

Client Name: Axis PED
Site Name: Priory Farm Solar Array
Project Ref: AxisL-043-003724
Date: 31st July 2024

Wymondley Transforming Station LWS: Walkover Survey Summary

Introduction

Background

Avian Ecology Limited (AEL) were commissioned by Axis on behalf of AGR Solar 4 Limited to undertake an update walkover botanical survey within the Wymondley Transforming Station Local Wildlife Site (LWS), in order to discharge Condition 20 of the approved permission for a solar farm and associated infrastructure (Planning application reference: 21/03380/FP), as follows:

No excavation of trenches for cabling within Wymondley Transforming Station Local Wildlife Site (LWS) shall take place until a soil management plan has been submitted to and approved in writing by the Local Planning Authority. The soil management plan shall include the following:

- i) An ecological survey of the route across the LWS.
- ii) Details relating to the lifting, storage and replacement of turves, including the season when this will take place.
- iii) Proposed aftercare and management.

The works shall be undertaken in accordance with the approved management plan. Reason - To minimise the impact upon the ecological and biodiversity interest of the Wymondley Transforming Station LWS in accordance with Policy NE4 of the North Hertfordshire Local Plan 2011-2031.

This is in relation to the cable route though the LWS for the previously consented Priory Farm Solar Array.

The location of the Cable Route, including the area within the Wymondley Transforming Station LWS is shown on **Figure 1**.

The objectives of this report are:

- Update baseline information on the current botanical interest within the Wymondley Transforming Station LWS;
- Identify the presence of any notable plant species within the Wymondley Transforming Station LWS; and
- Provide recommendations on any further survey works and/ or mitigation measures that should be implemented with regards to the Wymondley Transforming Station LWS.

This report has been informed by a desk-based review and botanical survey last carried out at the LWS in August 2022. Common names are used throughout this report, although binomials are provided in **Appendix 1**.

Wymondley Transforming Station LWS

The cable route passes through the Wymondley Transforming station LWS, designated for the presence of grassland indicator species. The LWS comprises a former gravel pit with a nutrient-poor stony substrate on which a patchy calcareous grassland has developed, and surrounds the existing Wymondley Transforming Station. The citation for the LWS, as provided by Hertfordshire Ecological Record Centre, is given below:

‘Old gravel pit landscaped to form grounds of transforming station. Poor stony substrate on chalk, with very few grasses recorded. Raised banks support coarse calcareous grassland with scrub invading slowly from the edges. Grassland indicators included Common Knapweed *Centaurea nigra*, Bird’s-foot Trefoil *Lotus corniculatus*, Fairy Flax *Linum catharticum*, Ploughman’s Spikenard *Inula conyza*, Yellow-wort *Blackstonia perfoliata*, Wild Strawberry *Fragaria vesca*, Wild Parsnip *Pastinaca sativa* and Pyramidal Orchid *Anacamptis pyramidalis*. Wildlife Site criteria: Grassland indicators’.

It should be noted that although the LWS is designated for its grassland indicator species, the LWS boundary encompasses all surrounding scrub and woodland around the perimeter too. Part of the cable route passes through the perimeter woodland, as well the open habitat present on site which was the reason for its designation.

Survey Methodology

The botanical walkover survey comprised of a survey of the cable route within the Wymondley Transforming Station LWS and a broader walkover survey of the LWS. This was undertaken by A. Littlechild BSc (Hons), a suitably qualified ecologist with Level 3 FISC (Field Identification Skills Certificate) on 16th July 2024.

The survey had a particular focus on any notable species which have been defined as those listed within the Vascular Plant Red Data List for Great Britain¹, although all species encountered were recorded.

Limitations

The survey was undertaken in mid-July, which is in the middle of the optimal botanical period. This would potentially not allow for the identification of early or late flowering species but gives a good indication of the site’s floral diversity. As such, there is not considered a significant limitation to the survey and subsequent assessment.

The survey did not penetrate deeper areas of scrub or woodland on the perimeter of the LWS, it focused on the areas that were open and the species which were the reason for the LWS designation. This is not considered a significant limitation as the cable will be drilled underneath the woodland in this area.

