystercatcher (*Haematopus ostralegus*) – 2.5% of the population
- Curlew (*Numenius Arquata*) – 1.1% of the Europe population
- Pintail (*Anas acuta*) – 9.0% of the population
- Grey plover (*Pluvialis squatarola*) – 1.1% of the GB population
- Knot (*Calidris canutus islandica*) – 3.5% of the GB population
- Dunlin (*Calidris alpina alpina*) (breeding) – 2.0% of the population
- Black-tailed godwit (*Limosa limosa islandica*) (breeding) – 2.5% of the population
- Bar-tailed godwit (*Limosa lapponica*) (wintering) – 1.2% of the Europe population
- Redshank (*Tringa tetanus*) – 3.5% Eastern Atlantic population

A.1.3 Conservation objectives

Ramsar Sites themselves do not have the same defined conservation objectives as NSN sites in the UK. No further information is available on the conservation objectives of this site, although objectives relating to the Dee Estuary SPA and Dee Estuary SAC designations.

A.1.4 Pressures and threats

- **Introduction/invasion of exotic animal species** – The Chinese mitten crab *Eriocheir sinensis* is an invasive non-native species that was found in the Dee Estuary by the Environment Agency (EA) in 2006. The crab burrows into river and estuary banks and can cause severe erosion. It has been found upstream in the fluvial sections of the River Dee above Chester Weir too.
- **Introduction/invasion of non-native plant species** – A programme of control including alien/alien woody species is currently underway within the Gronant Dunes and Talacre Warren SSSI. This will require ongoing work for a number of years yet.
- **Overfishing** – Review of existing fisheries byelaws excluding cockle fishery.
- **Pollution: industrial waste** – Contaminated land sites around the estuary.
- **General disturbance from human activities** – Dune systems are susceptible to destabilisation if not subject to active management to control recreational pressures from visitors and their activities.
- **Transport infrastructure development** – these include Port of Mostyn and coastal path (foot/cycle).
- **Sand dune erosion and accretion along the North Wales open coast** – Gronant Dunes and Talacre Warren.

A.2 Mersey Estuary Ramsar Site (UK11040)

A.2.1 Description

The Mersey is a large, sheltered estuary which comprises 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 and internationally important populations of waterfowl. During the winter, the site is of major importance for duck and waders. The site is also important during spring and autumn migration periods, particularly for wader populations moving along the west coast of Britain.

A.2.2 Qualifying features

Ramsar Criterion 5 is met because the site supports assemblages of international importance:

- Waterfowl (89576 individuals) with peak counts in winter

Ramsar Criterion 6 is met because the site supports species/populations occurring at levels of international importance:

- Species with peak counts in spring/autumn:
  - Common shelduck (*Tadorna tadorna*) – 4.2% of the population
  - Black-tailed godwit (*Limosa limosa islandica*) – 5.7% of the population
  - Common redshank (*Tringa totanus tetanus*) – 2.6% of the population
- Species with peak counts in winter:
  - Eurasian teal (*Anas crecca*) – 2.6% of the population
  - Northern pintail (*Anas acuta*) – 2% of the GB population
  - Dunlin (*Calidris alpina alpina*) – 3.6% of the population

A.2.3 Conservation objectives

Ramsar Sites themselves do not have the same defined conservation objectives as NSN sites in the UK. No further information is available on the conservation objectives of this site, although objectives relating to the Mersey Estuary SPA and Mersey Estuary SAC designations

A.2.4 Pressures and threats

N/A

A.3 Midland Meres and Mosses Phase 1 Ramsar Site (UK11043)

A.3.1 Description

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

A.3.2 Qualifying features

Ramsar Criterion 1 is met because the site comprises a diverse range of habitats from open water to raised bog

Ramsar Criterion 2 is met because the site supports a number of rare species of plants associated with wetlands including five nationally scarce species together with an assemblage of rare wetland invertebrates (three endangered insects and five other British Red Data Book species of invertebrates).

A.3.3 Conservation objectives

Ramsar Sites themselves do not have the same defined conservation objectives as NSN sites in the UK. No further information is available on the conservation objectives of this site.

A.3.4 Pressures and threats

- Eutrophication
- Introduction/invasion of non-native plant species

A.4 Midland Meres and Mosses Phase 2 Ramsar Site (UK11080)

A.4.1 Description

The Meres and Mosses form a geographically diverse series of lowland open water and peatland sites in the north-west Midlands of England and north-east Wales. These have developed in natural depressions in the glacial drift left by receding ice sheets which formerly covered the Cheshire/Shropshire Plain. The 18 component sites include open water bodies (meres), the majority of which are nutrient-rich with associated fringing habitats, reed swamp, fen, carr and damp pasture. Peat accumulation has resulted in the nutrient-poor peat bogs (mosses) forming in some sites on the fringes of the meres or completely infilling basins. In a few cases the result is a floating quaking bog or schwingmoor. The wide range of resulting habitats support nationally important flora and fauna.

A.4.2 Qualifying features

Ramsar Criterion 1 is met because the site comprises a diverse range of habitats from open water to raised bog.

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

A.4.3 Conservation objectives

Ramsar Sites themselves do not have the same defined conservation objectives as NSN sites in the UK. No further information is available on the conservation objectives of this site.

A.4.4 Pressures and threats

- Eutrophication
- Introduction/invasion of non-native plant species
- Pollution – pesticides/agricultural runoff

A.5 Dee Estuary SPA (UK9013011)

A.5.1 Description

The Dee Estuary lies on the boundary between England and Wales on the north-west coast of Britain. It is a large, funnel-shaped, sheltered estuary that supports extensive areas of intertidal

sand-flats, mud-flats and saltmarsh. 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, maritime heathland and grassland, mussel beds and *Sabellaria*. The site is of major importance for waterbirds. During the winter, the intertidal flats and saltmarshes provide feeding and roosting sites for large populations of ducks and waders. In summer, the site supports breeding populations of two species of terns at levels of European importance. The site is also important during migration periods, particularly for wader populations moving along the west coast of Britain.

This plan also covers the Mersey Narrows and North Wirral Foreshore SPA which is located at the mouths of the Dee and Mersey estuaries. It comprises intertidal habitats at Egremont foreshore, man-made lagoons at Seaforth Nature Reserve and the extensive intertidal flats at North Wirral Foreshore. It supports large numbers of feeding and roosting waders and features an exceptionally high density of wintering Turnstone.

A.5.2 Qualifying features

- A048 *Tadorna tadorna*; Common shelduck (Non-breeding)
- A052 *Anas crecca*; Eurasian teal (Non-breeding)
- A054 *Anas acuta*; Northern pintail (Non-breeding)
- A130 *Haematopus ostralegus*; Eurasian oystercatcher (Non-breeding)
- A141 *Pluvialis squatarola*; Grey plover (Non-breeding)
- A143 *Calidris canutus*; Red knot (Non-breeding)
- A149 *Calidris alpina alpina*; Dunlin (Non-breeding)
- A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)
- A157 *Limosa lapponica*; Bar-tailed godwit (Non-breeding)
- A160 *Numenius arquata*; Eurasian curlew (Non-breeding)
- A162 *Tringa totanus*; Common redshank (Non-breeding)
- A191 *Sterna sandvicensis*; Sandwich tern (Non-breeding)
- A193 *Sterna hirundo*; Common tern (Breeding)
- A195 *Sterna albifrons*; Little tern (Breeding)
- Waterbird assemblage

A.5.3 Conservation objectives

With regards to Dee Estuary SPA and the individual species and/or assemblage of species for which the site has been classified (the ‘Qualifying Features’ listed below), and subject to natural change. Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the 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.

A.5.4 Pressures and threats

- **Public Access/ Disturbance** – Direct disturbance to birds as a result of public access and recreation activities (including dog walking, kite surfing, sand yachting, parascending, hovercrafts etc) is a concern.
- **Changes in species distribution** – Petalwort is at high risk as a consequence of sub-optimal habitat conditions in the dune systems where it occurs on the Welsh side of the Dee Estuary SAC. Dune creation and restoration work is required to remedy the situation.
- **Invasive species** – Terrestrial and freshwater invasive non-native species are affecting the site and include (not exhaustive) *Crassula helmsii*, Giant hogweed, Himlayan balsam, Japanese knotweed, and Clematis. There is also a threat from the spread and increase in density of marine invasive non-native animal species such as the Mitten crab, Asian shore crab, Pacific oyster, Slipper limpet and Wireweed.
- **Climate change** – Higher tidal surges and changes to beaches/geomorphology of the estuary are damaging dune systems and threatening nesting tern colonies (via mortality and loss of suitable nesting sites). There is a change in particle size on the intertidal areas as a result of higher energy storms and the erosion of saltmarsh and mudflats features in some areas. The Estuary is filling with sand as a result of natural coastal processes (this is exacerbated by coastal development) such that there is saltmarsh encroachment onto sand and mud flat areas. There may also be potential impacts on the life-cycle of fish features arising from increases in water temperature and changes in rainfall.
- **Coastal squeeze** – There are a number of hard defences encroaching onto the foreshore. Moreover the threat of future development, combined with sea level rise may reduce the intertidal habitat and the ability to achieve a succession of the intertidal habitats (roll back). As a result supporting SAC habitats and habitats used by SPA bird features are at risk. There are localised instances of coastal squeeze on the estuary.
- **Inappropriate scrub control** – Scrub invasion on the dune systems is suppressing beneficial mobility of the dunes and affecting diversity within the vegetation communities.
- **Water pollution** – The Dee Estuary may be nutrient enriched (there are currently failures for dissolved inorganic nitrogen and macro algae) and is affected by both diffuse and point sources. The Lower River Dee may also be nutrient enriched, with high phosphate levels and possibly elevated nitrate levels (associated with agricultural sources). There are a number of outfalls (stormwater and industrial overflows) within the vicinity of this site which could have an impact on the site. Industrial sites (including historic sites) surrounding the Estuary pose a risk of diffuse and point source pollution. There is also a risk from unregulated activity which is not fully understood. Moreover, historic waste sites including former collieries, landfills etc are releasing leachate and waste and require action to prevent further pollution. Some of the extent/severity of impacts require further quantification.
- **Fisheries** – **Commercial, marine and estuarine:** There are a variety of sea fisheries activities occurring in the Estuary which could have an impact on site features. There have been separate risk-based assessments of commercial fishing activities for England and Wales, which have identified the actions below. In Welsh waters, the NRW Strategic Review of Fishing Issues, which was completed in November 2014, identified commercial fishing impacts and prioritised agreed actions for each Welsh Natura 2000 site. In English waters, commercial fishing activities categorised as ‘amber or green’ under Defra’s revised approach to commercial fisheries in European marine sites are being assessed by the North Western IFCA to determine whether management is required. For activities categorised as ‘green’, these assessments should take account of any relevant in-combination effects with other fishing activities. Intertidal hand working (English side only) from vessels and land, crab tiling and bait digging with forks have been identified as possible fisheries activity requiring an appropriate assessment level review across all Designated sites. The North Western IFCA

are currently undertaking an activity review to inform all assessments which will look at both recreational and commercial activity.

