

Appendix 3.2

ECOLOGICAL ASSESSMENT



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1.0 Biodiversity

1.1 Introduction

- 1.1.1 This appendix of the Environmental Statement (ES) assesses the likely impacts on biodiversity from the proposed re-development at Goodison Park football stadium (the application site) as undertaken with regard to the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment (2018)¹.
- 1.1.2 The Ecological Impact Assessment (EcIA) presents the baseline ecology and nature conservation aspects of the application site, assesses the likely significant effects of the proposed re-development upon ecological receptors, outlines mitigation measures proposed to reduce adverse impacts and promote biodiversity gains; and summarises the overall predicted ecological effects (i.e. the residual effects) of the proposed development.
- 1.1.3 This has been prepared to support an outline planning application for a mixed-use development.
- 1.1.4 The proposed development involves the demolition of the existing stadium and associated structures, site clearance and ground preparation works; including the removal of hardstanding areas.
- 1.1.5 The development proposals also include the construction of up to 173 residential units, and up to 23,379 square metres of floorspace for community, healthcare, residential institutions, education, leisure, retail and commercial uses. Car parking, public realm / landscaping and the creation of green spaces are also planned.
- 1.1.6 For the purposes of this assessment it is assumed that site preparation and enabling works will commence in 2024 and it is anticipated that all phases of development will be operational by 2028.
- 1.1.7 The EcIA assesses the Proposed Re-Development in relation to the proposals under the above outline planning application.

1.2 Study Extent

Application Site

- 1.2.1 The application site is in the Walton area of Liverpool and is approximately 4 km north-east of Liverpool City Centre. The site is 3.39 ha in size and is centred at Ordnance Survey National Grid Reference SJ 35897 93976.
- 1.2.2 The application site comprises a football stadium with a capacity to seat up to 39,572 people, ancillary buildings (including turnstile entrances, ticket offices and storage containers) and an area of hard standing in the southern section of the site. The hard standing includes vehicle parking areas which are in part used as a fan zone on match days.
- 1.2.3 The site is bordered by Goodison Road to the west, Spellow Lane to the south-west, Walton Lane to the south, Bullens Road to the east, Gwladys Street to the north and Goodison Place and the Church of St Luke the Evangelist to the north-west.
- 1.2.4 The area surrounding the site is characterised primarily by residential properties. Stanley Park is situated immediately south of the site but is separated from it by Walton Lane. Anfield Cemetery adjoins Stanley Park to the north-east and is separated from the site boundary by 150 metres.

Study Area

- 1.2.5 The area of search for the desk study incorporates the application site plus a 2 km search area around the application site.
- 1.2.6 The desk study area was extended to 10 km for Natura 2000 and Ramsar sites (only) to incorporate internationally designated sites, as recommended in pre-application consultation advice received from Natural England (NE) 29th June 2017 and Merseyside Environmental Advisory Service (MEAS) 23rd June 2017, 21st August 2019 (MEAS) and 2nd September 2019 (NE) – see Appendix 1. It should be noted that in 2017, Natural England stated in their consultation response that the following sites should be included in this assessment:
- Sefton Coast Special Area of Conservation (SAC)
 - Mersey Narrows & North Wirral Foreshore Special Protection Area (SPA) & Ramsar
 - Mersey Estuary SPA
 - Liverpool Bay SPA
 - Ribble & Alt Estuaries SPA & Ramsar
 - Mersey Narrows Site of Special Scientific Interest (SSSI)
 - North Wirral Foreshore SSSI
- 1.2.7 Advice provided by NE in 2017 indicated that Dee Estuary SAC/SPA should be considered. However, this advice was revisited during a meeting with NE on 19th September 2019, and given the distance of these Natura 2000 sites from the application site, it was agreed that it was unlikely that potential impact pathways would affect these designated sites since the Dee estuary SAC/SPA is 2.8 km north-west from the development site and largely isolated from any impacts by the Wirral Peninsula.
- 1.2.8 It was therefore agreed with NE and MEAS that Dee Estuary SAC/SPA could be excluded from consideration within this report.
- 1.2.9 The extended Phase 1 habitat survey was undertaken within the red line of the application site (as shown within Technical Appendix 1) as well as a badger check within a 50m buffer of the boundary and a pond check, within 500m of the boundary.
- 1.2.10 No other detailed ecological surveys were required to inform this assessment.

1.3 Previous Planning Consent

- 1.3.1 There have been no recent planning applications for the application site which are of note for this assessment.

1.4 Planning Policy and Legislation

- 1.4.1 Section 38(6) of the Planning and Compulsory Purchase Act 2004 and Section 70(2) of the Town & Country Planning Act 1990 require planning applications to be determined in accordance with the statutory development plan, unless material considerations indicate otherwise. The statutory development plan for the City of Liverpool currently comprises the Unitary Development Plan (adopted 2002).
- 1.4.2 A summary of the statutory development plan policies relevant to the application proposal is set out below. The following policies and guidance are material considerations which also inform the assessment:
- Draft Liverpool Local Plan (2018); and



- National Planning Policy Framework (revised February 2019).

National Policy

- 1.4.3 A revised National Planning Policy Framework (NPPF, Ministry of Housing Communities & Local Government, 2019)ⁱⁱ was issued on 19th February 2019 and currently supplements government Circular 06/2005, Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning Systemⁱⁱⁱ.
- 1.4.4 Circular 06/2005 states that the presence of protected species is a material consideration in the planning process. Paragraph 170 of the NPPF also states that:
- "Planning policies and decisions should contribute to and enhance the natural environment by:*
- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
 - b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
 - c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
 - d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
 - e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and,*
 - f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.*
- 1.4.5 Paragraph 175 then goes on to confirm that:
- When determining planning applications, local planning authorities should apply the following principles:*
- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
 - b) development on land within or outside a Site of Special Scientific Interest (SSSI), and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*

- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and,*
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

- 1.4.6 Regarding ECiAs and Habitat Regulations Assessments (HRAs) – any sites identified, or required, as compensatory measures for adverse effects on any Natura 2000/habitats site should also be given the same level as protection as the pSPA's (Potential Special Protection Area) and cSAC's (Candidate Special Area of Conservation) themselves. In addition, when an application is being determined, Paragraph 177 clarifies that:

"The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site."

- 1.4.7 Paragraph 180 is also relevant as:

"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:...

- c) Limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation."*

Local Policy

- 1.4.8 The application site is located within the Primarily Residential Area. Policy OE5 "Protection of nature conservation sites and features" within the saved Liverpool Unitary Development Plan: A Plan for Liverpool (2002) (3) states:
- "The City Council will seek to protect the nature conservation interest of open land and the water environment in the City by not permitting development which would:*
- i. destroy, fragment or adversely affect directly or indirectly a designated or proposed Special Protection Area (SPA), Ramsar site, or Site of Specific Scientific Interest (SSSI), unless the City Council is satisfied that there is no alternative solution and there are imperative reasons of overriding public interest;*
 - ii. destroy, fragment or adversely directly or indirectly affect a Site of Nature Conservation Value as identified by the City Council unless it can be clearly demonstrated that there are reasons for the*



proposal including benefits to the community, which outweigh the need to safeguard the substantive nature conservation value of the site;

iii. destroy, fragment or adversely affect, directly or indirectly, a Regionally Important Geological /Geomorphological Site (RIGS) unless it can be demonstrated that the benefits of the proposal to the community outweigh the need to safeguard the geological value of the site;

iv. have an adverse effect on legally protected wildlife species; or

v. destroy, fragment or adversely affect, indirectly or directly, sites with known conservation value in a neighbouring authority area.

2. In assessing criteria ii to iv full account will be taken of proposed mitigation measures."

1.4.9 In addition policy GI5 'Protection of Biodiversity and Geodiversity' of the emerging Liverpool Local Plan (2018) states:

"Development which may result in a likely significant effect on an internationally important site must be accompanied by sufficient evidence to enable the Council to make a Habitats Regulations Assessment. Adverse effects should be avoided and/or mitigated to ensure that the integrity of internationally important sites is protected. Development which may adversely affect the integrity of internationally important sites will only be permitted where there are no alternative solutions and there are imperative reasons of overriding public interest and suitable compensatory provision is secured. This also applies to sites and habitats outside the designated boundaries that support species listed as being important in the designations of the internationally important sites. [Emphasis added]"

Development which may cause direct or indirect significant harm to other designated sites of nature or geological conservation importance, Priority Habitats, legally protected species and / or Priority Species will only be permitted on:

- National sites (Mersey Estuary Ramsar site/Mersey Estuary Site of Special Scientific Interest (SSSI)): where there are no alternatives and where the benefits of development clearly outweigh the impact on the features of the site that make it of special scientific interest and its broader contribution to the national network;*
- Local Sites (Local Nature Reserves (LNRs), Local Wildlife Site (LWS) and Regionally Important Geological/Geomorphological Sites (RIGS): where the reasons for and the benefits of development clearly outweigh the impact on the nature conservation value of the site and its broader contribution to the Liverpool City Region (LCR) Ecological Network;*
- Sites including Priority Habitats/ Irreplaceable habitats (including ancient woodlands and aged or veteran trees) where there are wholly exceptional reasons and a suitable compensation strategy exists having regard to...' (amended policy wording incomplete)*

Where it has been demonstrated that significant harm cannot be avoided, appropriate mitigation, replacement or other compensatory provision may be required, to accord with the hierarchy of

sites. The location of appropriate mitigation, replacement or other compensatory measures will be targeted, using a sequential approach as follows:

- On site;*
- Immediate locality and / or within the Core Biodiversity Area;*
- LCR Nature Improvement Area within the City; and lastly*
- LCR Nature Improvement Area outside the City.*

Where significant harm resulting from development cannot be avoided, adequately mitigated or, as a last resort, compensated, then planning permission will be refused.

Development proposals which affect sites of nature conservation importance, priority habitats, legally protected species or priority species must be supported by an Ecological Appraisal and include details of avoidance, mitigation and /or compensation where appropriate.

The policy applies where development proposals in Liverpool may directly or indirectly affect sites with known conservation value in a neighbouring authority area.

This policy will apply to other sites recognised during the Plan period as being of nature conservation importance, including land provided as compensation."

This appendix of the ES addresses relevant planning policy and local policy and plans by presenting the biodiversity baseline, assessing the likely impacts and addressing these through the mitigation hierarchy, in accordance with BS 42020.

Biodiversity 2020: A Strategy for England's Wildlife & Ecosystem Services

1.4.10 Biodiversity 2020 replaces the previous UK Biodiversity Action Plan (BAP) and sets national targets to be achieved. The intent of Biodiversity 2020, however, is much broader than the protection and enhancement of less common species and is meant to embrace the wider countryside as a whole. The priority species and habitats considered under Biodiversity 2020 are the Species of Principal Importance (SPI) & Habitats of Principal Importance (HPI) detailed under Natural Environment and Rural Communities (NERC) Act 2006.

The Merseyside Biodiversity Group

1.4.11 The Merseyside Biodiversity Group was formed in 1997 to progress biodiversity action within Merseyside. It is a partnership of local authorities, statutory agencies, conservation organisations, higher education institutions and local people. The group is formed of a range of partners across Liverpool City Region working together to put forward a submission to Government to form a Local Nature Partnership. Local Nature Partnerships (LNPs) were introduced in Defra's Natural Environment White Paper *The Natural Choice: securing the value of nature*, published in 2011, recognising that partnership working is essential to deliver strategic ambitions for the natural environment at a local level. The Merseyside Biodiversity Group are the lead for the North Merseyside Biodiversity Action Plan incorporating a total of 44 species and habitat action plans for the local area.



Key Legislation

- 1.4.12 This assessment has been considered in the context of relevant UK, EU and international biodiversity and conservation legislation including:
- The Convention on Wetlands of International Importance especially as Waterfowl Habitat 1972 (the Ramsar or Wetlands Convention).
 - The European Commission (EC) Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC).
 - The Conservation of Habitats and Species Regulations 2017 (as amended) represents the UK's implementation of the Directive (the Habitats Regs).
 - The Convention on the Conservation of European Wildlife and Natural Habitats 1979 (the Bern Convention) - which carries an obligation to protect and conserve over 500 wild plant species and more than 1,000 wild animal species.
 - The EC Council Directive on the Conservation of Wild Birds (79/409/EEC) - which provides a framework for the conservation and management of, and human interactions with, wild birds in Europe.
 - The Wildlife and Countryside Act (WCA) 1981 (as amended).
 - The Countryside and Rights of Way (CROW) Act 2000.
 - The Natural Environment and Rural Communities (NERC) Act 2006.

1.5 Methodology and Scope

Scoping Assessment Stage

- 1.5.1 A formal scoping report in relation to the application site was submitted to statutory consultees in 2017 (CBRE 2017), as provided in ES Volume III, Appendix 2.1, and responses were received in relation to ecology from MEAS (June 2017).
- 1.5.2 A meeting was held between WYG, NE and MEAS on Monday the 9th of August 2019 in order to confirm requirements of both consultees in relation to this assessment. Written correspondence from both NE and MEAS following this meeting are presented within Appendix 1. In summary it was agreed that this EcIA should include an assessment based on the findings of the updated extended Phase 1 habitat survey and desk study.
- 1.5.3 In addition to the above, although not highlighted by NE as a site to be considered, we have also elected to include the Mersey Estuary Ramsar site within this assessment. This is due to the fact that this Ramsar shares the same boundary as the Mersey Estuary SPA.
- 1.5.4 A Shadow Habitats Regulations Assessment (sHRA) has been produced which provides both an Assessment of Likely Significant Effects (ALSE) and an Appropriate Assessment (AA) – the sHRA has been produced separately to the EcIA but is referred to in the relevant sections of this report.

Assessment Methodology

- 1.5.5 The impact assessment for biodiversity has been carried out with reference to the Chartered Institute of Ecology and Environmental Management's (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018 v1.1), hereafter referred to as the 'CIEEM Guidelines'. The impact assessment process involves:

- Identifying and characterising impacts;
- Incorporating measures to avoid or mitigate (reduce) these impacts;
- Assessing the significance of any residual effects after mitigation;
- Identifying appropriate compensation measures to offset significant residual effects; and
- Identifying opportunities for ecological enhancement.

- 1.5.6 The starting point for any assessment of impacts is to determine which ecological features are important and should be subject to detailed assessment. Ecological features can be important for a variety of reasons, for example, the quality or extent of designated sites or habitats, habitat/species rarity, the extent to which they are threatened throughout their range, or their rate of decline (CIEEM, 2018).

Determining Importance

- 1.5.7 The CIEEM Guidelines recommend that the importance of ecological features is considered within a defined geographical context. For the purpose of this assessment, the following levels have been used:
- **International** – SPAs, SACs, Ramsar Sites;
 - **National** – Sites designated at UK level, e.g. SSSI;
 - **Regional** – Habitats or populations of species of importance at a regional (i.e. north-west of England) level;
 - **County** – Designated Sites, such as Site of Importance for Nature Conservation (SINC) or habitats / species populations of importance at a county (i.e. Merseyside) level;
 - **Local** – Habitats or species populations of importance in a local (e.g. North Liverpool) context; and
 - **Negligible** – Habitats or species populations were either:
 - not detected on site;
 - the potential for them to be present is negligible; or
 - the habitat / species is present, but its presence is considered insignificant in relation to the application site and wider environment.

Habitats

- 1.5.8 With reference to the CIEEM Guidelines, the importance of habitats is measured against published selection criteria where available. Habitat types of European (international) conservation importance are listed on Annex I of the Habitats Directive. Habitats that are considered a priority for conservation in England are listed as HPis under Section 41 of the NERC Act 2006. Reference is also made to the local Habitat Action Plans (LHAPs).
- 1.5.9 Where important habitat types are affected but are currently in a degraded or unfavourable condition, their potential importance is considered, including the potential to contribute to conservation objectives. In accordance with the guidance, the assessor can use their informed professional judgment to assign certain features a greater importance if there is a reasonable chance that they can be restored to that higher importance in the future.

Species

- 1.5.10 Species of European (international) conservation importance are listed in Annexes II, IV and V of the EC Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC) and Annex I of



the EC Council Directive on the Conservation of Wild Birds (79/409/EEC). Species that are considered to be priorities for conservation in England are listed under Section 41 of the NERC Act 2006.

- 1.5.11 In accordance with the CIEEM Guidelines, the importance of species populations is measured using existing criteria where available. Contextual information about distribution and abundance is considered, including trends based on any historical records available.

Predicting and Characterising Ecological Impacts

- 1.5.12 With regards to the CIEEM Guidelines, when describing impacts, the following characteristics are considered – noting that not all these are relevant to every impact:
- **Positive or negative** – if an impact will improve or reduce the quality of the environment;
 - **Extent** – the spatial or geographical area over which the impact/effect may occur;
 - **Magnitude** – refers to size, amount, intensity and volume. If an impact is deemed to be significant then its magnitude, in quantitative terms, should be assessed;
 - **Duration** – the time for which an impact is expected to last;
 - **Timing and frequency** – whether impacts occur during critical life-stages or seasons; and,
 - **Reversibility** – an irreversible effect is one from which recovery is not possible within a reasonable timescale or there is no reasonable chance of action being taken to reverse it. A reversible effect is one from which spontaneous recovery is possible or which may be counteracted by mitigation.

Direct and Indirect Ecological Impacts

- 1.5.13 Both direct and indirect impacts are considered within this assessment. A direct impact is directly attributable to a defined action such as the physical loss of a habitat or the immediate mortality of an individual of a particular species. Indirect impacts are attributable to an action, but which affect ecological resources through effects on an intermediary ecosystem, process or ecological feature. An example of an indirect effect would be the loss of an important prey species for a predator.

Effect Significance

- 1.5.14 In accordance with the CIEEM Guidelines, the assessment will only describe those characteristics relevant to understanding the ecological effects and determining significance. A significant effect, in ecological terms, is defined as an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. Effects can be considered significant at a wide range of scales from international to local.
- 1.5.15 As noted above, impacts are only assessed in detail for features of recognised importance, such that impacts upon them may be significant, or where a legal offence is predicted to occur. Therefore, for the purposes of this assessment, impacts are assessed in detail only for those ecological features that are of at least **local** importance or are subject to some form of **legal protection**. Impacts on any features of lower importance would, by definition, have no significant effect on the wider ecology / population of that feature.
- 1.5.16 After assessing the effects of the proposal, all reasonable attempts are made to avoid and mitigate adverse ecological impacts. Once measures to avoid and mitigate adverse ecological impacts have been finalised, assessment of the residual impacts that will result in effects that are significant, and proposed compensatory measures, will be the factors considered against ecological objectives (legislation and policy) in determining the outcome of the application (CIEEM, 2018).

Limitations of the Assessment

- 1.5.17 There are no significant overall limitations that are considered to compromise the overall validity and robustness of this EcIA, however any qualifications or limitations that are specifically relevant to a particular floral or faunal survey are provided in the associated Technical Appendix.

1.6 Baseline Environment

Existing baseline

- 1.6.1 The application site has been subject to various ecological assessments undertaken by WYG between 2016 and 2019. Key findings are summarised in this section, to illustrate the level of importance assigned to each of the receptors identified. Detailed studies are presented as Technical Appendices 1 & 2 as follows:
- Technical Appendix 1 – WYG, (2019a), Goodison Park Legacy: Ecological Appraisal, Report on behalf of Everton Stadium Development Limited, Project Number A100795-1.
 - Technical Appendix 2 – WYG, (2019b), Goodison Park Legacy: Shadow Habitats Regulations Assessment Stage 1 and Stage 2, Report on behalf of Everton Stadium Development Limited, A100795-1.

Statutory Sites

- 1.6.2 A total of eight internationally designated sites (SPA and Ramsar) are recorded within the area of search, the closest of which is Liverpool Bay SPA (approximately 2.7 km west of the application site).
- 1.6.3 In addition, two nationally designated SSSI's are recorded within the area of search, the closest of which is Mersey Narrows SSSI (approximately 7 km west of the application site).
- 1.6.4 There are also three Local Wildlife Sites recorded within the area of search, the closest is the Melrose Cutting which is located 1 km south-west of the application site.
- 1.6.5 Details regarding each designated site and their qualifying/notifiable features are presented in Table 10.1 – they are also mapped on Figure 3 in Technical Appendix 1.

Table 10.1 Summary of designated sites.

| Designation | Site Name | Distance and Direction | Summary of Features | Evaluation |
|-------------|---------------------------|------------------------|--|----------------------|
| SAC | Sefton Coast (JNCC, 2015) | 5.62 km north-west | Annex I habitats that are a primary reason for selection of this site: Embryonic Shifting Dunes Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes') Fixed dunes with herbaceous vegetation ('grey dunes') Dunes with creeping willow <i>Salix repens</i> ssp. <i>Argentea Salicion arenariae</i> Humid dune slacks | International |



| Designation | Site Name | Distance and Direction | Summary of Features | Evaluation |
|-------------|---|------------------------|---|---------------|
| | | | <p>Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: Atlantic decalcified fixed dunes <i>Calluno-Ulicetea</i></p> <p>Annex II species that are a primary reason for selection of this site: Petalwort <i>Petalophyllum ralfsi</i></p> <p>Annex II species present as a qualifying feature, but not a primary reason for site selection: Great crested newt <i>Triturus cristatus</i></p> | |
| SPA | Mersey Narrows and North Wirral Foreshore (Natural England, 2013) | 4.22 km west | <p>Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:</p> <p><u>Over winter:</u></p> <p>Redshank <i>Tringa totanus</i>, 1,981 individuals representing at least 1.3% of the wintering eastern Atlantic - wintering population (5-year peak mean 1991/2 - 1995/6).</p> <p>Turnstone <i>Arenaria interpres</i>, 1,138 individuals representing at least 1.6% of the wintering western Palearctic - wintering population (5-year peak mean 1991/2 - 1995/6).</p> <p>Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl.</p> <p>Over winter, the area regularly supports 20,269 individual waterfowl (5-year peak mean 1991/2 - 1995/6) including: dunlin <i>Calidris alpina alpina</i>, knot <i>Calidris canutus</i>, grey plover <i>Pluvialis squatarola</i>, oystercatcher <i>Haematopus ostralegus</i>, cormorant <i>Phalacrocorax carbo</i>, turnstone, redshank.</p> | International |
| Ramsar | Mersey Narrows and North Wirral Foreshore (JNCC, 1995) | 4.2 km west | <p>Criterion 4 because it regularly supports plant and/or animal species at a critical stage in their life cycles or provides refuge during adverse conditions: during 2004/05 - 2008/09 the site supported important numbers of non-breeding little gulls and common terns <i>Sterna hirundo</i>.</p> <p>Criterion 5 because it regularly supports 20,000 or more waterbirds: during the winters 2004/05-2008/09, the site supported an average peak of 32,402 individual waterbirds.</p> | International |

| Designation | Site Name | Distance and Direction | Summary of Features | Evaluation |
|-------------|--|------------------------|---|---------------|
| | | | <p>Criterion 6 because it regularly supports 1% of the individuals in the populations of the following species or subspecies of waterbird in any season: during the winters 2004/05 - 2008/09, the site supported 2.4% of the islandica subspecies, western Europe/Waddensea/ Britain/Ireland (non-breeding) population of knot and 2.8% of the lapponica subspecies west Europe/north-west Africa (non-breeding) population of bar-tailed godwits <i>Limosa lapponica</i>.</p> | |
| SPA | Ribble and Alt Estuaries (Natural England, 2002) | 5.62 km north-west | <p>Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:</p> <p><u>During the breeding season:</u></p> <p>Common Tern, 182 pairs representing at least 1.5% of the breeding population in Great Britain (Count, as at 1996)</p> <p>Ruff <i>Philomachus pugnax</i>, 1 pair representing at least 9.1% of the breeding population in Great Britain (Count as at late 1980's)</p> <p><u>Over winter:</u></p> <p>Bar-tailed Godwit, 18,958 individuals representing at least 35.8% of the wintering population in Great Britain (5-year peak mean 1991/2 - 1995/6)</p> <p>Bewick's Swan <i>Cygnus columbianus bewickii</i>, 229 individuals representing at least 3.3% of the wintering population in Great Britain (5-year peak mean 1991/2 - 1995/6)</p> <p>Golden Plover <i>Pluvialis apricaria</i>, 4,277 individuals representing at least 1.7% of the wintering population in Great Britain (5-year peak mean 1991/2 - 1995/6)</p> <p>Whooper Swan <i>Cygnus cygnus</i>, 159 individuals representing at least 2.9% of the wintering population in Great Britain (5-year peak mean 1991/2 - 1995/6)</p> <p>Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:</p> <p><u>During the breeding season:</u></p> | International |



| Designation | Site Name | Distance and Direction | Summary of Features | Evaluation |
|-------------|-----------|------------------------|--|------------|
| | | | <p>Lesser Black-backed Gull <i>Larus fuscus</i>, 1,800 pairs representing at least 1.5% of the breeding western Europe/Mediterranean/west Africa population (Count, as at 1993)</p> <p>On passage:</p> <p>Ringed Plover <i>Charadrius hiaticula</i>, 995 individuals representing at least 2.0% of the Europe/north Africa - wintering population (5-year peak mean 1991/2 - 1995/6)</p> <p>Sanderling <i>Calidris alba</i>, 6,172 individuals representing at least 6.2% of the eastern Atlantic/western & southern Africa - wintering population (3-year mean May 1993 - 1995)</p> <p>Over winter:</p> <p>Black-tailed Godwit, 819 individuals representing at least 1.2% of the wintering Iceland - breeding population (5-year peak mean 1991/2 - 1995/6)</p> <p>Dunlin, 39,952 individuals representing at least 2.9% of the wintering northern Siberia/Europe/western Africa population (5-year peak mean 1991/2 - 1995/6)</p> <p>Grey Plover, 6,073 individuals representing at least 4.0% of the wintering eastern Atlantic - wintering population (5-year peak mean 1991/2 - 1995/6)</p> <p>Knot, 57,865 individuals representing at least 16.5% of the wintering north-eastern Canada/Greenland/Iceland/north-western Europe population (5-year peak mean 1991/2 - 1995/6)</p> <p>Oystercatcher, 16,159 individuals representing at least 1.8% of the wintering Europe & northern/western Africa population (5-year peak mean 1991/2 - 1995/6)</p> <p>Pink-footed Goose <i>Anser brachyrhynchus</i>, 23,860 individuals representing at least 10.6% of the wintering eastern Greenland/Iceland/UK population (5-year peak mean 1991/2 - 1995/6)</p> <p>Pintail <i>Anas acuta</i>, 3,333 individuals representing at least 5.6% of the wintering north-western Europe population (5-year peak mean 1991/2 - 1995/6)</p> | |

| Designation | Site Name | Distance and Direction | Summary of Features | Evaluation |
|-------------|---|------------------------|---|----------------------|
| | | | <p>Redshank, 2,708 individuals representing at least 1.8% of the wintering eastern Atlantic - wintering population (5-year peak mean 1991/2 - 1995/6)</p> <p>Sanderling <i>Calidris alba</i>, 2,859 individuals representing at least 2.9% of the wintering eastern Atlantic/western & southern Africa - wintering population (5-year peak mean 1991/2 - 1995/6)</p> <p>Shelduck <i>Tadorna tadorna</i>, 4,103 individuals representing at least 1.4% of the wintering north-western Europe population (5-year peak mean 1991/2 - 1995/6)</p> <p>Teal <i>Anas crecca</i>, 7,641 individuals representing at least 1.9% of the wintering north-western Europe population (5-year peak mean 1991/2 - 1995/6)</p> <p>Wigeon <i>Anas penelope</i>, 84,699 individuals representing at least 6.8% of the wintering western Siberia/north-western/north-eastern Europe population (5-year peak mean 1991/2 - 1995/6)</p> <p>Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 seabirds</p> <p>During the breeding season, the area regularly supports 29,236 individual seabirds including: black-headed gull <i>Larus ridibundus</i>, lesser black-backed gull, common tern</p> <p>Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl</p> <p>Over winter, the area regularly supports 301,449 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: grey plover, whooper swan, golden plover, bar-tailed godwit, pink-footed goose, shelduck, wigeon, teal, Bewick's Swan, oystercatcher, curlew <i>Numenius arquata</i>, knot, sanderling, dunlin, black-tailed godwit, redshank, cormorant, common scoter <i>Melanitta nigra</i>, lapwing <i>Vanellus vanellus</i> and pintail.</p> | |
| SPA | Liverpool Bay (Lawson <i>et al.</i> 2016) | 2.7 km west | <p>Article 4.1 qualification (79/409/EEC)</p> <p>Over winter:</p> <p>Red-throated diver, <i>Gavia stellata</i>, 6.89% of the GB population (5-year peak mean 2004/05 - 2010/11), 1,171 individuals</p> | International |



