Construction Method Statement.

20/06840/FUL – Land North of Melksham Substation, Near Melksham, Wiltshire.

On behalf of JBM Solar Projects 13 Ltd.

Date: July 2023 | Pegasus Ref: P20-0137 TRO2

Document Management.

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1. Introduction

1.1. This Construction Method Statement (CMS) has been prepared by Pegasus Group on behalf of JBM Solar Projects 13 Ltd (the Applicant) in order to discharge Condition 5 of planning permission 20/06840/FUL.

1.2. The scheme comprises the installation, operation, and decommission of a Solar Farm comprising ground mounted photovoltaics and associated infrastructure which could produce approximately 49.9MW. It was granted planning permission by Wiltshire Council, subject to conditions, in December 2021.

1.3. The planning application was supported by a CTMP which set out details of the agreed access arrangements and general management and mitigation measures for the construction phase of development.

1.4. Condition 5 of the Decision Notice dated the 17th of December 2021 states:

'No development shall commence on site until a Construction Method Statement (CMS), which shall include the following:

a. measures to control the emission of dust and dirt during construction;

b. hours of construction, including deliveries;

c. measures to retain the existing vegetation across the site, and details of any unvegetated areas of the site to be harrowed, where appropriate (noting any requirements in the Archaeological Mitigation and Management Plan (Version 3 / November 2021), and seeded with an approved grass seed mix prior to the construction phase;

d. together with details of drainage arrangements during the construction phase.

Has been submitted and approved in writing by, the Local Planning Authority.

The approved Statement shall be complied with in full prior to the commencement of the development and throughout the construction period. The development shall not be carried out otherwise than in accordance with the approved CMS.

REASON: The matter is required to be agreed with the Local Planning Authority before development commences in order that the development is undertaken in an acceptable manner, and to ensure that the development can be adequately drained.'

1.5. This CMS includes details of the above points. It should be read in conjunction with the CTMP that was submitted with the planning application and the Full CTMP that has been submitted in relation to Condition 8.

Site Context

1.6. The site is located to the north of the National Grid Melksham Substation, approximately 3.7 kilometres north of Melksham and 1.5 kilometres northeast of Whitley. The site comprises three agricultural fields and is bound by open agricultural land. Westlands Lane adjoins the sites southern frontage and Folly Lane West is located north of the site.

Access Arrangements

1.7. The site access arrangements for the construction and operational phases of the development have been agreed as part of the planning application submission and details are included in the submitted CTMP.

1.8. Access from the north is via an existing agricultural field access with Folly Lane West. Access to the site from the south is proposed via a new access off Westlands Lane. Both accesses will be retained for use once the site is operational.

1.9. Once the solar farm is decommissioned, the access points will be reinstated to their current form.

2. Measures to Control the Emission of Dust and Dirt

Dirt and Debris

2.1. Wheel washing facilities (in the form of a dry wheel wash) will be provided at the exit of the construction compound. This will allow for spoil to be removed prior to the vehicles routing onto the internal access track.

2.2. It is proposed that in the immediate vicinity of the site access junctions that regular inspections would be undertaken, and any dust, mud or debris transferred from the site onto the roads would be removed through the regular use of a road sweeper.

Dust

2.3. All contractors will adhere to (so far as is reasonably practicable) the measures set out below in order to help reduce and control dust generated during the construction works:

i. Water suppression will be used in dry conditions to reduce dust emissions (e.g., mobile bowsers or fixed sprayers as appropriate).

ii. Any stone/concrete cutting will have water fed suppression and appropriate PPE this will be reinforced at site specific induction.

iii. Delivery activities, plant, stockpiled materials and/or any other activities liable to significant dust generation will be located as far away as possible from the development site boundaries and neighbouring properties.

iv. Stored materials liable to dust generation will be dampened down, covered with tarpaulin, or otherwise contained as far as reasonably possible.

v. Skips, chutes, and conveyors will be covered and if necessary enclosed to ensure that dust does not escape.

vi. All vehicles carrying loose materials will be securely covered.

vii. Areas where there is regular vehicular movement will have a bound surface which will be kept in good repair.

viii. Periodic road-sweeping will be implemented if ground conditions and/or adverse weather conditions dictate. This will ensure that the site access track and public roads affected are kept clean. The public highway will be inspected regularly.

ix. A water bowser will be made available at the compound, if ground conditions and prevailing weather conditions dictate. This will be used for dust suppression (haul road/compound areas.

