



Longfield Solar Farm

Arboricultural Impact Assessment (Part 1 of 2)

Document Reference : EN010118/EX/8.13

Revision 1.0

October 2022

Longfield Solar Energy Farm Ltd

APFP Regulation 5(2)(q)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure)

Regulations 2009

Quality information

Prepared by	Checked by	Verified by	Approved by
Oliver Laycock Senior Arboricultural Consultant	Georgina Tearne Principal Arboricultural Consultant	Andy Wakefield Associate Director (Arboriculture)	Neil Titley Technical Director

Revision History

Revision	Revision date	Details	Authorized	Name	Position
00	26 September 2022	Revision 1	26 September 2022	Neil Titley	Technical Director

Prepared for:

Longfield Solar Energy Farm Ltd

Prepared by:

AECOM Limited
aecom.com

© 2022 AECOM Limited. All Rights Reserved.

This document has been prepared by AECOM Limited (“AECOM”) for sole use of our client (the “Client”) in accordance with generally accepted consultancy principles, the budget for fees and the terms of reference agreed between AECOM and the Client. Any information provided by third parties and referred to herein has not been checked or verified by AECOM, unless otherwise expressly stated in the document. No third party may rely upon this document without the prior and express written agreement of AECOM.

Table of Contents

1.	Introduction.....	1
1.1	Background.....	1
1.2	Trees and the Planning Process.....	1
1.3	Protected Trees and Woodland	4
1.4	Other Landscape Features	4
1.5	Methodology	4
2.	General Arboricultural Principles	7
2.1	General Principles	7
2.2	Below ground constraints.....	7
2.3	Soils.....	8
2.4	Above ground constraints	8
2.5	Trees and Risk in the Context of Development.....	8
2.6	Trees and Wildlife	9
2.7	Tree Works	9
3.	Field Work Observations	10
3.1	The Order limits	10
3.2	The Trees.....	10
3.3	Statutory and Non-Statutory Designations.....	11
4.	The Scheme	16
5.	Arboricultural Impact Assessment	17
5.1	Purpose	17
5.2	Impacts to Important or Protected Tree Features	18
5.3	Trees to be Removed	19
5.4	Tree Works	20
5.5	Incursions within the RPA or Canopy Spread	21
5.6	The Future Impact of Retained Trees	22
5.7	Tree Protection	22
5.8	Site Organisation, Storage and Use of Materials, Plant and Machinery	23
5.9	Tree Planting.....	23
5.10	Services.....	24
6.	Conclusions	25
7.	References	27
	Appendix A Tree Constraints Plan.....	28
	Appendix B Tree Survey Schedule.....	42
	Key to Abbreviations Used in the Survey	55
	Appendix C Site Photography	56
	Appendix D Vegetation Removal Plan Submitted with the DCO Application	59
	Appendix E Tree Protection Plan	61
	Appendix F Outline Tree Protection Measures.....	74
F.1	Outline Tree Protection Measures	74
F.2	Ground Protection.....	75
F.3	General guidance for the management of exposed roots	75
F.4	Storage, use and mixing of materials.....	76
	Appendix G Tree Protection Signage (Example).....	77

Figures

Figure 1 – Showing the Priority Habitat Inventory (England) designations in the Order limits (1 of 2).	13
Figure 2 – Showing the Priority Habitat Inventory (England) designations in the Order limits (2 of 2).	13
Figure 3 – Showing the Ancient Woodland designations in the Order limits (1 of 2).	14
Figure 4 – Showing the Ancient Woodland designations in the Order limits (2 of 2).	14
Figure 5 – Showing the small leaved lime tree, to the north of Boreham Industrial Estate, recorded as a veteran tree within the ATI.....	15
Figure 6 – Showing the eastern stem of T112 the veteran lime tree.	43
Figure 7 – Showing the base of T112.....	43
Figure 8 – Showing T9 a veteran oak tree.	43
Figure 9 – Showing T9.	43
Figure 10 – Showing T121 a veteran oak tree.	44
Figure 11 – Showing T121	44
Figure 12 – Showing T113 (right) and T114 (left) two high quality (Category A) trees.....	45
Figure 13 – Showing T29 a high quality (Category A) tree.....	45
Figure 14 - Default specification for protective barrier	50

Tables

Table 1: BS5837:2012 Tree Categorisation process	6
Table 2: Summary of Removals, Incursions and Pruning to Facilitate the Scheme.....	17

1. Introduction

1.1 Background

- 1.1.1 AECOM has been instructed by Longfield Solar Energy Farm Ltd (The Applicant) to carry out an Arboricultural Impact Assessment of the proposed maximum extent of tree and vegetation loss needed to deliver Longfield Solar Farm, as illustrated on the Vegetation Removal Plan (Figure 10-15 of 6.3 Environmental Statement [APP-186]).
- 1.1.2 This report identifies the likely direct and indirect impacts of the Scheme along with any suitable mitigation measures, where appropriate. The Tree Protection Plan presented in Appendix E identifies trees to be removed and how retained trees are to be successfully protected.
- 1.1.3 The Vegetation Removal Plan (Figure 10-15 of 6.3 Environmental Statement [APP-186]) has been updated for Deadline 3 of Examination in response to the findings in this report. This new version is not appended to this report.

1.2 Trees and the Planning Process

- 1.2.1 The National Planning Policy Framework (NPPF)¹ seeks to ensure that new development is sustainable and underlines the importance of Green Infrastructure, of which trees form an integral part. This encompasses a recognition of the importance of trees in relation to the management of air, soil and water quality along with other associated ecosystem services and climate change adaptation. The NPPF also seeks to achieve the protection and enhancement of landscapes and a net gain in biodiversity. Finally it specifically identifies veteran/ancient trees and ancient woodland as a highly valuable and irreplaceable habitat. It states that deterioration or loss of ancient woodland or veteran trees should not be permitted unless there are “*wholly exceptional circumstances*”.
- 1.2.2 The Overarching National Policy Statement for Energy (NPS EN1) (2011) states that:

“Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The IPC [now the Secretary of State] should not grant development consent for any development that would result in its loss or deterioration unless the benefits (including need) of the development, in that location outweigh the loss of the woodland habitat. Aged or ‘veteran’ trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided.

Where such trees would be affected by development proposals the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons why”.

¹ Ministry of Housing, Communities and Local Government. 2012. Policy Paper: National Planning Policy Framework
Application Document Ref: EX/8.13
Planning Inspectorate Scheme Ref: EN010118

- 1.2.3 Local Planning Authorities (LPA) in the UK have a statutory duty to consider both the protection and planting of trees when considering planning and development consent applications. The potential impact of development on all trees (including those not protected by a Tree Preservation Order or other statutory designation) is therefore a material consideration.
- 1.2.4 ‘BS5837:2012 Trees in relation to design demolition and construction – Recommendations (BS5837)’² provides a framework which sets out how trees should be considered in this context and also explicitly applies to development where planning consent is not required.
- 1.2.5 BS5837 recommends that a tree survey is undertaken to identify the quality and benefits of trees and the spatial constraints associated with them. This is then used to produce a Tree Constraints Plan showing the above and below ground constraints associated with trees. This drawing is used to inform the design process and to allow the retention of good quality trees where appropriate.
- 1.2.6 An Arboricultural Impact Assessment is then developed to identify the likely direct and indirect impacts of a scheme, and a Tree Protection Plan is prepared to identify trees to be removed or retained and to illustrate how retained trees are to be protected. An Arboricultural Method Statement is often required as a condition of planning consent or as a Development Consent Order (DCO) requirement to detail how sensitive operations are to be achieved in close proximity to retained trees. These elements are intended to deliver a sustainable and harmonious relationship between trees and new development.

Local Policy Context

- 1.2.7 The Site (referred to as the ‘Order limits’) is located within the operating boundaries of Braintree District Council and Chelmsford City Council, both of which have policies that detail how the planning authorities consider trees in the development process and excerpts from these documents have been included below.
- 1.2.8 The Braintree District Council Local Plan 20333 (adopted July 2022) includes a number of sections relating to trees and new development and excerpts from this document are included below.

Policy LPP 64 - Protected Species, Priority Species and Priority Habitat

- 1.2.9 This states: “Proposals resulting in the loss, deterioration or fragmentation of irreplaceable habitats such as ancient woodland or veteran trees will not normally be acceptable unless the need for, and benefits of the development in that location clearly outweigh the loss.”

Policy LPP 65 - Tree Protection

² BSI. 2012. BS5837:2012 Trees in relation to design demolition and construction – Recommendations (BS5837)

³ Braintree District Council. 2022. Local Plan 2033.

Application Document Ref: EX/8.13

Planning Inspectorate Scheme Ref: EN010118

- 1.2.10 This states: *“The Council will consider the protection of established healthy trees which offer significant amenity value to the locality by:*
- *Assessing the value and contribution made by trees to the Conservation Areas in which they are located when determining S211 notifications for works to trees, including their removal.*
 - *Serving Tree Preservation Orders in response to an objection to such a notification or in other circumstances as detailed below.*
- 1.2.11 *Prominent trees which contribute to the character of the local landscape and are considered to have reasonable life expectancy will be protected by tree preservation orders particularly if they are considered to be under threat from removal.*
- 1.2.12 *Trees which make a significant positive contribution to the character and appearance of their surroundings will be retained unless there is a good arboricultural reason for their removal for example they are considered to be dangerous or in poor condition. Similarly alterations to trees such as pruning or crown lifting should not harm the tree or disfigure it; any tree surgery should be carried out to reflect BS3998:2010 (as superseded).*
- 1.2.13 *When considering the impact of development on good quality trees the Council will expect developers to reflect the best practice guidance set out in BS5837:2012 (as amended). The standard recommends that trees of higher quality are a material consideration in the development process.*
- 1.2.14 *Where trees are to be retained on new development sites there must be a suitable distance provided between the established tree and any new development to allow for its continued wellbeing and ensure it is less vulnerable to pressures from adjacent properties for its removal. Planning conditions will be applied to protect trees during development. New landscape proposals for tree planting on development sites should reflect the recommendations set out in BS5837:2012 (as amended) and BS8545:2014 (as superseded).*
- 1.2.15 *In considering works to trees, new planting and the trees in new development schemes the Council will expect proposals to be in general conformity to and contribute to the aims of Braintree District’s Tree Strategy.”*

Policy LPP 67 - Landscape Character and Features

- 1.2.16 This policy states: *“Proposals for new development should be informed by, and be sympathetic to, the character of the landscape as identified in the District Council's Landscape Character Assessments. Proposals which may impact on the landscape such as settlement edge, countryside or large schemes will be required to include an assessment of their impact on the landscape and should not be detrimental to the distinctive landscape features of the area such as trees, hedges, woodlands, grasslands, ponds and rivers. Development which would not successfully integrate into the local landscape will not be permitted.*

- 1.2.17 *Where development is proposed close to existing features, it should be designed and located to ensure that the condition and future retention/management will not be prejudiced but enhanced where appropriate.*
- 1.2.18 *Additional landscaping including planting of native species of trees, hedgerows and other flora may be required to maintain and enhance these features.”*
- 1.2.19 Braintree District Council also has a Tree Strategy⁴ (adopted March 2016) which reiterates the policies relating to trees included within the Core Strategy and Local Plan Review and includes practical guidance and implications for trees in the development process.
- 1.2.20 The Chelmsford City Council Local Plan⁵ (adopted 27th May 2020) includes a number of policies identifying how the council consider trees in relation to new development. The key policy is Policy DM17 –Trees, Woodland And Landscape Features, which states:

1.3 Protected Trees and Woodland

- 1.3.1 Planning permission will be granted for development proposals that do not result in unacceptable harm to the health of a preserved tree, trees in a Conservation Area or Registered Park and Garden, preserved woodlands or ancient woodlands. Consideration will also be given to the impact of a development on aged or veteran trees found outside ancient woodlands.
- 1.3.2 Development proposals that have the potential to affect preserved trees, trees in a Conservation Area or Registered Park and Garden, preserved woodlands or ancient woodlands must set out measures to secure their protection.
- 1.3.3 In exceptional circumstances there may be overriding public benefits arising from the development that could justify the removal of a preserved tree or trees. In such circumstances, a replacement tree, or trees, shall be provided of a size and type suitable for its location.

1.4 Other Landscape Features

- 1.4.1 Planning permission will be granted for development proposals that do not result in unacceptable harm to natural landscape features that are important to the character and appearance of the area. Harm or loss of these features will not be permitted unless a landscape strategy, which would compensate for the loss or harm, is secured or where there are overriding public benefits arising from the development.

1.5 Methodology

- 1.5.1 Where possible the Scheme has been designed based on a minimum off-set of 15m from tree canopies and 5m from hedgerows to ensure such features are not impacted; these areas were not included in the tree survey. The tree survey has focused on areas where it has not been possible to avoid the aforementioned off-sets from trees and hedges, such as for visibility splays,

⁴ Braintree District Council. 2016. BDC067 Tree Strategy – March 2016

⁵ Chelmsford City Council. 2020. Adopted Local Plan.

Application Document Ref: EX/8.13

Planning Inspectorate Scheme Ref: EN010118

tracks, or cables associated with the Scheme. These areas are illustrated on the Vegetation Removal Plan (Figure 10-15 of 6.3 Environmental Statement [APP-186]), which was submitted as part of the DCO application is replicated within Appendix D; it shows the maximum areas of expected tree and hedge loss.

- 1.5.2 A Tree Constraints Plan showing the position of trees and the spatial constraints associated with them is included as Appendix A of this report, which corresponds with the Tree Survey Schedule presented in Appendix B.
- 1.5.3 A verification survey will be carried out during the detailed design to confirm the conclusions of this Arboricultural Impact Assessment remain valid prior to start of construction and to identify any veteran (or ancient) trees within the Order limits that are outside of the areas shown on the Vegetation Removal Plan (Figure 10-15 of 6.3 Environmental Statement [APP-186]) that need to be protected. No development or works will take place in the Root Protection Area (RPA)/buffer zone (determined as 15x stem diameter or canopy +5m – whichever is greater) should additional veteran trees be identified within the Order limits.
- 1.5.4 Trees T9, T112 and T121 identified on the Tree Constraints Plan in Appendix A and in the Tree Survey Schedule presented in Appendix B have been recorded as veteran and therefore their RPAs on the Tree Constraints Plan have been extended to 15 times their stem diameter (at 1.5m) or an additional 5m beyond the edge of their canopy (whichever is greatest) as per standing advice from the Forestry Commission and Natural England (2022)⁶.
- 1.5.5 In addition, all recorded Ancient Woodlands within or adjacent to the Order limits have been given a 20m buffer zone where possible. Where this has not been feasible to retain in the design phase it has been reduced to a minimum 15m buffer zone which accords with best practice guidance set out in standing advice from Natural England and the Forestry Commission (2022). For these reduced buffer zone areas an assessment has been undertaken to determine if any individual trees are present that could have RPAs that extend beyond the 15m buffer zone.
- 1.5.6 The tree survey has been based on Ordnance Survey Base Mapping and trees have been plotted indicatively with reference to GPS positions, site features and publicly available aerial photography. As such all positions are indicative and the relative distances of features must be measured out in the Order limits.
- 1.5.7 The survey was otherwise conducted in accordance with the requirements of BS5837:2012 Trees in relation to design, demolition and construction – Recommendations (BS5837).
- 1.5.8 The fieldwork was undertaken on 18th and 19th May 2022, 15th June 2022, and 7th September 2022, during which dimensional data and observational

⁶ Natural England and Forestry Commission. 2022. Guidance: Ancient woodland, ancient trees and veteran trees: advice for making planning decisions
Application Document Ref: EX/8.13
Planning Inspectorate Scheme Ref: EN010118

information were collected. A diameter tape measure was used to measure stem diameters where feasible.

- 1.5.9 The fieldwork informing this report has comprised a preliminary, non-intrusive, visual survey undertaken from ground level with the specific intention of evaluating the quality and benefits of trees in the Order limits.
- 1.5.10 Where further inspection is deemed appropriate to ascertain the condition of a particular tree or other arboreal features, this has been identified within the preliminary management recommendations. Average dimensions or dimensional ranges have occasionally been used, where appropriate, to best describe features.
- 1.5.11 The tree categorisation process recommended by BS5837:2012 is summarised in the table below and corresponds with the tree canopy outline shown on the Tree Constraints Plan included as Appendix A and the information in the Tree Survey Schedule included as Appendix B.

Table 1: BS5837:2012 Tree Categorisation process

Category	Definition
A	High quality, minimum of 40+ years remaining contribution
B	Moderate quality, minimum of 20+ years remaining contribution
C	Low quality, minimum of 10+ years remaining contribution
U	Unsuitable for retention, <10 years remaining contribution
1	Arboricultural value
2	Landscape value
3	Conservation or cultural value

2. General Arboricultural Principles

2.1 General Principles

- 2.1.1 Trees are dynamic living organisms which provide essential benefits to society and the wider environment. Any Scheme with the potential to impact on trees must take into consideration the value of trees in the Order limits, the impact of any proposed activity along with any potential future conflicts in the Order limits. Suitable measures to safeguard retained trees or mitigate the loss of trees (to be removed) need to be fully considered.
- 2.1.2 Tree branches and roots frequently grow across site boundaries and off site trees can pose a significant constraint, and need to be carefully considered when assessing the developable space within a site.

2.2 Below ground constraints

- 2.2.1 Below ground tree roots and the soil environment in which they grow need to be protected if the tree is to be retained. Trees grow in association with fungi and other soil organisms which are of key importance to tree health. Roots are essential for anchorage, the uptake of water and nutrients, and the storage of energy (carbohydrates) for the future growth and function of the tree.
- 2.2.2 Roots can be damaged by physical severance or wounding (e.g. following excavation of the soil) which can lead to the development of decay and a decline in vitality and/or instability. Raising the soil level can bury tree roots at a depth where suitable conditions for growth are less available. Toxic materials discharged into the soil (such as cement based aggregates, fuel and chemicals) can lead to root death and dysfunction. Soils can be compacted to levels inhospitable to tree growth with even a single pass of machinery, regular pedestrian traffic or the storage of plant and materials. Relieving compaction can be problematic and may require costly remedial works. Changes in drainage/water levels can also have significant long term impacts for tree health.
- 2.2.3 The effects of these incursions may take many years to manifest, with a resulting decline in amenity value and potentially the death or failure of the tree. It should be noted that older trees are particularly sensitive to damage and changes in conditions.
- 2.2.4 The Root Protection Area (RPA) is a notional area considered to be the minimum zone that must be protected to avoid any adverse impacts on retained trees. This area is deemed to be particularly important for tree stability, growth, function and health. However, roots may extend far greater distances, with the distribution of the root system relating directly to the availability of suitable conditions for growth (namely oxygen, water and nutrients). It is generally accepted that tree roots are predominantly located in the upper 1000mm of soil; however, roots may develop at deeper levels where conditions allow.

- 2.2.5 RPAs are calculated as per BS5837: 2012 Annexe C, D and Section 4.6 in the BS 5837 2012 Document. Veteran trees have a larger RPA in accordance with standing advice from Natural England and the Forestry Commission (2022).
- 2.2.6 The RPA of the existing tree stock is an important material consideration when considering site constraints and planning development activities. The RPAs of significant trees in the Order limits are shown on the Tree Constraints Plans included in Appendix A.
- 2.2.7 The default position must be that all development, including any associated services will occur outside the RPAs of retained trees. Where this is unavoidable, it may be appropriate to use special measures to install structures, services or surfacing within RPAs which allow the protection of roots and soil structure which are essential for tree growth and keep any incursion to a minimum.
- 2.2.8 Further steps to improve or increase the useable rooting area available to the tree may also be required.

2.3 Soils

- 2.3.1 On shrinkable clay soil, tree growth can lead to the differential movement of structures as moisture is removed from the soil during the growing season. Soils must be carefully assessed, and any foundations must be installed following the recommendations of National House Building Council (NHBC) Standards Chapter 4.2: Building Near Trees (2021) to avoid potential future damage. Where trees which predate existing structures are to be removed, this can result in heave as the soils are re-wet.
- 2.3.2 The advice of a suitably qualified engineer must be obtained to inform any potential issue of heave. Specific advice in relation to this issue is beyond the scope of this report.

2.4 Above ground constraints

- 2.4.1 Tree stems and branches can restrict available space on a site. Damage or wounding (including excessive pruning) can significantly reduce the amenity contribution of the tree and may lead to the development of dysfunction and decay, with significant long term implications for tree health. The future impact of existing trees should be carefully considered, including individual species characteristics (such as potential future size, fruit fall, shade etc.) and how the tree will interact with any proposed development and future land use. Annual tree growth can lead to direct damage if stems/branches (or roots) come into physical contact with structures and this must also be taken into consideration.

2.5 Trees and Risk in the Context of Development

- 2.5.1 Tree owners/managers have a legal duty to prevent foreseeable harm. It is generally accepted that this duty can be fulfilled by undertaking proactive inspections of significant trees to identify obvious defects and by taking appropriate remedial action or gaining further advice as appropriate.

- 2.5.2 AECOM can provide surveys and advice in relation to tree risk management where required. Further guidance is available from the National Tree Safety Group⁷.
- 2.5.3 The tree survey carried out as the basis of this report is primarily for planning purposes, focusing on the quality and benefits of the trees and is not specifically designed to assess the safety of trees on site. However, when obvious issues have been identified recommendations have been included in the Tree Survey Schedule (Appendix B).
- 2.5.4 The Construction (Design and Management) Regulations (2015)⁸ states that developers and contractors have responsibilities for health and safety as a result of their actions. Should trees be left in an unstable or hazardous condition the Health and Safety Executive (HSE) could seek to prosecute those responsible along with the potential for further Civil claims for damages.

2.6 Trees and Wildlife

- 2.6.1 Full consideration must be given to the presence of species protected under the Wildlife and Countryside Act (1981 - as amended), the Countryside Rights of Way Act (2000) and the Conservation of Habitats and Species Regulations (2017). In particular the presence of bats and nesting birds. It is recommended that wherever possible, significant tree/hedge works take place outside of the typical bird nesting season of March to September.

2.7 Tree Works

- 2.7.1 Any tree surgery recommendations contained within this report are to be undertaken in accordance with BS3998: 2010 Tree work – Recommendations (BS3998)⁹ by suitably qualified and insured contractors. Significant pruning works are best undertaken when trees are dormant or outside periods of high functional activity to reduce the overall impact on energy available to the tree for growth and processes. In general the optimum period for works is between November to February and July to August (subject to the presence of protected species) when the tree is less active and better placed to respond to wounding and a reduction in leaf area.

⁷ National Tree Safety Group (NTSG),2011. Common sense risk management of trees. Forestry Commission.

⁸ Legislation.gov.uk. The Construction (Design and Management) Regulations 2015. UK Statutory Instruments 2015 No. 51.

⁹ BSI. 2010. BS3998: 2010 Tree work – Recommendations (BS3998)

Application Document Ref: EX/8.13

Planning Inspectorate Scheme Ref: EN010118

3. Field Work Observations

3.1 The Order limits

- 3.1.1 The Order limits is shown on the Tree Constraints Plan included within Appendix A of this report and the areas of focus for the survey are shown on the Vegetation Removal Plan (ref: EN0110118 – Figure 10-15 by AECOM), which was submitted as part of the DCO application and is replicated within Appendix D of this report.
- 3.1.2 The Order limits is located to the north east of Chelmsford and to the north of Boreham Village and includes land to the south west and north east of Waltham Road and to the east of Boreham Road. It is predominantly bordered by farm houses or further arable fields and is also bordered by Boreham Village to the south, Hatfield Perevel Village to the south east and Terling Village to the north east.
- 3.1.3 The survey area is comprised of 25 parcels of land within the Order limits that are identified on the Vegetation Removal Plan and each is generally associated with the boundary of an arable field that consists of hedgerows, individual trees, tree groups or woodlands.

3.2 The Trees

- 3.2.1 There were 126 tree features recorded in the survey which focused on predetermined areas of the Order limits where potential arboricultural impacts were identified.
- 3.2.2 These trees range from young to mature and are predominately in fair to good condition. Species present include ash (*Fraxinus excelsior*), common oak (*Quercus robur*), rowan (*Sorbus aucuparia*), sycamore (*Acer pseudoplatanus*), field maple (*Acer campestre*), blackthorn (*Prunus spinosa*), hawthorn (*Crataegus monogyna*), common lime (*Tilia x europaea*), elm sp. (*Ulmus sp.*), elder (*Sambucus nigra*), goat willow (*Salix caprea*), white willow (*Salix alba*), silver birch (*Betula pendula*) and white poplar (*Populus alba*).
- 3.2.3 The most significant trees included within the survey are T9, T112 and T121, which are three high quality (Category A) veteran trees. T9 and T121 are two large oak trees that have numerous veteran features including: large dead wood, numerous animal holes in the stem and crown, lower crown formation (retrenchment), fungal fruiting bodies (likely *Ganoderma sp.*) and extensive stem decay. T112 is a large lime tree that has previously failed at the base which has resulted in the death of the western stems, however, the eastern stem (still partially propped) is still functional. In addition there are numerous habitat features and extensive basal decay.
- 3.2.4 In addition, two recorded Ancient Semi Natural Woodlands (ASNW) were surveyed and these relate to Ringers Wood (W67) and part of Lost Wood (W79). Both of these features are classed as high quality (Category A) and are considered to provide significant and irreplaceable landscape and habitat value.

- 3.2.5 Ancient Woodland and veteran trees are considered to be an irreplaceable habitat which is afforded a high priority in the planning process.
- 3.2.6 The survey also included three additional high quality (Category A) trees; T29, T113 and T114 that are mature oak which are prominent in the landscape and considered to provide significant landscape and amenity value.
- 3.2.7 Sixty-eight tree features were recorded as moderate quality (Category B) and are considered to provide good landscape and amenity value and 45 tree features were classified as low quality (Category C) due to their age, size, condition and replaceability.
- 3.2.8 The remaining five tree features were classed as very low quality (Category U) due to either being dead or in poor condition.
- 3.2.9 Preliminary management recommendations are included within the Tree Survey Schedule in Appendix B of this report and these should be actioned in the recommended timescales.