| Designation | Site Name | Distance and Direction | Summary of Features | Evaluation |
|-------------|---------------------------------------|------------------------|---|----------------------|
| | | | <p>Little gull, <i>Hydrocoloeus minutus</i>, (wintering) (5-year peak mean 2004/05 - 2010/11), 319 individuals</p> <p>Little tern, <i>Sternula albifrons</i>, (breeding) 6.84% of the GB population 5-year mean 2010 – 2014), 130 pairs (260 individuals)</p> <p>Common tern, (breeding) 1.80% of the GB population 5-year mean 2011 – 2015), 180 pairs (360 individuals)</p> <p>Article 4.2 qualification (79/409/EEC)</p> <p><u>Over winter:</u></p> <p>Common scoter, 10.31% of the north-west European population regularly occurring migrant (5-year mean of peaks 2004/05 - 2010/11), 56,679 individuals</p> <p>Article 4.2 qualification (79/409/EEC) an internationally important assemblage of birds.</p> <p>Over winter the area regularly supports: 69,687 water birds (5-year peak mean 2004/05 - 2010/11) including: (over 1% GB or 2000 individuals) red-throated diver, little gull, red-breasted merganser <i>Mergus serrator</i>, cormorant; (less than 1% GB or less than 2000 individuals) black-headed gull, common gull <i>Larus canus</i>, common eider <i>Somateria mollissima</i>, northern fulmar <i>Fulmarus glacialis</i>, great black-backed gull <i>Larus marinus</i>, great crested grebe <i>Podiceps cristatus</i>, common murre <i>Uria aalge</i>, northern gannet <i>Morus bassanus</i>, Atlantic puffin <i>Fratercula arctica</i>, herring gull <i>Larus argentatus</i>, black-legged kittiwake <i>Rissa tridactyla</i>, lesser black-backed gull, common loon <i>Gavia immer</i>, European shag <i>Phalacrocorax aristotelis</i>, razorbill <i>Alca torda</i> and velvet scoter <i>Melanitta fusca</i>.</p> | |
| Ramsar | Ribble and Alt Estuaries (JNCC, 2005) | 5.62 km west | <p>Ramsar criterion 2 This site supports up to 40% of the Great Britain population of natterjack toads <i>Bufo calamita</i>.</p> <p>As plant species: petalwort (Conservation status: European Red List: Vulnerable; EC Habitats Directive: Annex II)</p> <p>Ramsar criterion 5 Assemblages of international importance:</p> | International |

| Designation | Site Name | Distance and Direction | Summary of Features | Evaluation |
|-------------|-----------|------------------------|--|------------|
| | | | <p>Species with peak counts in winter: 222,038 waterfowl (5-year peak mean 1998/99-2002/2003)</p> <p>Ramsar criterion 6 Species/populations occurring at levels of international importance.</p> <p>Qualifying species with peak counts in spring/autumn:</p> <p>Black-tailed godwit, Iceland/western Europe 3323 individuals, representing an average of 7% of the population (5-year peak mean 1998/92002/3)</p> <p>Redshank, 4465 individuals, representing an average of 1.7% of the population (5-year peak mean 1998/9-2002/3)</p> <p>Dunlin, western Siberia/western Europe 38,196 individuals, representing an average of 2.8% of the population (5-year peak mean 1998/9-2002/3 - spring peak)</p> <p>Grey plover, eastern Atlantic/western Africa - wintering 11,021 individuals, representing an average of 4.4% of the population (5-year peak mean 1998/9-2002/3 - spring peak)</p> <p>Red knot, <i>Calidris canutus islandica</i>, western & southern Africa (wintering) 42,692 individuals, representing an average of 9.4% of the population (5-year peak mean 1998/9-2002/3)</p> <p>Ringed plover, Europe/north-western Africa 3761 individuals, representing an average of 5.1% of the population (5-year peak mean 1998/9-2002/3 - spring peak)</p> <p>Sanderling, eastern Atlantic 7401 individuals, representing an average of 6% of the population (5-year peak mean 1998/92002/3 - spring peak)</p> <p>Species with peak counts in winter:</p> <p>Bar-tailed godwit, western Palearctic 13,935 individuals, representing an average of 11.6% of the population (5-year peak mean 1998/9-2002/3)</p> <p>Oystercatcher, Europe & north-west Africa - wintering 18,926 individuals, representing an average of 1.8% of the population (5-year peak mean 1998/9-2002/3)</p> | |



| Designation | Site Name | Distance and Direction | Summary of Features | Evaluation |
|-------------|-----------------------------|------------------------|---|---------------|
| | | | <p>Teal, north-west Europe 5107 individuals, representing an average of 1% of the population (5-year peak mean 1998/9-2002/3)</p> <p>Wigeon, north-west Europe 69,841 individuals, representing an average of 4.6% of the population (5-year peak mean 1998/9-2002/3)</p> <p>Pintail, north-west Europe 1,497 individuals, representing an average of 2.5% of the population (5-year peak mean 1998/9-2002/3)</p> <p>Pink-footed goose, Greenland, Iceland/UK 6,552 individuals, representing an average of 2.42% of the population (5-year peak mean 1998/9-2002/3)</p> <p>Tundra swan, <i>Cygnus columbianus bewickii</i>, north-west Europe 230 individuals, representing an average of 1.1% of the GB population (5-year peak mean 1998/9-2002/3)</p> <p>Whooper swan, Iceland / UK / Ireland 211 individuals, representing an average of 1% of the population (5-year peak mean 1998/9-2002/3)</p> | |
| Ramsar | Mersey Estuary (JNCC, 1995) | 7.3 km south | <p>Criterion 5 assemblages of international importance Species with peak counts in winter: 89,576 waterfowl (5-year peak mean 1998/9-2002/2003)</p> <p>Criterion 6 species/populations occurring at levels of international importance. Qualifying Species/populations in spring/autumn:</p> <p>Common shelduck, north-west Europe 12,676 individuals, representing an average of 4.2% of the population (5-year peak mean 1998/9-2002/3)</p> <p>Black-tailed godwit, Iceland/western Europe 2,011 individuals, representing an average of 5.7% of the population (5-year peak mean 1998/9-2002/3)</p> <p>Common redshank, 6,651 individuals, representing an average of 2.6% of the population (5-year peak mean 1998/9-2002/3)</p> <p><u>Species with peak counts in winter:</u></p> <p>Teal, north-west Europe 10,613 individuals, representing an average of 2.6% of the population (5-year peak mean 1998/9-2002/3)</p> | International |

| Designation | Site Name | Distance and Direction | Summary of Features | Evaluation |
|-------------|--|------------------------|---|---------------|
| | | | <p>Northern pintail, north-west Europe 565 individuals, representing an average of 2% of the GB population (5-year peak mean 1998/9- 2002/3)</p> <p>Dunlin, western Siberia/western Europe 48,364 individuals, representing an average of 3.6% of the population (5-year peak mean 1998/9-2002/3)</p> | |
| SPA | Mersey Estuary (Natural England, 2004) | 7.3 km south | <p>Article 4.1 qualification (79/409/EEC) <u>Over winter the area regularly supports:</u></p> <p>Golden plover north-western Europe – breeding, 3,040 individuals, 1.2% of the GB population 5-year peak mean, 1993/94 -1997/98</p> <p>Article 4.2 qualification (79/409/EEC) <u>Over winter the area regularly supports:</u></p> <p>Northern pintail north-western Europe, 1,169 individuals, 1.9% of the population 5-year peak mean, 1993/94 - 1997/98</p> <p>Teal north-western Europe, 11,723 individuals, 2.9% of the population 5-year peak mean, 1993/94 - 1997/98</p> <p>Wigeon, western Siberia/north-western/north-eastern Europe, 11,886 individuals, 4.2% of the population in Great Britain 5-year peak mean, 1993/94-1997/98</p> <p>Dunlin, northern Siberia/Europe/western Africa, 48,789 individuals 3.6% of the Population 5-year peak mean, 1993/94 -1997/98</p> <p>Black-tailed godwit, (Iceland - breeding, 976 individuals, 1.6% of the population 5-year peak mean, 1993/94 -1997/98</p> <p>Curlew, Europe - breeding, 1,300 individuals, 1.1% of the population in Great Britain 5-year peak mean, 1993/94 -1997/98</p> <p>Grey plover, eastern Atlantic - wintering, 3,040 individuals, 2.3% of the population in Great Britain 5-year peak mean, 1993/94 - 1997/98</p> <p>Great crested grebe north-western Europe - wintering, 136 individuals, 1.4% of the population in Great Britain 5-year peak mean, 1993/94 - 1997/98</p> <p>Shelduck, north-western Europe, 6,476 individuals, 2.2% of the population 5-year peak</p> | International |



| Designation | Site Name | Distance and Direction | Summary of Features | Evaluation |
|-------------|---|------------------------|--|------------|
| | | | <p>mean, 1993/94 - 1997/98</p> <p>Redshank, eastern Atlantic - wintering, 4,513 individuals, 2.8% of the population 5-year peak mean, 1993/94 - 1997/98</p> <p>Lapwing, Europe - breeding, 10,544 individuals, 0.7% of the population in Great Britain 5-year peak mean, 1993/94 - 1997/98</p> <p><u>On passage the area regularly supports:</u></p> <p>Ringed plover, Europe/northern Africa - wintering, 505 individuals, 1.7% of the population in Great Britain 5-year peak mean, 1993 - 1997</p> <p>Redshank, eastern Atlantic - wintering, 4,513 individuals, 3.8% of the population 5-year peak mean, 1993-1997</p> | |
| SSSI | Mersey Narrows (Natural England, 2000) | 7 km west | <p>Notified features for this SSSI are:</p> <p>Aggregations of non-breeding birds – cormorant, redshank and turnstone.</p> <p>Isolated saline lagoons</p> <p>Moderately exposed sandy shores (with polychaetes and bivalves).</p> <p>Sheltered muddy shores (including estuarine muds).</p> <p>SM9 - <i>Suaeda maritima</i> saltmarsh</p> | National |
| SSSI | North Wirral foreshore (Natural England, no date) | 14 km west | <p>Notified features for this SSSI are:</p> <p>Aggregations of non-breeding birds - bar-tailed godwit, dunlin, knot and turnstone</p> <p>Sheltered muddy shores (including estuarine muds).</p> <p>SM10 - Transitional low marsh vegetation with <i>Puccinellia maritima</i>, annual <i>Salicornia</i> species and <i>Suaeda maritima</i>.</p> <p>SM6 - <i>Spartina anglica</i> saltmarsh</p> <p>Wave exposed sandy shores (with burrowing crustaceans and polychaetes).</p> | National |
| LWS | Melrose Cutting | 1.0 km south-west | This is a mosaic of habitats along an ~750m section of old railway cutting. Locally rare plant species include wall rue <i>Asplenium ruta-muraria</i> , common boomrape <i>Orobancha minor</i> , hare's-foot | County |

| Designation | Site Name | Distance and Direction | Summary of Features | Evaluation |
|-------------|------------------------------|------------------------|--|------------|
| | | | <p>clover <i>Trifolium arvense</i>, heath woodrush <i>Luzula multiflora</i> and yellow-wort <i>Blackstonia perfoliata</i>.</p> | |
| LWS | Leeds-Liverpool Canal Rivers | 1.6 km west | <p>The canal connects with the River Mersey via the Stanley Dock to Pier Head Link and supports a variety of plant species, including nine locally rare species, these being common mallow <i>Malva neglecta</i>, hemp agrimony <i>Eupatorium cannabinum</i>, marsh woundwort <i>Stachys palustris</i>, reed sweet-grass <i>Glyceria maxima</i>, sheep's fescue <i>Festuca ovina</i>, wavy hair grass <i>Deschampsia flexuosa</i>, wild carrot <i>Daucus carota</i>, wood sage <i>Teucrium scorodonia</i> and yellow water-lily <i>Nuphar lutea</i>.</p> <p>Many waterbirds breed along the canal, including mute swan <i>Cygnus olo</i>, mallard <i>Anas platyrhynchos</i>, coot <i>Fulica atra</i>, moorhen <i>Gallinula chloropus</i> and grey wagtail <i>Motacilla cinerea</i>. The canal is also important for wintering birds, including kingfisher <i>Alcedo atthi</i>, great crested grebe <i>Podiceps cristatus</i> and goldeneye <i>Bucephala clangula</i>.</p> | County |
| LWS | Loop line | 1.9 km north-east | <p>The longest wildlife corridor in Liverpool, an old disused railway stretching for 11km and containing a diverse mosaic of habitats, including secondary broadleaf woodland, with developing understorey and scrub. The ground flora includes bluebell <i>Hyacinthoides non-scripta</i>, lords and ladies <i>Arum maculatum</i>, wood dock <i>Rumex sanguineus</i> and black bryony <i>Dioscorea communis</i>.</p> <p>Acid and neutral unimproved grasslands also occur along the Loop Line and include locally notable plant species such as bee orchid <i>Ophrys apifera</i>, creeping willow, meadow barley <i>Hordeum brachyantherum</i>, smooth tare <i>Vicia tetrasperma</i> and wild carrot.</p> <p>Partly vegetated sandstone cliffs on the Loop Line contain locally notable plant species such as harts-tongue <i>Asplenium scolopendrium</i>, hard ferns <i>Blechnum spicant</i> and royal ferns <i>Osmunda regalis</i>, black and maidenhair spleenwort <i>Asplenium trichomanes</i>, pellitory-of-the-wall <i>Parietaria judaica</i> and various liverworts <i>Marchantiophyta</i>.</p> | County |



Habitats

1.6.6 The application site predominantly consists of hard standing. Habitats recorded on site are presented within Technical Appendix 1, in summary these were:

- Hard standing
- Amenity Grassland
- Buildings

1.6.7 A detailed description of these habitats is provided below, as identified during the site surveys.

Hard standing

1.6.8 There was a large area of hard standing on the south side of the application site. This is mostly used for car parking and was completely devoid of vegetation. Hard standing areas on site are therefore considered to be of **negligible** importance.

Amenity Grassland

1.6.9 The playing surface of the football pitch itself constituted amenity grassland. It is understood to be 50% grass and 50% synthetic. The grass species were not identifiable due to regular mowing, but this is considered to be of negligible ecological significance, because the playing surface is frequently disturbed and subjected to regular maintenance and is therefore considered extremely unlikely to support any notable plant species. This habitat was therefore assessed as having **negligible** importance.

Buildings

1.6.10 The largest building on the application site is comprised of four large main stands which make up the stadium. The stadium was well maintained and offered no features that could be used by roosting bats.

1.6.11 Additionally, nine ancillary buildings were present on the application site all of which were of sound construction and well maintained. The buildings were not considered to offer any ecological value and are therefore assessed as having **negligible** importance.

Protected and Notable Species

Birds

1.6.12 The desk-top study returned eight bird species of note within 2 km of the application site (but none from the application site itself). Such records include house sparrow *Passer domesticus*, song thrush *Turdus philomelos*, skylark *Alauda arvensis*, bullfinch *Pyrrhula pyrrhula*, dunnoek *Prunella modularis*, swift *Apus apus*, starling *Sturnus vulgaris* and peregrine falcon *Falco peregrinus*.

1.6.13 During the site survey, only two bird species were observed resting on the stands, these being feral pigeon *Columba livia* and Magpie *Pica pica*, both of which are considered common and widespread.

1.6.14 It is considered unlikely that the site offers nesting opportunities for most species of wild bird because of a lack of suitable habitat. Although feral pigeon are known to use structures and features present within the site and could potentially nest on site in the future, especially if the site became disused.

1.6.15 It is thought unlikely that peregrine falcon or any other bird species recorded within 2 km of the site would breed on the site. Although peregrines breed on high buildings, disturbance levels on the site are considered to be too high (especially on match days) to support nesting of this species. As such, the breeding bird assemblage within the application site is assessed as having **negligible** importance.

Water vole

1.6.16 The desk study returned two records of water vole *Arvicola amphibius* within 2km of the application site, the closest of which was approximately 390m south-southeast of the application site, in Stanley Park recorded in 1999. However, no suitable habitat for water voles was recorded on the application site, nor are there any hydrological links with potentially suitable water vole habitat. It is therefore considered that the application site is of **negligible** importance for water voles.

Bats

1.6.17 The data search returned thirty-one bat records within 2km of the application site boundary (none of which were on site). Of the records provided eight were of common pipistrelles *Pipistrellus pipistrellus*, seven were of unspecified pipistrelles, six were of brown long-eared bats *Plecotus auritus* and ten were of unspecified bat species.

1.6.18 A search on MAGIC revealed that one European Protected Species Licence (EPSL) for bats had been granted within 2 km of the application site. This was located 1km to the south-west to allow the destruction of a common pipistrelle roost between 2013 and 2015.

1.6.19 No bat roosts were recorded within the application site and all buildings were assessed as forming negligible bat roost potential.

1.6.20 The site showed a complete lack of vegetation, apart from the pitch itself, and additionally the surrounding environment provides no natural vegetation. The stadium and car park are also well lit and so consequently, it is considered that the application site offers no foraging and commuting potential for bats. It is therefore considered that the application site is of **negligible** importance for bats.

Amphibians, Reptiles, Mammals, Invertebrates and plants

1.6.21 No protected / notable mammals (other than those discussed above), reptiles or amphibian records were returned during the desk study and the application site contains no suitable habitats for these species.

1.6.22 A total of nine species of notable invertebrate recorded within 2 km of the application site were returned during the desk study. These were wall (butterfly) *Lasiommata megera*, common darter *Sympetrum striolatum*, common blue damselfly *Enallagma cyathigerum*, blue tailed damselfly *Ischnura elegans*, buff ermine moth *Spilarctia luteum*, sawfly moth *Cirrhia icteritia*, shoulder-striped wainscot *Leucania comma*, southern hawkmoth *Aeshna cyanea* and brown hawkmoth *Aeshna grandis*. However, no notable invertebrates were incidentally recorded during the site survey and the habitats recorded within the application site are considered unsuitable for such species.

1.6.23 The data search also returned records of four notable flora species from within 2km of the application site. These were bluebell *Hyacinthoides non-scripta*, shore dock *Rumex rupestris*, cornflower *Centaurea cyanus* and purple ramping-fumitory *Fumaria purpurea*. However, there is no suitable habitat within the application site for these notable plant species.

1.6.24 The application site's importance for all the features detailed above is therefore considered to be **negligible**.

1.7 Mitigation within the Submitted Design

1.7.1 This section summarises the key features that have been incorporated into this project via a Construction Strategy and Construction and Environmental Management Plan.

Source Noise Control

1.7.2 Wherever possible noise will be controlled at source.



- a) avoid unnecessary revving of engines and switch off equipment when not required;
- b) keep internal haul routes well maintained and avoid steep gradients;
- c) use rubber linings in, for example, chutes and dumpers to reduce impact noise;
- d) minimize drop height of materials;
- e) start-up plant and vehicles sequentially rather than all together.

1.7.3 As far as reasonably practicable, sources of significant noise will be enclosed or screened. The extent to which this can be done depends on the nature of the machine or process to be enclosed and their ventilation requirements. For maximum benefit, screens will be close to the source of noise.

Plant Location

1.7.4 The plant and activities to be employed on that site will be reviewed to ensure that they are the quietest available for the required purpose; this is in accordance with best practicable means. For an existing operational site, where reasonably practicable, noisy plant or activities will be replaced by less noisy alternatives if noise problems are occurring. Noise from existing plant and equipment can often be reduced by modification or by the application of improved sound reduction methods, but this will only be carried out after consultation with the manufacturer. Suppliers of plant will often have ready-made kits available and will often have experience of reducing noise from their plant.

Working Methods

1.7.5 Where reasonably practicable, quiet working methods will be employed, including use of the most suitable plant, reasonable hours of working for noisy operations, and economy and speed of operations.

Scheduling of Works

1.7.6 It is proposed that the scheduling of any construction works at the site be within daytime hours. The following hours of construction working are proposed;

- a) Monday to Friday: 07:00 – 19:00
- b) Saturday: 07:00 – 13:00
- c) Sundays and Bank Holidays: No Working

1.7.7 Where practicable, percussive piling activities will be scheduled to avoid migration/mating periods of sensitive ecological species as advised by the project ecologist.

Maintenance

1.7.8 Regular and effective maintenance by trained personnel is essential and will do much to reduce noise from plant and machinery. Increases in plant noise are often indicative of future mechanical failure.

Training

1.7.9 Operatives will be trained to employ appropriate techniques to keep site noise to a minimum and will be effectively supervised to ensure that best working practice in respect of noise reduction is followed. All employees will be advised regularly of the following, as part of their training:

- a) the proper use and maintenance of tools and equipment;
- b) the positioning of machinery on site to reduce the emission of noise to the neighbourhood and to site personnel;

- c) the avoidance of unnecessary noise when carrying out manual operations and when operating plant and equipment;
- d) the protection of persons against noise;
- e) the operation of sound measuring equipment (selected personnel).

1.7.10 Special attention will be given to the use and maintenance of sound-reduction equipment fitted to power tools and machines.

Community Relations

1.7.11 Good relations with people living and working in the vicinity of site operations are of paramount importance. Early establishment and maintenance of these relations throughout the duration of site operations, will go some way towards allaying people's fears. It is suggested that good relations can be developed by keeping people informed of progress and by treating complaints fairly and expeditiously. The person, company or organization carrying out work on site will appoint a responsible person to liaise with the public. In general, the longer the duration of activities on a site, the more likely it is that noise from the site will prove to be an issue. In this context, good public relations and communication are important. The hours of working will be planned in advance and disseminated. There will be a need to adhere strictly to the stated schedule and ensure that the community is informed of their likely durations.

Noise Monitoring

1.7.12 On-site noise levels will be monitored regularly, particularly if changes in machinery or project designs are introduced, by a suitably qualified person appointed specifically for the purpose. The following monitoring scheme is proposed.

1.7.13 Noise monitoring during the construction phase will be undertaken in accordance with the guidance presented in Annex G of BS 5228-1:2009 which states that the following information will be recorded:

- a) the measured values of LAeq and, where appropriate, LpA(max) or LA01, together with details of the appropriate time periods;
- b) details of the instrumentation and measurement methods used, including details of any sampling techniques, position of microphone(s) in relation to the site and system calibration data;
- c) any factors that might have adversely affected the reliability or accuracy of the measurements;
- d) plans of the site and neighbourhood showing the position of plant, associated buildings and notes of site activities during monitoring period(s);
- e) notes on weather conditions, including where relevant, wind speed/direction, temperature, presence of precipitation, etc.;
- f) time, date and name of person carrying out the measurement.

1.7.14 Proposed construction noise monitoring locations are shown on the accompanying Appendix C. It is proposed that noise levels will be routinely monitored and reported at these locations for 4 hours during construction activities on a monthly basis. Additional measurements will be undertaken to establish whether specific equipment or practices will be capable of achieving the Noise Emission Limits as set out below or in light of any complaints.

Vibration Monitoring

1.7.15 Vibration monitoring will be undertaken during the construction phase; monitoring will record ppv, max displacement, VDV and acceleration. Measurement will generally be undertaken in accordance with the procedure described in BS ISO 4866:2010: Guidelines for the measurement of vibrations and evaluation of



their effects on structures. Baseline monitoring to be undertaken prior to works starting on site to establish appropriate monitoring trigger levels for vibration and displacement.

1.7.16 Works will stop and alternative methods employed if vibration exceeds the established thresholds.

1.7.17 Records of the monitoring will be consistent with the requirements of BS7385:1990 and will include:

- Description of the vibration source
- Type and condition of the building
- Purpose of the measurement
- Reference to BS7385
- Position of transducer and manner of coupling type and make of transducer
- Frequency range and linearity
- Assessment of the sources of error
- PPV recorded and associated frequency

Dust Management

1.7.18 Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk and should include as a minimum the highly recommended measures in this document. The desirable measures should be included as appropriate for the site.

1.7.19 Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.

1.7.20 Make the complaints log available to the local authority when asked.

1.7.21 Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the logbook.

1.7.22 Hold regular liaison meetings with other high-risk construction sites within 500m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.

1.7.23 Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100m of site boundary, with cleaning to be provided if necessary.

1.7.24 Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked

1.7.25 Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

1.7.26 Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.

1.7.27 Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.

1.7.28 Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period

1.7.29 Avoid site runoff of water or mud.

1.7.30 Keep site fencing, barriers and scaffolding clean using wet methods.

1.7.31 Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.

1.7.32 Cover, seed or fence stockpiles to prevent wind whipping.

1.7.33 Planning and controlling the orientation, shape and locations of stockpiles, to minimise the risk of dust rising through wind action.

1.7.34 Ensure all vehicles switch off engines when stationary - no idling vehicles.

1.7.35 Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.

1.7.36 Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on un-surfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate)

1.7.37 Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.

1.7.38 Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing)

1.7.39 Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems

1.7.40 Control measures and dust suppression techniques including reuse of site won water to minimise

1.7.41 resource use on the project

1.7.42 Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.

1.7.43 Ensure a dampening water bowser will be utilised to keep the dust on the site to a minimum. This can be towed behind various site vehicles to dampen down the site.

1.7.44 Use enclosed chutes and conveyors and covered skips

1.7.45 Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.

1.7.46 Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods

1.7.47 Avoid bonfires and burning of waste materials.

1.7.48 Internally to the building, we will utilise vacs of different sizes to remove any dust that is generated by the construction works, brushes will not be used.

1.7.49 Skips will be emptied regularly and all skips that are removed from site will be sheeted over prior to leaving the site boundary.



- 1.7.50 Ensuring appropriate selection and maintenance of construction vehicles, plant and equipment (i.e. vehicle and plant which produce less emissions and are regularly serviced).
- 1.7.51 Ensuring plant and equipment is not left running for long periods when not directly in use.

Demolition

- 1.7.52 Ensure effective water suppression is used during demolition operations. Handheld sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.
- 1.7.53 Ensure water suppression will be used on the demolition machines to give dampening down at the point of source. This will also be enhanced with mist cannons dampening down areas where the materials are stacked prior to being removed from site.
- 1.7.54 Avoid explosive blasting, using appropriate manual or mechanical alternatives.
- 1.7.55 Bag and remove any biological debris or damp down such material before demolition.

Earthworks

- 1.7.56 Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.
- 1.7.57 Use Hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.
- 1.7.58 Only remove the cover in small areas during work and not all at once.

Construction

- 1.7.59 Avoid scabbling (roughening of concrete surfaces) if possible.
- 1.7.60 Ensure sand and other aggregates are stored in banded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
- 1.7.61 Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.

Trackout

- 1.7.62 Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.
- 1.7.63 Avoid dry sweeping of large areas.
- 1.7.64 Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
- 1.7.65 Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
- 1.7.66 Record all inspections of haul routes and any subsequent action in a site logbook.
- 1.7.67 Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsters and regularly cleaned.
- 1.7.68 Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).

- 1.7.69 A jet wash pull along bowser will be used to clean the wheels of vehicles as they exit site, this will minimise and reduce the risk of dust emissions and deposition of material on the public highway.
- 1.7.70 Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.
- 1.7.71 Access gates to be located at least 10m from receptors where possible.

1.8 Likely Significant Environmental Effects of the Scheme

- 1.8.1 As stated in the assessment methodology section, impacts are only assessed in detail for valuable ecological features potentially vulnerable to significant impacts arising from the development that would be significant in EIA terms. Consequently, impacts have only been assessed in detail for those receptors that are of at least **Local** value or are subject to **legal protection**.
- 1.8.2 Therefore, our detailed impact assessment only considers the following features:
- Mersey Narrows and North Wirral Foreshore SPA & Ramsar, Mersey Estuary SPA, Liverpool Bay SPA, Ribble and Alt Estuaries SPA & Ramsar and Sefton Coast SAC (Collectively referred to as Natura 2000 and Ramsar sites);
 - Mersey Narrows SSSI and North Wirral SSSI;
 - Melrose Cutting LWS, Leeds-Liverpool Canal LWS and Loop Line LWS;
 - Where possible, ecological receptors have been assessed together in order to facilitate understanding and avoid repetition of identical impacts.

Construction Phase Effects

Natura 2000 & Ramsar sites

- 1.8.3 The Shadow Habitats Regulations Assessment (sHRA) (Technical Appendix 2) has assessed the potential effects of the following impact pathways associated with the application site:
- Habitat Loss within the designated sites
 - Habitat loss within functional habitat beyond the boundary of the designated sites
 - Habitat degradation – Air quality and dust deposition
 - Habitat degradation - Water quality impacts as a result of pollution events
 - Disturbance of qualifying features – Visual and auditory disturbance

- 1.8.4 The conclusion of the sHRA determined that no Likely Significant Effects are anticipated in relation to relevant qualifying features of the designated sites. Therefore, construction phase effects of the application Site are considered to be **not significant**.

SSSI's

- 1.8.5 The application site is located beyond the impact risk zone for both the North Wirral Foreshore and Mersey Narrows SSSI.
- 1.8.6 In addition, these sites are both located in excess of 5 km from the application site and no known habitat or hydrological connections exist between each SSSI or the application site (both SSSI's are isolated from the application site by existing urban development and the North Wirral Foreshore is located on the opposite



side of the River Mersey). Therefore, construction phase effects upon these designated sites are considered to be highly unlikely and therefore **not significant**.