3. Hours of Construction

3.1. The construction phase is anticipated to take approximately 12 months (up to 52 weeks). This includes the preparation of the site, the installation of the accesses, erection of fencing, assembly and erections of the PV strings, installation of the inverters/transformers and grid connection.

3.2. The site construction opening times will be as follows:

- Site will be fully open for all works including heavy machinery and deliveries:

  - Monday to Friday between 08:30-17:30;

  - Saturdays between 09:00-13:00.

- Site will be open for non-invasive works (i.e. no heavy machinery or deliveries will be permitted between:

  - Monday to Friday 07:30-08:30 and 16:30-17:30; and

  - Saturdays 07:30-09:30 and 13:00-16:30.

- No deliveries will take place on Sundays or Public Holidays

3.3. There will be no deviation from these delivery and working hours unless written permission from WC is obtained.

4. Measures Relating to Retention of Existing Vegetation

4.1. A Landscape Plan and Archaeological Mitigation and Management Plan (AMMP) have been submitted as part of the planning application.

4.2. The landscape proposals comprise the following elements:

- Grassland creation below and around the arrays;
- Hedgerow creation along with the supplementary and infill planting within existing hedgerows;
- Tree planting to bolster the existing trees within the site
- Integration of swales to manage surface water within the site; and
- Integration of existing PRoWs with new hedgerow planting alongside to provide a green corridor for users.

4.3. All existing boundary and internal field hedgerows will be retained and reinforced (as necessary) with native hedgerow planting and trees (of local provenance) to: strengthen field patterns and local landscape character; screen views of the development from nearby PRoW and dwellings; and increase valuable habitat provision and connectivity.

4.4. Access tracks, fence lines and panel layouts have been designed to avoid the removal of any existing vegetation and trees will be protected in line with the Arboriculture Impact Assessment, submitted with the planning application.

4.5. Any areas of the site that are currently unvegetated shall be seeded as per the landscape plan. The proposed grass mix has already been approved as part of the planning consent, as shown on the planting plan at Appendix A.

4.6. All seeding shall be carried out in accordance with BS4428:1989 Code of Practice for general landscape operations or the most relevant and current British Standard and in accordance with the seed supplier's technical advice.

4.7. As set out in the AMMP, seeding of the site will take place before any other construction groundworks. This typically entails cultivation (tilling) to 100mm below present ground level and then spreading seed across the bare earth. Further seeding will take place post-construction in any areas adversely affected by vehicle tracking.

<u>Transitional Iron Age to Roman Settlement</u>

4.8. The land beneath the ground-mounted arrays within the above-ground foundation zones in Fields 9, 10 and 12 will be sown with a Long Term Grazing Mix. The western boundary of Field 12, outside the above-ground foundation zone, will be enhanced by new hedgerow and tree planting. The existing hedgerow within the eastern margin of Field 10, outside the above-ground foundation zone, will be enhanced with new planting. The field margins of all three areas will be sown with a Standard General Purpose Meadow Mix.

4.9. There will be no cultivation (tilling) within the above-ground foundation zones, to avoid truncation of buried archaeological deposits. Grass seed will be dispersed using a hand-pushed spreader; no heavy machinery or equipment will be deployed. No other vegetation, or trees, will be planted within the above-ground foundation zones at this or any other time.

Roman Roadside Settlement

4.10. Landscaping of the development exclusion zones in Fields 4, 5, and 6 will be undertaken once the arrays and infrastructure have been installed elsewhere within the site.

4.11. First, the Heras fencing will be removed to facilitate access to the areas. This will entail the manual detachment of the panels from their bases and from one another, and the collection of the panels and their bases.

4.12. The areas will then be sown with a Standard General Purpose Meadow Mix. This will provide suitable surface coverage of the Roman roadside settlement areas with no risk of root damage to the underlying buried archaeological deposits. The existing mature hedgerow and tree group at the southern boundary and to the west of centre of Field 5 will be retained.

4.13. There will be no cultivation (tilling) within the exclusion zones, to avoid truncation of buried archaeological deposits. Grass seed will be dispersed using a hand-pushed spreader; no heavy machinery or equipment will be deployed. No other vegetation, or trees, will be planted within the exclusion zones at this or any other time.