3.3 Statutory and Non-Statutory Designations

Statutory Designations

- 3.3.1 The Braintree District Council Tree Preservation Order (TPO) Register¹⁰ was checked along with the online mapping¹¹ on 21st June 2022 for the presence any TPO's or Conservation Area (CA) designation within or immediately adjacent to the Order limits and none were identified.
- 3.3.2 AECOM also checked the Chelmsford City Council TPO Register and the online mapping¹² for the presence of any TPO's or CA designations within or immediately adjacent to the Order limits. No CA designations were identified. However, two TPO's were identified within or adjacent to the Order limits. This includes two individual trees subject to TPO (TPO/2008/058) located at Belvedere, Waltham Road, Boreham, Chelmsford Essex CM3 3AX. These trees are located outside of the Order limits and do not correspond with any trees included within the tree survey. In addition, a woodland TPO (TPO No. 1998/19) is present to the west of Boreham Industrial Estate, Boreham, which is immediately adjacent to the Order limits and is likely to correspond with the surveyed tree feature G106.
- 3.3.3 A TPO notification letter was received on 20th September 2022 from Chelmsford City Council identifying a provisional TPO (TPO/2022/014) of a veteran lime tree located to the west of Waltham Road which correlates with T112.
- 3.3.4 Defra's Magic Map¹³ was checked on 21st June 2022 for the presence of any other statutory designations relating to trees such as Sites of Special Scientific

¹⁰ Braintree District Council. 2022. Tree preservation orders (TPO). Online archive

¹¹ Braintree District Council. 2022. Listed Buildings, Conservation Areas and Article 4 Directions. Online archive

¹² Chelmsford City Council. 2022. ArcGis. Online archive

¹³ Defra. 2022. MAGIC Map. Online archive

Interest (SSSI) and none were identified within or immediately adjacent to the Order limits.

- 3.3.5 The Hedgerow Regulations (1997)¹⁴ protect agricultural or countryside hedgerows which meet the requirements of an 'important hedgerow'. These include a minimum length of 20m (or meets another hedge at each end) and a minimum age of at least 30 years. A wide range of other ecological and archaeological/heritage features can constitute an important hedgerow and further advice from a qualified ecologist will be sought in advance of any planned works which could impact established hedgerows on or bordering agricultural or countryside land.
- 3.3.6 The Heritage Desk Based Assessment [APP-057] identifies a number of general areas where hedgerows may be ancient or otherwise important (based on Archaeological criteria), and eleven tree hedge features considered to be of Archaeological importance have been identified within the arboricultural study areas (these are: T26, T30, T31, T32, T33, H61, H62, G69, G70, G76 and G77).
- 3.3.7 Full planning or a DCO is an exemption from the need to apply for consent for works to trees protected by the Hedgerow Regulations, a Tree Preservation Order, the need to give notice of the intention to undertake works within a Conservation Area and the need to apply for a Felling Licence with the Forestry Commission (to fell more than 5m³ per calendar quarter).
- 3.3.8 Prior to any tree works the status of trees to be removed or pruned must be verified with the LPA and the Forestry Commission as appropriate.

Non-Statutory Designations

- 3.3.9 Magic Map was checked on 21st June 2022 for the presence of any non-statutory designations relating to trees and one traditional orchard and a number of deciduous woodlands which are included within the Priority Habitat Inventory (England) were identified throughout the Order limits. These are non-statutory designations which have the potential to be a material consideration in the planning process.
- 3.3.10 In addition, a number of Ancient Replanted Woodlands (PAWS) and Ancient and Semi-Natural Woodlands (ASNW) are present on or adjacent to the Order limits. This non-statutory designation is considered to be an irreplaceable habitat which is afforded a high priority in the planning process. A minimum 15m buffer has been applied to all PAWS and ASNW where no works or impacts are to take place in accordance with standing advice from Natural England and Forestry Commission (2022).
- 3.3.11 Only two Ancient Semi Natural Woodlands were recorded within the arboricultural study areas as part of the tree survey which includes Ringers Wood (W67) and part of Lost Wood (W79). However, a number of other Ancient Woodland designations are present on site and the minimum buffer (or greater) has been applied in all cases.

¹⁴ Legislation.gov.uk. The Hedgerows Regulations 1997. UK Statutory Instruments 1997 No. 1160.
Application Document Ref: EX/8.13
Planning Inspectorate Scheme Ref: EN010118

3.3.12 Figures 1, 2, 3 and 4 illustrate the Priority Habitat Inventory (England) designations and Ancient Woodland designations across the Scheme.

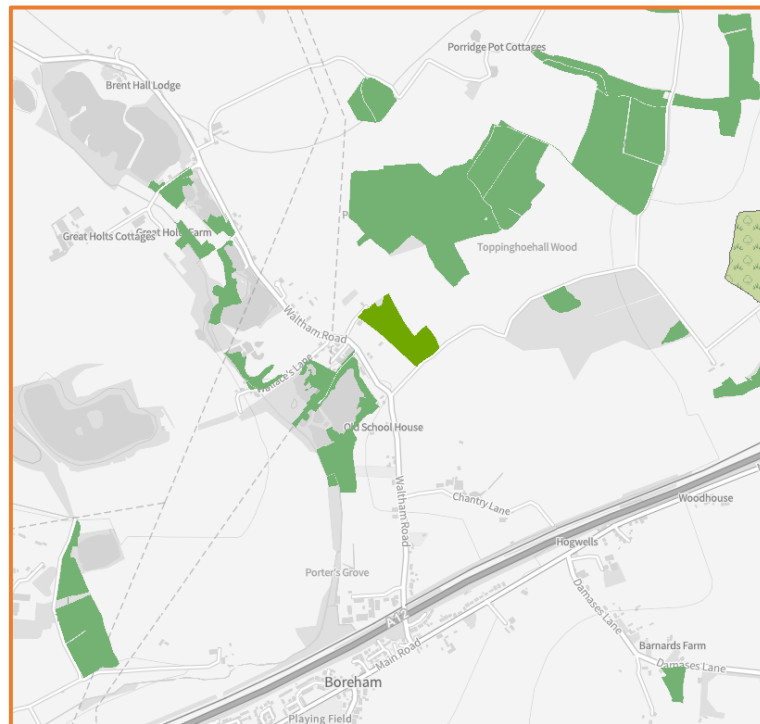


Figure 1 – Showing the Priority Habitat Inventory (England) designations in the Order limits (1 of 2).

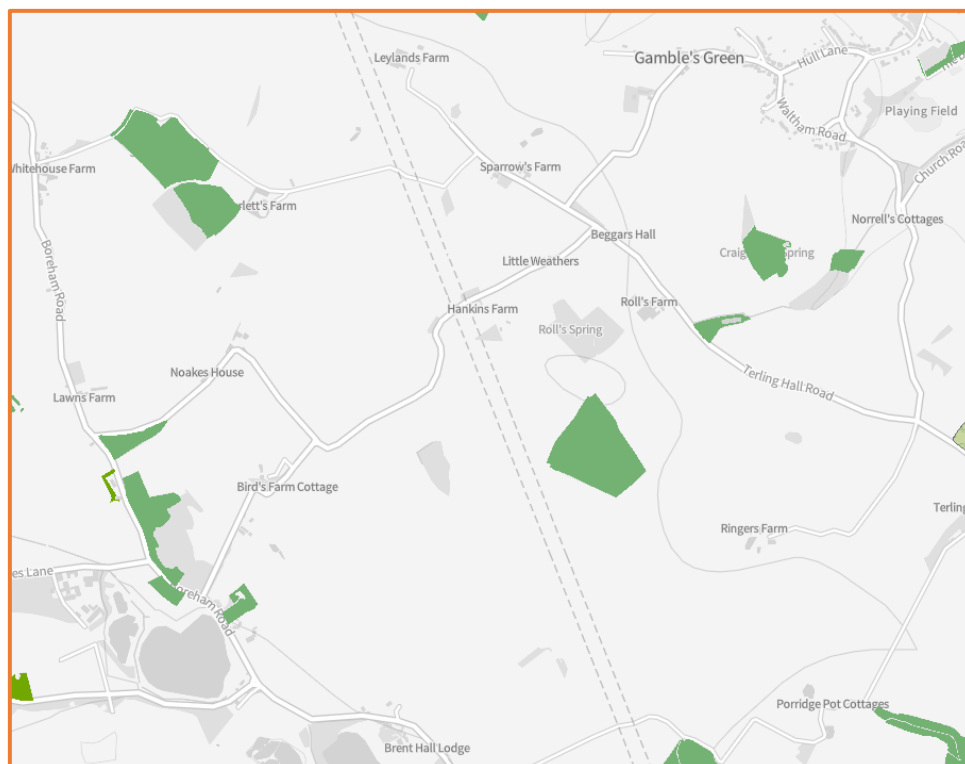


Figure 2 – Showing the Priority Habitat Inventory (England) designations in the Order limits (2 of 2).

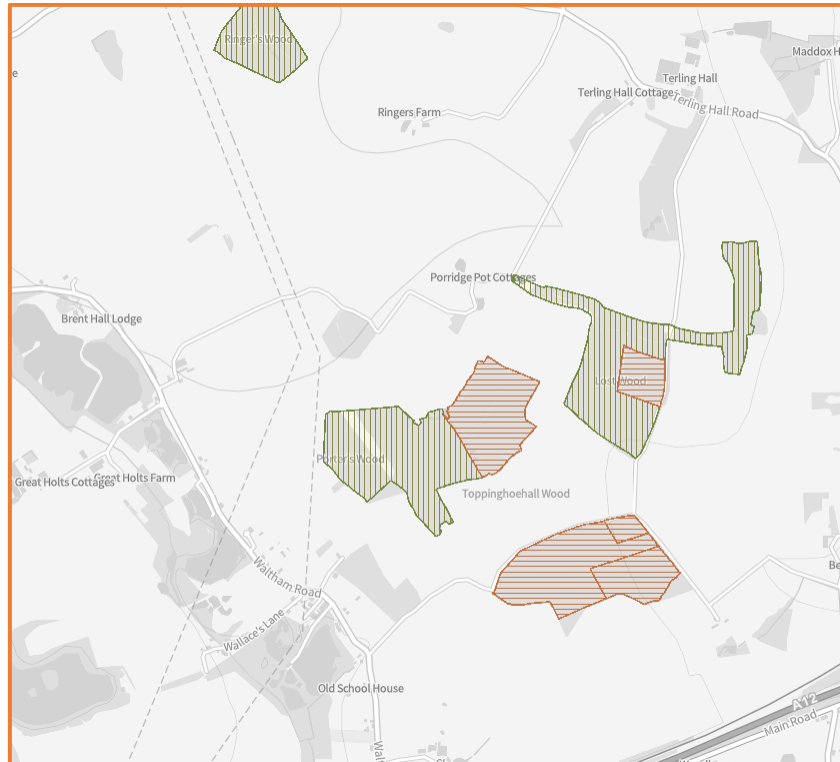


Figure 3 – Showing the Ancient Woodland designations in the Order limits (1 of 2).

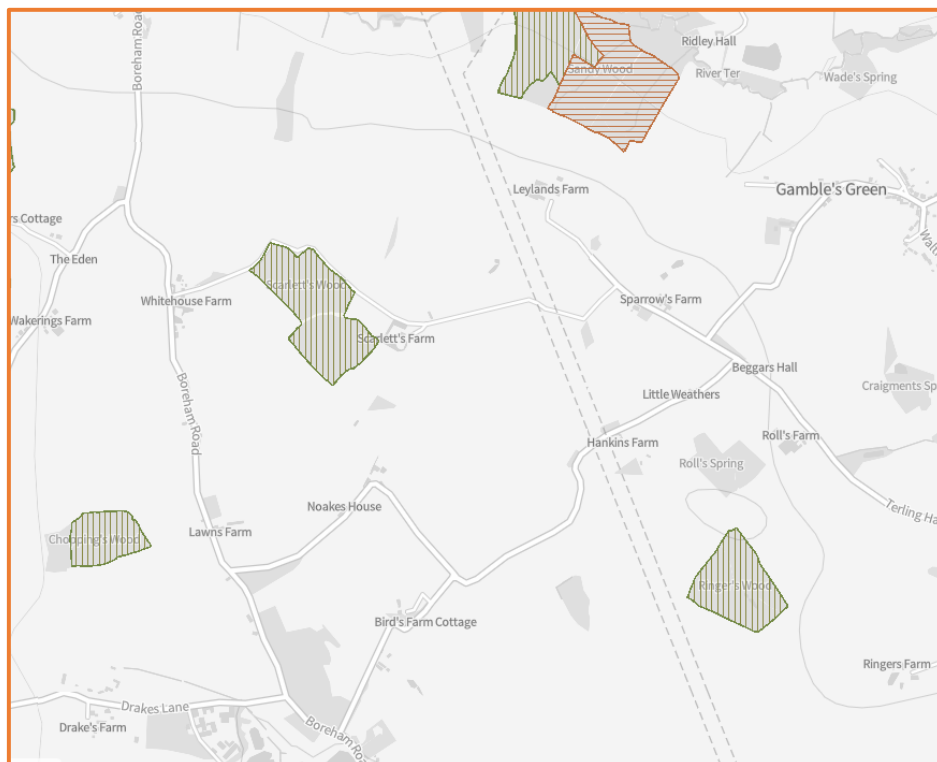


Figure 4 – Showing the Ancient Woodland designations in the Order limits (2 of 2).

3.3.13 AECOM checked the Woodland Trust Ancient Tree Inventory¹⁵ (ATI) and one small leaved lime (T112), to the north of the Boreham Industrial Estate, is recorded as a veteran (as shown on Figure 5). In addition two large oak trees

¹⁵ Woodland Trust. Ancient Tree Inventory. Online archive
Application Document Ref: EX/8.13
Planning Inspectorate Scheme Ref: EN010118

(T112 and T121) have also been identified as veteran that are not recorded within the ATI. Veteran trees are considered irreplaceable habitat which is afforded a high priority in the planning process.

- 3.3.14 The RPAs of these trees on the TCP have been extended to 15 times their stem diameter (at 1.5m) or 5m from the edge of their canopy (whatever is greatest) as per standing advice from the Forestry Commission and Natural England (2022).
- 3.3.15 No other notable, veteran or ancient trees were identified within or immediately adjacent to the Order limits.

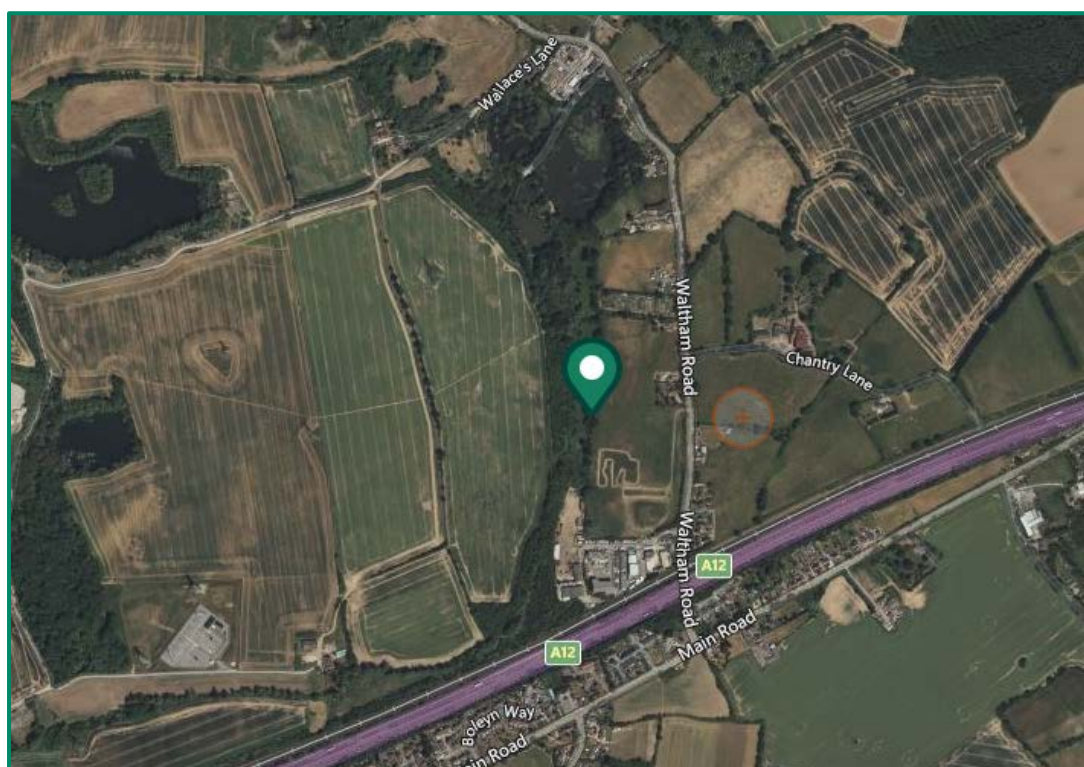


Figure 5 – Showing the small leaved lime tree, to the north of Boreham Industrial Estate, recorded as a veteran tree within the ATI.

4. The Scheme

- 4.1.1 The Illustrative Concept Design [APP-110] for the Scheme is overlaid on the Tree Protection Plan included within Appendix E and includes the installation of solar panels across a number of arable fields, with associated access routes, fencing and utilities including a cable route across the Order limits.
- 4.1.2 The Illustrative Concept Design shows a likely design. The DCO allows for some flexibility for micro-siting (minor movement within defined parameters) some features such as access tracks and cables to avoid local features or constraints that might be identified during detailed design.

5. Arboricultural Impact Assessment

5.1 Purpose

- 5.1.1 This impact assessment sets out the likely principal direct and indirect impacts of the Scheme on the trees on or immediately adjacent to the Order limits and suitable mitigation measures to allow for the successful retention of significant trees or to compensate for trees to be removed, where appropriate.
- 5.1.2 A brief summary of the maximum extent of trees to be removed, tree works and incursions related to the Scheme are detailed within Table 2 below.

Table 2: Summary of Removals, Incursions and Pruning to Facilitate the Scheme

Impact	Category A	Category B	Category C	Category U
Trees to be removed to facilitate the Scheme	0	T1, T2, T4, T11, T26, T30, T31, T32, T36, T37, G50 (part), G64, G76, G80, T84, T85, T86, T88, T89, T92, G101 (part), G103 (part), and G111	T18, T33, H38 (part), H39 (part), H40 (part), H41 (part), G42 (part), H44 (part), H46 (part), H51 (part), H52 (part), H53, H61 (part), H62 (part), H65 (part), H66 (part), G69 (part), G70 (part), G71 (part), G72 (part), G77, H78 (part), G81, G82, T91, G97 (part), G98 (part), G100 (part), G104 (part), G105 (part) and G107 (part)	T90 and T95
Total	0	16 Individual trees, 4 tree groups and 3 part tree groups	3 Individual trees, 3 tree groups, 11 part tree groups, 13 part hedgerows and 1 hedgerow	2 Individual trees
Trees which may require some incursion into their construction exclusion zone to allow the Scheme	0	T25, T28, T34, T87, T96 and T115	T83	0
Total	0	6 Individual trees	1 Individual tree	0

Impact	Category A	Category B	Category C	Category U
Trees to be pruned to facilitate the Scheme	0	T6, T15, T16, T25, T27, T28, T34, G54, G59, T87 and T96	0	0
Total	0	9 Individual trees and 2 tree groups	0	0

5.2 Impacts to Important or Protected Tree Features

Veteran Trees

- 5.2.1 Trees T9, T112 and T121 have been recorded as veteran due to their maturity and the extent of habitat features present (such as extensive decay, crown retrenchment and deadwood), therefore their RPAs on the Tree Protection Plan have been extended to 15 times their stem diameter (at 1.5m) or 5m from the edge of their canopy (whichever is greatest) as per standing advice from the Forestry Commission and Natural England (2022)¹⁶.
- 5.2.2 T9 has the potential to be impacted by a proposed access route and fencing, however, the track will be micro-sited to the south to avoid the amended RPA of this tree which will not be impacted. This will be illustrated on a revised version of the Illustrative Concept Design and Vegetation Removal Plan, which will be submitted during Examination.
- 5.2.3 T112 is within the proposed cable corridor, however the cable will be micro-sited to avoid the RPA of this tree or if the RPA cannot be avoided then Horizontal Direction Drilling (HDD) will be utilised, with access and retrieval pits located outside of RPAs and the run being at least 2m below ground level. Therefore, this tree will not be impacted.
- 5.2.4 T121 is set back from any development proposals and this tree will therefore not be impacted.

Important Hedgerows:

- 5.2.5 The Heritage Desk Based Assessment [APP-057] identifies a number of general areas where hedgerows may be ancient or otherwise important (based on Archaeological criteria). These areas are likely to include trees; T26, T30, T31, T32, T33, H61, H62, G69, G70, G76 and G77 which will all be impacted. The estimated extents of the removals for important hedgerows are quantified in linear metres in the Tree Survey Schedule (Appendix B) and equates to a total of 260.1 linear metres. This figure relates only to the loss of important hedgerows and the total extent of all hedgerows to be removed is not quantified in this report.

¹⁶ Natural England and Forestry Commission. 2022. Guidance: Ancient woodland, ancient trees and veteran trees: advice for making planning decisions
Application Document Ref: EX/8.13
Planning Inspectorate Scheme Ref: EN010118

5.2.6 Where feasible (such as in areas where removal is required for temporary visibility splays such as for important hedgerow H61) hedgerows to be removed will be reduced in height or coppiced rather than removed and will be allowed to regenerate. In such cases any loss or reduction of amenity and other benefits are likely to be temporary,

Tree Preservation Orders:

5.2.7 Two confirmed TPO's and one provisional TPO have been identified within or close to the arboricultural study areas.

5.2.8 The first TPO relates to tree group G106 to the west of Boreham Industrial Estate (TPO Ref 1998/19 W1 – Woodland of mixed broadleaf species).

5.2.9 A second area of trees protected by TPO is outside of the arboricultural study area and the Order limits. This relates to TPO reference 2008/58 which includes T1 (ash), T2 (oak) and G1 (2 ash, 1 Laburnum) which are located within the rear garden of 'Belvedere' a residential property to the west of Waltham Road. G1 (2 ash, 1 Laburnum) is recorded on land to the north of the property but these trees are understood to no longer be present on site.

5.2.10 The provisional TPO (TPO/2022/014) correlates with T112 a veteran lime located to the west of Waltham Road.

5.2.11 No trees protected by TPO will be removed or impacted by the Scheme.

Ancient Woodland

5.2.12 Two recorded ASNW are included in the arboricultural study area, which includes W67 (Ringers Wood) to the northeast of the Scheme and W79 (Lost Wood) to the east. Multiple other ASNW and PAWs are located within or just outside the Order limits but have not been subject to a tree survey and are not directly affected by the Scheme.

5.2.13 A minimum 15m buffer zone has been applied to the ancient woodland boundaries in accordance with standing advice from Natural England and the Forestry Commission (2022).

5.2.14 Both surveyed woodlands will not be impacted and all infrastructure shown on the TPP, such as new access tracks, will be micro-sited to avoid the 15m minimum buffer zone.

5.2.15 All of the remaining ASNW or PAWs within the Order limits will have a minimum buffer zone applied where no works or access will be permitted and these features will therefore not be impacted by the Scheme.

5.3 Trees to be Removed

5.3.1 Twenty one Individual trees, seven tree groups, 14 part tree groups, 13 part hedgerows and one hedgerow are to be removed to facilitate the Scheme; this includes 16 individual trees, three part tree groups and four tree groups classed as moderate quality (Category B), three individual trees, eleven part tree groups, three tree groups, 13 part hedgerows and one hedgerow

classified as low quality (Category C) and the remaining two individual trees classified as very low quality (Category U).

- 5.3.2 All trees identified to be removed to facilitate the Scheme are within the Order limits.
- 5.3.3 The loss of these trees represents a reasonable worst case assessment which will be improved upon where feasible as part of the detailed design process and is considered to be necessary due to direct conflicts with proposed access roads, fencing and a cable route.
- 5.3.4 In addition, T10, T35 and G45 of very low quality (Category U) are also recommended for removal. These trees are arguably not suitable for long term retention and their removal is justified regardless of the Scheme and is not necessary to facilitate it.
- 5.3.5 Where hedgerows require removal for visibility splays to facilitate temporary access routes these will be coppiced to just above ground level or will be pruned or laid to a greater height allowing for the necessary visibility splay. The trees can then be allowed to regenerate to current dimensions following completion of site works and the removal of temporary access routes. This is likely to be applicable for H53, H61 and H65 and in such cases the loss or reduction of benefits such as amenity will be temporary. In addition where possible individual trees within visibility splays will be retained where any obstruction to visibility is within acceptable limits.
- 5.3.6 The final extent of tree removals will be determined on site following the setting out of the Scheme and a walkover review by an Arboriculturist.
- 5.3.7 Tree removals will be mitigated with a high quality scheme of new tree planting and associated landscaping works as detailed in the Outline Landscape and Ecology Management Plan [EN010118/APP/7.13] which will represent an opportunity to enhance the quality, benefits and resilience of trees on site.
- 5.3.8 All of the remaining recorded trees can be retained and protected.

5.4 Tree Works

- 5.4.1 Tree removals and tree pruning to facilitate the Scheme are detailed in the Tree Survey Schedule included in Appendix B.
- 5.4.2 Trees T6, T15, T16, T25, T27, T28, T34, G54, G59, T87 and T96 are likely to require crown lifting to 5m to provide reasonable clearance for access roads and visibility splays. This level of pruning will not negatively impact the physiological or structural condition of the trees.
- 5.4.3 Where significant tree removal is to take place in proximity to trees to be retained there is some potential for additional tree removals or other remedial works (such as pruning or pollarding) to be required to address any loss of companion shelter (shelter and protection created by the presence of trees, particularly those to the edge of a group, to those beyond). It is not feasible to reliably determine this at this stage and an on-site assessment of retained trees is required by an Arboriculturist following site clearance works to

determine the extent of any additional works required. This may also require additional landowner and/or planning authority consent.