LWS

- 1.8.7 The closest of the three LWS is Melrose Cutting, located 1 km west. Therefore, construction activities (which will not extend beyond the red line boundary of the application site) will not result in the direct loss or damage of habitats which form or support features of the non-statutory designated sites.
- 1.8.8 Melrose cutting and loop line LWS' are designated for their botanical interest. Therefore, any visual or auditory disturbance can be screened out for both of these sites.
- 1.8.9 In addition, although the Leeds – Liverpool Canal is of value to bird species it is considered that this LWS is sufficiently isolated from the application site to avoid any disturbance effects on the local bird interest from the construction phase.
- 1.8.10 As with statutory designated sites, all LWS lie beyond 50m of the site (and 50 m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s)) and lack any hydrological connection with the site. Therefore, no indirect negative effects upon LWS as a result of airborne and/or waterborne pollution are considered likely during the construction phase of this project. Therefore, construction phase effects upon these designated sites are considered highly unlikely and are therefore considered to be **not significant**.

Operational Phase Effects

Natura 2000 & Ramsar sites

- 1.8.11 The sHRA (Technical Appendix 2) has assessed the potential effects of the following impact pathways associated with the application site:
- Habitat degradation - as a result of increased visitor numbers causing trampling effects;
 - Disturbance to qualifying bird species – Visual/human presence;
 - Disturbance of qualifying features –Auditory disturbance;
 - Disturbance of qualifying features – Lighting effects;
 - Habitat degradation – Air pollution;
 - Loss of qualifying features - Potential bird strike.
- 1.8.12 The conclusion of the Shadow HRA determined that Likely Significant Effects are not anticipated in relation to relevant qualifying features of the designated sites during the operational phase. Therefore, operation phase effects of the application site are considered to be **not significant**.

SSSI

- 1.8.13 The application site is located beyond the impact risk zone for both the North Wirral Foreshore and Mersey Narrows SSSI.
- 1.8.14 In addition, these sites are both located in excess of 5 km from the application site and no known habitat or hydrological connections exist between each SSSI or the application site (both SSSI's are isolated from the application site by existing urban development and the North Wirral Foreshore is located on the opposite side of the River Mersey). Therefore, operation phase effects such as air quality, disturbance from lighting and noise, air and water pollution are unlikely to affect features of these designated sites.

- 1.8.15 It is noted that residents of the operational application site have the potential to cause an increase in habitat degradation from trampling and disturbance to qualifying features of these designated sites. However, visitor survey information presented within "*Recreational activity and interactions with birds within the SSSIs on the north-west coast of England*" (Liley *et al.* 2017) indicates that visitors to the relevant designated sites travel a maximum of 5.2 km from home. Mersey Narrows is located approximately 7 km from the application site by road and North Wirral Foreshore SSSI is located 14 km by road (there are no shorter routes that can be accessed by foot). It is therefore considered highly unlikely that residents of the application site will significantly contribute to recreational pressure at these designated sites.

- 1.8.16 Therefore, effects upon SSSI's as a result of the operational phase are considered to be **not significant**.

LWS

- 1.8.17 The closest of the three LWS is 1 km to the south-east (Melrose Cutting). The operational activities will not result in the direct loss or damage of habitats which form or support features of any of the non-statutory designated sites.
- 1.8.18 In addition, due to the distance of the application site from any LWS along with its location within a residential area in North Liverpool (which lacks habitat and hydrological connectivity to these non-statutory designated sites) any visual or auditory disturbance during the operational phase can be screened out for these sites.
- 1.8.19 Although the Leeds – Liverpool Canal is of value to bird species it is considered that this LWS is sufficiently isolated from the application site to avoid any visual and auditory disturbance effects on the local bird interest as a result of the operational phase of this project. It is noted that LWS is within 5.2 km of the application site. However, there is approximately 2,000ha of open space within 10 km of the application site (refer to technical Appendix 2 for location mapping of such open space) which may be available for recreational purposes by the residents of the proposed re-development. In addition, the operational application site will incorporate open green space for recreational use. It is therefore considered that residents of the application site are likely to visit a wide range of areas for recreational purposes and recreational pressure within Leeds-Liverpool Canal is unlikely to cause a significant increase in disturbance to bird species associated with this LWS.
- 1.8.20 Therefore, effects upon LWS as a result of the operational application site are considered to be **not significant**.

1.9 Cumulative Effects

- 1.9.1 The following key developments have been identified as being relevant to the cumulative impact assessment (see Chapters 2 and 13 of Environmental Statement, Volume II for further details of these developments):
- Bramley Moore Dock Stadium: proposals for a new stadium for Everton Football Club at Bramley Moore Dock;
 - The Peel Liverpool Waters permission (Ref. 100/2424) as varied by the non-material amendments to the original permission, the most recent of which was approved on 23rd August 2019 (reference 19NM/1121), and any subsequent reserved matters applications (e.g. Application Ref: 18RM/1554; 19RM/1817) and the Central Docks masterplan, submitted under a discharge of conditions application (Discharge of Condition 11 application ref. 19DIS/1315), which were discharged on 12th November 2019.;
 - Standalone applications for schemes at Liverpool Waters (e.g. Hive City (A06) - Application Ref: 17F/0456), Plaza (A05 - Application Ref: 17F/0913), The Lexington (A04 - Application Ref: 16F/1370



and 17F/2056), Cruise Liner Terminal: Application Ref: 17O/3230 and Application Ref: 19RM/1037; Isle of Man Ferry Terminal: Application Refs: 18F/3231 & 18L/3232;

- Clock Tower Drive, off Rice Lane, Walton (former Walton Hospital Site) (Ref: 15F/1129);
- The Parks – Phase 5 (Ref: 08F/0247);
- Land at Commercial Road (Planning application awaited following press announcement);
- Claremont Gardens, Westminster Road, Sellar Street, Easby Road (Ref: 11F/1146);
- Walton Lane (Ref: 18F/1316); and
- Cemex UK Ltd, Regent Road (Ref: 16F/2999).

1.9.2 However, as no significant effects upon ecological receptors are anticipated as a result of construction and operation phases of the application site it is considered highly unlikely that the application site will interact with other developments in the wider area. Therefore, cumulative effects are considered to be **not significant**.

1.10 Additional Mitigation, Compensation and Enhancement Measures

1.10.1 The following mitigation, compensation and enhancement recommendations are made in relation to the ecological receptors that will be affected during construction and/or operational phases of the project.

Construction Phase

Habitats

1.10.2 Terrestrial habitats have been valued as forming negligible ecological value and have not been discussed above in terms of potential effects of the application site during construction and operation phases. However, proposed habitat creation works proposed within the illustrative masterplan show that the application site will include a number of semi-natural habitats. Landscaping details are a reserved matter and are not applied for within this application; however, the illustrative masterplan indicates that these habitats could include:

- Broad-leaved scattered trees (species to be confirmed through subsequent reserved matters submissions);
- Dense scrub; and,
- Semi-improved neutral grassland.

1.10.3 Inclusion of the above habitats within the application site would result in local enhancement to habitats on site. Such habitat enhancements may also provide a beneficial effect for bird, bat and invertebrate species in the local area by providing additional ecological resources which may be used for foraging, resting and commuting/migrating purposes.

Breeding birds

1.10.4 Although the application site is considered to be of negligible value for breeding birds it is noted that low numbers of common and widespread species (feral pigeons) may nest on site. It is therefore, recommended that vegetation clearance, demolition and construction works should be scheduled to take place outside of the bird nesting season (March – September) in order to avoid causing an offence under the Wildlife & Countryside Act, 1981 (as amended).

1.10.5 Where works need to be conducted within the application site during the nesting season period, nesting bird checks will be required to be undertaken by a suitably qualified Ecological Clerk of Works (ECOW) in advance of those works being commenced.

1.10.6 If nesting birds are identified, the ECOW will advise on suitable working methods and establish exclusion zones to avoid damage to the nest and disturbance to the breeding birds. The measures recommended would depend on the nature of the works in the area close to the nest, as well as the nesting bird species, and could result in delays to undertaking works within specific areas of the application site until all the chicks have fledged.

1.10.7 If works cease for longer than 72 hours within the March to September period, then nesting bird checks should be repeated prior to the recommencement of those works.

1.10.8 Where demolition and construction take place during the bird breeding season, the routes taken by demolition and construction traffic in relation to the location of any bird nests identified by the ECOW will also have to be considered. The distance that construction traffic would be required to keep from the nest would depend on the nesting bird species and would therefore be advised by the ECOW following the checks.

1.10.9 In order to compensate for the potential loss of nesting habitat and enhance the application site for future nesting it is recommended that additional nesting habitats are provided. Such habitat in the form of scrub and trees within open green space on site is indicated within the illustrative masterplan (drawing ref 17-087-120). In addition, it is recommended that six bird boxes are positioned on trees within soft landscaping on site.

Bats

1.10.10 Although the application site is considered to be of negligible value for roosting and foraging bats, in accordance with NPPF the following enhancement measures are recommended. Such measures are designed to enhance the foraging and roosting value of the operational application site and include:

- Provision of six artificial bat roosts within new build properties at a minimum height of 9 m from ground level and facing various aspects. Artificial roosts could include (but are not limited to) six Schwegler 2F on the walls of new properties or “bat access slates” on the roofs.
- Provision of wildflower grassland along with the provision of nectar producing shrubs to enhance value for invertebrates within greenspaces which subsequently enhances foraging value for bat species.

1.10.11 An experienced ecologist should advise on an appropriate location of these features, i.e. avoiding direct illumination, as far as practicable.

1.11 Climate Change

1.11.1 All habitats are likely to be affected by the long-term effects of climate change. This can present itself in terms of the species likely to be present e.g. increases in survival of introduced non-native plants and animals in the UK, or by affecting the biogeography of species already here.

1.11.2 In the context of the application site, it is predicted that the effects of climate change would **not be significant**. This is based on the low sensitivity of habitats and species present on site and the fact that the species present are predominantly common, widespread and are not at the edge of their range.

1.11.3 It is considered that climate change may adversely affect habitats located within the relevant national and international designated sites and may result in an adverse effect upon qualifying features.



1.11.4 While climate change may result in a reduction in the availability of habitats which support qualifying and notifiable features (e.g. via sea level rise) it is considered unlikely that construction and operation phases of the application site will contribute to such adverse effects.

1.12 Assessment Summary and Likely Significant Residual Effects

1.12.1 Implementation of the embedded mitigation (detailed in Section 1.7) and additional enhancement measures will act to prevent any likely significant adverse effects from the application site clearance, construction and operational phases of the proposed development.

Table 10.2 Assessment Summary and Residual Environmental Effects (Biodiversity)

| Summary description of the identified effect | Sensitivity of Receptor | Significance and Nature of Effect | Additional Mitigation | Residual Significance and Nature of Effect |
|--|-------------------------|-----------------------------------|-----------------------|--|
| Construction | | | | |
| International Designated Sites (SPA/Ramsar) | International | Not significant | N/A | Not significant |
| Nationally Designated Sites (SSSI) | National | Not significant | N/A | Not significant |
| Non statutory designated site | County | Not significant | N/A | Not significant |

| Summary description of the identified effect | Sensitivity of Receptor | Significance and Nature of Effect | Additional Mitigation | Residual Significance and Nature of Effect |
|--|-------------------------|-----------------------------------|--|--|
| Habitats <i>Habitat loss</i> | Negligible | Not significant | Biodiversity enhancement recommendations address the loss of terrestrial habitats within the application site. | Not significant |
| Species | Negligible | N/A | <i>Enhancement:</i> Provision of six bat and six bird boxes | Beneficial, not significant |
| Operation | | | | |
| International Designated Sites (SPA/Ramsar) | International | Not significant | N/A | Not significant |
| Nationally Designated Sites (SSSI) | National | Not significant | N/A | Not significant |
| Non statutory designated site | County | Not significant | N/A | Not significant |



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1.14 Glossary

| Term | Definition |
|----------|---|
| AA | Appropriate Assessment |
| ALSE | Assessment of Likely Significant Effects |
| BAP | Biodiversity Action Plan |
| BCT | Bat Conservation Trust |
| BoCC | Birds of Conservation Concern |
| CEMP | Construction Environmental Management Plan |
| CIEEM | Chartered Institute of Ecology and Environmental Management |
| CROW Act | Countryside and Rights of Way Act 2000 |
| EcIA | Ecological Impact Assessment |
| EPSL | European Protected Species Licence |
| ES | Environment Statement |
| HPI | Habitat of Principal Importance |
| HRA | Habitat Regulation Assessment |
| LCR | Liverpool City Region |
| LPA | Local Planning Authority |



| Term | Definition |
|------|--|
| LWS | Local Wildlife Site |
| MEAS | Merseyside Environmental Advisory Service |
| NERC | Natural Environment and Rural Communities |
| NPPF | National Planning Policy Framework |
| SAC | Special Area of Conservation |
| SINC | Site of Importance for Nature Conservation |

ⁱ Chartered Institute of Ecology and Environmental Management (2018, v1.1) Guidelines for Ecological Impact Assessment in the UK and Ireland.

ⁱⁱ Ministry of Housing, Communities & Local Government (2018) National Planning Policy Framework

| Term | Definition |
|------|--|
| SPA | Special Protection Area |
| SPI | Species of Principal Importance |
| SSSI | Site of Special Scientific Interest |
| WCA | The Wildlife and Countryside Act 1981 (as amended) |

ⁱⁱⁱ ODPM, (2005), Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System, [online] Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf, Accessed May 2019.



Appendix 1

Goodison Park Legacy Project: Ecological Appraisal



Goodison Park Legacy Project

Ecological Appraisal



Everton Stadium Development Limited

January 2020

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Figure 2 – Phase 1 Habitat Plan

Appendix A – Report Conditions

Appendix B – Key Legislation

Appendix C - Wildlife Attracting Plant Species

Executive Summary

| Contents | Summary |
|----------------------------------|--|
| Site Location | The site is situated in the Walton district of Liverpool and is centred at Ordnance Survey Grid Reference SJ 35897 93976. The site currently consists of a football stadium, ancillary buildings and areas of hard standing. |
| Proposals | <p>The development proposals involve the demolition of the existing stadium and associated structures, site clearance and ground preparation works; including removal of hardstanding areas.</p> <p>It is proposed to construct up to 173 residential units, and up to 23,379 square metres of floorspace for community, healthcare, education, retail/commercial uses. Car parking, access roads, public realm improvement works and the creation of green spaces are also planned.</p> |
| Existing Site Information | Ecological Appraisal completed in September 2017 by WYG. |
| Scope of this Survey(s) | Extended Phase 1 Habitat Survey and Desk Study to determine likelihood of protected sites, habitats and species being affected by proposed works. Also, an assessment of the presence of any invasive species. |
| Results | <ul style="list-style-type: none"> • No impact on protected sites considered likely as a result of the proposed development. • No protected or notable habitats or species recorded on site. • No invasive species recorded on site. |
| Recommendations | <p>Further work</p> <ul style="list-style-type: none"> • Stage 1 Habitat Regulations Assessment: to assess impact of development on Mersey Narrows and North Wirral Foreshore SPA and RAMSAR sites. <p>Mitigation</p> <ul style="list-style-type: none"> • Birds: Site demolition and clearance works should be timed to take place outside of the bird nesting season (March to September inclusive). Where this is not possible, an Ecological Clerk of Works (ECoW) should perform a check of the site for nesting birds prior to any works taking place and demarcate temporary exclusion areas in the event of birds' nests being located. <p>Enhancements</p> <ul style="list-style-type: none"> • Bats: a minimum of five bat boxes are recommended to be installed post-construction. • Birds: a minimum of five bird boxes (with varying sized entrance holes) are recommended to be installed post-construction. • Landscaping: proposals should include beneficial planting to attract wildlife. |



Glossary

| | |
|----------------------|---|
| BCT | Bat Conservation Trust |
| BoCC | Bird(s) of Conservation Concern |
| BSI | British Standard Institute |
| BTO | British Trust for Ornithology |
| CEnv | Chartered Environmentalist |
| CIEEM | Chartered Institute of Ecology & Environmental Management |
| CRoW Act | Countryside and Rights of Way Act 2000 |
| Csac | Candidate Special Area of Conservation |
| DEFRA | Department for the Environment, Food and Rural Affairs |
| EcIA | Ecological Impact Assessment |
| ECoW | Ecological Clerk of Works |
| EPSL | European Protected Species Licence |
| GCN | Great Crested Newt |
| Habitat Regulations | Conservation of Habitats and Species Regulations 2017 (as amended) |
| HAP | Habitat Action Plan |
| Hedgerow Regulations | Hedgerow Regulations 1997 |
| HPI | Habitat(s) of Principal Importance |
| HRA | Habitats Regulations Assessment |
| JNCC | Join Nature Conservation Committee |
| LBAP | Local Biodiversity Action Plan |
| LNR | Local Nature Reserve |
| LWS | Local Wildlife Site |
| MCIEEM | Member of Chartered Institute of Ecology & Environmental Management |
| Natura 2000 site | A European site designated for its nature conservation value |
| NERC Act | Natural Environment and Rural Communities Act 2006 |
| NNR | National Nature Reserve |
| NPPF | National Planning Policy Framework |
| PRFS | Potential Roost Features |
| pSPA | Potential Species Protection Area |
| RSPB | Royal Society for the Protection of Birds |
| SAC | Special Area of Conservation |
| SAP | Species Action Plan |
| SPA | Special Protection Area |
| SPI | Species of Principal Importance |
| SSSI | Site(s) of Special Scientific Interest |
| W&CA | Wildlife & Countryside Act 1981 (as amended) |
| W&CA sch8 | Wildlife & Countryside Act 1981 (as amended), Schedule 8 |



1.0 Introduction

1.1 Background

WYG was commissioned by Everton Stadium Development Limited in May 2019 to undertake an Ecological Appraisal of the site known as Goodison Park, currently used as Everton Football Club's home stadium.

This report has been prepared by Assistant Ecologist Grace Bishop and the conditions pertinent to it are provided in Appendix A.

1.2 Site Location

The 'site' is located in the Walton District of Liverpool and is approximately 4km north-east of Liverpool City Centre. The site is centred at Ordnance Survey National Grid Reference SJ 35897 93976.

The redline boundary of the site is shown on Figure 1. It comprises a football stadium with a capacity to seat up to 39,572 people, ancillary buildings (including turnstile entrances, ticket offices and storage containers) and an area of hard standing in the southern section of the site. The hard standing includes vehicle parking areas, a match day fan zone and a small vehicle access road, off Goodison Road.

The site is bordered by Goodison Road to the west, Spellow Lane to the south-west, Walton Lane to the south, Bullens Road to the east, Gwladys Street to the north and Goodison Place and the Church of St Luke the Evangelist to the north-west.

The area surrounding the site is characterised primarily by residential properties. Stanley Park is situated immediately south of the site but is separated from it by Walton Lane. Anfield Cemetery adjoins Stanley Park to the north-east and is separated from the site boundary by a distance of 150 metres.

1.3 Development Proposals

The development proposals involve the demolition of the existing stadium and associated structures, site clearance and ground preparation work; including the removal of hardstanding areas. The development proposals also include the construction of up to 173 residential units, and up to 23,379 square metres of floorspace for community, residential institutions, retail and commercial uses. Car parking, access roads, public realm improvement works, and the creation of green spaces are also planned.

1.4 Purpose of the Report

The purpose of this report is to complete:

- Review previous desk study data to understand existing information on statutory and non-statutory sites of nature conservation interest and relevant records of protected/notable species within the site and its zone of influence;
- An extended Phase 1 habitat survey, involving a walkover of the site to record habitat types and dominant vegetation, including any invasive species, and a reconnaissance survey for evidence of protected fauna or habitats capable of supporting such species;



- An assessment of the potential ecological receptors present on site, identify any constraints they pose to future development and (if possible) any recommendations for any further surveys, avoidance, mitigation or enhancement measures that are needed (as appropriate).

Note that scientific names are provided at the first mention of each species and common names (where appropriate) are then used throughout the rest of the report for ease of reading.

A summary of the key legislation is also provided in Appendix B.



2.0 Methodology

2.1 Desk Study

2.1.1 Previous Reports

An Ecological Appraisal was completed in September 2017 by WYG.

2.1.2 Local Ecological Records Centre

It was determined that no additional data searches were required, due to the lack of change in habitats and species presence on the site and in the surrounding area. Therefore, desk study data from the report completed in September 2017 has been used to inform this report. Information was requested from the Merseyside BioBank (2017), for information on any nature conservation designations and protected or notable species records within 2 km of the site.

The data search covered:

- Statutory designated sites for nature conservation, namely SACs, SPAs, Ramsar sites, SSSIs, NNRs and LNRs;
- Non-statutory designated sites for nature conservation, namely LWS;
- Legally protected species, such as great crested newts *Triturus cristatus*, badger *Meles meles* and bats;
- Notable habitats and species, such as those listed as Habitats or Species of Principal Importance (HPIs or SPIs); and,
- Priority habitats or species within the North Merseyside LBAP.

The data search did not cover:

- Tree Preservation Orders (TPOs); or
- Conservation Areas designated for their special architectural and historic interest.

2.1.3 Local Species Recorders

The following local species recorder groups were also contacted for any relevant records that they held:

- North Merseyside Amphibian and Reptile Group

2.1.4 Online Resources

A search for relevant information was also made on the following websites:

- MAGIC www.magic.gov.uk - DEFRA's interactive, web-based database for statutory designations and information on any EPSL applications that have been granted in the local area since 2015.

2.2 Field Surveys

The following methodologies have been used to identify the ecological receptors present on or near the site, which are relevant to the proposed development.



2.2.1 Habitats

An extended Phase 1 habitat survey was undertaken on the site on 31st May 2019 by Consultant Ecologist Jessica Yorke and Assistant Ecologist Grace Bishop. The weather conditions were dry and cloudy, with light winds and an air temperature of 17°C.

The vegetation and broad habitat types within the site were noted during the survey in accordance with the categories specified for an Ecological Appraisal (JNCC, 2010). Dominant plant species were recorded for each habitat present using nomenclature according to Stace (2019). The site was also appraised for its suitability to support notable flora, with regard to the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017).

2.2.2 Protected & Notable Species

The site was inspected for evidence of, and its potential to support, protected or notable species, especially those listed under the Schedule 2 of the Habitat Regulations, Schedule 5 of the W&CA, the CRoW Act, those given extra protection under the NERC Act, and species included in the Merseyside LBAP.

Great Crested Newt

The site was appraised for its suitability to support GCN. The assessment was based on Guidance outlined in the *Herpetofauna Workers' Manual* (Gent & Gibson, 2003) and the *Great Crested Newt Conservation Handbook* (Langton, Becket & Foster, 2001).

Bats

Roosting Bats – Buildings / Structures / Trees

Any suitable buildings, structures or trees on site were assessed from the ground for their suitability to support breeding, resting and hibernating bats using survey methods based on the BCT *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016) – hereafter referred to as the 'BCT Guidelines'. The following system has therefore been used to categorise the bat roost suitability of any features found:

Table 1 Categories of Bat Roost Suitability (BCT Guidelines)

| Suitability | Typical Roosting Features |
|-------------------|---|
| Negligible | Negligible habitat feature on site likely to be used by roosting bats. |
| Low | A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential. |
| Moderate | A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed). |

| Suitability | Typical Roosting Features |
|-------------|---|
| High | A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis & potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. |

Foraging/commuting Bats

The BCT Guidelines use the following criteria to categorise the potential value of habitats and features for use by foraging and commuting bats and these have been used to characterise the value of this site:

Table 2 Categories of Habitat Suitability (BCT Guidelines)

| Suitability | Typical Foraging & Commuting Features |
|-------------------|---|
| Negligible | Negligible habitat features on site likely to be used by commuting or foraging bats. |
| Low | Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub. |
| Moderate | Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water. |
| High | Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts. |

Reptiles

The site was appraised for its suitability to support reptiles. The assessment was based on guidance outlined in the *Herpetofauna Workers' Manual* (Gent & Gibson, 2003).

Badgers

The site was surveyed for evidence of badger setts or other badger activity such as paths, latrines or signs of foraging. Methodologies used and any setts recorded were classified according to guidance held within Surveying badgers (Harris, Cresswell & Jefferies, 1989).

Hazel Dormice

The site was surveyed for its suitability to support hazel dormice. The assessment was based on guidance outlined in Dormouse Conservation Handbook (Bright, Morris and Mitchell-Jones 2006).



Other Species

The site was also appraised for its suitability to support other protected or notable fauna including mammals, amphibians, birds and invertebrates with regard to the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017) and *BS42020:2013 Biodiversity – Code of Practice for Planning and Development* (BSI, 2013). Evidence of any current or historical presence of such species was recorded.

2.2.3 Invasive Species

The site was searched for evidence of invasive plant species, such as Japanese knotweed *Reynoutria japonica* (formerly *Fallopia japonica*), Indian (Himalayan) balsam *Impatiens glandulifera*, giant hogweed *Heracleum mantegazzianum*, wall cotoneaster *Cotoneaster horizontalis* and rhododendron *Rhododendron ponticum* × *Rhododendron maximum*. A full list of all invasive plant species is provided in Appendix B.

2.3 Limitations

The optimal period to undertake an extended Phase 1 habitat survey is April-September. The survey was completed in May which is in the optimal survey window. As such this is not considered to be a limitation to the accurate assessment of the habitats and the dominant species of the respective vegetation types were visible and identifiable.

The majority of the site was accessed during the site visit. The football stadium and stands could easily be viewed from the amenity grassland (football pitch), with the aid of binoculars and all the ancillary buildings could be externally inspected.

To determine presence or likely absence of protected species usually requires multiple visits at suitable times of the year. As a result, this survey focuses on assessing the potential of the site to support species of note, which are considered to be of principal importance for the conservation of biodiversity with reference to those given protection under UK or European wildlife legislation. This report cannot therefore be considered a comprehensive assessment of the ecological interest of the site. However, it does provide an assessment of the ecological interest present on the day the site was visited and highlights areas where further survey work may be recommended.

The details of this report will remain valid for a period of **two years** from the date of the survey, after which the validity of this assessment should be reviewed to determine whether further updates are necessary. Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals which this report was based on.

3.0 Baseline Conditions

3.1 Designated Sites

The following designated sites of ecological importance have been identified within 2 km of the site.

Table 3 Designated Sites Within 2km

| Designation | Site Name | Distance & Direction | Summary of features |
|----------------------|---|----------------------|--|
| SPA, RAMSAR and SSSI | Mersey Narrows and North Wirral Foreshore | 2.7 W | <p>Comprises extensive intertidal mud and sandflats, distinct areas of rocky shore and small areas of saltmarsh, located at the mouths of the Mersey and Dee Estuaries.</p> <p>An important foraging habitat for birds, especially wading birds in winter, including turnstone <i>Arenaria interpres</i>, redshank <i>Tringa totanus</i>, bar-tailed godwit <i>Limosa lapponica</i>, dunlin <i>Calidris alpina</i>, sanderling <i>Calidris alba</i>, knot <i>Calidris canutus</i>, grey plover <i>Pluvialis squatarola</i>, oystercatcher <i>Haematopus ostralegus</i> and cormorant <i>Phalacrocorax carbo</i>.</p> <p>Important also for little gull <i>Hydrocoloeus minutus</i> and common tern <i>Sterna hirundo</i> on passage, the latter also as a breeding bird.</p> |
| LWS | Melrose Cutting | 1.0 W | <p>This is a mosaic of habitats along an 750m section of old railway cutting. Locally rare plant species include wall rue <i>Asplenium ruta-muraria</i>, common boomrape <i>Orobancha minor</i>, hare's-foot clover <i>Trifolium arvense</i>, heath woodrush <i>Luzula multiflora</i> and yellow-wort <i>Blackstonia perfoliata</i>.</p> |
| LWS | Leeds-Liverpool Canal | 1.6 SW | <p>The canal connects with the River Mersey via the Stanley Dock to Pier Head Link and supports a variety of plant species, including nine locally rare species, these being common mallow <i>Malva neglecta</i>, hemp agrimony <i>Eupatorium cannabinum</i>, marsh woundwort <i>Stachys palustris</i>, reed sweet-grass <i>Glyceria maxima</i>, sheep's fescue <i>Festuca ovina</i>, wavy hair grass <i>Deschampsia flexuosa</i>, wild carrot <i>Daucus carota</i>, wood sage <i>Teucrium scorodonia</i> and yellow water-lily <i>Nuphar lutea</i>.</p> |

| Designation | Site Name | Distance & Direction | Summary of features |
|-------------|-----------|----------------------|--|
| | | | Many waterbirds breed along the canal, including mute swan <i>Cygnus olo</i> , mallard <i>Anas platyrhynchos</i> , coot <i>Fulica atra</i> , moorhen <i>Gallinula chloropus</i> and grey wagtail <i>Motacilla cinerea</i> . The canal is also important for wintering birds, including kingfisher <i>Alcedo atthi</i> , great crested grebe <i>Podiceps cristatus</i> and goldeneye <i>Bucephala clangula</i> . |
| LWS | Loop Line | 1.9 NE | <p>The longest wildlife corridor in Liverpool, an old disused railway stretching for 11km and containing a diverse mosaic of habitats, including secondary broadleaf woodland, with developing understorey and scrub. The ground flora includes bluebell <i>Hyacinthoides non-scripta</i>, lords and ladies <i>Arum maculatum</i>, wood dock <i>Rumex sanguineus</i> and black bryony <i>Dioscorea communis</i>.</p> <p>Acid and neutral unimproved grasslands also occur along the Loop Line and include locally notable plant species such as bee orchid <i>Ophrys apifera</i>, creeping willow <i>Salix repens</i>, meadow barley <i>Hordeum brachyantherum</i>, smooth tare <i>Vicia tetrasperma</i> and wild carrot.</p> <p>Partly vegetated sandstone cliffs on the Loop Line contain locally notable plant species such as harts-tongue <i>Asplenium scolopendrium</i>, hard ferns <i>Blechnum spicant</i> and royal ferns <i>Osmunda regalis</i>, black and maidenhair spleenwort <i>Asplenium trichomanes</i>, pellitory-of-the-wall <i>Parietaria judaica</i> and various liverworts <i>Marchantiophyta</i>.</p> |

3.2 Habitats

The following habitats have been identified through our assessment:

3.2.1 Amenity Grassland

The playing surface of the football pitch itself constituted amenity grassland (Photograph 1). It is understood to be 50% grass and 50% synthetic. The grass species were not identifiable due to regular mowing, but this is considered to be of negligible ecological significance, because the playing surface is regularly disturbed and subjected to regular maintenance and is therefore considered extremely unlikely to support any rare or notable plant species.