4.14. There will be no harrowing during the construction phase.

5. Drainage Arrangements

5.1. Full details regarding drainage at the site are submitted as part of a technical note produced by PFA Consulting (dated December 2022) to discharge Condition 4 (Ref: PL/2023/00556), as part of the wider submission. The discharge of Condition 4 was approved in March 2023.

Good Site Management

5.2. The adoption of best practice construction site management with adequate contingency planning and following the principles of pollution prevention guidance will reduce the risk of water pollution during the construction and decommissioning phases.

5.3. The key principles are set out in CIRIA Toolbox Talks: Environmental, CIRIA C532 , CIRIA C741 , and CIRIA C648.

5.4. Construction activities will follow a set schedule/phase plan to avoid periods of elevated flood risk in susceptible areas of the site. This will minimise the disruption to onsite overland flows.

Retention of vegetation

5.5. Existing vegetation will be retained on site as much as possible to bind the soil together and reduce the rate of runoff from exposed soil and reduce the rates of soil erosion.

5.6. If necessary, once the construction is completed, to alleviate the effects of compaction any affected areas will be harrowed and seeded prior to commissioning.

Phasing of Drainage System

5.7. In areas where there is little vegetation cover, interception swales will be provided before works commence. The details of the interception swales are set out on drawings: J115/11A 35-36 of the Technical Note submitted to discharge Condition 4.

5.8. If during construction it becomes clear that the surface of the site is becoming significantly disturbed, then interception swales will be implemented immediately to restrict potential runoff and act as silt traps. If the site remains vegetated and in good condition during the construction phase interception swales will be implemented at the end of the construction programme. The timing of the implementation of the swales will be determined by the site manager.

5.9. The porous subbase and outlet serving the control equipment should be installed in parallel with the control equipment it served to ensure runoff can be managed from these areas of the development. Details are set out on drawings: J115/9, 20, 22-27,29,30-33 of the Technical Note submitted to discharge Condition 4.

Construction Compounds

5.10. The construction compounds and internal access tracks will be constructed from permeable material such as MOT Type 3 subbase which will retain the existing site runoff characteristics. A specification for porous subbase is set out on Drawing No. J115/09 Rev A. of the Technical Note submitted to discharge Condition 4.

5.11. If deemed necessary by the site manager, interception swales will be provided in the vicinity of construction compounds.

5.12. Construction compounds are located strategically to avoid areas of elevated surface water flood risk. This will minimise the risk of overland flows or waterlogged ground impeding construction vehicles/activities.

Appendix A

PLANTING SPECIFICATION

These implementation and maintenance guidelines are for planning purposes only to indicate the level of workmanship to be specified and do not constitute a detailed specification.

1. GENERAL

1.1. All landscape operatives will be appropriately trained, certified and qualified to undertake the tasks required. When required, the relevant certificates will be made available for inspection. All work is to be carried out in accordance with the relevant British Standards, Codes of Practice and Legislation.

1.2. All plants shall conform to BS 3936 and be in accordance with the National Plant Specification. Supplying nurseries shall be registered under the HTA Nursery Certification Scheme. All plants shall be packed and transported in accordance with the Code of Practice for Plant Handling as produced by CPSE.

1.3. Planting shall not be carried out when the ground is waterlogged, frost bound or during periods of cold drying winds. All bareroot planting stock will be kept covered until actually planted in order to minimise water-loss and prevent the roots from drying out. Tree handling, storage and planting shall be in accordance with BS 8545 Chapters 9 to10 and Annexes E to F.

1.4. The landscape contractor shall maintain all areas of new planting for a period of 12 months following practical completion. All stock deemed to be dead, dying or diseased within the defects period shall be replaced by the contractor at his own cost.

1.5. A minimum intervention approach will be used in terms of weed control. In areas of transplant tree/shrub or ornamental shrub planting this is to be achieved by using mulch mats and hand-weeding. Weed killer and other chemicals will be used as little as possible on site. Spot removal of weeds will be carried out by hand removal as necessary.

2. TREE PLANTING

Ground Preparation and Tree Pit Excavation

2.1. Where necessary remove existing weeds by hand. Chemical removal using a glyphosate based herbicide will be avoided unless large areas need clearing – following which allow a suitable period to elapse, as recommended by the manufacturer, for the herbicide to take effect.

