Padbury Brook Solar Farm
Arboricultural Planning Statement

Date: November 2022

Submitted to:

JBM Solar Projects 8 Ltd.

ADAS Reference: 1051745

Prepared by:

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK ADAS Ltd.

Version History

Version	Date	Amendment
-	September 2022	INITIAL REPORT
v2	October 2022	Red line boundary and design layout update
V3	November 2022	Entrance hedge removal

Contents

Appendices

1 Executive Summary

JBM Solar Projects 8 Ltd are proposing the installation and operation of a renewable energy generating station comprising ground-mounted photovoltaic solar arrays and battery-based electricity storage containers together with substation, switchgear container, inverter/transformer units, site access, internal access tracks, security measures, access gates, other ancillary infrastructure, and landscaping and biodiversity enhancements on land near Stratton Audley, Cherwell District, Oxfordshire, England OX27 9AL.

For the purposes of this report, reference to 'the site' means land encompassed by the red line shown on the Site Location Plan.

JBM Solar Projects 8 Ltd have commissioned ADAS to provide arboricultural advice in relation to the proposed development in line with the requirements of 'BS5837:2012 Trees in Relation to Design, Demolition and Construction: Recommendations' (BS5837:2012). This report has been prepared to comply with the requirements set out in Table B.1 of Annex B of BS5837:2012.

An ADAS Arboricultural Consultant carried out a full arboricultural survey of the site. The tree survey identified a total of 63 arboricultural features, comprising 25 individual trees, 10 groups of trees, 27 hedgerows and one woodland, which have the potential to be impacted by the development proposals.

In line with the recommendations contained within Table 1 of BS5837:2012, of these arboricultural features, 21 were awarded a high A grade, 34 were awarded a moderate B grade, seven were awarded a low C grade and one was assessed as being unsuitable for retention in the context of new development, grade U.

The proposed development will require the removal of approximately 7m section of H1 and a 5m section of H13, H49, H50 and H51 category B hedgerows. All other individual trees, groups of trees, hedgerows and woodlands that were recorded during the survey are to be retained and protected within the proposed development.

A review of Cherwell District Council on-line mapping has established that the site is not situated within a Conservation Area and none of the trees are protected by a Tree Preservation Order (TPO).

In order to ensure the successful integration of retained trees into the proposed development, tree protection measures have been incorporated into the design which are intended to maintain the trees in a safe and healthy condition.

2 Introduction

2.1 The Author

This document has been prepared by Iain Waddell, an ADAS Arboricultural Consultant. Iain is a Professional Member of the Arboricultural Association and holds the L6 Diploma in Arboriculture. Iain has 11 years of experience within the arboricultural industry.

2.2 Client Instruction

This report was commissioned by JBM Solar Projects 8 Ltd in June 2022 and is pertinent to the site known as Padbury Brook Solar Farm on land near Stratton Audley, Cherwell District, Oxfordshire, England OX27 9AL. For the purposes of this report, reference to 'the site' means land encompassed by the red line shown on the Site Location Plan contained in **Appendix 1**.

2.3 Purpose of Report

The purpose of this document is to provide reference and clarification on aspects of tree protection and any necessary tree management works for the proposed development. It is proposed to achieve this by setting out a methodology for all proposed works that may affect trees which are to be retained on and adjacent to site.

This document is also intended as a reference point for all site operatives and a copy will remain with the site manager for the duration of the development.

This document may be used as a point of reference if there were to be a dispute over compliance with related planning conditions.

2.4 Tree Survey Methodology

An initial tree survey, to establish the tree constraints on the site, was carried out by Iain Waddell of ADAS on 12th July 2022. The tree survey was carried out in accordance with the recommendations contained within BS5837:2012.

All trees have been visually inspected from ground level unless otherwise stated, with no climbing or boring tests being undertaken. The comments made on their condition are based on observable factors present at the time of inspection.

The information shown in **Table 1** below was recorded as part of the tree survey.

Table 1: Tree Survey Schedule heading descriptions

Column Heading	Description
Tree Ref No.	All individual trees and groups of trees have been given a unique reference number. Each number is prefixed by a letter. ▪ T = Individual tree ▪ G = Group of trees ▪ H = Hedgerow ▪ W = Woodland Where a tree reference is followed by an * it indicates that the position of the tree has been recorded to the associated plan by eye.
Species	The English common name has been used, with the scientific name in brackets.
Single or Multiple stem (S or M)	▪ 'S' represents a tree which has a single clear stem to at least 1.5m above ground level. ▪ 'M(a)' represents a tree where the main stem divides into two to five stems below 1.5m above ground level, and ▪ 'M(b)' represents a tree where the main stem divides into 6 or more stems below a height of 1.5m.
Height (m)	Where possible tree heights are measured using a laser. In some instances, such as in close groups of trees, one height may be measured, and other nearby trees estimated from this height. Measurements are provided in metres.
Stem Diameter (mm)	S_n represents the stem number. Measurements are provided in millimetres at 1.5m above ground level for single stemmed trees.
Branch Spread (m)	Measured in metres to the four cardinal compass points (N, E, S, W).
Crown Clearance	(1) Height in metres of the first significant branch, and the direction of growth. (2) Height in metres of lowest part of crown.
Life Stage	The stage at which the tree is within its lifecycle (Y = young, SM = semi-mature, EM = early-mature, M = mature, OM = over mature, V = veteran)
General Observations	Any relevant observations are recorded, with particular reference to structural and/or physiological condition.
Preliminary Management Recommendations	Recommendations are made where management work is required for reasons of health and safety or sound arboricultural management.
Estimated Remaining Contribution (years)	An estimation of how long the feature will contribute to its surroundings. This is recorded in bands of either <10 years, 10+ years, 20+ years and 40+ years.
Tree Quality Grading	The trees are graded to the categories prescribed within BS5837:2012 (U, A, B & C). Details of this grading system can be found in **Appendix 2.**

Column Heading	Description
Root Protection Area (RPA)	Calculated as prescribed in section 4.6 of BS5837:2012, provided as an area (m^2) and a radius from the tree's stem (m).

2.5 Assumptions and Limitations

The Tree Constraints Plan (TCP) contained in **Appendix 3** has developed from the tree survey information and the topographical survey (drawing ref: 20220614_A031_3P570 (2)- Topographical Survey .dwg).

This report assumes that the proposed design layout demonstrated on the Tree Protection Plan (TPP) contained in **Appendix 4** is the final layout.

This report is only intended for use by the person(s), or company named on the front cover.

This report is not a full hazard or risk assessment of trees and should not be used as such.

Trees are living organisms and are constantly adapting to their ever-changing environment. No tree is completely safe and there is no guarantee that problems or deficiencies may not arise in the future, which have not been identified in this report. Therefore, this report is only valid for a period of 1 year from the date of the initial site inspection.

2.6 Tree Preservation Orders and Conservation Areas

Local Planning Authorities (LPAs) have the power to preserve selected trees and woodlands through the making of Tree Preservation Orders (TPOs). Similarly, special provision is provided to trees located within Conservation Areas (CAs) which are not the subject of a TPO. The LPAs powers to do this are provided by the following Act of Parliament and its associated regulations:

- Town and Country Planning Act 1990
- Town and Country Planning (Determination of Appeals by Appointed Persons) (Prescribed Classes) (Amendment) (England) Regulations 2008
- Town and Country Planning (Trees) (Amendment) (England) Regulations 2012

The principal effect of a TPO is to prohibit the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of trees without first obtaining the consent of the relevant Local Authority.

Where works to trees within a CA are proposed, six weeks notification must first be given to the relevant Local Authority.

Unauthorised works to trees either protected by a TPO or those that are located within a CA, could result in an unlimited fine for each tree.

A review of Cherwell District Council on-line mapping, undertaken on the 17th August 2022, has established that the site is not situated within a Conservation Area and none of the trees are protected by a Tree Preservation Order (TPO). A copy of the plan from the search is provided in **Appendix 5**.

2.7 Wildlife Legislation

The following Acts and Regulations are the main pieces of legislation that protect wildlife and habitats in England and Wales:

- Wildlife and Countryside Act 1981 (as amended)
- Conservation of Habitats and Species Regulations 2017 (as amended)
- Protection of Badgers Act 1992
- The Hedgerows Regulations 1997
- Countryside and Rights of Way Act 2000
- Natural Environment and Rural Communities Act 2006 & Environment (Wales) Act 2016

The Wildlife and Countryside Act 1981 provides statutory protection to wild birds, their nests (whether in use or being built), as well as other wild animals such as bats and their roosts. Under the Act it is a criminal offence to intentionally destroy any wild bird, its nest, or eggs, or to harm any bat, damage, or block access to its roost (even if it is not occupied at the time), or to disturb a bat whilst it is occupying a roost. For some birds listed in Schedule 1 of the Act, such as barn owl, it is also an offence to disturb them while they are nesting, building a nest, in or near a nest that contains their young, or to disturb their dependent young. Other wild animals afforded full legal protection under the Act, and which may be affected by tree works include otters and their places of shelter (often in exposed tree roots along river banks), hazel dormice, their breeding sites, and resting places (well-structured woodland and scrub), and red squirrels and their nests (dreys). The Conservation of Habitats and Species Regulations 2017 provide additional legal protection to some species, including bats (all species), otters and hazel dormice. Badgers and their setts are specifically protected under the Protection of Badgers Act 1992, which makes it an offence to damage or block a sett, or to disturb badgers whilst they are using a sett. Where works might result in an offence being committed, advice will be required from a suitably experienced ecologist before they can be undertaken. For example, it may be necessary to programme tree work outside of the bird nesting period, typically March to August inclusive, or for an ecologist to undertake prior visual inspections of trees for nests and / or bat roosts.

Under the Wildlife and Countryside Act 1981 it is also illegal to plant or otherwise cause to grow in the wild certain invasive non-native plant species, including Japanese Knotweed, Himalayan Balsam, Giant Hogweed and Rhododendron. Any works that might cause the spread of these species could therefore result in an offence being committed. This might occur as a result of the incidental transportation of soil containing seeds or live root and stem fragments on the wheels of vehicles, or on the boots of personnel.

Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are strictly protected sites designated respectively under the EC Habitats Directive and the EC Birds Directive. In England and Wales,

SACs and SPAs are given legal protection by The Conservation of Habitats and Species Regulations 2017, which transpose the EC Habitats Directive and EC Birds Directive into national law. The Regulations ensure that any plan or project that may damage an SAC or SPA can only proceed if certain strict conditions are met.

Sites of Special Scientific Interest (SSSIs) are areas notified under the Wildlife and Countryside Act 1981 as being of special interest for nature conservation or their geology with additional protection afforded to them by the Countryside and Rights of Way Act 2000. Under the legislation Natural England (NE) or Natural Resources Wales (NRW) must be notified of any planned works or operations that could potentially damage an SSSI or its features of interest before they are able to proceed.

The Natural Environment and Rural Communities Act 2006 and Environment (Wales) Act 2016 place a statutory duty on public authorities (public bodies and utility companies) to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of their functions.

The above provides only a brief summary of the legislation. It is advised that the original text of the relevant legislation is consulted for the exact wording. If necessary, advice should be sought from a suitably qualified ecologist prior to any tree works being undertaken.

2.8 Site Description

The site under consideration comprises agricultural land located near Stratton Audley, Cherwell District, Oxfordshire, England OX27 9AL.

The site comprises circa 59.4 hectares of land located to the north of the village of Stratton Audley. The south eastern corner of the site is located east of Mill Road with the main body of the site surrounded with further agricultural land to the south and east. The northern boundary of the site backs on to a wooded area known as Oldfields Copse.

The site is comprised of a network of agricultural fields currently used for crop production, and vegetation within the site was primarily located along field boundaries.

3 Tree Survey Results

3.1 Overview

The findings of this tree survey are contained in the Tree Survey Schedule in **Appendix 6** which has been used to develop the Tree Protection Plan in **Appendix 4**.

3.2 Species

The range of tree species across the site is demonstrated in **Figure 2** below. The trees are typically situated along field boundaries within the site. Vegetation primarily composed Hawthorn and Field Maple hedgerows with standard English Oak trees within them. It was noted that many of the Elm trees, which were contained within larger groups of trees around the boundaries of the site, were in a dead and declining condition due to Dutch Elm Disease.

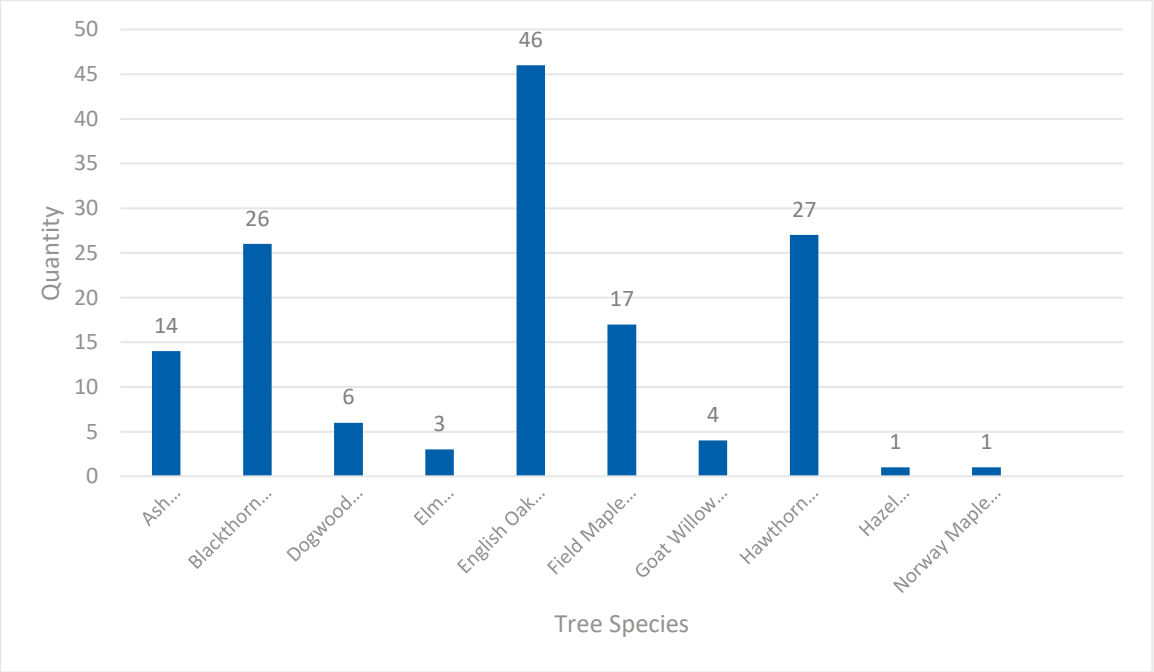


Figure 2: Range of Tree Species on site

3.3 Life Stage

The majority of the trees on the site were assessed as being either young or mature in age, as is demonstrated in **Figure 3** below. A small number of early-mature were also recorded.

