



Frodsham Solar

Environmental Statement Vol 2 Appendix 7-5: Assessment of Frodsham, Helsby and Ince Marshes Local Wildlife Site

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Frodsham Solar

on behalf of Axis PED

Technical Appendix 7.5: Assessment of Frodsham, Helsby and Ince Marshes Local Wildlife Site



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CONTENTS

1	INTRODUCTION	4
1.1	Background and Scope.....	4
2	ASSESSMENT OF FRODSHAM, HELSBY AND INCE MARSHES LWS AGAINST CURRENT CRITERIA	6
3	CONCLUSION	11

TABLES

Table 2.1:	LWS Criteria Met at Frodsham, Helsby and Ince Marshes LWS.....	6
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1 INTRODUCTION

1.1 Background and Scope

- 1.1.1 This Technical Appendix has been prepared to accompany **Chapter 7: Terrestrial Ecology [EN010153/DR/6.1] (APP-040)** of the Frodsham Solar Environmental Statement (ES).
- 1.1.2 It presents an assessment of Frodsham, Helsby and Ince Marshes Local Wildlife Site (LWS) against the current LWS selection criteria for the Cheshire region¹, focusing primarily on the area of the LWS that overlaps with the Order Limits boundary.
- 1.1.3 This technical appendix includes an assessment of Frodsham Helsby Ince LWS against the current LWS selection criteria. The assessment of impacts on the LWS as a result of the Proposed Development are discussed in Section 7.8 of Chapter 7 and habitat creation/enhancement measures proposed within the Frodsham Helsby Ince LWS are detailed within the **Outline Landscape Environment Management Plan (oLEMP) [EN010153/DR/7.13] (REP3-015)**.
- 1.1.4 This assessment has been informed by a combination of a desk-based review of relevant ecological information, together with a suite of ecological and ornithological surveys, details of which are included in **Technical Appendices 7-1 – 7-3 (APP-075, APP-076 & APP-077)**.
- 1.1.5 All features listed in the current LWS selection criteria for the Cheshire region¹ have been assessed, however, only those which are present or potentially present within the Site are listed in **Table 2.1**, below.
- 1.1.6 As detailed on the Cheshire West and Chester Public Interactive Map², currently recognised qualifying criteria of Frodsham, Helsby and Ince Marshes LWS include:
- Neutral grassland (H7);
 - Restorable grassland (H11);
 - Coastal and Floodplain grazing marsh (H17);
 - Fens, swamps, bogs and reedbeds (H18);
 - Wildlife corridors/buffers (H24);
 - Accessible natural greenspace (H26);
 - Mosaics (H27);
 - Saltmarsh and intertidal mudflats (H28)
 - Birds (S2);
 - Mammals (S3); and,
 - Vascular plants (S13).

¹ Cheshire Wildlife Trust (2012). Local Wildlife Site Selection Criteria for the Cheshire region. Covering the districts of Cheshire West and Chester, Cheshire East, Wirral, Halton and Warrington. Updated February 2014.

² Available at: [Public Map Viewer \(cheshirewestandchester.gov.uk\)](#) [Accessed 16/09/2024]

1.1.7 Throughout this report, common names for species are favoured over scientific names unless there is potential for confusion, in which case scientific names are also presented.

2 ASSESSMENT OF FRODSHAM, HELSBY AND INCE MARSHES LWS AGAINST CURRENT CRITERIA

2.1.1 **Table 2.1** presents the criteria that are considered to be met within areas of Frodsham, Helsby and Ince Marshes LWS that overlap with the Order Limits, together with a justification for why they are considered to be met.

2.1.2 **Table 2.1** also includes a reference to where potential impacts to a met criterion are addressed within **Chapter 7: Terrestrial Ecology [EN010153/DR/6.1] (APP-040)** of the Frodsham Solar Environmental Statement (ES).