- **Inappropriate coastal management** – In some locations the inappropriate removal of strand line material, vegetation and raking is considered to be affecting or reducing the potential formation of embryonic dunes and vegetated strandlines.
- **Overgrazing** – The issue on the site is inappropriate grazing (stock type and/or timing of grazing). Parts of the site are managed for both SAC and SPA features and where these have different sward height preferences it causes a conflict in terms of the level of grazing deemed appropriate for the area. Increased grazing pressure caused by Canada geese, in combination with grazing sheep, could result in overgrazing in parts of the site.
- **Direct impact from third party** – There is a risk that the hand gathering of Glasswort Salicornia could increase significantly, resulting in gathering on a commercial scale.
- **Marine litter** – Marine litter originating from both the River Dee and the wider environment, accumulates in the Estuary. Litter can smother habitats and plant species and act as an abrasive. It can also entangle, or be digested by birds.
- **Predation** – Ground and avian predators have an adverse impact upon the site's fragile tern populations.
- **Planning permission**: **general** – At a strategic planning level, there is a concern that the assessment of cumulative, in-combination and off-site impacts on sensitive bird species and other habitats and species may be inadequate given the range of planned developments (including direct land take, impact of discharges relating to development (air & water), transport and infrastructure provision (transportation and service corridors). There may also be inadequate provision of suitable and sufficient avoidance, mitigation and compensation measures.
- **Marine consents and permits** – There are a variety of consented marine activities on the site. Consents may be reviewed at regular points of renewal and/or if new evidence becomes available. In particular, there is new evidence on increased turbidity on feeding SPA birds is the area.
- **Wildfire/ arson** – Deliberate fires regularly occur on dune areas and in the upper saltmarsh of the site.
- **Air pollution: impact of atmospheric nitrogen deposition** – There are a variety of sources of air pollution including from the industrial areas adjacent the Estuary. Nitrogen deposition exceeds site relevant critical loads.
- **Transportation and service corridors** – There is a potential for a significant increase in current levels of vessel activity (e.g. as a result of the servicing of off-shore windfarms) and this has potential to cause disturbance to SPA features.
- **Physical modification** – A reduced level of freshwater input flushing into and through the Estuary from the River Dee could potentially be impacting the features however more investigation of this issue is needed

A.6 Mersey Estuary SPA (UK9005131)

A.6.1 Description

The Mersey Estuary is a large sheltered estuary and comprises an unusual configuration with a narrow mouth and wide shallow basin. It is composed of extensive intertidal mud and sandflats on the northern and southern shores of the estuary, distinct areas of rocky shore and areas of saltmarsh which are constantly eroding and accreting.

The saltmarsh areas are either firm sandy areas or are riddled with muddy creeks. The large areas of intertidal sand and mudflats are submerged at high tide, and exposed in the estuary at

low tide providing an important feeding habitat for birds. The estuary also provides extensive roosting sites for large populations of waterbirds and is of major importance during the winter for duck and wader species and for supporting wader populations moving along the west coast of Britain during the spring and autumn migration periods.

A.6.2 Qualifying features

- A048 *Tadorna tadorna*; Common shelduck (Non-breeding)
- A052 *Anas crecca*; Eurasian teal (Non-breeding)
- A054 *Anas acuta*; Northern pintail (Non-breeding)
- A140 *Pluvialis apricaria*; European golden plover (Non-breeding)
- A149 *Calidris alpina alpina*; Dunlin (Non-breeding)
- A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)
- A162 *Tringa totanus*; Common redshank (Non-breeding)
- Waterbird assemblage

A.6.3 Conservation objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the 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.

A.6.4 Pressures and threats

- **Changes in species distribution** – Recently commissioned reports indicate there have been large decreases in bird numbers on this SPA compared to local SPAs and regional trends. There is a need to investigate and understand reasons for these changes.
- **Invasive species** – The population of Canada geese has significantly increased on the site introducing resource competition with some bird species e.g. via increased grazing and increased nutrient pressure. There is a threat from the spread and increase in density of invasive non-native species, such as Chinese mitten crab.
- **Public access/ disturbance** – Users of public footpaths immediately adjacent to the north shore of the site can cause disturbance to birds roosting and feeding at this location.

A.7 Dee Estuary SAC (UK0030131)

A.7.1 Description

The Dee Estuary lies on the boundary between England and Wales on the north-west coast of Britain. It is a large, funnel-shaped, sheltered estuary that supports extensive areas of intertidal sand-flats, mud-flats and saltmarsh. 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, maritime heathland and grassland, mussel beds and Sabellaria. The site is of major importance

for waterbirds. During the winter, the intertidal flats and saltmarshes provide feeding and roosting sites for large populations of ducks and waders. In summer, the site supports breeding populations of two species of terns at levels of European importance. The site is also important during migration periods, particularly for wader populations moving along the west coast of Britain.

This plan also covers the Mersey Narrows and North Wirral Foreshore SPA which is located at the mouths of the Dee and Mersey estuaries. It comprises intertidal habitats at Egremont foreshore, man-made lagoons at Seaforth Nature Reserve and the extensive intertidal flats at North Wirral Foreshore. It supports large numbers of feeding and roosting waders and features an exceptionally high density of wintering Turnstone.

A.7.2 Qualifying features

- H1130. Estuaries
- H1140. Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats
- H1210. Annual vegetation of drift lines
- H1230. Vegetated sea cliffs of the Atlantic and Baltic coasts; Vegetated sea cliffs
- H1310. Salicornia and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand
- H1330. Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*); Atlantic salt meadows H2110. Embryonic shifting dunes; Shifting dunes
- H2120. Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes with marram
- H2130. Fixed dunes with herbaceous vegetation ("grey dunes"); Dune grassland
- H2190. Humid dune slacks
- S1095. *Petromyzon marinus*; Sea lamprey
- S1099. *Lampetra fluviatilis*; River lamprey
- S1395. *Petalophyllum ralfsii*; Petalwort

A.7.3 Conservation objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the ‘Qualifying Features’ listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

A.7.4 Pressures and threats

- **Public Access/ Disturbance** – Direct disturbance to birds as a result of public access and recreation activities (including dog walking, kite surfing, sand yachting, parascending, hovercrafts etc) is a concern.
- **Changes in species distribution** – Petalwort is at high risk as a consequence of sub-optimal habitat conditions in the dune systems where it occurs on the Welsh side of the Dee Estuary SAC. Dune creation and restoration work is required to remedy the situation.
- **Invasive species** – Terrestrial and freshwater invasive non-native species are affecting the site and include (not exhaustive) *Crassula helmsii*, Giant hogweed, Himlayan balsam, Japanese knotweed, and Clematis. There is also a threat from the spread and increase in density of marine invasive non-native animal species such as the Mitten crab, Asian shore crab, Pacific oyster, Slipper limpet and Wireweed.
- **Climate change** – Higher tidal surges and changes to beaches/geomorphology of the estuary are damaging dune systems and threatening nesting tern colonies (via mortality and loss of suitable nesting sites). There is a change in particle size on the intertidal areas as a result of higher energy storms and the erosion of saltmarsh and mudflats features in some areas. The Estuary is filling with sand as a result of natural coastal processes (this is exacerbated by coastal development) such that there is saltmarsh encroachment onto sand and mud flat areas. There may also be potential impacts on the life-cycle of fish features arising from increases in water temperature and changes in rainfall.
- **Coastal squeeze** – There are a number of hard defences encroaching onto the foreshore. Moreover the threat of future development, combined with sea level rise may reduce the intertidal habitat and the ability to achieve a succession of the intertidal habitats (roll back). As a result supporting SAC habitats and habitats used by SPA bird features are at risk. There are localised instances of coastal squeeze on the estuary.
- **Inappropriate scrub control** – Scrub invasion on the dune systems is suppressing beneficial mobility of the dunes and affecting diversity within the vegetation communities.
- **Water pollution** – The Dee Estuary may be nutrient enriched (there are currently failures for dissolved inorganic nitrogen and macro algae) and is affected by both diffuse and point sources. The Lower River Dee may also be nutrient enriched, with high phosphate levels and possibly elevated nitrate levels (associated with agricultural sources). There are a number of outfalls (stormwater and industrial overflows) within the vicinity of this site which could have an impact on the site. Industrial sites (including historic sites) surrounding the Estuary pose a risk of diffuse and point source pollution. There is also a risk from unregulated activity which is not fully understood. Moreover, historic waste sites including former collieries, landfills etc are releasing leachate and waste and require action to prevent further pollution. Some of the extent/severity of impacts require further quantification.
- **Fisheries** – **Commercial, marine and estuarine:** There are a variety of sea fisheries activities occurring in the Estuary which could have an impact on site features. There have been separate risk-based assessments of commercial fishing activities for England and Wales, which have identified the actions below. In Welsh waters, the NRW Strategic Review of Fishing Issues, which was completed in November 2014, identified commercial fishing impacts and prioritised agreed actions for each Welsh Natura 2000 site. In English waters, commercial fishing activities categorised as ‘amber or green’ under Defra’s revised approach to commercial fisheries in European marine sites are being assessed by the North Western IFCA to determine whether management is required. For activities categorised as ‘green’, these assessments should take account of any relevant in-combination effects with other fishing activities. Intertidal hand working (English side only) from vessels and land, crab tiling and bait digging with forks have been identified as possible fisheries activity requiring an appropriate assessment level review across all Designated sites. The North Western IFCA

are currently undertaking an activity review to inform all assessments which will look at both recreational and commercial activity.