¹ Cheffings, C.M. & Farrell, L. (Eds), Dines, T.D., Jones, R.A., Leach, S.J., McKean, D.R., Pearman, D.A., Preston, C.D., Rumsey, F.J., Taylor, I. 2005. The Vascular Plant Red Data List for Great Britain. Species Status 7: 1-116. Joint Nature Conservation Committee, Peterborough.

Results

A full list of species encountered during the survey with approximate vegetation cover (using the DAFOR scale) is provided in **Appendix 1** and photos of the LWS are shown in **Appendix 2**.

The update survey confirmed the presence of indicator species of a well-drained species-rich grassland. This was largely with a short sward although there were some localised areas with a longer sward, predominantly surrounding scattered scrub such as mature willow and hawthorn shrubs.

The vegetation appeared to be browsed by both rabbits and deer, as evidence by rabbit droppings and deer prints across the LWS. Badger was also present across the LWS and wider surroundings, as evidenced by large mammal tracks across the south western bank of the LWS (which the Cable Route crosses) and the presence of a badger sett and guard hair in the surrounding woodland.

There were no dominant species across the LWS, with grass coverage largely limited with exception of some localised areas which had patches with frequent grasses recorded. The LWS is overall dominated by a range of forbs and occasional bryophytes. This differs from the 2022 survey, which revealed it was abundant with bryophytes at the time. The species composition across the LWS suggests calcareous substrate, although not considered likely to be strongly calcareous due to a lack of more typical calcareous indicator species.

Calcareous indicators present include fairy flax, ladies bedstraw, wild basil, pyramidal orchid, common agrimony, yellow-wort, wild strawberry, yellow feather-moss, big shaggy-moss and sweet-brier. A single bee orchid was also recorded on the outskirts of the LWS, immediately adjacent to a permissive footpath in the north of site. Sheep's fescue is frequent too; although this tends to be a grass species of either calcareous or acid soils, as well as dry and disturbed ground.

Species typical of previously disturbed ground are also present, including red bartsia, mullein, mallow, yellow feather-moss, common centaury, smooth hawksbeard, teasel, vipers- bugloss and perforate St John's-wort.

Of the species recorded, only wild strawberry is listed as near threatened on the England Red Data List², with all other species are classed as least concern. The status of species recorded is provided in **Appendix 1**. No rare plant register is available for the county of Hertfordshire³.

A review of historic satellite images reveals the site is being slowly encroached by scrub from the surrounding woodland, particularly on the northern western and south western boundaries. It is noted that a number of young and semi-mature ash trees displaying signs of ash dieback are present along the south western aspect of site near the cable route. There is evidence of scrub management around the electricity pylon bases, although it is not clear if the practice is in place across the rest of the site.

In addition, no invasive non-native species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were noted. A low number of non-native species were identified; tutsan and garden ladies-mantle as noted from the 2022 botanical survey, plus buddleia and pale yellow eyed grass, however these were not invasive at time of survey and mostly restricted to a single patch of each. Garden ladies mantle was more prevalent, but still only present on Site on an occasional basis.

² Stroh, P.A., Leach, S.J., August, T.A., Walker, K.J., Pearman, D.A., Rumsey, F.J., Harrower, C.A., Fay, M.F., Martin, J.P., Pankhurst, T., Preston, C.D. & Taylor, I. 2014. *A Vascular Plant Red List for England*. Botanical Society of Britain and Ireland, Bristol.

³ <https://bsbi.org/rare-plant-registers>

Discussion

The update walkover survey concurs with the information provided in the LWS citation, in that the LWS is a well-drained calcareous grassland with indicator species present including pyramidal orchid, fairy flax and wild strawberry. The LWS citation however, states that few grass species are present and whilst this is true of some areas within the LWS, including the area where the cable route crosses, some areas are locally frequent with grasses such as the north western aspect of the site.

A review of historic satellite images reveals the site has been subject to vegetative management or habitat manipulation over the past twenty years in order to facilitate the transforming station works. Areas of vegetation have been sporadically removed and appear to have re-colonised again within a few years.