- 5.4.4 No additional works to retained trees are likely to be required. All tree work will follow the principles of BS3998: 2010 Treework – Recommendations and must be carried out by suitably qualified and insured contractors. The Arboricultural Association provides a list of contractors who meet these requirements.
- 5.4.5 Should the requirement for additional tree works be identified, this will be discussed with an arboriculturist and no works will be undertaken without the consent of the LPA.

5.5 Incursions within the RPA or Canopy Spread

- 5.5.1 The Scheme will require incursions within the RPA or Construction Exclusion Zones (CEZ) of 6 individual trees. These incursions are required for the construction of new access roads and to provide working space for the construction of the new underground cable.

Proposed Access Roads

- 5.5.2 The Scheme will require incursions into the CEZ's of trees T28, T34, T96 and T115 to facilitate the construction of new hard surfaced roads. All incursions are below 21% of the RPA which is one percent above the recommended within BS5837:2012, however areas of incursion above 20% are generally acceptable when using specialist methodologies. If the detailed design cannot avoid these RPAs, specialist construction methodologies will be utilised to avoid *negative impacts to the physiological or structural condition of the trees*.
- 5.5.3 'No dig' principles can be achieved with the use of a three dimensional load bearing surface (such as Cellweb, ArborRaft or equivalent) that is designed to meet the highest expected loads and is positioned on top of the existing ground level.
- 5.5.4 Edging is often not required to stabilise the load bearing surface and the edge of the surface. If edging is required this must be installed without excavation. Methods of edging for different circumstances would include the use of treated wooden peg and boards or railway sleepers pinned in position. Concrete kerb edging can typically be set directly into the cellular confinement system if required.
- 5.5.5 These works must be supervised by an Arboriculturist.

Cable route

- 5.5.6 The Scheme will require CEZ incursions for trees T25, T83 and T87 to provide working space to facilitate the installation of the new underground cable. Following crown lifting works these trees will require RPA incursions of up to 3% for T25, 8% for T83 and 24.5% for T87. To protect the structure of the soil and prevent any negative impacts to the physiological condition of the trees these incursions will be managed with fit for purpose ground protection specified to the highest expected load (as detailed in Appendix F.2).

- 5.5.7 The cable route will be positioned as far from the stem of retained trees as possible and all trenching will be outside of the RPA of retained trees. Any spoil or arisings will be stored outside of the RPA or on ground protection boards to protect soil structure below.
- 5.5.8 Where plant or machinery is required to operate within 5m of a retained tree canopy a bankman must be present to avoid physical damage to trees.

5.6 The Future Impact of Retained Trees

- 5.6.1 The future impact of retained trees in conjunction with the Scheme and future use of the Order limits has been considered.
- 5.6.2 Retained trees will require periodic inspection to assess their structural condition and safety. Occasional removal of dead wood or other remedial works to address significant defects may be required in areas of frequent access. This is unlikely to be overly onerous and will be the responsibility of the tree owner. This will not represent a significant change from the current situation on site.
- 5.6.3 The Order limits contains a significant population of large trees in varying condition. Trees within the Order limits will require ongoing maintenance and assessment by a competent person to ensure that any risks from tree failure are managed in accordance with best practice.
- 5.6.4 All tree works recommended as a result of the preliminary tree survey of the survey areas within the Order limits which considered trees in the context of the current use of the Order limits (these works are included as preliminary management recommendations in the Tree Schedule in Appendix B of this report) should be actioned within the recommended timescales.

5.7 Tree Protection

- 5.7.1 Retained trees are vulnerable to damage from construction activities which can include physical damage to stems and branches following impacts with plant. Root severance following trenching, root death or dysfunction following damage to soil structure (caused by the movement of people or machinery on unsurfaced ground) or via the spillage of materials toxic to tree health. The default position is that the RPA and Canopy spread of trees to be retained will form an effective Construction Exclusion Zone, secured with robust fencing where no access will be permitted. Where access is necessary within this area special measures such as the use of ground protection and arboricultural supervision are generally required.
- 5.7.2 Outline tree protection measures are considered in Appendix F of this report. An Arboricultural Method Statement will be prepared as part of the Construction Environmental Management Plan to set out the phasing of site operations, the finalised tree protection measures for the Order limits and to provide detail on how sensitive elements of work are to be achieved in proximity to retained trees. Issues to be addressed by the Method Statement are listed in the Conclusion of this report.

5.8 Site Organisation, Storage and Use of Materials, Plant and Machinery

- 5.8.1 All construction site facilities including site huts, staff and contractor parking and areas for storage will be located outside of the RPA or crown spread of retained trees, including those not specifically covered in this report. Space is likely to be constrained on site and will need to be carefully considered. The Construction Exclusion Zones identified on the Tree Protection Plan must be fully respected and their location and significance is to be highlighted to all site staff and contractors during the formal site briefing.
- 5.8.2 The use, mixing and washing of materials can lead to run off or inadvertent spillage into tree root zones. Many substances often used on construction sites can be toxic to tree roots (such as concrete, fuels, salts, builders sand and herbicides) and can result in the death of tree roots and beneficial soil organisms and can have a significant impact on the future health and appearance of the tree.
- 5.8.3 The storage of materials and arising's can result in an effective raised soil level. This buries tree roots at depths where air and water are less available and can lead to the decline or death of the tree.
- 5.8.4 For these reasons the storage of materials and any washing, mixing or refuelling will take place in agreed allocated areas at least 5m from the edge of the RPA of retained trees.
- 5.8.5 Any slope effect must be taken into account and where there is a potential for run off, heavy duty polythene sheeting and sandbags must be in place as bunding to prevent toxic materials reaching RPAs.
- 5.8.6 Particular care is required where high sided vehicles, long reach machinery and plant with jibs, booms and counterweights are to operate with in proximity to retained trees. A banksman will be used where the movement of plant or long reach machinery occurs within 5m of any part of a retained tree to ensure no damage is sustained.

5.9 Tree Planting

- 5.9.1 Existing areas of unsurfaced ground must be protected during the construction phases if they are to be re-used for new plantings. Protection can be achieved using fit for purpose ground protection measures as set out in BS5837:2012 Section 6.2.3 or by creating a fenced exclusion zone. Where protection is not feasible, soil amelioration or replacement works will be required to ensure suitable growing conditions for new trees to fully establish.
- 5.9.2 Where new trees are to be planted, the minimum planting distances detailed in Annexe A, Table A.1 of BS5837:2012 will be adhered to, to prevent direct damage to services and structures from future tree growth.
- 5.9.3 New tree planting will be implemented in accordance with the guidance set out in BS8545: 2014 Trees: from nursery to establishment in the landscape – Recommendations.

5.10 Services

- 5.10.1 Other than the proposed cable route no other information in relation to services is available at this stage.
- 5.10.2 Where existing services become redundant within the RPA of a retained tree, the default position must be that they be decommissioned and left in situ. Where this is not feasible the following principles are to be observed.
- 5.10.3 Existing services are to be removed by winching out from an access/inspection chamber located outside of an RPA. It may be acceptable to fill redundant pipe work with an inert material or undertake pipe bursting where necessary within the RPA of retained trees.
- 5.10.4 Excavation to install services has the potential to result in unacceptable root severance which could result in instability, dysfunction or the death of trees. Repeated incursions are particularly damaging and must be avoided by bundling services wherever possible.
- 5.10.5 The default position will therefore be that all services be routed outside of the RPA of retained trees. The following general principles will apply and where services must be routed within the RPA of a retained tree this process will be subject to a detailed method statement with approval from the Planning Authority. The principles of the National Joint Utilities Group (NJUG) Volume 4 guidance must be adhered to.
- 5.10.6 All services must be bundled as far as possible and installed within RPAs using hand/compressed air excavation (e.g. for shallow service runs) or trenchless techniques such as impact moling (thrust boring) with all access pits and inspection chambers being located outside of the RPA. The route must run as far from the main stem of a retained tree as possible and must be at a minimum depth so that the upper 1m of the soil profile is undisturbed. The depth of the run may need to be adjusted to account for soil type and species variation and this must be determined subject to the advice of an arboriculturist.
- 5.10.7 This operation must take place as specified in a Method Statement. Any water pipes must be constructed so as to be resistant to ingress by tree roots (both existing trees, and newly planted trees) which could include the use of root barriers where appropriate.

6. Conclusions

- 6.1.1 The Scheme will not impact any recorded veteran trees, ancient woodlands (including their 15m buffer zones) or trees protected by TPO.
- 6.1.2 Eleven important hedgerows (based on Archaeological criteria) will be impacted by the Scheme. In total 260.1 linear metres of important hedgerow is likely to be removed or coppiced.
- 6.1.3 21 individual trees, seven tree groups, 14 part tree groups, 13 part hedgerows and one hedgerow are to be removed to facilitate the Scheme; this includes 16 individual trees, three part tree groups and four tree groups classed as moderate quality (Category B), three individual trees, eleven part tree groups, three tree groups, 13 part hedgerows and one hedgerow classified as low quality (Category C) and the remaining two individual trees classified as very low quality (Category U).
- 6.1.4 All trees identified to be removed to facilitate the Scheme are within the Order limits.
- 6.1.5 The loss of these trees is necessary due to direct conflicts with proposed access roads, fencing and a cable route.
- 6.1.6 In addition, T10, T35 and G45 of very low quality (Category U) are also recommended for removal. These trees are arguably not suitable for long term retention and their removal is justified regardless of the Scheme.
- 6.1.7 Where hedgerows require removal for visibility splays to facilitate temporary access routes these will be coppiced to just above ground level or will be pruned or laid to a greater height allowing for the necessary visibility splay. The trees can then be allowed to regenerate to current dimensions following completion of site works and the removal of temporary access routes. This is likely to be applicable for H53, H61 and H65 and in such cases the loss or reduction of benefits such as amenity will be temporary. In addition where possible individual trees within visibility splays will be retained where any obstruction to visibility is within acceptable limits.
- 6.1.8 Ten tree features are likely to require crown lifting to 5m to provide reasonable clearance for access roads and visibility splays. This level of pruning will not negatively impact the physiological or structural condition of the trees.
- 6.1.9 Six tree features will be subject to an impact via incursions within the RPA for new hard surfacing and construction working space, this will be managed with ground protection and alternative construction methodologies to protect roots and soil structure and will not result in a negative impact on tree health or amenity value.
- 6.1.10 Tree removals will be mitigated with a high quality scheme of new tree planting and associated landscaping works as detailed in the Outline Landscape and Ecology Management Plan [EN010118/APP/7.13] which will represent an opportunity to enhance the quality, benefits and resilience of trees on site.

6.1.11 Soil structure for areas of new tree planting where the ground is currently unsurfaced will either be protected using ground protection or fenced exclusion zones; or the soil structure will be ameliorated or replaced following the completion of construction works on site.

6.1.12 An Arboricultural Method Statement will be produced as part of the Construction Environmental Management Plan, which will address the following issues:

- Conditions of planning consent
- Pre commencement meeting and site briefing
- Order and phasing of operations
- Tree works
- Tree protection fencing
- Ground protection
- Site storage and facilities
- Movement of people, plant and materials
- Enabling works
- Installation of new surfacing
- Installation of new structures/features
- Installation of new services and/or diversion of existing services
- Hard landscaping
- Soft Landscaping
- Removal of tree protection measures.

7. References

Braintree District Council, Local Plan 2033 (Adopted July 2022)

Braintree District Council, Tree Strategy (Adopted March 2016)

British Standards Institution (BSI), BS5837:2012. Trees in relation to design, demolition and construction – Recommendations. BSI

British Standards Institution (BSI), BS3998:2010. Tree work – Recommendations. BSI

British Standards Institution (BSI) BS8545: 2014 Trees: from the nursery to independence in the landscape – Recommendations

Chelmsford City Council, Local Plan (Adopted 27th May 2020)

National House Building Council (NHBC) Standards, (2022). Chapter 4.2: Building Near Trees

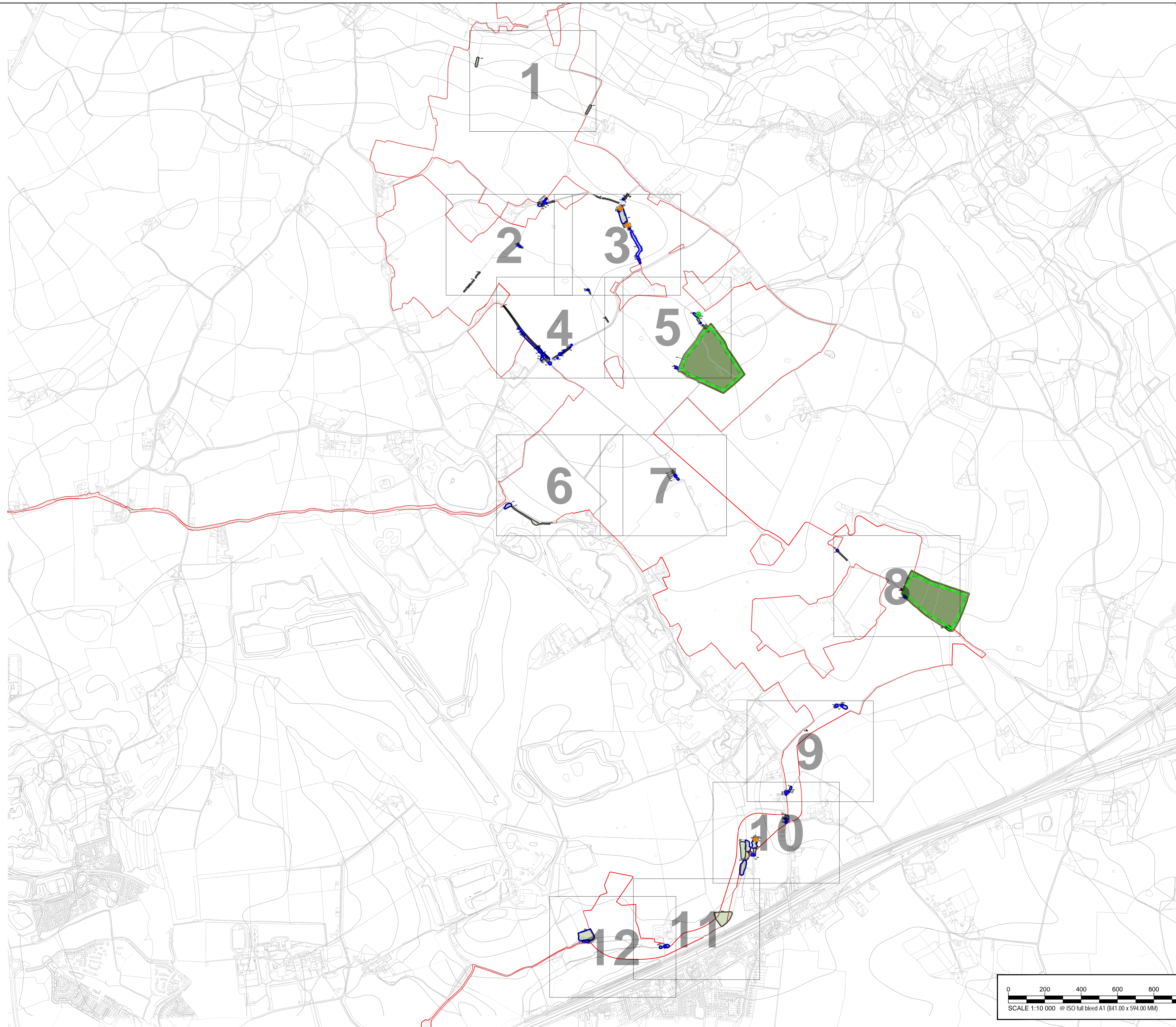
National Joint Utilities Group (NJUG) Volume 4, Issue 2, (2007). NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.

National Tree Safety Group (NTSG), 2011. Common sense risk management of trees. Forestry Commission.

Ministry of Housing, Communities and Local Government (MHCLG), 2021. National Planning Policy Framework (NPPF). MHCLG

Department of Energy and Climate Change (2011) Overarching National Policy Statement for Energy (EN1).

Appendix A Tree Constraints Plan



GENERAL NOTES

1. TREE CATEGORIES AS DEFINED BY BS 5837:2012
2. TREE LOCATIONS ARE BASED ON THE OS MAPPING, AERIAL IMAGERY, AND GPS CO-ORDINATES FROM ON SITE WALKOVER.
3. * INDICATES A TREE / GROUP WHOSE POSITION IS APPROXIMATE AS BASED UPON AERIAL PHOTOGRAPHY AND ON SITE OBSERVATIONS.
4. PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
5. THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.
6. DRAWING REFERENCES:
 2022-01-05 - Longfield Solar Farm RLB.dwg
 X_Longfield Base plan mapping.dwg

KEY PLAN



KEY

- SITE BOUNDARY
- A CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (HIGH QUALITY & VALUE)
- B CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (MODERATE QUALITY & VALUE)
- C CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (LOW QUALITY & VALUE)
- U CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (UNSUITABLE FOR RETENTION)
- ROOT PROTECTION AREAS (RPA) (AS DEFINED BY BS 5837:2012)
- APPROXIMATE SHADING ARC (AS DEFINED BY BS 5837:2012)
- ★ VETERAN TREE MARKER (INDICATES POSITION OF A VETERAN TREE)
- ANCIENT WOODLAND (WITH 15M BUFFER ZONE) (AREA CLASSIFIED AS AN ANCIENT WOODLAND)

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	22.09.22	FIRST ISSUE
VR		

DRAWING STATUS

ISSUE

PROJECT NUMBER

60640215

SHEET TITLE

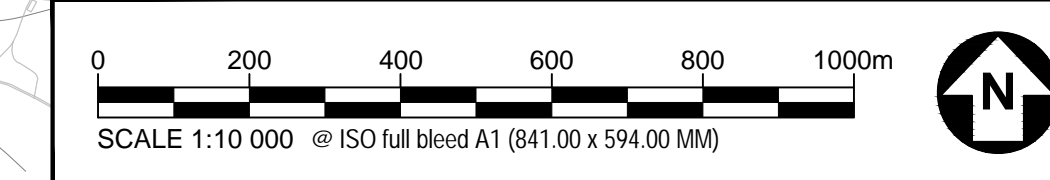
TREE CONSTRAINTS PLAN
 (SHEET 00)

SHEET NUMBER

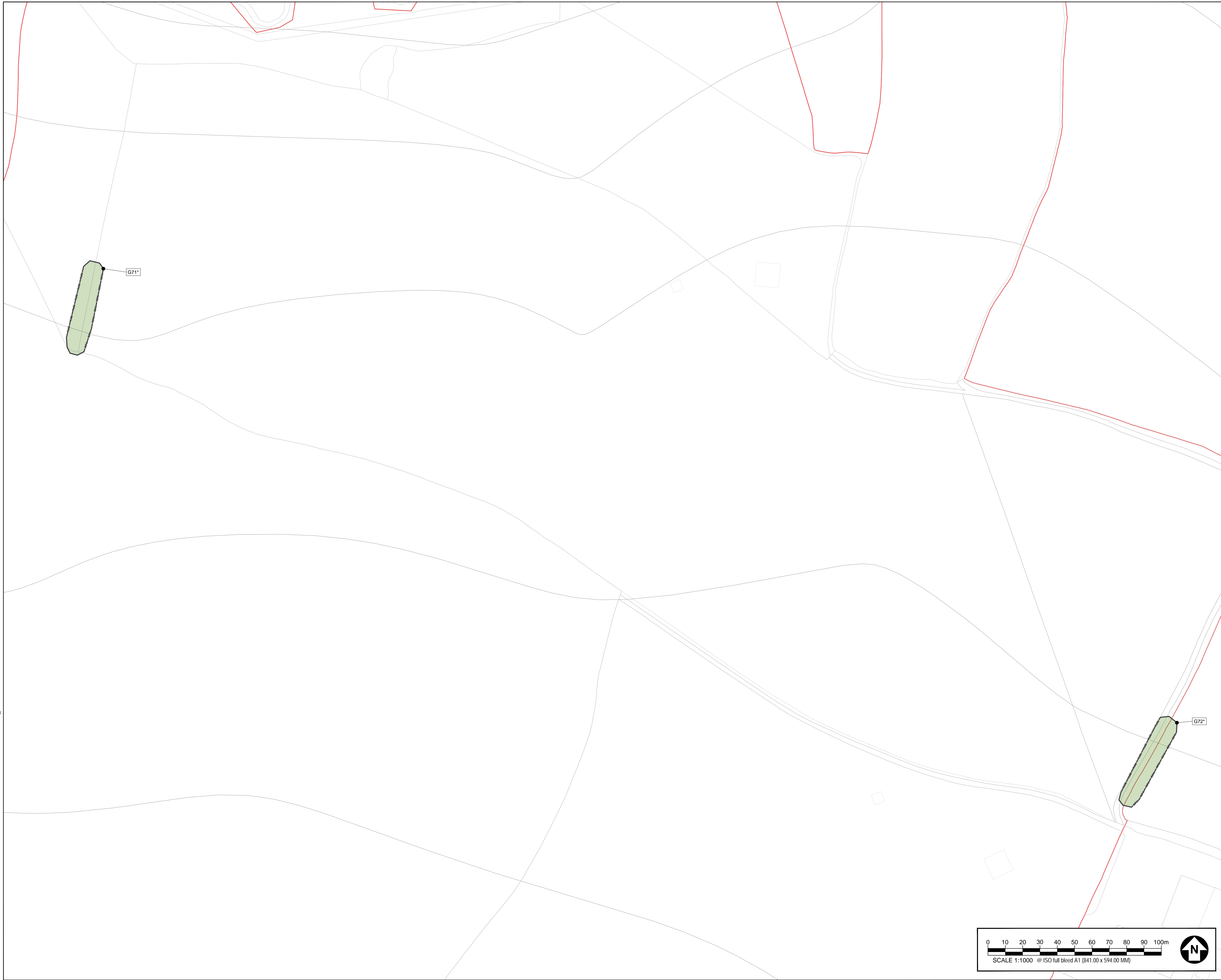
60640215-ACM-XX-XX-AB-TCP-000

REV.

P01



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility, and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.



PROJECT
 LONGFIELD SOLAR

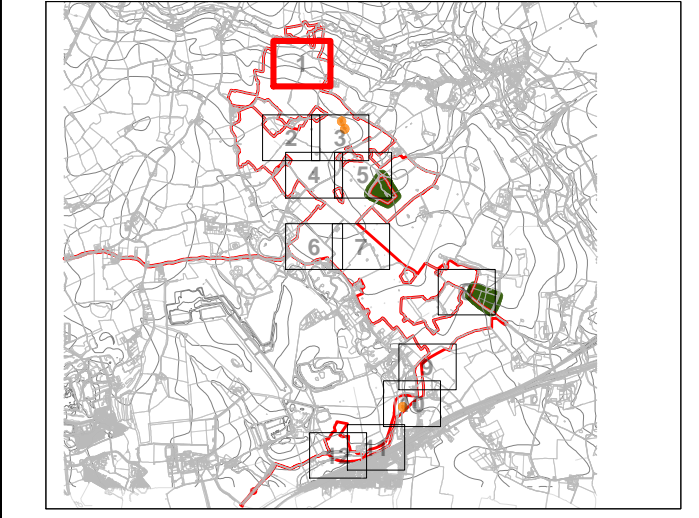
CLIENT
 LONGFIELD SOLAR
 ENERGY FARM LTD
 CONSULTANT

AECOM
 Plumer House, Third Floor,
 East Wing, Tallyour Road
 Plymouth, PL6 5DH
 Tel +44(0)1752 676700
 Fax +44(0)870 238 6023
 www.aecom.com

GENERAL NOTES

1. TREE CATEGORIES AS DEFINED BY BS 5837:2012
2. TREE LOCATIONS ARE BASED ON THE OS MAPPING, AERIAL IMAGERY, AND GPS CO-ORDINATES FROM ON SITE WALKOVER.
3. * INDICATES A TREE / GROUP WHOSE POSITION IS APPROXIMATE AS BASED UPON AERIAL PHOTOGRAPHY AND ON SITE OBSERVATIONS.
4. PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
5. THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.
6. DRAWING REFERENCES:
 2022-01-05 - Longfield Solar Farm RLB.dwg
 X_Longfield Base plan mapping.dwg

KEY PLAN



KEY

- **SITE BOUNDARY**
- **A CATEGORY TREE, GROUP, HEDGE, OR WOODLAND**
(HIGH QUALITY & VALUE)
- **B CATEGORY TREE, GROUP, HEDGE, OR WOODLAND**
(MODERATE QUALITY & VALUE)
- **C CATEGORY TREE, GROUP, HEDGE, OR WOODLAND**
(LOW QUALITY & VALUE)
- **U CATEGORY TREE, GROUP, HEDGE, OR WOODLAND**
(UNSUITABLE FOR RETENTION)
- ROOT PROTECTION AREAS (RPA)**
(AS DEFINED BY BS 5837:2012)
- APPROXIMATE SHADING ARC**
(AS DEFINED BY BS 5837:2012)
- ★ **VETERAN TREE MARKER**
(INDICATES POSITION OF A VETERAN TREE)
- ANCIENT WOODLAND (WITH 15M BUFFER ZONE)**
(AREA CLASSIFIED AS AN ANCIENT WOODLAND)

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	22.09.22	FIRST ISSUE
IR		

DRAWING STATUS

ISSUE

PROJECT NUMBER

60640215

SHEET TITLE

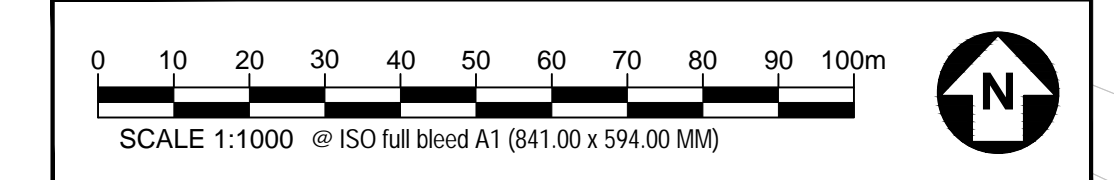
TREE CONSTRAINTS PLAN
 (SHEET 1)

SHEET NUMBER

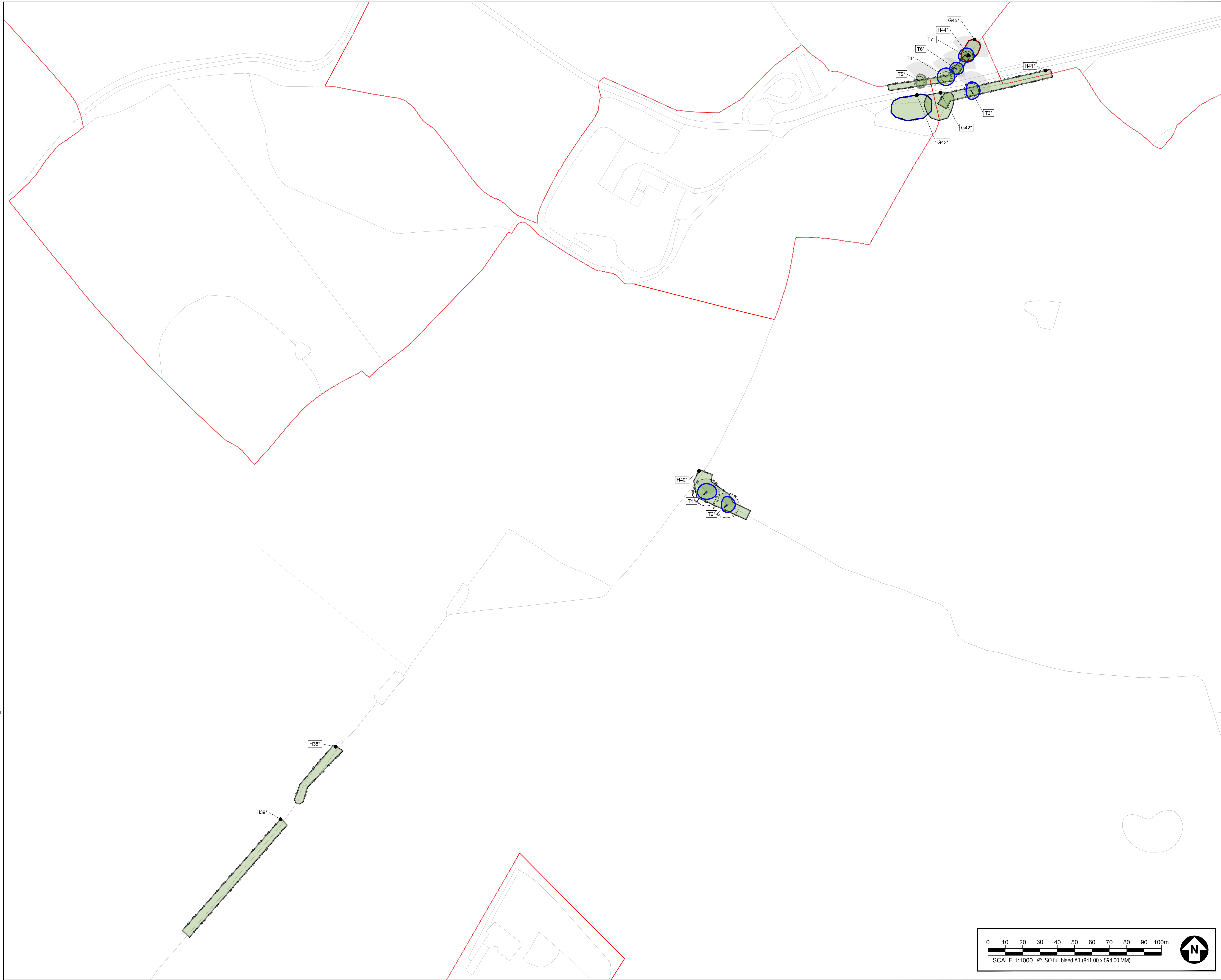
60640215-ACM-XX-XX-AB-TCP-01

REV.