- **Inappropriate coastal management** – In some locations the inappropriate removal of strand line material, vegetation and raking is considered to be affecting or reducing the potential formation of embryonic dunes and vegetated strandlines.
- **Overgrazing** – The issue on the site is inappropriate grazing (stock type and/or timing of grazing). Parts of the site are managed for both SAC and SPA features and where these have different sward height preferences it causes a conflict in terms of the level of grazing deemed appropriate for the area. Increased grazing pressure caused by Canada geese, in combination with grazing sheep, could result in overgrazing in parts of the site.
- **Direct impact from third party** – There is a risk that the hand gathering of Glasswort Salicornia could increase significantly, resulting in gathering on a commercial scale.
- **Marine litter** – Marine litter originating from both the River Dee and the wider environment, accumulates in the Estuary. Litter can smother habitats and plant species and act as an abrasive. It can also entangle, or be digested by birds.
- **Predation** – Ground and avian predators have an adverse impact upon the site's fragile tern populations.
- **Planning permission**: **general** – At a strategic planning level, there is a concern that the assessment of cumulative, in-combination and off-site impacts on sensitive bird species and other habitats and species may be inadequate given the range of planned developments (including direct land take, impact of discharges relating to development (air & water), transport and infrastructure provision (transportation and service corridors). There may also be inadequate provision of suitable and sufficient avoidance, mitigation and compensation measures.
- **Marine consents and permits** – There are a variety of consented marine activities on the site. Consents may be reviewed at regular points of renewal and/or if new evidence becomes available. In particular, there is new evidence on increased turbidity on feeding SPA birds is the area.
- **Wildfire/ arson** – Deliberate fires regularly occur on dune areas and in the upper saltmarsh of the site.
- **Air pollution: impact of atmospheric nitrogen deposition** – There are a variety of sources of air pollution including from the industrial areas adjacent the Estuary. Nitrogen deposition exceeds site relevant critical loads.
- **Transportation and service corridors** – There is a potential for a significant increase in current levels of vessel activity (e.g. as a result of the servicing of off-shore windfarms) and this has potential to cause disturbance to SPA features.
- **Physical modification** – A reduced level of freshwater input flushing into and through the Estuary from the River Dee could potentially be impacting the features however more investigation of this issue is needed

A.8 River Dee and Bala Lake SAC (UK0030252)

A.8.1 Description

The River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid SAC extends from the upland source of the Dee at Bala Lake in Snowdonia, Wales through lowland Shropshire and Cheshire in England, to its outflow into the Dee Estuary, and includes some of the tributaries such as the Ceiriog. It is considered of European importance due to the habitat it provides for plant communities and a number of species, including several fish species such as Atlantic salmon, and also otter and floating water plantain.

A joint approach has been taken by Natural Resources Wales and Natural England to identifying issues and actions related to cross-border Natura 2000 sites. For the River Dee and Bala Lake/Afon Dyfrdwy a Llyn Tegid (of which 87% lies in Wales) information on the issues and actions required to improve the condition of the SAC is contained in a Prioritised Improvement Plan produced by Natural Resources Wales as part of its LIFE Natura 2000 Programme in 2015

A.8.2 Qualifying features

- H3260. Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation; Rivers with floating vegetation often dominated by water-crowfoot
- S1095. *Petromyzon marinus*; Sea lamprey
- S1096. *Lampetra planeri*; Brook lamprey
- S1099. *Lampetra fluviatilis*; River lamprey
- S1106. *Salmo salar*; Atlantic salmon
- S1163. *Cottus gobio*; Bullhead
- S1355. *Lutra lutra*; Otter
- S1831. *Luronium natans*; Floating water-plantain

A.8.3 Conservation objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

A.8.4 Pressures and threats

N/A

A.9 Oak Mere SAC (UK0012970)

A.9.1 Description

Oak Mere is a shallow lake and one of the West Midland meres. It has unusual water chemistry which has resulted in an outstanding range of aquatic plants and invertebrates. The lake is surrounded by a mosaic of wetland habitats, including boggy pools, basin mires and wet woodland.

A.9.2 Qualifying features

- H3110. Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*); Nutrient-poor shallow waters with aquatic vegetation on sandy plains

- H7140. Transition mires and quaking bogs; Very wet mires often identified by an unstable `quaking` surface

A.9.3 Conservation objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

A.9.4 Pressures and threats

- **Water pollution** – Concentrations of nutrients (principally nitrogen and phosphorus) in the mere are in exceedance of target levels, reducing the diversity of species found in Oak Mere itself and the associated wetlands. Oak Mere was classified as an oligotrophic lake but is currently eutrophic, with a loss of characteristic species.
- **Invasive species** – Crassula is present at high frequencies in both the open water and marginal zones of the mere, and appears to be competing with the native plant species. It has not yet been found in the transition mires but has the potential to migrate here also.
- **Hydrological changes** – An investigation is required to add to the current understanding of the site's hydrology. Historic Victorian era records suggest water levels at Oakmere were significantly higher. Several factors may be implicated in level being lower subsequently including an overflow pipe at the north end which limits water levels. The adjacent Fourways Quarry could have implications for the water levels in the SAC in terms of the height of the water levels maintained in the quarry and via the effect of such a large void on the gradient of the groundwater.
- **Air pollution: impact of atmospheric nitrogen deposition** – Nitrogen deposition exceeds the site relevant critical loads. Potential local sources of aerial nutrient enrichment include from local poultry, dairy, pig units and industrial sources.

A.10 West Midlands Mosses SAC (UK0013595)

A.10.1 Description

The West Midlands Mosses comprises four sites: Clarepool Moss, Abbots Moss, Chartley Moss and Wybunbury Moss.

These support 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.

A.10.2 Qualifying features

- H3160. Natural dystrophic lakes and ponds; Acid peat-stained lakes and ponds
- H7140. Transition mires and quaking bogs; Very wet mires often identified by an unstable `quaking` surface

A.10.3 Conservation objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

A.10.4 Pressures and threats

- **Water pollution** – On each of the component sites (i.e. Clarepool Moss, Wybunbury Moss, Abbots Moss, and Chartley Moss) the features have been historically impacted by, and remain vulnerable to, changes in water quality and nutrient enrichment from their surrounding catchment. Dystrophic pools at Abbots Moss currently fail to meet their water quality objectives whilst those at Clarepool Moss require testing. The evidence suggests that activities within the small catchments (agriculture, forest nursery, residential etc) are the sources of excess nutrients.
- **Hydrological changes** – All of the component areas of transition mire are impacted by historic drainage. At Clarepool, Chartley and Wybunbury Mosses some of this damage has been partially repaired but further measures to restore a naturalised hydrology are needed in all locations. As well as surface water, ground water is also an important water supply mechanism to the mosses. Hence the SAC is vulnerable to groundwater abstractions and artificial flooding as well as catchment drainage.
- **Air pollution: impact of atmospheric nitrogen deposition** – Nitrogen deposition exceeds site relevant critical loads.
- **Inappropriate scrub control** – The transition mire habitat at each of the component sites experiences continual re-colonisation by scrub, typically birch and pine as a consequence of past hydrological change e.g. historical drainage and cumulative nutrient enrichment together with readily available seed sources. The presence of excessive amounts of scrub and trees affects the mire habitat by increasing the rate of drying out and by the addition of nutrients.
- **Game management: Pheasant rearing** – Nutrient enrichment in the areas of pheasant pens and disturbance to ground flora from game birds are a local issue at Clarepool and Chartley Mosses. Erosion may be caused by shoot activities and access restrictions due to shooting can restrict rewetting and conservation management activities.
- **Forestry and woodland management** – Inappropriate woodland management, for example the restocking of land in close proximity to Abbots Moss could cause shade, nutrient enrichment and enhanced evapo-transpiration and serve as an undesirable seed source for scrub (e.g. Pine) encroachment.
- **Habitat fragmentation** – The sites are small and geographically isolated from each other. The threat of localised species extinction is greater and so the chances of recolonisation by lost species is very low. An example of this is provided by the extinction from Abbots Moss and Wybunbury Moss in recent decades of the white-faced darter dragonfly, a species dependent on dystrophic pools. The nearest donor population is more than 20 miles away

A.11 Rostherne Mere Ramsar Site (UK11060)

A.11.1 Description

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

A.11.2 Qualifying features

- **Ramsar Criterion 1** – Rostherne Mere is one of the deepest and largest of the meres of the Shropshire-Cheshire Plain. Its shoreline is fringed with common reed *Phragmites australis*.

A.11.3 Conservation objectives

Ramsar Sites themselves do not have the same defined conservation objectives as NSN sites in the UK. No further information is available on the conservation objectives of this site.

A.11.4 Pressures and threats

- Eutrophication
- Introduction/invasion of non-native animal species

A.12 Mersey Narrow and North Wirral Foreshore Ramsar Site (UK11041)

A.12.1 Description

The Mersey is a large, sheltered estuary which comprises 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 and internationally important populations of waterfowl. During the winter, the site is of major importance for duck and waders. The site is also important during spring and autumn migration periods, particularly for wader populations moving along the west coast of Britain.