As such, it is considered that the habitats will re-establish quickly following any ground works required to facilitate the cable route. The area of habitat removal required to install the cable route is limited to a long, thin area of around 900mm wide and 1m deep, plus surrounding area likely to be disturbed by machinery to install the cable.

Some areas of bare ground are also known to be good for certain plant species to establish, which might otherwise struggle in a competitive area. This is supported by one of the habitat condition assessment criteria for the 'moderate, high and very high grassland', which is the presence of bare earth on site, between 1 and 5% which would pass the criteria.

Regardless, measures should be considered to protect the ground from excessive disturbance and to limit heavy machinery use along the route as much as possible.

It is understood that the cable will be drilled underneath the perimeter woodland of the LWS via Horizontal Directional Drilling (HDD) at a depth of 3m. This is below the rhizosphere of woodland, ensures no trees will have to be removed to facilitate the cable and other ground level impacts are nil. Any possible impacts within the woodland would be limited to minor root damage and overall it is considered the woodland would have to no significant impact.

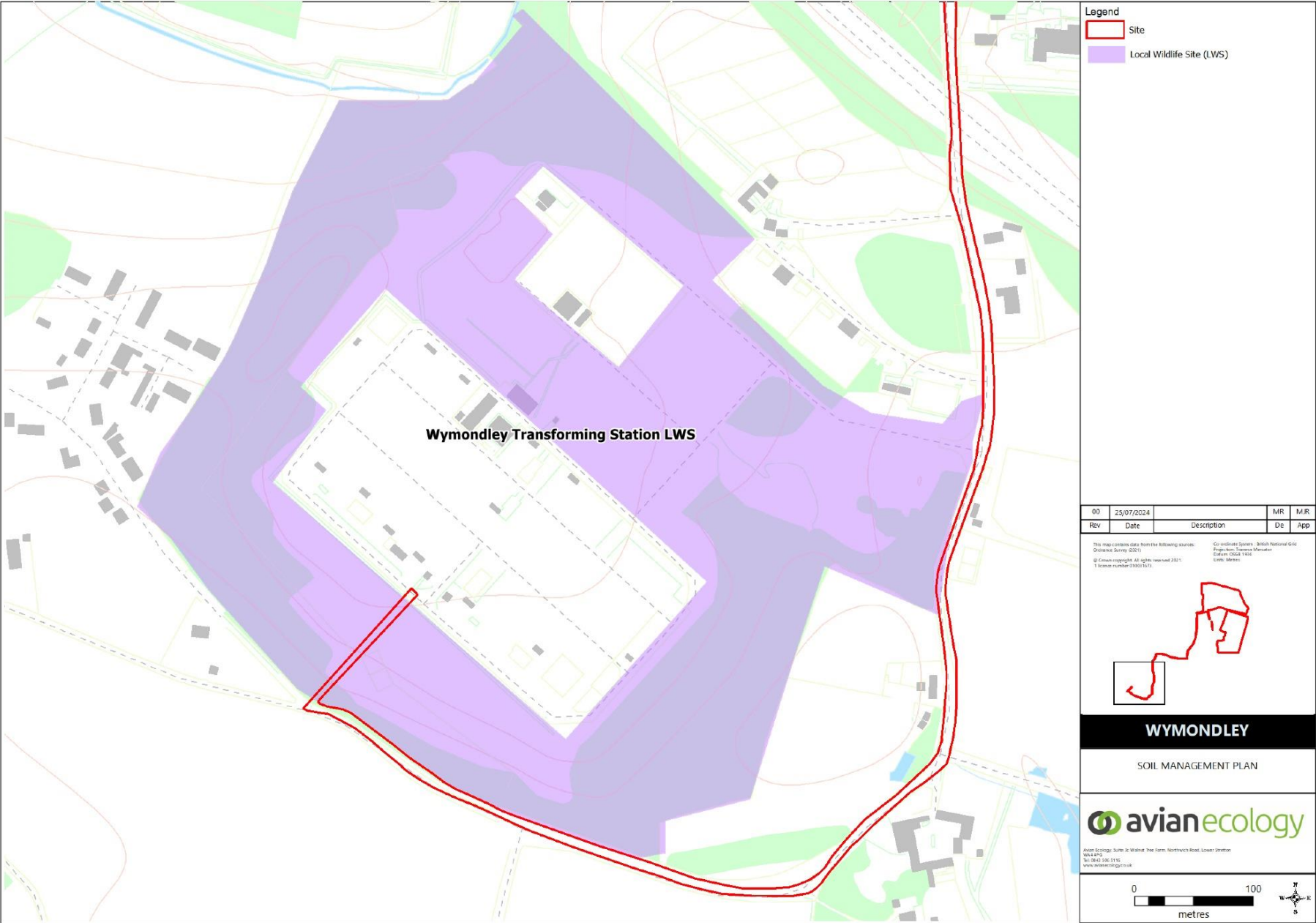
Works within the open habitats present on the LWS will proceed following a soil management plan, which includes measures to ensure the topsoil containing the seedbank is excavated and stored separate to subsoil layers and following the laying of new cable that the trench is infilled with the topsoil layer at the surface. Please refer to the Soil Management Plan (Avian Ecology, 2024)⁴.