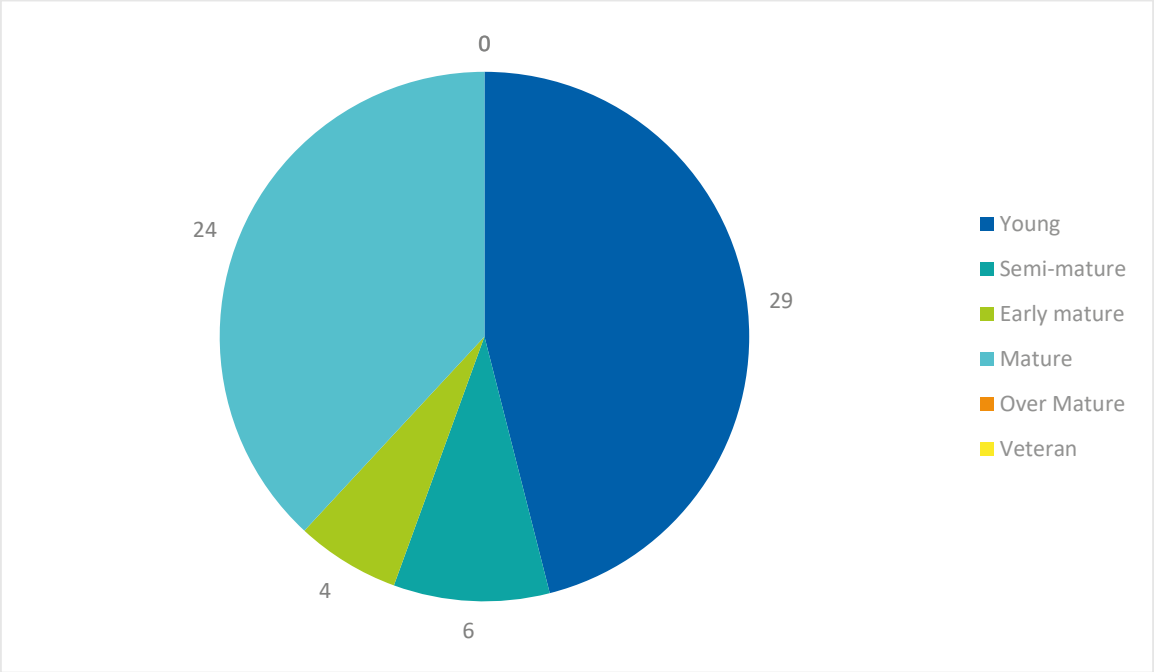


Figure 3: Life Stages of trees on site

3.4 Tree Quality

As demonstrated in **Figure 4** below, the quality of tree stock across the site was varied with a relatively even split between trees of a high quality and trees of a moderate quality supplemented with a reasonable proportion of trees of a low quality and a very small number of trees being assessed as being unsuitable for retention in the context of the proposed development.

The low quality vegetation primarily comprised field boundary groups of trees across the site, whereas those of a moderate quality included denser tree groups and maintained hedgerows to the boundaries of the site.

The high quality (category A) trees surveyed included 20 established trees or groups of trees (T2, T4, G5, G11, G11, T18, T19, G33, T34, T36, T37, T39, T40, T42, T45, T47, T52, T53, T59 and T61) and an area of woodland (W30).

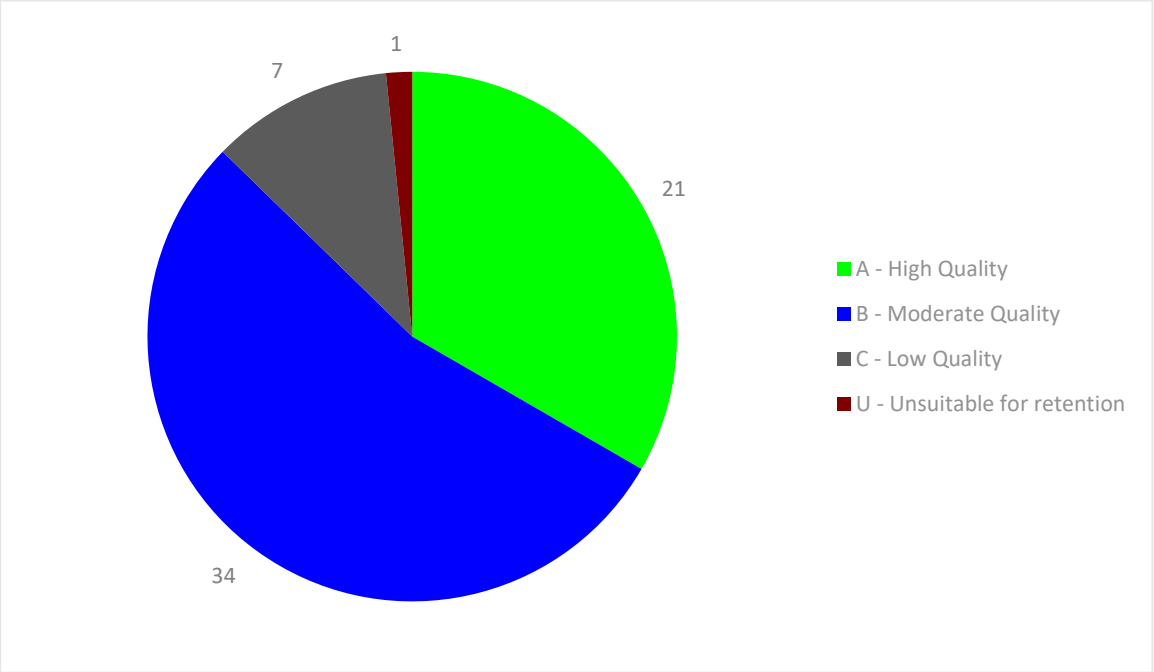


Figure 4: Tree quality grading across the site

4 Arboricultural Impact Assessment

4.1 Impact Summary

The proposals have been overlaid onto the Tree Constraints Plan and a Tree Protection Plan has been provided in **Appendix 4**. The impact the proposals were likely to have on the existing trees has been assessed under the following categories, and the findings are summarised in **Table 2**.

- Trees proposed for removal. This includes trees:
    - that are under the footprint of the proposed development
    - whose RPAs are heavily affected by the development
    - which are to be removed for reasons of sound arboricultural management.
- Retained trees which are unaffected by the development proposals

Table 2: Arboricultural Implications Assessment

Impact	Reason	Tree Quality Assessment Category Grading*				Totals
		A	B	C	U	
Hedgerows to be removed	▪ Located within footprint of proposed development. ▪ * = identified for partial removal only.	None	H1*, H13*, H49*, H50* H51*	None	None	**5**
Retained trees that are at risk of damage due to proximity to proposed works	▪ Crowns and/or RPAs Located near proposed access track or other construction activity	T42, T47	None	None	None	**2**
Retained trees, groups of trees, hedgerows and woodlands which are unaffected by the development	▪ All works outside of RPAs and canopies.	T2, T4, G5, G11, G12, T18, T19, W30, G33, T34, T36, T37, T39, T40, T45, T52, T53, T59, T61	H6, H7, H9, H10, H14, H15, H16, T17, T20, H22, H23, H24, H25, T26, H27, T28, H29, H31, T32, T35, H38, G41, G43, H44, H46, H48, H54, H57, G58	T3, G21, T55, T56, G60, G62, G63	G8	**56**
					Total	**63**

4.2 Impact Assessment

Working with the project team, the development layout has been designed so that very minimal works are required within the RPAs of two retained trees T42 and T47, and as such the potential for harm to occur to these retained trees as a consequence of the development is minor.

The proposed site boundary security fencing has also been designed to be outside the RPAs and canopies of all retained trees, with all other site works occurring within the fenced zone. If erected at the outset of the project the new security fencing will effectively function as tree protection fencing minimising the risk of any other works within the site impacting upon retained trees.

4.3 Impact Mitigation

The causes of potential harm are summarised in **Table 3,** along with any mitigation measures for those trees that are at risk of damage through disturbance of their RPAs and crowns, or those that require extra protection due to their proximity to the proposed works. Where specific construction methodologies are required, these are detailed in **Section 6** of this report.

Table 3: Summary of potential damage to retained trees

Tree Number	Species	Potential Cause of Damage	Mitigation
H1	Hawthorn, Blackthorn, Oak, Field maple	▪ 7m section to be felled due to construction of a new entrance road	▪ Tree protection fencing to avoid direct impact from machinery, materials storage, or other compaction in the RPA on retained sections of H1
H13, H49, H50, H51	Hawthorn, Blackthorn, Oak, Field maple	▪ 5m section to be felled due to construction of a new access road and entrance road	▪ Tree protection fencing to avoid direct impact from machinery, materials storage, or other compaction in the RPA on retained sections of H13, H49, H50 and H51 ▪
T42, T47	Oak	▪ Proximity to construction area and/or access roads	▪ Tree protection fencing to deter direct impacts from machinery, materials storage or other compaction in the RPA. ▪ Existing access track way for farm machinery deemed suitable for all solar farm machinery

5 Preliminary Tree Work

5.1 Tree Retention and Removal

The proposed development will require the removal of approximately 5m of three category B hedgerows H13, H49, H50 andT51 alond with a 7m section of H1.

The sections of the hedgerow requiring removal are marked upon the Tree Protection Plan, **Appendix 4.**

5.2 Tree Work Schedule

A schedule of tree work has been provided within **Appendix 7**. All tree work will be carried out prior to commencement of construction activities and prior to the erection of the tree protection measures.

5.2.1 Standard of Tree Work

All tree work and felling operations will be carried out in accordance with BS3998:2010 'Recommendations for Tree Work'; current arboricultural industry guidelines and best practice; and all relevant Health & Safety standards. Tree work is a specialist task that requires operatives to be appropriately qualified, skilled, and adequately insured. Guidance on selecting an appropriate contractor can be obtained from the Arboricultural Association, who also maintains a directory of Approved Contractors. The Arboricultural Association can be contacted on 01242 522152 or via their website http://www.trees.org.uk.

5.2.2 Wildlife Constraints

As mentioned in **section 2.7** of this report, all tree work operations must comply with The Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000, which provide statutory protection to birds, bats, and other species, all of which could inhabit trees. Where works may constitute an offence, advice will be acquired from a suitably qualified person before works are able to proceed. For example, it may be necessary to programme tree work outside of the main bird nesting period, typically March through to August inclusive.

5.2.3 Modification to Tree Work Schedule

Should the recommended work schedule require modification, for whatever reason, this will be agreed with the appointed Arboricultural Consultant (when applicable), and also approved in writing by Cherwell District Council. Under no circumstances will the appointed contractor deviate from the Tree Work Schedule contained in **Appendix 7**, unless approved in writing by Cherwell District Council.

6 Tree Protection Measures

6.1 Overview

Although these methodologies set out the precautions to be followed in order to ensure the retained trees are protected, the final responsibility for their installation lies with the site supervisor who must ensure that all current legislation and best practice is followed and that they are installed in a safe manner.

6.2 Construction Exclusion Zone (CEZ)

The CEZ is defined around the retained trees by the tree protection barriers shown by a brown line on the TPP. Where possible the CEZ is positioned to protect both the crowns and the Root Protection Areas (RPAs) of the retained trees. Guidance on RPAs is contained in **Appendix 8**.

6.3 Barriers

In line with Section 6.2.2 of BS 5837:2012, which requires that the tree protection barriers be fit for the purpose of excluding construction activity and that they provide adequate protection to the trees and hedge, It is proposed that the construction security fence as specified on the proposal plan (Drawing Ref: 20220824_A031_3P570BI (2)) will act as the tree protection fence for the majority of the trees surveyed. The site security fence will be constructed and fully installed before the main solar construction phase is implemented.

In some areas, additional tree protection fencing will be required and is indicated on the TPP with an brown line, for example for the RPAs of H13, T42, T47, H49, H50 and H51 all require additional fencing.

In order for fencing to be considered suitable for tree protection, it is proposed that they will consist of 2m tall, welded mesh panels supported on scaffold poles driven into the ground. Each panel will be secured to its neighbour with a minimum of 2 anti-tamper couplers secured so that they can only be undone from inside the CEZ. The panels will be further supported by stabilizer struts which will be pinned to the ground. An example of this type of barrier is contained in **Appendix 9**.

The location of the tree protection barriers is provided on the TPP contained in **Appendix 4**. Their precise location and construction will be agreed on site between the appointed arboricultural consultant and Cherwell District Council before any site works commence.

Inside the CEZ the following prohibitions will be complied with:

- No excavations, including by hand; unless approved by Cherwell District Council;
- No storage of machinery;
- No storage or handling of building materials, fuel, chemicals, or spoil;
- No fires;
- No vehicular access;

- No pedestrian access; unless approved by Cherwell District Council;
- No alteration, increase or decrease, to existing ground levels; unless approved by Cherwell District Council;
- No excavation or installation of services; unless approved by Cherwell District Council.

In order to ensure that the CEZ remains intact, the tree protection barriers will not be moved or temporarily dismantled except in the situations previously mentioned.

To enable site operatives to appreciate the purpose of the protective fencing and reduce the risk of operatives attempting to move them, all-weather notices will be erected on the barriers similar to the example in **Appendix 10**.

6.4 Landscaping and Level changes within RPAs of Retained Trees

Ground levels will not be reduced within the RPA of any retained trees for landscaping purposes or to tie in with new levels. For the purpose of landscaping, ground levels will be increased to a maximum of 200mm depth using inert granular fill or soil. This material will be free of contaminants and other foreign objects potentially injurious to tree roots.

6.5 Utility Connections

At the time of producing this report ADAS have not been made aware of the locations of any underground utility connections. However, in order to avoid damage to any of the retained trees, the following services will avoid the RPAs:

- Electricity
- Foul and surface water drains
- Land drains
- Soakaways
- Gas
- Oil
- Telephone
- Lighting
- Signage

If services must unavoidably be installed within the RPAs around retained trees, the locations of these will be chosen in consultation with the retained Arboricultural Consultant and will be agreed in writing with Cherwell District Council. The works will be carried out using trenchless techniques such as moling, laser guided boring and/or in accordance with advice contained within National Joint Utilities Group 'Guidelines

for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees, Volume 4' (NJUG 4).