A.12.2 Qualifying features

- **Ramsar Criterion 4** is met because the site regularly supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions:
  - Little gull (*Hydrocoloeus minutus*)
  - Common tern (*Sterna hirundo*)
- **Ramsar Criterion 5** is met because the site supports assemblages of international importance**:**
  - Waterfowl (32,402 individuals) with peak counts in the winter
- **Ramsar Criterion 6** is met because the site supports species occurring at levels of international importance. Species with peak counts in winter:
  - Black-tailed godwit (*Limosa limosa islandica*) – 2.4% of the population
  - Knot (*Calidris canutus*) – W Europe/Waddensea/Britain/Ireland (non-breeding) population
  - Bar-tailed godwit (*Limosa lapponica*) – 2.8% of the W Europe/NW Africa (non-breeding) population

A.12.3 Conservation objectives

Ramsar Sites themselves do not have the same defined conservation objectives as NSN sites in the UK. No further information is available on the conservation objectives of this site, although objectives relating to the Mersey Narrow and North Wirral Foreshore SPA designation.

A.12.4 Pressures and threats

- **Unspecific development urban use** – Egremont Foreshore is vulnerable to both social and economic pressures to return the foreshore back to sandy beaches. Egremont also is vulnerable to physical pressures through sedimentation of the foreshore by the coastal processes reducing the available low tide feeding habitat.

  Sand sedimentation at Egremont foreshore is increasing reducing the low tide feeding area (hard rocky substrates, boulder clay). Consequently, the build of beaches will increase recreation pressure both summer and winter overtime. The artificial replenishment of sand is likely to enhance this pressure.
- **Recreation/tourism disturbance** – Threats from increasing recreational activities particularly on North Wirral Foreshore. The intensity and location of recreational activities is affecting the way birds use the foreshore and move between sites along the North West Coast. N**E** work with Wirral Borough Council to manage group recreational activities through voluntary agreements, licensing and permitting arrangements.

  Recreation and levels of activity on North Wirral Foreshore are thought to be contributing to declines bird numbers and their usage of the site.
- **Vegetation succession** – Issues of sedimentation and vegetation succession at Hoylake Beach will be addressed through management plans and community engagement, supported by powers within Wildlife and Countryside Act 1981 as amended and the Conservation of Habitats & Species Regulations 2010.

  Sedimentation and associated vegetation succession could result in changes to species of birds using the site.

A.13 Mersey Narrow and North Wirral Foreshore SPA (UK9020287)

A.13.1 Description

The Dee Estuary lies on the boundary between England and Wales on the north-west coast of Britain. It is a large, funnel-shaped, sheltered estuary that supports extensive areas of intertidal sand-flats, mud-flats and saltmarsh. 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, maritime heathland and grassland, mussel beds and Sabellaria. The site is of major importance for waterbirds. During the winter, the intertidal flats and saltmarshes provide feeding and roosting sites for large populations of ducks and waders. In summer, the site supports breeding populations of two species of terns at levels of European importance. The site is also important during migration periods, particularly for wader populations moving along the west coast of Britain.

This plan also covers the Mersey Narrows and North Wirral Foreshore SPA which is located at the mouths of the Dee and Mersey estuaries. It comprises intertidal habitats at Egremont foreshore, man-made lagoons at Seaforth Nature Reserve and the extensive intertidal flats at North Wirral Foreshore. It supports large numbers of feeding and roosting waders and features an exceptionally high density of wintering Turnstone.

A.13.2 Qualifying features

- A157. *Limosa lapponica*; Bar-tailed godwit (non-breeding)
- A177. *Hydrocoloeus minutus*; Little gull (non-breeding)
- A143. *Calidris canutus islandica*; Knot (non-breeding)
- A193. *Sterna hirundo;* Common tern (non-breeding)
- A193. *Sterna hirundo*; Common tern (breeding)
- Waterbird assemblage

A.13.3 Conservation objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the 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.

A.13.4 Pressures and threats

- **Public access/disturbance** – Direct disturbance to birds as a result of public access and recreation activities (including dog walking, kite surfing, sand yachting, parascending, hovercrafts etc) is a concern.
- **Changes in species distribution** – Petalwort is at high risk as a consequence of sub-optimal habitat conditions in the dune systems where it occurs on the Welsh side of the Dee Estuary SAC. Dune creation and restoration work is required to remedy the situation.
- **Invasive species** – Terrestrial and freshwater invasive non-native species are affecting the site and include (not exhaustive) *Crassula helmsii*, Giant hogweed, Himlayan balsam, Japanese knotweed, and Clematis. There is also a threat from the spread and increase in density of marine invasive non-native animal species such as the Mitten crab, Asian shore crab, Pacific oyster, Slipper limpet and Wireweed
- **Climate change** – Higher tidal surges and changes to beaches/geomorphology of the estuary are damaging dune systems and threatening nesting tern colonies (via mortality and loss of suitable nesting sites). There is a change in particle size on the intertidal areas as a result of higher energy storms and the erosion of saltmarsh and mudflats features in some areas. The Estuary is filling with sand as a result of natural coastal processes (this is exacerbated by coastal development) such that there is saltmarsh encroachment onto sand and mud flat areas. There may also be potential impacts on the life-cycle of fish features arising from increases in water temperature and changes in rainfall
- **Coastal squeeze** – There are a number of hard defences encroaching onto the foreshore. Moreover the threat of future development, combined with sea level rise may reduce the intertidal habitat and the ability to achieve a succession of the intertidal habitats (roll back). As a result supporting SAC habitats and habitats used by SPA bird features are at risk. There are localised instances of coastal squeeze on the estuary.
- **Inappropriate scrub control** – Scrub invasion on the dune systems is suppressing beneficial mobility of the dunes and affecting diversity within the vegetation communities.

- **Water pollution** – The Dee Estuary may be nutrient enriched (there are currently failures for dissolved inorganic nitrogen and macro algae) and is affected by both diffuse and point sources. The Lower River Dee may also be nutrient enriched, with high phosphate levels and possibly elevated nitrate levels (associated with agricultural sources). There are a number of outfalls (stormwater and industrial overflows) within the vicinity of this site which could have an impact on the site. Industrial sites (including historic sites) surrounding the Estuary pose a risk of diffuse and point source pollution. There is also a risk from unregulated activity which is not fully understood. Moreover, historic waste sites including former collieries, landfills etc are releasing leachate and waste and require action to prevent further pollution. Some of the extent/severity of impacts require further quantification.
- **Fisheries: Commercial, marine and estuarine** – There are a variety of sea fisheries activities occurring in the Estuary which could have an impact on site features. There have been separate risk-based assessments of commercial fishing activities for England and Wales, which have identified the actions below.

  In Welsh waters, the NRW Strategic Review of Fishing Issues, which was completed in November 2014, identified commercial fishing impacts and prioritised agreed actions for each Welsh Natura 2000 site.

  In English waters, commercial fishing activities categorised as ‘amber or green’ under Defra’s revised approach to commercial fisheries in European marine sites are being assessed by the North Western IFCA to determine whether management is required. For activities categorised as ‘green’, these assessments should take account of any relevant in-combination effects with other fishing activities.

  Intertidal handworking (English side only) from vessels and land, crab tiling and bait digging with forks have been identified as possible fisheries activity requiring an appropriate assessment level review across all Designated sites. The North Western IFCA are currently undertaking an activity review to inform all assessments which will look at both recreational and commercial activity.
- **Inappropriate coastal management** – In some locations the inappropriate removal of strand line material, vegetation and raking is considered to be affecting or reducing the potential formation of embryonic dunes and vegetated strandlines.
- **Overgrazing** – The issue on the site is inappropriate grazing (stock type and/or timing of grazing). Parts of the site are managed for both SAC and SPA features and where these have different sward height preferences it causes a conflict in terms of the level of grazing deemed appropriate for the area. Increased grazing pressure caused by Canada geese, in combination with grazing sheep, could result in overgrazing in parts of the site.
- **Direct impact from third party** – There is a risk that the hand gathering of Glasswort Salicornia could increase significantly, resulting in gathering on a commercial scale
- **Marine litter** – Marine litter originating from both the River Dee and the wider environment, accumulates in the Estuary. Litter can smother habitats and plant species and act as an abrasive. It can also entangle, or be digested by birds.
- **Predation** – Ground and avian predators have an adverse impact upon the site's fragile tern populations.
- **Planning permission: general** – At a strategic planning level, there is a concern that the assessment of cumulative, in-combination and off-site impacts on sensitive bird species and other habitats and species may be inadequate given the range of planned developments (including direct land take, impact of discharges relating to development (air & water), transport and infrastructure provision (transportation and service corridors). There may also be inadequate provision of suitable and sufficient avoidance, mitigation and compensation measures.

- **Marine consents and permits** – There are a variety of consented marine activities on the site. Consents may be reviewed at regular points of renewal and/or if new evidence becomes available. In particular, there is new evidence on increased turbidity on feeding SPA birds is the area
- **Wildfire/arson** –. There are a variety of sources of air pollution including from the industrial areas adjacent the Estuary. Nitrogen deposition exceeds site relevant critical loads.
- **Air pollution: impact of atmospheric nitrogen deposition** – There are a variety of sources of air pollution including from the industrial areas adjacent the Estuary. Nitrogen deposition exceeds site relevant critical loads.
- **Transportation and service corridors** – There is a potential for a significant increase in current levels of vessel activity (e.g. as a result of the servicing of off-shore windfarms) and this has potential to cause disturbance to SPA features.
- **Physical modification** – A reduced level of freshwater input flushing into and through the Estuary from the River Dee could potentially be impacting the features however more investigation of this issue is needed.