Photograph 1: Playing surface of the current Everton Football ground



3.2.2 Hard Standing

There was a large area of hard standing on the south side of the site. This is mostly used for car parking and was completely devoid of vegetation (Photograph 2).

Photograph 2: Hard standing



3.2.3 Buildings

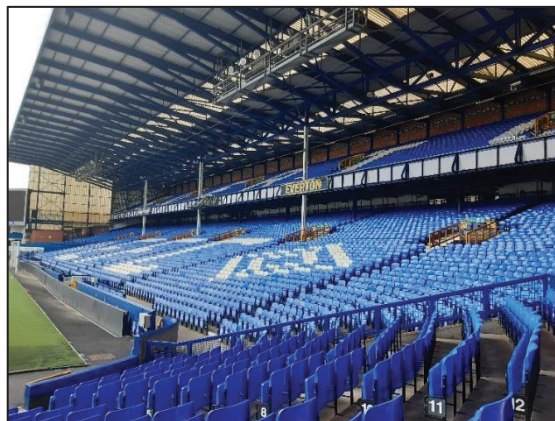
Four large main stands make up the stadium, which was the largest building on site. The Main (west) Stand, shown in Photograph 3, is the largest and the only stand to have an internal roof space. This roof space appeared to be well sealed with no signs of cracks or crevices.

Photograph 3: Main stand with internal roof space



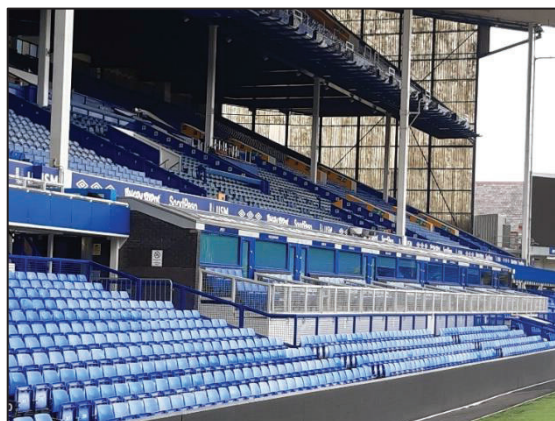
The west, east and north facing stands all have brick work at the back of the stands (Photograph 4), which is adjacent to corrugated metal that forms the exterior of the stadium. The brickwork had no cracks or damaged bricks and was well sealed.

Photograph 4: Example stand with brick work, east stand



The west stand has a small brick building built into the seating, comprising UPV windows and a felt roof (Photograph 5). The building was well sealed, with no cracks or crevices present.

Photograph 5: Brick building within west stand



On three sides of the ground, the rear sides of the stands directly border the surrounding roads (Photograph 6).

Photograph 6: Rear of west stand, bordering Goodison Road



Additionally, nine ancillary buildings were present on site (see Figure 2 for locations) and are described below.

Building 1 (B1)

This is a small single-storey brick building, located within the hard-standing area on the south side of the site. The building was in good condition, with only a small crack alongside the door frame. (Photograph 7).

Photograph 7: Building B1



Building 2 (B2)

This is a small metal building located on the south-eastern edge of the stadium. The building is in regular use by maintenance staff for storage purposes. The building was constructed from corrugated panels and has a sloping roof. It was in good condition (Photograph 8).

Photograph 8: Building B2



Building 3 (B3)

This is a single-storey painted brick building, located at the south-eastern edge of the site. It was in good condition, with a small area of damaged brick near a ventilation pipe at the front of the building (Photograph 9).

Photograph 9: Building B3



Building 4 (B4)

This is a painted ancillary brick and block constructed building, located at the north-western edge of the site. It was in good condition, with some construction work taking place at the time of the survey (Photograph 10).

Photograph 10: Building B4



Building 5 (B5)

This is a small painted metal building, located within the hard standing area at the south-western edge of the site. It is used as a club shop (Photograph 11) and was found to be in good condition, with no signs of cracks or crevices.

Photograph 11: Building B5



Building 6 (B6)

This is a small metal portacabin, located at the south-western edge of the site. It was found to be in good condition, with no cracks or crevices (Photograph 12).

Photograph 12: Building B6



Building 7 (B7)

This is a small brick-built painted building, located at the western edge of the stadium. The building had wooden facades beneath the guttering and metal guards along the edges of the felt roof, which had been damaged in certain places, creating cracks and gaps. (Photograph 13).

Photograph 13: Building B7



Building 8 (B8)

This is a small metal portacabin, currently being used as additional toilet facilities, located at the south-western edge of the site. It was found to be in good condition, with no cracks or crevices (Photograph 14).

Photograph 14: Building B8



Building 9 (B9)

A small metal cabin, used as a newspaper stand. It was in good condition with no cracks or crevices (Photograph 15).

Photograph 15: Building B9



3.3 Protected & Notable Species

3.3.1 Great Crested Newts

The desk study returned no records of GCN on or within 2km of the site. A search on MAGIC revealed that, at the time of writing, no EPSLs for GCN have been granted within 2km of the site.

During the site visit, no water bodies were observed on site. A review of aerial imagery revealed the presence of one water body within 500 metres of the site, this being a lake in Stanley Park 50 metres south of the site. There are no records of GCN from this lake, also in addition this water body is separated from the site by a busy main road (Walton Lane) which would present a major barrier to GCN dispersal.

The site contains no terrestrial habitat suitable for foraging or sheltering GCN. Consequently, **GCN are not considered to be a potential constraint to the proposed development** and are not discussed further in this report.

3.3.2 Reptiles

The desk study returned no records of reptiles either on site or within 2km of the site.

No reptiles were observed on site during the site visit and no suitable habitat to support foraging, resting and commuting reptiles was recorded. The predominantly urban surroundings to the site are also unsuitable for reptiles. Parkland to the south of the site may have the potential to support reptile species, however this is isolated from the site by a busy main road. Consequently, **reptiles are not considered to be a potential constraint to the proposed development** and are not discussed further in this report.

3.3.3 Bats

The desk study returned 31 records of bats (including bat roosts) within 2 km of the site, of which eight were of common pipistrelles *Pipistrellus pipistrellus*, seven were of unspecified pipistrelles, six were of brown long-eared bats *Plecotus auritus* and ten were of unspecified bat species.

A search on MAGIC revealed that one EPSL for bats had been granted within 2km of the site. This was located 1km to the south-west to allow the destruction of a common pipistrelle roost between 2013 and 2015.

A summary of bat roost records returned in the desk study is provided in Table 4 below. For multiple records, the location, approximate distance, direction and date of the closest record and roost record only are given.

Table 4 Details of records of bats and bat roosts within 2km of the site.

| Bat species | Location | Approximate Distance (km) & Direction | Date of record | Record details |
|-------------------------|------------------|---------------------------------------|----------------|------------------|
| Unspecified pipistrelle | Stanley park | 0.39 SSE | 2008 | None provided |
| Common pipistrelle | Anfield Cemetery | 0.70 E | 2000 | 1 count of adult |

| Bat species | Location | Approximate Distance (km) & Direction | Date of record | Record details |
|----------------------|-----------------|---------------------------------------|----------------|-------------------|
| Common pipistrelle | Anfield stadium | 0.99 S | 2004 | 1 count of roost |
| Brown long-eared bat | Not named | 0.99 S | 1991 | 1 count of flight |

Roosting potential

There are no trees on site. Buildings on site were assessed for their potential to support roosting bats, the findings of which have been summarised below.

The four stands of the stadium are all open on at least one side and therefore very exposed to high winds and cold temperatures. Consequently, the stands were considered to have negligible suitability for roosting bats, as bats prefer to roost in well sheltered places. There are examples of cracks and crevices both internally and externally, see photographs 17 and 18.

Photograph 17: Gaps in eastern wall of supporter access area in East Stand



Photograph 18: Cracked wooden façade on the front of building 7.



Although cracks and crevices are present, it is considered unlikely that bats would utilise these gaps and crevices to gain access to possible roosting areas, as regular use of the stadium for football matches would result in high levels of light and noise disturbance.

The ancillary buildings and stands were also assessed for bat roosting potential and the results are given in Table 5 below.

Table 5 Summary of bat roost suitability for onsite ancillary buildings and stands

| Building reference | Assessed internally or externally | Description of potential roost features (PRFS) | Bat roost suitability |
|--------------------|-----------------------------------|--|-----------------------|
| North stand | Externally only | Brickwork present – no suitable holes, cracks or voids. | Negligible |
| East stand | Externally & Internal | External brickwork present – no suitable holes, cracks or voids. Internal gaps and crevices in the walls and ceilings – Unlikely to be used by bats due to disturbance by noise and light | Negligible |
| South stand | Externally only | Brickwork present – no suitable holes, cracks or voids. | Negligible |
| West stand | Externally only | Stand with a roof void - no suitable holes, cracks or voids. | Negligible |
| Building B1 | Externally only | Small crack alongside the door frame - Unlikely to be used by bats due to disturbance by noise and light | Negligible |
| Building B2 | Externally only | None – no suitable holes, cracks or voids. | Negligible |
| Building B3 | Externally only | Cracks near ventilation hole – Unlikely to be used by bats due to disturbance by noise and light | Negligible |
| Building B4 | Externally only | None – no suitable holes, cracks or voids. | Negligible |
| Building B4 | Externally only | None – no suitable holes, cracks or voids. | Negligible |
| Building B5 | Externally only | None – no suitable holes, cracks or voids. | Negligible |
| Building B6 | Externally only | None – no suitable holes, cracks or voids. | Negligible |
| Building B7 | Externally only | Cracks and gaps in the wood façade and metal roof guards – Unlikely to be used by bats due to disturbance by noise and light | Negligible |
| Building B8 | Externally only | None – no suitable holes, cracks or voids. | Negligible |
| Building B9 | Externally only | None – no suitable holes, cracks or voids. | Negligible |



No signs of bats, such as droppings, were recorded during the survey. Consequently, **the four stands and ancillary buildings are considered to have negligible potential for roosting bats**, based on a lack of suitable features and the high level of current usage of the site for sporting events.

Foraging and Commuting Potential

The site showed a complete lack of vegetation, apart from the pitch itself, additionally the surrounding environment provides no natural vegetation in the shape of street trees or hedgerows. The stadium and car park are also well lit and consequently, it is considered that the site offers **negligible foraging and commuting potential for bats**.

Consequently, **bats are not considered to be a constraint to the proposed development of the site** and are not considered further in this report.

3.3.4 Badger

The desk study returned no records of badger on or within 2km of the site.

No evidence of badgers or their field signs was observed on site during the survey and the site is considered to offer no potential for badgers. Suitable habitat for foraging and sett creation is located 50m South of the site in Stanley Park. However due to the presence of a main road and high brick wall between the site and suitable habitat, it is considered unlikely that badgers will commute to the application site. Consequently, **badgers are not considered to be a constraint to the proposed development of the site** and are not considered further in this report.

3.3.5 Otter & Water Vole

The desk study returned no records of otter *Lutra lutra* within 2km of the site. A search on MAGIC revealed that at the time of writing, no European Protected Species Licences for otters have been granted within 2km of the site.

The desk study returned two records of water vole *Arvicola amphibius* within 2km of the site, the closest of which was approximately 390m south-southeast of the site, in Stanley Park recorded in 1999.

No evidence of otters or water voles was observed during the survey and the site completely lacked suitable habitat for these species. The lakes in Stanley Park are 50 metres from the site boundary and offer potential habitat for water voles. However, the site is situated between a considerable barrier, a main road and high brick wall, as well as a sufficient distance from these water bodies to avoid causing any impact to any water vole population or this species' habitat.

Consequently, **otter and water vole are not considered to be a constraint to the proposed development** and are not considered further in this report.

3.3.6 Birds

The desk study returned multiple records of a range of bird species being present within 2 km of the site. One bird species which is listed under Schedule 1 of the W&CA, peregrine falcon *Falco peregrinus*. It has been recorded breeding within 2km of the site, and several pairs of peregrines are known to breed in Liverpool. Schedule 1 listed species are a material consideration for planning.

Four BoCC red listed species have been recorded within 2km of the site. These are house sparrow *Passer domesticus*, song thrush *Turdus philomelos*, skylark *Alauda arvensis* and starling *Sturnus vulgaris*. Three BoCC amber listed species have been recorded within 2km of the site. These are bullfinch *Pyrrhula pyrrhula*, dunnoek *Prunella modularis* and swift *Apus apus*.

Six of the species recorded within 2km of the site are listed as NERC Species of Principal Importance.

These are the bullfinch, dunnock, house sparrow, skylark, song thrush and starling.

Bird species recorded within 2km of the site are summarised in Table 6 (note: where multiple records for a species have been provided, the nearest record to the site has been listed in the table).

Table 6 Bird species recorded within 2km of the site

| Common Name | Status* | Approximate Distance (km) and Direction from Site Boundary |
|------------------|----------------------|--|
| Dunnock | BoCC Amber; NERC | 0.10 ENE |
| House Sparrow | BoCC Red; NERC; LBAP | 0.10 ENE |
| Song Thrush | BoCC Red; NERC; LBAP | 0.10 ENE |
| Starling | BoCC Red; NERC; LBAP | 0.10 ENE |
| Swift | BoCC Amber; NERC | 0.10 ENE |
| Peregrine Falcon | BoCC Amber; NERC | 1.36 NW |
| Bullfinch | BoCC Amber; NERC | 1.90 W |
| Skylark | BoCC Red; NERC; LBAP | 1.90 W |

During the site survey, only two bird species were observed resting on the stands, these being feral pigeon *Columba livia* and Magpie *Pica pica* both of which are considered common and widespread.

It is considered unlikely that the site offers nesting opportunities for most species of wild bird because of a lack of suitable habitat and high levels of disturbance on site. Although feral pigeon are known to use structures and features present within the site and could potentially nest on site, especially if the site became disused. It is thought unlikely that peregrine falcon would breed on the site. Although peregrines breed on high buildings, disturbance levels on the site are considered to be too high (especially on match days) to support nesting of this species.

3.3.7 Invertebrates

The desk study returned multiple records of a range of invertebrate species recorded within 2 km of the site. Rare and notable invertebrate species recorded within 2km of the site are summarised in Table 7 (note: where multiple records for one species have been provided, the nearest record to the site has been listed in table 7).

Table 7 Rare and notable invertebrate species recorded within 2km of the site.

| Common Name | Status* | Approximate Distance (km) and Direction from Site Boundary |
|---|---------|--|
| Wall (butterfly) <i>Lasiommata megera</i> | NERC | 0.10 ENE |
| Common Darter <i>Sympetrum striolatum</i> | LBAP | 0.63 SE |

| | | |
|--|------|----------|
| Common Blue Damselfly <i>Enallagma cyathigerum</i> | LBAP | 0.79 SW |
| Blue Tailed Damselfly <i>Ischnura elegans</i> | LBAP | 1.39 WSW |
| Buff Ermine Moth <i>Spilarctia luteum</i> | NERC | 1.50 NE |
| Sallow Moth <i>Cirrhia icteritia</i> | NERC | 1.50 NE |
| Shoulder-Striped Wainscot <i>Leucania comma</i> | NERC | 1.50 NE |
| Southern Hawker <i>Aeshna cyanea</i> | LBAP | 1.80 WNW |
| Brown Hawker <i>Aeshna grandis</i> | LBAP | 1.82 N |

No rare or notable invertebrates were recorded during the survey and the site has no potential to support rare or notable invertebrates due to the lack of suitable habitat. Therefore, **Invertebrates are not considered a constraint to the proposed development** and are not discussed further in this report.

3.3.8 Other Notable Fauna

The desk study returned multiple records of other notable fauna within 2km of the site, namely Hedgehog *Erinaceus europaeus* and red squirrel *Sciurus vulgaris*. However, no signs of the presence of those species were observed during the survey and the site offers no suitable habitat to support either species. Consequently, neither **hedgehog nor red squirrel are considered a constraint to the proposed development** and are not discussed further in this report.

3.3.9 Notable Flora

The desk study returned multiple records of plants within 2km of the site, two of which are protected under Schedule 8 of the Wildlife and Countryside Act, 1981 (as amended), namely bluebell and shore dock *Rumex rupestris*. Three are designated as NERC, Section 41 species, namely cornflower *Centaurea cyanus*, purple ramping-fumitory *Fumaria purpurea* and shore dock. Two of the plant species which have been recorded within 2km of the site are named as priority species in the North Merseyside LBAP, namely bluebell and purple ramping-fumitory.

All the rare and notable plants with records returned from the data search within 2km of the site are listed in Table 8 below. Where multiple records of a species were given, only the closest is listed in the table.

Table 8 Rare and notable plants recorded within 2km of the site.

| Common Name | Status* | Approximate Distance (km) and Direction from Site Boundary |
|-------------------------|-----------------|--|
| Bluebell | W&CA Sch8; LBAP | 0.10 ENE |
| Purple Ramping-Fumitory | NERC; LBAP | 0.67 ENE |
| Shore Dock | WCA Sch8; NERC | 1.82 W |
| Cornflower | NERC | 1.97 SSW |

No rare or notable plants were recorded during the survey. The habitats occurring on site are not considered to be potentially suitable for any rare and notable plants to grow on the site. Therefore, **rare and notable plants are not considered to be a potential constraint to the proposed development** and are not discussed further in this report.

3.3.10 Invasive Non-Native Species

The desk study returned multiple records of eight different invasive non-native species of plant, as listed in Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended), within 2km of the site. These were water fern *Azolla filiculoides*, Nuttall's waterweed *Elodea nuttallii*, curly waterweed *Lagarosiphon major*, Himalayan (Indian) balsam *Impatiens glandulifera*, Japanese Knotweed *Reynoutria japonica*, montbretia *Crocsmia aurea*, Pontic rhododendron *Rhododendron ponticum* and Virginia-creeper *Parthenocissus quinquefolia*.

No invasive species of plant were recorded on site or its immediate environs. Invasive Non-native Species **are therefore not considered to be a potential constraint to the proposed development** and are not discussed further in this report.

3.4 Importance of Ecological Features

In line with the CIEEM Guidelines for Preliminary Ecological Appraisal, (2017), and based on the above baseline information, each ecological feature recorded within the study area is considered to have the following importance, using the Methodology as defined in Section 4 of the CIEEM Guidelines for Ecological Impact Assessment (2018):

Table 9 Importance of Ecological Features

| Feature | Importance | Rationale |
|---|---------------|--|
| Mersey Narrows and North Wirral Foreshore SPA and Ramsar | International | A designated Natura 2000 site for birds, especially for foraging wading birds in winter. |
| Mersey Narrows SSSI | National | Important habitats for birds, especially wading birds and cormorants. |
| Melrose Cutting LWS | County | A mosaic of habitats with locally rare plant species. |
| Leeds-Liverpool Canal LWS | County | Supports aquatic vegetation and aquatic bird species that are of importance within the local area. |
| Loop Line LWS | County | Wildlife corridor with a mosaic of habitats and locally notable plant species. |
| Amenity grassland | Negligible | Highly disturbed/managed habitat considered unlikely to support rare or notable floral species. |
| Hard standing | Negligible | No natural habitat or habitat features supported. |
| Nesting birds | Negligible | Potential for very limited nesting of common and widespread bird species. |
| Either: International (incl. European) / National / Regional / County / Local / Negligible Or: Unknown (i.e. further surveys/information needed) | | |

The potential for the proposals to have adverse or beneficial impacts on features assessed as having local importance or above, along with the need for any mitigation or enhancement measures are discussed in detail below.



4.0 Relevant Planning Policy & Legislation

4.1 National Planning Policy Framework

An updated NPPF was issued on 19th February 2019 (Ministry of Housing Communities and Local Government, 2019) and currently supplements government Circular 06/2005, *Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System* (Office of the Deputy Prime Minister, 2005).

Circular 06/2005 states that the presence of protected species is a material consideration in the planning process. Paragraph 170 of the NPPF also states that:

'Planning policies and decisions should contribute to and enhance the natural environment by:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)*
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland*
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate*
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.*

The conservation and enhancement of wildlife is also specifically referenced regarding development within the National Parks or the Broads.

Paragraph 175 then goes on to confirmed that:

When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*



- c) *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- d) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

Regarding EcIA's and HRA's – any sites identified, or required, as compensatory measures for adverse effects on any Natura 2000/habitats site should also be given the same level as protection as the pSPA's and cSAC's themselves. In addition, when an application is being determined, Paragraph 177 clarifies that:

"The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site."

Paragraph 180 is also relevant as;

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:...

- c) *limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.*

4.2 Biodiversity 2020: A strategy for England's Wildlife & Ecosystem Services

Biodiversity 2020 (DEFRA, 2011) replaces the previous UK Biodiversity Action Plan and sets national targets to be achieved. The intent of Biodiversity 2020, however, is much broader than the protection and enhancement of less common species, and is meant to embrace the wider countryside as a whole.

The priority species and habitats considered under Biodiversity 2020 are the SPI & HPI detailed under NERC Act (see Appendix B for further details).

4.3 Local Biodiversity Action Plan

Local Biodiversity Action Plans (LBAPs) identify habitat and species conservation priorities at a local level (typically County by County) and are usually drawn up by a consortium of local Government organisations and conservation charities. Although they are no-longer managed at a national level many are still reviewed and updated at a local level.

The Merseyside LBAP is the relevant document for this site and it contains the following Habitat & Species Action Plans:

Table 10 LBAP SAPs

| Species Action Plans | |
|--|---|
| Corn bunting <i>Emberiza calandra</i> | Dark green fritillary <i>Argynnis aglaja</i> |
| Grey partridge <i>Perdix perdix</i> | Dragonflies <i>Anisoptera</i> |
| Lapwing <i>Vanellus vanellus</i> | Grayling butterfly <i>Hipparchia semele</i> |
| Skylark | Vernal mining-bee <i>Colletes cunicularius</i> |
| Song thrush | Northern dune tiger beetle <i>Cicindela hybrida</i> |
| Urban birds (including house sparrows, house martins <i>Delichon urbicum</i> and swifts <i>Apus apus</i>) | Sandhill rustic moth <i>Luperina nickerlii</i> |
| Bats <i>Chiroptera</i> | Bluebell |
| Brown Hare <i>Lepus europaeus</i> | Dune helleborine <i>Epipactis dunensis</i> |
| Red squirrel | Purple ramping-fumitory <i>Fumaria purpurea</i> |
| Water vole | Isle of Man cabbage <i>Coincya monensis subsp. monensis</i> |
| Common lizard <i>Zootoca vivipara</i> | Petalwort <i>Petalophyllum ralfsii</i> |
| Sand lizard <i>Lacerta agilis</i> | Sand-grass <i>Leymus arenarius</i> |
| Great crested newt | Stoneworts <i>Charales</i> |
| Natterjack toad <i>Epidalea calamita</i> | |

Table 11 LBAP HAPs

| Habitats Action Plans | |
|-----------------------------------|----------------------------|
| Conifer Woodland | Lowland raised bog |
| Lowland mixed broad-leaf woodland | Canals |
| Wet woodland | Ponds |
| Lowland wood pasture and parkland | Reedbeds |
| Urban trees | Coastal saltmarsh |
| Lowland acid grassland | Coastal sand dunes |
| Lowland heathland | Field boundaries |
| Urban grassland | Urban green infrastructure |

It should be noted that the existence of a SAP or HAP does not always infer an elevated level of importance for those features. These plans may be designed to encourage an increase in these habitats/species, rather than to protect a county-scarce feature (for example).

4.4 Local Plan

Liverpool City Council's statutory development plan comprises the **Unitary Development Plan, adopted in 2002**. Policies relevant to the development are listed below;



OE5 - protection of nature conservation sites and features

1. *The City Council will seek to protect the nature conservation interest of open land and the water environment in the City by not permitting development which would:*
 - i. *destroy, fragment or adversely affect directly or indirectly a designated or proposed Special Protection Area (SPA), Ramsar site, or Site of Specific Scientific Interest (SSSI), unless the City Council is satisfied that there is no alternative solution and there are imperative reasons of overriding public interest;*
 - ii. *destroy, fragment or adversely directly or indirectly affect a Site of Nature Conservation Value as identified by the City Council unless it can be clearly demonstrated that there are reasons for the proposal including benefits to the community, which outweigh the need to safeguard the substantive nature conservation value of the site;*
 - iii. *destroy, fragment or adversely affect, directly or indirectly, a Regionally Important Geological /Geomorphological Site (RIGS) unless it can be demonstrated that the benefits of the proposal to the community outweigh the need to safeguard the geological value of the site*
 - iv. *have an adverse effect on legally protected wildlife species; or*
 - v. *destroy, fragment or adversely affect, indirectly or directly, sites with known conservation value in a neighbouring authority area.*
2. *In assessing criteria ii to iv full account will be taken of proposed mitigation measures.*

OE6 - development and nature conservation

In the circumstances where development is permitted on or adjacent to any sites covered by policy OE5, which in the case of the Mersey Estuary will be subject to the most rigorous examination, the City Council will seek to minimise potential damage by:

- i. *requiring developers to undertake a site investigation to identify the nature conservation interest of the site;*
- ii. *requiring developers to set out proposals for the protection and management of the nature conservation value of the site; and*
- iii. *considering the use of conditions and/or planning obligations to safeguard the nature conservation interest and/or provide compensatory measures for any nature conservation interest damaged or destroyed during the development process.*

OE7 - habitat creation and enhancement

1. *The City Council will seek to enhance the nature conservation interest of open land and water courses in the City by:*
 - i. *supporting and initiating proposals for habitat creation and enhancement particularly within Sites of Nature Conservation Value and those other sites which, although do not meet the criteria required to be designated as an SNCV, are considered to be of value for nature conservation;*
 - ii. *supporting proposals which strengthen and enhance wildlife corridors in the City;*
 - iii. *managing its own land, and particularly the City's parks, in a manner more positively beneficial to wildlife and encouraging other landowners to do the same where appropriate;*
 - iv. *encouraging the reopening of culverted water courses where opportunities arise and supporting the Alt 2000 initiative;*
 - v. *encouraging developers to undertake landscaping in an ecologically sensitive manner; and*



- vi. *encouraging and supporting community groups, schools and other organisations to work in partnership with the City Council on habitat creation and enhancement initiatives.*
2. *In addition to the designation of Mull Wood Local Nature Reserve at Croxteth Park, the City Council will seek to designate further Local Nature Reserves (LNRs) in the City and secure appropriate management regimes with initial consideration being given to:*
 - a) *Mill Wood*
 - b) *Otterspool Gorge*
 - c) *Childwall Woods and Fields*
 - d) *Land adjacent to Garston Gas Works*
 - e) *Hillfoot Road and Simpsons Pavilion*
 - f) *Melrose Cutting*
 - g) *Mersey Estuary*
 - h) *Croxteth Country Park (extension to existing Local Nature Reserve)*

At the time of writing the report the **Draft Liverpool Local Plan (2018)** was available to view online and therefore has also been included, with detailed policies listed below. The plan is awaiting examination by the Secretary of State and therefore full weight cannot be given to these emerging policies, in accordance with paragraph 48 of the NPPF.

Chapter 12 of this local plan focuses on 'Green Infrastructure.' This is defined as '*the network of green and blue spaces that lies within the City and provides multiple social, economic and environmental functions.*' (pg. 283). This 'network' includes land in both public and private ownership, comprising the city's 'green wedges', parks, local wildlife sites, allotments, street trees, hedges, cemeteries, private gardens, water spaces (including the River Mersey, Leeds-Liverpool Canal), park lakes and water courses.

Policy GI1 states that '*the recreational function, visual amenity, historic and structural quality and value of the city's green infrastructure resource will be protected and enhanced.*' Specifically, protection will be afforded to:

- a. The green belt, green wedges and the Mersey Estuary SSSI/SPA/Ramsar Site.
- b. The network of city, district, neighbourhood and local parks.
- c. Biodiversity assets, including Local Wildlife Sites (LWS) and Local Nature Reserved (LNR)
- d. Regionally important Geological/Geomorphological Sites (RIGS).
- e. Locally important open spaces and water courses, including amenity spaces and allotments.
- f. Playing fields and pitches.
- g. Recreational routes and the Public Rights of Way network.