Table 2.1: LWS Criteria Met at Frodsham, Helsby and Ince Marshes LWS

Criteria	Justification	Relevant reference
Habitat Criteria		
H2 Wet Woodland	<p>Criterion met: Woodland communities meeting the definition of National Vegetation Classification (NVC) W2, W4, W5, W6, W7 (alder, willow sp. or downy birch dominant). Areas of locally native semi-natural lowland mixed deciduous woodland and/or wet woodland greater than 0.25 ha should be selected.</p> <p>Justification: The wet woodland adjacent to the access road in Frodsham Windfarm is consistent with NVC community W2 (willow and birch with frequent common reed). The area of this habitat type located within the Site is less than 0.25 ha; however, combined with an adjacent area of this habitat type that sits outside the Site boundary, the total area is greater than 0.25 ha.</p>	<p>Wet woodland is scoped out of detailed assessment, due to no direct impact impacts as detailed within the Biodiversity Net Gain Report [EN010153/DR/7.12] .</p> <p>[as updated alongside this submission]</p>
H7 Neutral grassland	<p>Criterion met: Threshold to qualify as Lowland meadow BAP priority habitat, with four ‘occasional’ indicator species (from Table 3 (of the LWS Selection Criteria)), at least three of which are listed as neutral grassland indicators.</p> <p>Justification: No individual neutral grassland field within the Site meets the threshold; however, all the neutral grassland fields combined do meet the criteria by having the following ‘occasional’ indicator species included in Table 3 (* denotes neutral grassland indicators):</p> <ul style="list-style-type: none"> • Bugle*; • Common bird’s foot trefoil* • Goat’s-beard*; • Meadow vetchling*; and, • Small sedges (spiked sedge, yellow sedge and false fox sedge). 	<p>Neutral grassland impacts are addressed in paragraph 7.8.27 to 7.8.30 in Section 7.8 of Chapter 7: Terrestrial Ecology [EN010153/DR/6.1] (APP-040).</p>
H11 Restorable grassland	<p>Criterion met: Moderately species rich semi-improved, where there is good potential to restore to BAP quality. Threshold to qualify as restorable grassland habitat requires a minimum of:</p>	<p>Details of retained and enhanced grassland are located within the Outline Landscape and Ecology Management</p>

Criteria	Justification	Relevant reference
	<ul style="list-style-type: none"> Four 'occasional' indicator species present from Table 3 (of the LWS Selection Criteria), but two or fewer occur from the lists given for neutral/acid/marshy/calcareous grassland. <p>Justification: Numerous grassland fields within the Site include at least four 'occasional' indicator species included in Table 3 of the criteria.</p>	<p>Plan (oLEMP) [EN010153/DR/7.13] [REP3-014] Section 4.6, paragraph 4.61.</p>
H18 Fens, swamps, bogs and reedbeds	<p>Criterion met: Areas of fens, swamps, reedbeds, lowland raised bogs and blanket bogs with sphagnum moss, cotton grasses or abundant tall vegetation such as common reed, tall sedges and grasses or wetland plants from Table 5 (of the LWS Selection Criteria).</p> <p>Justification: Areas of reedbed adjacent to the River Weaver and within Frodsham Windfarm comprise the following species from Table 5:</p> <ul style="list-style-type: none"> Common reed; and, Marsh woundwort. 	<p>Reedbed habitat is addressed in Section 7.8 of Chapter 7: Terrestrial Ecology [EN010153/DR/6.1] (APP-040) (under Habitats of Principal Importance) and also within Section 6.3 of the Biodiversity Net Gain Report [EN010153/DR/7.12].</p>
H20 Ponds and ditches	<p>Criterion met: All seasonal or permanent ponds or ditches of <2 ha where one or more of the following criteria are met:</p> <ul style="list-style-type: none"> High value ponds or ditches which support species or species assemblages which qualify under the species selection criteria S 1-13 and are dependent on the pond; and, Ponds or ditches which sit within 250 m of a high value pond or ditch, which have a strong likelihood of hosting the qualifying species or species assemblages. <p>Justification: Ditches supporting water vole and European eels are known to be present within the Site. Further ditches within 250 m, which have a strong likelihood of hosting the qualifying species, are also present within the Site.</p>	<p>Pond and ditches are addressed in Section 7.8 of Chapter 7: Terrestrial Ecology [EN010153/DR/6.1] (APP-040) (under Habitats of Principal Importance (ponds) and other habitats (ditches)).</p> <p>Impacts to eel is detailed in paragraph 7.7.39</p> <p>Impacts to otter and water vole is detailed in 7.2.28.</p>
H24 Wildlife corridor/buffers	<p>Criterion met: Areas of land including hedges and ditches where they:</p> <ul style="list-style-type: none"> Provide a physical link between two or more areas of high wildlife value and has favourable conditions for the movement of species between these habitats; and, Provide additional buffering habitat for species associated with existing wildlife sites. 	<p>Wildlife corridor/buffers are addressed in Section 7.8 of Chapter 7: Terrestrial Ecology [EN010153/DR/6.1] (APP-040) (under Non-Statutory</p>