Prepared by: A. Littlechild *BSc (Hons)*

Reviewed by: J. Stevens *BSc (Hons)*

⁴ Avian Ecology (2024) *Wymondley Transforming Station LWS Soil Management Plan*

Figure 1: Non-Statutory Designated Site with Consented Cable Route Location



Appendix 1: Botanical Species Recorded

Scientific Name	Common Name	DAFOR	England Red List Status
<i>Acer pseudoplatanus</i>	Sycamore	R	
<i>Achillea millefolium</i>	Yarrow	R	LC
<i>Agrimonia eupatoria</i>	Common agrimony	O	LC
<i>Agrostis capillaris</i>	Common bent	O	LC
<i>Alchemilla mollis</i>	Garden lady's-mantle	O	
<i>Anacamptis pyramidalis</i>	Pyramid orchid	O	LC
<i>Arrhenatherum elatius</i>	False oat grass	O	LC
<i>Bellis perennis</i>	Common daisy	R	LC
<i>Betula spp.</i>	Birch	O	LC
<i>Blackstonia perfoliata</i>	Yellow-wort	O	LC
<i>Bromus hordeaceus</i>	Soft brome	R	LC
<i>Buddleja davidii</i>	Buddleia	R	
<i>Calliergonella cuspidata</i>	Pointed spear-moss	O	
<i>Centaureum erythaea</i>	Common centaury	F	LC
<i>Cerastium fontanum</i>	Common mouse-ear	R	LC
<i>Chamaenerion angustifolium</i>	Rose-bay willowherb	R	LC
<i>Cirsium arvense</i>	Creeping thistle	R	LC
<i>Cirsium palustre</i>	Marsh thistle	R	LC
<i>Clinopodium vulgare</i>	Wild basil	O	LC
<i>Cornus sanguinea</i>	Dogwood	O	LC
<i>Crataegus monogyna</i>	Hawthorn	O	LC
<i>Crepis capillaris</i>	Smooth hawksbeard	F	LC
<i>Daucus carota</i>	Wild carrot	O	LC
<i>Dipsacus fullonum</i>	Common teasel	O	LC

Appendix 1: Botanical Species Recorded

Scientific Name	Common Name	DAFOR	England Red List Status
<i>Echium vulgare</i>	Viper's-bugloss	R	LC
<i>Festuca ovina</i>	Sheep's fescue	F	LC
<i>Festuca rubra</i>	Red fescue	R	LC
<i>Fragaria vesca</i>	Wild strawberry	F	NT
<i>Fraxinus excelsior</i>	Ash	O	LC
<i>Galium verum</i>	Lady's bedstraw	R	LC
<i>Geranium dissectum</i>	Cut-leaved crane's-bill	R	LC
<i>Glechoma hederacea</i>	Ground-ivy	R	LC
<i>Holcus lanatus</i>	Yorkshire fog	O	LC
<i>Homalothecium lutescens</i>	Yellow feather-moss	O	
<i>Hypericum androsaemum</i>	Tutsan	R	LC
<i>Hypericum perforatum</i>	Perforate St John's Wort	O	LC
<i>Juncus inflexus</i>	Hard rush	R	LC
<i>Kindbergia praelonga</i>	Common feather-moss	O	
<i>Leucanthemum vulgare</i>	Ox eye daisy	F	LC
<i>Linum catharticum</i>	Fairy flax	R	LC
<i>Lotus corniculatus</i>	Bird's-foot trefoil	F	LC
<i>Malva sylvestris</i>	Mallow	O	LC
<i>Malva moschata</i>	Musk mallow	R	LC
<i>Medicago lupulina</i>	Black meddick	R	LC
<i>Odontites vernus</i>	Red bartsia	O	LC
<i>Oenothera sp.</i>	Evening primrose	R	
<i>Ophrys apifera</i>	Bee orchid	Present	LC
<i>Peltigera canina</i>	Dog lichen	O	