Item 2 of Policy G15 states that '*development which may cause direct or indirect significant harm to other designated sites of nature or geological conservation importance, priority habitats, legally protected species and / or priority species will only be permitted on:*

Development which may cause significant harm will only be permitted for:

- **National sites** (Mersey Estuary Ramsar site / Mersey Estuary Site of Special Scientific Interest (SSSI)): where there are no alternatives and where the benefits of development clearly outweigh the impact on the features of the site that make it of special scientific interest and its broader contribution to the national network.
- **Local sites** (i.e. LNR, LWS and RIGS); where the reasons for and the benefits of development clearly outweigh the impact on the nature conservation value of the site and its broader contribution to the Liverpool City Region (LCR) Ecological Network; and
- **Priority habitats / irreplaceable habitats:** where there are wholly exceptional reasons and a suitable compensation strategy exists.



Item 5 of Policy G15 states that '*development proposals which affect sites of nature conservation importance, priority habitats, legally protected species or priority species must be supported by an Ecological Appraisal and include details of avoidance, mitigation and / or compensation where appropriate.*'

Lastly, strategic policy STP3 relates to protecting environmentally sensitive areas, such as Natura 2000 and RAMSAR sites. It states that '*Development proposals which may have an adverse impact will be subject to a Habitat Regulations Assessment at the project level to ensure that any likely significant effects have been assessed, and measures to avoid or mitigate these effects have been identified and are deliverable.*'

4.5 Legislation

Full details of the UK legislation and offences which are relevant to the ecological receptors identified are included in Appendix B. However, based on the findings of our assessment, it is considered that the proposals will need to consider the following legal provisions:

- Harm to a Natura 2000 site
- Disturbance of nesting wild birds



5.0 Discussion

5.1 Designated Sites

Natura 2000 Sites

The Mersey Narrows and North Wirral Foreshore SPA and Ramsar Site is situated 2.7km west of the application site. This is considered sufficiently distant that the proposed construction of the development will have limited impact on the designated site. Furthermore, there are no hydrological connections to the site.

It is also considered unlikely that the important populations of bird species which the SPA and Ramsar designated areas protect would utilise the site for foraging, roosting or breeding, as there are no suitable habitats available on site to support such species.

However, due to the increase in human population as a result of the proposed development there is potential for significant effects on the RAMSAR and SPA through an increase in public pressure from recreation. Therefore, to assess the potential impact a **Stage 1 Habitats Regulations Assessment (HRA) will be required** and a report to inform HRA Stage 1 has been provided as part of this planning application.

Sites of Special Scientific Interest

The Mersey Narrows SSSI is also situated 2.7km west of the site and the proposed development is within the Impact Risk Zone. However, the development is sufficiently distant that the proposed development will have no impact on this SSSI, to which it is not connected hydrologically. Although the site is within the Impact risk zone the development does not qualify for further consultation with Natural England. This is due to the proposed development not corresponding to the described relevant developments listed in the impact risk zone citation.

It is considered unlikely that the important bird species protected by the SSSI would utilise the site for foraging, roosting or breeding, as there are no suitable habitats available on site. Therefore, no further actions are required regarding SSSIs.

Local Wildlife Sites

The Melrose Cutting LWS is situated 1km west of the site at its closest point and is separated from the site by almost continuous urban development. It is considered likely that the proposed development could impact on the LWS, due to an increase in visitor pressure as a result of the increase in population. To offset this pressure the development should include open green spaces within the site to provide a greater supply of recreational space on site. Additionally, there is a total 2,298 hectares of open space within a 10km radius of the application site, that will help relieve recreational pressure further.

The Leeds-Liverpool Canal is situated 1.6km south-west of the site at its closest point and is not connected to it hydrologically. Consequently, it is considered very unlikely that the proposed development would impact on that LWS.

The Liverpool Loop Line LWS is situated 1.9km north-east of the site at its closest point and is separated from the site by a considerable amount of urban development. Consequently, it is considered very unlikely that the proposed development would impact on that linear LWS site.

5.2 Habitats

There are no Habitats of Principal Importance or Priority Habitats present on site.



5.3 Protected & Notable Species

Bats

The site was identified as having negligible potential for roosting and foraging bats therefore no further survey or mitigation is required in relation to this project.

Birds

The site was identified as having low potential to support nesting birds, because of the lack of suitable habitat and the high level of disturbance when football matches take place. However, it is considered possible that common and locally widespread species (such as feral pigeon) may from time to time utilise the stadium for nesting purposes.

All breeding birds, their nests and eggs are protected by the W&CA against intentional disturbance, damage and destruction during the nesting season (generally considered to be March to September inclusive). Therefore, it is recommended that demolition, site clearance and the commencement of construction work should take place outside of the bird nesting season. If this is not possible, then it is strongly recommended that an ECoW conducts a check of the whole site for active bird nesting immediately prior (no more than 24-hours) to the commencement of demolition, clearance, and construction activities. Once this check is complete, a 24-hour window will allow for site works to commence, should no active nests be identified. Should works cease for more than 24 hours, then an additional check for breeding birds may be required.

If a nesting bird is identified, the ECoW will advise on suitable working methods and exclusion zones to restrict works on site. Measures recommended will depend on the nature of the works in that area, as well as the individual bird species identified to be nesting. The suitable working methods advised may result in delays to undertaking site works within specific areas of the site, until the ECoW has advised that all of the chicks have fledged.

Other Fauna

No other protected and notable species of fauna were considered likely to be occur on site. However, it is recommended that, for demolition and construction phases of works, site induction includes the following recommendations to reduce the possible risk of harming or disturbing any protected or notable species during these works:

- Emergency procedure: In the unlikely event that a protected/notable species, evidence of these or its resting place is located during site clearance, then works in that area must cease until further advice has been sought from an ECoW;
- If injured or sickly animals are found then the animal should be admitted to a wildlife hospital or centre for relocation by an ECoW. If the injured or sickly animal is a protected species (e.g. bat) works in this area should cease immediately and an ecologist should be contacted for further advice.

Enhancements

Opportunities should be sought where possible for nature conservation enhancement of the site in line with current policy guidance (NPPF, para. 175, 2019).

Bats

It is recommended that at least **five bat boxes** be erected on the site after construction has been completed, in order to enhance the value of the site for bats. It is recommended that at least two boxes are installed on trees planted in the planned shared green space areas and that the remainder are placed on the sides of the new buildings.



Bat boxes should be sited 3-4 metres high to avoid disturbance by cats, the public or roads. The boxes should also be positioned so as to be high enough to avoid direct illumination, placed out of the way of strong winds and positioned where they can get sun for part of the day. Bats can use boxes as hibernation roosts in winter and as maternity roosts in the summer. Therefore, to create a range of temperature variations the boxes should be installed facing different directions.

Birds

As part of the completed development of the site, it is recommended that a minimum of **five bird boxes** (with varying sized entrance holes) are installed on planted trees and on buildings on site, in order to attract a range of species. These should be sited in separate locations at 4-6m high and where they are not visible or accessible to domestic cats or the general public. The nest boxes could be placed in the planned shared green space areas.

Landscaping

Landscaping is a reserved matter and therefore details are not provided with this outline application. However, recommendations regarding planting include planting of new areas of soft landscaping with insect-attracting, native species of local provenance, wherever possible, to enhance the site's ecology. This approach should apply to any tree/scrub species planted, as well as the ground flora/grass mixes sown and will create valuable habitats for invertebrates. Planting woody species that produce fruit and berries and nectar-producing herbaceous plants that flower at different times of the year would have the greatest benefits for local wildlife, see Appendix C for suitable planting list.

Green open space

Incorporate green open space into the proposed development, encouraging areas for recreation in the form of an amenity grassland for the public to use.



6.0 Summary

6.1 Designated Sites

There are potential impacts on the SPA and RAMSAR due to an increase in public pressure therefore a Stage 1 Habitat Regulations assessment should be carried out.

6.2 Habitats

No protected or notable habitats are present on site.

6.3 Protected & Notable Species

Bats

It is recommended that a minimum of five bat boxes are placed within the site post-construction, ideally in the shared green space areas.

Birds

It is recommended that demolition and site clearance work should be timed to take place outside of the bird nesting season (March to September inclusive). Where this is not possible, an ECoW should attend site to perform a check for nesting birds prior to clearance and the commencement of construction taking place. If nesting birds are identified, the ECoW will advise on suitable working practices in order to protect the birds until the breeding season is over.

As part of the future development of the site, it is recommended that a minimum of five bird boxes (with varying sized entrance holes) are installed on planted trees and buildings on site, in order to attract a range of species. Ideally, they could be placed within the shared green space areas and sited in separate locations at 4-6m high.

Other Fauna

No further surveys for other protected species of fauna are recommended.

Landscaping

It is recommended that the proposed development plant beneficial species that will attract a variety of wildlife to the site.



7.0 References

- Bright, P.W., Morris, P.A. and Mitchell-Jones, A., (2006), *Dormouse Conservation Handbook*, 2nd Edition, English Nature: Peterborough.
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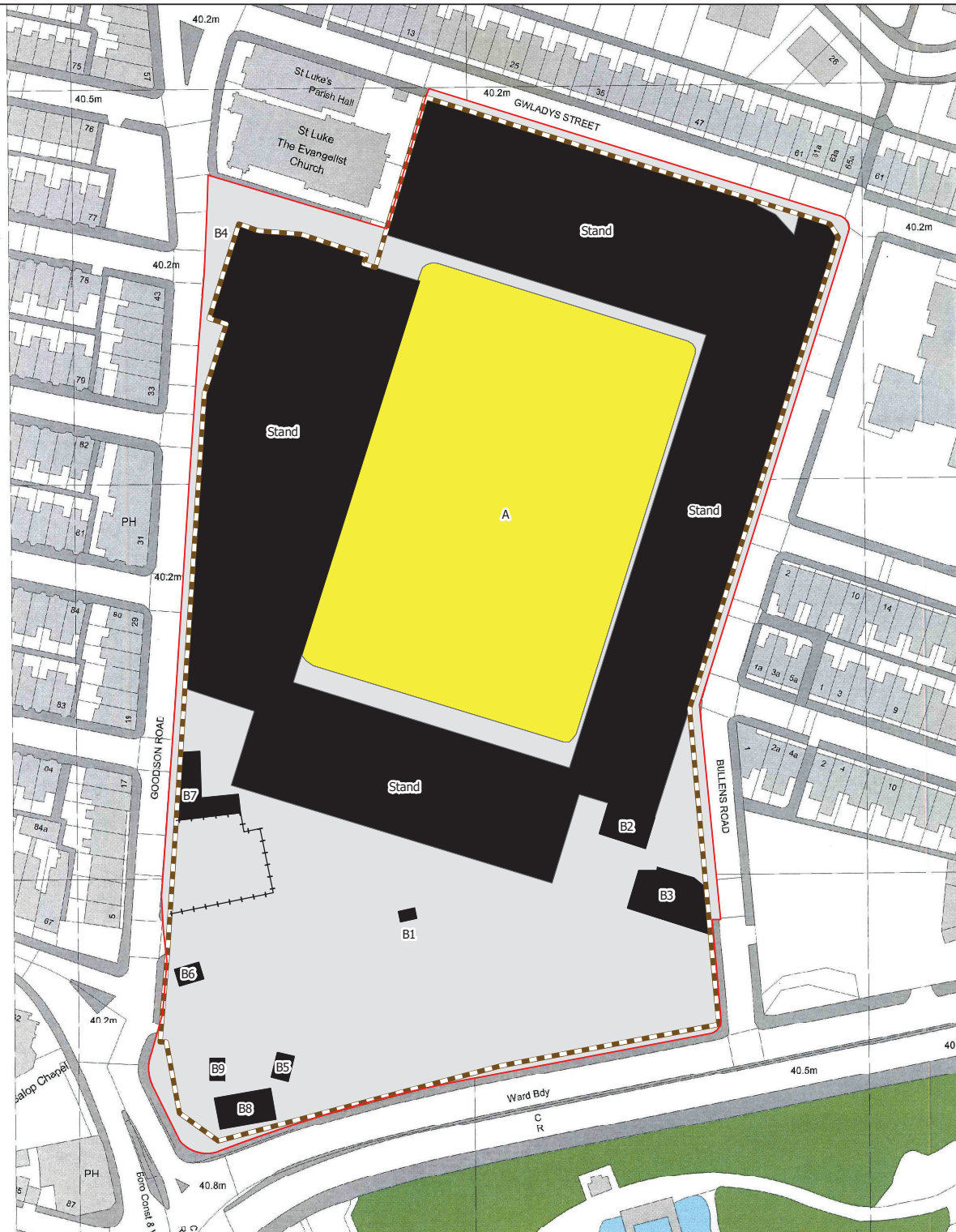
Please note that the legislation which is relevant to this report is not included in the list above, but details are included in Appendix B below.



FIGURES

Figure 1 – Site Location Plan

Figure 2 – Phase 1 Habitat Plan



| Rev | Date | Notes |
|-----|----------|------------------------|
| A | 12/02/20 | Initial map production |

Legend

- Site boundary
- A Amenity grassland
- Buildings
- Hardstanding
- Wall
- Fence

0 12.5 25 50 Metres



Phase 1 Habitat Plan

Goodison Park Everton Stadium Development Limited

| | | | |
|--------------------------|---------------------------|------------------------------|----------------|
| Scale at A3: 1:1,100 | Project No: A100795-1 | Drawing No: Figure 2 | Revision: A |
| Drawn by: Ben Blowers | Drawn date: 12/02/2020 | Approved by: Grace Bishop | |

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Appendix A – Report Conditions

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The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections'. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The "shelf life" of the Report will be determined by a number of factors including; its original purpose, the Client's instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. WYG accept no liability for issues with performance arising from such factors.



Appendix B – Key Legislation

Bern Convention

The *Convention on the Conservation of European Wildlife and Natural Habitats* (the *Bern Convention*) was adopted in Bern, Switzerland in 1979, and was ratified in 1982. Its aims are to protect wild plants and animals and their habitats listed in Appendices 1 and 2 of the Convention, and regulate the exploitation of species listed in Appendix 3. The regulation imposes legal obligations on participating countries to protect over 500 plant species and more than 1000 animals.

To meet its obligations imposed by the Convention, the European Community adopted the *EC Birds Directive* (1979) and the *EC Habitats Directive* (1992 – see below). Since the Lisbon Treaty, in force since 1st December 2009, European legislation has been adopted by the European Union.

Bonn Convention

The Convention on the Conservation of Migratory Species of Wild Animals or 'Bonn Convention' was adopted in Bonn, Germany in 1979 and came into force in 1985. Participating states agree to work together to preserve migratory species and their habitats by providing strict protection to species listed in Appendix I of the Convention. It also establishes agreements for the conservation and management of migratory species listed in Appendix II.

In the UK, the requirements of the convention are implemented via the Wildlife & Countryside Act 1981 (as amended), Wildlife (Northern Ireland) Order 1985 (as amended), Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 and the Countryside and Rights of Way Act 2000 (CRoW).

Habitats Directive

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, or the 'Habitats Directive', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the Habitats Directive is transposed into national law via the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales, and via the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.

Birds Directive

The EC Directive on the Conservation of Wild Birds (79/409/EEC) or 'Birds Directive' was introduced to achieve favourable conservation status of all wild bird species across their distribution range. In this context, the most important provision is the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex 1 of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance.

Conservation of Habitats and Species Regulations 2017 (as amended)

Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I or II of the Habitats Directive respectively) to the European Commission. These sites, if ratified by the European Commission, are then designated as Special Protection Areas (SPAs) within six years. Public bodies must also help preserve, maintain and re-establish habitats for wild birds.

The 2018 amendments mainly related to the impact of the *People Over Wind* decision and some implications arising for neighbourhood plan development and a range of other planning tools including Local Development Orders and Permission in Principle – see here for full details:

<https://www.legislation.gov.uk/uksi/2018/1307/note/made>

The Regulations make it an offence to deliberately capture, kill, disturb or trade in the animals listed in Schedule 2, or pick, uproot, destroy, or trade in the plants listed in Schedule 5 - see below:

| Schedule 2 – European Protected Species of Animals | Schedule 5 – European Protected Species of Plants |
|--|---|
| Horseshoe bats <i>Rhinolophidae</i> - all species | Shore dock <i>Rumex rupestris</i> |
| Common bats <i>Vespertilionidae</i> - all species | Killarney fern <i>Trichomanes speciosum</i> |
| Large Blue Butterfly <i>Maculinea arion</i> | Early gentian <i>Gentianella anglica</i> |
| Wild cat <i>Felis sylvestris</i> | Lady's-slipper <i>Cypripedium calceolus</i> |
| Dolphins, porpoises and whales <i>Cetacea</i> – all sp. | Creeping marsh-wort <i>Apium repens</i> |
| Dormouse <i>Muscardinus avellanarius</i> | Slender naiad <i>Najas flexilis</i> |
| Pool frog <i>Rana lessonae</i> | Fen orchid <i>Liparis loeselii</i> |
| Sand lizard <i>Lacerta agilis</i> | Floating-leaved water plantain <i>Luronium natans</i> |
| Fisher's estuarine moth <i>Gortyna borelii lunata</i> | Yellow marsh saxifrage <i>Saxifraga hirculus</i> |
| Great crested newt <i>Triturus cristatus</i> | |
| Otter <i>Lutra lutra</i> | |
| Lesser whirlpool ram's-horn snail <i>Anisus vorticulus</i> | |
| Smooth snake <i>Coronella austriaca</i> | |
| Sturgeon <i>Acipenser sturio</i> | |
| Natterjack toad <i>Epidalea calamita</i> | |
| Marine turtles <i>Caretta caretta</i> , <i>Chelonia mydas</i> , <i>Lepidochelys kempii</i> , <i>Eretmochelys imbricata</i> , <i>Dermochelys coriacea</i> | |

Wildlife & Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the 'Bern Convention' and the Birds Directive are implemented in the UK. Since it was first introduced, the Act has been amended several times.

The Act makes it an offence to (with exception to species listed in Schedule 2) intentionally:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use; or
- take or destroy an egg of any wild bird.

Or to intentionally do the following to a wild bird listed in Schedule 1:

- disturbs any wild bird while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird.

In addition, the Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5;
- interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places; and
- The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Finally, the Act also makes it an offence (subject to exceptions) to:

- intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore attached to any such wild plant;
- unless an authorised person, intentionally uproot any wild plant not included in Schedule 8; or
- sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Following all amendments to the Act, Schedule 5 'Animals which are Protected' contains a total of 154 species of animal, including several mammals, reptiles, amphibians, fish and invertebrates. Schedule 8 'Plants which are Protected' of the Act, contains 185 species, including higher plants, bryophytes and fungi and lichens. A comprehensive and up-to-date list of these species can be obtained from the JNCC website.

Part 14 of the Act makes unlawful to plant or otherwise cause to grow in the wild any plant which is listed in Part II of Schedule 9.

It is recommended that plant material of these species is disposed of as bio-hazardous waste, and these plants should not be used in planting schemes.

Schedule 1 - Birds which are protected by special penalties

| | | | |
|--------------------------|---------------------------------|-----------------------|--------------------------------|
| Avocet | <i>Recurvirostra avosetta</i> | Osprey | <i>Pandion haliaetus</i> |
| Bee-eater | <i>Merops apiaster</i> | Owl, Barn | <i>Tyto alba</i> |
| Bittern | <i>Botaurus stellaris</i> | Owl, Snowy | <i>Nyctea scandiaca</i> |
| Bittern, Little | <i>Ixobrychus minutus</i> | Peregrine | <i>Falco peregrinus</i> |
| Bluethroat | <i>Luscinia svecica</i> | Petrel, Leach's | <i>Oceanodroma leucorhoa</i> |
| Brambling | <i>Fringilla montifringilla</i> | Phalarope, Red-necked | <i>Phalaropus lobatus</i> |
| Bunting, Cirl | <i>Emberiza cirlus</i> | Plover, Kentish | <i>Charadrius alexandrinus</i> |
| Bunting, Lapland | <i>Calcarius lapponicus</i> | Plover, Little Ringed | <i>Charadrius dubius</i> |
| Bunting, Snow | <i>Plectrophenax nivalis</i> | Quail, Common | <i>Coturnix coturnix</i> |
| Buzzard, Honey | <i>Pernis apivorus</i> | Redstart, Black | <i>Phoenicurus ochruros</i> |
| Capercaillie | <i>Tetrao urogallus</i> | Redwing | <i>Turdus iliacus</i> |
| Chough | <i>Pyrrhocorax pyrrhocorax</i> | Rosefinch, Scarlet | <i>Carpodacus erythrinus</i> |
| Corncrake | <i>Crex crex</i> | Ruff | <i>Philomachus pugnax</i> |
| Crake, Spotted | <i>Porzana porzana</i> | Sandpiper, Green | <i>Tringa ochropus</i> |
| Crossbills (all species) | <i>Loxia</i> | Sandpiper, Purple | <i>Calidris maritima</i> |
| Curlew, Stone | <i>Burhinus oedipnemos</i> | Sandpiper, Wood | <i>Tringa glareola</i> |
| Divers (all species) | <i>Gavia</i> | Scaup | <i>Aythya marila</i> |
| Dotterel | <i>Charadrius morinellus</i> | Scoter, Common | <i>Melanitta nigra</i> |
| Duck, Long-tailed | <i>Clangula hyemalis</i> | Scoter, Velvet | <i>Melanitta fusca</i> |
| Eagle, Golden | <i>Aquila chrysaetos</i> | Serim | <i>Serinus serinus</i> |
| Eagle, White-tailed | <i>Haliaetus albicilla</i> | Shorelark | <i>Eremophila alpestris</i> |
| Falcon, Gyr | <i>Falco rusticolus</i> | Shrike, Red-backed | <i>Lanius collurio</i> |
| Fieldfare | <i>Turdus pilaris</i> | Spoonbill | <i>Platalea leucorodia</i> |
| Firecrest | <i>Regulus ignicapillus</i> | Stilt, Black-winged | <i>Himantopus himantopus</i> |
| Garganey | <i>Anas querquedula</i> | Stint, Temminck's | <i>Calidris temminckii</i> |

| | | | |
|---|------------------------------------|---------------------------------------|--|
| Godwit, Black-tailed | <i>Limosa limosa</i> | Swan, Bewick's | <i>Cygnus bewickii</i> |
| Goshawk | <i>Accipiter gentilis</i> | Swan, Whooper | <i>Cygnus cygnus</i> |
| Grebe, Black-necked | <i>Podiceps nigricollis</i> | Tern, Black | <i>Chlidonias niger</i> |
| Grebe, Slavonian | <i>Podiceps auritus</i> | Tern, Little | <i>Sterna albifrons</i> |
| Greenshank | <i>Tringa nebularia</i> | Tern, Roseate | <i>Sterna dougallii</i> |
| Gull, Little | <i>Larus minutus</i> | Tit, Bearded | <i>Panurus biarmicus</i> |
| Gull, Mediterranean | <i>Larus melanocephalus</i> | Tit, Crested | <i>Parus cristatus</i> |
| Harriers (all species) | <i>Circus</i> | Tree-creeper, Short-toed | <i>Certhia brachydactyla</i> |
| Heron, Purple | <i>Ardea purpurea</i> | Warbler, Cetti's | <i>Cettia cetti</i> |
| Hobby | <i>Falco subbuteo</i> | Warbler, Dartford | <i>Sylvia undata</i> |
| Hoopoe | <i>Upupa epops</i> | Warbler, Marsh | <i>Acrocephalus palustris</i> |
| Kingfisher | <i>Alcedo atthis</i> | Warbler, Savi's | <i>Locustella luscinioides</i> |
| Kite, Red | <i>Milvus milvus</i> | Whimbrel | <i>Numenius phaeopus</i> |
| Merlin | <i>Falco columbarius</i> | Woodlark | <i>Lullula arborea</i> |
| Oriole, Golden | <i>Oriolus oriolus</i> | Wryneck | <i>Jynx torquilla</i> |
| Animal (Vertebrate) Species Listed in Schedule 5 (full legal protection at all times) | | | |
| Horseshoe Bats (all species) | <i>Rhinolophidae</i> | Newt – Great Crested | <i>Triturus cristatus</i> |
| Typical Bats (all species) | <i>Vespertilionidae</i> | Snake – Smooth | <i>Coronella austriaca</i> |
| Dolphin – Bottle-nosed | <i>Tursiops truncatus (tursio)</i> | Toad, Natterjack | <i>Epidalea calamita</i> |
| Dolphin – Common | <i>Delphinus delphis</i> | Turtles – All Species | <i>Cheloniidae</i> & <i>Dermochelyidae</i> |
| Dormouse – Hazel | <i>Muscardinus avellanarius</i> | Basking Shark | <i>Cetorhinus maximus</i> |
| Pine Marten | <i>Martes martes</i> | Burbot | <i>Lota lota</i> |
| Porpoise – Harbour | <i>Phocaena phocaena</i> | Goby – Giant | <i>Gobius cobitis</i> |
| Otter – Eurasian | <i>Lutra lutra</i> | Goby – Couch's | <i>Gobius couchii</i> |
| Squirrel – Red | <i>Sciurus vulgaris</i> | Seahorse – Short-snouted ¹ | <i>Hippocampus hippocampus</i> |
| Walrus | <i>Odobenus rosmarus</i> | Seahorse – Spiny | <i>Hippocampus guttulatus</i> |
| Water Vole | <i>Arvicola amphibius</i> | Sturgeon | <i>Acipenser sturio</i> |
| Whales – All Species | <i>Cetacea</i> | Vendace | <i>Coregonus albula</i> |
| Wildcat | <i>Felis sylvestris</i> | Whitefish | <i>Coregonus lavaretus</i> |
| Lizard – Sand | <i>Lacerta agilis</i> | | |
| Animal (Vertebrate) Species Protected under Section 9 (1) part: Killing and Injuring & Section 9 (5) Sale | | | |
| Adder | <i>Vipera berus</i> | Slow-worm | <i>Anguis fragilis</i> |
| Lizard – Viviparous | <i>Zootoca vivipara</i> | Snake – Grass | <i>Natrix helvetica (natrix)</i> |
| Animals (Vertebrate) Species Protected under Section 9 (5) Sale only | | | |
| Frog – common | <i>Rana temporaria</i> | Newt – Smooth | <i>Lissotriton vulgaris</i> |
| Newt – Palmate | <i>Lissotriton helvetica</i> | Toad – Common | <i>Bufo bufo</i> |
| Animals (Vertebrate) Species Protected under Section 9 (1) (4)(a): Killing, Injuring & Taking and Damage / Destruction of place of shelter / protection only | | | |
| Allis Shad | <i>Alosa alosa</i> | Shark – Angel | <i>Squatina squatina</i> |
| Twaite Shad | <i>Alosa fallax</i> | | |
| Butterflies & Moths – Full Protection under Schedule 5² at all times | | | |
| High brown fritillary | <i>Argynnis adippe</i> | Fisher's Estuarine Moth | <i>Gortyna borellii</i> |
| Large Blue | <i>Maculinea arion</i> | Barberry Carpet | <i>Pareulype berberata</i> |

¹ Both sea horse species are protected in England only.