P01



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.



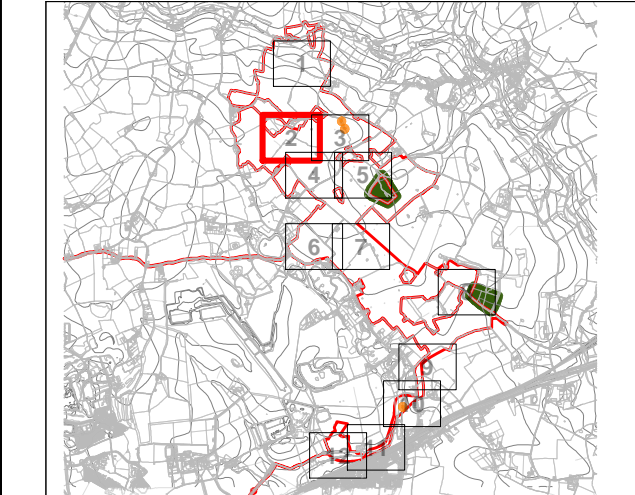
PROJECT
 LONGFIELD SOLAR

CLIENT
 LONGFIELD SOLAR ENERGY FARM LTD
CONSULTANT

AECOM
 Plumer House, Third Floor,
 East Wing, Tallyour Road
 Plymouth, PL6 5DH
 Tel +44(0)1752 676700
 Fax +44(0)870 238 6023
 www.aecom.com

- GENERAL NOTES**
1. TREE CATEGORIES AS DEFINED BY BS 5837:2012
 2. TREE LOCATIONS ARE BASED ON THE OS MAPPING, AERIAL IMAGERY, AND GPS CO-ORDINATES FROM ON SITE WALKOVER.
 3. * INDICATES A TREE / GROUP WHOSE POSITION IS APPROXIMATE AS BASED UPON AERIAL PHOTOGRAPHY AND ON SITE OBSERVATIONS.
 4. PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
 5. THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.
 6. DRAWING REFERENCES:
 2022-01-05 - Longfield Solar Farm RLB.dwg
 X_Longfield Base plan mapping.dwg

KEY PLAN



- KEY**
- SITE BOUNDARY
 - A CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (HIGH QUALITY & VALUE)
 - B CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (MODERATE QUALITY & VALUE)
 - C CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (LOW QUALITY & VALUE)
 - U CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (UNSUITABLE FOR RETENTION)
 - ROOT PROTECTION AREAS (RPA) (AS DEFINED BY BS 5837:2012)
 - APPROXIMATE SHADING ARC (AS DEFINED BY BS 5837:2012)
 - VETERAN TREE MARKER (INDICATES POSITION OF A VETERAN TREE)
 - ANCIENT WOODLAND (WITH 15M BUFFER ZONE) (AREA CLASSIFIED AS AN ANCIENT WOODLAND)

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	22.09.22	FIRST ISSUE
NR		

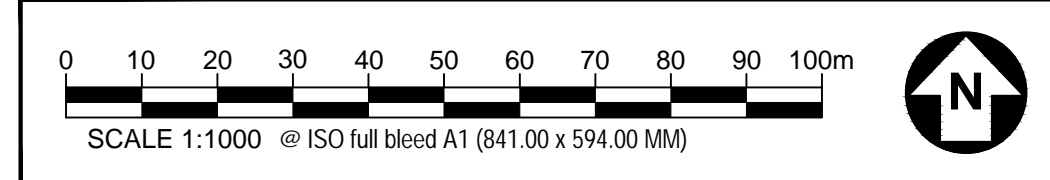
DRAWING STATUS

ISSUE

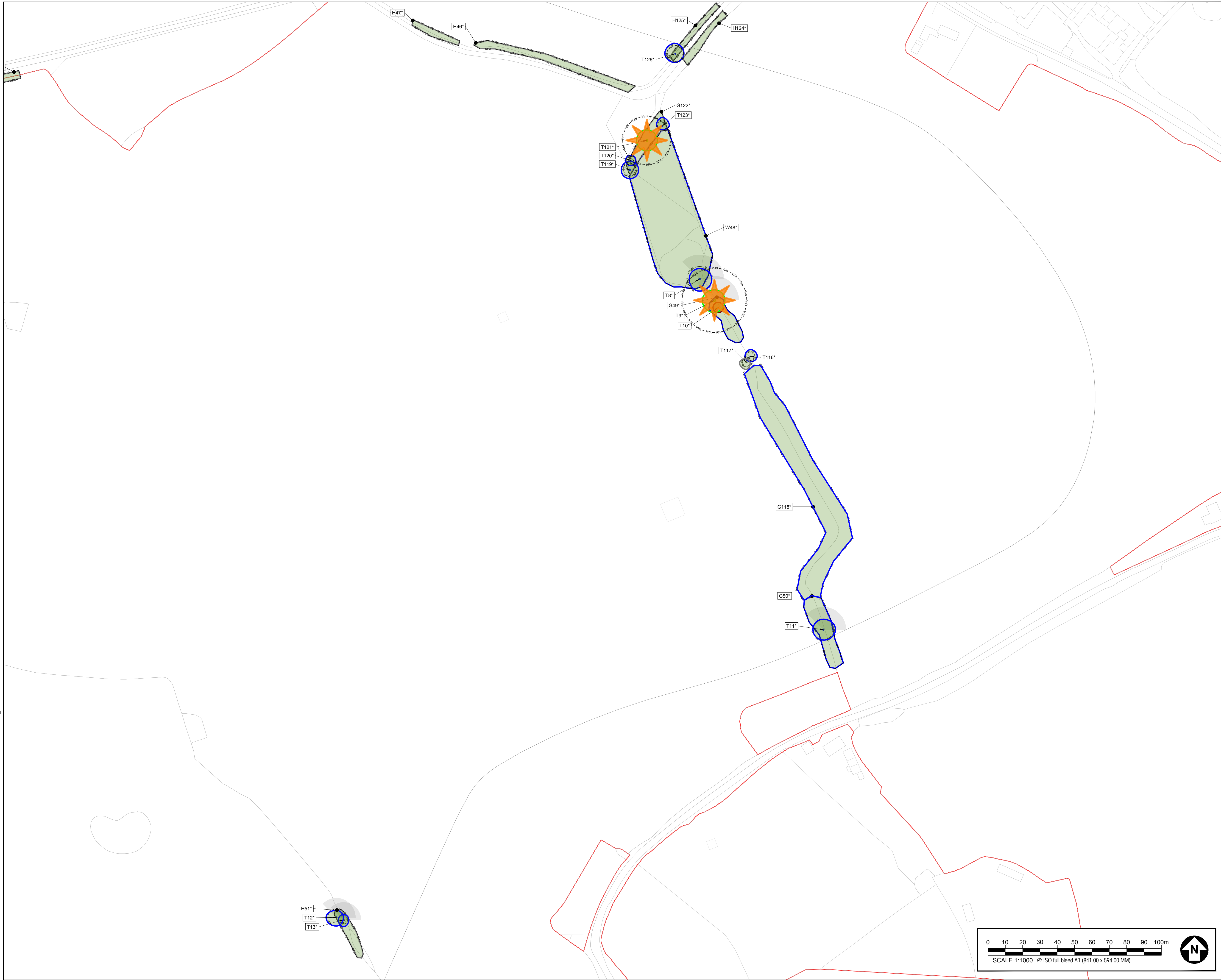
PROJECT NUMBER
 60640215

SHEET TITLE
 TREE CONSTRAINTS PLAN (SHEET 2)

SHEET NUMBER 60640215-ACM-XX-XX-AB-TCP-02
REV. P01



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.



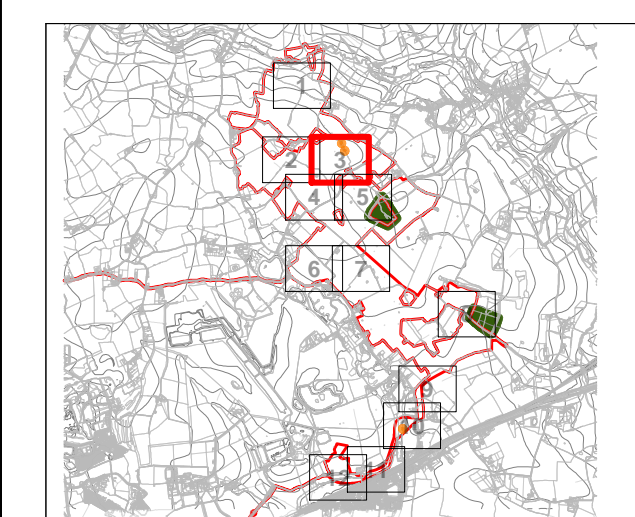
PROJECT
 LONGFIELD SOLAR

CLIENT
 LONGFIELD SOLAR ENERGY FARM LTD
 CONSULTANT

AECOM
 Plumer House, Third Floor,
 East Wing, Tallyour Road
 Plymouth, PL6 5DH
 Tel +44(0)1752 676700
 Fax +44(0)870 238 6023
 www.aecom.com

- GENERAL NOTES**
1. TREE CATEGORIES AS DEFINED BY BS 5837:2012
 2. TREE LOCATIONS ARE BASED ON THE OS MAPPING, AERIAL IMAGERY, AND GPS CO-ORDINATES FROM ON SITE WALKOVER.
 3. * INDICATES A TREE / GROUP WHOSE POSITION IS APPROXIMATE AS BASED UPON AERIAL PHOTOGRAPHY AND ON SITE OBSERVATIONS.
 4. PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
 5. THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.
 6. DRAWING REFERENCES:
 2022-01-05 - Longfield Solar Farm RLB.dwg
 X_Longfield Base plan mapping.dwg

KEY PLAN



KEY

- SITE BOUNDARY
- A CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (HIGH QUALITY & VALUE)
- B CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (MODERATE QUALITY & VALUE)
- C CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (LOW QUALITY & VALUE)
- U CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (UNSUITABLE FOR RETENTION)
- ROOT PROTECTION AREAS (RPA) (AS DEFINED BY BS 5837:2012)
- APPROXIMATE SHADING ARC (AS DEFINED BY BS 5837:2012)
- ★ VETERAN TREE MARKER (INDICATES POSITION OF A VETERAN TREE)
- ANCIENT WOODLAND (WITH 15M BUFFER ZONE) (AREA CLASSIFIED AS AN ANCIENT WOODLAND)

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	22.09.22	FIRST ISSUE
IR	DATE	DESCRIPTION

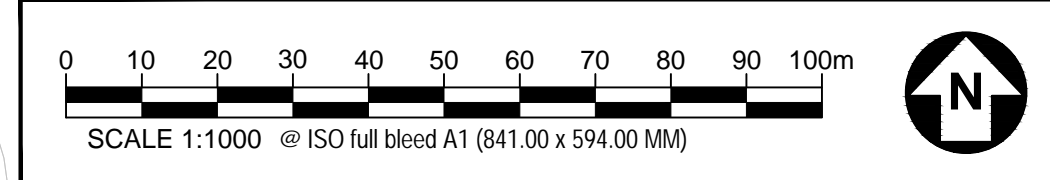
DRAWING STATUS

ISSUE

PROJECT NUMBER
 60640215

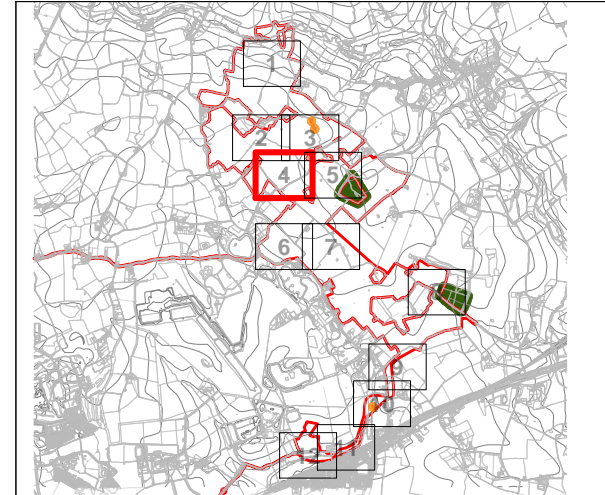
SHEET TITLE
 TREE CONSTRAINTS PLAN
 (SHEET 3)

SHEET NUMBER **REV.**
 60640215-ACM-XX-XX-AB-TCP-03 P01



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

KEY PLAN



KEY

- SITE BOUNDARY**
- A CATEGORY TREE, GROUP, HEDGE, OR WOODLAND**
(HIGH QUALITY & VALUE)
- B CATEGORY TREE, GROUP, HEDGE, OR WOODLAND**
(MODERATE QUALITY & VALUE)
- C CATEGORY TREE, GROUP, HEDGE, OR WOODLAND**
(LOW QUALITY & VALUE)
- U CATEGORY TREE, GROUP, HEDGE, OR WOODLAND**
(UNSUITABLE FOR RETENTION)
- ROOT PROTECTION AREAS (RPA)**
(AS DEFINED BY BS 5837:2012)
- APPROXIMATE SHADING ARC**
(AS DEFINED BY BS 5837:2012)
- VETERAN TREE MARKER**
(INDICATES POSITION OF A VETERAN TREE)
- ANCIENT WOODLAND (WITH 15M BUFFER ZONE)**
(AREA CLASSIFIED AS AN ANCIENT WOODLAND)

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	22.09.22	FIRST ISSUE
VR		

DRAWING STATUS

ISSUE

PROJECT NUMBER

60640215

SHEET TITLE

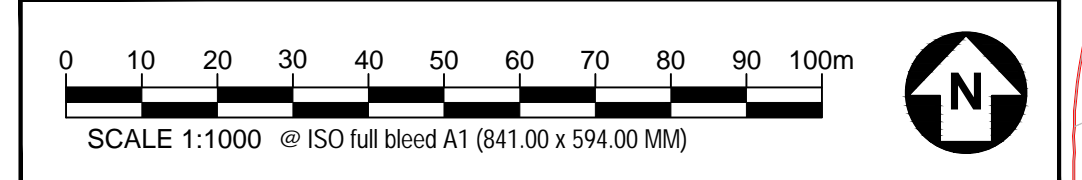
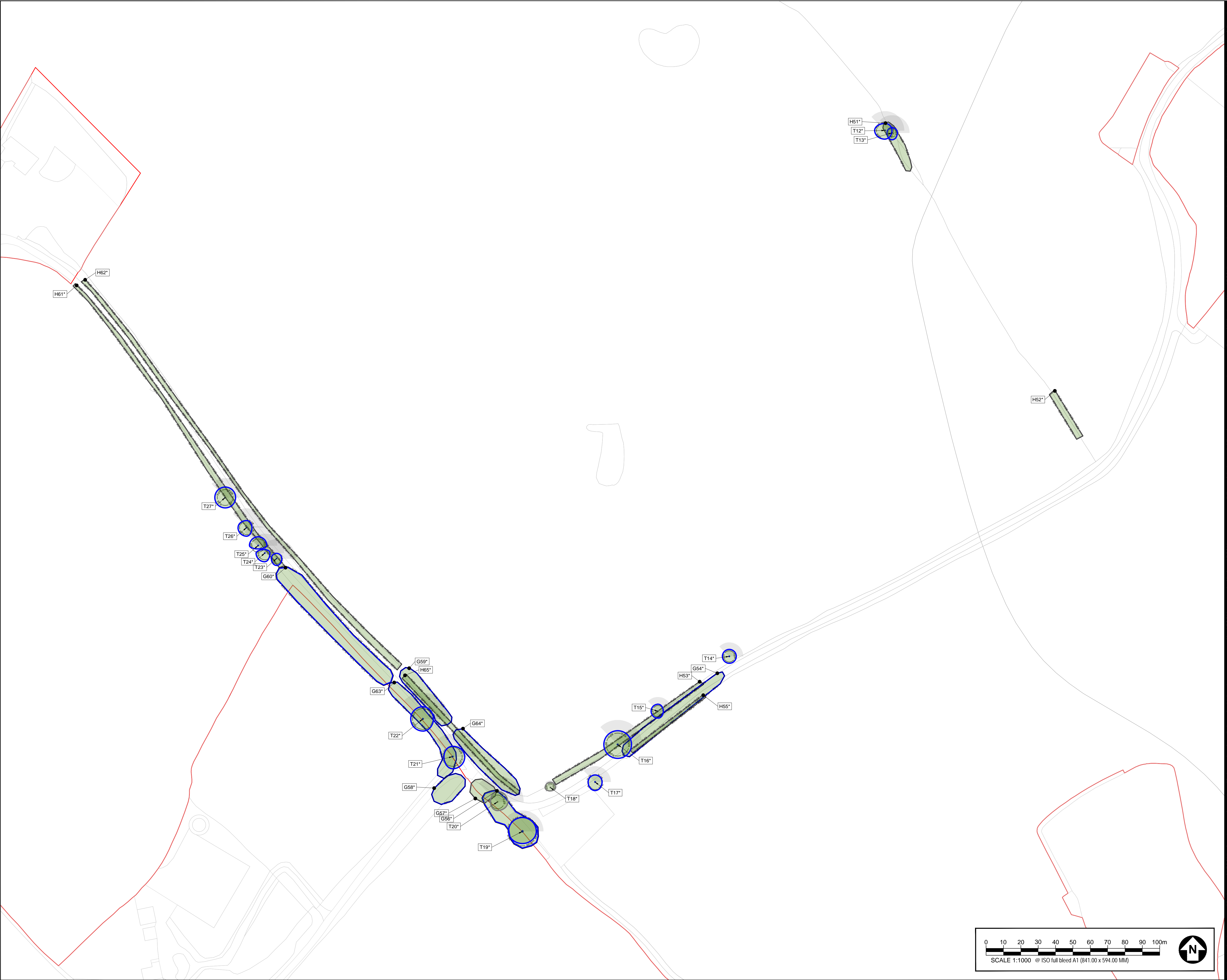
TREE CONSTRAINTS PLAN
 (SHEET 4)

SHEET NUMBER

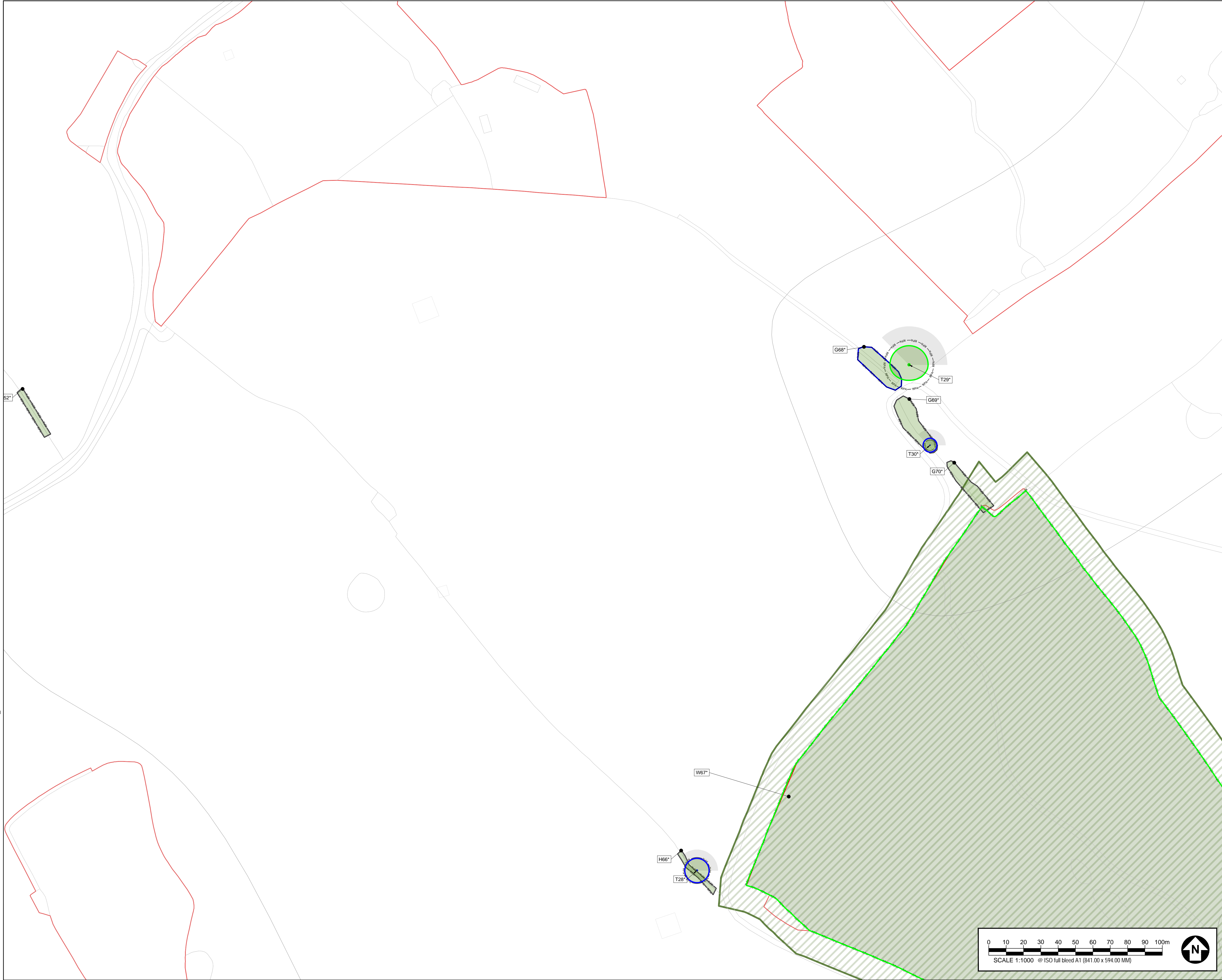
60640215-ACM-XX-XX-AB-TCP-04

REV.

P01



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the scaled dimensions.