2.2. Tree pits of at least 75mm diameter greater than the root system and no deeper than the rootball / container depth are to be excavated and the sides well scarified to prevent smearing. All extraneous matter such as plastic, wood, metal and stones greater than 50mm in any dimension shall be removed from site.

2.3. During excavation of the pit, the soil dug should be placed to one side separating topsoil and subsoil as far as is practical.

Tree Planting

2.4. Trees shall be planted as per the planting arrangement as set out on the planting plan and plant schedule.

2.5. The typical rooting depth for trees is 900mm. The first 300mm shall be made up of topsoil; it shall be ensured that a suitable subsoil provides the remainder of the minimum rooting depth.

2.6. The root system of the tree should be wetted prior to planting. The tree should be planted at the correct depth taking into account the position of the root flare and the finished level - the rootball or root stem transition should be level with the existing host soil or surface. The base of the rootball should typically sit on subsoil, for larger rootballs the subsoil will sit around the lower portion of the rootball.

2.7. Tree pits should be backfilled with the excavated topsoil, if the original topsoil is not available or deemed unsuitable, a multi-purpose topsoil should be used. Any subsoil excavated should be discarded and the subsoil depth (beyond 300mm deep) backfilled with a high sand content subsoil. Backfill should be added gradually, in layers of 150mm to 230mm depth, ensuring the tree is held upright At each stage the fill should be firmed in to eliminate all air pockets under and around the root system, but with care being taken not to excessively compact the soil. The final layer should not be consolidated.

2.8. General-purpose slow release fertiliser (at the rate of 75gm/m2) and Tree Planting and Mulching Compost at the rate of (20litres/m2) are to be incorporated into the top 150mm of topsoil during final cultivations.

2.9. Selected standard trees will be protected from rabbit and deer damage by fitting appropriate tree guards.

2.10. All extra heavy standard size trees are to be double staked with 75mm dia stakes. Stakes should be driven at least 300mm into undisturbed ground before planting the tree, taking care to avoid underground services and cables etc. and should typically be one third the height of the tree stem above ground.

2.11. Staked trees shall be secured to stakes with suitable proprietary rubber tree ties and spacers.

2.12. Immediately after planting, but before applying the below bark mulch, all trees should be saturated to field capacity.

2.13. Ornamental composted bark mulch will be spread to a depth of 75mm across a 0.8m dia circle around individual trees, ensuring that the root flare and base of the stem, along with any ground cover plants, are not buried.

3. HEDGEROW PLANTING

Ground Preparation

3.1. Where necessary existing weeds will be treated with a glyphosate-based herbicide and a suitable period allowed to elapse, as recommended by the manufacturer, for the herbicide to take effect.

3.2. All extraneous matter such as plastic, wood, metal and stones greater than 50mm diameter will be removed from site to a registered waste disposal facility.

Planting

3.3. The planting arrangement shall be as set out in the plant schedule on the relevant planting plan.

3.4. Bare-root hedge plants shall be notch planted in a double staggered row at the rate of 5 plants per linear metre (using L- shaped notches) using spades of a design suitable for this purpose. The notches must be vertical and deep enough for the roots to hang freely, with the transplant being planted so that the root collar is exactly level with the ground surface. The notch must then be closed and the soil will be well firmed round the roots in line with the guidelines as set out in BS 4428 (1989).

3.5. Container-grown hedge plants will be planted into a pit dug 1.5x the diameter of the root mass, with the bottom and sides of the planting pit broken up to aid root expansion. The plants will be planted so that the root collar is exactly level with the ground surface.

3.6. All bare-root hedge planting stock will be protected from rabbit damage using approved proprietary 600mm clear plastic spiral guards, supported with 0.9m 12/14lb canes as advised by the manufacturer.

3.7. All container-grown shrubs will be protected from rabbit damage using approved proprietary 600mm plastic shrub shelters, supported with 0.9m x 32 mm x 32mm softwood stakes as advised by the manufacturer.

Maintenance during first growing season

3.8. All dead, dying or diseased hedge plants will be replaced with plants of similar size and species. If the failure of the plant is due to disease and the disease is considered likely to re-occur then an alternative species may be used as replacement if agreed with the LPA.