Criteria	Justification	Relevant reference
	Justification: Habitats within the Site, including the network of hedgerows and ditches, provide a physical link between areas of high wildlife value, including woodland, wetland and open grassland, and has favourable conditions for the movement of species between these habitats. The Site provides additional buffering habitat for species associated with Mersey Estuary Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar Site, and has been confirmed as functionally linked land.	Designated Sites for Nature Conservation), paragraphs 7.8.11 to 7.8.19.
H25 High value hedges	Criterion met: High value species rich hedges at least 20 m in length where they have a least four native woody species in a 30 m section within 2 m of the centre of the hedge. Justification: Hedges meeting the above criteria are present within the Site.	Hedges are addressed in Section 7.8 of Chapter 7: Terrestrial Ecology [EN010153/DR/6.1 (APP-040) (under Habitats of Principal Importance), paragraph 7.8.20 onwards.
H26 Accessible natural greenspace	Criterion met: Sites when the social/aesthetic/educational interest of the site derives from the wildlife features of the site. Justification: Regular walkers and birdwatchers visit the LWS for the wildlife features of the Site.	The Site will remain assessable to the public. See Outline Public Rights of Way Management Plan [EN010153/DR/7.9 (Rep3-028) and paragraph 7.8.84 in Section 7.8 of Chapter 7: Terrestrial Ecology [EN010153/DR/6.1 (APP-040)
Species Criteria		
S1 Butterflies	Criterion met: Regularly supports an assemblage of species with a minimum total score of 16 points calculated from Table 6 (of the LWS Selection Criteria). Justification: Species recorded during the invertebrate assessment undertaken in 2023 (see Appendix 7.2 Protected Ecological Species Baseline Report) that are included in Table 6 of the LWS Selection Criteria: <ul style="list-style-type: none"> • Speckled wood (1 point); • Green-veined white (1 point); • Red admiral (1 point); • Small tortoiseshell (1 point); • Peacock (1 point); 	Invertebrates are addressed in Section 7.8 of Chapter 7: Terrestrial Ecology [EN010153/DR/6.1 (APP-040) , paragraphs 7.8.69 to 7.8.70

Criteria	Justification	Relevant reference
	<ul style="list-style-type: none"> • Large white (1 point); • Meadow brown (1 point); • Small white (1 point); • Meadow brown (1 point); • Small white (1 point); • Gatekeeper (1 point); • Comma (1 point); • Small copper (2 points); • Small skipper (2 points); • Large skipper (2 points); • Common blue (2 points); and, • Ringlet (5 points). 	
S2 Birds	<p>Criterion met: Sites that support either:</p> <ul style="list-style-type: none"> • Any regular probable breeding or over wintering* bird species listed in Table 7 (of the LWS Selection Criteria); • Any regular over wintering population as listed in Table 8 (of the LWS Selection Criteria); or, • At least 10 probable breeding species from Tables 7 and 9 (of the LWS Selection Criteria). <p>Justification:</p> <ul style="list-style-type: none"> • Regular probable breeding or over wintering bird species listed in Table 7 (of the LWS Selection Criteria): <ul style="list-style-type: none"> ○ Avocet: 0-3 breeding territories estimated; ○ Gadwall: 1-12 breeding territories estimated; ○ Little ringed plover: 0-2 breeding territories estimated; and, ○ Yellow wagtail: 0-4 breeding territories estimated. • Regular over wintering population as listed in Table 8 (of the LWS Selection Criteria): <ul style="list-style-type: none"> ○ Black-tailed godwit; ○ Duck species (5+ species of dabbling ducks: shoveler, mallard, pintail, wigeon and teal); ○ Pink-footed goose; and, ○ Teal. • At least 10 probable breeding species from Tables 7 and 9 (of the LWS Selection Criteria): <ul style="list-style-type: none"> ○ Avocet; ○ Gadwall; 	<p>Impacts to bird species are addressed in Birds are addressed in Section 8.8 of Chapter 8: Ornithology [EN010153/DR/6.1] (APP-041), paragraphs 8.8.21 to 8.8.32 and 8.8.75 to 8.8.80.</p>