6.6 Arboricultural Input

6.6.1 Sequence of Events

The sequence of events taken from the flow diagram within Figure 1 of BS5837:2012 has been provided in **Appendix 11**. This is to demonstrate the key timings for arboricultural input on a development site once planning permission has been approved.

6.6.2 Site Monitoring

The developer should appoint an Arboricultural Consultant to monitor the tree protection measures on site. The purpose of this is to ensure the protection measures remain in situ and continue to provide sufficient protection to the trees.

This role will initially entail the Arboricultural Consultant liaising with the developer and Cherwell District Council to ensure the recommended protection measures are suitably installed. Once the tree protection measures have been installed, and construction activity commences, the extent of any on-going site monitoring is at the discretion of Cherwell District Council.

A formal record of these supervisory visits should be recorded and kept on file; a copy should also be circulated to all relevant parties, including Cherwell District Council.

6.6.3 Key Contacts during Development

A list of key contacts relevant to this site that may be required throughout the duration of the development has been included in **Appendix 12**.

7 Conclusions

The tree survey undertaken by Iain Waddell of ADAS on 12th July 2022 identified a total of 63 arboricultural features, comprising 25 individual trees, 10 groups of trees, 27 hedgerows and one woodland, which have the potential to be impacted by the development proposals.

The proposed development will retain all trees, groups of trees and woodland, and only requires the removal of approximately 5m of category B hedgerows (H13, H49, H50 and H51) and 7m section of H1.

It is not considered that the vegetation removal necessary to implement the proposed development will have a significant landscape impact.

The security fencing shown on the proposal plan (20220614_A031_3P570 (2)) must be erected prior to any commencement of construction works due to its important role in acting as tree protection fencing.

The proposed development has been designed to ensure that the majority of construction operations are completed outside the RPAs of retained trees across the entire site, and all retained trees can be adequately protected during construction works.

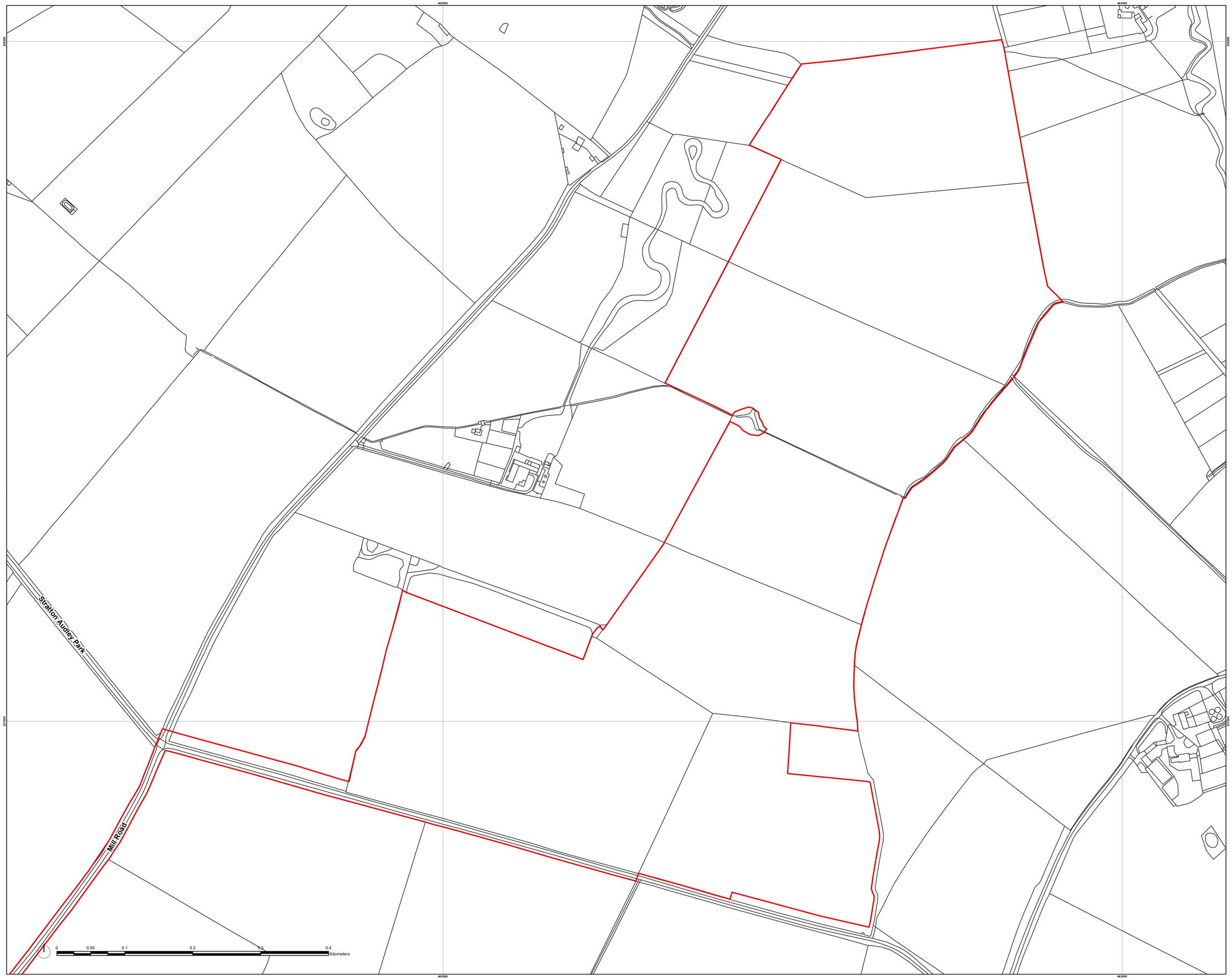
The scheme has been designed with tree protection and biodiversity enhancement as a priority and this is demonstrated in the lack of proposed vegetation removal, and the very minor encroachment of proposed work taking place within the RPA of two trees.

The current layout allows the retention of all high value trees on site, and the proposed tree losses will not have a significant negative impact on the treescape of the area.

ADAS are satisfied that, providing the recommendations contained within this report are followed, the proposed development of the site can be successfully achieved without causing undue harm to those trees identified for retention.

Appendix 1: Site Location Plan

See following page.



LEGEND

Site

Issue.	Issue Details	Date
01	-	07/11/2022

Client:

JBM Solar

Project:

Padbury Brook Solar Farm

Drawing Title:

Site Location Plan A

Drawing No: 1120022-ADAS-XX-XX-DR-P-8001

Scale: 1:2,500 at A1

Drawn by: IH Date: 07/11/2022

Checked by: DH Date: 07/11/2022

ADAS, 11d Park House, Milton Park,
Milton, Abingdon, Oxford, OX14 4RS
Tel: 01235 355630

Appendix 2: Cascade Chart for Tree Quality Assessment

See following page.

Table 1 **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

Appendix 3: Tree Quality and Constraints Plan

See following page.

LEGEND

TREE CATEGORIES - **NOTE: Quality class description derived from BS5837:2012**

Category A
Trees / Groups of high quality: with an estimated remaining life expectancy of at least 40 years.

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Category C
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Category U
Trees / Groups: in such a condition that they cannot realistically be retained as living trees in the context of current land use for longer than 10 years.

Root Protection Area (RPA)

Based on Survey & Engineering Projects drawing 'Topographical Survey' number '20220614_A031_3P570 (1). Please see original for details.

Rev.	Issue Details.	Date.
1	-	17/08/2022

Client:
JBM Solar Projects 8 Ltd

Project:
Padbury Brook Solar Farm

Drawing Title:
Tree Constraints Plan

Drawing No: 1051745_JBM_TCP_Full Area

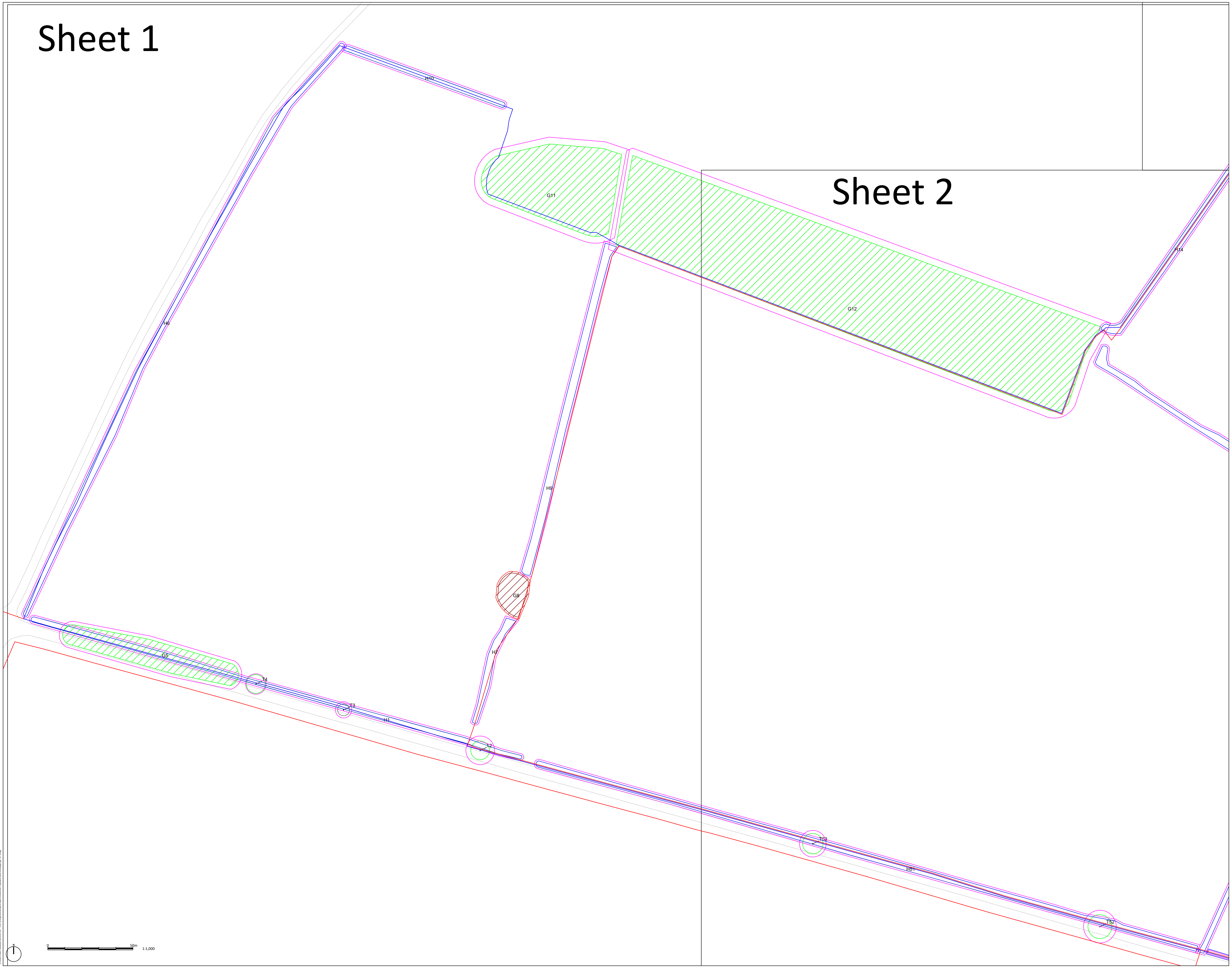
Scale: 1:2500 @A1

Drawn by: IW Date: 17/08/2022

Checked by: IB Date: 17/08/2022

ADAS, 11d Park House, Milton Park,
Milton, Abingdon, Oxford, OX14 4RS

Tel: 01235 355630



LEGEND

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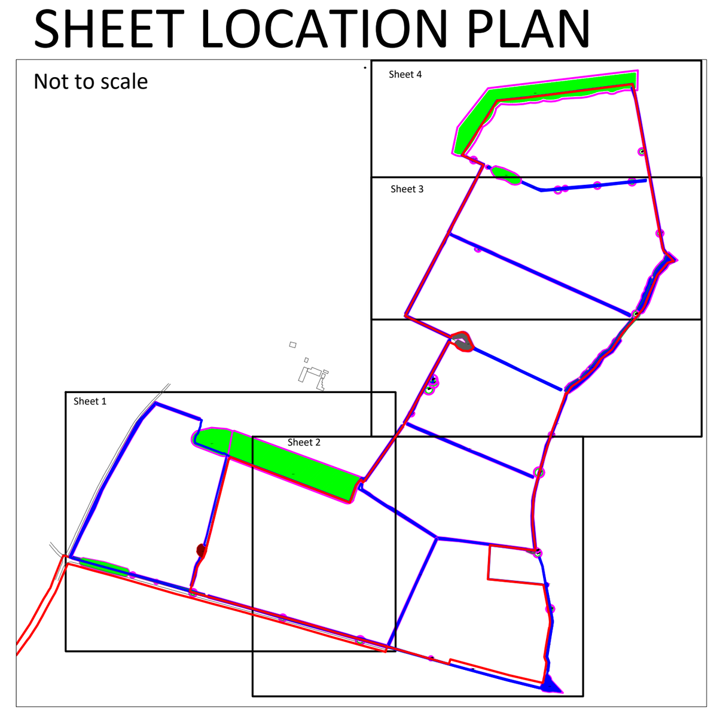
Root Protection Area (RPA)

Based on Survey & Engineering Projects drawing 'Topographical Survey' number '20220614_A031_3P570 (1). Please see original for details.