3.9. The planting area will be kept weed free throughout the maintenance period using approved herbicides in April, June and August

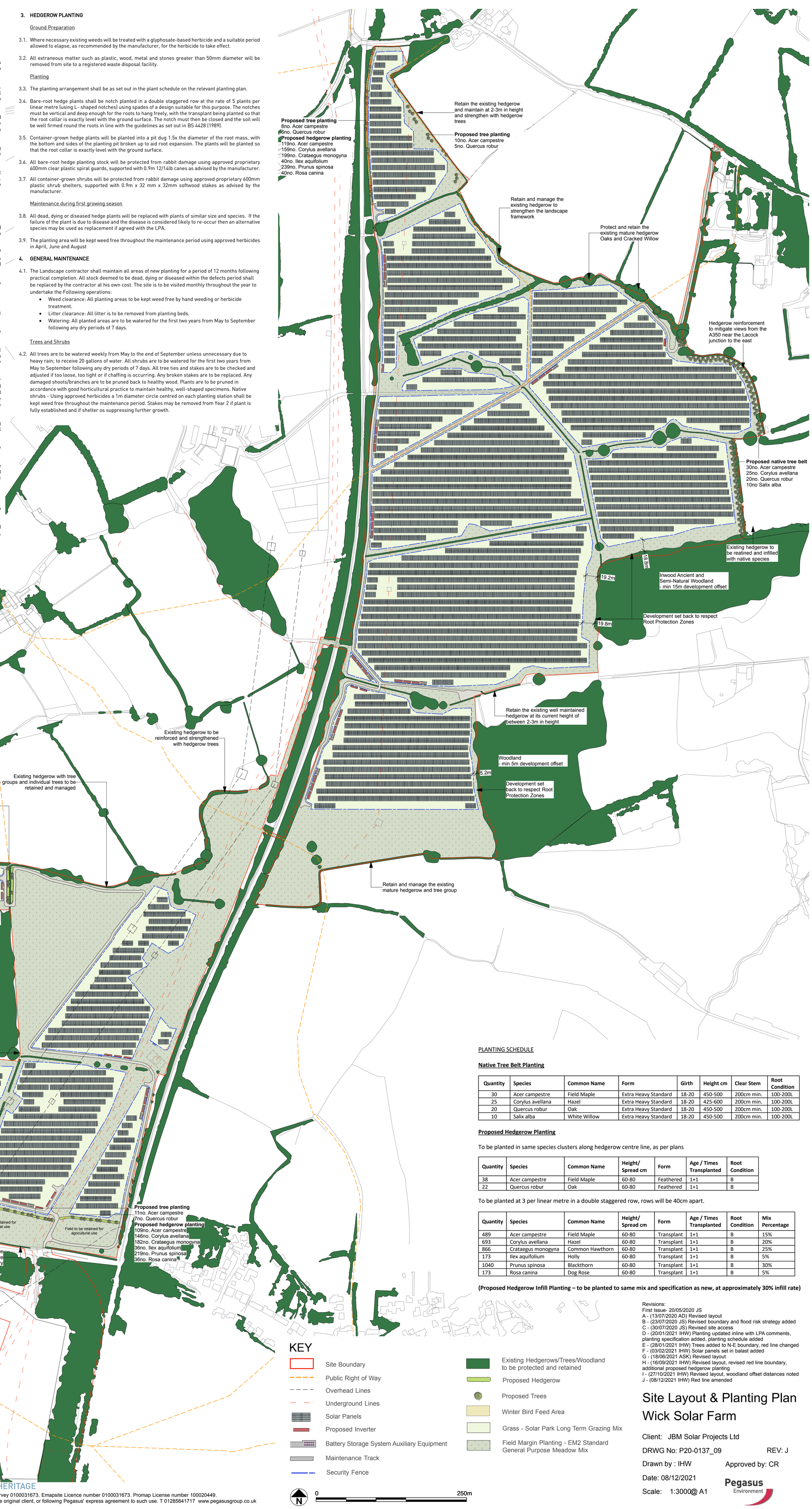
4. GENERAL MAINTENANCE

4.1. The Landscape contractor shall maintain all areas of new planting for a period of 12 months following practical completion. All stock deemed to be dead, dying or diseased within the defects period shall be replaced by the contractor at his own cost. The site is to be visited monthly throughout the year to undertake the Following operations:

- Weed clearance: All planting areas to be kept weed free by hand weeding or herbicide treatment.
- Litter clearance: All litter is to be removed from planting beds.
- Watering: All planted areas are to be watered for the first two years from May to September following any dry periods of 7 days.