² Viper's Bugloss Moth *Hadena irregularis* was removed from Schedule 5 in 1996 as it is believed to be extinct.



| | | | |
|---|------------------------------------|---|--|
| Heath Fritillary | <i>Mellicta athalea</i> | Black-veined Moth | <i>Siona lineata</i> |
| Marsh Fritillary | <i>Eurodryas aurinia</i> | Sussex Emerald | <i>Thalera fimbrialis</i> |
| Swallowtail | <i>Papilio machaon britannicus</i> | Essex Emerald | <i>Thetidia smaragdalis</i> |
| Large Copper | <i>Lycaena dispar</i> | Fiery Clearwing | <i>Bembecia chrysidiformis</i> |
| Reddish-buff Moth | <i>Acosmetia caliginosa</i> | New-Forest Burnet | <i>Zygaena viciae</i> |
| Butterflies – Protected under Section 9 (5) Sale Only | | | |
| Purple Emperor | <i>Apatura iris</i> | Adonis Blue | <i>Lysandra bellargus</i> |
| Northern Brown Argus | <i>Aricia artaxerxes</i> | Chalkhill Blue | <i>Lysandra coridon</i> |
| Pearl-bordered Fritillary | <i>Boloria euphrosyne</i> | Glanville Fritillary | <i>Melitaea cinxia</i> |
| Chequered Skipper | <i>Carterocephalus palaemon</i> | Large Tortoiseshell | <i>Nymphalis polychloros</i> |
| Large Heath | <i>Coenonympha tullia</i> | Silver-studded Blue | <i>Plebejus argus</i> |
| Small Blue | <i>Cupido minimus</i> | Black Hairstreak | <i>Strymonidia pruni</i> |
| Mountain Ringlet | <i>Erebia epiphron</i> | White-letter Hairstreak | <i>Strymonidia w-album</i> |
| Duke of Burgundy | <i>Hamearis lucina</i> | Brown Hairstreak | <i>Thecla betulae</i> |
| Silver-spotted Skipper | <i>Hesperia comma</i> | Lulworth Skipper | <i>Thymelicus acteon</i> |
| Wood White | <i>Leptidea sinapis</i> | | |
| Other Invertebrates – Full Protection under Schedule 5 at all times | | | |
| Rainbow Leaf-beetle | <i>Chrysolina cerealis</i> | Tadpole Shrimp | <i>Triops cancriformis</i> |
| Spangled Diving-beetle | <i>Graphopterus zonatus</i> | Trembling Sea-mat | <i>Victorella pavidia</i> |
| Lesser Silver Water-beetle | <i>Hydrochara caraboides</i> | De Folin's Lagoon Snail | <i>Caecum armoricum</i> |
| Moccas Beetle | <i>Hypebaeus flavipes</i> | Sandbowl Snail | <i>Catinella arenaria</i> |
| Violet Click-beetle | <i>Limoniscus violaceus</i> | Freshwater Pearl Mussel | <i>Margaritifera margaritifera</i> |
| Bembridge Beetle | <i>Parcymus aeneus</i> | Glutinous Snail | <i>Myxas glutinosa</i> |
| New Forest Cicada | <i>Cicadetta montana</i> | Lagoon Snail | <i>Paludinella littorina</i> |
| Wart-Biter | <i>Decticus verrucivorus</i> | Lagoon Sea Slug | <i>Tenellia adspersa</i> |
| Mole-Cricket | <i>Gryllotalpa gryllotalpa</i> | Northern Hatchet-shell | <i>Thyasira gouldi</i> |
| Field-Cricket | <i>Gryllus campestris</i> | Tentacled Lagoon-worm | <i>Alkmaria romijni</i> |
| Norfolk Hawker Dragonfly | <i>Aeshna isosceles</i> | Lagoon Sand-worm | <i>Armandia cirrhosa</i> |
| Southern Damselfly | <i>Coenagrion mercuriale</i> | Medicinal Leech | <i>Hirudo medicinalis</i> |
| Fen Raft Spider | <i>Dolomedes fimbriatus</i> | Marine Hydroid | <i>Clavopsella navis</i> |
| Ladybird Spider | <i>Eresus niger (cinaberinus)</i> | Ivell's Sea Anemone | <i>Edwardsia ivelli</i> |
| Fairy Shrimp | <i>Chirocephalus diaphanus</i> | Starlet Sea Anemone | <i>Nematosella vectensis</i> |
| Lagoon Sand Shrimp | <i>Gammarus insensibilis</i> | Atlantic Stream (White-clawed) Crayfish | <i>Austropotamobius pallipes</i> |
| Other Invertebrates Protected under Section 9 (1) Possession & 9 (2) (5) Sale only | | | |
| Stag Beetle | <i>Lucanus cervus</i> | Roman Snail ³ | <i>Helix pomatia</i> |
| Fan Mussel | <i>Atrina fragilis</i> | Pink Sea-fan | <i>Eunicella verrucosa</i> |
| Other Invertebrates Protected under Section 9 (4) (a) Damage / Destruction of Place of Shelter / Protection only | | | |
| Mire Pill Beetle | <i>Curimopsis nigrita</i> | | |
| Vascular Plant Species - Full Protection under Schedule 8 at all times (previous Scientific name in brackets) | | | |
| Adder's-tongue Least | <i>Ophioglossum lusitanicum</i> | Lily – Snowdon | <i>Gagea serotina (Lloydia serotina)</i> |
| Alison- Small | <i>Alyssum alyssoides</i> | Marsh-mallow – Rough | <i>Malva setigera (Althaea hirsuta)</i> |

³ England only

| | | | |
|-------------------------|---|-----------------------------|---|
| Broomrape – Bedstraw | <i>Orobanche caryophyllacea</i> | Milk-parsley – Cambridge | <i>Selinum carvifolia</i> |
| Broomrape – Oxtongue | <i>Orobanche picridis</i> | Mudwort – Welsh | <i>Limosella aquatica</i> |
| Broomrape – Thistle | <i>Orobanche reticulata</i> ⁴ | Naiad – Holly-leaved | <i>Najas marina</i> |
| Cabbage – Lundy | <i>Coincya wrightii</i> (<i>Rhynchosinapis wrightii</i>) | Orache – Stalked | <i>Atriplex pedunculata</i> (<i>Halimione pedunculata</i>) |
| Calamint – Wood | <i>Clinopodium menthifolium</i> (<i>Calamintha sylvatica</i>) | Orchid – Early Spider | <i>Ophrys sphegodes</i> |
| Catchfly – Alpine | <i>Silene suecica</i> (<i>Lychnis alpina</i>) | Orchid – Ghost | <i>Epipogium aphyllum</i> |
| Centaury – Slender | <i>Centaureum tenuiflorum</i> | Orchid – Lapland Marsh | <i>Dactylorhiza lapponica</i> |
| Cinquefoil – Rock | <i>Potentilla rupestris</i> | Orchid – Late Spider | <i>Ophrys fuciflora</i> |
| Clary – Meadow | <i>Salvia pratensis</i> | Orchid – Lizard | <i>Himantoglossum hircinum</i> |
| Club-rush – Triangular | <i>Schoenoplectus triquetus</i> (<i>Scirpus triquetus</i>) | Orchid – Military | <i>Orchis militaris</i> |
| Colt's-foot – Purple | <i>Homogyne alpina</i> | Orchid – Monkey | <i>Orchis simia</i> |
| Cotoneaster – Wild | <i>Cotoneaster cambricus</i> (<i>C. integerrimus</i>) | Pear – Plymouth | <i>Pyrus cordata</i> |
| Cotton-grass – Slender | <i>Eriophorum gracile</i> | Pennycress – Perfoliate | <i>Microthlaspi perfoliatum</i> (<i>Thlaspi perfoliatum</i>) |
| Cow-wheat – Field | <i>Melampyrum arvense</i> | Pennyroyal | <i>Mentha pulegium</i> |
| Crocus – Sand | <i>Romulus columnae</i> | Pigmyweed | <i>Crassula aquatica</i> |
| Cudweed – Broad-leaved | <i>Filago pyramidata</i> | Pine - Ground | <i>Ajuga chamaepitys</i> |
| Cudweed – Jersey | <i>Gnaphalium luteoalbum</i> | Pink – Cheddar | <i>Dianthus gratianopolitanus</i> |
| Cudweed – Red-tipped | <i>Filago lutescens</i> | Pink – Childing | <i>Petrorhagia nanteuillii</i> |
| Cut-grass | <i>Leersia oryzoides</i> | Ragwort – Fen | <i>Jacobaea paludosa</i> (<i>Senecio paludosa</i>) |
| Deptford Pink | <i>Dianthus armeria</i> | Ramping-fumitory – Martin's | <i>Fumaria reuteri</i> (<i>F. martinii</i>) |
| Diapensia | <i>Diapensia lapponica</i> | Rampion – Spiked | <i>Phyteuma spicata</i> |
| Eryngo – Field | <i>Eryngium campestre</i> | Restharrow – Small | <i>Ononis reclinata</i> |
| Fern – Dickie's-bladder | <i>Cystopteris dickieana</i> | Rock-cress – Alpine | <i>Arabis alpina</i> |
| Fleabane – Alpine | <i>Erigeron borealis</i> | Rock-cress – Bristol | <i>Arabis scabra</i> |
| Fleabane – Small | <i>Pulicaria vulgaris</i> | Sandwort – Norwegian | <i>Arenaria norvegica</i> ⁵ |
| Galingale – Brown | <i>Cyperus fuscus</i> | Sandwort – Teesdale | <i>Minuartia stricta</i> |
| Gentian – Alpine | <i>Gentiana nivalis</i> | Saxifrage – Drooping | <i>Saxifraga cernua</i> |
| Gentian - Dune | <i>Gentianella amarella</i> subsp. <i>occidentalis</i> (<i>Gentianella uliginosa</i>) | Saxifrage – Tufted | <i>Saxifraga cespitosa</i> |
| Gentian – Fringed | <i>Gentianopsis ciliata</i> (<i>Gentianella ciliata</i>) | Solomon's-seal – Whorled | <i>Polygonatum verticillatum</i> |
| Gentian - Spring | <i>Gentiana verna</i> | Sow-thistle – Alpine | <i>Cicerbita alpina</i> |
| Germander – Cut-leaved | <i>Teucrium botrys</i> | Spearwort – Adder's-tongue | <i>Ranunculus ophioglossifolius</i> |
| Germander – Water | <i>Teucrium scordium</i> | Speedwell – Fingered | <i>Veronica triphyllos</i> |
| Gladiolus – Wild | <i>Gladiolus illyricus</i> | Speedwell – Spiked | <i>Veronica spicata</i> ⁶ |
| Goosefoot – Stinking | <i>Chenopodium vulvaria</i> | Spike-rush – Dwarf | <i>Eleocharis parvula</i> |

⁴ The Weeds Act 1959 does not apply to thistles *Cirsium* & *Carduus* species supporting this broomrape.

⁵ All subspecies occurring in the UK

⁶ Both subspecies: *spicata* & *hybrida*



| | | | |
|--|--|------------------------------------|---|
| Grass-poly | <i>Lythrum hyssopifolia</i> | South-stack Fleawort | <i>Tephrosia integrifolia</i> <i>ssp. maritima</i> |
| Hare's-ear – Sick- leaved | <i>Bupleurum falcatum</i> | Star-of-Bethlehem – Early | <i>Gagea bohemica</i> |
| Hare's-ear – Small | <i>Bupleurum baldense</i> | Starfruit | <i>Damasonium alisma</i> |
| Hawk's-beard – Stinking | <i>Crepis foetida</i> | Strapwort | <i>Corrigiola littoralis</i> |
| Hawkweed – Northroe | <i>Hieracium northroense</i> | Violet – Fen | <i>Viola persicifolia</i> |
| Hawkweed – Shetland | <i>Hieracium zetlandicum</i> | Viper's-grass | <i>Scorzonera humilis</i> |
| Hawkweed – Weak- leaved | <i>Hieracium attenuatifolium</i> | Water-plantain – Ribbon- leaved | <i>Alisma gramineum</i> |
| Heath – Blue | <i>Phyllodoce caerulea</i> | Wood-sedge – Starved | <i>Carex depauperata</i> |
| Helleborine – Red | <i>Cephalanthera rubra</i> | Woodsia – Alpine | <i>Woodsia alpina</i> |
| Horsetail – Branched | <i>Equisetum ramosissimum</i> | Woodsia – Oblong | <i>Woodsia ilvensis</i> |
| Hound's-tongue – Green | <i>Cynoglossum germanicum</i> | Wormwood – Field | <i>Artemisia campestris</i> |
| Knawel – Perennial | <i>Scleranthus perennis</i> ⁷ | Woundwort - Downy | <i>Stachys germanica</i> |
| Knot-grass – Sea | <i>Polygonum maritimum</i> | Woundwort – Limestone | <i>Stachys alpina</i> |
| Leek – Round-headed | <i>Allium sphaerocephalon</i> | Yellow-rattle – Greater | <i>Rhinanthus angustifolius</i> |
| Lettuce – Least | <i>Lactuca saligna</i> | | |
| Vascular Plant Species – Partial Protection under Section 13 (2) Protection from commercial exploitation and sale | | | |
| Bluebell | <i>Hyacinthoides non-scripta</i> | | |
| Bryophytes – Full Protection under Schedule 8 at all times | | | |
| Anamodon – Long- leaved | <i>Anomodon langifolius</i> | Flamingo Moss | <i>Desmatodon cernuus</i> |
| Blackwort | <i>Southbya nigrella</i> | Frostwort | <i>Gymnomitrium apiculatum</i> |
| Crystalwort – Lizard | <i>Riccia bifurca</i> | Glaucous Beard Moss | <i>Barbula glauca</i> |
| Earwort – Marsh | <i>Jamesoniella undulifolia</i> | Green Shield Moss | <i>Buxbaumia viridis</i> |
| Feathermoss – Polar | <i>Hygrohypnum polare</i> | Hair Silk Moss | <i>Plagiothecium piliferum</i> |
| Flapwort – Norfolk | <i>Leiocolea rutheana</i> | Knothole Moss | <i>Zygodon forsteri</i> |
| Grimmia – Blunt-leaved | <i>Grimmia unicolor</i> | Large Yellow Feather Moss | <i>Scorpidium turgescens</i> |
| Petalwort | <i>Petalophyllum ralfsii</i> | Millimetre Moss | <i>Micromitrium tenerum</i> |
| Lindenberg's Leafy- Liverwort | <i>Adelanthus lindenbergianus</i> | Multi-fruited River Moss | <i>Cryphaea lamyana</i> |
| Feather-moss Slender Green | <i>Drepanocladus vernicosus</i> | Nowell's Limestone Moss | <i>Zygodon gracilis</i> |
| Alpine Copper-Moss | <i>Mielichhoferia melichhoferia</i> | Rigid Apple Moss | <i>Bartramia stricta</i> |
| Baltic Bog-Moss | <i>Sphagnum balticum</i> | Round-leaved feather Moss | <i>Rhynchostegium rotundifolium</i> |
| Blue Dew-Moss | <i>Saelania glaucescens</i> | Schleicher's Thread Moss | <i>Bryum schleicheri</i> |
| Blunt-leaved bristle- Moss | <i>Orthotrichum obtusifolium</i> | Triangular Pygmy Moss | <i>Acaulon triquetrum</i> |
| Bright-Green Cave-Moss | <i>Cyclodictyon laetevirens</i> | Turpswort | <i>Geocalyx graveolens</i> |
| Cordate Beard Moss | <i>Barbula cordata</i> | Vaucher's Feather Moss | <i>Hypnum vaucheri</i> |
| Cornish Path Moss | <i>Ditrichum cornubicum</i> | Western Rustwort | <i>Marsupella profunda</i> |
| Derbyshire Feather Moss | <i>Thamnobryum angustifolium</i> | | |
| Stoneworts – Full Protection under Schedule 8 at all times | | | |
| Bearded Stonewort | <i>Chara canescens</i> | Foxtail Stonewort | <i>Lamprothamnium papulosum</i> |

⁷ Includes both subspecies: *perennis* & *prostratus*

| Lichens – Full Protection under Schedule 8 at all times | | | | | |
|---|----------|-----------------------------------|--|-----|--|
| New Forest Lichen | Beech | <i>Enterographa elaborata</i> | Forked Hair Lichen | | <i>Bryoria furcellata</i> |
| Snow Caloplaca | | <i>Caloplaca nivalis</i> | Golden Hair Lichen | | <i>Teloschistes flavicans</i> |
| Tree Catapyrenium | | <i>Catapyrenium psoromoides</i> | Orange-fruited Lichen | Elm | <i>Caloplaca luteoalba</i> |
| Laurer's Catillaria | | <i>Catillaria laurai</i> | River Jelly Lichen | | <i>Collema dichotomum</i> |
| Convuluted Cladonia | | <i>Cladonia convoluta</i> | Starry Breck Lichen | | <i>Buellia asterella</i> |
| Upright Cladonia | Mountain | <i>Cladonia stricta</i> | Caledonia Pannaria | | <i>Pannaria ignobilis</i> |
| Goblin Lights | | <i>Catolechia wahlenbergii</i> | New Forest Parmelia | | <i>Parmelia minarum</i> |
| Elm Gyalecta | | <i>Gyalecta ulmi</i> | Oil Stain Parmentaria | | <i>Parmentaria chilensis</i> |
| Tarn Lecanora | | <i>Lecanora archariana</i> | Southern Grey Physcia | | <i>Physcia tribacioides</i> |
| Copper Lecidea | | <i>Lecidea inops</i> | Ragged Pseudo-cyphellaria | | <i>Pseudocyphellaria lacerata</i> |
| Arctic Kidney Lichen | | <i>Nephroma arcticum</i> | Rusty Alpine Psora | | <i>Psora rubiformis</i> |
| Ciliate Strap Lichen | | <i>Heterodermia leucomelos</i> | Rock Nail | | <i>Calicium corynellum</i> |
| Coralloid Rosette Lichen | | <i>Heterodermia propagulifera</i> | Serpentine Selanopsora | | <i>Selanopsora liparina</i> |
| Ear-lobed Dog Lichen | | <i>Peltigera lepidophora</i> | Sulphur Tresses | | <i>Alectoria ochroleuca</i> |
| Lichens – Partial Protection under Section 13 (2) Commercial Exploitation and Sale Only | | | | | |
| Tree Lungwort | | <i>Lobaria pulmonaria</i> | | | |
| Fungi – Full Protection under Schedule 8 at all times | | | | | |
| Royal Bolete | | <i>Boletus regius</i> | Oak Polypore | | <i>Buglossosporus pulvinus</i> |
| Hedgehog Fungus | | <i>Hericium erinaceum</i> | Sandy Stilt Ball | | <i>Battaria phalloides</i> |
| Invasive plant species listed in Schedule 9 | | | | | |
| Australian swamp stonecrop or New Zealand pygmyweed | | <i>Crassula helmsii</i> | Japanese rose | | <i>Rosa rugosa</i> |
| Californian red seaweed | | <i>Pilea californica</i> | Japanese seaweed | | <i>Sargassum muticum</i> |
| Curly waterweed | | <i>Lagarosiphon major</i> | Laver seaweeds (except native species) | | <i>Porphyra</i> spp |
| Duck potato | | <i>Sagittaria latifolia</i> | Parrot's-feather | | <i>Myriophyllum aquaticum</i> |
| Entire-leaved cotoneaster | | <i>Cotoneaster integrifolius</i> | Perfoliate alexanders | | <i>Smyrniolum perfoliatum</i> |
| False Virginia creeper | | <i>Parthenocissus inserta</i> | Pontic rhododendron | | <i>Rhododendron ponticum</i> |
| Fanwort or Carolina water-shield | | <i>Cabomba caroliniana</i> | Purple dewplant | | <i>Disphyma crassifolium</i> |
| Few-flowered garlic | | <i>Allium paradoxum</i> | Red algae | | <i>Grateloupia luxurians</i> |
| Floating pennywort | | <i>Hydrocotyle ranunculoides</i> | Rhododendron | | <i>Rhododendron ponticum</i> × <i>Rhododendron maximum</i> |
| Floating water primrose | | <i>Ludwigia peploides</i> | Small-leaved cotoneaster | | <i>Cotoneaster microphyllus</i> |
| Giant hogweed | | <i>Heracleum mantegazzianum</i> | Three-cornered garlic | | <i>Allium triquetrum</i> |
| Giant kelp | | <i>Macrocystis</i> spp. | Variegated yellow archangel | | <i>Lamiastrum galeobdolon</i> subsp. <i>argentatum</i> |
| Giant knotweed | | <i>Fallopia sachalinensis</i> | Virginia creeper | | <i>Parthenocissus quinquefolia</i> |
| Giant rhubarb | | <i>Gunnera tinctoria</i> | Wakame | | <i>Undaria pinnatifida</i> |
| Giant salvinia | | <i>Salvinia molesta</i> | Wall cotoneaster | | <i>Cotoneaster horizontalis</i> |
| Green seafringers | | <i>Codium fragile</i> | Water fern | | <i>Azolla filiculoides</i> |
| Himalayan cotoneaster | | <i>Cotoneaster simonsii</i> | Water hyacinth | | <i>Eichhornia crassipes</i> |
| Hollyberry cotoneaster | | <i>Cotoneaster bullatus</i> | Water lettuce | | <i>Pistia stratiotes</i> |



| | | | | |
|---------------------------|-----------|--|----------------|------------------------------|
| Hooked seaweed | asparagus | <i>Asparagopsis armata</i> | Water primrose | <i>Ludwigia grandiflora</i> |
| Hottentot fig | | <i>Carpobrotus edulis</i> | Water primrose | <i>Ludwigia uruguayensis</i> |
| Hybrid knotweed | | <i>Fallopia japonica</i> × <i>Fallopia sachalinensis</i> | Waterweeds | <i>Elodea</i> spp. |
| Indian (Himalayan) balsam | | <i>Impatiens glandulifera</i> | Yellow azalea | <i>Rhododendron luteum</i> |
| Japanese knotweed | | <i>Reynoutria japonica</i> | | |

Protection of Badgers Act 1992

The main legislation protecting badgers in England and Wales is the Protection of Badgers Act 1992 (the 1992 Act). Under the 1992 Act it is an offence to: wilfully kill, injure, take or attempt to kill, injure or take a badger; dig for a badger; interfere with a badger sett by, damaging a sett or any part thereof, destroying a sett, obstructing access to a sett, causing a dog to enter a sett or disturbing a badger while occupying a sett.

The 1992 Act defines a badger sett as: "any structure or place which displays signs indicating current use by a badger"

Natural Environment and Rural Communities Act 2006

Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of Habitats and Species which are of Principal Importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal (e.g. planning) functions. The S41 list includes 65 Habitats of Principal Importance and 1,150 Species of Principal Importance.

Hedgerow Regulations 1997

The Hedgerow Regulations were made under Section 97 of the Environment Act 1995 and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.



Birds of Conservation Concern

This is a review of the status of all birds occurring regularly in the United Kingdom. It is regularly updated and is prepared by leading bird conservation organisations, including the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).

The latest report was produced in 2015 (Eaton *et al*, 2015) and identified 67 red list species, 96 amber species, and 81 green species. The criteria are complex, but generally:

- **Red list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of more than 50% in the last 25 years.
- **Amber list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of between 25% and 50% in the last 25 years. Species that have a UK breeding population of less than 300 or a non-breeding population of less than 900 individuals are also included, together with those whose 50% of the population is localised in 10 sites or fewer and those whose 20% of the European population is found in the UK.
- **Green list** species are all regularly occurring species that do not qualify under any of the red or amber criteria are green listed

Global IUCN Red List

The International Union for Conservation of Nature (IUCN) Threatened Species was devised to provide a list of those species that are most at risk of becoming extinct globally. It provides taxonomic, conservation status and distribution information about threatened taxa around the globe.

The system catalogues threatened species into groups of varying levels of threat, which are: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CE), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE). Criteria for designation into each of the categories is complex, and consider several principles.

Local Biodiversity Action Plan (LBAP)

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level), and are usually drawn up by a consortium of local Government organisations and conservation charities.

Some LBAP's may also include Habitat Action Plans (HAP) and/or Species Action Plans (SAP), which are used to guide and inform the local decision making process.

Wild Mammals (Protection) Act 1996

This Act offers protects a form of protection to all wild species of mammals, irrespective of other legislation, and focussed on animal welfare, rather than conservation.

Unless covered by one of the exceptions, a person is guilty of an offence if he mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering.

It's application is typically restricted to preventing deliberate harm to wildlife (in general) during construction works etc.

Appendix C – Wildlife Attracting Plant Species

Table D1: Trees, shrubs and climbers

| Common name | Scientific name |
|--------------|------------------------------|
| Bramble | <i>Rubus fruticosus</i> |
| Buddleia | <i>Buddleja sp.</i> |
| Common alder | <i>Alnus glutinosa</i> |
| Dog rose | <i>Rosa canina</i> |
| Elder | <i>Sambucus sp.</i> |
| English oak | <i>Quercus robur</i> |
| Gorse | <i>Ulex sp.</i> |
| Guelder rose | <i>Viburnum opulus</i> |
| Hawthorn | <i>Crataegus sp.</i> |
| Hazel | <i>Corylus sp.</i> |
| Honeysuckle | <i>Lonicera periclymenum</i> |
| Hornbeam | <i>Carpinus sp.</i> |
| Ivy | <i>Hedera sp.</i> |
| Jasmine | <i>Jasminum sp.</i> |
| Rowan | <i>Sorbus sp.</i> |
| Silver birch | <i>Betula pendula</i> |

Table D2: Flowers for borders

| Common name | Scientific name |
|------------------------|----------------------------------|
| Aubretia* | <i>Aubrieta sp.</i> |
| Candytuft* | <i>Iberis sp.</i> |
| Cherry pie* | <i>Heliotropium arborescens</i> |
| Corncockle | <i>Agrostemma githago</i> |
| Cornflower | <i>Centaurea cyanus</i> |
| Corn marigold | <i>Glebionis segetum</i> |
| Corn poppy | <i>Papaver rhoeas</i> |
| Echinacea* | <i>Echinacea sp.</i> |
| English Bluebell | <i>Hyacinthoides non-scripta</i> |
| Evening primrose* | <i>Oenothera sp.</i> |
| Field poppies | <i>Papaver rhoeas</i> |
| Honesty* | <i>Lunaria annua</i> |
| Ice plant 'Pink lady'* | <i>sedum spectabile</i> |
| Knapweed | <i>Centaurea sp.</i> |
| Mallow | <i>Malva sp.</i> |
| Mexican aster* | <i>Cosmos bipinnatus</i> |
| Michaelmas daisy* | <i>Aster novi-belgii</i> |
| Night-scented stock* | <i>Matthiola longipetala</i> |
| Ox-eye daisy | <i>Leucanthemum vulgare</i> |
| Phacelia* | <i>Phacelia tanacetifolia</i> |
| Poached egg plant* | <i>Limnanthes douglasii</i> |

| | |
|--------------------|-----------------------------|
| Primrose | <i>Primula vulgaris</i> |
| Red campion | <i>Silene dioica</i> |
| Red valerian* | <i>Centranthus ruber</i> |
| Scabious | <i>Scabiosa sp.</i> |
| St John's wort | <i>Hypericum perforatum</i> |
| Sweet William* | <i>Dianthus barbatus</i> |
| Tobacco plant* | <i>Nicotiana</i> |
| Verbena* | <i>Verbena sp.</i> |
| Wallflowers* | <i>Erysimum sp.</i> |
| Wood forget-me-not | <i>Myosotis sylvatica</i> |
| Yarrow | <i>Achillea millefolium</i> |

Plants marked * are hybrids or exotics

Table D3: Herbs

| Common name | Scientific name |
|-------------------|-------------------------------|
| Angelica | <i>Angelica sp.</i> |
| Bergamot | <i>Monarda sp.</i> |
| Borage | <i>Borago officinalis</i> |
| Coriander | <i>Caroiandrum sp.</i> |
| English marigolds | <i>Calendula officinalis</i> |
| Fennel | <i>Foenicululm sp.</i> |
| Feverfew | <i>Tanacetum parthenium</i> |
| Hyssop | <i>Hyssopus officinalis</i> |
| Lavenders | <i>Lavandula</i> |
| Lemon balm | <i>Melissa officinalis</i> |
| Marjoram | <i>Origanum majorana</i> |
| Rosemary | <i>Rosmarinus officinalis</i> |
| Sweet cicely | <i>Myrrhis odorata</i> |
| Thyme | <i>Thymus vulgaris</i> |

Table D4: Wildflowers for pond edges and marshy areas

| Common name | Scientific name |
|---------------------|------------------------------|
| Bog bean | <i>Menyanthes sp.</i> |
| Bugle | <i>Ajuga sp.</i> |
| Creeping Jenny | <i>Lysimachia nummularia</i> |
| Flag iris | <i>Iris pseudacorus</i> |
| Hemp agrimony | <i>Eupatorium cannabinum</i> |
| Lady's smock | <i>Cardamine pratensis</i> |
| Marsh mallow | <i>Althaea officinalis</i> |
| Marsh marigold | <i>Caltha palustris</i> |
| Marsh woundwort | <i>Stachys palustris</i> |
| Meadowsweet | <i>Filipendula ulmaria</i> |
| Purple loosestrife | <i>Lythrum salicaria</i> |
| Water avens | <i>Geum rivale</i> |
| Water forget-me-not | <i>Myosotis scorpioides</i> |
| Water mint | <i>Mentha citrata</i> |

(Source: 'Encouraging bats – Gardening for bats', Bat Conservation Trust, 2015)



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Appendix 2

Goodison Park Legacy Project, Liverpool: Report to Inform Habitats Regulations Assessment Stage 1



Goodison Park Legacy Project

Report to Inform Habitats Regulations Assessment Stage 1

**For Everton Stadium Development
Limited**

February 2020

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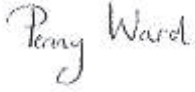

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Glossary

| | |
|---------------------|--|
| ALSE | Assessment of Likely Significant Effects |
| AA | Appropriate Assessment |
| BMD | Bramley-Moore Dock |
| DAS | Discretionary Advice Service |
| Habitat Regulations | Conservation of Habitats and Species Regulations 2017 |
| HRA | Habitats Regulations Assessment |
| JNCC | Joint Nature Conservation Committee |
| LSE(s) | Likely Significant Effect(s) |
| MCIEEM | Member of the Chartered Institute of Ecology & Environmental Management |
| MEAS | Merseyside Environmental Advisory Service |
| Natura 2000 site | A European site designated for its nature conservation value |
| NE | Natural England |
| IAQM | Institute of Air Quality Management |
| PEA | Preliminary Ecological Appraisal |
| SSSI | Site of Special Scientific Interest |
| SAC | Special Area of Conservation |
| SIP | Site Improvement Plan |
| SPA | Special Protection Area |



| Contents | Summary |
|--------------------------------------|--|
| Site Location | <p>The site is situated in the Walton district of Liverpool and is centred at Ordnance Survey Grid Reference SJ 35897 93976.</p> <p>The site currently consists of a football stadium, ancillary buildings and areas of hard standing.</p> |
| Proposals | <p>The development proposals involve the demolition of the existing stadium and associated structures, site clearance and ground preparation works, including removal of hardstanding areas.</p> <p>It is proposed to construct up to 173 residential units, and up to 23,379 square metres of floorspace for community, residential institutions, retail/commercial uses. Car parking, access roads, public realm improvement works and the creation of green spaces are also planned.</p> |
| Existing Site Information | <p>Natural England have provided advice under their Discretionary Advice Service (DAS) which has been reviewed in order to inform this report.</p> |
| Scope of this Assessment | <p>This report assesses the Likely Significant Effects (HRA Stage 1) of the proposed development upon relevant designated Natura 2000 sites, which are:</p> <ul style="list-style-type: none"> • Sefton Coast SAC; • Mersey Narrows & North Wirral Foreshore SPA; • Mersey Estuary SPA; • Liverpool Bay SPA; • Ribble & Alt Estuaries SPA; • Mersey Narrows & North Wirral Foreshore Ramsar; and • Ribble & Alt Estuaries Ramsar. |
| Results of Stage 1: Screening | <p>Stage 1 concluded that likely significant effects upon qualifying features of designated sites, as a result of the construction and operation of the application site, are not anticipated when considered alone and in-combination with other plans and projects.</p> |
| Conclusions | <p>As such, the 'Competent Authority' is considered unlikely to require any further assessment under the Habitats Regulations, and construction and operational phases of the application site for this project will be able to proceed without any adverse effects on the integrity of the internationally designated sites in the wider area.</p> |



1.0 Introduction

1.1 Background

WYG was commissioned by Everton Stadium Development Limited in September 2019 to prepare a report to inform a Habitats Regulations Assessment (HRA), of the site known as Goodison Park, currently used as Everton Football Club's home stadium, hereby referred to as "the application site".