SHEET LOCATION PLAN

Not to scale



Rev.	Issue Details.	Date.
1	-	17/08/2022

Client:
JBM Solar Projects 8 Ltd

Project:
Padbury Brook Solar Farm

Drawing Title:
Tree ConstraintsPlan

Drawing No: 1051745_JBM_TCP_Sheet 1

Scale: 1:1000 @A1

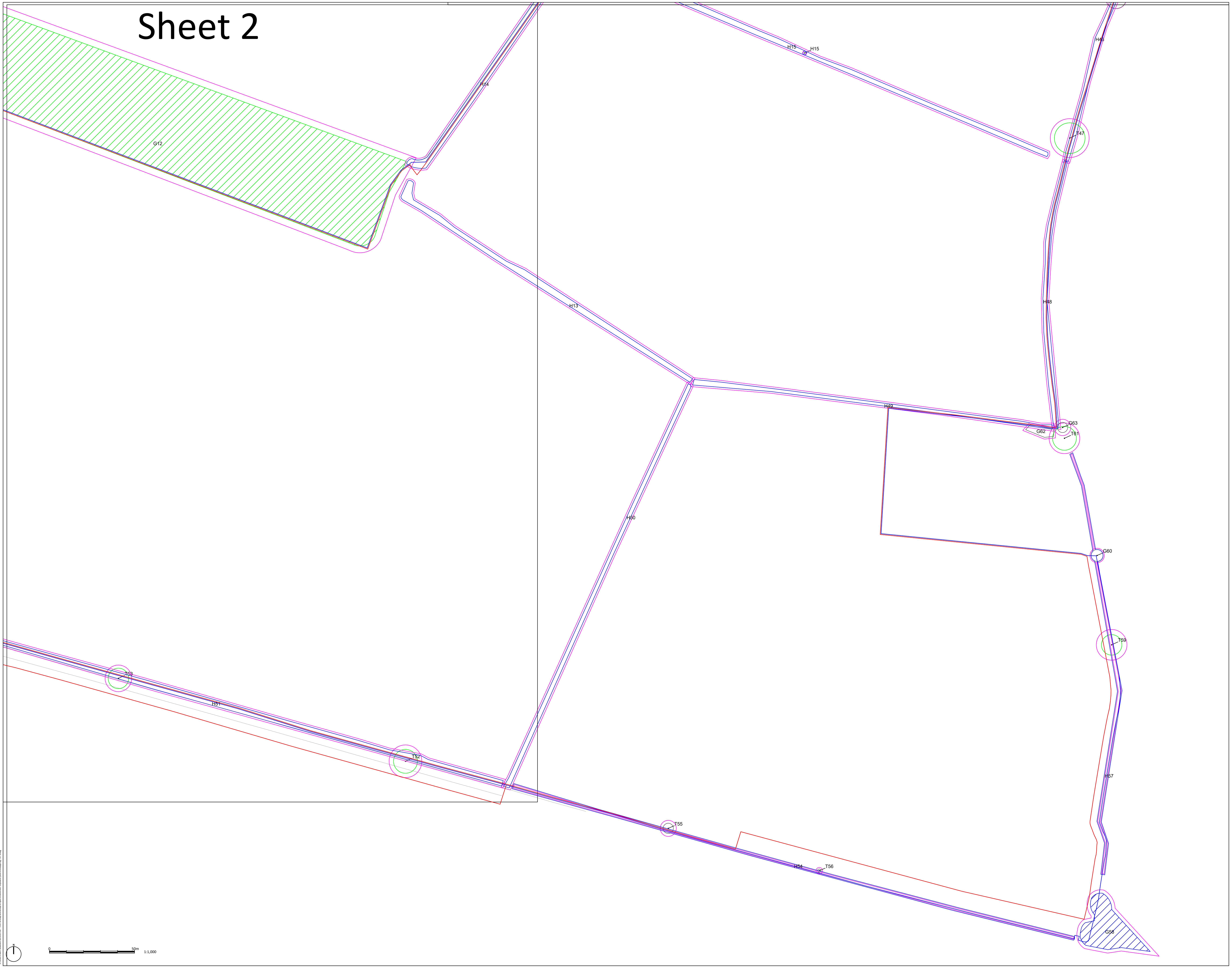
Drawn by: IW — Date: 17/08/2022

Checked by: IB — Date: 17/08/2022

ADAS, 11d Park House, Milton Park,
Milton, Abingdon, Oxford, OX14 4RS

Tel: 01235 355630

Sheet 2



LEGEND

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SHEET LOCATION PLAN

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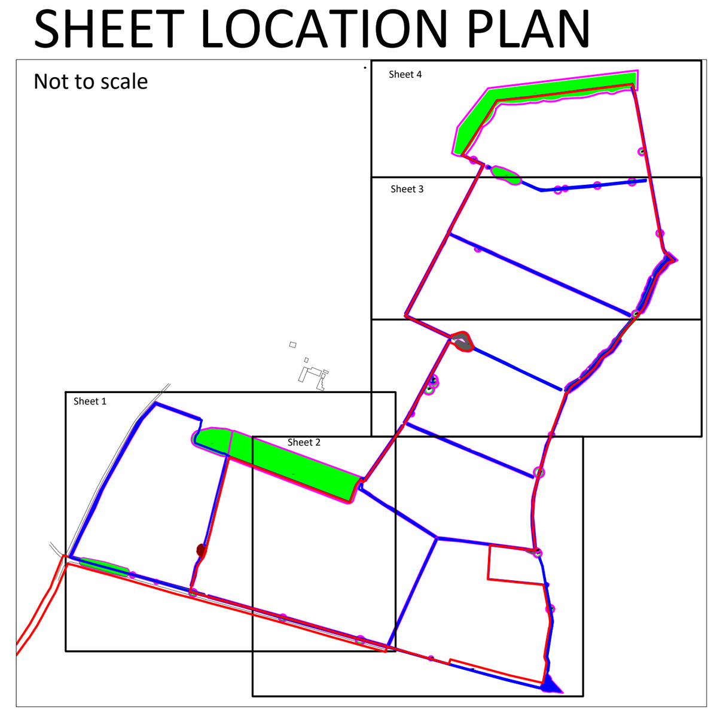


Rev.	Issue Details.	Date.
1	-	17/08/2022

Client:
JBM Solar Projects 8 Ltd

Project:
Padbury Brook Solar Farm

Drawing Title:
Tree Constraints Plan

Drawing No: 1051745_JBM_TCP_Sheet 2

Scale: 1:1000 @A1

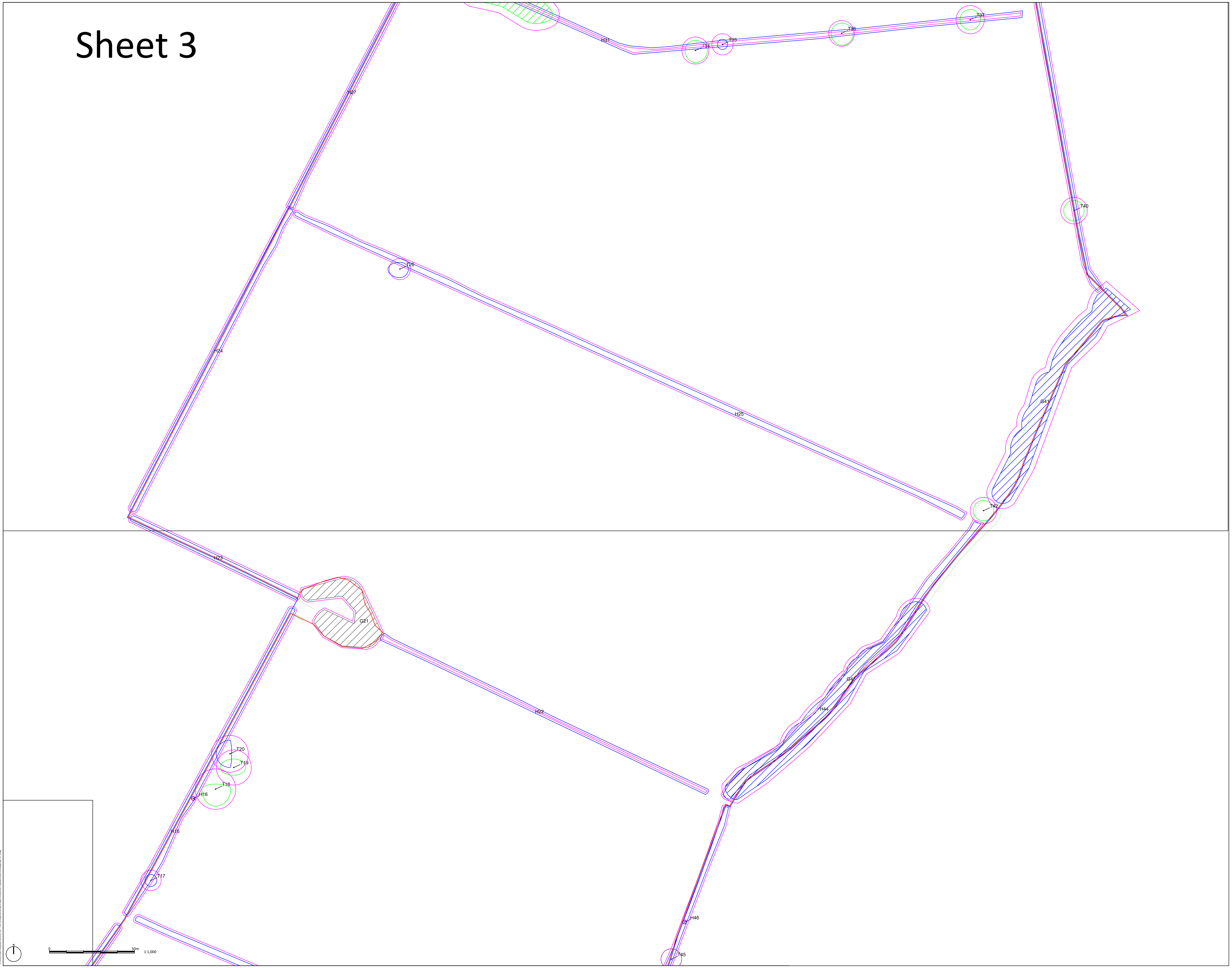
Drawn by: IW Date: 17/08/2022

Checked by: IB Date: 17/08/2022

ADAS, 11d Park House, Milton Park,
Milton, Abingdon, Oxford, OX14 4RS

Tel: 01235 355630

Sheet 3



LEGEND

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SHEET LOCATION PLAN

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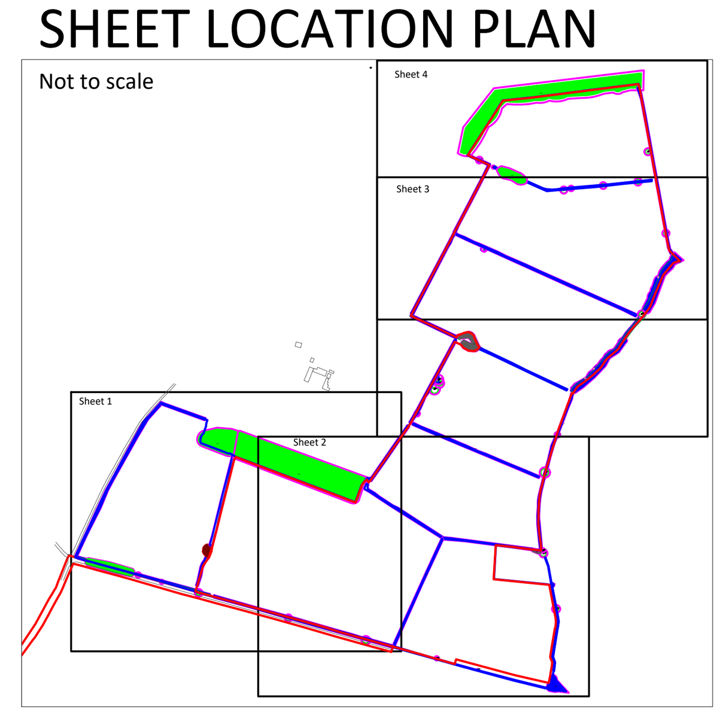