Trees and Shrubs

4.2. All trees are to be watered weekly from May to the end of September unless unnecessary due to heavy rain; to receive 20 gallons of water. All shrubs are to be watered for the first two years from May to September following any dry periods of 7 days. All tree ties and stakes are to be checked and adjusted if too loose, too tight or if chaffing is occurring. Any broken stakes are to be replaced. Any damaged shoots/branches are to be pruned back to healthy wood. Plants are to be pruned in accordance with good horticultural practice to maintain healthy, well-shaped specimens. Native shrubs - Using approved herbicides a 1m diameter circle centred on each planting station shall be kept weed free throughout the maintenance period. Stakes may be removed from Year 2 if plant is fully established and if shelter os suppressing further growth.



PLANTING SCHEDULE

Native Tree Belt Planting

Quantity	Species	Common Name	Form	Girth	Height cm	Clear Stem	Root Condition
30	Acer campestre	Field Maple	Extra Heavy Standard	18-20	450-500	200cm min.	100-200L
25	Corylus avellana	Hazel	Extra Heavy Standard	18-20	425-600	200cm min.	100-200L
20	Quercus robur	Oak	Extra Heavy Standard	18-20	450-500	200cm min.	100-200L
10	Salix alba	White Willow	Extra Heavy Standard	18-20	450-500	200cm min.	100-200L

Proposed Hedgerow Planting

To be planted in same species clusters along hedgerow centre line, as per plans

Quantity	Species	Common Name	Height/ Spread cm	Form	Age / Times Transplanted	Root Condition
38	Acer campestre	Field Maple	60-80	Feathered	1+1	B
22	Quercus robur	Oak	60-80	Feathered	1+1	B

To be planted at 3 per linear metre in a double staggered row, rows will be 40cm apart.

Quantity	Species	Common Name	Height/ Spread cm	Form	Age / Times Transplanted	Root Condition	Mix Percentage
489	Acer campestre	Field Maple	60-80	Transplant	1+1	B	15%
693	Corylus avellana	Hazel	60-80	Transplant	1+1	B	20%
866	Crataegus monogyna	Common Hawthorn	60-80	Transplant	1+1	B	25%
173	Ilex aquifolium	Holly	60-80	Transplant	1+1	B	5%
1040	Prunus spinosa	Blackthorn	60-80	Transplant	1+1	B	30%
173	Rosa canina	Dog Rose	60-80	Transplant	1+1	B	5%

(Proposed Hedgerow Infill Planting – to be planted to same mix and specification as new, at approximately 30% infill rate)

KEY

- Site Boundary
- Public Right of Way
- Overhead Lines
- Underground Lines
- Solar Panels
- Proposed Inverter
- Battery Storage System Auxiliary Equipment
- Maintenance Track
- Security Fence
- Existing Hedgerows/Trees/Woodland to be protected and retained
- Proposed Hedgerow
- Proposed Trees
- Winter Bird Feed Area
- Grass - Solar Park Long Term Grazing Mix
- Field Margin Planting - EM2 Standard General Purpose Meadow Mix

N 0 250m

Revisions:
First Issue- 20/05/2020 JS
A - (13/07/2020 AD) Revised layout
B - (23/07/2020 JS) Revised boundary and flood risk strategy added
C - (30/07/2020 JS) Revised site access
D - (20/01/2021 IHW) Planting updated inline with LPA comments, planting specification added, planting schedule added
E - (28/01/2021 IHW) Trees added to N-E boundary, red line changed
F - (03/02/2021 IHW) Solar panels set in balast added
G - (18/06/2021 ASK) Revised layout
H - (16/09/2021 IHW) Revised layout, revised red line boundary, additional proposed hedgerow planting
I - (27/10/2021 IHW) Revised layout, woodland offset distances noted
J - (08/12/2021 IHW) Red line amended

Site Layout & Planting Plan
Wick Solar Farm

Client: JBM Solar Projects Ltd

DRWG No: P20-0137_09 REV: J

Drawn by : IHW Approved by: CR

Date: 08/12/2021

Scale: 1:3000@ A1

Pegasus Environment

DESIGN | ENVIRONMENT | PLANNING | ECONOMICS | HERITAGE

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