Appendix 1: Botanical Species Recorded

Scientific Name	Common Name	DAFOR	England Red List Status
<i>Plantago lanceolata</i>	Ribwort plantain	O	LC
<i>Plantago major</i>	Greater plantain	R	LC
<i>Poa sp</i>	Meadow grass	O	
<i>Potentilla reptans</i>	Creeping cinquefoil	F	LC
<i>Prunella vulgaris</i>	Self-heal	O	LC
<i>Prunus spinosa</i>	Blackthorn	O	LC
<i>Pseudoscleropodium purum</i>	Neat feather-moss	O	
<i>Ranunculus repens</i>	Creeping buttercup	R	LC
<i>Rhytidiadelphus triquetus</i>	Big shaggy-moss	O	
<i>Rosa canina</i>	Dog rose	R	LC
<i>Rosa rubiginosa</i>	Sweet-brier	O	LC
<i>Rubus fruticosus agg.</i>	Bramble	O	LC
<i>Salix alba</i>	White willow	R	LC
<i>Salix caprea</i>	Goat willow	O	LC
<i>Senecio jacobaea</i>	Ragwort	F	LC
<i>Sisyrinchium striatum</i>	Pale yellow eyed grass	R	
<i>Solanum dulcamara</i>	Bittersweet	R	LC
<i>Stachys officinalis</i>	Betony	R	LC
<i>Stellaria graminea</i>	Lesser stitchwort	R	LC
<i>Trifolium micranthum</i>	Hop trefoil	R	LC
<i>Trifolium repens</i>	White clover	R	LC
<i>Urtica dioica</i>	Common nettle	Present	LC
<i>Verbascum thapsus</i>	Mullein	R	LC
<i>Verbena officinalis</i>	Vervain	Present	LC

Appendix 1: Botanical Species Recorded

Scientific Name	Common Name	DAFOR	England Red List Status
<i>Veronica serpyllifolia</i>	Thyme-leaved speedwell	O	LC
<i>Vicia hirsuta</i>	Hairy tare	R	LC

For the perimeter woodland belt only:

Scientific Name	Common Name	DAFOR
<i>Acer campestre</i>	Field maple	O
<i>Acer pseudoplatanus</i>	Sycamore	O
<i>Betula spp.</i>	Birch	F
<i>Cornus sanguinea</i>	Dogwood	R
<i>Corylus avellana</i>	Hazel	O
<i>Crataegus monogyna</i>	Hawthorn	F
<i>Fraxinus excelsior</i>	Ash	F
<i>Prunus spinosa</i>	Blackthorn	O
<i>Quercus robur</i>	English oak	F
<i>Rosa canina</i>	Dog rose	R
<i>Sambucus nigra</i>	Elder	O
<i>Salix alba</i>	White willow	O
<i>Salix caprea</i>	Goat willow	O

Appendix 2: LWS Photos

Photo	Description
	Cable route to be installed underground roughly in this area- to connect to the building shown on the right
	LWS perimeter scrub and woodland, which will have the cable installed underground via HDD

Appendix 2: LWS Photos

Photo	Description
	Scattered scrub and mammal path running across the cable route location
	Example of ground flora across the LWS

Appendix 2: LWS Photos

Photo	Description
	Showing longer vegetation and pyramidal orchids across the wider LWS
	Single bee orchid recorded next to a footpath in the north of the LWS