Rev.	Issue Details.	Date.
1	-	17/08/2022

Client:
JBM Solar Projects 8 Ltd

Project:
Padbury Brook Solar Farm

Drawing Title:
Tree Constraints Plan

Drawing No: 1051745_JBM_TCP_Sheet 3

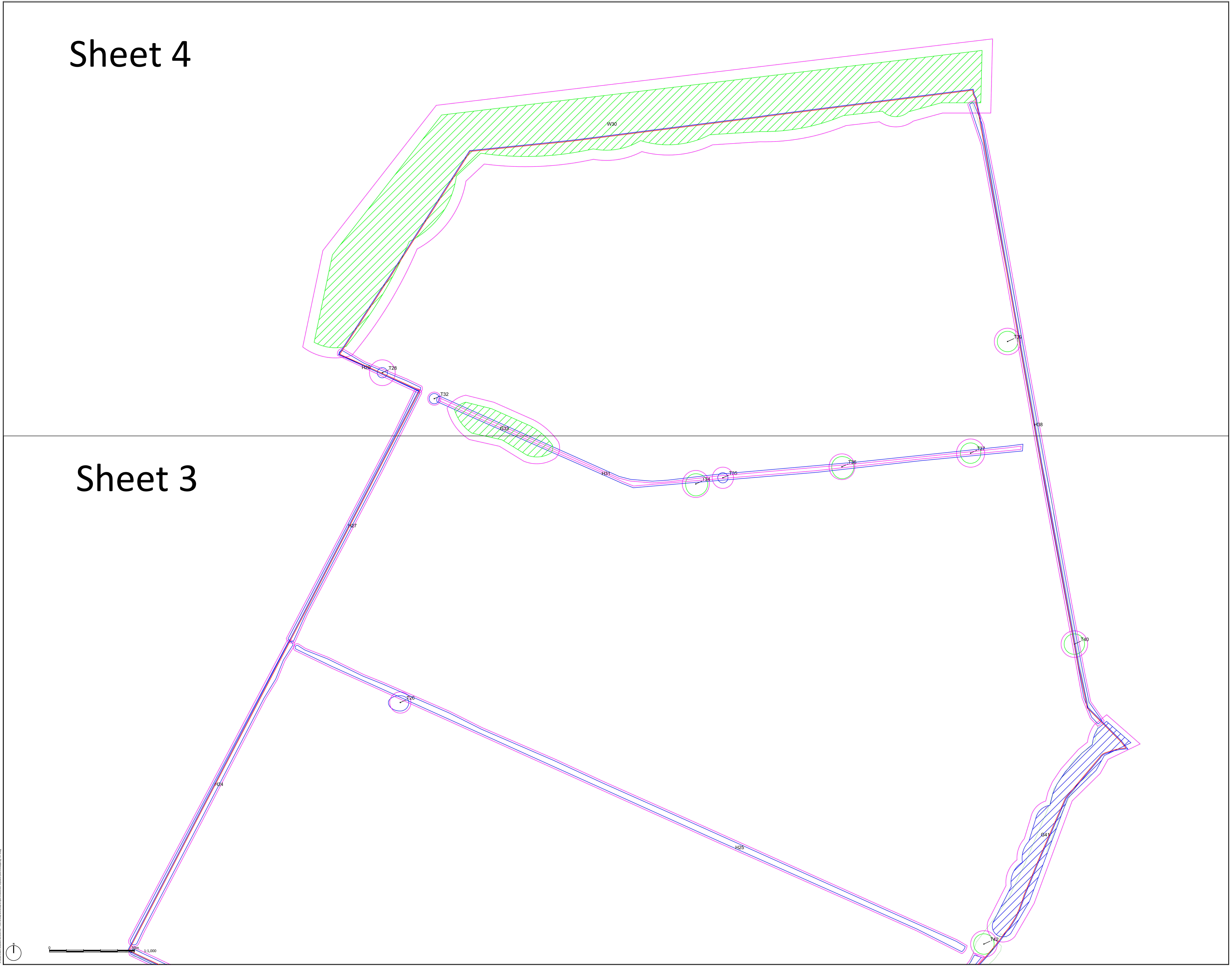
Scale: 1:1000 @A1

Drawn by: IW — Date: 17/08/2022

Checked by: IB — Date: 17/08/2022

ADAS, 11d Park House, Milton Park,
Milton, Abingdon, Oxford, OX14 4RS

Tel: 01235 355630



LEGEND

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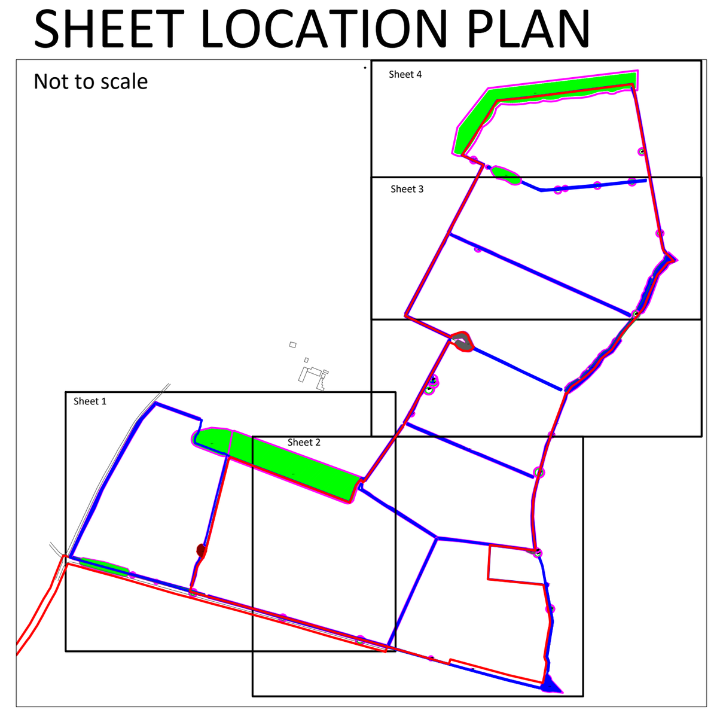
Based on Survey & Engineering Projects drawing 'Topographical Survey' number '20220614_A031_3P570 (1). Please see original for details.

SHEET LOCATION PLAN

Not to scale



Rev.	Issue Details.	Date.
1	-	17/08/2022

Client:
JBM Solar Projects 8 Ltd

Project:
Padbury Brook Solar Farm

Drawing Title:
Tree Constraints Plan

Drawing No: 1051745_JBM_TCP_Sheet 4

Scale: 1:1000 @A1

Drawn by: IW   Date: 17/08/2022

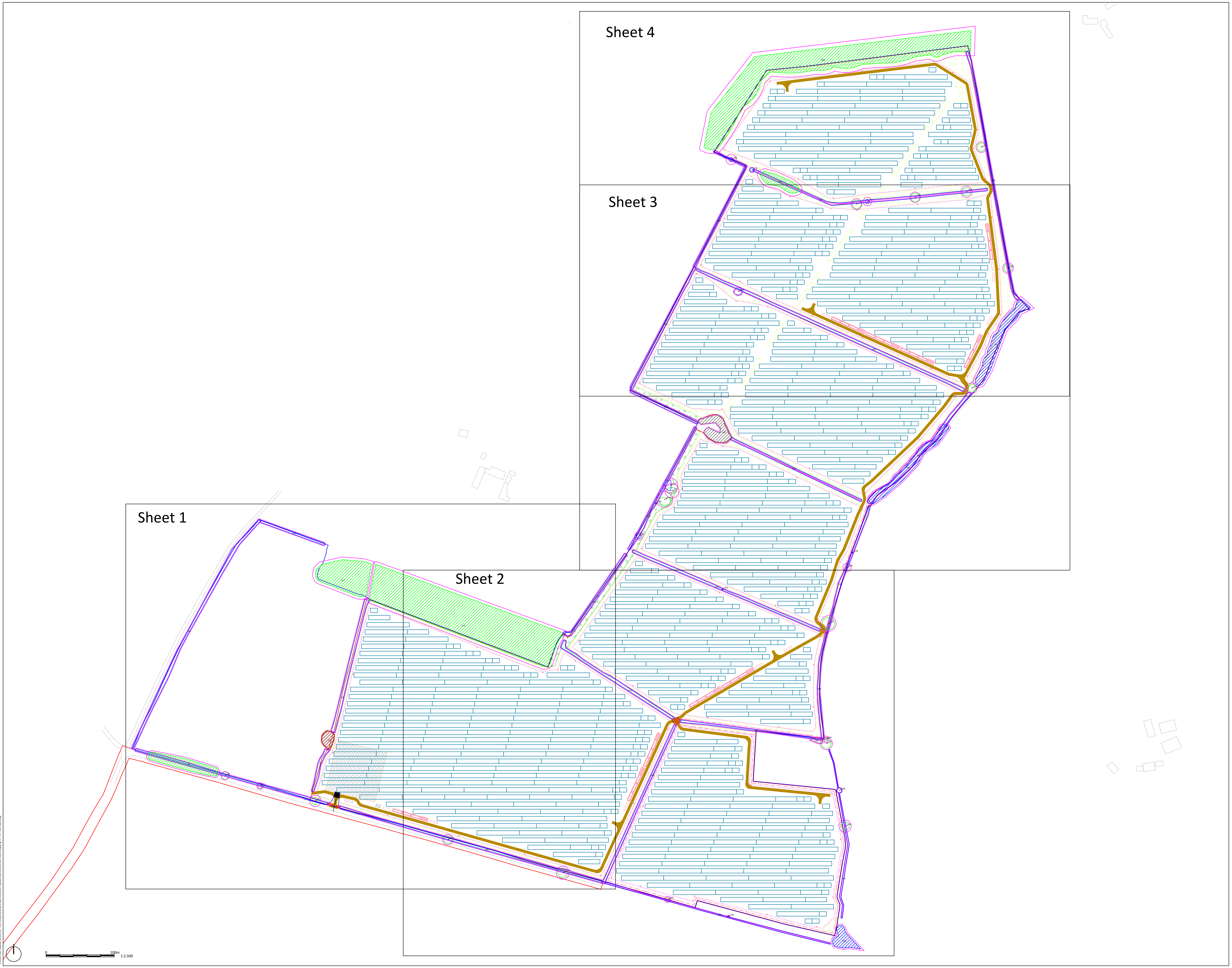
Checked by: IB   Date: 17/08/2022

ADAS, 11d Park House, Milton Park,
Milton, Abingdon, Oxford, OX14 4RS

Tel: 01235 355630

Appendix 4: Tree Protection Plan

See following page.



LEGEND

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Root Protection Area (RPA)

Trees To Be Removed
Trees / Groups: which are to be removed

Tree Protection Fencing

Based on Survey & Engineering Projects drawing 'Topographical Survey' number '20220614_A031_3P570 (1). Please see original for details.

Legend:

- Planning Red Line
- Landlord's property
- Inverter
- Battery stations
- Spare containers
- Customer switchgear container
- Solar panels
- Deer fence
- Overhead Lines
- Solar access track
- DNO building & comms mast
- PROW
- Wildflower Meadow
- Drain/pond
- Hedges
- Construction compound
- CCTV Cameras
- Gate
- Permissive Path
- Tree/Hedge Planting

Rev.	Issue Details.	Date.
2	Entrance hedge removal	Nov 2022
1	-	17/08/2022

Client:
JBM Solar Projects 8 Ltd

Project:
Padbury Brook Solar Farm

Drawing Title:
Tree Protection Plan

Drawing No: 1051745_JBM_TPP_Full Area

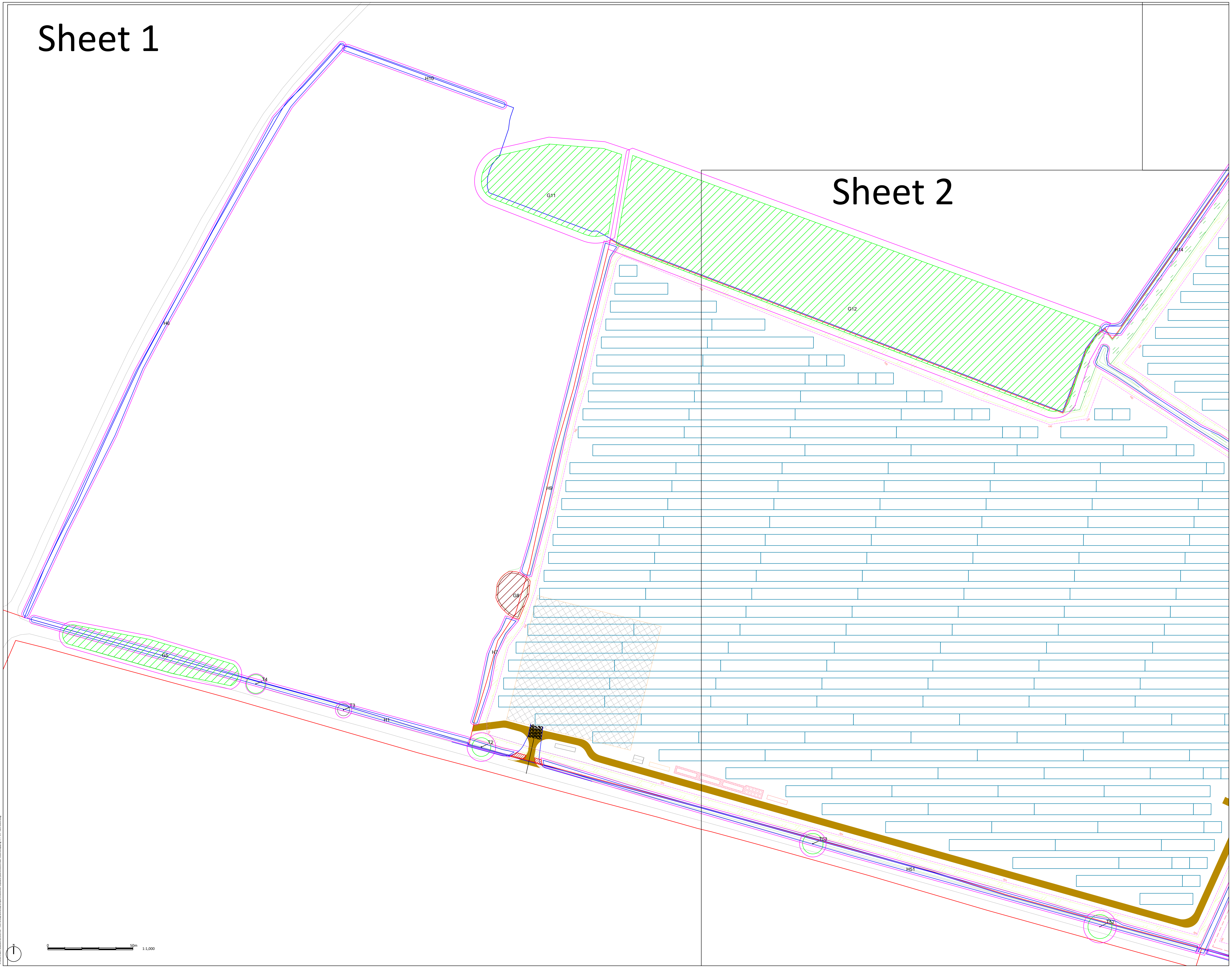
Scale: 1:2500 @A1

Drawn by: IW — Date: 17/08/2022

Checked by: IB — Date: 17/08/2022

ADAS, 11d Park House, Milton Park,
Milton, Abingdon, Oxford, OX14 4RS

Tel: 01235 355630



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LEGEND

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- **Root Protection Area** (RPA)
- **Trees To Be Removed** Trees / Groups: which are to be removed
- Tree Protection Fencing

Based on Survey & Engineering Projects drawing 'Topographical Survey' number '20220614_A031_3P570 (1). Please see original for details.