A.14 Brown Moss SAC (UK0030100)

A.14.1 Description

Brown Moss forms part of the series of meres and mosses in the Midlands. The site consists of a series of pools in a setting of heathland and woodland. The pools support Floating water plantain *Luronium natans* for which the SAC is designated, and vary considerably in their water chemistry and also in their water levels which fluctuate considerably and apparently independently. Floating water plantain appears to behave as a metapopulation on this site, colonising the various pools according to their suitability.

A.14.2 Qualifying features

S1831. *Luronium natans*; Floating water-plantain

A.14.3 Conservation objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

A.14.4 Pressures and threats

- **Hydrological changes** – The site dried out almost completely in summer 2013. The influence of groundwater and direction of flow is thought to be key to the management of the notified feature. Surface drains and ditches also exist, some draining surrounding farmland, others linking the pools. Some of these have become silted up or diverted and need further investigation to determine the quantity and quality of water coming into the site.

- **Water pollution** – High phosphorus and nitrogen concentrations in groundwater and surface water feeding the pools is being caused by agricultural run-off, gathering geese, septic tanks and release from sediment. The eutrophication this causes impacts on the suitability of the pools for Floating water plantain.
- **Invasive species** – Non native *Azolla sp*, and especially *Crassula helmsii* are recurring problems despite a level of control in the past. Their rapid expansion can alter the vegetation dynamic around pool margins; and its persistence can lead to an increase in the proportion of emergent or marginal species and a reduction in aquatic species typical of open water, including Floating water plantain. A programme of physical or chemical control may therefore be required.
- **Water pollution** – The area is a mainly dairy farming, high input system potentially contributing to nitrogen and phosphorus levels in pools, through run-off into ditches feeding into the site. The eutrophication this causes, impacts on the suitability of the pools for Floating water plantain. Catchment Sensitive Farming may be a more effective tool than stewardship in moderating fertiliser & slurry usage in the catchment.
- **Siltation** – Of the total external and internal sources of phosphorus, sediment was the major contributor. Phosphorus release from sediment contributed up to 84% of the total supply. Birds are a major contributor leading to high phosphorus levels in pools, thereby affecting macrophyte communities. Control of geese has been mooted but the area is open access land and is well used by the local public
- **Air pollution: impact of atmospheric nitrogen deposition** – Nitrogen deposition exceeds site relevant critical loads.

A.15 Fenn's, Whixhall, Bettisfield, Wem and Cadney Mosses SAC (UK0012912)

A.15.1 Description

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.

A.15.2 Qualifying features

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

A.15.3 Conservation objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

A.15.4 Pressures and threats

- **Inappropriate water levels** – Because of the highly modified nature of the cut over peat surface, the large size of the site and the extensive and complex nature of the artificial

drainage system allowing for pastoral agriculture and forestry on the main peat body, the restoration of a favourable hydrological regime requires considerable effort. To achieve stable water levels near to ground level beyond the core area will involve improving and reconfiguring the drainage system on and around the site beyond the current rewetted area of the National Nature Reserve (NNR) and this may have implications for the viability of agricultural grazing and forestry. This will be complex and require a significant investment of resources. Barriers that have prevented a water level management plan being put in place need to be reviewed and addressed. Further progress will require further planning, negotiation and the co-operation of landowners and watercourse managers, as well as the funding to implement the necessary measures that are identified.

- **Water pollution** – Bog vegetation for the most part requires low nutrient acidic water supplied via rainfall. However in various places the extensive artificial drainage network causes mineral and nutrient-rich water to ingress into bog areas e.g. Bronington Manor drain, and the Border drain. As well as reducing excess nutrients in the drainage network (by addressing small point sources such as septic tanks, nutrient rich drains and by reducing diffuse sources), in the medium and long-term problematical ditches and drains require diversion around the edge of the site.
- **Air pollution: impact of atmospheric nitrogen deposition** – Aerial nitrogen deposition exceeds site relevant critical loads. Fortunately the prevalent wind direction bringing rain to the SAC does not cross major industrial areas, but there are immediate local sources of ammonia (including Wardle's Aluminium Works and nearby poultry units), many of which are too small to be consented and therefore controlled as emitters.
- **Inappropriate scrub control** – Where the peatland has experienced excessively dry conditions and is ungrazed secondary woodland has developed. In other areas conifer plantations were established in the past. As well as producing shade and leaf litter, water loss is higher under tree cover due to greater evapo-transpiration losses. Tree cover exceeding 10% is a negative factor in attempting to restore bog habitat however in making decisions regard should be given to the impact on invertebrates.
- **Overgrazing** – Most of the pastureland in the SAC is grazed very heavily and for as much of the year as possible. This leads to the peat profile being damaged by poaching and the addition of nutrients (manure and fertilizers) as well as by cultivation practices such as re-seeding.
- **Planning permission: general** – Activities permitted by planning permission that prevent the restoration of the SAC need to be reviewed
- **Peat extraction** – Peat cutting reduces the extent of bog vegetation but also requires drainage, which affects a considerably greater area than that cut. The extent of commercial planning permission has reduced to allow only for the hand cutting which is a lease requirement.
- **Invasive species** – *Crassula Helmsii*, Australian Stonecrop is a non-native invasive plant species and is present in the peripheral drains of the site. It has a tendency to spread quickly and may form dense mats. Anecdotal evidence suggest that it does not compete well where acidic sphagnum moss is abundant. Effective methods of elimination and control are currently absent. Japanese Knotweed is present in some locations.

A.16 Manchester Mosses SAC (UK0030200)

A.16.1 Description

The Mersey floodplain was once covered by complex of large lowland raised bogs covering over 3500 ha. While most of this bog has been converted to agriculture or lost to development, several examples have survived as degraded raised bog; the largest and best preserved

examples Risley Moss, Astley & Bedford Mosses and Holcroft Moss make up the component SSSI of the Manchester Mosses SAC.

All of the Manchester mosses with the exception of Holcroft Moss have been cut over and all were drained resulting in the dominance of purple moor grass *Molinia caerulea*, bracken *Pteridium aquilinum* and birch *Betula* spp. However all of the mosses have now been re-wet and a more typical wet bog community of common cotton grass *Eriophorum angustifolia*, hare's tail cotton grass *Eriophorum vaginatum* and bog mosses *Sphagnum* sp. has now established over large areas of the mosses with sundew *Drosera rotundifolia*, cross leaved heath *Erica tetralix*, bog myrtle *Myrica gale*, cranberry *Vaccinium oxycoccus* and bog rosemary *Andromeda polifolia* all starting to spread.

A.16.2 Qualifying features

H7120. Degraded raised bogs still capable of natural regeneration

A.16.3 Conservation objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

A.16.4 Pressures and threats

- **Hydrological changes** – The combination of historic peat cutting, fragmentation, drainage and peat wastage and some of the early restoration work has significantly modified the hydrological function of all the component mosses. Considerable work has been done and is ongoing within the sites to manage the hydrology and restore the conditions for bog development. Working with partners and stakeholder we have been able to establish hydrological buffer zones around parts of the moss. However, there are still areas were agricultural, and transport infrastructure requires deep drainage on adjacent land that still dry out or impact on parts of the mosses.
- **Air pollution: impact of atmospheric nitrogen deposition** – Nitrogen deposition exceeds site relevant critical loads.

A.17 Rixton Clay Pits SAC (UK0030265)

A.17.1 Description

Rixton Clay Pits is situated to the east of Warrington within disused brickworks. The site comprises a mosaic of habitats including open water, fen, swamp, wet woodland and meadow that have all developed within the flooded workings since quarrying ceased in the 1960s.

Great crested newt Triturus cristatus are known to occur in at least 20 ponds across the site, indeed the site supports the largest population of great crested newts in Cheshire. The reserve is now managed for wildlife and amenity purposes by the local authority ranger service.

A.17.2 Qualifying features

S1166. *Triturus cristatus*; Great crested newt

A.17.3 Conservation objectives

With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

A.17.4 Pressures and threats

- **Direct impact for 3rd party** – There have been issues with tipping into the reserve from adjacent properties, resulting in damage.

A.18 Liverpool Bay SPA (UK9020294)

A.18.1 Description

Liverpool Bay covers a large area from low water to approximately 20km offshore in the Eastern Irish Sea, extending from Anglesey in Wales to Blackpool in England. It is classified to protect common scoter, a sea duck that overwinters in the site in the tens of thousands and feeds on bivalve molluscs on the sea bed, as well as red throated diver which also overwinter in the site and are pursuit predators of small fish. The site also protects the habitats that support these species.

Shell Flat and Lune Deep cSAC lies offshore of Blackpool and Fleetwood and protects the subtidal sandbanks of Shell Flat. This area is the home to many of the bivalves that support the common scoter population, as well as the rocky reefs found on the slopes of the Lune Deep, a glacially formed trench that leads into Morecambe Bay.

A.18.2 Qualifying features

- A001 *Gavia stellata*; Red-throated diver (Non-breeding)
- A065 *Melanitta nigra*; Common scoter (Non-breeding)
- A177 *Hydrocoloeus minutus*; Little gull (Non-breeding)
- A193 *Sterna hirundo*; Common tern (Breeding)
- A195 *Sternula albifrons*; Little tern (Breeding)
- Waterbird assemblage

A.18.3 Conservation objectives

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the 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.