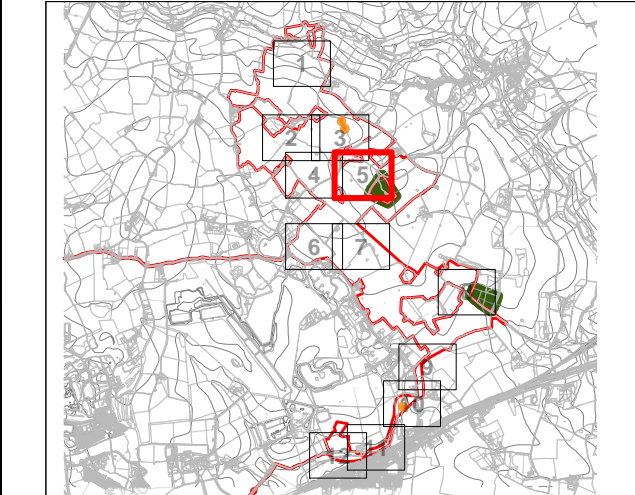
PROJECT
 LONGFIELD SOLAR

CLIENT
 LONGFIELD SOLAR
 ENERGY FARM LTD
 CONSULTANT

AECOM
 Plumer House, Third Floor,
 East Wing, Tallyour Road
 Plymouth, PL6 5DH
 Tel +44(0)1752 676700
 Fax +44(0)870 238 6023
 www.aecom.com

- GENERAL NOTES**
1. TREE CATEGORIES AS DEFINED BY BS 5837:2012
 2. TREE LOCATIONS ARE BASED ON THE OS MAPPING, AERIAL IMAGERY, AND GPS CO-ORDINATES FROM ON SITE WALKOVER.
 3. * INDICATES A TREE / GROUP WHOSE POSITION IS APPROXIMATE AS BASED UPON AERIAL PHOTOGRAPHY AND ON SITE OBSERVATIONS.
 4. PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
 5. THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.
 6. DRAWING REFERENCES:
 2022-01-05 - Longfield Solar Farm RLB.dwg
 X_Longfield Base plan mapping.dwg

KEY PLAN



- KEY**
- SITE BOUNDARY
 - A CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (HIGH QUALITY & VALUE)
 - B CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (MODERATE QUALITY & VALUE)
 - C CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (LOW QUALITY & VALUE)
 - U CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (UNSUITABLE FOR RETENTION)
 - ROOT PROTECTION AREAS (RPA) (AS DEFINED BY BS 5837:2012)
 - APPROXIMATE SHADING ARC (AS DEFINED BY BS 5837:2012)
 - ★ VETERAN TREE MARKER (INDICATES POSITION OF A VETERAN TREE)
 - ANCIENT WOODLAND (WITH 15M BUFFER ZONE) (AREA CLASSIFIED AS AN ANCIENT WOODLAND)

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	22/09/22	FIRST ISSUE
IR	DATE	DESCRIPTION

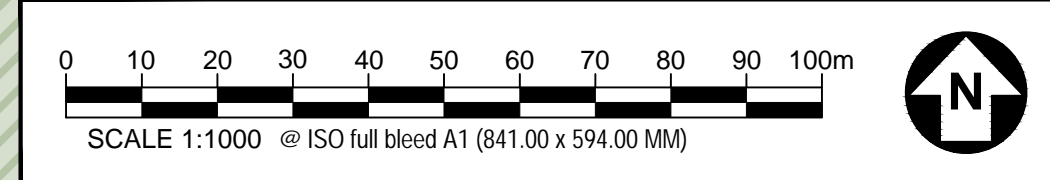
DRAWING STATUS

ISSUE

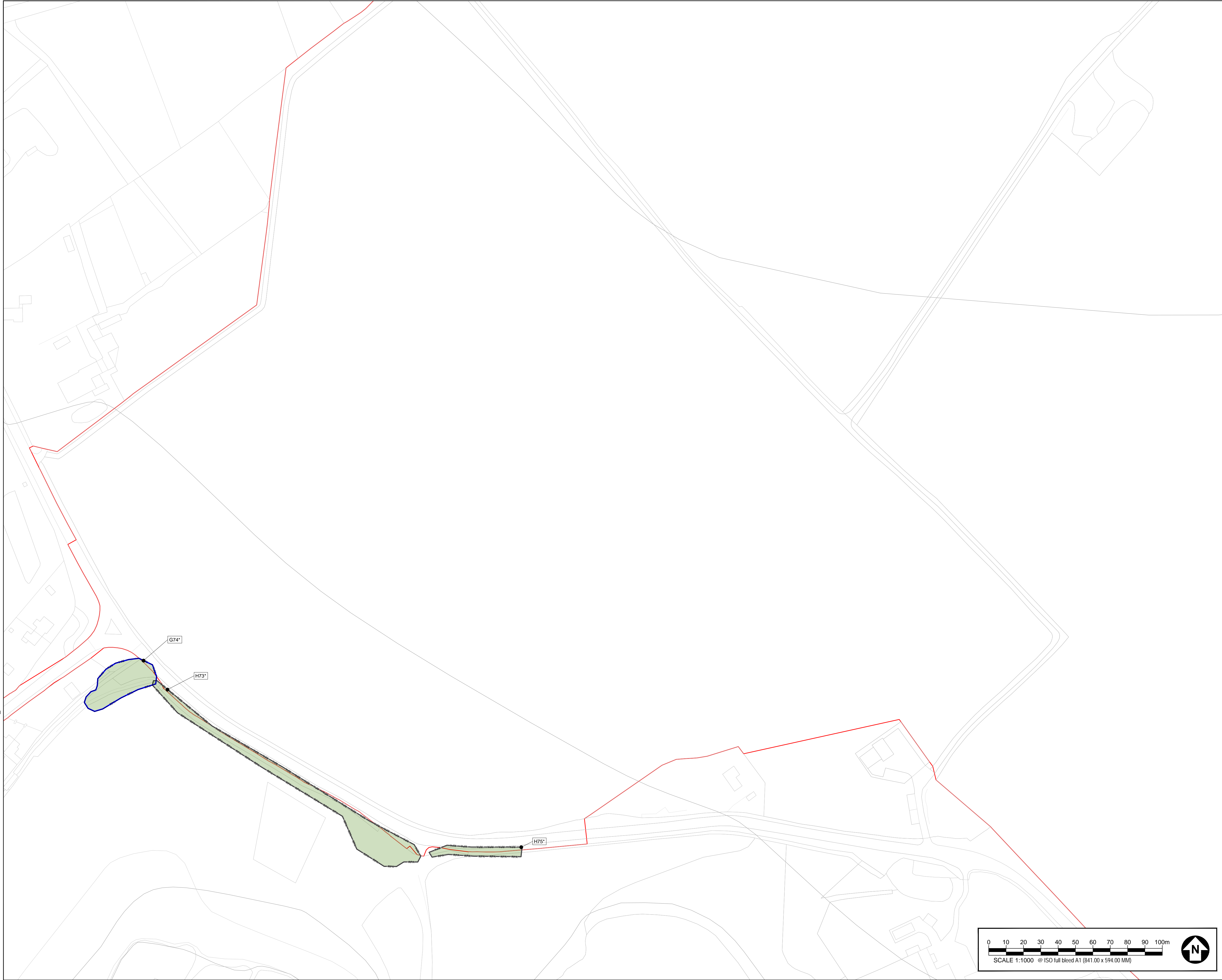
PROJECT NUMBER
 60640215

SHEET TITLE
 TREE CONSTRAINTS PLAN
 (SHEET 5)

SHEET NUMBER **REV.**
 60640215-ACM-XX-XX-AB-TCP-05 P01



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.



PROJECT
 LONGFIELD SOLAR

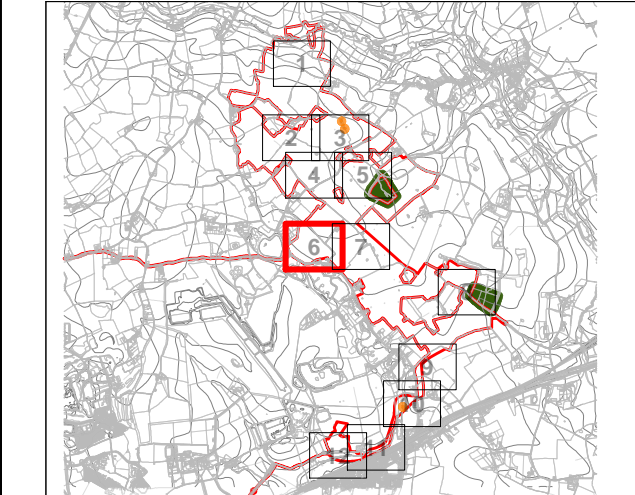
CLIENT
 LONGFIELD SOLAR
 ENERGY FARM LTD
 CONSULTANT

AECOM
 Plumer House, Third Floor,
 East Wing, Tallyour Road
 Plymouth, PL6 5DH
 Tel +44(0)1752 676700
 Fax +44(0)870 238 6023
 www.aecom.com

GENERAL NOTES

1. TREE CATEGORIES AS DEFINED BY BS 5837:2012
2. TREE LOCATIONS ARE BASED ON THE OS MAPPING, AERIAL IMAGERY, AND GPS CO-ORDINATES FROM ON SITE WALKOVER.
3. * INDICATES A TREE / GROUP WHOSE POSITION IS APPROXIMATE AS BASED UPON AERIAL PHOTOGRAPHY AND ON SITE OBSERVATIONS.
4. PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
5. THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.
6. DRAWING REFERENCES:
 2022-01-05 - Longfield Solar Farm RLB.dwg
 X_Longfield Base plan mapping.dwg

KEY PLAN



KEY

- SITE BOUNDARY
- A CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (HIGH QUALITY & VALUE)
- B CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (MODERATE QUALITY & VALUE)
- C CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (LOW QUALITY & VALUE)
- U CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (UNSUITABLE FOR RETENTION)
- ROOT PROTECTION AREAS (RPA) (AS DEFINED BY BS 5837:2012)
- APPROXIMATE SHADING ARC (AS DEFINED BY BS 5837:2012)
- ★ VETERAN TREE MARKER (INDICATES POSITION OF A VETERAN TREE)
- ANCIENT WOODLAND (WITH 15M BUFFER ZONE) (AREA CLASSIFIED AS AN ANCIENT WOODLAND)

ISSUE/REVISION

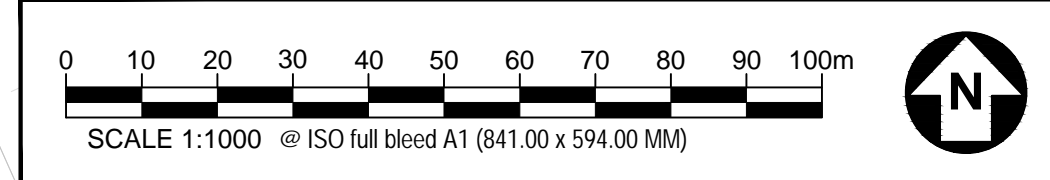
NO	DATE	DESCRIPTION
P01	22.09.22	FIRST ISSUE
IR	DATE	DESCRIPTION

DRAWING STATUS
 ISSUE

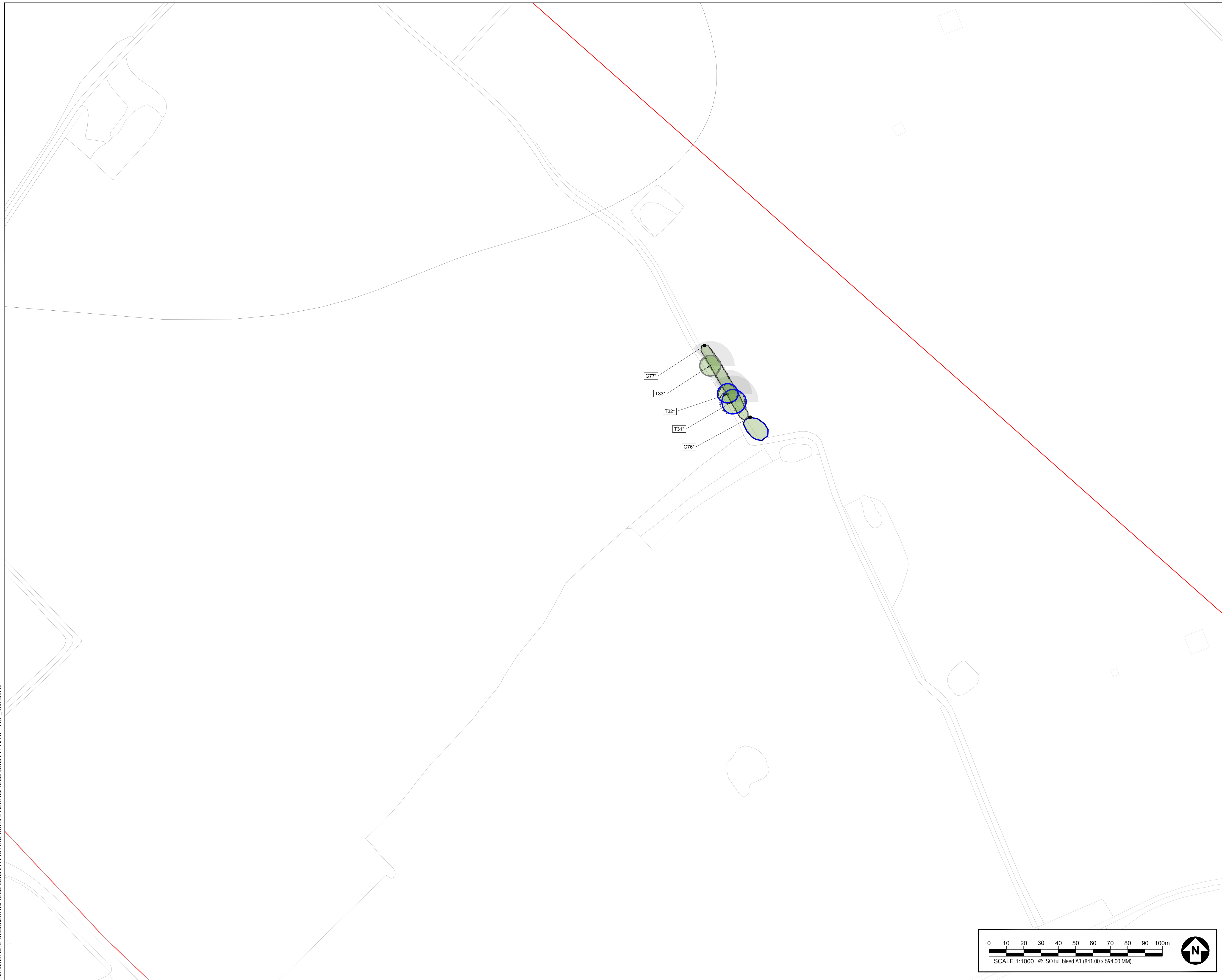
PROJECT NUMBER
 60640215

SHEET TITLE
 TREE CONSTRAINTS PLAN
 (SHEET 6)

SHEET NUMBER **REV.**
 60640215-ACM-XX-XX-AB-TCP-06 P01



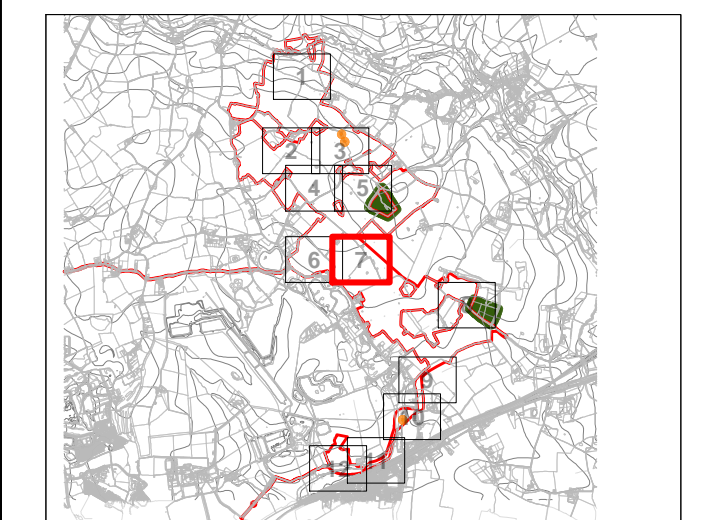
This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.



GENERAL NOTES

1. TREE CATEGORIES AS DEFINED BY BS 5837:2012
2. TREE LOCATIONS ARE BASED ON THE OS MAPPING, AERIAL IMAGERY, AND GPS CO-ORDINATES FROM ON SITE WALKOVER.
3. * INDICATES A TREE / GROUP WHOSE POSITION IS APPROXIMATE AS BASED UPON AERIAL PHOTOGRAPHY AND ON SITE OBSERVATIONS.
4. PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
5. THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.
6. DRAWING REFERENCES:
 2022-01-05 - Longfield Solar Farm RLB.dwg
 X_Longfield Base plan mapping.dwg

KEY PLAN



KEY

- SITE BOUNDARY
- A CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (HIGH QUALITY & VALUE)
- B CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (MODERATE QUALITY & VALUE)
- C CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (LOW QUALITY & VALUE)
- U CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (UNSUITABLE FOR RETENTION)
- ROOT PROTECTION AREAS (RPA) (AS DEFINED BY BS 5837:2012)
- APPROXIMATE SHADING ARC (AS DEFINED BY BS 5837:2012)
- VETERAN TREE MARKER (INDICATES POSITION OF A VETERAN TREE)
- ANCIENT WOODLAND (WITH 15M BUFFER ZONE) (AREA CLASSIFIED AS AN ANCIENT WOODLAND)

ISSUE/REVISION

IR	DATE	DESCRIPTION
P01	22.09.22	FIRST ISSUE

DRAWING STATUS

ISSUE

PROJECT NUMBER

60640215

SHEET TITLE

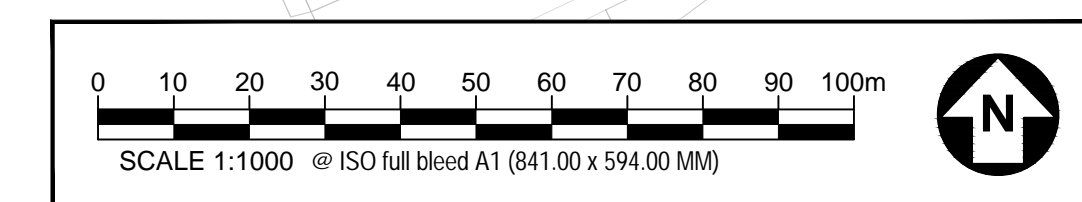
TREE CONSTRAINTS PLAN
 (SHEET 7)

SHEET NUMBER

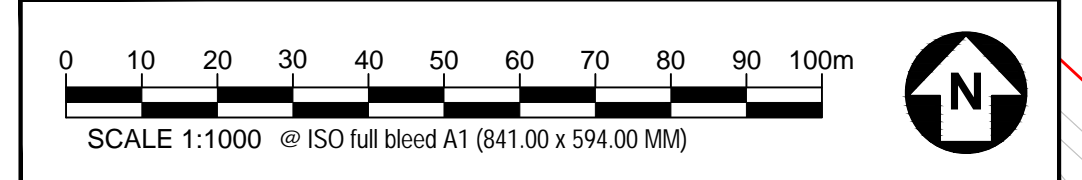
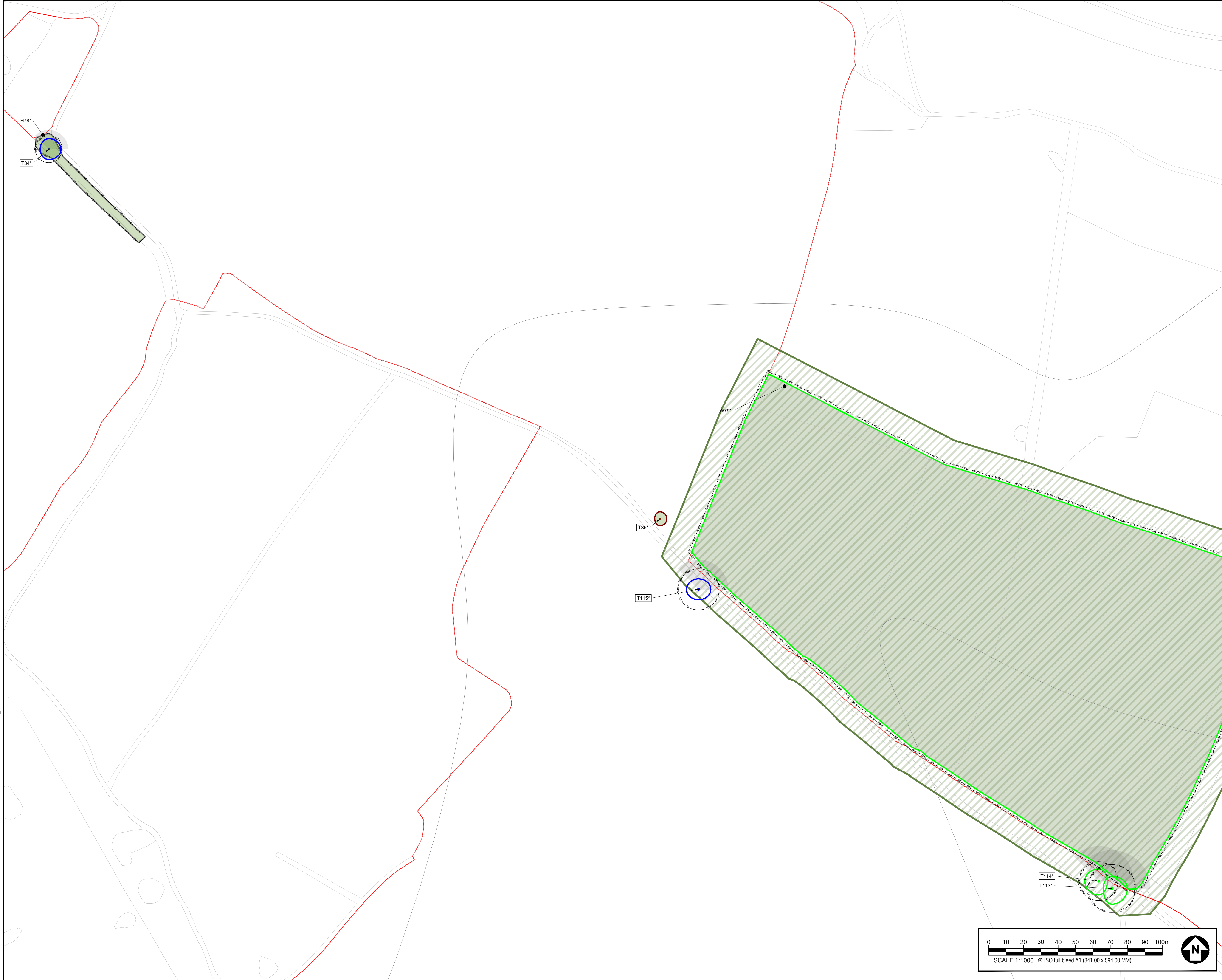
60640215-ACM-XX-XX-AB-TCP-07

REV.

P01



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.