Criteria	Justification	Relevant reference
	<ul style="list-style-type: none"> ○ Little ringed plover; ○ Yellow wagtail; ○ Barn owl; ○ Bullfinch; ○ Dunnock; ○ House sparrow; ○ Kestrel; ○ Lapwing; ○ Linnet; ○ Mallard; ○ Meadow pipit; ○ Reed bunting; ○ Ringed plover; ○ Shelduck; ○ Shoveler; ○ Skylark; ○ Song thrush; ○ Starling; ○ Stock dove; and, ○ Yellowhammer. 	
S3 Mammals	<p>Criterion met: Sites that regularly support an assemblage of mammals from Table 10 (of the LWS Selection Criteria) which score a total of 12 points.</p> <p>Justification: Species recorded during field surveys (see Appendix 7.2 Protected Ecological Species Baseline Report) that are included in Table 10 of the LWS Selection Criteria:</p> <ul style="list-style-type: none"> ● Otter (12 points); ● Water vole (4 points); and, ● Badger (2 points). 	<p>Mammals are addressed in Section 7.8 of Chapter 7: Terrestrial Ecology [EN010153/DR/6.1] (APP-040).</p> <p>Otter are addressed in paragraphs 7.8.38 to 7.8.47</p> <p>Water vole are addressed in paragraphs 7.8.48 to 7.8.55</p> <p>Other notable mammals are addressed in 7.8.56 to 7.8.61</p> <p>Badger is addressed in 7.7.32 to 7.7.35.</p>
S4 Dragonflies and damselflies (Odonata)	<p>Criterion met: Sites that regularly support species assemblages (probable breeding) scoring eight points or more from Table 11 (of the LWS Selection Criteria).</p>	<p>Invertebrates are addressed in Section 7.8 of Chapter 7: Terrestrial Ecology</p>

Criteria	Justification	Relevant reference
	<p>Justification: Species recorded during the invertebrate assessment undertaken in 2023 (see Appendix 7.2 Protected Ecological Species Baseline Report) that are included in Table 6 of the LWS Selection Criteria:</p> <ul style="list-style-type: none"> • Azure damselfly (1 point); • Blue tailed damselfly (1 point); • Brown hawkler (1 point); • Common darter (1 point); • Large red damselfly (1 point); • Migrant hawkler (4 points); and, • Ruddy darter (4 points). 	<p>[EN010153/DR/6.1 (APP-040), paragraphs 7.8.69 to 7.8.70</p>
S7 Fresh water fish	<p>Criterion met: Sites that regularly support:</p> <ul style="list-style-type: none"> • The European eel. <p>Justification: based on a desk-based review of HyNet North West Hydrogen Pipeline Aquatic Ecology Survey Report (October 2024³), European eels are present within the Site. It has therefore been assumed that the Site regularly supports this species.</p>	<p>Fish are addressed in Section 7.8 of Chapter 7: Terrestrial Ecology [EN010153/DR/6.1 (APP-040). Impacts to eel is detailed in paragraph 7.7.39</p>
S13 Vascular plants	<p>Criterion met: Sites that regularly support significant or viable populations of any species listed in Table 21 of the LWS Selection Criteria.</p> <p>Justification: A small population of European spindle (listed on Table 21 of the LWS Selection Criteria) is present within the Site boundary (at SJ503781). An additional, larger population of European spindle is present immediately south of this area, beyond the Site boundary. Together, these two areas are considered to support a population that is likely self-sustaining in the medium term.</p>	<p>The area of European spindle located within the Site is located at the base of a hedgerow along the Public Right of Way, and is located within the Principal Public Access/Biodiversity Enhancement Zones (as identified within the Illustrative Environmental Masterplan (Figure 2-3 [EN010153/DR/6.3 (APP-106))), and will therefore be retained as part of the Proposed Development.</p>

2.1.3 All features listed in the current LWS selection criteria for the Cheshire region¹ have been assessed, no other criteria are considered to be met within areas of Frodsham, Helsby and Ince Marshes LWS that overlap with the Order Limits.

³ WSP UK Limited for Cadent Gas Limited (2024). HyNet North West Hydrogen Pipeline. Appendix 5k: Aquatic Ecology Survey Report. WSP UK Limited for Cadent Gas Limited.