Legend:

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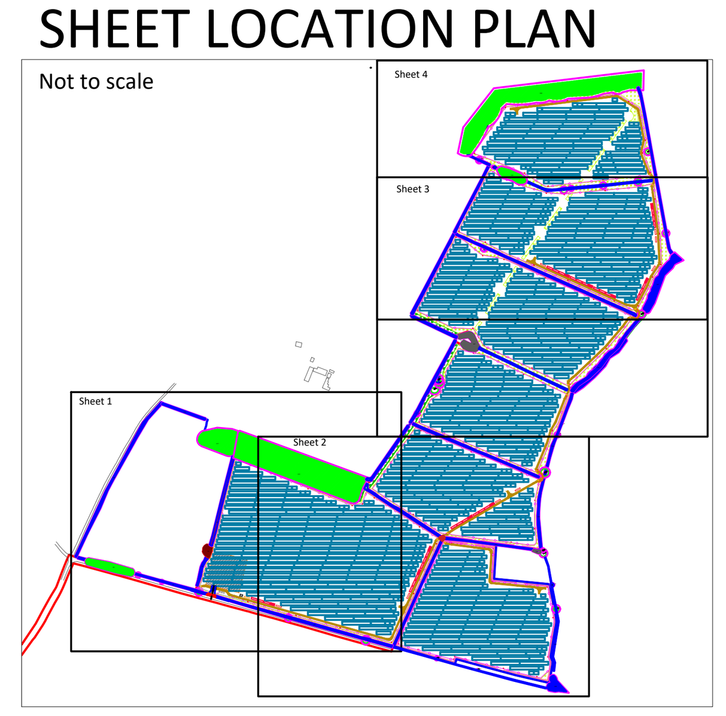
- Permissive Path
- Tree/Hedge Planting

SHEET LOCATION PLAN

Not to scale



Rev.	Issue Details.	Date.
2	Entrance hedge removal	Nov 2022
1	-	17/08/2022

Client:
JBM Solar Projects 8 Ltd

Project:
Padbury Brook Solar Farm

Drawing Title:
Tree Protection Plan

Drawing No: 1051745_JBM_TPP_Sheet 1

Scale: 1:1000 @A1

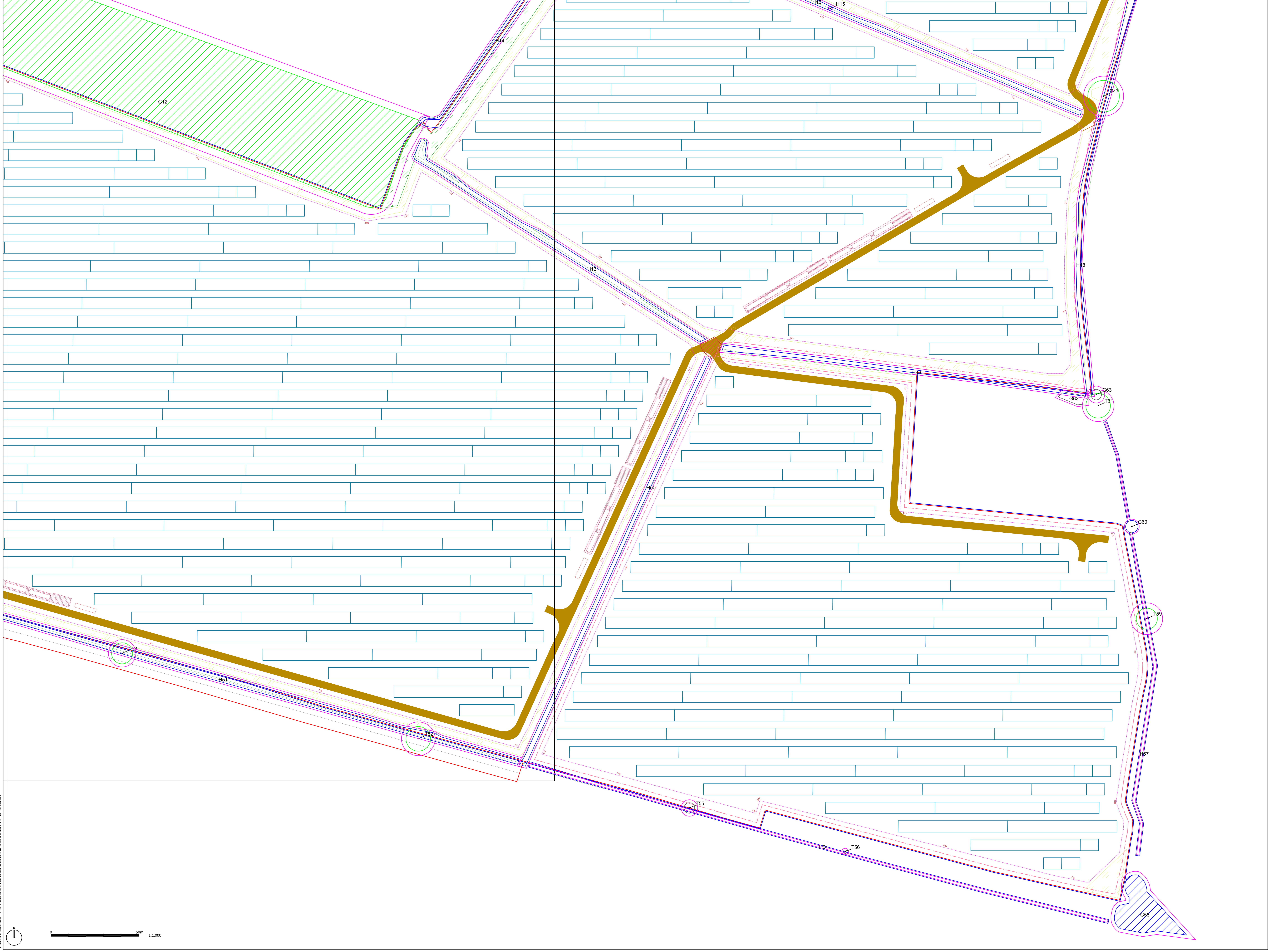
Drawn by: IW Date: 17/08/2022

Checked by: IB Date: 17/08/2022

ADAS, 11d Park House, Milton Park,
Milton, Abingdon, Oxford, OX14 4RS

Tel: 01235 355630

Sheet 2



LEGEND

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Root Protection Area (RPA)

Trees To Be Removed
Trees / Groups: which are to be removed

Tree Protection Fencing

Based on Survey & Engineering Projects drawing 'Topographical Survey' number '20220614_A031_3P570 (1). Please see original for details.

Legend:

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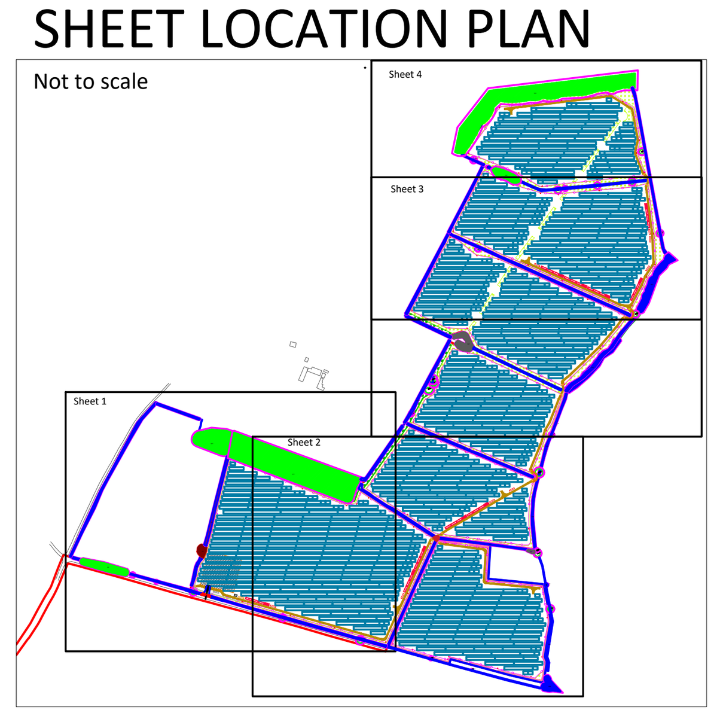
SHEET LOCATION PLAN

Not to scale



Rev.	Issue Details.	Date.
2	Entrance hedge removal	Nov 2022
1	-	17/08/2022

Client:
JBM Solar Projects 8 Ltd

Project:
Padbury Brook Solar Farm

Drawing Title:
Tree Protection Plan

Drawing No: 1051745_JBM_TPP_Sheet 2

Scale: 1:1000 @A1

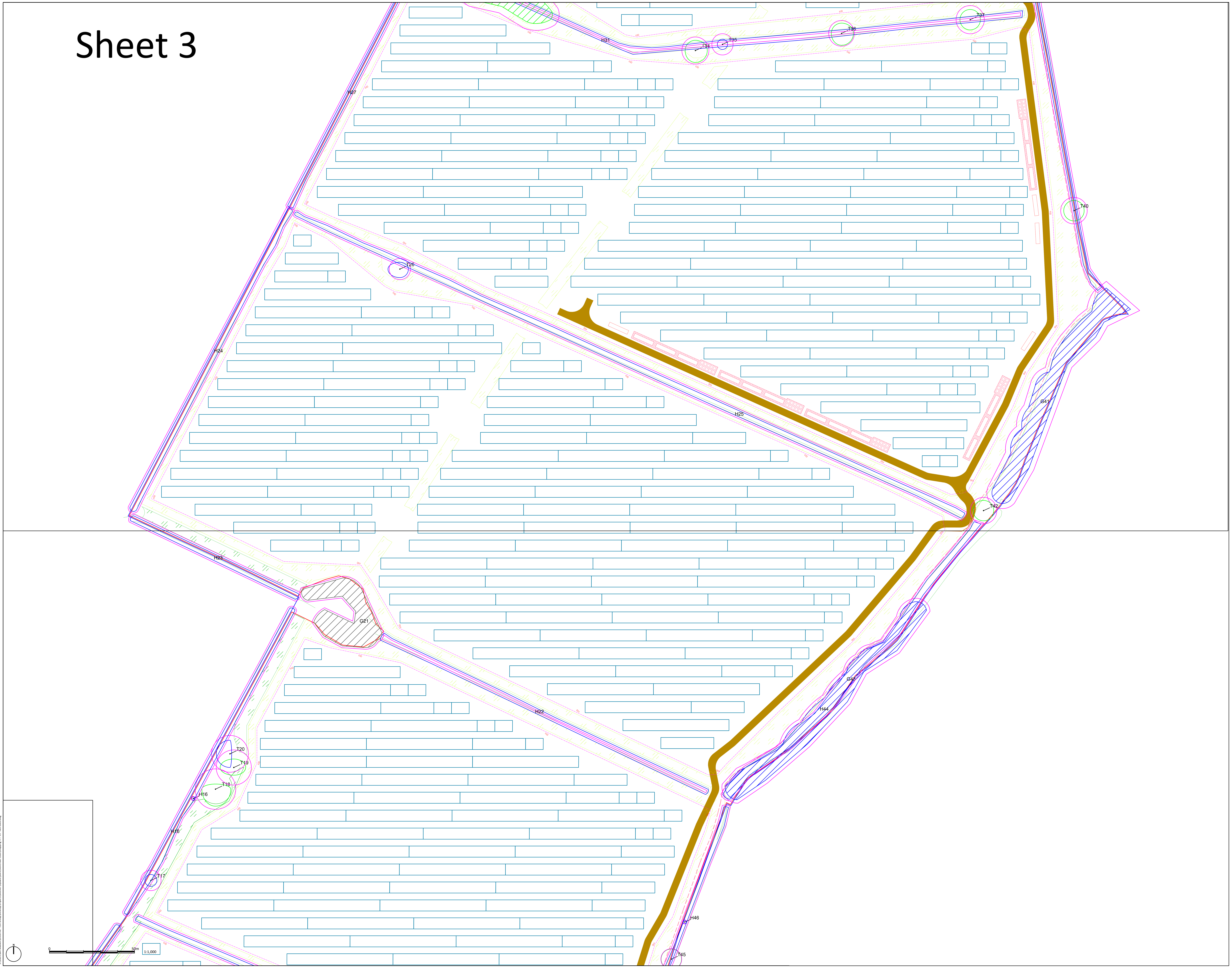
Drawn by: IW — Date: 17/08/2022

Checked by: IB — Date: 17/08/2022

ADAS, 11d Park House, Milton Park,
Milton, Abingdon, Oxford, OX14 4RS

Tel: 01235 355630

Sheet 3



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Root Protection Area (RPA)

Trees To Be Removed
Trees / Groups: which are to be removed

Tree Protection Fencing

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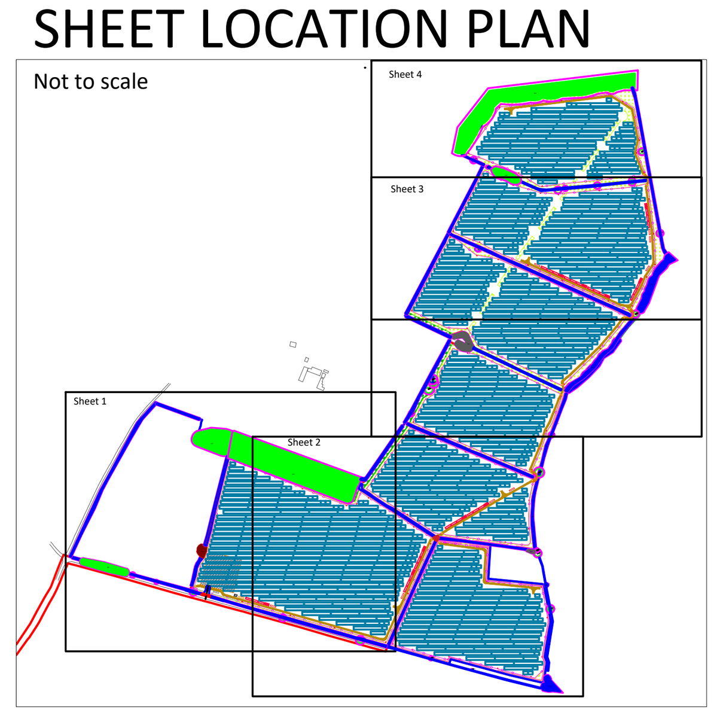
SHEET LOCATION PLAN

Not to scale



Rev.	Issue Details.	Date.
2	Entrance hedge removal	Nov 2022
1	-	17/08/2022

Client:
JBM Solar Projects 8 Ltd

Project:
Padbury Brook Solar Farm

Drawing Title:
Tree Protection Plan

Drawing No: 1051745_JBM_TPP_Sheet 3

Scale: 1:1000 @A1

Drawn by: IW — Date: 17/08/2022

Checked by: IB — Date: 17/08/2022

ADAS, 11d Park House, Milton Park,
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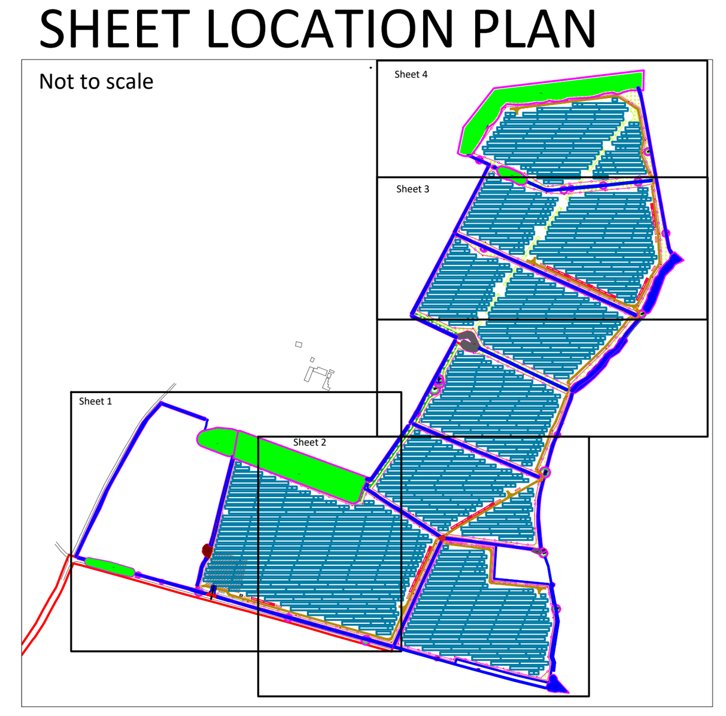
Not to scale