A.18.4 Pressures and threats

- **Fisheries: Commercial, marine and estuarine** – The issues described here only apply to English waters. Dredges (inc. hydraulic), benthic trawls and seines are categorised as 'Red' for this interest feature (and specifically the sub-features: Stony reef communities; Bedrock reef communities) as part of Defra's revised approach to commercial fisheries management in European Marine Sites (EMSs), and requisite mechanisms are being or will be implemented by the North West Inshore Fisheries and Conservation Authorities (NWIFCA). There is a specific issue with the light otter trawl fishery around Lune Deep Reef, for which the NWIFCA have implemented a byelaw that allows for the continuation of a limited fishery adjacent to the feature, based on its track record. This matter only relates to the SAC feature. For commercial fishing activities categorised as 'Amber or Green' under Defra's revised approach to commercial fisheries in EMSs require assessment and (where appropriate) management. This assessment will be undertaken by NWIFCA and the Marine Management Organisation (MMO). For activities categorised as 'green', these assessments should take account of any in-combination effects of amber activities, and/or appropriate plans or projects, in the site. The existing fisheries that fall into this category may be a current pressure as result of the removal of marine species preyed upon by SPA birds, damage to the sea bed, entanglement of birds in nets and disturbance of the birds. There is interest in developing a clam fishery in Liverpool Bay using novel technology which poses a threat.
- **Transportation and service corridors** – There is existing heavy use of the area for shipping in established corridors that birds avoid. Proposals for shipping and transport routes outside of the established corridors would have high potential for disturbance to SPA birds. This issue applies to English waters only.
- **Fisheries: Recreational, marine and estuarine** – There is a threat of disturbance to SPA birds from recreational vessels (classified as pelagic) located largely closer to shore, with the impact of this being poorly understood. Pelagic: sub-activity includes gear that does not interact with the seabed e.g. pelagic trawls, drift nets and pelagic long lines. They also use handlines and rod & line angling (vessel-based) including where no anchoring occurs.
- **Extraction: Non-living resources** – Aggregate dredging results in the affected dredged area becoming unsuitable habitat for organisms living on and in the seabed. The effect of this on the SPA bird features is not fully understood. Applies to English waters only.
- **Siltation** – As a result of recent changes in the use of dredged material from the Mersey, some of which is now disposed of within the Mersey Estuary system, rather than at a disposal site within the Liverpool Bay SPA. The removal of this deposit from the SPA may result in habitat improvement at the disposal site. Applies only to the SPA in English waters
- **Water pollution** – The site faces a risk of oil spills or other pollution incidents from shipping and industry.

A.19 Berwyn and South Clwyd Mountains SAC

A.19.1 Description

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.

A.19.2 Qualifying features

- 4030 European dry heaths
- 7130 Blanket bogs
- 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrate (*Festuco-Brometalia*)
- 7140 Transition mires and quaking bogs
- 8120 Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*)
- 8210 Calcareous rocky slopes with chasmophytic vegetation

A.19.3 Conservation objectives

With regard to the SAC and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change. Conservation objectives are listed below:

- Its natural range and areas it covers within that range are stable or increasing.
- 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.
- The conservation status of its typical species is favourable.
- 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.
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future.
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."

A.19.4 Pressures and threats

- **Grazing pressure** – Grazing pressure unevenly distributed throughout sward probably/possibly as a result of density of bracken on mountain. Upper mountain sward tall, dense - requires grazing. Gorse encroaching onto trackway restricting access. Good ffridd habitat, evidence of heather regeneration but trees/scrub developing dense cover - some selective thinning required to prevent succession to woodland and maintain open ffridd habitat. Suggest thinning of trees as capital works under new agreement

A.20 Halkyn Mountain SAC

A.20.1 Description

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 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.

A.20.2 Qualifying features

- 6130 Calaminarian grasslands of the *Violetalia calaminariae*
- 4030 European dry heaths
- 6210 Semi-natural dry grasslands and scrublands facies on calcareous substrates (*Festuco-Brometalia*)
- 6410 Monlinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)
- 1166 Great crested newt (*Triturus cristatus*)

A.20.3 Conservation objectives

- Its natural range and areas it covers within that range are stable or increasing.
- 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.
- The conservation status of its typical species is favourable.
- 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.
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future.
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."

A.20.4 Pressures and threats

- **Grazing pressure** – Recent years have seen a decline in the number of active graziers. The distribution of grazing pressure across the site is not uniform; consequently some core areas see high stocking levels whilst some of the more peripheral areas of the common remain ungrazed. Overgrazing (currently year round grazing by sheep) and related agricultural activities such as winter stock feeding threaten the condition of the grassland and heathland features
- **Invasive non-native species** – *Crassula helmsii* colonisation of great crested newt breeding ponds threatens the condition of the great crested newt feature across the site.
- **Public access/disturbance** – Unlawful access by motorised vehicles is threatening the condition of the calaminarian grassland

A.21 Alyn Valley Woods SAC

A.21.1 Description

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*)'.

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*)'

A.21.2 Qualifying features

- 9180 Tilio-Acerion forests of slopes, screes and ravines
- 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)
- 91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (*Alno-Padion, Alnion incanae*, *Salicion albae*)

A.21.3 Conservation objectives

- Its natural range and areas it covers within that range are stable or increasing.
- 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.
- The conservation status of its typical species is favourable.
- 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.
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future.
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."

A.21.4 Pressures and threats

- **Grazing pressure** – The grazing pressure must not be so high as to break down the vegetation structure and cause significant bare areas to appear

A.22 Deeside and Buckley Newt sites SAC

A.22.1 Description

This composite site in north-east Flintshire is situated on the coastal slopes overlooking the Dee Estuary. Surrounding terrestrial habitat is rich and varies from neutral and acid grasslands, through Molinia mires to scrub, lowland dry and wet heath and mature broad-leaved woodland. Lowland dry and wet heath are an uncommon habitat type in North East Wales. This mosaic of habitats forms an important foraging, sheltering and overwintering area for adult and juvenile newts

A.22.2 Qualifying features

- 91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles
- 1166 Great crested newt (*Triturus cristatus*)

A.22.3 Conservation objectives

- Its natural range and areas it covers within that range are stable or increasing.
- 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.
- The conservation status of its typical species is favourable.
- 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.
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future.
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."

A.22.4 Pressures and threats

- **Agricultural intensification** – significant threat from loss of habitat due to agricultural intensification, pond senescence and urban expansion.
- **Development** – The SAC lies within and at the edge of both residential and industrial areas of Deeside and Buckley. Consequently, owing to its location, pressure from development is likely to occur in the future

A.23 Johns Town Newt site SAC

A.23.1 Description

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.

A.23.2 Qualifying features

- 1166 Great crested newt (*Triturus cristatus*)

A.23.3 Conservation objectives

- Its natural range and areas it covers within that range are stable or increasing.
- 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.
- The conservation status of its typical species is favourable.
- 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.
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future.
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis."

A.23.4 Pressures and threats

- **Development** – The SAC lies within and at the edge of both residential and industrial areas of Johnstown. Consequently, owing to its location, pressure from development is likely to occur in the future.

A.24 River Eden SAC (UK0012643)

A.24.1 Description

The River Eden is England's finest large river system on limestone and sandstone. The Eden catchment encompasses East Cumbria, from its headwaters in the Yorkshire Dales to its discharge in the Solway Firth Estuary.

The designated area of the River Eden includes headwaters running off the Orton block limestone, the North Pennine Moors and the eastern fells of the Lake District. The variation in geology, altitude and flow result in an extremely high number of aquatic plant species, with over 180 species recorded, many uncommon and at the edge of their geographical range. In places on the Eden there still remains natural riparian habitats of wet woodland, sedge swamp and oxbow lakes.

The River Irthing in particular supports extensive areas of alder-floodplain woodland and the river shingles that this dynamic habitat forms upon . The Eden is one of the finest rivers in the UK for Atlantic salmon, bullhead and the three lamprey species found in the UK. The limestone streams and the upper main river support an extensive white-clawed crayfish population. Otter is found throughout the catchment.

Ullswater, part of the River Eden SAC, is the second largest lake in the Lake District. It is a relatively deep lake, with both oligotrophic and mesotrophic elements to its flora and fauna

A.24.2 Qualifying features

- H3130 Oligotrophic to mesotrophic standing water with vegetation
- H3260 Water courses of plain to montane levels with *R. fluitantis*
- H91E0 Alluvial woods with *A. glutinosa, F. excelsior*
- S1092 Freshwater 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*

A.24.3 Conservation objectives

- 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.

A.24.4 Pressures and threats

- **Water pollution** –
  1. Diffuse water pollution from agriculture (DWPA) is causing failure of water quality targets on specific tributaries. Catchment Sensitive Farming (CSF) and some Higher-Level Stewardship (HLS) are targeted at these tributaries, but additional measures may be required including targeting the new agri-environment LTP4 (NELMS) at failing tributaries if this has suitable options and mechanisms for delivery.
  2. There is a water quality threat for Ullswater which is hovering on passing/failing its phosphate targets. Source apportionment modelling attributes the impacts to tourism infrastructure, such as public toilets and campsites. Water quality failures in Dacre Beck are due to a large, non-consented caravan site. The EA is intending to look into regulating the development.
- **Agricultural management practices**
  1. Higher Level Stewardship was not a successful mechanism for managing riparian strips in intensive farmland, therefore a better mechanism to improve management is required where these are impacting the interest features of the SAC. This issue also needs cross-referencing with the areas of physical modification.
  2. Where there is favourable management occurring, particularly under an Environmental Stewardship (ES) LTP4, this needs to be maintained. The (NELMS) need targeting where the highest gain would be achieved.
  3. Inappropriate grazing levels resulting in erosion, loss of bank stability and lack of complex vegetation in the riparian zone all cause stretches of the SAC to be in unfavourable condition. A whole tributary may be assessed as favourable, due to the extent of the length of the SSSI units but stretches may still need the riparian management addressing. An improved mechanism is needed to incentivise land managers to remove stock from watercourses
- **Physical modification** – Physical modification of the river channel has resulted in 176 km of river being included in the Eden River Restoration Policy as requiring 'Assisted Natural Recovery' or 'Significant Channel Restoration'. This is a threat, as opposed to a pressure because currently resources are available to implement a river restoration demonstration project(s). Funding through the Water Framework Directive (WFD) will cease in 2015, therefore new funding sources need to be secured to ensure restoration continues.
- **Invasive species** – Himalayan balsam and Japanese knotweed are impacting on alder-floodplain woodland ground flora. Both species are causing significant erosion of banksides. Signal crayfish are now present in the River Caldew - a lower river tributary. They are not currently threatening the interest features but could do so in the future.
- **Changes in species distributions** – Conservation Limits for Atlantic salmon were severely depleted in 2012-13. Continued failure of CL will result in the feature being assessed as Unfavourable Declining. Fisheries byelaws including catch-release and Net Limitation Order are already in place but will be reviewed if salmon returns continue to decline. The main issue is perceived to be poor salmon survival at sea
- **Forestry and woodland management** – Where wooded stretches of the river are not in favourable condition, appropriate woodland management is required to
  – improve riparian management
  – maximise the area of alder-floodplain woodland
  – retain adjacent woodland

  Impacts/threats are spatially limited to alder-floodplain woodland sections, riparian areas of Ullswater and adjacent large woodlands, plus areas of coniferous woodland that would benefit from being changed to having a broad-leaved riparian zone.