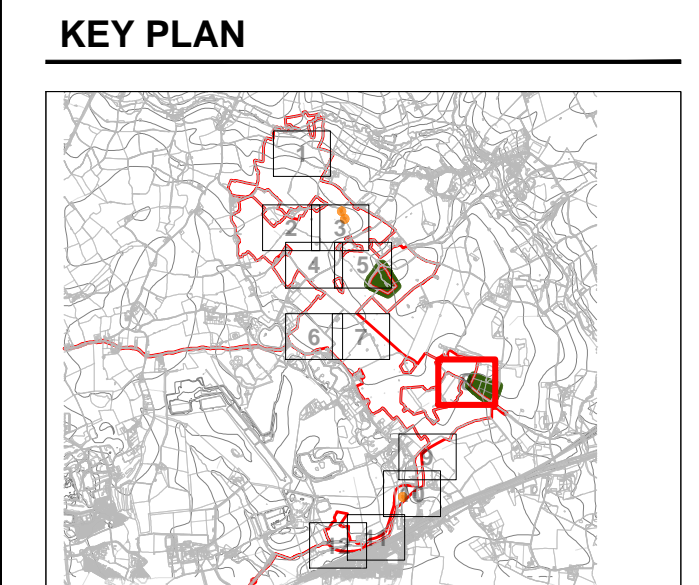
PROJECT
 LONGFIELD SOLAR

CLIENT
 LONGFIELD SOLAR ENERGY FARM LTD
 CONSULTANT

AECOM
 Plumer House, Third Floor,
 East Wing, Tallyour Road
 Plymouth, PL6 5DH
 Tel +44(0)1752 676700
 Fax +44(0)870 238 6023
 www.aecom.com

GENERAL NOTES

1. TREE CATEGORIES AS DEFINED BY BS 5837:2012
2. TREE LOCATIONS ARE BASED ON THE OS MAPPING, AERIAL IMAGERY, AND GPS CO-ORDINATES FROM ON SITE WALKOVER.
3. * INDICATES A TREE / GROUP WHOSE POSITION IS APPROXIMATE AS BASED UPON AERIAL PHOTOGRAPHY AND ON SITE OBSERVATIONS.
4. PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
5. THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.
6. DRAWING REFERENCES:
 2022-01-05 - Longfield Solar Farm RLB.dwg
 X_Longfield Base plan mapping.dwg



- KEY**
- SITE BOUNDARY
 - A CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (HIGH QUALITY & VALUE)
 - B CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (MODERATE QUALITY & VALUE)
 - C CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (LOW QUALITY & VALUE)
 - U CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (UNSUITABLE FOR RETENTION)
 - ROOT PROTECTION AREAS (RPA) (AS DEFINED BY BS 5837:2012)
 - APPROXIMATE SHADING ARC (AS DEFINED BY BS 5837:2012)
 - ★ VETERAN TREE MARKER (INDICATES POSITION OF A VETERAN TREE)
 - ANCIENT WOODLAND (WITH 15M BUFFER ZONE) (AREA CLASSIFIED AS AN ANCIENT WOODLAND)

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	22.09.22	FIRST ISSUE
VR		

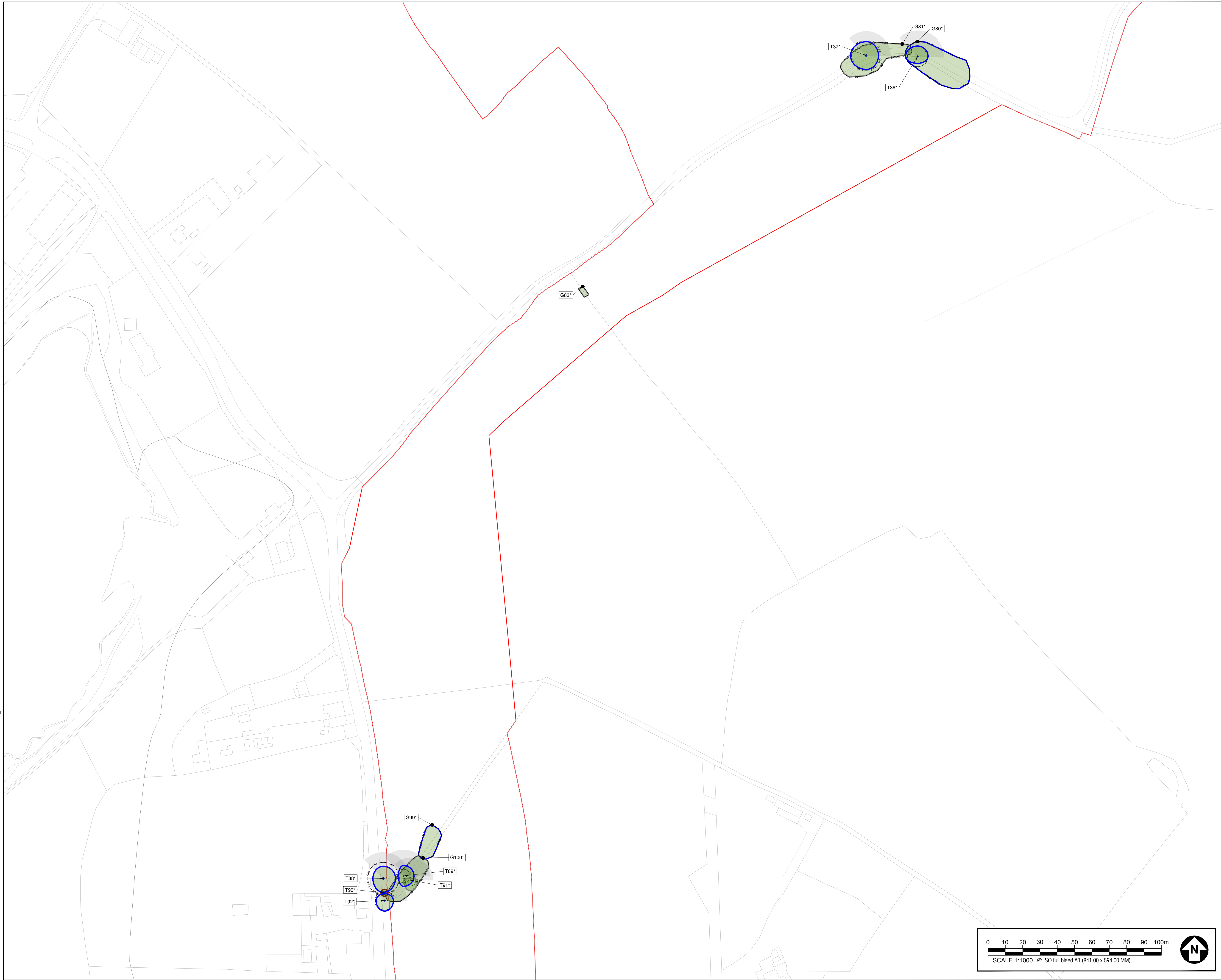
DRAWING STATUS
 ISSUE

PROJECT NUMBER
 60640215

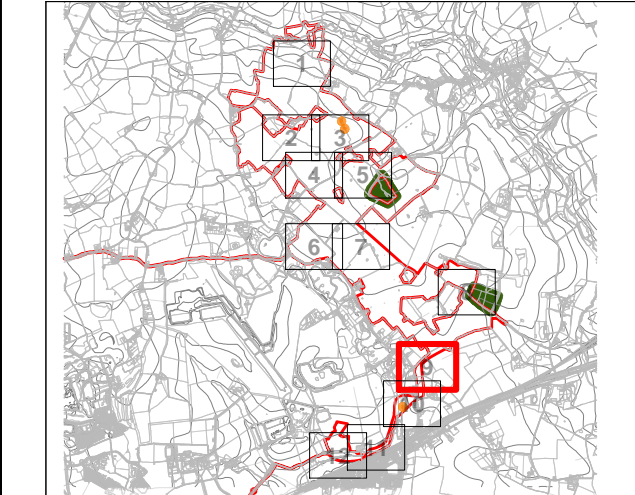
SHEET TITLE
 TREE CONSTRAINTS PLAN
 (SHEET 8)

SHEET NUMBER **REV.**
 60640215-ACM-XX-XX-AB-TCP-08 P01

This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.



KEY PLAN



KEY

- SITE BOUNDARY
- A CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (HIGH QUALITY & VALUE)
- B CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (MODERATE QUALITY & VALUE)
- C CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (LOW QUALITY & VALUE)
- U CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (UNSUITABLE FOR RETENTION)
- ROOT PROTECTION AREAS (RPA) (AS DEFINED BY BS 5837:2012)
- APPROXIMATE SHADING ARC (AS DEFINED BY BS 5837:2012)
- ★ VETERAN TREE MARKER (INDICATES POSITION OF A VETERAN TREE)
- ANCIENT WOODLAND (WITH 15M BUFFER ZONE) (AREA CLASSIFIED AS AN ANCIENT WOODLAND)

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	22.09.22	FIRST ISSUE
IR	DATE	DESCRIPTION

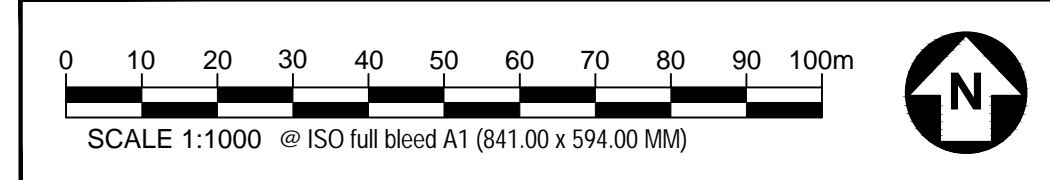
DRAWING STATUS

ISSUE

PROJECT NUMBER
 60640215

SHEET TITLE
 TREE CONSTRAINTS PLAN
 (SHEET 9)

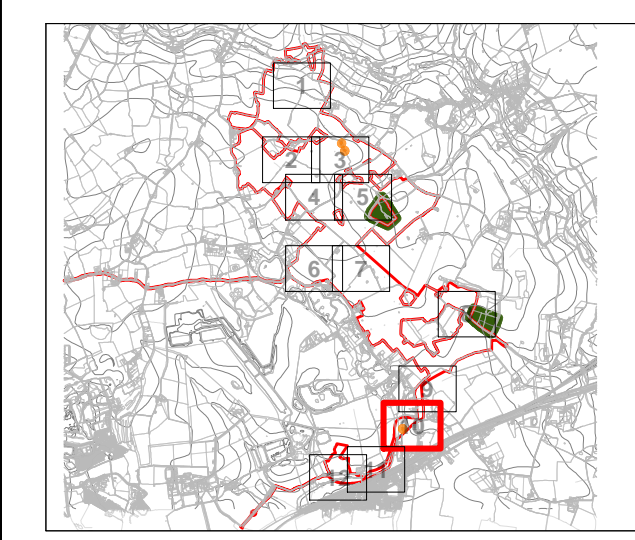
SHEET NUMBER **REV.**
 60640215-ACM-XX-XX-AB-TCP-09 P01



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

1. TREE CATEGORIES AS DEFINED BY BS 5837:2012
2. TREE LOCATIONS ARE BASED ON THE OS MAPPING, AERIAL IMAGERY, AND GPS CO-ORDINATES FROM ON SITE WALKOVER.
3. * INDICATES A TREE / GROUP WHOSE POSITION IS APPROXIMATE AS BASED UPON AERIAL PHOTOGRAPHY AND ON SITE OBSERVATIONS.
4. PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
5. THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.
6. DRAWING REFERENCES:
 2022-01-05 - Longfield Solar Farm RLB.dwg
 X_Longfield Base plan mapping.dwg

KEY PLAN



KEY

- SITE BOUNDARY
- A CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (HIGH QUALITY & VALUE)
- B CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (MODERATE QUALITY & VALUE)
- C CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (LOW QUALITY & VALUE)
- U CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (UNSUITABLE FOR RETENTION)
- ROOT PROTECTION AREAS (RPA) (AS DEFINED BY BS 5837:2012)
- APPROXIMATE SHADING ARC (AS DEFINED BY BS 5837:2012)
- VETERAN TREE MARKER (INDICATES POSITION OF A VETERAN TREE)
- ANCIENT WOODLAND (WITH 15M BUFFER ZONE) (AREA CLASSIFIED AS AN ANCIENT WOODLAND)

ISSUE/REVISION

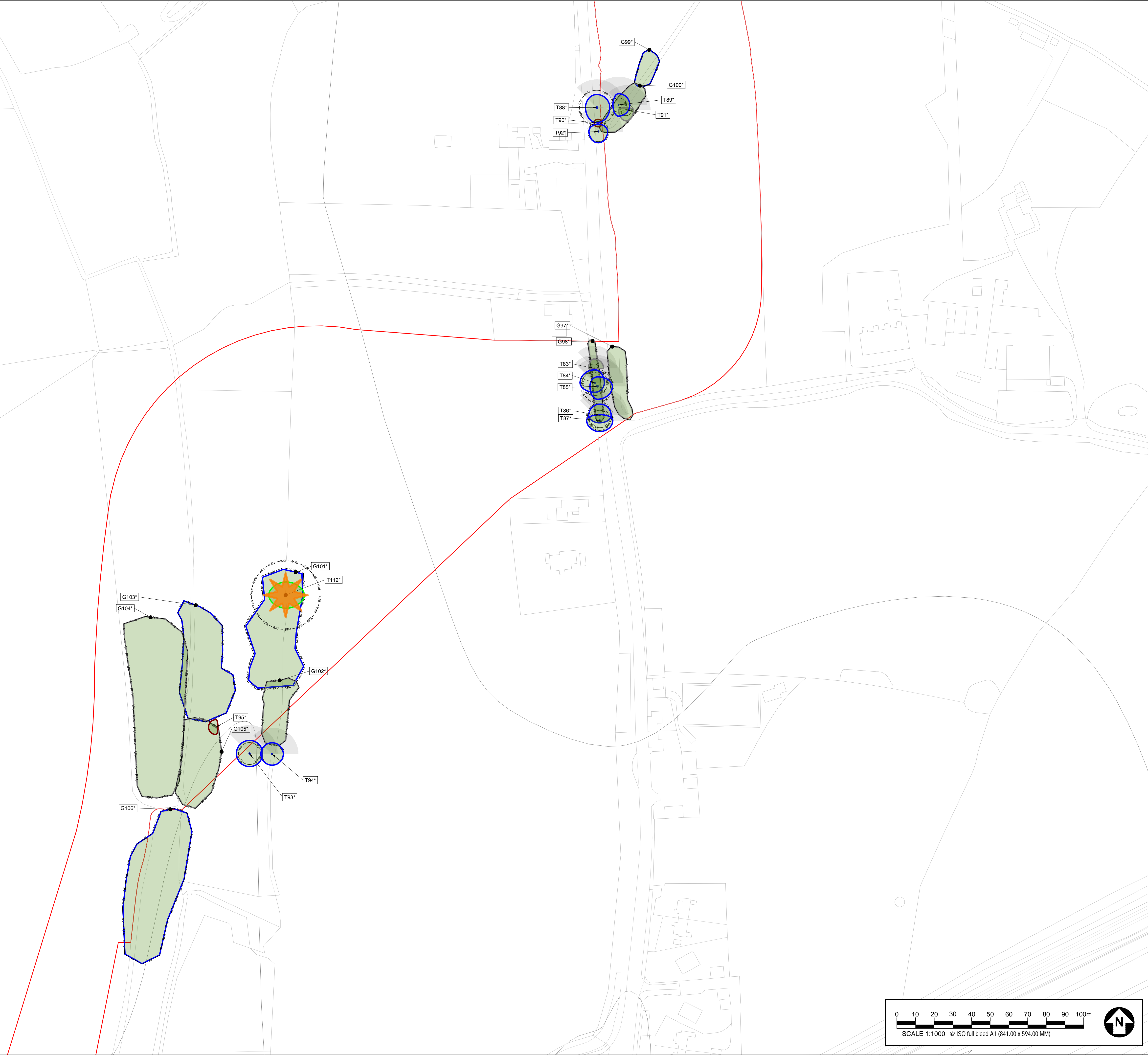
NO	DATE	DESCRIPTION
P01	22.09.22	FIRST ISSUE
IR		

DRAWING STATUS
 ISSUE

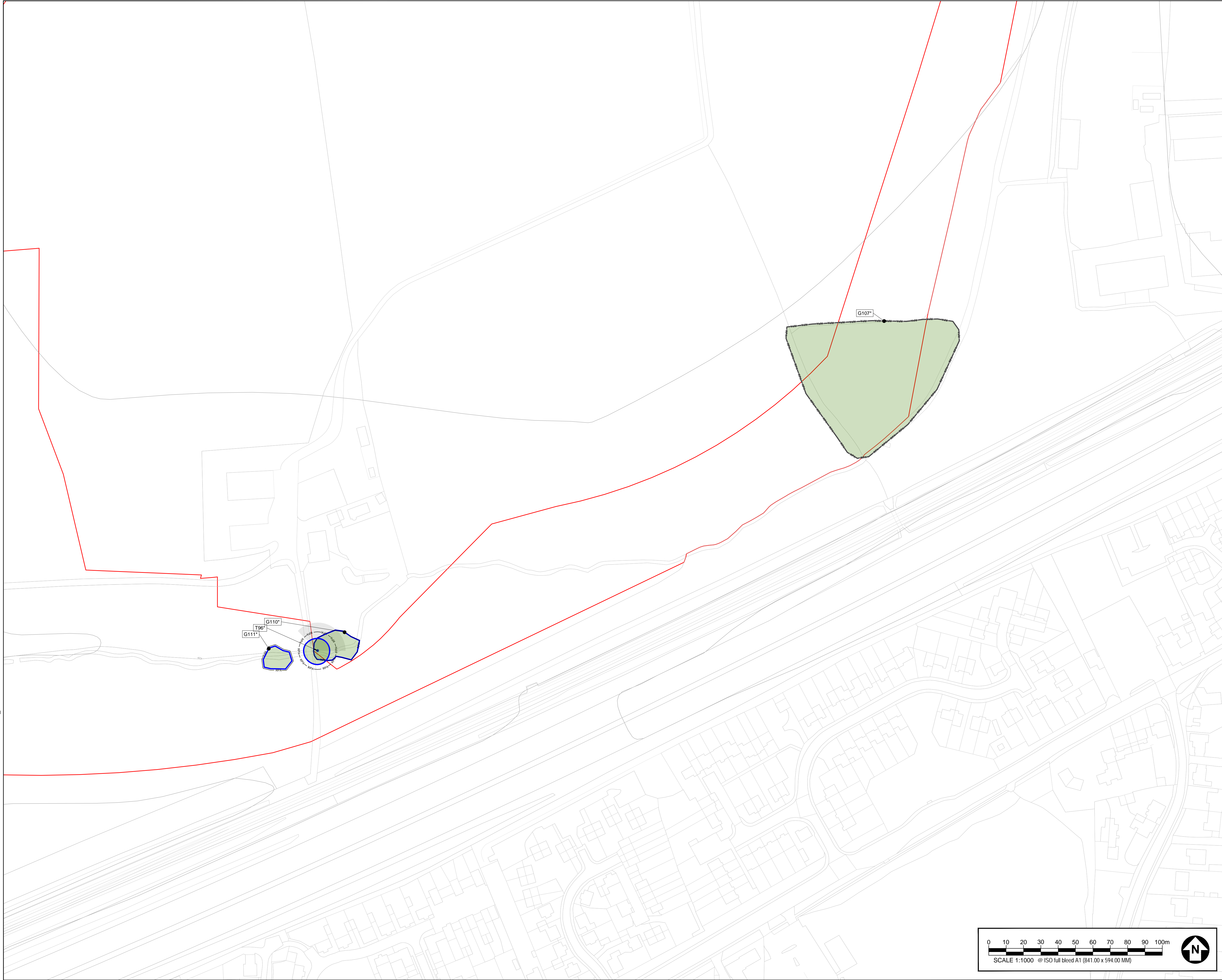
PROJECT NUMBER
 60640215

SHEET TITLE
 TREE CONSTRAINTS PLAN
 (SHEET 10)

SHEET NUMBER **REV.**
 60640215-ACM-XX-XX-AB-TCP-010 P01



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.



PROJECT
 LONGFIELD SOLAR

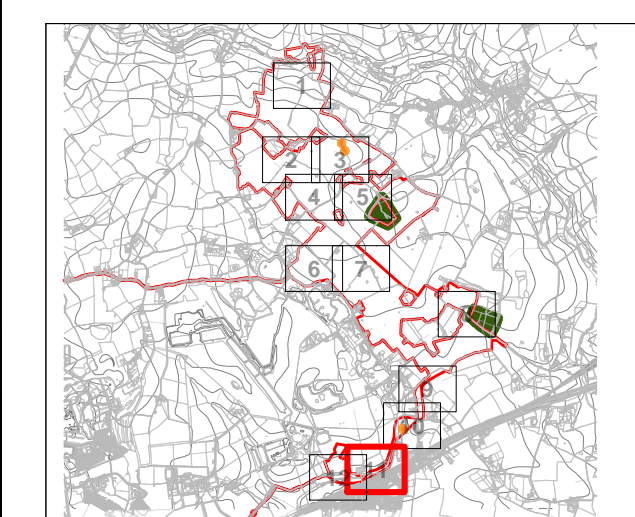
CLIENT
 LONGFIELD SOLAR
 ENERGY FARM LTD
 CONSULTANT

AECOM
 Plumer House, Third Floor,
 East Wing, Tallyour Road
 Plymouth, PL6 5DH
 Tel +44(0)1752 676700
 Fax +44(0)870 238 6023
 www.aecom.com

GENERAL NOTES

1. TREE CATEGORIES AS DEFINED BY BS 5837:2012
2. TREE LOCATIONS ARE BASED ON THE OS MAPPING, AERIAL IMAGERY, AND GPS CO-ORDINATES FROM ON SITE WALKOVER.
3. * INDICATES A TREE / GROUP WHOSE POSITION IS APPROXIMATE AS BASED UPON AERIAL PHOTOGRAPHY AND ON SITE OBSERVATIONS.
4. PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
5. THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.
6. DRAWING REFERENCES:
 2022-01-05 - Longfield Solar Farm RLB.dwg
 X_Longfield Base plan mapping.dwg

KEY PLAN



KEY

- SITE BOUNDARY**
- A CATEGORY TREE, GROUP, HEDGE, OR WOODLAND**
(HIGH QUALITY & VALUE)
- B CATEGORY TREE, GROUP, HEDGE, OR WOODLAND**
(MODERATE QUALITY & VALUE)
- C CATEGORY TREE, GROUP, HEDGE, OR WOODLAND**
(LOW QUALITY & VALUE)
- U CATEGORY TREE, GROUP, HEDGE, OR WOODLAND**
(UNSUITABLE FOR RETENTION)
- ROOT PROTECTION AREAS (RPA)**
(AS DEFINED BY BS 5837:2012)
- APPROXIMATE SHADING ARC**
(AS DEFINED BY BS 5837:2012)
- ★ **VETERAN TREE MARKER**
(INDICATES POSITION OF A VETERAN TREE)
- ANCIENT WOODLAND (WITH 15M BUFFER ZONE)**
(AREA CLASSIFIED AS AN ANCIENT WOODLAND)

ISSUE/REVISION

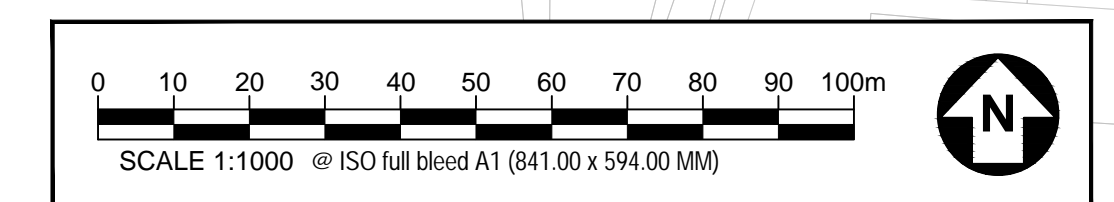
NO	DATE	DESCRIPTION
P01	22.09.22	FIRST ISSUE
VR		

DRAWING STATUS
 ISSUE

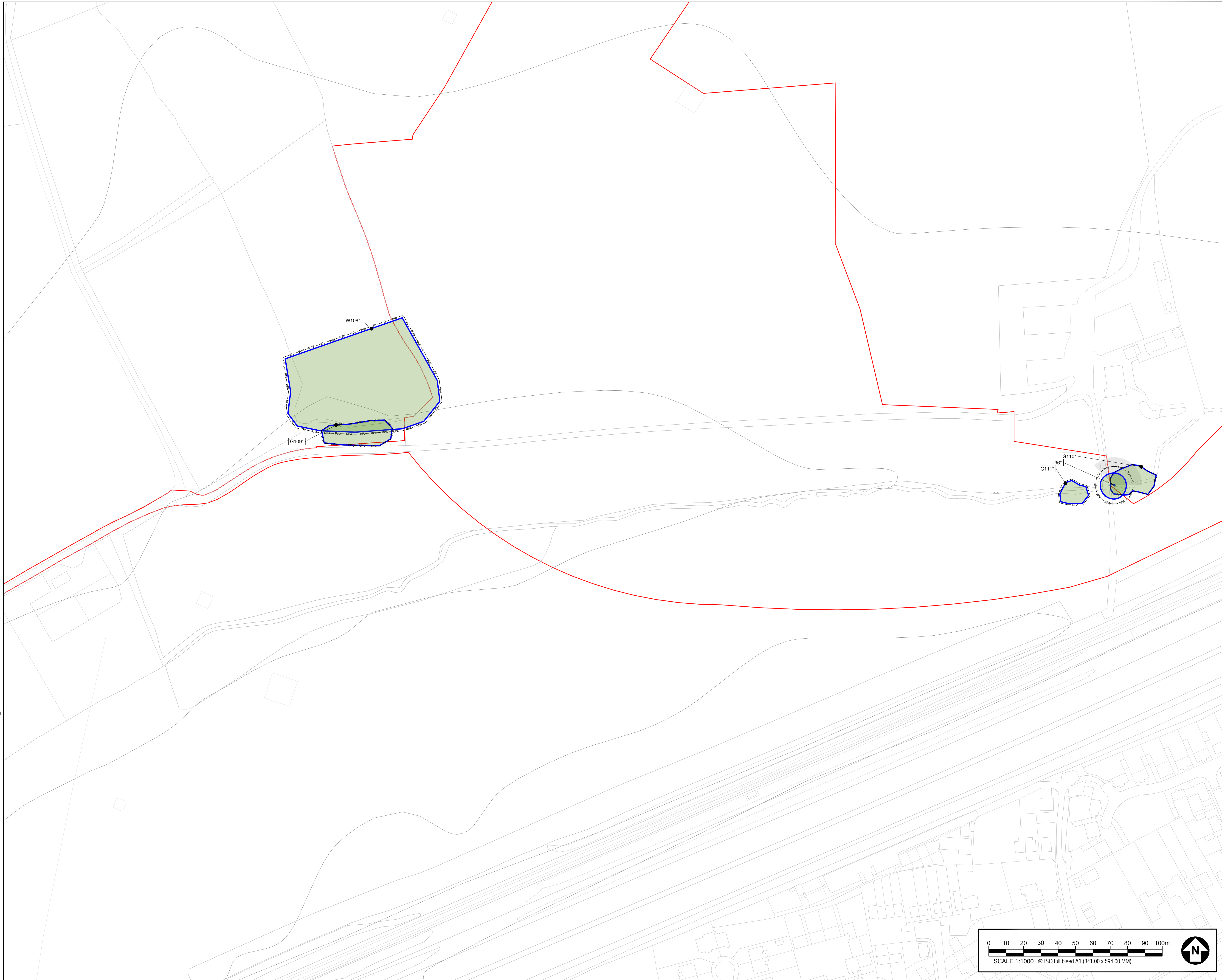
PROJECT NUMBER
 60640215

SHEET TITLE
 TREE CONSTRAINTS PLAN
 (SHEET 11)

SHEET NUMBER **REV.**
 60640215-ACM-XX-XX-AB-TCP-011 P01



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.