Rev.	Issue Details.	Date.
2	Entrance hedge removal	Nov 2022
1	-	17/08/2022

Client:
JBM Solar Projects 8 Ltd

Project:
Padbury Brook Solar Farm

Drawing Title:
Tree Protection Plan

Drawing No: 1051745_JBM_TPP_Sheet 3

Scale: 1:1000 @A1

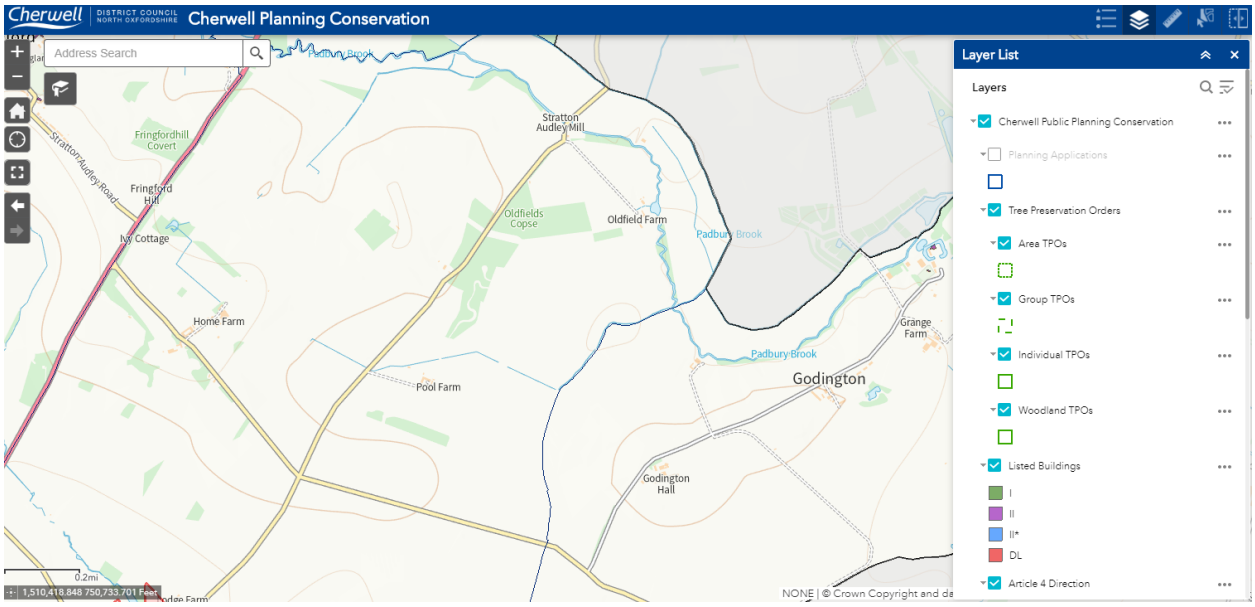
Drawn by: IW Date: 17/08/2022

Checked by: IB Date: 17/08/2022

ADAS, 11d Park House, Milton Park,
Milton, Abingdon, Oxford, OX14 4RS

Tel: 01235 355630

Appendix 5: TPO and Conservation Area Plan



Appendix 6: Tree Survey Schedule

See following page.

Column Heading	Description
Tree Ref No.	All individual trees and groups of trees have been given a unique reference number. Each number is prefixed by a letter. ▪ T = Individual tree ▪ G = Group of trees ▪ H = Hedgerow * W = Woodland
Species	The English common name has been used.
Single or Multiple stem (S or M)	* 'S' represents a tree which has a single clear stem to at least 1.5m above ground level. * 'M(a)' represents a tree where the main stem divides into two to five stems below 1.5m above ground level, and * 'M(b)' represents a tree where the main stem divides into 6 or more stems below a height of 1.5m.
Height (m)	Where possible tree heights are measured using a laser. In some instances such as in close groups of trees, one height may be measured and other nearby trees estimated from this height. Measurements are provided in metres.
Stem Diameter (mm)	S_n represents the stem number. Measurements are provided in millimetres at 1.5m above ground level for single stemmed trees.
Very Large Girth (y/n)	Girth is very large for species inaccordance with Fig 1.3 of publication 'Ancient and other veteran trees: further guidance on management' Acient Tree Forum 2013. RAVEN - Step 1
Ancient (A), Veteran (V) or Notable (N)	Result of the RAVEN assessment © Julian Forbes-Laird 2018 www.flac.uk.com; provided on separate ADAS Sheet 2. (RAVEN = Recognition of Ancient, Veteran & Notable Trees)
Branch Spread (m)	Measured in metres to the four cardinal compass points (N, E, S, W).
Crown Clearance Life Stage	(1) Height in metres of the first significant branch, and the direction of growth. (2) Height in metres of lowest part of crown. The stage at which the tree is within its lifecycle (Y = young, SM = semi-mature, EM = early-mature, M = mature, OM = over mature, V = veteran)
General Observations	Any relevant observations are recorded, with particular reference to structural and/or physiological condition.
Preliminary Management Recommendations	Recommendations are made where management work is required for reasons of health and safety or sound arboricultural management.
Estimated Remaining Contribution (years)	An estimation of how long the feature will contribute to its surroundings. This is recorded in bands of either <10 years, 10+ years, 20+ years and 40+ years.
Tree Quality Grading	The trees are graded to the categories prescribed within BS5837:2012 (U, A, B & C).
Root Protection Area	Calculated as prescribed in section 4.6 of BS5837:2012, provided as an area (m^2) and a radius from the tree's stem (m).
Note: Those measurements shown in *italics* have been estimated, usually where access has restricted it being taken.	

Table 1: Tree Survey Schedule heading descriptions

Tree Ref No.	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm) S1	S2	S3	Branch Spread (m) N	E	S	W	Crown Clearance (m) (1)	(2)	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Tree Quality Grading	Root Protection Area (m^2)	(radius in m)
H1	Hawthorn, Blackthorn, Ash, Dogwood	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
T2	Oak	S	16	700			5.5	5.5	5.5	5.5	2.0-E	2	M	Road side tree which grows on boundary ditch. The tree is in good condition with only minor deadwood in the crown	None	40+	A12	221.7	8.4
T3	Oak	S	7	400			3.5	3.5	3.5	3.5	2.0-S	2	SM	Estimated measurements due to no access, field boundary tree growing in the hedgerow. The tree has poor form and condition moderate deadwood throughout the crown	None	10+	C2	72.4	4.8
T4	Oak	S	9	500			5.5	5.5	5.5	5.5	2.0-E	2	M	Road side tree which grows on boundary ditch. The tree is in good condition with only minor deadwood in the crown. Estimated measurements due limited access to the tree base	None	40+	A12	113.1	6.0
G5	Oak	S	15	600			6	6	6	6	2.0-E	2	M	Road side group of 6x trees which grow on boundary ditch. The trees are in good condition with only minor deadwood in the crown. Estimated measurements due limited access to the tree base	None	40+	A12	162.9	7.2
H6	Hawthorn, Blackthorn, Ash, Dogwood	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
H7	Hawthorn, Blackthorn, Ash, Dogwood	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
G8	Norway maple, elm	S	6.5	*100*			2	2	2	2	0.5-E	0.5	Y	Group of low quality trees, elm trees are dead or are heavily infected with DED	None	<10	U	4.5	1.2
H9	Hawthorn, Blackthorn, Ash, Dogwood	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition, dispersed ash trees which are heavily infected with ADB	None	40+	B2	4.5	1.2
H10	Hawthorn, Blackthorn, Ash, Dogwood	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2

Tree Ref No.	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm) S1	S2	S3	Branch Spread (m) N	E	S	W	Crown Clearance (m) (1)	(2)	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Tree Quality Grading	Root Protection Area (m^2)	(radius in m)
G11	Oak	S	12	350			5	5	5	5	2.0-E	2	SM	Road side group of trees which grow on the field boundary. The trees are in good condition with only minor deadwood in the crown. Estimated measurements due limited access to the tree base	None	40+	A12	55.4	4.2
G11	Oak, Ash, Hawthorn, blackthorn	S	16	350			5	5	5	5	2.0-E	2	SM	Road side group of trees which grow on the field boundary. The trees are in good condition, Hawthorn, blackthorn understory. Estimated measurements due limited access to the tree base	None	40+	A12	55.4	4.2
H13	Hawthorn, Blackthorn, Ash, Dogwood, Willow	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
H14	Hawthorn, blackthorn,	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
H15	Hawthorn, blackthorn,	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
H16	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
T17	Oak	S	6.5	*500*			3.5	3.5	3.5	3.5	2.0-E	2	M	Field boundary tree with estimated stem measurements due to no access. The tree has lost its central leader from very old storm damage resulting in reduced form, crown has good leaf development throughout	None	40+	B2	113.1	6.0
T18	Oak	S	19	*990*			3	9	10	8	2.0-E	2	M	Field boundary tree is in good condition with only minor deadwood	None	40+	A12	443.4	11.9
T19	Oak	S	16	*860*			5	7	4.5	8	2.0-E	2	M	Field boundary tree is in good condition with only minor deadwood	None	40+	A12	334.6	10.3
T20	Oak	S	16	*900*			8	1	8	8	2.0-E	2	M	Field boundary tree which has had the eastern crown fail with the loss of two large limbs. remaining crown is weighted to the west	None	20+	B2	366.5	10.8

Tree Ref No.	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm) S1	S2	S3	Branch Spread (m) N	E	S	W	Crown Clearance (m) (1)	(2)	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Tree Quality Grading	Root Protection Area (m^2)	(radius in m)
G21	Hawthorn, blackthorn, Oak, willow, elm	S	6.5	*100*			2	2	2	2	0-E	0	Y	group of young unmanaged trees of low quality	None	20+	C2	4.5	1.2
H22	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
H23	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
H24	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
H25	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
T26	Oak	S	11	*520*			4	5	5	7	2.0-E	2	M	Field boundary tree with estimated stem measurements due to no access. The tree has lost its central leader from very old storm damage resulting in reduced form, crown has good leaf development throughout but does have deadwood throughout the crown	None	40+	B2	122.3	6.2
H27	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
T28	Oak	S	16	*630*			3	3	3	3	2.0-E	2	M	Field boundary tree is in fair condition with only major deadwood throughout the crown	None	10+	B2	179.6	7.6
H29	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
W30	Oak, Ash, elm, blackthorn, hawthorn	S	19	*500*			7	7	7	7	0-N	0	M	High value woodland with mature oak and ash with hawthorn blackthorn elm understory. Ash and elm are at various stages of being infected with ADB and DED. This woodland is a key landscape feature	None	40+	A12	113.1	6.0

Tree Ref No.	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm) S1	S2	S3	Branch Spread (m) N	E	S	W	Crown Clearance (m) (1)	(2)	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Tree Quality Grading	Root Protection Area (m^2)	(radius in m)
H31	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
T32	Oak	S	6	*320*			3	3	3	3	2.0-N	2	SM	Field boundary tree in good condition with good leaf development throughout	None	40+	B2	46.3	3.8
G33	Oak	S	13	540			7	7	7	7	2.0-E	2	M	Group of 5x trees which grow on field boundary ditch. The trees are in good condition with only minor deadwood in the crown. Estimated measurements due limited access to the tree base	None	40+	A12	131.9	6.5
T34	Oak	S	12	*660*			6	7	7	6	2.0-E	2	M	Field boundary tree is in good condition with only minor deadwood	None	40+	A12	197.1	7.9
T35	Oak	S	12	*520*			3	3	3	3	2.0-E	2	M	Field boundary tree is in fair condition with moderate deadwood throughout the crown	None	20+	B2	122.3	6.2
T36	Oak	S	12	*630*			6	7	7	6	2.0-E	2	M	Field boundary tree is in good condition with only minor deadwood in the crown	None	40+	A12	179.6	7.6
T37	Oak	S	12	*690*			6	6	6	6	2.0-E	2	M	Field boundary tree is in good condition with only minor deadwood in the crown	None	40+	A12	215.4	8.3
H38	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
T39	Oak	S	12	*650*			6	6	6	6	2.0-E	2	M	Field boundary tree is in good condition with only minor deadwood in the crown	None	40+	A12	191.2	7.8
T40	Oak	S	12	*650*			6	6	6	6	2.0-E	2	M	Field boundary tree is in good condition with only minor deadwood in the crown, estimated stem measurements due to thick undergrowth	None	40+	A12	191.2	7.8

Tree Ref No.	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm) S1	S2	S3	Branch Spread (m) N	E	S	W	Crown Clearance (m) (1)	(2)	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Tree Quality Grading	Root Protection Area (m^2)	(radius in m)
G41	Oak, Ash, Hawthorn, blackthorn, Willow,	S	12	*300*			5	5	5	5	0.5-S	0.5	M	Group of trees which grow along the field boundary on top of the boundary ditch. Mature oak, willow with hawthorn blackthorn understory	None	40+	B2	40.7	3.6
T42	Oak	S	12	*650*			6	6	6	6	2.0-E	2	M	Field boundary tree is in good condition with only minor deadwood in the crown, estimated stem measurements due to thick undergrowth, Thick ivy to near full height of the tree	None	40+	A12	191.2	7.8
G43	Willow, ash, blackthorn, hawthorn	S	7	*200*			3	3	3	3	0-E	0	SM	Field boundary group predominately hawthorn, blackthorn hedgerow with dispersed ash and willow. Ash trees are at various stages of being infected with ADB	None	20+	B2	18.1	2.4
H44	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
T45	Oak	S	12	*510*			6	6	6	6	2.0-E	2	M	Field boundary tree is in good condition with only minor deadwood in the crown, estimated stem measurements due to thick undergrowth,	None	40+	A12	117.7	6.1
H46	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
T47	Oak	S	12	*950*			9	9	9	9	2.0-S	2	M	Field boundary tree is in good condition with only minor deadwood in the crown, estimated stem measurements due to thick undergrowth	None	40+	A12	408.3	11.4
H48	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
H49	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
H50	Hawthorn, blackthorn, oak, field maple	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2