This report has been prepared by WYG Principal Ecologist Phil Preston BSc (Hons) MSc MCIEEM. The conditions pertinent to the report are provided in Appendix A.

1.2 Site Location

The 'application site' is in the Walton District of Liverpool and is approximately 4km north-east of Liverpool City Centre. The site is centred at Ordnance Survey National Grid Reference SJ 35897 93976.

The application site comprises a football stadium with a capacity to seat up to 39,572 people, ancillary buildings (including turnstile entrances, ticket offices and storage containers) and an area of hard standing in the southern section of the site. The hard standing includes vehicle parking areas, a match day fan zone and a small vehicle access road, off Goodison Road.

The site is bordered by Goodison Road to the west, Spellow Lane to the south-west, Walton Lane to the south, Bullens Road to the east, Gwladys Street to the north and Goodison Place and the Church of St Luke the Evangelist to the north-west.

The area surrounding the site is characterised primarily by residential properties. Stanley Park is situated immediately south of the site but is separated from it by Walton Lane. Anfield Cemetery adjoins Stanley Park to the north-east and is separated from the site boundary by 150 metres.

1.3 Development Proposals

The development proposals involve the demolition of the existing stadium and associated structures, site clearance and ground preparation works, including the removal of hardstanding areas.

They include the construction of up to 173 residential units, and up to 23,379 square metres of floorspace for community, residential institutions, retail/commercial uses. Car parking, access roads, public realm improvement works, and the creation of green spaces are also planned.

The redline boundary for the application site and proposed development layout is presented within Appendix B.

Site preparation and enabling works will commence in 2024, and it is anticipated that all phases of development will be operational by 2028.



1.4 Planning status

The application is for outline planning permission, with all matters reserved (Access, Appearance, Layout, Landscaping and Scale).

Everton has submitted an application for full planning permission for a new stadium at Bramley-Moore Dock. Together, the two schemes (redevelopment of Goodison Park and the development of a new stadium at Bramley-Moore Dock) are referred to as 'The People's Project'.

1.5 Requirements for the Habitats Regulations Assessment

The requirement for a Habitats Regulations Assessment (HRA) is established through Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora, hereby referred to as the 'Habitats Directive', in Articles 6(3) and 6(4). The Habitats Directive is transposed into national legislation by the Conservation of Habitats and Species Regulations 2017. These are hereafter referred to as the 'Habitats Regulations'.

Under Regulation 63, any project which is anticipated to have a likely significant effect (LSE) on a European site (either alone or in-combination with other projects) and is not directly connected with, or necessary for the management of the site, must be subject to an HRA to determine the implications for the site in view of its conservation objectives. This LSE is determined during the Stage 1: Screening Assessment of an HRA (see below).

A Stage 2: Appropriate Assessment then needs to be carried out in respect of any plan or project which:

- either alone or in combination with other plans or projects would be likely to have a significant effect on a site designated within the European network; and
- is not directly connected with the management of the site for nature conservation.

The term European site is defined fully in Regulation 8 of the Habitats Regulations and includes:

- Special Areas of Conservation (SACs);
- possible SACs;
- Special Protection Areas (SPAs);
- potential SPAs;
- Wetlands of International Importance designated or proposed for their wetland features under the auspices of the Convention of Wetlands of International Importance (commonly referred to as 'Ramsar sites'); and
- sites identified for Natura 2000 compensatory measures.

The final two categories are afforded the same level of protection as SACs and SPAs as a matter of Government policy, and the assessment provisions of the Habitats Regulations are applied to them (Natural England, 2017).



1.6 Consultation

Natural England (NE), under their Discretionary Advice Service (DAS), provided advice on the 17th June 2017 regarding designated sites in the wider area which should be considered within this assessment.

A second meeting with Natural England and Merseyside Environmental Advisory Service (MEAS) in 2019 confirmed which designated sites to include along with information on potential pathways to LSE.

A third stage of consultation was received from Natural England on 2nd September 2019. This advice note referred to sources of information to assist with the production of this report along with providing guidance on plans to consider in terms of in combination assessment (Liverpool Local Plan (Liverpool City Council, 2018)) and Wirral Core Strategy (Wirral Council, 2012).

In addition, MEAS was consulted in December 2019 in relation to the draft Visitor Management Strategy referred to in their consultation response issued in September 2019 in order to assist with assessing LSEs related to public pressure impacts.

All consultation received from NE and MEAS is presented within Appendix C.

1.7 Site Selection

In accordance with the DAS provided by NE in 2017 the following designated sites were selected for inclusion in this assessment:

- Sefton Coast SAC;
- Mersey Narrows & North Wirral Foreshore SPA;
- Mersey Estuary SPA;
- Liverpool Bay SPA;
- Ribble & Alt Estuaries SPA;
- Mersey Narrows & North Wirral Foreshore Ramsar; and
- Ribble & Alt Estuaries Ramsar.

In addition to the above, the Mersey Estuary Ramsar site has been included in this assessment because it shares the same boundary as the Mersey Estuary SPA. Advice provided by NE in 2017 indicated that the Dee Estuary SAC and SPA should be considered. However, given the distance of these designated sites from the application site, it was considered unlikely that potential impact pathways would affect these designated sites, reasons for this are summarised as follows; the Dee Estuary SAC / SPA is 16.4 km west from the application site and largely isolated from any impacts by the Wirral Peninsula. It was therefore agreed with consultees that Dee Estuary SAC / SPA could be excluded from consideration within this report due to the absence of functionally linked habitats for the SPA qualifying species.

1.8 Information Used in this Assessment

The potential pathways to LSE were identified following a review of the following documents that are referred to if relevant in the report:



- The qualifying features of SACs and SPAs;
- The conservation objectives for SACs and SPAs;
- The threats to SPAs;
- The Ramsar criteria; and
- Site Improvement Plans for SACs and SPAs.

2.0 Assessment Methodology

The Habitats Directive and Regulations do not specify how assessment should be undertaken. In undertaking this HRA, the process we have adopted is that recommended in official European Council (EC) guidance (EC, 2001). The stages of the HRA process are described below:

- **Stage 1: Screening** – the process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans and considers whether these impacts are likely to be significant. This is also known as an 'assessment of likely significant affects (ALSE)';
- **Stage 2: Appropriate assessment** – the consideration of the impact on the integrity of the Natura 2000 site of the project or plan, either alone or in-combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts (in accordance with guidance following the recent decision by the CJEU; *People Over Wind and Sweetman v Coillte Teoranta* (C-323/17) regarding application of embedded mitigation at Stage 1 or Stage 2 of an HRA (Freeths, 2018);
- **Stage 3: Assessment of alternative solutions** – the process which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site; and
- **Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain** – an assessment of compensatory measures where, in the light of an assessment of Imperative Reasons of Over-riding Public Interest (IROPI), it is deemed that the project or plan should proceed (it is important to note that this guidance does not deal with the assessment of IROPI).

The Stage 1 Screening Assessment comprises four steps, as described below:

- **Step 1.** Determining whether the project or plan is directly connected with or necessary to the management of the Natura 2000 site(s);
- **Step 2.** Describing the project or plan and the description and characterisation of other projects or plans that in-combination have the potential for having significant effects on the Natura 2000 site(s);
- **Step 3.** Identifying the potential effects on the Natura 2000 site(s); and
- **Step 4.** Assessing the significance of any effects on the Natura 2000 site(s).



3.0 Scope of the Assessment

Projects can cause effects that lead to impacts on sites outside of the development footprint. These can be influenced by site variables such as prevailing wind conditions, surface and groundwater flow direction, which will all have an influence on the relative distance at which an impact can occur.

Additionally, the mobile nature of qualifying species must also be considered. This is because adverse effects on the qualifying species of a site can occur even if they are not present within the site. For instance, birds may forage in one area but roost at another, but both may not be within a site for which they are designated.

Following consultation with Natural England, six sites were screened into Stage 1 of this report. The details of these sites are provided in Table 1. The locations of these sites in relation to the proposed development site are shown in Appendix D. The details of the sites in Table 1 are provided in Section 3.2 to 3.8.

Table 1: Summary of European Sites Screened in to this Report

| Natura 2000 Site | Area (ha) | Distance (Linear) and direction from site |
|--|-----------|---|
| Sefton Coast SAC | 4591.59 | The application site is located approximately 5.62 km south-east the designated site at its closest point. |
| Liverpool Bay SPA | 252757.73 | The application site is located approximately 2.7 km east from the designated site at its closest point. |
| Mersey Narrows & North Wirral Foreshore SPA & Ramsar | 2078.63 | The application site is located approximately 5.08 km east from the designated site at its closest point. |
| Mersey Estuary SPA & Ramsar | 5023.35 | The application site is located approximately 7.60 km north from the designated site at its closest point. |
| Ribble & Alt Estuaries SPA | 12447.14 | The application site is located approximately 5.62 km south-east from the designated site at its closest point. |
| Ribble & Alt Estuaries Ramsar | 13488.48 | The application site is located approximately 5.62 km south-east from the designated site at its closest point. |

3.1 Sefton Coast SAC

The Sefton Coast SAC lies 5.62km north-west of the application site on the coast of Lancashire and Sefton in northwest England. The SAC encompasses all or parts of Ribble Estuary SSSI and Sefton Coast SSSI. It comprises two estuaries, of which the Ribble is by far the larger, together with an extensive area of sandy foreshore along the Sefton Coast, and forms part of the chain of west coast SPAs that fringe the Irish Sea.

The qualifying species for the site are shown in Table 2, which presents information on the qualifying features.

Table 2: Summary of Qualifying Features of the Designated Site (JNCC, 2005).

| Reason for selection | Qualifying feature |
|--|---|
| Annex I habitats that are a primary reason for selection of this site | Embryonic Shifting Dunes Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes') Fixed dunes with herbaceous vegetation ('grey dunes') Dunes with <i>Salix repens ssp. argentea</i> <i>Salicion arenariae</i> Humid dune slacks |
| Annex I habitats, present as a qualifying feature, but not a primary reason for selection of this site | Atlantic decalcified fixed dunes <i>Calluno-Ulicetea</i> |
| Annex II species that are a primary reason for selection of this site | Petalwort <i>Petalophyllum ralfsi</i> |
| Annex II species, present as a qualifying feature, but not a primary reason for site selection | Great crested newt <i>Triturus cristatus</i> |

The conservation objectives of the Sefton Coast SAC are as follows (Natural England, 2019c):

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 list of relevant pressures and threats to Sefton Coast SAC as presented within the SIP (Natural England, 2014b) for the designated site is presented in table 3.

Table 3: Summary of Pressures and Threats Associated with Ribble and Alt Estuaries SPA

| Description | Pressure / Threat |
|--|-------------------|
| Coastal squeeze | Threat |
| Air Pollution: Impact of atmospheric nitrogen deposition | Threat |
| Inappropriate scrub control | Pressure / Threat |
| Invasive species | Threat |
| Hydrological changes | Threat |
| Public Access/Disturbance | Threat |
| Inappropriate coastal management | Pressure |
| Shooting / scaring | Pressure |
| Invasive species | Pressure / Threat |
| Feature location / extent / condition unknown | Pressure |

3.2 Liverpool Bay SPA

Liverpool Bay is located 2.7 km west of the application site, on the northwest coast of England stretching from the east coast of Anglesey along the coastline up to Morecambe Bay. The site comprises marine areas, sea inlets, tidal rivers, estuaries, mud flats, sand flats and lagoons.

The qualifying species for the site are shown in Table 4, which presents information on the qualifying features.

Table 4: Summary of Qualifying Features of the Designated Site (Lawson et al. 2016)

| Qualifying feature | Description |
|---|---|
| It is used regularly by 1% or more of the Great Britain populations of a number of species listed in Annex I in any season. | <p>Red-throated diver, <i>Gavia stellata</i>, 6.89% of the GB population (5-year peak mean 2004/05 - 2010/11), 1,171 individuals</p> <p>Little gull, <i>Hydrocoloeus minutus</i>, (wintering) (5-year peak mean 2004/05 - 2010/11), 319 individuals</p> <p>Little tern, <i>Sternula albifrons</i>, (breeding) 6.84% of the GB population 5-year mean 2010 – 2014), 130 pairs (260 individuals)</p> <p>Common tern, <i>Sterna hirundo</i>, (breeding) 1.80% of the GB population 5-year mean 2011 – 2015), 180 pairs (360 individuals)</p> |



| | |
|--|---|
| It is used regularly by 1% or more of the biogeographical populations of a number of regularly occurring migratory species (other than those listed in Annex I) in any season. | Common scoter, <i>Melanitta nigra</i> , 10.31% of the NW European population regularly occurring migrant (5-year mean of peaks 2004/05 - 2010/11), 56,679 individuals |
| An internationally important assemblage of birds in the non-breeding season. | Over winter the area regularly supports: 69,687 water birds (5-year peak mean 2004/05 - 2010/11) |

The conservation objectives of the Liverpool Bay SPA are as follows (Natural England, 2019c):

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 list of relevant pressures and threats to the Liverpool Bay SPA as presented within the Site Improvement Plan (SIP) (Natural England, 2015a) for the designated site is presented in Table 5.

Table 5: Summary of Pressures and Threats Associated with Liverpool Bay SPA

| Description | Pressure / Threat or? |
|--|-----------------------|
| Fisheries: Commercial marine and estuarine | Pressure |
| Transportation and service corridors | Threat |
| Fisheries: Recreational marine and estuarine | Threat |
| Extraction: Non-living resources | Threat |
| Siltation | Threat |
| Water Pollution | Threat |

3.3 Mersey Narrows & North Wirral Foreshore SPA

Mersey Narrows and North Wirral Foreshore is located 5.08 km west of the application site, on the northwest coast of England at the mouths of the Mersey and Dee estuaries. The site comprises intertidal habitats at Egremont foreshore, man-made lagoons at Seaforth and the extensive intertidal flats at North Wirral Foreshore.



Egremont is most important as a feeding habitat for waders at low tide whilst Seaforth is primarily a high tide roost site, as well as a nesting site for terns. North Wirral Foreshore supports large numbers of feeding waders at low tide and also includes important high tide roost sites. The qualifying species for the site are shown in table 6, which presents information on the qualifying features.

Table 6: Summary of Qualifying Features of the Designated Site (JNCC, 2015)

| Qualifying feature | Description |
|--|---|
| It is used regularly by 1% or more of the Great Britain populations of a number of species listed in Annex I in any season. | <p>Bar-tailed godwit <i>Limosa lapponica</i>, (5.5% of the GB population 5-year peak mean 2004/05 - 2008/09), 3,344 individuals</p> <p>Common tern, 213 individuals – non-breeding (2004/05 – 2008/09)</p> <p>On passage the area regularly supports:</p> <p>Little gull: 213 individuals (no national population estimate)</p> <p>Common tern: 1,475 individuals (no national population estimate)</p> <p>In the breeding season the area regularly supports:</p> <p>Common tern: 1.8% of the GB population (2005-2009), 177 pairs (354 individuals)</p> |
| It is used regularly by 1% or more of the biogeographical populations of a number of regularly occurring migratory species (other than those listed in Annex I) in any season. | <p>Red knot <i>Calidris canutus islandica</i> (2.4% W Europe/Waddensea/Britain/Ireland population 5-year peak mean (2004/05 - 2008/09)), 10,655 individuals</p> |
| An internationally important assemblage of birds in the non-breeding season. | <p>32,366 individual waterbirds (5-year peak mean 2004/05 - 2008/09)</p> |

The conservation objectives of the Mersey Narrows & North Wirral Foreshore SPA are as follows (Natural England, 2014a):

“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 list of relevant pressures and threats to the Mersey Narrows and North Wirral Foreshore SPA as presented within the Site Improvement Plan (SIP) (Natural England, 2015b) for the designated site is presented in table 7.

Table 7: Summary of Pressures and Threats Associated with Mersey Narrows and North Wirral Foreshore SPA

| Description | Pressure / Threat or? |
|--|-----------------------|
| Public Access / Disturbance | Pressure / Threat |
| Changes in species distributions | Pressure |
| Invasive species | Pressure / Threat |
| Climate change | Pressure / Threat |
| Coastal squeeze | Pressure / Threat |
| Inappropriate scrub control | Pressure |
| Water Pollution | Pressure / Threat |
| Fisheries: Commercial marine and estuarine | Pressure / Threat |
| Inappropriate coastal management | Pressure / Threat |
| Overgrazing | Pressure / Threat |
| Direct impact from third party | Threat |
| Marine litter | Pressure / Threat |
| Predation | Threat |
| Planning Permission: General | Threat |
| Marine consents and permits | Threat |
| Wildfire/ arson | Threat |
| Air Pollution: impact of atmospheric nitrogen deposition | Pressure |
| Transportation and service corridors | Threat |
| Physical modification | Pressure / Threat |

3.4 Ribble & Alt Estuaries SPA

The Ribble and Alt Estuaries SPA lies 5.62 km north-west of the application site, on the coast of Lancashire and Sefton in northwest England. The SPA encompasses all or parts of Ribble Estuary SSSI and Sefton Coast SSSI. It comprises two estuaries, of which the Ribble is by far the larger, together with an extensive area of sandy foreshore along the Sefton Coast, and forms part of the chain of west coast SPAs that fringe the Irish Sea. There is considerable interchange in the movements of birds between this site and Morecambe Bay, Mersey Estuary, Dee Estuary and Martin Mere.

A large proportion of the SPA is within the Ribble Estuary National Nature Reserve. The site consists of extensive areas of sand and mudflats and, particularly in the Ribble, large areas of saltmarsh.



There are also areas of coastal grazing marsh. The intertidal flats are rich in invertebrates on which waders and some wildfowl feed. The highest densities of feeding birds are on the muddier substrates of the Ribble, though sandy shores throughout are also used. Saltmarshes and coastal grazing marshes support high densities of wildfowl and these, together with intertidal sand and mudflats throughout, are used as high tide roosts.

The site supports internationally important populations of waterbirds in winter, including swans, geese, ducks and waders. It is also of major importance during migration periods, especially for wader populations moving along the west coast of Britain. The larger expanses of saltmarsh and areas of coastal grazing marsh support breeding birds, including large concentrations of gulls and terns. These seabirds feed both offshore and inland, outside the SPA. Several species of waterfowl (notably Pink-footed Goose *Anser brachyrhynchus*) use feeding areas on agricultural land outside the SPA boundary.

Table 8 presents information on the qualifying features.

Table 8: Summary of qualifying features of the designated site (Programme Officer, 2015)

| Qualifying feature | Description |
|---|--|
| It is used regularly by 1% or more of the Great Britain populations of a number of species listed in Annex I in any season. | <p>Ruff <i>Philomachus pugnax</i> (Western Africa - wintering), 1 nest, 9.1% of the GB breeding population Count as at late 1980s</p> <p>Common tern (Northern/Eastern Europe - breeding), 182 pairs (264 individuals), 1.5% of the GB breeding population Count as at 1996</p> <p>Tundra swan <i>Cygnus columbianus bewickii</i> (Western Siberia/North-eastern & North-western Europe), 276 individuals, 3.9% of the GB population 5-year peak mean 1993/94 - 1997/98</p> <p>Whooper swan <i>Cygnus cygnus</i> (Iceland/UK/Ireland), 182 individuals, 3.3% of the GB population 5-year peak mean 1993/94 - 1997/98</p> <p>Bar-tailed godwit (Western Palearctic - wintering), 20,086 individuals, 37.9% of the GB population 5-year peak mean 1993/94 - 1997/98</p> <p>Golden plover <i>Pluvialis apricaria</i> [North-western Europe - breeding], 3,598 individuals, 1.4% of the GB population 5-year peak mean 1993/94 - 1997/98</p> |
| It is used regularly by 1% or more of the biogeographical populations of a number of regularly occurring migratory species (other than those listed in Annex I) in any season | <p>Lesser black-backed gull (Western Europe/Mediterranean/Western Africa), 1,800 pairs (3,600 individuals), 1.5% of the breeding population Count as at 1993</p> <p>Over winter the area regularly supports:</p> <p>Northern pintail <i>Anas acuta</i> (North-western Europe), 2,731 individuals 4.6% of the population 5-year peak mean 1993/94 - 1997/98</p> |



| Qualifying feature | Description |
|--|---|
| | <p>Teal <i>Anas crecca</i> (North-western Europe), 7,157 individuals, 1.8% of the population 5-year peak mean 1993/94 - 1997/98</p> <p>Teal <i>Anas penelope</i> (Western Siberia/North-western/North-eastern Europe), 85,259 individuals, 6.8% of the population 5-year peak mean 1993/94 - 1997/98</p> <p>Pink-footed goose <i>Anser brachyrhynchus</i> (Eastern Greenland/Iceland/UK), 11,764 individuals, 5.2% of the population 5-year peak mean 1993/94 - 1997/98</p> <p>Sanderling <i>Calidris alba</i> (Eastern Atlantic/Western & Southern Africa - wintering), 2,882 individuals, 2.9% of the population 5-year peak mean 1993/94 - 1997/98</p> <p>Dunlin (Northern Siberia/Europe/Western Africa), 39,376 individuals, 2.8% of the population 5-year peak mean 1993/94 - 1997/98</p> <p>Red knot (North-eastern Canada/Greenland/Iceland/North-western Europe), 68,922 individuals, 19.7% of the population 5-year peak mean 1993/94 - 1997/98</p> <p>Oystercatcher (Europe & Northern/Western Africa), 18,535 individuals, 2.1% of the population 5-year peak mean 1993/94 - 1997/98</p> <p>Black-tailed godwit (Iceland - breeding), 1,273 individuals, 1.8% of the population 5-year peak mean 1993/94 - 1997/98</p> <p>Grey plover (Eastern Atlantic - wintering), 9,355 individuals, 6.2% of the population 5-year peak mean 1993/94 - 1997/98</p> <p>Common shelduck <i>Tadorna tadorna</i> (North-western Europe), 4,925 individuals, 1.6% of the population 5-year peak mean 1993/94 - 1997/98</p> <p>Common redshank <i>Tringa totanus</i> (Eastern Atlantic - wintering), 2,505 individuals, 1.7% of the population 5-year peak mean 1993/94 - 1997/98</p> <p>On passage the area regularly supports:</p> <p>Sanderling (Eastern Atlantic/Western & Southern Africa - wintering), 6,535 individuals, 6.5% of the population 5-year peak mean 1993 - 1997</p> <p>Ringed plover <i>Charadrius hiaticula</i> (Europe/Northern Africa - wintering), 1,657 individuals, 3.3% of the population 5-year peak mean 1993 - 1997</p> |
| An internationally important assemblage of birds in the non-breeding season. | 323,861 individual waterbirds (5 year peak mean 1993/94 - 1997/98) |



| Qualifying feature | Description |
|--|--|
| It is used regularly by over 20,000 seabirds in any season | 29,236 individual seabirds (count period ongoing) |

The conservation objectives of the Ribble & Alt Estuaries SPA are as follows (Natural England, 2019a):

"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 list of relevant pressures and threats to the Ribble and Alt Estuaries SPA as presented within the SIP (Natural England, 2014b) for the designated site is presented in table 9.

Table 9: Summary of Pressures and Threats Associated with Ribble and Alt Estuaries SPA

| Description | Pressure / Threat |
|--|-------------------|
| Coastal squeeze | Threat |
| Air Pollution: impact of atmospheric nitrogen deposition | Threat |
| Inappropriate scrub control | Pressure / Threat |
| Invasive species | Threat |
| Hydrological changes | Threat |
| Public Access/Disturbance | Threat |
| Inappropriate coastal management | Pressure |
| Shooting / scaring | Pressure |
| Invasive species | Pressure / Threat |
| Feature location / extent / condition unknown | Pressure |

3.5 Mersey Estuary SPA

The Mersey Estuary is 7.6 km south of the application site, on the Irish Sea coast of north-west England. The SPA encompasses all or parts of Mersey Estuary SSSI and New Ferry SSSI. It 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.

Table 10 presents information on the qualifying features.

Table 10: Summary of qualifying features of the designated site

| Qualifying feature | Description |
|---|--|
| It is used regularly by 1% or more of the Great Britain populations of a number of species listed in Annex I in any season. | Golden plover (North-western Europe – breeding), 3,040 individuals , 1.2% of the GB population 5-year peak mean, 1993/94 -1997/98 |
| It is used regularly by 1% or more of the biogeographical populations of a number of regularly occurring migratory species (other than those listed in Annex I) in any season | <p>Northern pintail (North-western Europe), 1,169 individuals, 1.9% of the population 5-year peak mean, 1993/94 -1997/98</p> <p>Teal (North-western Europe), 11,723 individuals, 2.9% of the population 5-year peak mean, 1993/94 -1997/98</p> <p>Wigeon, (Western Siberia/North-western/North-eastern Europe), 11,886 individuals, 4.2% of the population in Great Britain 5-year peak mean, 1993/94- 1997/98</p> <p>Dunlin, (Northern Siberia/Europe/Western Africa), 48,789 individuals 3.6% of the Population 5-year peak mean, 1993/94-1997/98</p> <p>Black-tailed godwit, (Iceland - breeding), 976 individuals, 1.6% of the population 5-year peak mean, 1993/94-1997/98</p> <p>Curlew, (Europe - breeding), 1,300 individuals, 1.1% of the population in Great Britain 5-year peak mean, 1993/94-1997/98</p> <p>Grey plover, (Eastern Atlantic - wintering), 3,040 individuals, 2.3% of the population in Great Britain 5-year peak mean, 1993/94-1997/98</p> <p>Great crested grebe (North-western Europe - wintering), 136 individuals, 1.4% of the population in Great Britain 5-year peak mean, 1993/94-1997/98</p> <p>Shelduck, (North-western Europe), 6,476 individuals, 2.2% of the population 5-year peak mean, 1993/94-1997/98</p> <p>Redshank, (Eastern Atlantic - wintering), 4,513 individuals, 2.8% of the population 5-year peak mean, 1993/94-1997/98</p> <p>Lapwing, (Europe - breeding), 10,544 individuals, 0.7% of the population in Great Britain 5-year peak mean, 1993/94-1997/98</p> <p>On passage the area regularly supports:</p> <p>Ringed plover, (Europe/Northern Africa - wintering), 505 individuals, 1.7% of the population in Great Britain 5-year peak mean, 1993-1997</p> |



| Qualifying feature | Description |
|--------------------|---|
| | Redshank , (Eastern Atlantic - wintering), 4,513 individuals , 3.8% of the population 5-year peak mean, 1993-1997 |

The conservation objectives of the Mersey Estuary SPA are as follows (NE, 2019b):

"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 list of relevant pressures and threats to the Mersey Estuary SPA as presented within the SIP for the designated site are presented in table 11.

Table 11: Summary of Pressures and Threats Associated with Mersey Estuary SPA

| Description | Pressure / Threat |
|--------------------------------------|-------------------|
| Changes in species distributions | Pressure |
| Invasive species | Pressure / Threat |
| Public Pressure Access / Disturbance | Pressure |

3.6 Mersey Narrows & North Wirral Ramsar

The site located 4.22 km west of the application site, comprises intertidal habitats at Egremont foreshore on the south bank of the Mersey, man-made saline and freshwater lagoons at Seaforth on the north bank and the extensive intertidal flats at North Wirral Foreshore. Egremont is most important as a feeding habitat for waders at low tide whilst Seaforth is primarily a high tide roost site. The two areas are separated by approximately 2 km and have a constant exchange of bird populations. North Wirral Foreshore supports large numbers of feeding waders at low tide and includes important high tide roost sites, it is an area of intertidal sands and mudflats with embryonic saltmarsh.