PROJECT
 LONGFIELD SOLAR

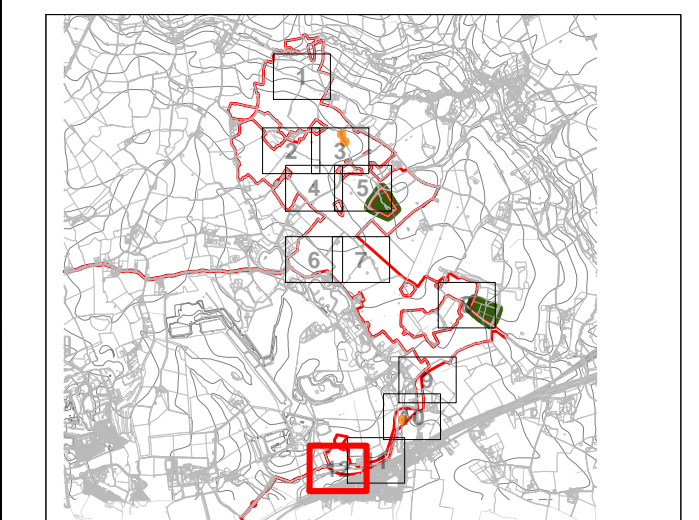
CLIENT
 LONGFIELD SOLAR
 ENERGY FARM LTD
 CONSULTANT

AECOM
 Plumer House, Third Floor,
 East Wing, Tallyour Road
 Plymouth, PL6 5DH
 Tel +44(0)1752 676700
 Fax +44(0)870 238 6023
 www.aecom.com

GENERAL NOTES

1. TREE CATEGORIES AS DEFINED BY BS 5837:2012
2. TREE LOCATIONS ARE BASED ON THE OS MAPPING, AERIAL IMAGERY, AND GPS CO-ORDINATES FROM ON SITE WALKOVER.
3. * INDICATES A TREE / GROUP WHOSE POSITION IS APPROXIMATE AS BASED UPON AERIAL PHOTOGRAPHY AND ON SITE OBSERVATIONS.
4. PLANS SHOULD BE READ IN CONJUNCTION WITH THE AECOM ARBORICULTURAL REPORT.
5. THE ORIGINAL OF THIS DRAWING WAS PRODUCED IN COLOUR - A MONOCHROME COPY SHOULD NOT BE RELIED UPON.
6. DRAWING REFERENCES:
 2022-01-05 - Longfield Solar Farm RLB.dwg
 X_Longfield Base plan mapping.dwg

KEY PLAN



KEY

- SITE BOUNDARY
- A CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (HIGH QUALITY & VALUE)
- B CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (MODERATE QUALITY & VALUE)
- C CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (LOW QUALITY & VALUE)
- U CATEGORY TREE, GROUP, HEDGE, OR WOODLAND (UNSUITABLE FOR RETENTION)
- ROOT PROTECTION AREAS (RPA) (AS DEFINED BY BS 5837:2012)
- APPROXIMATE SHADING ARC (AS DEFINED BY BS 5837:2012)
- ★ VETERAN TREE MARKER (INDICATES POSITION OF A VETERAN TREE)
- ANCIENT WOODLAND (WITH 15M BUFFER ZONE) (AREA CLASSIFIED AS AN ANCIENT WOODLAND)

ISSUE/REVISION

NO	DATE	DESCRIPTION
P01	22.09.22	FIRST ISSUE
IR		

DRAWING STATUS

ISSUE

PROJECT NUMBER

60640215

SHEET TITLE

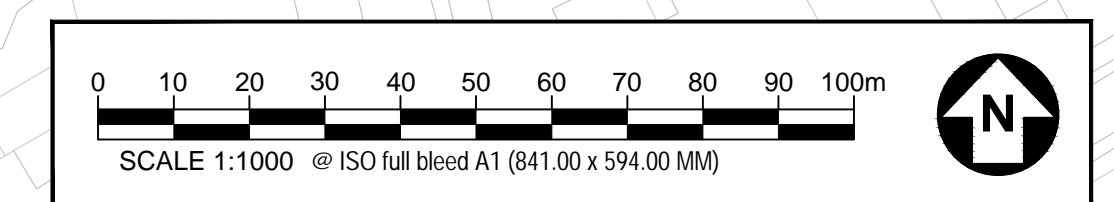
TREE CONSTRAINTS PLAN
 (SHEET 12)

SHEET NUMBER

60640215-ACM-XX-XX-AB-TCP-012

REV.

P01



This drawing has been prepared for the use of AECOM's client. It may not be used, modified, reproduced or relied upon by third parties, except as agreed by AECOM or as required by law. AECOM accepts no responsibility and denies any liability whatsoever, to any party that uses or relies on this drawing without AECOM's express written consent. Do not scale this document. All measurements must be obtained from the stated dimensions.

Appendix B Tree Survey Schedule

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Tree Works to Facilitate the Scheme	Hedgerow Linear Meterage Loss	Estimated Remaining Contribution	Category	Status
T1*	Common Oak (<i>Quercus robur</i>)	8	650#	5	4	6	5	3.0/E	2.5	Good	M	Good	No access base, growing adjacent to ditch. Appears to have previously lost leader at 4m but with a new established crown present.		Remove		20+	B1,2	n/a
T2*	Common Oak (<i>Quercus robur</i>)	7	600#	5	4	5	3	4.0/SW	2.5	Good	M	Good	No access to base, growing adjacent to ditch. Dense ivy cover. Appears to have previously lost leader at 4m but with a new established crown present.		Remove		20+	B1,2	n/a
T3*	Ash (<i>Fraxinus excelsior</i>)	11	350#	5	5	5	3	5.0/W	3	Good	SM	Good	No access to base. Growing in ditch.				20+	B1	n/a
T4*	Ash (<i>Fraxinus excelsior</i>)	11	250#	5	5	5	5	5.0/E	4	Good	SM	Good	No access to base. Growing adjacent to ditch.		Remove		20+	B1	n/a
T5*	Ash (<i>Fraxinus excelsior</i>)	11	230#	4	4	4	2	5.0/E	5	Good	SM	Good	No access to base. Growing adjacent to ditch. Previous loss of codominant stems at base.				10+	C1	n/a
T6*	Field Maple (<i>Acer campestre</i>)	11	200#	4	3	4	4	4.0/NW	4	Good	SM	Good	No access to base, growing adjacent to ditch.		Crown lift to 5m over the Scheme to provide reasonable clearance		20+	B1	n/a
T7*	Ash (<i>Fraxinus excelsior</i>)	12	270#	5	3	4	5	4.0/W	5	Good	SM	Good	No access to base, growing adjacent to ditch.				20+	B1	n/a
T8*	Common Oak (<i>Quercus robur</i>)	14	600#	6	7	7	6	3.0/S	3	Good	M	Good	No access to base. Growing adjacent to pond. Moderate deadwood. Prominent in group.				20+	B1,2	n/a
T9*	Common Oak (<i>Quercus robur</i>)	14	1240	6	7	6	7	5.0/SW	1	Good	V	Good	Prominent tree considered to be veteran. Lower crown formation present. Fruiting body at base to northeast likely <i>Ganoderma sp.</i> . Hollowing between buttress roots to north and east, with large stem cavity present. Extends in horizontally approximately 1m and vertically 0.3m. Brown rot present. Significant swelling of lower stem likely to be associated with cavity. Large deadwood. A number of animal holes on stem and in crown.				40+	A1,2,3	Veteran Tree
T10*	Ash (<i>Fraxinus excelsior</i>)	11	160,90,100,110	3	3	3	3	n/a	2	Fair	SM	Fair	Moderate crown dieback and sparsity. <i>Inonotus hispidus</i> bracket on stem to west. Low traffic area.	Fell If land frequency increases.			<10	U1	n/a

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Tree Works to Facilitate the Scheme	Hedgerow Linear Meterage Loss	Estimated Remaining Contribution	Category	Status
T11*	Common Oak (<i>Quercus robur</i>)	13	510	6	6	7	6	4.0/S	4	Good	EM	Good	Growing adjacent to ditch. Prominent tree in group.		Remove		20+	B1,2	n/a
T12*	Common Oak (<i>Quercus robur</i>)	11	410	4	5	4	6	4.0/W	2	Fair	SM	Good	Growing adjacent to ditch. Minor outer crown dieback.				20+	B1	n/a
T13*	Field Maple (<i>Acer campestre</i>)	10	200#	3	4	3	3	8.0/N	0	Good	EM	Good	No access to base, growing adjacent to ditch.				20+	B2	n/a
T14*	Ash (<i>Fraxinus excelsior</i>)	8	270	4	4	4	4	3.0/W	3	Good	SM	Good	Growing adjacent to ditch.				20+	B1	n/a
T15*	Ash (<i>Fraxinus excelsior</i>)	8	270	4	4	3	4	3.0/SW	2	Good	SM	Good	Growing adjacent to ditch.		Crown lift to 5m over the Scheme to provide reasonable clearance		20+	B1	n/a
T16*	Common Oak (<i>Quercus robur</i>)	14	550#	8	8	8	8	3.0/S	2	Good	EM	Good	No access to base, growing adjacent to ditch. Prominent tree. Good landscape value.		Crown lift to 5m over the Scheme to provide reasonable clearance		20+	B1	n/a
T17*	Common Oak (<i>Quercus robur</i>)	9	360	4	5	4	4	2.0/S	1	Good	SM	Good					20+	B1	n/a
T18*	Rowan (<i>Sorbus aucuparia</i>)	4	180#	3	2	3	3	1.8/N	1.3	Good	EM	Good	No access to base, growing adjacent to ditch. Several bark wounds on stem. Minor wound wood development.		Remove		10+	C1	n/a
T19*	Common Oak (<i>Quercus robur</i>)	12	700#	8	7	8	8	4.0/N	0	Good	M	Good	No access to base, growing adjacent to ditch. Ivy covered. Moderate deadwood. Good landscape value. Appears to have previously lost western crown but has regrown.				20+	B1,2	n/a
T20*	Ash (<i>Fraxinus excelsior</i>)	15	330	6	5	6	4	2.0/W	6	Fair	EM	Good	Growing adjacent to ditch. Moderate outer crown dieback. Low traffic area.				10+	C1	n/a
T21*	Ash (<i>Fraxinus excelsior</i>)	13	350,300#	6	7	7	5	4.0/E	4	Good	EM	Good	No access to base, growing adjacent to ditch. Two stems from base. Appears to be a good union. Moderate deadwood in lower crown.	Remove dead wood (< 3 months)			20+	B1,2	n/a
T22*	Ash (<i>Fraxinus excelsior</i>)	15	470,170#	7	7	6	7	5.0/E	4	Good	M	Good	No access to base, growing adjacent to ditch.				20+	B1,2	n/a
T23*	Field Maple (<i>Acer campestre</i>)	11	250#	3	4	3	3	2.0/W	3	Good	EM	Good	No access to base, growing adjacent to ditch.				20+	B1	n/a
T24*	Common Oak (<i>Quercus robur</i>)	11	320#	2	5	3	5	4.0/S	4	Good	SM	Good	No access to base, growing adjacent to ditch.				20+	B1	n/a
T25*	Common Oak (<i>Quercus robur</i>)	11	320#	5	2	5	5	5.0/SW	4	Good	SM	Good	No access to base, growing adjacent to ditch.			Crown lift to 5m over the Scheme to provide reasonable clearance	20+	B1	n/a

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Tree Works to Facilitate the Scheme	Hedgerow Linear Meterage Loss	Estimated Remaining Contribution	Category	Status
T26*	Common Oak (<i>Quercus robur</i>)	11	340#	4	5	3	5	5.0/SW	5	Good	SM	Good	No access to base, growing adjacent to ditch.		Remove		20+	B1	Important hedge (Archaeology)
T27*	Common Oak (<i>Quercus robur</i>)	11	380#	6	6	6	6	2.5/S	2	Good	EM	Good	No access to base, growing adjacent to ditch.		Crown lift to 5m over the Scheme to provide reasonable clearance		20+	B1	n/a
T28*	Common Oak (<i>Quercus robur</i>)	12	630#	7	7	7	7	2.0/S	2	Good	EM	Good	No access to base, growing adjacent to ditch. Good landscape feature.				20+	B1	n/a
T29*	Common Oak (<i>Quercus robur</i>)	22	1180	11	9	11	11	4.0/S	2	Good	M	Good	Significant landscape feature. Large deadwood. A number of previous limb failure wounds.				40+	A1	n/a
T30*	Common Oak (<i>Quercus robur</i>)	9	250	4	4	4	4	1.7/N	1	Good	M	Good			Remove		20+	B1	Important hedge (Archaeology)
T31*	Ash (<i>Fraxinus excelsior</i>)	15	600#	7	7	8	6	4.0/W	4	Fair	M	Good	No access to base. Growing adjacent to ditch. Moderate crown sparsity with moderate deadwood. Low traffic area.		Remove		20+	B2	Important hedge (Archaeology)
T32*	Ash (<i>Fraxinus excelsior</i>)	14	450#	6	5	6	6	2.5/SW	4	Fair	EM	Good	No access to base. Growing adjacent to ditch. Moderate inner crown sparsity with large deadwood. Low traffic area.		Remove		20+	B2	Important hedge (Archaeology)
T33*	Ash (<i>Fraxinus excelsior</i>)	14	480#	6	6	6	6	4.0/N	2	Fair	EM	Fair	No access to base. Growing adjacent to ditch. At least three <i>Inonotus hispidus</i> brackets visible in upper crown on stem and scaffold limbs. Woodpecker hole on main stem to north at 7m. Low traffic area.	If land frequency increases undertake safety survey.	Remove		10+	C1,2	Important hedge (Archaeology)
T34*	Common Oak (<i>Quercus robur</i>)	11	320,350,350,260#	6	6	7	5	1.7/SE	3	Good	SM	Good	No access to base. Growing adjacent to ditch.		Crown lift to 5m over the Scheme to provide reasonable clearance		20+	B1	n/a
T35*	Goat Willow (<i>Salix caprea</i>)	8	400#	4	4	4	3	2.0/N	0	Poor	EM	Fair	No access to base. Growing adjacent to ditch. Significant dieback of crown. Large deadwood. Low traffic area.	Fell if land frequency increases.			<10	U1	n/a
T36*	Common Oak (<i>Quercus robur</i>)	15	490	6	4	6	7	3.0/W	2	Good	EM	Good	Growing adjacent to ditch. Forms a row of early mature trees. Good landscape value.		Remove		20+	B1,2	n/a
T37*	Common Oak (<i>Quercus robur</i>)	14	710	8	8	7	9	2.0/SE	2	Good	M	Good	Growing adjacent to ditch. Good landscape value.		Remove		20+	B1,2	n/a
H38*	Blackthorn (<i>Prunus spinosa</i>), Field Maple (<i>Acer campestre</i>), Elder (<i>Sambucus nigra</i>), Hawthorn	2.5	100	1	1	1	1	n/a	n/a	Good	SM	Good	Managed hedge.		Remove in part as per TPP	5.2	10+	C2	n/a

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Tree Works to Facilitate the Scheme	Hedgerow Linear Meterage Loss	Estimated Remaining Contribution	Category	Status
	<i>(Crataegus monogyna)</i>																		
H39*	Hazel (<i>Corylus avellana</i>), Field Maple (<i>Acer campestre</i>), Unknown, Unknown	2.5	100	1	1	1	1	n/a	n/a	Good	SM	Good	Managed hedge.		Remove in part as per TPP	10.4	10+	C2	n/a
H40*	Hazel (<i>Corylus avellana</i>), Field Maple (<i>Acer campestre</i>), Elm (<i>Ulmus sp</i>), Unknown	4	150	2	2	2	2	n/a	n/a	Good	Y-SM	Good	Managed hedge. Several dead trees present. Low traffic area.		Remove in part as per TPP	10	10+	C2	n/a
H41*	Hawthorn (<i>Crataegus monogyna</i>), Field Maple (<i>Acer campestre</i>), Blackthorn (<i>Prunus spinosa</i>), Unknown	2.5	100	1	1	1	1	n/a	n/a	Good	Y-SM	Good	Managed hedge.		Remove in part as per TPP	7	10+	C2	n/a
G42*	Hawthorn (<i>Crataegus monogyna</i>), Ash (<i>Fraxinus excelsior</i>), Blackthorn (<i>Prunus spinosa</i>), Common Oak (<i>Quercus robur</i>)	12	180	4	4	4	4	n/a	n/a	Good - Fair	Y-SM	Good	Limited access to bases. Moderate to minor crown sparsity of ash likely to be Chalara ash dieback.		Remove in part as per TPP		10+	C2	n/a
G43*	Hawthorn (<i>Crataegus monogyna</i>), Ash (<i>Fraxinus excelsior</i>), Holly (<i>Ilex aquifolium</i>), Common Oak (<i>Quercus robur</i>)	12	250#	5	5	5	5	n/a	n/a	Good - Fair	Y-EM	Good	Limited access to bases.				20+	B2	n/a
H44*	Common Lime (<i>Tilia X europaea</i>), Hazel (<i>Corylus avellana</i>), Hawthorn (<i>Crataegus monogyna</i>), Elm (<i>Ulmus sp</i>)	3	100#	1	1	1	1	n/a	n/a	Good	SM	Good	No access to base, growing adjacent to ditch.		Remove in part as per TPP	7	10+	C2	n/a
G45*	Unknown	11	200#	3	3	3	3	n/a	n/a	Dead	SM	Dead	Two dead trees. Low traffic area.	If land frequency increases fell dead trees.			<10	U1	n/a
H46*	Blackthorn (<i>Prunus spinosa</i>), Hazel (<i>Corylus avellana</i>)	2.5	75#	1	1	1	1	n/a	n/a	Good	Y-SM	Good	No access to bases. Managed hedge.		Remove in part as per TPP	2	10+	C2	n/a
H47*	Blackthorn (<i>Prunus spinosa</i>), Field Maple (<i>Acer campestre</i>)	2	75#	1	1	1	1	n/a	n/a	Good	Y-SM	Good	No access to bases. Managed hedge.				10+	C2	n/a

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Tree Works to Facilitate the Scheme	Hedgerow Linear Meterage Loss	Estimated Remaining Contribution	Category	Status
W48*	Common Oak (<i>Quercus robur</i>), Sweet chestnut (<i>Castanea sativa</i>), Ash (<i>Fraxinus excelsior</i>), Field Maple (<i>Acer campestre</i>), Blackthorn (<i>Prunus spinosa</i>), Hawthorn (<i>Crataegus monogyna</i>), Sycamore (<i>Acer pseudoplatanus</i>), Cherry (<i>Prunus sp.</i>), Crack willow (<i>Salix fragilis</i>)	14	450#	4	4	4	4	n/a	n/a	Good	Y-SM	Good	Limited access. Dense woodland group.				20+	B2	n/a
G49*	Hawthorn (<i>Crataegus monogyna</i>), Field Maple (<i>Acer campestre</i>), Ash (<i>Fraxinus excelsior</i>), Common Oak (<i>Quercus robur</i>), Blackthorn (<i>Prunus spinosa</i>)	12	250#	4	4	4	4	n/a	n/a	Good	Y-SM	Good	Limited access to bases.			9.4	20+	B2	n/a
G50*	Hawthorn (<i>Crataegus monogyna</i>), Field Maple (<i>Acer campestre</i>), English Elm (<i>Ulmus procera</i>), Ash (<i>Fraxinus excelsior</i>)	12	200#	4	4	4	4	n/a	n/a	Good	SM-EM	Good	Limited access to bases. Growing adjacent to ditch.		Remove in part as per TPP.	8.9	20+	B2	n/a
H51*	Common Lime (<i>Tilia X europaea</i>), Goat Willow (<i>Salix caprea</i>), Hornbeam (<i>Carpinus betulus</i>), Field Maple (<i>Acer campestre</i>)	6	150#	2	2	2	2	n/a	n/a	Good	Y-SM	Good	No access to bases, growing adjacent to ditch. Partly managed hedge.		Remove in part as per TPP.	7.5	10+	C2	n/a
H52*	Blackthorn (<i>Prunus spinosa</i>)	2	100#	1	1	1	1	n/a	n/a	Good	SM	Good	No access to bases, growing adjacent to ditch. Managed hedge.		Remove in part as per TPP.	8.4	10+	C2	n/a
H53*	Blackthorn (<i>Prunus spinosa</i>), Elm (<i>Ulmus sp.</i>)	2	100#	1	1	1	1	n/a	n/a	Good	SM	Good	No access to bases, growing adjacent to ditch. Managed hedge.		Remove or coppice at ground level	102	10+	C2	n/a
G54*	Ash (<i>Fraxinus excelsior</i>), Common Oak (<i>Quercus robur</i>)	10	350	5	5	5	5	n/a	n/a	Good	SM	Good	Row of semi mature ash and oak. Average spacings of 11m.		Crown lift to 5m over the Scheme to provide reasonable clearance		20+	B1,2	n/a
H55*	Hazel (<i>Corylus avellana</i>), Field Maple (<i>Acer campestre</i>)	2	100	1	1	1	1	n/a	n/a	Good	SM	Good	Managed hedge.				10+	C2	n/a

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Tree Works to Facilitate the Scheme	Hedgerow Linear Meterage Loss	Estimated Remaining Contribution	Category	Status
G56*	Field Maple (<i>Acer campestre</i>), Common Oak (<i>Quercus robur</i>), Ash (<i>Fraxinus excelsior</i>), Blackthorn (<i>Prunus spinosa</i>), Hawthorn (<i>Crataegus monogyna</i>)	12	370	4	4	4	4	n/a	n/a	Good	Y-EM	Good	Limited access to bases, growing adjacent to ditch.				20+	B1,2	n/a
G57*	Ash (<i>Fraxinus excelsior</i>), Blackthorn (<i>Prunus spinosa</i>)	11	230#	4	4	4	4	n/a	n/a	Good - Poor	SM	Fair	No access to bases, growing adjacent to ditch. Predominantly ash with significant dieback and sparsity.	Fell dead/dying trees. (< 3 months)			10+	C2	n/a
G58*	Ash (<i>Fraxinus excelsior</i>), Hawthorn (<i>Crataegus monogyna</i>), Field Maple (<i>Acer campestre</i>), Elm (<i>Ulmus sp</i>)	12	250#	5	5	5	5	n/a	n/a	Good - Fair	SM	Good	No access to bases, growing adjacent to ditch. Ash with moderate dieback.				20+	B2	n/a
G59*	Ash (<i>Fraxinus excelsior</i>), Common Lime (<i>Tilia X europaea</i>), Common Oak (<i>Quercus robur</i>)	12	330#	5	5	5	5	n/a	n/a	Good	SM	Good	No access to bases, growing adjacent to ditch. Row of semi mature trees. Average spacing of 7m.		Crown lift to 5m over the Scheme to provide reasonable clearance		20+	B1,2	n/a
G60*	Field Maple (<i>Acer campestre</i>), Common Oak (<i>Quercus robur</i>), Elm (<i>Ulmus sp</i>), Hawthorn (<i>Crataegus monogyna</i>)	14	450#	5	5	5	5	n/a	n/a	Good	SM-EM	Good	No access to bases, growing adjacent to ditch.				20+	B1,2	n/a
H61*	Elm (<i>Ulmus sp</i>), Hazel (<i>Corylus avellana</i>), Hawthorn (<i>Crataegus monogyna</i>), Blackthorn (<i>Prunus spinosa</i>)	2	100#	1	1	1	1	n/a	n/a	Good	SM	Good	No access to bases, growing adjacent to ditch. Managed hedge.		Remove in part or coppice at ground level as per TPP	158	10+	C2	Important hedge (Archaeology)
H62*	Elm (<i>Ulmus sp</i>), Ash (<i>Fraxinus excelsior</i>), Hawthorn (<i>Crataegus monogyna</i>), Blackthorn (<i>Prunus spinosa</i>)	5	100#	2	2	2	2	n/a	n/a	Good	SM	Good	No access to bases, growing adjacent to ditch. Managed gappy hedge.		Remove in part as per TPP	13.2	10+	C2	Important hedge (Archaeology)
G63*	Common Oak (<i>Quercus robur</i>), Ash (<i>Fraxinus excelsior</i>), Hawthorn (<i>Crataegus monogyna</i>), Blackthorn (<i>Prunus spinosa</i>)	10	300#	4	4	4	4	n/a	n/a	Good	Y-SM	Good	No access to bases, growing adjacent to ditch. unmanaged hedge with a number of individual established trees within group.				20+	B2	n/a
G64*	Ash (<i>Fraxinus excelsior</i>), Common Lime (<i>Tilia X europaea</i>), Common Oak (<i>Quercus robur</i>)	11	350#	5	5	5	5	n/a	n/a	Good	SM	Good	No access to bases, growing adjacent to ditch. Row of semi mature trees. Average spacing of 8m.		Remove		20+	B1,2	n/a

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Tree Works to Facilitate the Scheme	Hedgerow Linear Meterage Loss	Estimated Remaining Contribution	Category	Status
H65*	Field Maple (<i>Acer campestre</i>), Common Lime (<i>Tilia X europaea</i>), Goat Willow (<i>Salix caprea</i>), Blackthorn (<i>Prunus spinosa</i>)	4	100#	1	1	1	1	n/a	n/a	Good	SM	Good	No access to bases, growing adjacent to ditch. Partly managed hedge.		Remove in part or coppice at ground level as per TPP	80	10+	C2	n/a
H66*	Blackthorn (<i>Prunus spinosa</i>), Hawthorn (<i>Crataegus monogyna</i>)	2	100#	1	1	1	1	n/a	n/a	Good	SM	Good	No access to bases, growing adjacent to ditch. Managed hedge.		Remove in part as per TPP	12.6	10+	C2	n/a
W67*	Common Oak (<i>Quercus robur</i>), Field Maple (<i>Acer campestre</i>), Hawthorn (<i>Crataegus monogyna</i>), Ash (<i>Fraxinus excelsior</i>)	16	600#	8	8	8	8	n/a	n/a	Good	Y-M	Good	Woodland group with significant landscape value.				40+	A1,2,3	Ancient Woodland
G68*	Field Maple (<i>Acer campestre</i>), Common Lime (<i>Tilia X europaea</i>)	12	250#	5	5	5	5	n/a	n/a	Good	SM-EM	Good	No access to bases, growing adjacent to ditch.				20+	B2	n/a
G69*	Field Maple (<i>Acer campestre</i>), Common Oak (<i>Quercus robur</i>)	10	160#	3	3	3	3	n/a	n/a	Good	SM	Good	No access to bases, growing adjacent to ditch.		Remove in part as per TPP	4.2	10+	C2	Important hedge (Archaeology)
G70*	Field Maple (<i>Acer campestre</i>)	10	180#	4	4	4	4	n/a	n/a	Good	SM	Good	No access to bases, growing adjacent to ditch.		Remove in part as per TPP	20	10+	C2	Important hedge (Archaeology)
G71*	Hawthorn (<i>Crataegus monogyna</i>), Field Maple (<i>Acer campestre</i>)	6	180#	3	3	3	3	n/a	n/a	Good	Y-SM	Good	No access to bases. Growing adjacent to ditch. One dead tree in group. Low traffic area.		Remove in part as per TPP	15.3	10+	C2	n/a
G72*	Hawthorn (<i>Crataegus monogyna</i>), Field Maple (<i>Acer campestre</i>), Common Lime (<i>Tilia X europaea</i>), Blackthorn (<i>Prunus spinosa</i>)	8	180#	4	4	4	4	n/a	n/a	Good	Y-SM	Good	No access to bases. Growing adjacent to ditch.		Remove in part as per TPP	57.7	10+	C2	n/a
H73*	Blackthorn (<i>Prunus spinosa</i>), Field Maple (<i>Acer campestre</i>), Hornbeam (<i>Carpinus betulus</i>)	3	100#	2	2	2	2	n/a	n/a	Good	SM	Good	No access to bases. Growing adjacent to ditch. Managed hedge.				10+	C2	n/a
G74*	Common Oak (<i>Quercus robur</i>), Cherry (<i>Prunus sp.</i>), Field Maple (<i>Acer campestre</i>), Hawthorn (<i>Crataegus monogyna</i>)	10	250#	5	5	5	5	n/a	n/a	Good	SM-EM	Good	No access to bases. Growing adjacent to ditch.				20+	B2	n/a
H75*	Blackthorn (<i>Prunus spinosa</i>)	3	100#	1	1	1	1	n/a	n/a	Good	EM	Good	No access to bases. Growing adjacent to ditch. Managed hedge.				10+	C2	n/a
G76*	Common Lime (<i>Tilia X europaea</i>)	11	250#	4	4	4	4	n/a	n/a	Good	SM	Good	No access to bases. Growing adjacent to ditch.		Remove	15.7	20+	B2	Important hedge (Archaeology)