Tree Ref No.	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm) S1	S2	S3	Branch Spread (m) N	E	S	W	Crown Clearance (m) (1)	(2)	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Tree Quality Grading	Root Protection Area (m^2)	(radius in m)
H51	Hawthorn, blackthorn, oak, field maple, hazel	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
T52	Oak	S	12	*800*			7	7	7	7	2.0-S	2	M	Field boundary tree is in good condition with only minor deadwood in the crown, estimated stem measurements due to thick undergrowth, ivy to full height	None	40+	A12	289.6	9.6
T53	Oak	S	15	*650*			6	6	6	6	2.0-S	2	M	Field boundary tree is in good condition with only minor deadwood in the crown, estimated stem measurements due to thick undergrowth	None	40+	A12	191.2	7.8
H54	Hawthorn, blackthorn, oak, field maple, hazel	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
T55	Ash	S	10	*390*			3	3	3	3	1.0-E	1	EM	The tree is heavily infected with ADB	None	10+	C2	68.8	4.7
T56	Ash	S	4.5	*160*			1	1	1	1	1.0-E	1	Y	The tree is heavily infected with ADB	None	10+	C2	11.6	1.9
H57	Hawthorn, blackthorn, oak, field maple, hazel	S	2	100			1	1	1	1	0-E	0	Y	Field boundary hedge in good condition	None	40+	B2	4.5	1.2
G58	Ash, Oak	S	14	*400*			5.5	5.5	5.5	5.5	1.5-S	2	EM	Group of 5x ash trees in fair condition and onecoak in good condition. Ash trees are innfirst stages of being infected with ADB	None	20+	B2	72.4	4.8
T59	Oak	S	12	*750*			6	6	6	6	2.0-S	2	M	Field boundary tree is in good condition with only minor deadwood in the crown, estimated stem measurements due to thick undergrowth	None	40+	A12	254.5	9.0
G60	Willow	M(a)	6	*200*	*200*	200	3.5	3.5	3.5	3.5	0.5-N	0	EM	Estimated measurements due to no access, field boundary group	None	20+	C2	54.3	4.2

Tree Ref No.	Species	Single or Multiple Stem (S or M)	Height (m)	Stem Diameter (mm) S1	S2	S3	Branch Spread (m) N	E	S	W	Crown Clearance (m) (1)	(2)	Life Stage	General Observations (structural / physiological condition)	Preliminary Management Recommendations	Estimated Remaining Contribution (years)	Tree Quality Grading	Root Protection Area (m^2)	(radius in m)
T61	Oak	S	15	*750*			7	7	7	7	3.0-S	2	M	Field boundary tree is in good condition with only minor deadwood in the crown, estimated stem measurements due to thick undergrowth	None	40+	A12	254.5	9.0
G62	Willow, Hawthorn	S	6	*200*			2.5	2.5	2.5	2.5	0.5-N	0	EM	Estimated measurements due to no access, field boundary group	None	20+	C2	18.1	2.4
G63	Ash	S	8	*400*			3	3	3	3	1.0-N	1	M	3x ash trees which have grown ajacent to the farm access track. All are in fair condition due to being infected with ADB	None	10+	C2	72.4	4.8

Appendix 7: Tree Work Schedule

Tree No:	Species	Recommended Management Work
H1	Hawthorn, Blackthorn, Oak, Field maple	Fell and remove approximately 7m section identified on Tree Protection Plan.
H13, H49, H50, H51	Hawthorn, Blackthorn, Oak, Field maple	Fell and remove approximately 5m section identified on Tree Protection Plan.

Accompanying Notes:

- All tree work and felling to be carried out in accordance with BS 3998 (2010) 'Recommendations for Tree Work', current industry guidelines and best practice, and all relevant Health & Safety standards;
- All operatives to be appropriately qualified, skilled, and adequately insured, for the task they are undertaking;
- All tree work and felling must comply with The Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000;
- Where sections of hedges and groups are to be removed reference is to be made to the Tree Protection Plans contained in **Appendix 4** for the exact locations.
- Modification to, or deviation from, the above schedule must first gain approval from Cherwell District Council.

Appendix 8: RPA Guidance

The Root Protection Area (RPA) is calculated from the stem diameter of the tree, in accordance with the guidance contained in section 4.6 of BS 5837:2012. Where trees have been identified as being either Ancient, Veteran or Notable, then the standing advice has been adopted to provide a 'buffer zone' of 15x the stem diameter.

These areas are normally sacrosanct, and should not be entered, by traffic or foot, during construction, or used to store materials, fuel, or chemicals.

Protective fencing should be erected along the edge of the RPA, before construction begins, and should not be moved until after all construction has finished and vacated the site. The type of fencing used should be fit for purpose, and ordinarily conform to the recommendations given in section 6.2.2 of BS 5837:2012 and be erected similar to the example shown in Figure 2 of the same standard.

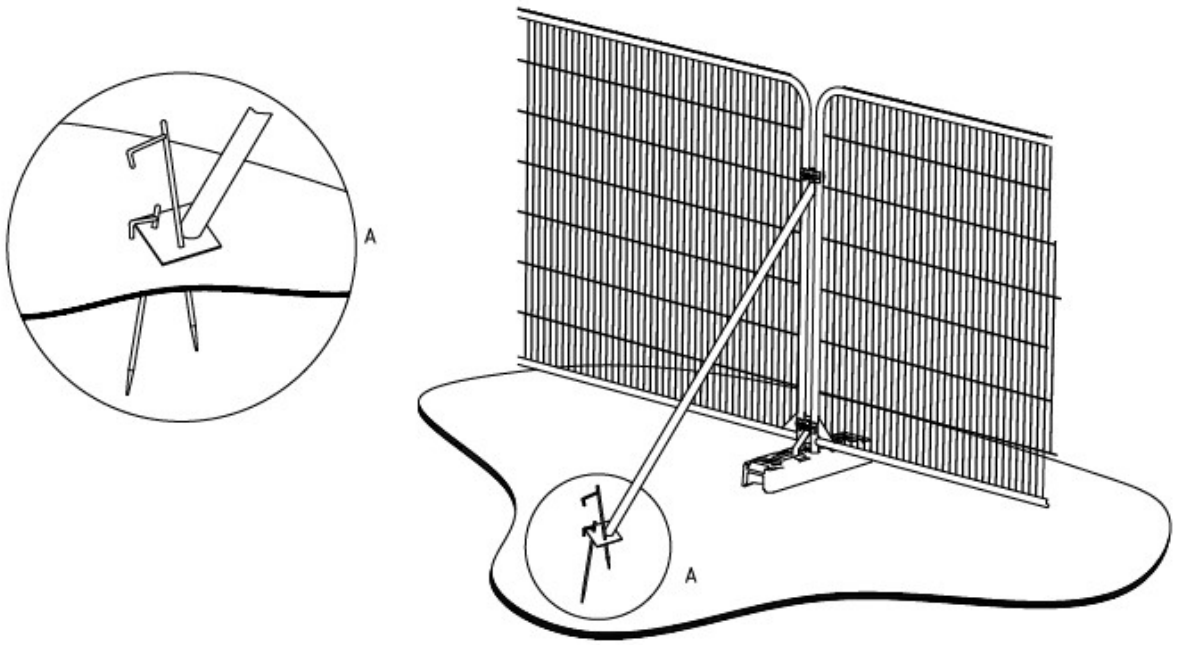
Where underground services cannot be routed outside the RPA, these should be installed by trenchless technology, such as a directional drill. Where this technology is used the underground channel created should be no less than 600mm below normal ground level, or the base of the tree. Also, the starting and receiving excavations should not be within the RPA. Drill channel lubricant should be avoided, other than water, unless precautions are taken to prevent contamination of soil and possibly water. Hand digging may be an alternative to trenchless excavation, but this is less desirable, and not always practical.

When determining the workable space around the RPA of a tree or trees, it is also important to maintain a working zone of one metre (which is usually sufficient) between the edge of construction and the protective fencing.

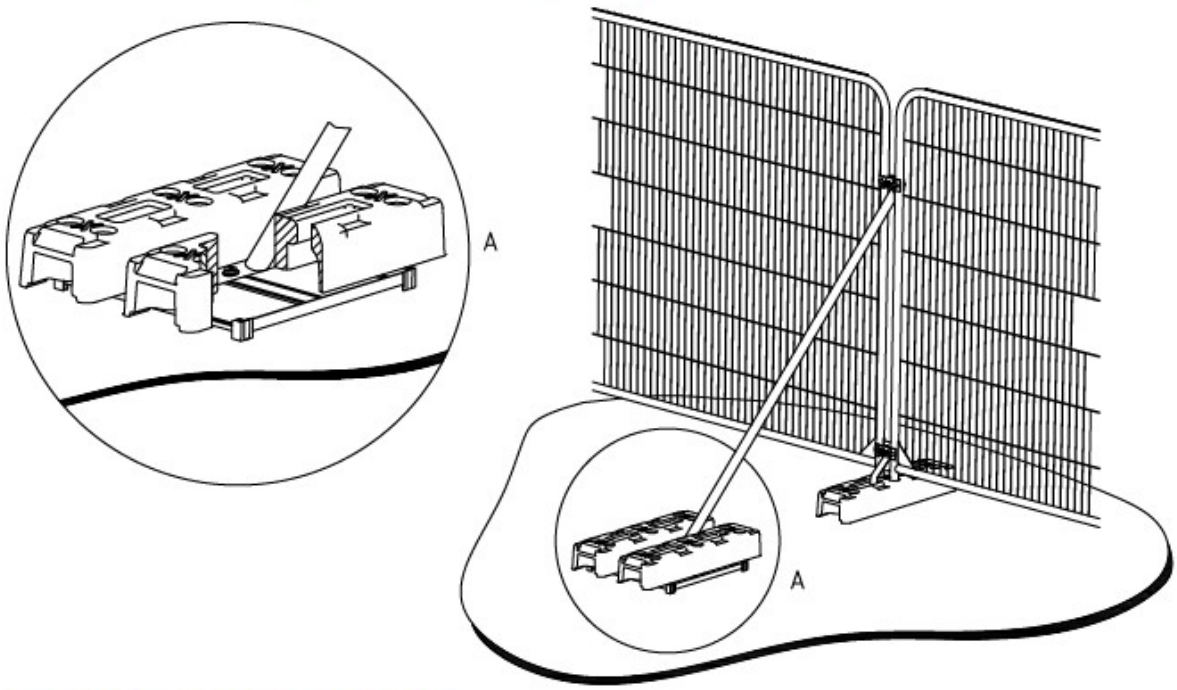
Appendix 9: Example Tree Protection Barrier

See following page.

Figure 3 Examples of above-ground stabilizing systems



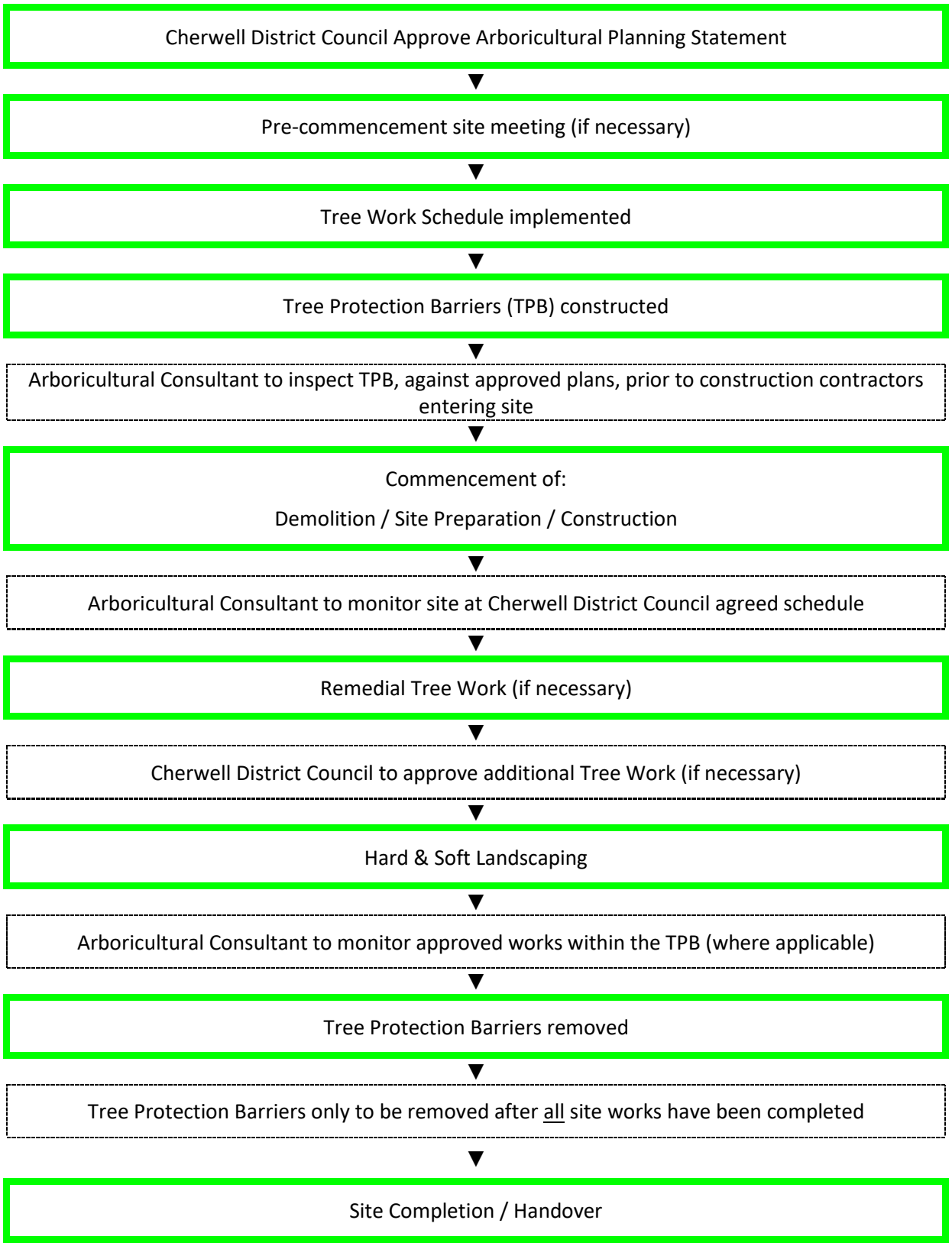
a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Appendix 10: Example Tree Protection Barrier Sign

Appendix 11: Key Sequence of Events after Planning Approval



Appendix 12: Contact Details

	Name	Main Contact and Details
Site Details	Padbury Brook Solar Farm	Land near Stratton Audley, Cherwell District, Oxfordshire, England OX27 9AL
Developer	JBM Solar Projects 8 Ltd	-
Site Manager	TBC	-
Arboricultural Consultant	Iain Waddell	RSK ADAS Ltd 11D Park House Milton Park Abingdon Oxfordshire OX14 4RS T: 07391866564 E: iain.waddell@adas.co.uk
Local Authority:	Cherwell District Council	Cherwell District Council, Development Management, Place & Growth Directorate, Bodicote House, Banbury, OX15 4AA