- **Hydrological changes** – The Eden supplies a large volume of water to United Utilities integrated supply zone. Large abstractions were amended by the EA Review of Consents. Additional abstraction could impact on certain areas of the catchment, e.g. the River Leith. Drought orders are probably a greater threat than licensed abstraction. Multiple small-scale licences also have potential to impact, but these are mostly on intensively farmed areas where the river is larger, rather than the small limestone tributaries
- **Disease** – Signal crayfish are the vector for *Aphanomyces astaci* which causes crayfish plague in the native white-clawed crayfish. Crayfish plague is devastating to the native crayfish. As well as being transferred by non-native crayfish it can also be transferred in water and mud containing the *Aphanomyces astaci* zoospores. Signal crayfish are present in the lower catchment therefore there is a threat to the native population.
- **Air pollution: risk of atmospheric nitrogen deposition** – Nitrogen deposition exceeds the site-relevant critical load for ecosystem protection and hence there is a risk of harmful effects, but the sensitive features are currently considered to be in favourable condition on the site. This requires further investigation.

A.25 Sefton Coast SAC (UK0013076)

A.25.1 Description

The Sefton Coast SAC and the Ribble and Alt Estuaries SPA, together cover 16,976.28ha of estuary, tidal river, salt marsh, sand dunes, dune heath and dune slacks on the north west coast of England.

The Sefton Coast supports Great crested newt and the plant, petalwort. The Ribble and Alt Estuaries support internationally important populations of breeding and wintering seabirds, wildfowl and waders. Pressure comes from low-impact recreation due to its proximity with a large, urban population, as well as development

A.25.2 Qualifying features

- H2110. Embryonic shifting dunes
- H2120. Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes with marram
- H2130. Fixed dunes with herbaceous vegetation ("grey dunes"); Dune grassland*
- H2150. Atlantic decalcified fixed dunes (*Calluno-Ulicetea*); Coastal dune heathland*
- H2170. Dunes with Salix repens ssp. argentea (*Salicion arenariae*); Dunes with creeping willow
- H2190. Humid dune slacks
- S1166. *Triturus cristatus*; Great crested newt
- S1395. *Petalophyllum ralfsii*; Petalwort

A.25.3 Conservation objectives

- 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

A.25.4 Pressures and threats

- **Coastal squeeze** – The coastline is eroding around Formby Point. Woodland behind the eroding dunes means that the natural process of roll-back can not occur, leading to fragmentation of dune habitats and loss of embryo and mobile dune habitats.
- **Air pollution: risk of atmospheric nitrogen deposition** – Nitrogen deposition exceeds critical loads and causes rapid growth of vegetation on transitional dune habitats; leading to loss of early successional vegetation communities and associated habitats and species
- **Inappropriate scrub control** – Inadequate control of encroaching scrub into fixed dunes and dune slacks, due to lack of mowing and / or grazing leads to loss of dune habitat.
- **Invasive species** – Encroachment of non-native vegetation (white poplar, Japanese rose, Sea buckthorn) is affecting dynamism of mobile dune habitats and vegetation composition on fixed dunes.
- **Hydrological changes** – Available water in the dunes is affected by presence of invasive scrub; man-made plantations and drainage systems within the adjacent urban settlement. Research has been carried out into dune hydrology and effects of woodland on the water table
- **Public access/disturbance** – Disturbance of bird populations through terrestrial and marine recreation (walkers, joggers, dog walkers, off-road vehicles, sand yachting, kite surfing, jet ski, boating, angling) and disturbance to dune and foreshore species and habitats through these recreational activities. Localised nutrient enrichment of dune flora by dog fouling and disturbance of dune slacks by dogs.
- **Inappropriate coastal management** – Authorised parking on Ainsdale Beach, regulated by Sefton Metropolitan Borough Council, interrupts development of the Green Beach
- **Fisheries: Commercial marine and estuarine** – Commercial fishing activities categorised as ‘amber or green’ under Defra’s revised approach to commercial fisheries in EMSs require assessment and (where appropriate) management. This assessment will be undertaken by NWIFCA. For activities categorised as ‘green’, these assessments should take account of any in-combination effects of amber activities, and/or appropriate plans or projects, in the site. There is a potential commercial electro-clam razor fishery on the Sefton Coast. Fishing can cause issues relating to access and disturbance; competition for bird food; disturbance through quad bikes and other vehicles. Unauthorised access rare due to police, EA and IFCA presence.
- **Changes to site conditions** – Erosion and retreat of the dune system leads to the exposure of historic remains from the cigarette industry (nicotene waste) at Formby. This has resulted in increased levels of nutrients, leading to changes in plant species. The nicotene cliffs also affect natural dune processes.
- **Inappropriate coastal management** – A large quantity of rubble from the Blitz in Liverpool was used to stabilize the coast at Crosby. This has now become exposed and forms an artificial shingle beach, of value to some species. There is, however, an associated risk to human health from hazardous waste and natural coastal processes are inhibited
- **Shooting/scaring** – There are concerns that consented cull of herring gulls and lesser black backed gulls on the Ribble Estuary may result in significant disturbance of the breeding colony and other species, if the conditions are not adhered to.
- **Invasive species** – Liverpool Docks is known to host several species of Marine invasive non-native species (Japanese skeleton shrimp, *Caprella mutica* and seaweed species *Undaris pinnafitida*. The Dee Estuary has also recorded Chinese Mitten *crab Erocheir sinensis* - all of which can spread to the site and affect roosting or feeding habitat (e.g. through competition with native species on which the birds depend)

- **Feature location/extent/pressure condition unknown** – There are gaps in current data and monitoring of SPA bird populations. More comprehensive data gathering would facilitate adequate site management, including Habitats Regulations Assessments.

A.26 Ribble & Alt Estuaries Ramsar Site

A.26.1 Description

A large area including two estuaries which form part of the chain of west coast sites which fringe the Irish Sea. The site is formed by extensive sand and mudflats backed, in the north, by the saltmarsh of the Ribble Estuary and, to the south, the sand dunes of the Sefton Coast. The tidal flats and saltmarsh support internationally important populations of waterfowl in winter and the sand dunes support vegetation communities and amphibian populations of international importance.

A.26.2 Qualifying features

Ramsar Criterion 2 is met because the site supports up to 40% of the Great Britain population of natterjack toads *Bufo calamita*

Ramsar Criterion 5 is met because the site supports assemblages of international importance:

- Waterfowl - 222038 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar Criterion 6 is met because the site has species/populations occurring at levels of international importance.

Qualifying species regularly supported during the breeding season:

- Ringed plover , *Charadrius hiaticula*, Europe/Northwest Africa
- Grey plover , *Pluvialis squatarola*, E Atlantic/W Africa -wintering
- Red knot , *Calidris canutus islandica*, W & Southern Africa (wintering)
- Sanderling , *Calidris alba*, Eastern Atlantic
- Dunlin , *Calidris alpina alpina*, W Siberia/W Europe
- Black-tailed godwit , *Limosa limosa islandica*, Iceland/W Europe
- Common redshank , *Tringa totanus totanus*,
- Lesser black-backed gull , *Larus fuscus graellsii,*

Species with peak counts in winter:

- Tundra swan , *Cygnus columbianus bewickii*, NW Europe
- Whooper swan , *Cygnus cygnus*, Iceland/UK/Ireland
- Pink-footed goose , *Anser brachyrhynchus*, Greenland, Iceland/UK
- Common shelduck , *Tadorna tadorna*, NW Europe
- Eurasian wigeon , *Anas penelope*, NW Europe
- Eurasian teal , *Anas crecca*, NW Europe
- Northern pintail , *Anas acuta*, NW Europe
- Eurasian oystercatcher , *Haematopus ostralegus ostralegus*, Europe & NW Africa -wintering
- Bar-tailed godwit , *Limosa lapponica lapponica*, W Palearctic

A.26.3 Conservation objectives

Ramsar Sites themselves do not have the same defined conservation objectives as NSN sites in the UK. No further information is available on the conservation objectives of this site.

A.26.4 Pressures and threats

N/A

A.27 Ribble & Alt Estuaries SPA (UK9005103)

A.27.1 Description

A large area including two estuaries which form part of the chain of west coast sites which fringe the Irish Sea. The site is formed by extensive sand and mudflats backed, in the north, by the saltmarsh of the Ribble Estuary and, to the south, the sand dunes of the Sefton Coast. The tidal flats and saltmarsh support internationally important populations of waterfowl in winter and the sand dunes support vegetation communities and amphibian populations of international importance.