- 2.1.4 As detailed in **Section 1**, currently recognised qualifying criteria of Frodsham, Helsby and Ince Marshes LWS include the following:
- Coastal and Floodplain grazing marsh (H17);
 - Mosaics (H27); and,
 - Saltmarsh and intertidal mudflats (H28).
- 2.1.5 Based on informed gathered during a desk-based review of relevant ecological information, together with a suite of ecological and ornithological surveys, these three criteria are not considered to be met within areas of Frodsham, Helsby and Ince Marshes LWS that overlap with the Order Limits:
- 2.1.6 Justification as to why these three criteria are not considered to be met are included below.
- Habitat surveys undertaken of the Site, as detailed in ES Vol 2 Appendix 7-1 Habitats Baseline Report **[EN010153/DR/6.2] (APP-075)**, have not identified any areas of coastal and floodplain grazing marsh Habitat of Principal Importance (HPI) (UK BAP priority habitat) within the Site.
 - As detailed within the LWS selection criteria for the Cheshire region¹, the Mosaic (H27) criterion 'is only to be used to select mosaic sites which fail to reach the minimum size specified in the habitat criteria (e.g. woodlands which have a size threshold)'. Habitat surveys undertaken of the Site, as detailed in ES Vol 2 Appendix 7-1 Habitats Baseline Report **[EN010153/DR/6.2] (APP-075)**, recorded no such habitat parcels within the Site.
 - Habitat surveys undertaken of the Site, as detailed in ES Vol 2 Appendix 7-1 Habitats Baseline Report **[EN010153/DR/6.2] (APP-075)**, have not identified any areas of saltmarsh and intertidal mudflats HPI (UK BAP priority habitat) within the Site.

3 CONCLUSION

- 3.1.1 This assessment concludes that Frodsham, Helsby and Ince Marshes LWS meets the c Cheshire Wildlife Trust (2012) defined criteria of an LWS.
- 3.1.2 The assessment of impacts on the LWS as a result of the proposed development is discussed within Section 7.8 of Chapter 7 Ecology and habitat creation/enhancement measures proposed within the Frodsham Helsby Ince LWS are detailed within the oLEMP **[EN010153/DR/7.13] (REP3-015)**.
- 3.1.3 In summary, incorporated mitigation includes the creation and retention of a range of habitats within the LWS, as detailed in the Indicative Environmental Masterplan shown in **ES Volume 3 Figure 2-3 [EN010153/DR/6.3] (APP-106)**, including: the retention of existing/woodland, hedgerows, tree lines, waterbodies, reedbeds, ditches and watercourses, as far as practicable; the creation of 3.6 km of new native hedgerows and 4.7 km of tree and shrub belts; the enhancement of existing hedgerow; the creation of 2.2 ha of native woodland and shrub; the creation of botanically diverse grassland, enhancement of open water and reedbeds and extensive habitat enhancement and creation within the principal public access / biodiversity enhancement zones.
- 3.1.4 Enhancement measures include a commitment to achieve an increase of at least 10 % in both habitat and hedgerow units across the Site. Commitment to delivering a measurable gain will also include the requirement for long-term ecological monitoring and management through the lifespan of the Proposed Development. These proposed habitat enhancement measures, together with ecological

monitoring and management, would not be undertaken in the absence of the Proposed Development. These measures will result in positive impacts on habitats, which in turn will also benefit associated flora and fauna (e.g. mammals, invertebrates, birds and fish) for which the LWS is cited, thereby resulting in long-term positive impacts to the LWS as a whole.

- 3.1.5 The creation and enhancement of high value habitats detailed above, such as hedgerows and woodland, will strengthen the LWS's wildlife corridor, a feature for which it is also cited for. Existing corridors along ditches will be maintained. The presence of mammal gaps or gates along fence lines within the LWS will allow continued movement of fauna into and out of the Main Development Area during construction. With the inclusion of 'mammal gates' the presence of perimeter fencing surrounding the Solar Array Development Area (SADA) may benefit badgers and other species (if present) during the operational phase by providing undisturbed areas of high value and well managed habitat.
- 3.1.6 Although the installation of predator fencing surrounding the Non-Breeding Bird Mitigation Area (NBBMA) will result in the cessation of access to otter and badger, to the NBBMA, the decision to exclude mammalian predators from the NBBMA is conservation based (i.e., for the protection of breeding waders, which are in very substantial decline and suffer badly from egg predation). However, considering the presence of high value habitat within the surrounding landscape, such as the River Weaver, extensive network of ditches, and an area of large undeveloped land to the south of the NBBMA, the cessation of access to the NBBMA is unlikely to adversely affect free movement of species throughout the landscape, or the availability of food or shelter resources. Furthermore, incorporated habitat mitigation and enhancement measures as detailed in the oLEMP **[EN010153/DR/7.13] (REP3-015)** include the creation of new ponds and wetland habitats, together with enhanced management of habitats (including ditches) across the SADA, which will provide additional foraging, sheltering and breeding habitat for these species; thereby providing long-term positive impacts to cited features of the LWS, and therefore the LWS as a whole.
- 3.1.7 Taking into consideration the incorporated mitigation, the Proposed Development is anticipated to result in medium to long term moderate positive effects for the lifetime of the Proposed Development on Frodsham, Helsby and Ince Marshes LWS.