The Mersey Narrows & North Wirral Ramsar site fulfils three criteria that identify it as a wetland of international importance (JNCC, 2013). These are:

- Criterion 4** – It regularly supports plant and / or animal species at a critical stage in their life cycles or provides refuge during adverse conditions.



- **Criterion 5** – It regularly supports 20,000 or more waterbirds: During the winters 2004/05 - 2008/09, the Mersey Narrows and North Wirral Foreshore Ramsar site supported an average peak of 32,402 individual waterbirds.
- **Criterion 6** – It regularly supports 1% of the individuals in the populations of the following species waterbird in any season: knot and bar-tailed godwits

3.7 Ribble & Alt Estuaries Ramsar

A large area located 5.62 km north-west of the application site, 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.

The Ribble & Alt Estuaries Ramsar site fulfils three criteria that identify it as a wetland of international importance (JNCC, 2008a), these are:

- **Criterion 2** – Site supports up to 40% of the Great Britain population of natterjack toads *Bufo calamita* and plant species: petalwort *Petalophyllum ralfsii* (Conservation status: European Red List: Vulnerable; EC Habitats Directive: Annex II)
- **Criterion 5** – Assemblages of international importance: Species with peak counts in winter: 222,038 waterfowl (5-year peak mean 1998/99-2002/2003)
- **Criterion 6** – Species / populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation): black-tailed godwit, common redshank, dunlin, grey plover, red knot, ringed plover, sanderling, bar-tailed godwit, oystercatcher, teal, wigeon, northern pintail, pink-footed goose, tundra swan and whooper swan.

3.8 Mersey Estuary Ramsar

The Mersey is a large, sheltered estuary located 7.60 km south of the application site, 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.

The Mersey Estuary Ramsar site fulfils two criteria that identify it as a wetland of international importance (JNCC, 2008b). These are:

- **Criterion 5** – Assemblages of international importance. Species with peak counts in winter: 89,576 waterfowl (5-year peak mean 1998/99-2002/2003)
- **Criterion 6** – Species / populations occurring at levels of international importance. These species include common shelduck, black-tailed godwit, common redshank, teal, northern pintail and dunlin.





4.0 Stage 1: Screening

4.1 Identification of Potential Pathways to LSE on European Site(s)

This section identifies potential pathways to LSE as a result of the construction and operation of the proposed development. These were identified following a review of the Conservation Objectives, Supplementary Advice Documents and Site Improvement Plans (SIPs) for each of the European sites screened into Stage 1. Based on this review, the following pathways were identified:

Construction Phase

- Habitat loss within the designated sites;
- Habitat loss within functional habitat beyond the boundary of the designated sites;
- Habitat degradation – air quality and dust deposition;
- Habitat degradation - water quality impacts as a result of pollution events;
- Disturbance of qualifying features – visual and auditory disturbance.

Operation Phase

- Habitat degradation - as a result of increased visitor numbers causing trampling effects;
- Disturbance to qualifying bird species – visual/human presence;
- Disturbance of qualifying features – auditory disturbance;
- Disturbance of qualifying features – lighting effects;
- Habitat degradation – air pollution;
- Loss of qualifying features - potential bird strike.

The European sites that these potential pathways could act upon and the mechanisms by which they could occur are provided in Table 12. This includes whether these require Appropriate Assessment at Stage 2.

4.1.1 Assessment of Likely Significant Effects

Table 12 indicates the aspects of the proposed development that could in theory create adverse effects on the qualifying features of the above designated sites in isolation. In addition, to direct and indirect effects of the proposed development upon qualifying features of relevant designated sites, potential effects upon habitats which support qualifying features are also discussed in this assessment.

Table 12: Assessment of Likely Significant Effects

| Impact Pathway | Assessment | Appropriate Assessment Required at Stage 2 |
|--|--|--|
| Construction phase (enabling and construction works) | | |
| Habitat loss within the designated sites | The application site lies a minimum of 2.7 km from designated site boundaries. Construction works will therefore not result in a direct loss of habitat associated with these designated sites. Therefore, no LSE is anticipated as a result of this impact pathway. | No |
| Habitat loss within functional habitat beyond the boundary of the designated sites | The application site currently consists of an operational football stadium comprising hard standing, intensively managed amenity grassland (the existing pitch) and built structures (WYG 2019) within the urban context of North Liverpool. Habitats associated with the application site are therefore not considered to form functionally linked habitat for qualifying features supported by the above designated sites. Construction works will therefore not result in a loss of functionally linked habitat associated with these designated sites. Therefore, no LSE is anticipated as a result of this impact pathway. | No |
| Habitat degradation – air quality & dust deposition | Guidance on the Assessment of the Impacts of Construction on Air Quality and the Determination of their Significance December 2011 (IAQM, 2011) has been produced in relation to ecological receptors. This states that the effects of construction related air pollution only require detailed assessment when sensitive receptors (such as the designated site included within this assessment) are located within a maximum of 500 m from construction works. In addition, guidance provided by IAQM (2014) states that the effects of fugitive dust would be limited to within 50 m of sources. All designated sites are located beyond the buffer zones from the application site as depicted by the above IAQM guidance documents. As a result, no adverse effects upon such sites as a result of construction phase of works are considered likely. Therefore, no LSE is anticipated as a result of this impact pathway. | No |
| Habitat degradation - as a result of pollution events | The application site lies a minimum of 2.7km from designated site boundaries. In addition, OS mapping indicates that there are no known hydrological links connecting the application site and designated sites. It is therefore considered that the construction phase of the application site will not result in degradation of habitats as a result of pollution events. Therefore, no LSE is anticipated as a result of this impact pathway. | No |
| Disturbance of qualifying features – visual and auditory disturbance. | Construction is anticipated to take place from the third quarter of 2024 until 2028. Such works will coincide with times of year when bird species which form qualifying features of designated sites are likely to be present. However, given the lack of suitable habitat within the application site and the distance from the application site to designated sites combined with the urban context of the application site within North Liverpool, it is considered that the construction phase will not result in any auditory or visual disturbance to qualifying features associated with the designated sites. Therefore, no LSE is anticipated as a result of this impact pathway. | No |
| Operational phase | | |
| Habitat degradation as a result of <ul style="list-style-type: none"> increased visitor numbers causing trampling effects; and disturbance to bird species, (including walking of dogs). | The SIP for Liverpool Bay indicates that this designated site is not susceptible to public recreational pressure. This is because this site is a marine SPA and therefore not subject to public access. It is noted that the Liverpool Docks area may form functionally linked habitat for qualifying species of the designated sites (NEBS, WYG 2018). However, terrestrial areas of the docks are comprised of hard standing which is not susceptible to trampling. It is considered that occasional visits to localised tourist attractions within the dock may increase visitor numbers to areas utilised by qualifying features. However, species most likely to be encountered in such areas (cormorant) are relatively tolerant of disturbance and are likely to be accustomed to the presence of the public. It is therefore considered unlikely that the effects of increased public pressure will adversely affect the favourable conservation status of qualifying features of this designated site. Therefore, although the application site is located within 10km of this designated site this impact pathway is screened out as LSEs are not anticipated. Public access/disturbance is listed as a pressure within SIPs for the Ribble & Alt Estuaries SPA, Mersey Estuary SPA and Mersey Narrows and North Wirral Foreshore SPA and Sefton Coast SAC. Such pressures are considered to also apply to the corresponding Ramsar site for each of the above, this pressure is discussed further in relation to these sites. Assuming an occupation of 2.4 people (Office for National Statistics 2017) per residential property (total number of properties = 173 units) within the operational application site, the potential local population will increase by 415 people. This assumes that all residents occupying the new development will migrate into the local area from surrounding regions. | No |

| | | |
|--|---|--|
| | <p>The office for National Statistics (https://www.nomisweb.co.uk/reports/lmp/lep/1925185554/report.aspx#tabrespop) indicates that the population of the Liverpool City Region is comprised of approximately 1,551,500 people. Therefore, based on the above it is anticipated that the population will increase by 0.03%. It is recognised, however, that occupancy of the application site is highly unlikely to comprise entirely of new residents to the Liverpool City Region and will partially comprise residents that move to this area from within Liverpool City Region. In reality, therefore, that occupation of this development may not significantly contribute to population rise in the Liverpool City Region. In addition, the Department for Transport statistics document (DfT 2017) indicates that approximately 48% of the UK population walk for leisure purposes. Applying this statistic to the potential population of the application site indicates that an average of approximately 199 residents of the application site (0.01% of the population of the Liverpool City Region) application site are likely to visit outdoor spaces for leisure and recreation purposes.</p> <p>Natural England's Accessible Natural Greenspace Standard (Natural England 2018) (http://webarchive.nationalarchives.gov.uk/20140605111422/http://www.naturalengland.org.uk/regions/east_of_england/ourwork/gi/accessiblenaturalgreenspacestandardangst.aspx), indicates that people are prepared to travel the following distances to accessible natural greenspace of differing sizes:</p> <ul style="list-style-type: none"> • At least 2ha in size, no more than 300m (5 minute walk) • At least 20 ha in size, no more than 2 km • At least 100ha in size, no more than 5 km • At least 500ha in size, no more than 10 km <p>However, visitor survey information presented within "<i>Recreational activity and interactions with birds within the SSSIs on the North-West coast of England</i>" (Liley et al 2017) indicates that visitors to the relevant designated sites travel a maximum of 5.2km from home.</p> <p>All of the designated sites included within this assessment exceed 500ha and are within 10km of the application site, although all extend a significant distance beyond this. It should however be noted that there are no public rights of way connecting the application site to designated sites and at a minimum distance of 7km (by road) from the application site, it is considered unlikely that these sites would be accessed by foot. Access by car is most likely. The closest car parks for relevant designated sites are located approximately 7.5km from the application site through the local road network and are therefore considered to be the only relevant access points (as all other car parks recorded on OS mapping are located over 10km from the application site). However, a total of 534 public open spaces (including playing fields, play spaces country parks and Local Wildlife Parks are present within 10km of the application site providing a total of 2,298ha of land available for recreational purposes (Location of all public spaces and distances for all from the application site are presented in Appendix E). Of the 534 public open spaces the following are present between the application site and Ribble & Alt estuaries SPA/Ramsar, Mersey Narrows and foreshore SPA/Ramsar, Mersey Estuary SPA/Ramsar and Sefton coast SAC (location in relation to the application site is shown in Appendix E):</p> <ul style="list-style-type: none"> • Stanley Park (35ha) – Adjacent site • Melrose Cutting Local Wildlife Site (4.37ha) – 1 Km west • Walton Hall park (52.1ha) - distance via road/footpath – 1.2km northeast • Leeds and Liverpool Canal Local Wildlife Site (8.59ha) – 1.6km southwest • Loop Line Local Wildlife Site (47.16ha) – 1.9km north east • Everton park (5ha)- distance via road/footpath – 2.4km southwest • Bootle South recreational ground (9.6ha), distance via road/footpath – 2.4km northwest • Rupert Lane Recreational Grid (15.9ha) - distance via road/footpath – 2.7km south • North park (7.5ha) - distance via road/footpath – 3.5km northwest • Chavase Park (1ha)- distance via road/footpath – 4.5km southwest • Hatton Hill Park (4.2ha) - distance via road/footpath – 4.9km northwest • Rimrose Valley Country Park (106ha) – distance via road/footpath – 5.4km northwest • Brookvale recreational ground (6.5ha)– distance via road/footpath – 5.7km northwest • Croxteth Hall and Country Park (221ha) - distance via road/footpath – 5.7km east • Wood Henge Princes Park (19.7ha) – distance via road/footpath - 6.2km south • Sefton Park (94.4ha)– distance via road/footpath – 6.7km south • Marine Lake water body (and paths) (56.9ha) distance via road/footpath – 7.2km northwest • Festival Gardens (32.5ha) - distance via road/footpath – 7.5km (closest car park) south <p>There is no known use of the above parks by qualifying features of the aforementioned designated sites. Furthermore, the parks form unsuitable habitat for qualifying features.</p> <p>In addition to this, the illustrative masterplan for the application site incorporates an area of open green space within the redline boundary of the site (measuring approximately 0.6ha) that can be used for local recreational purposes such as dog walking.</p> <p>Given the fact that the application site is located beyond the mean distance travelled from home to relevant designated sites by visitors, combined with numerous areas of existing alternative natural green space (i.e. public open space within 10km of the application site)</p> | |
|--|---|--|

| | | |
|--|---|----|
| | <p>it is considered unlikely that the potential population increase associated with the application site would result in significant increase in visitor numbers to designated sites.</p> <p>It is therefore considered that operation of the application site is unlikely to result in degradation of habitats (which form or support qualifying features) as a result of visitor pressure, or cause disturbance to species which form qualifying features of the designated sites (either within or outside the designated sites).</p> <p>Therefore, no LSE is anticipated as a result of this impact pathway</p> | |
| Disturbance of qualifying features – visual (including lighting) and auditory disturbance. | <p>The operational site will involve an increase in the local population and by default an increase in local activities (i.e. people commuting to/from the site). However, given the distance from the application site to designated sites combined with the urban context of the application site within North Liverpool it is considered that the operational phase will not result in any auditory or visual disturbance to qualifying features associated with the designated sites.</p> <p>Therefore, no LSE is anticipated as a result of this impact pathway.</p> | No |
| Disturbance of qualifying features – lighting effects. | <p>The operational site will involve the use of external lighting. However, the application site is largely screened from designated sites by existing housing development. While it is recognised that the operational site will feature buildings of greater height than the surrounding terraced houses it is considered that these features of the application site will not feature any significant external lighting.</p> <p>Any light omitted from taller buildings is considered unlikely to cause disturbance to qualifying features of the designated sites given the distance (min 2.7km, max 7.6km) to the application site. Furthermore, there is no functionally linked habitat between the application site and designated sites, and it is therefore unlikely that qualifying features are present within the locality of the application site. It is therefore highly unlikely that the operational site will cause any disturbance to bird species which form qualifying features of the designated sites.</p> <p>Therefore, no LSE is anticipated as a result of this impact pathway.</p> | No |
| Habitat degradation – air pollution | <p>The air quality chapter produced for the Environmental Statement (ES) for the proposed development at Goodison Park application site (WYG, 2019) has concluded that the effects of air pollution upon Natura 2000/Ramsar sites can be screened out as the application site is located beyond 2km from any of the relevant designated sites. In addition, it is noted that the operational development will result in an increase in traffic within Liverpool and this will result in air quality impacts of designated sites within 200m of such roads in accordance with "A guide to the assessment of air quality impacts on designated nature conservation sites" (IAQM 2019). The closest roads (excluding residential streets) to each designated site are:</p> <ul style="list-style-type: none"> Ribble & Alt Estuaries SPA and Ramsar – A565; 1,208m east of site Sefton Coast SAC – A565; 1,208m east of site Mersey Narrows and North Wirral Foreshore SPA – A565; 670m east of site Liverpool Bay SPA – A5036; 141m east at its closest point (SJ335 909) but in excess of 200m north and south of this point Mersey Estuary SPA & Ramsar; Riverside Drive; 191m north west at its closest point but in excess of 200m further northwest and south east. <p>Based on the above, air quality impacts as a result of increased traffic on roads close to designated sites as a result of the operation of the application site can be screened out for Ribble & Alt Estuaries SPA/Ramsar, Sefton Coast SAC and Mersey Narrows and North Wirral Foreshore SPA and Ramsar.</p> <p>Liverpool Bay SPA and Mersey Estuary SPA/Ramsar are within 200m of A5036. However, a review of information presented by Air Pollution Information System (APIS - http://www.apis.ac.uk/src/select-a-feature?site=UK9005131&SiteType=SPA&submit=Next) indicates that qualifying features of Liverpool Bay and Mersey Estuary are not directly sensitive to the critical loads associated with traffic related air pollution. APIS also states, in relation to exceedance of critical load level for Ammonia (NH₃), Nutrient Nitrogen and Nitrogen oxides (NO_x), that the impacts of exceedance are either unlikely to affect these qualifying features, or provide a positive effect due to a potential increase in food supply as a result of increased nutrient loading.</p> <p>It is noted that APIS highlights a likely effect as a result of exceedance of critical load for NO_x and nitrogen upon broad habitats associated with qualifying features of the designated sites, such broad habitats include:</p> <ul style="list-style-type: none"> Littoral sediment Neutral grassland Open water <p>None of the above habitats are recorded within Liverpool Bay SPA within 200m of the A5036. However, littoral sediment is recorded within Mersey Estuary within 200m of Riverside Drive (total area likely to be affected is 0.2ha equal to 0.003% of the designated site). APIS indicates potential negative effects upon this habitat could occur as a result of deposition of NO_x, likely to result in a change in vegetation growth structure, vigour or species composition. However, APIS also indicates that deposition of NO_x exceeding the critical load threshold may result in a positive impact upon qualifying features via an increase in food supply. Increase in deposition of nutrient nitrogen from use of the Riverside Road may result in increased growth and dominance of grass species within Mersey Estuary SPA. Given the small area of the designated site likely to be affected by</p> | No |



| | | |
|---|--|-----------|
| | <p>deposition of air pollutants, combined with the potential to benefit foraging species within the designated site, it is considered highly unlikely that adverse effects upon the favourable conservation status of qualifying features of the designated site will occur as a result of this impact pathway.</p> <p>Therefore, no LSE is anticipated as a result of this impact pathway.</p> | |
| Loss of qualifying features - potential bird strike | <p>It is recognised that the maximum height of buildings proposed for the application site measure a maximum of seven storeys (ground plus six storeys) with a maximum height of 24.8m above ground level. The majority of proposed buildings are lower than this. Such buildings have the potential to cause accidental bird strike issues in the local area. However, the application site is located a minimum of 2.7km from designated sites and, given the urban context within North Liverpool, is not considered to be within a migratory route for qualifying features associated with such sites. Neither is it located between designated sites, functionally linked land or mapped sensitivity areas for qualifying features associated with the designated sites (RSPB 2008).</p> <p>It is therefore considered highly unlikely that the operational application site will pose a significant risk to bird species which form qualifying features of the designated sites (either within or outside the designated site boundaries). Therefore, no LSE is anticipated as a result of this impact pathway.</p> | No |

5.0 Consideration of In-combination Effects

5.1 Projects

A total of thirteen schemes have been identified as requiring assessment in-combination with the proposed development, details of which are provided within Goodison Park Legacy Project ES Volume II, Chapter 2 for list of cumulative developments considered in the assessment (CBRE 2019). A total of six schemes scoped out ecology all together and/or have not been required to consider effects upon designated sites, so these schemes have been scoped out of this assessment as **LSEs are not anticipated** when considered in-combination with the application site. The remaining seven schemes have scoped in assessment upon designated sites within the ES or report to inform an HRA for the relevant scheme, these are detailed in table 13.

Table 13: Summary of relevant planning applications.

| Scheme | Planning Ref | Summary assessment | Appropriated Assessment Required at Stage 2 |
|----------------------------------|--------------------------------|---|---|
| Bramley Moore Dock (BMD) Stadium | Submitted, awaiting validation | <p>This application for this scheme has not been validated at the time of writing but is linked to this application site as it forms a replacement stadium for use by Everton Football club. The applicant is the same as that of this outline application for the Goodison Park Legacy Project and the HRA for BMD was also carried out by WYG. The HRA for this scheme has identified LSE when this project is considered alone and in combination with other projects and plans.</p> <p>However, none of the impact pathways associated with BMD apply to the application site. Therefore, when considered in combination with the application site LSEs are not anticipated.</p> | No |
| Hive City | 17F/0456 | <p>The proposed scheme is for the development of commercial/restaurant properties. The HRA for this scheme (Peel Holdings 2008) does not anticipate LSEs as a result of this scheme when considered alone and in combination.</p> <p>Therefore, No LSEs on these designated sites are anticipated in relation to this scheme. When considered in combination</p> | No |



| Scheme | Planning Ref | Summary assessment | Appropriated Assessment Required at Stage 2 |
|------------------|-----------------------|--|---|
| | | with the application site LSEs are not anticipated. | |
| Liverpool Waters | 100/2424 | <p>The ES for the Liverpool Waters Project (Liverpool Waters, 2011, sect 7.6.32, Pg241) states:</p> <p>"The increase in activity associated with the operational usage of the site will result in some additional noise, light and an increase in human activity. Due to the low numbers of waterbirds present on the site and the likelihood they will habituate to the presence of new infrastructure and use the dock network instead, this impact is considered to be not significant at a local level; confidence in this prediction is probable."</p> <p>It is therefore considered highly unlikely that the effects of the Liverpool Waters project will interact with the effects of this project.</p> <p>Therefore, No LSEs on these designated sites are anticipated in relation to this scheme. When considered in combination with the application site LSEs are not anticipated.</p> | No |
| The Lexington | 16F/1370 and 17F/2056 | <p>The Preliminary Ecological Appraisal (Moda Living 2016) refers to the HRA for the Liverpool Waters scheme (as this project sits within the boundaries of the Liverpool Waters Scheme) and concludes that this scheme would not result in impacts upon designated sites.</p> <p>Therefore, No LSEs on these designated sites are anticipated in relation to this scheme. When considered in combination with the application site LSEs are not anticipated.</p> | No |



| Scheme | Planning Ref | Summary assessment | Appropriated Assessment Required at Stage 2 |
|---|----------------------|--|---|
| Plaza 1821 | 17F/0913 | <p>The HRA for this scheme (Peel Holdings 2017) concludes that LSEs are not anticipated.</p> <p>Therefore, No LSEs on these designated sites are anticipated in relation to this scheme. When considered in combination with the application site LSEs are not anticipated.</p> | No |
| Liverpool Cruise Liner Terminal, Princes Dock | 17O/3230 & 19RM/1037 | <p>The HRA for this scheme (Waterman, 2017) concludes that this project will not result in LSEs upon designated sites during construction and operational phases of works when considered alone. This is due to anticipated lack of disturbance and displacement of relevant qualifying features of designated sites during operation of this scheme.</p> <p>In addition, when relevant projects in the surrounding area are considered in combination with this scheme, no LSEs are anticipated. This is due to the low numbers of birds recorded within the application site at any time and therefore effects upon qualifying features in combination with relevant in combination projects (Liverpool Waters) are considered highly unlikely.</p> <p>Given, that this project is not considered likely to cause adverse effects upon the favourable conservation status of qualifying features of the designated site alone or in combination with relevant projects it is considered LSEs are not anticipated when considered in combination with the application site.</p> | No |
| Isle of Man Ferry | 18F/3231 & 18L/3232 | <p>The HRA for this scheme (Waterman, 2018) states that LSE cannot be ruled out in relation to the following impact pathways (when considered alone and in</p> | No |



| Scheme | Planning Ref | Summary assessment | Appropriated Assessment Required at Stage 2 |
|--------|--------------|---|---|
| | | <p>combination with other plans and projects):</p> <ul style="list-style-type: none"> • Direct and indirect displacement of cormorant (qualifying feature of Liverpool Bay SPA) • Death or injury to birds (cormorant) via pollution <p>However, the application site is not connected to designated sites and does not form functionally linked habitat to designated sites which could support cormorant. It is considered that the application site will not interact with this scheme. Therefore, when considered in combination with the application site LSEs are not anticipated.</p> | |

Of the schemes which have been assessed in terms of potential effects upon designated sites, **none are considered likely to act in combination with the proposed development to result in a LSE** upon qualifying features of the relevant designated sites. Therefore, no further in-combination assessment is required in relation to projects.

5.2 Plans

5.2.1 Liverpool Local Plan

The HRA produced in support of the draft Liverpool Local Plan (Aecom 2017, Sect 4.2, Pg 23) considered the likely effects upon the above designated sites and states that:

"Of the 100 detailed policies put forward by the Local Plan, the following 11 were screened in for LSEs upon designated sites (therefore requiring further consideration in the HRA) due to potential pathways being identified to European Sites. These are as follows:

- CC 23 Housing Provision in the City Centre
- EC1 Employment Land Supply,
- EC2 Employment Areas,
- EC3 Delivering Economic Growth,
- EC5 Office Development
- H1 Housing Requirements,
- H2 Site Allocations,
- H4 Older Persons Housing,
- H5 Student Housing Provision,
- H7 Primarily Residential Areas,
- H10 Conversion of Dwellings and Buildings



Although the following detailed policies were screened out when the plan was considered in isolation however, they have been considered further in the HRA regarding their 'in combination effects:

- CC1 The Main Office Area,
- CC1a Pall Mall,
- CC2 Pumpfields,
- CC3 The Knowledge Quarter (KQ Liverpool),
- CC4 Paddington Village,
- CC6 The Fabric District,
- CC12 Liverpool Waters (already has planning permission but considered as part of the overall quantum of housing and employment growth to be delivered in Liverpool),
- CC13 Ten Streets."

The Liverpool Local Plan seeks to deliver at least 34,780 net new dwellings across Liverpool during 2013-2033. The local plan also recognises that the population of the Liverpool area is considered likely to increase over the lifetime of the plan (partly as a result of occupation of new dwellings as they come forward in future years).

The HRA for Liverpool Local Plan (AECOM 2017 Sect 5.7, Pg 35) states (in relation to recreational disturbance of qualifying bird species): "Recommended text for inclusion in the Local Plan is as follows: 'Commencing early in the plan period Liverpool City Council will work with partners, including the other Merseyside authorities, to devise and implement a Visitor Management Strategy (VMS) to protect all European sites in the Liverpool City Region from increased recreational pressure. The financing of this VMS may include a tariff to be applied to net new residential development..... Provided that this commitment to a visitor management strategy framework is incorporated within the plan it can be considered that recreational pressure from the Plan area will not result in loss upon the Mersey Estuary as a result of increased recreational pressure both alone and in combination.'"

However, at the time of writing this assessment, no VMS document has been produced (and likely tariff for new developments have not been finalised) and so cannot be relied upon as a means of reducing public pressure upon designated sites. As such, **LSEs upon the favourable conservation status of qualifying features of the designated sites are anticipated** when the Liverpool Local Plan is considered alone and in combination with other plans and projects.

It is recognised that LSEs are anticipated via recreational/public pressure as a result of population increase associated with the Local Plan for Liverpool. However, LSEs are not anticipated as a result of the application site alone (as discussed above). It is therefore considered that the application site will not interact with relevant plans and therefore in-combination effects with relevant plans can be screened out of this assessment.

5.2.2 Wirral Core Strategy

The HRA report prepared in support of the Core Strategy for Wirral (Scott Wilson 2010) determined that LSEs at the above designated sites were anticipated in relation to the following policies (generally because they promote and determine the location or scale of development (particularly housing and commercial development)):

- 2: Settlement Area Policies
- 3: Spatial Vision (with respect to the following Spatial Objectives):
 - Spatial Objective 1 - Economic Revitalisation
 - Spatial Objective 2 - Housing Growth and Market Renewal



- Spatial Objective 7 - New City Neighbourhood
 - 4: Broad Spatial Strategy
 - 5: Local Housing Targets
 - 6: Distribution of Housing
 - 8: Order of Preference
 - 10: Gypsies and Travellers
 - 11: Distribution of Employment
 - 12: Retail Network
 - 14: Decentralised Energy
 - 21: Strategic Locations

The Wirral Core Strategy seeks to provide a net gain of 3,750 dwellings (Scott Wilson 2010). Despite this the population of Wirral is not considered to grow over the lifetime of the relevant policy documents (Scott Wilson 2010). In addition, the HRA for the Wirral Core Strategy includes recreational pressure as an impact pathway which may result in LSEs upon designated sites. As such, **LSEs upon the favourable conservation status of qualifying features of the designated sites are anticipated** when the Wirral Core Strategy is considered alone and in combination with other plans and projects.

It is recognised that LSEs are anticipated via recreational/public pressure as a result of population increase associated with the Core Strategy for Wirral. However, LSEs are not anticipated as a result of the application site alone (as discussed above). It is therefore considered that the application site will not interact with relevant plans and therefore **in-combination effects with relevant plans can be screened out of this assessment.**



5.3 Discussion

Using a precautionary approach, this assessment has concluded that LSEs on qualifying interest features associated with the above designated sites **are not anticipated, either alone or in combination with other plans and projects.**

As such, the 'Competent Authority', in consultation with Natural England is considered unlikely to require any further assessment under the Habitats Regulations, and the proposed development should be able to proceed without any adverse effects on the integrity of the internationally designated sites within 10 km of the proposed development.



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Appendix A – Report Conditions

This Report has been prepared using reasonable skill and care for the sole benefit of Everton Stadium Development Limited ("the Client") for the proposed uses stated in the report by WYG Environment Planning Transport Limited ("WYG"). WYG exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder's permission.

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The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. WYG accept no liability for issues with performance arising from such factors.



Appendix B – Site Boundary and Development Layout



- [illegible]

**Illustrative Purposes Only:
Not For Approval**

Application / Site Boundary