A.27.2 Qualifying features

- A037 *Cygnus columbianus bewickii;* Bewick's swan (Non-breeding)
- A038 *Cygnus cygnus*; Whooper swan (Non-breeding)
- A040 *Anser brachyrhynchus*; Pink-footed goose (Non-breeding)
- A048 *Tadorna tadorna*; Common shelduck (Non-breeding)
- A050 *Anas penelope*; Eurasian wigeon (Non-breeding)
- A052 *Anas crecca*; Eurasian teal (Non-breeding)
- A054 *Anas acuta*; Northern pintail (Non-breeding)
- A130 *Haematopus ostralegus*; Eurasian oystercatcher (Non-breeding)
- A137 *Charadrius hiaticula*; Ringed plover (Non-breeding)
- A140 *Pluvialis apricaria*; European golden plover (Non-breeding)
- A141 *Pluvialis squatarola*; Grey plover (Non-breeding)
- A143 *Calidris canutus*; Red knot (Non-breeding)
- A144 *Calidris alba*; Sanderling (Non-breeding)
- A149 *Calidris alpina alpina*; Dunlin (Non-breeding)
- A151 *Philomachus pugnax*; Ruff (Breeding)
- A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)
- A157 *Limosa lapponica*; Bar-tailed godwit (Non-breeding)
- A162 *Tringa totanus*; Common redshank (Non-breeding)
- A183 *Larus fuscus*; Lesser black-backed gull (Breeding)
- A193 *Sterna hirundo*; Common tern (Breeding)
- Waterbird assemblage
- Seabird assemblage

A.27.3 Conservation objectives

- 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.

A.27.4 Pressures and threats

- **Coastal squeeze** – The coastline is eroding around Formby Point. Woodland behind the eroding dunes means that the natural process of roll-back can not occur, leading to fragmentation of dune habitats and loss of embryo and mobile dune habitats.
- **Air pollution: risk of atmospheric nitrogen deposition** – Nitrogen deposition exceeds critical loads and causes rapid growth of vegetation on transitional dune habitats; leading to loss of early successional vegetation communities and associated habitats and species
- **Inappropriate scrub control** – Inadequate control of encroaching scrub into fixed dunes and dune slacks, due to lack of mowing and / or grazing leads to loss of dune habitat.
- **Invasive species** – Encroachment of non-native vegetation (white poplar, Japanese rose, Sea buckthorn) is affecting dynamism of mobile dune habitats and vegetation composition on fixed dunes.
- **Hydrological changes** – Available water in the dunes is affected by presence of invasive scrub; man-made plantations and drainage systems within the adjacent urban settlement. Research has been carried out into dune hydrology and effects of woodland on the water table
- **Public access/disturbance** – Disturbance of bird populations through terrestrial and marine recreation (walkers, joggers, dog walkers, off-road vehicles, sand yachting, kite surfing, jet ski, boating, angling) and disturbance to dune and foreshore species and habitats through these recreational activities. Localised nutrient enrichment of dune flora by dog fouling and disturbance of dune slacks by dogs.
- **Inappropriate coastal management** – Authorised parking on Ainsdale Beach, regulated by Sefton Metropolitan Borough Council, interrupts development of the Green Beach
- **Fisheries: Commercial marine and estuarine** – Commercial fishing activities categorised as ‘amber or green’ under Defra’s revised approach to commercial fisheries in EMSs require assessment and (where appropriate) management. This assessment will be undertaken by NWIFCA. For activities categorised as ‘green’, these assessments should take account of any in-combination effects of amber activities, and/or appropriate plans or projects, in the site. There is a potential commercial electro-clam razor fishery on the Sefton Coast. Fishing can cause issues relating to access and disturbance; competition for bird food; disturbance through quad bikes and other vehicles. Unauthorised access rare due to police, EA and IFCA presence.
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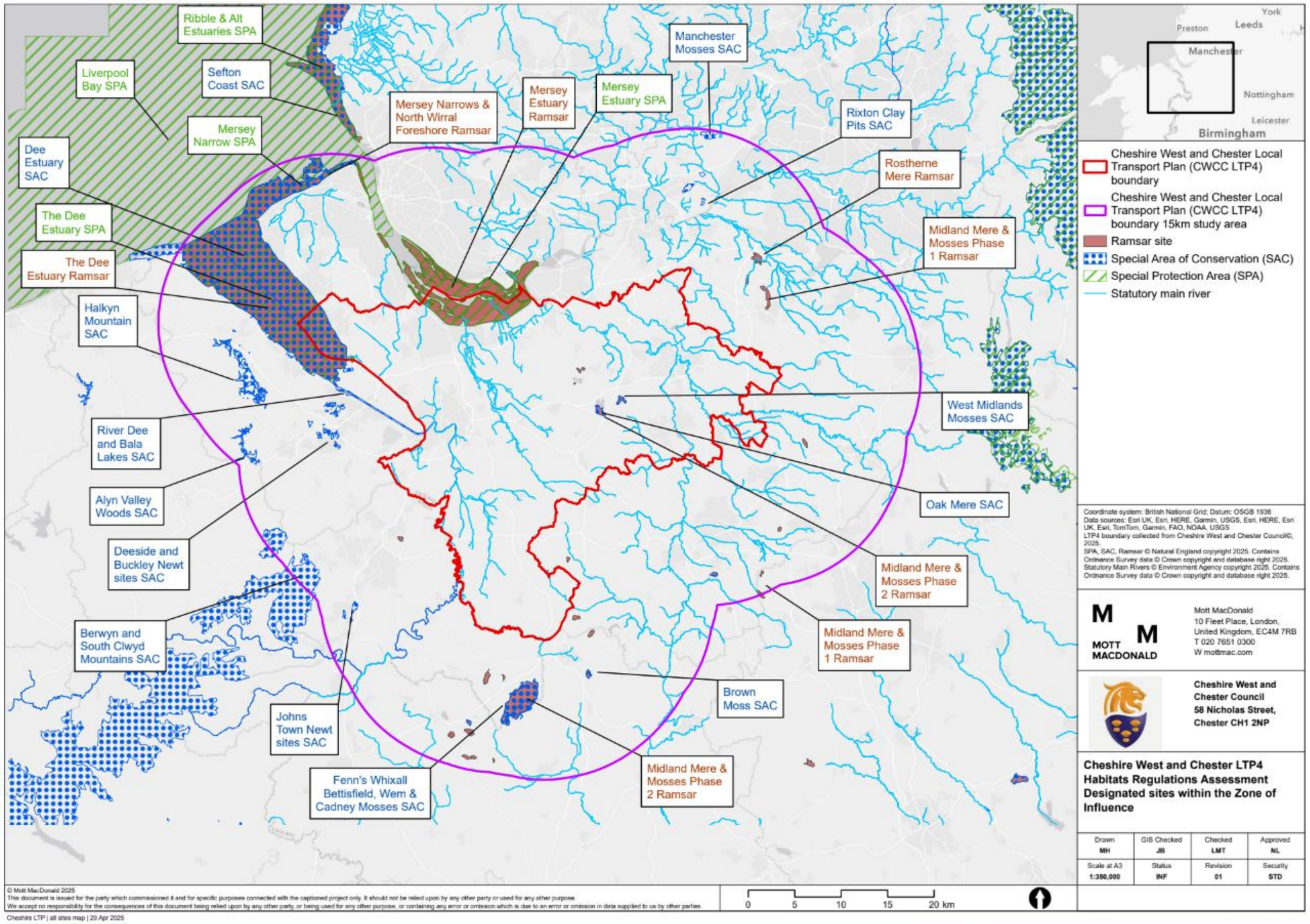
- **Feature location/extent/pressure condition unknown** – There are gaps in current data and monitoring of SPA bird populations. More comprehensive data gathering would facilitate adequate site management, including Habitats Regulations Assessments.

B. Appendix B – Map of Designated Sites within 15km of the LTP4 Boundary


Ribble & Alt Estuaries SPA
Liverpool Bay SPA
Sefton Coast SAC
Mersey Narrow SPA
Dee Estuary SAC
The Dee Estuary SPA
The Dee Estuary Ramsar
Halkyn Mountain SAC
River Dee and Bala Lakes SAC
Alyn Valley Woods SAC
Deeside and Buckley Newt sites SAC
Berwyn and South Clwyd Mountains SAC
Johns Town Newt sites SAC
Fenn's Whixall Bettisfield, Wem & Cadney Mosses SAC
Mersey Narrows & North Wirral Foreshore Ramsar
Mersey Estuary Ramsar
Mersey Estuary SPA
Manchester Mosses SAC
Rixton Clay Pits SAC
Rostherne Mere Ramsar
Midland Mere & Mosses Phase 1 Ramsar
West Midlands Mosses SAC
Oak Mere SAC
Midland Mere & Mosses Phase 2 Ramsar
Midland Mere & Mosses Phase 1 Ramsar
Brown Moss SAC
Midland Mere & Mosses Phase 2 Ramsar
York
Preston
Leeds
Manchester
Nottingham
Leicester
Birmingham
Cheshire West and Chester Local Transport Plan (CWCC LTP4) boundary
Cheshire West and Chester Local Transport Plan (CWCC LTP4) boundary 15km study area
Ramsar site
Special Area of Conservation (SAC)
Special Protection Area (SPA)
Statutory main river
Coordinate system: British National Grid; Datum: OSGB 1936
Data sources: Esri UK, Esri, HERE, Garmin, USGS, Esri, HERE, Esri UK, Esri, TomTom, Garmin, FAO, NOAA, USGS
LTP4 boundary collected from Cheshire West and Chester Council©, 2025.
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Statutory Main Rivers © Environment Agency copyright 2025. Contains Ordnance Survey data © Crown copyright and database right 2025.
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Cheshire West and Chester LTP4 Habitats Regulations Assessment Designated sites within the Zone of Influence
Drawn MH
GIS Checked JB
Checked LMT
Approved NL
Scale at A3 1:350,000
Status INF
Revision 01
Security STD
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0 5 10 15 20 km
Cheshire LTP | all sites map | 29 Apr 2025