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Tree Works to Facilitate the Scheme	Hedgerow Linear Meterage Loss	Estimated Remaining Contribution	Category	Status
													Previous crown lifting over access route.						
G77*	Ash (<i>Fraxinus excelsior</i>), Blackthorn (<i>Prunus spinosa</i>), Field Maple (<i>Acer campestre</i>)	12	180#	4	4	4	4	n/a	n/a	Good - Fair	Y-SM	Good - Fair	No access to bases. Growing adjacent to ditch. Several semi mature ash with minor to moderate dieback.		Remove	49	10+	C2	Important hedge (Archaeology)
H78*	Blackthorn (<i>Prunus spinosa</i>), Goat Willow (<i>Salix caprea</i>), Hawthorn (<i>Crataegus monogyna</i>)	6	150#	3	3	3	3	n/a	n/a	Good	SM-EM	Good	No access to bases. Growing adjacent to ditch. Unmanaged hedge.		Remove in part as per TPP	21	10+	C2	n/a
W79*	Ash (<i>Fraxinus excelsior</i>), Common Oak (<i>Quercus robur</i>), Elder (<i>Sambucus nigra</i>), Field Maple (<i>Acer campestre</i>), Elm sp. (<i>Ulmus sp.</i>)	18	800#	8	8	8	8	n/a	n/a	Good - Dead	Y-M	Good - Dead	Limited access to bases. Significant woodland group.				40+	A1,2,3	Ancient Woodland
G80*	Ash (<i>Fraxinus excelsior</i>), Common Oak (<i>Quercus robur</i>), Hawthorn (<i>Crataegus monogyna</i>)	15	700#	9	9	9	9	n/a	n/a	Good	EM-M	Good	Limited access to bases. Growing adjacent to ditch. Row of early mature to mature oak and ash with hawthorn understory. Good landscape value.		Remove	41.4	20+	B1,2	n/a
G81*	Hawthorn (<i>Crataegus monogyna</i>), Field Maple (<i>Acer campestre</i>), Elder (<i>Sambucus nigra</i>)	9	160#	4	4	4	4	n/a	n/a	Good	SM	Good	Limited access to bases. Growing adjacent to ditch.		Remove	42.9	10+	C2	n/a
G82*	Elder (<i>Sambucus nigra</i>)	3	80#	2	2	2	2	n/a	n/a	Good - Dead	Y-SM	Good - Dead	Self set elder. No access to bases. Several dead trees present. Low traffic area.		Remove		10+	C2	n/a
T83*	Common Oak (<i>Quercus robur</i>)	12	200	5	0.1	5	3	2.0/N	4	Good	SM	Good	Moderate form suppression from tree to south.				10+	C1	n/a
T84*	Common Oak (<i>Quercus robur</i>)	15	560	7	5	5	8	4.0/N	3	Good	EM	Good	Power line extending through crown. Forms large crown with adjacent oak.		Remove		20+	B1,2	n/a
T85*	Common Oak (<i>Quercus robur</i>)	15	410,320,470	5	7	8	4	4.0/N	3	Good	EM	Good	Power line extending through crown. Forms large crown with adjacent oak.		Remove		20+	B1,2	n/a
T86*	Common Oak (<i>Quercus robur</i>)	15	350,300,300#	6	4	6	6	2.5/N	1	Good	EM	Good	No access to base. Power line extending through crown. Forms large crown with adjacent oak.		Remove		20+	B1,2	n/a

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Tree Works to Facilitate the Scheme	Hedgerow Linear Meterage Loss	Estimated Remaining Contribution	Category	Status
T87*	Common Oak (<i>Quercus robur</i>)	15	450#	3	6	7	7	2.5/E	1	Good	EM	Good	No access to base. Power line extending through crown. Forms large crown with adjacent oak.		Crown lift to 5m over the Scheme to provide reasonable clearance		20+	B1,2	n/a
T88*	Common Oak (<i>Quercus robur</i>)	15	360,600,260,150,140#	7	8	7	6	1.7/N	2	Good	EM	Good	Limited access to base. Powerline extending through crown.		Remove		20+	B1,2	n/a
T89*	Common Oak (<i>Quercus robur</i>)	15	320	6	6	6	3	3.0/N	6	Good	EM	Good			Remove		20+	B1,2	n/a
T90*	Unknown	13	280	2	2	2	2	n/a	n/a	Dead	EM	Dead	Dead stem adjacent to road.	Fell (< 1 month)	Remove		<10	U	n/a
T91*	Field Maple (<i>Acer campestre</i>)	13	240,120	1	6	4	4	3.0/S	1	Good	EM	Good	Growing adjacent to ditch. Moderate form suppression from trees to north.		Remove		10+	C1,2	n/a
T92*	Common Oak (<i>Quercus robur</i>)	13	450	4	6	5	5	2.0/S	2	Good	EM	Good	Ivy covered. Powerline extending through crown.		Remove		20+	B2	n/a
T93*	Common Oak (<i>Quercus robur</i>)	15	490	7	7	7	7	3.0/S	0.5	Good	EM	Good	Good form.				20+	B1,2	n/a
T94*	Common Oak (<i>Quercus robur</i>)	14	420,250#	6	6	6	6	2.0/N	2	Good	EM	Good	No access to base.				20+	B1,2	n/a
T95*	Common Oak (<i>Quercus robur</i>)	8	200	4	4	1	4	1.0/S	1	Poor	SM	Fair	Significant crown dieback and sparsity. Low traffic area.	Fell if land frequency increases.	Remove		<10	U	n/a
T96*	Weeping Willow (<i>Salix X chrysocoma</i>)	16	900#	7	8	7	8	4.0/SW	0	Good	M	Good	No access to base. Ivy covered. Previous crown lifting over access track to west. Good landscape feature. Adjacent to ditch.				20+	B1,2	n/a
G97*	Blackthorn (<i>Prunus spinosa</i>), Field Maple (<i>Acer campestre</i>)	9	130#	4	4	4	4	n/a	n/a	Good	Y-SM	Good	Limited access to bases. Adjacent to ditch.		Remove in part as per TPP	28.4	10+	C2	n/a
G98*	Blackthorn (<i>Prunus spinosa</i>), Hawthorn (<i>Crataegus monogyna</i>)	6	100#	2	2	2	2	n/a	n/a	Good	Y-SM	Good	No access to bases. Understory group.		Remove in part as per TPP	26.4	10+	C2	n/a
G99*	Common Oak (<i>Quercus robur</i>), Elder (<i>Sambucus nigra</i>), Blackthorn (<i>Prunus spinosa</i>)	16	500#	7	7	7	7	n/a	n/a	Good	EM	Good	Limited access to bases. Row of early mature oak.				20+	B1,2	n/a
G100*	Field Maple (<i>Acer campestre</i>), Elder (<i>Sambucus nigra</i>), Blackthorn (<i>Prunus spinosa</i>), Hornbeam (<i>Carpinus betulus</i>)	11	150	3	3	3	3	n/a	n/a	Good	Y-SM	Good	Mixed group adjacent to ditch.		Remove in part as per TPP	23.7	10+	C2	n/a
G101*	Common Oak (<i>Quercus robur</i>), Blackthorn (<i>Prunus spinosa</i>), Field	16	650#	7	7	7	7	n/a	n/a	Good	SM-EM	Good	Limited access to bases. Group of predominantly semi mature to early mature oak. Good landscape feature.		Remove in part as per TPP.	21	20+	B1,2	n/a

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Tree Works to Facilitate the Scheme	Hedgerow Linear Meterage Loss	Estimated Remaining Contribution	Category	Status
	Maple (<i>Acer campestre</i>)																		
G102*	Hawthorn (<i>Crataegus monogyna</i>), Blackthorn (<i>Prunus spinosa</i>), Elder (<i>Sambucus nigra</i>)	8	150#	3	3	3	3	n/a	n/a	Good	SM	Good	No access to bases. Dense group.				10+	C2	n/a
G103*	Common Oak (<i>Quercus robur</i>), Goat Willow (<i>Salix caprea</i>), Blackthorn (<i>Prunus spinosa</i>)	13	400#	5	5	5	5	n/a	n/a	Good	SM-EM	Good	Dense group. No access to bases.		Remove in part as per TPP.		20+	B1,2	n/a
G104*	Field Maple (<i>Acer campestre</i>), Hawthorn (<i>Crataegus monogyna</i>), Common Oak (<i>Quercus robur</i>), Goat Willow (<i>Salix caprea</i>)	8	150#	3	3	3	3	n/a	n/a	Good	Y	Good	Limited access to bases. Plantation group.		Remove in part as per TPP		10+	C2	n/a
G105*	Hawthorn (<i>Crataegus monogyna</i>), Blackthorn (<i>Prunus spinosa</i>), Hazel (<i>Corylus avellana</i>)	7	100#	3	3	3	3	n/a	n/a	Good	SM	Good	No access to bases. Dense group.		Remove in part as per TPP		10+	C2	n/a
G106*	Common Oak (<i>Quercus robur</i>), Field Maple (<i>Acer campestre</i>), Hornbeam (<i>Carpinus betulus</i>), Elder (<i>Sambucus nigra</i>)	18	600#	7	7	7	7	n/a	n/a	Good	SM-EM	Good	No access to bases. Dense group. Good landscape value.				20+	B1,2	Tree Preservation Order
G107*	Field Maple (<i>Acer campestre</i>), Hawthorn (<i>Crataegus monogyna</i>), Goat Willow (<i>Salix caprea</i>), Common Oak (<i>Quercus robur</i>), Ash (<i>Fraxinus excelsior</i>), Silver Birch (<i>Betula pendula</i>), White Poplar (<i>Populus alba</i>), Common Lime (<i>Tilia x europaea</i>)	12	170#	5	5	5	5	n/a	n/a	Good	Y-SM	Good	Limited access to bases. Predominantly a young plantation with several (circa 10) larger specimens set back into group up to 300mm stem diameter.		Remove in part as per TPP		10+	C1,2	n/a
W108*	White Willow (<i>Salix alba</i>), Hazel (<i>Corylus avellana</i>), Ash (<i>Fraxinus excelsior</i>), Sycamore (<i>Acer pseudoplatanus</i>), Elder (<i>Sambucus nigra</i>), Field Maple (<i>Acer campestre</i>)	18	600#	6	6	6	6	n/a	n/a	Good	Y-M	Good	No access to bases. Viewed from road. Woodland group.				20+	B1,2	n/a

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Tree Works to Facilitate the Scheme	Hedgerow Linear Meterage Loss	Estimated Remaining Contribution	Category	Status
G109*	White Willow (<i>Salix alba</i>)	14	350#	4	4	4	4	n/a	n/a	Good	SM	Good	No access to bases. Growing adjacent to ditch. Evenly spaced group. Spacings of circa 8m.				20+	B2	n/a
G110*	Leyland Cypress (<i>X Cupressocyparis leylandii</i>), Common Alder (<i>Alnus glutinosa</i>), Elder (<i>Sambucus nigra</i>)	18	500#	6	6	6	6	n/a	n/a	Good - Fair	SM-M	Good	No access to bases. Growing adjacent to ditch. Leylandii showing some upper crown dieback.				20+	B1,2	n/a
G111*	Horse Chestnut (<i>Aesculus hippocastanum</i>)	17	650#	7	7	7	7	n/a	n/a	Good	M	Good	No access to base. Dense crown down to ground level obstructing survey. Good landscape value.		Remove	16.3	20+	B1,2	n/a
T112*	Small Leaved Lime (<i>Tilia x cordata</i>)	12	900, 450, 700#	7	7	10	9	n/a	0	Fair	V	Poor	No access to base. Tree stems have recently failed at the base. Western stem is dead but eastern stem appears to be in good physiological condition. Low traffic area. Identified on ATI as veteran.				40+	A3	Veteran Tree and Provisional TPO
T113*	Common Oak (<i>Quercus robur</i>)	22	1150	7	9	9	5	5.0/W	4	Good	M	Good	Prominent tree. Several large wounds in crown. Large deadwood. Large longitudinal bark wound to north of codominant stem circa 5m long and 300mm wide. Minor to moderate wound wood development. Low traffic area. Significant landscape value.				40+	A1,2	n/a
T114*	Common Oak (<i>Quercus robur</i>)	20	930	7	8	5	8	5.0/W	4	Good	M	Good	Prominent tree. Several large wounds in crown. Large deadwood. Minor inner crown sparsity of northern crown. Low traffic area. Significant landscape value.				40+	A1,2	n/a
T115*	Ash (<i>Fraxinus excelsior</i>)	17	990	6	6	7	7	5.0/SE	1	Good	M	Good	Growing adjacent to ditch. Large pruning wounds to south over arable field including one limb circa 330mm diameter. Several limb failure wounds in crown.				20+	B1,2	n/a
T116*	Ash (<i>Fraxinus excelsior</i>)	9	220	4	3	4	3	5.0/E	2	Good	SM	Good	No access				20+	B2	n/a
T117*	Ash (<i>Fraxinus excelsior</i>)	8	212.602	2	4	2	4	4.0/S	2	Good	SM	Good	Suppressed form				10+	C2	n/a
G118*	Field Maple (<i>Acer campestre</i>), Blackthorn (<i>Prunus spinosa</i>), Hawthorn (<i>Crataegus monogyna</i>), Hazel (<i>Corylus avellana</i>), Elm (<i>Ulmus</i> sp)	11	300	4	4	4	4	n/a	n/a	Good		Good	Growing adjacent to ditch				20+	B2	n/a

Tree ID	Species	Estimated Height (m)	Stem Diameter (mm)	Canopy Spread (N)	Canopy Spread (S)	Canopy Spread (E)	Canopy Spread (W)	First Significant Branch (m)	Canopy Clearance (m)	Physiological Condition	Life Stage	Structural Condition	Condition Comments	Preliminary Management Comments	Tree Works to Facilitate the Scheme	Hedgerow Linear Meterage Loss	Estimated Remaining Contribution	Category	Status
T119*	Ash (<i>Fraxinus excelsior</i>)	12	300	5	5	5	5	5.0/W	3	Good	SM	Good					20+	B2	n/a
T120*	Field Maple (<i>Acer campestre</i>)	7	220	3	3	3	3	1.3/N	0	Good	EM	Good	No access. Minor form suppression to south				20+	B2	n/a
T121*	Common Oak (<i>Quercus robur</i>)	12	930	6	6	6	6	3.0/SW	3	Fair	V	Good	Significant crown dieback. Large sections of deadwood. Sparse lower crown. Old Fungal fruiting body at base to north and younger fruiting bodies to north, east and south east. Likely to be beef steak fungus. Minor cavity to south at base that extends in >0.4m with brown rot.	Likely to be a veteran tree			40+	A3	Veteran tree
G122*	Elder (<i>Sambucus nigra</i>), Hawthorn (<i>Crataegus monogyna</i>), Blackthorn (<i>Prunus spinosa</i>), Ash (<i>Fraxinus excelsior</i>)	8	100	3	3	3	3	n/a	n/a	Good		Good	Limited access. RPAs unlikely to extend beneath existing hard surfacing				10+	C2	n/a
T123*	Cherry (<i>Prunus</i> sp)	9	240	5	2	4	3	3.0/N	4	Good	SM	Good	Minor form suppression to south				10+	C2	n/a
H124*	Field Maple (<i>Acer campestre</i>), Blackthorn (<i>Prunus spinosa</i>)	2.5	75										Managed hedge				10+	C2	n/a
H125*	Field Maple (<i>Acer campestre</i>), Blackthorn (<i>Prunus spinosa</i>), Hawthorn (<i>Crataegus monogyna</i>), Hazel (<i>Corylus avellana</i>)	2.5	75										Managed hedge				10+	C2	n/a
T126*	Ash (<i>Fraxinus excelsior</i>)	12	400	6	5	5	6	3.0/N	2	Good	EM	Good	No Access				20+	B2	n/a

Key to Abbreviations Used in the Survey

Ref No	Specific identification number given to each tree or group. T=Tree/H=Hedge/G=Group.	
Species	Common name followed by botanical name shown in <i>italics</i>	
RPA	Root Protection Area (As defined by BS5837)	
Stem diameter	Diameter of main stem, measured in millimetres at 1.5 m above ground level. (MS = Multi-stem tree measured in accordance with BS5837 Annexe C)	Av / Average: indicates an average representative measured dimension for the group or feature
Spread	The width and breadth of the crown. Estimated on the four compass points in metres.	
Crown clearance	The estimated height (in metres) above ground level of the lowest significant branch attachments.	
#	Estimated dimensions	
*	Indicates estimated position of tree (not indicated on topographical survey).	
Category	Categorisation of the quality and benefits of trees on site as per Table 1 and 2 of BS5837:2012. 1=Arboricultural quality/value 2=Landscape quality/value 3=Cultural quality/value (including conservation)	
	A=High quality/value 40yrs+ (light green). B=Moderate quality/value 20yrs+ (mid blue) C=Low quality/value min 10yrs/stem diameter less than 150mm (grey). U=Unsuitable for retention (dark red).	
Life stage	<p>Young (Y): Newly planted tree 0-10 years.</p> <p>Semi-Mature (SM): Tree in the first third of its normal life expectancy for the species (significant potential for future growth in size).</p> <p>Early Mature (EM): Tree in the second third of its normal life expectancy for the species (some potential for future growth in size)</p> <p>Mature (M): Tree in the final third of its normal life expectancy for the species (having typically reached its approximate ultimate size).</p> <p>Over Mature (OM): Tree beyond the normal life expectancy for the species.</p> <p>Veteran (V): Tree which is of interest biologically, aesthetically or culturally because of its condition, size or age.</p>	

Structural condition	<p>Good: No significant structural defects</p> <p>Fair: Structural defects which can be resolved via remedial works.</p> <p>Poor: Structural defects which cannot be resolved via remedial works.</p> <p>Dead: Dead.</p>
Physiological condition	<p>Good: Normal vitality including leaf size, bud growth, density of crown and wound wood development.</p> <p>Fair: Lower than normal vitality, reduced bud development, reduced crown density, reduced response to wounds.</p> <p>Poor: Low vitality, low development and distribution of buds, discoloured leaves, low crown density, little extension growth for the species.</p> <p>Dead: Dead</p> <p>Fair/Good = Indicates an intermediate condition</p> <p>Fair – Good = Indicates a range of conditions (e.g. within a group)</p>
Preliminary management recommendations	<p>Works identified during the tree survey as part of sound arboricultural management, based on the current context of the Order limits (where relevant reference has been made to tree management based on the potential future context of the Order limits).</p>
Works to facilitate the development	<p>Tree works identified as necessary to facilitate the Scheme following a desk top analysis of the proposals in relation to tree constraints.</p>

Appendix C Site Photography



Figure 6 – Showing the eastern stem of T112 the veteran lime tree.



Figure 7 – Showing the base of T112.



Figure 8 – Showing T9 a veteran oak tree.



Figure 9 – Showing T9.



Figure 10 – Showing T121 a veteran oak tree.

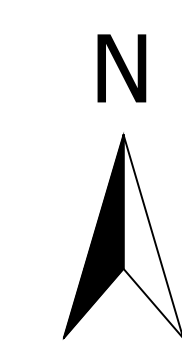
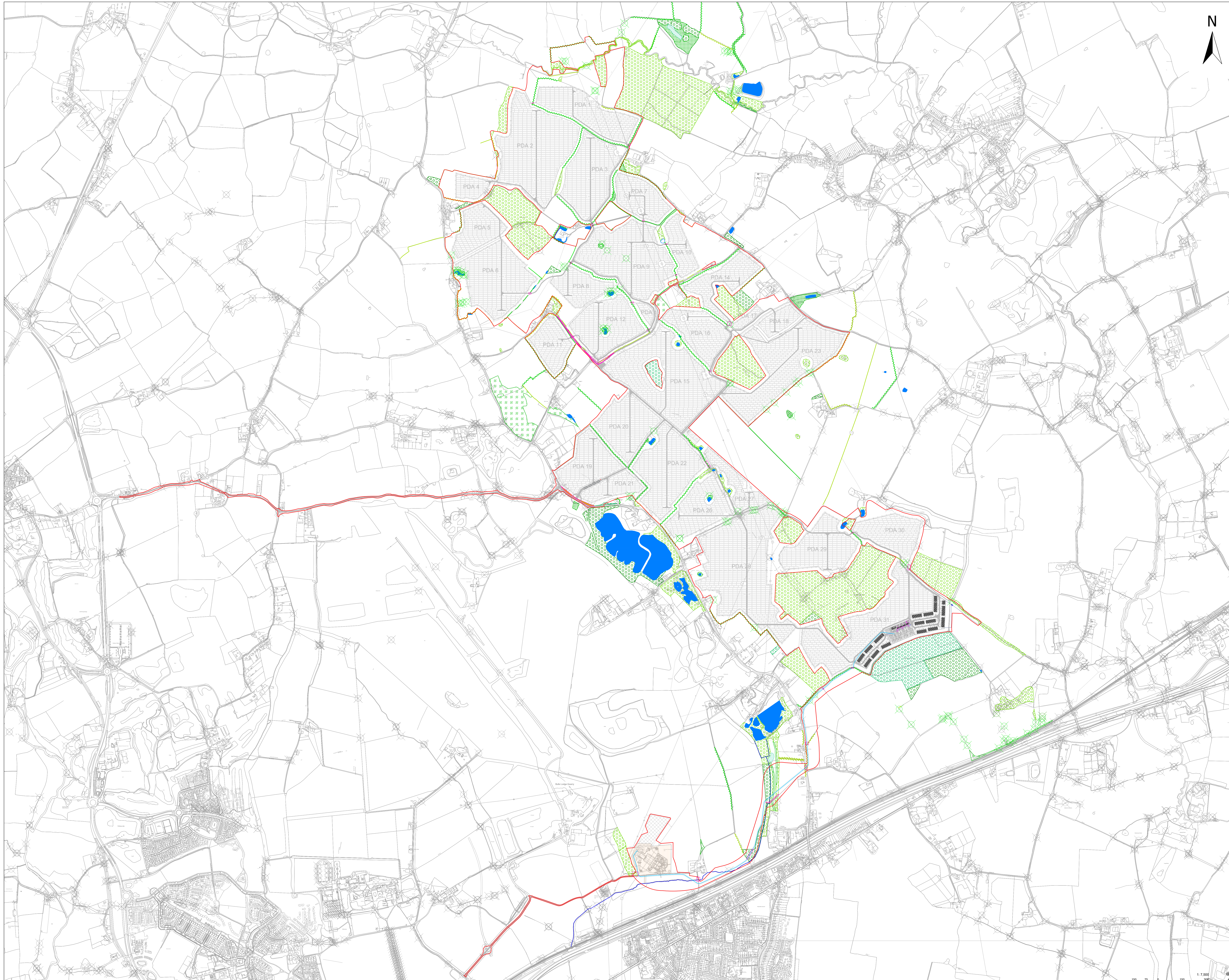


Figure 11 – Showing T121



Figure 12 – Showing T113 (right) and T114 (left) two high quality (Category A) trees. Figure 13 – Showing T29 a high quality (Category A) tree.

Appendix D Vegetation Removal Plan Submitted with the DCO Application



- LEGEND**
- Order Limits
 - Layout Infrastructure
 - Broadleaved Woodland- Plantation
 - Broadleaved Woodland- Semi Natural
 - Mixed Woodland- Semi Natural
 - Scrub-Dense Continuous
 - Scrub-Scattered
 - Standing Water
 - Swamp
 - Hedge With Trees- Species Rich
 - Hedge With Trees- Species Poor
 - Intact Hedge-Native Species Rich
 - Intact Hedge-Native Species Poor
 - Defunct Hedge-Native Species Rich
 - Defunct Hedge-Native Species Poor
 - Running Water
 - Broadleaved Tree
 - Coniferous Tree
 - Potential Area of Vegetation Removal
 - Cable Run
 - 10 m Cable Corridor



NOTES
This drawing is to be read in conjunction with all other relevant documentation.
All dimensions, changes, levels, and coordinates are in metres unless defined otherwise.
This drawing is to be read in conjunction with the project health & safety file for any identified potential risks.
The drawing is the copyright of Arcus and cannot be reproduced in any form without the express consent of the company. Written and scaled dimensions to be checked on site, and any discrepancies should be reported to Arcus prior to work commencing on site.

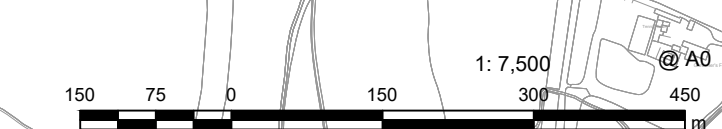
Reproduced from Ordnance Survey digital map data © Crown copyright 2022. All rights reserved. License number 100048606.
Scale above 1:2,500 used as appropriate for figure requirements.

ISSUE PURPOSE
Environmental Statement
APFP Regulation: 5(2)(a)

PINS REFERENCE NUMBER
EN010118

FIGURE TITLE
Vegetation Removal Plan

FIGURE NUMBER
Figure 10-15



Appendix E Tree Protection Plan