Fairgreen BESS

British Standards 5837:2012 Tree Survey: Arboricultural Impact Assessment, Method Statement and Tree Protection Plan

Client:

Renewable Energy Systems Ltd

Report Reference:

RSE_9244_R1_V3_ARB

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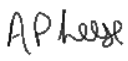
Originated:	**Andy Leese** MSc, MArborA	Arboriculturist		23/06/2025
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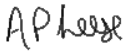
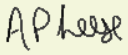
Issued to Client:	**Andy Leese** MSc, MArborA	Arboriculturist		23/06/2025
Revisions: V3	**Andy Leese** MSc, MArborA	Arboriculturist		26/06/2025

1 EXECUTIVE SUMMARY

i RammSanderson Ecology Ltd was instructed by Renewable Energy Systems Ltd to carry out an assessment of trees within a site in North Benfleet, Basildon, Essex which follows the guidance of British Standards 5837:2012 'Trees in relation to design, demolition and construction – Recommendations', and to provide a report on the arboricultural implications to the proposed development of the site.

ii The current development proposals are for a Battery Energy Storage System and associated access.

iii A current topographical survey of the site in AutoCAD format has been provided and this formed the basis for the Tree Constraints Plan.

iv Following consultation with the project planners regarding the arboricultural constraints, a site layout plan has been produced which is considered represent the most appropriate integration between the proposals and existing trees. A provided AutoCAD copy of this proposed site plan (Drawing Number: 05560-RES-LAY-DR-PT-001–rev 3) has been considered during the Arboricultural Impact Assessment and used to produce Tree Protection Plan.

v The content and scope of this report is listed below:

- BS 5837:2012 Tree Survey and Categorisation
- Arboricultural Impact Assessment
- Arboricultural Method Statement
- Tree Protection Plan

1.1 Findings and Recommendations

i The survey assessed a total of 75 trees, 41 groups of trees and 8 hedgerows. There was a moderate amount of tree cover on the site mainly confined to the site edges and alongside existing access track routes. There was a general mix of moderate quality (category B) and low quality (category C) trees and tree groups with occasional high-quality (category A) trees.

ii There are currently no tree preservation orders (TPO) at this location and the site is not situated within a conservation area. Therefore, none of the trees detailed within this report were subject to statutory protection at the time of the survey.

iii A total of 2 trees were assessed as category U (trees T31 and T63). If no targets remain, it is considered acceptable for T31 to be retained, otherwise it should be removed or the owner notified of its condition. T63 should be removed or the owner notified of its condition if outside of ownership.

iv The proposed development will require the removal of 5 individual low-quality trees (T10, T26, T27, T72 and T75) plus the removal of small hedgerow sections H2, H3, H4 and H5. Pruning back, edge and section removals are also anticipated for low quality groups G3, G4, G8, G9, G31, G32, G33, G34 and G35 for access purposes.

v There will therefore be a low impact to the arboricultural and amenity value on the site. Although a low impact, it is nevertheless recommended to add tree planting to the landscape design where feasible and appropriate to compensate for losses.

vi It is recommended that temporary protective fencing is erected in order to create a construction exclusion zone which adequately protects the retained trees from damage during the construction works. This fencing should be erected at the outset of the development before any activities are carried out or materials/ plant is brought onto the site. For full details see the Tree Protection Plan (Appendix D).

vii Minor incursions are anticipated from existing access track upgrading / resurfacing within the edges of the Root Protection Areas of trees T39, T40, T43, T45, T67, T68, and groups G21, G22, and G33. It is therefore recommended to avoid excavation where possible when undertaking this work to the existing access track to minimise root impacts to these trees. Where existing hard surfacing is in place such as for trees T43 and T45, the existing sub-base should be retained to prevent impacts to root layers.

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2 INTRODUCTION AND BACKGROUND

2.1 Purpose and Scope of this Report

i This report has been prepared following the guidance within BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations' Its purpose is to assess the likely arboricultural implications to the development proposals for the site and to be submitted in support of a planning application to the Local Planning Authority seeking consent for these proposals. It also provides arboricultural guidance on how the proposed development can be achieved while minimising any potential detrimental impacts to retained trees.

ii In preparing this report, consideration has been given to the proposed layout, the condition of the trees, and the final use of the site with a focus on providing a harmonious, balanced environment between the trees, buildings, and the end users of the site.

iii Whilst not definitive, the findings and any associated recommendations detailed within this report are considered reasonable, practicable, sustainable, and in the interests of promoting good arboricultural management.

iv Recommendations included within this report are the professional opinion of an experienced Arboriculturist and are the view of RammSanderson Ecology Ltd. This is based on a review of the information provided by the Client, the brief, and a survey of the site. This report pertains to these results only.

v This report and the survey(s) on which it depends have been carried out by a competent Arboriculturist.

2.2 Regulatory and Policy Framework

i Part VIII of the Town and Country Planning Act 1990 (as amended) and the Town and Country Planning (Tree Preservation) (England) Regulations 2012 enable a local planning authority to make a Tree Preservation Order (TPO) to protect specific trees, groups of trees, or woodlands in the interests of amenity. A TPO prohibits the cutting down, toppling, lopping, uprooting, wilful damage, and wilful destruction of protected trees without the local planning authority's written consent.

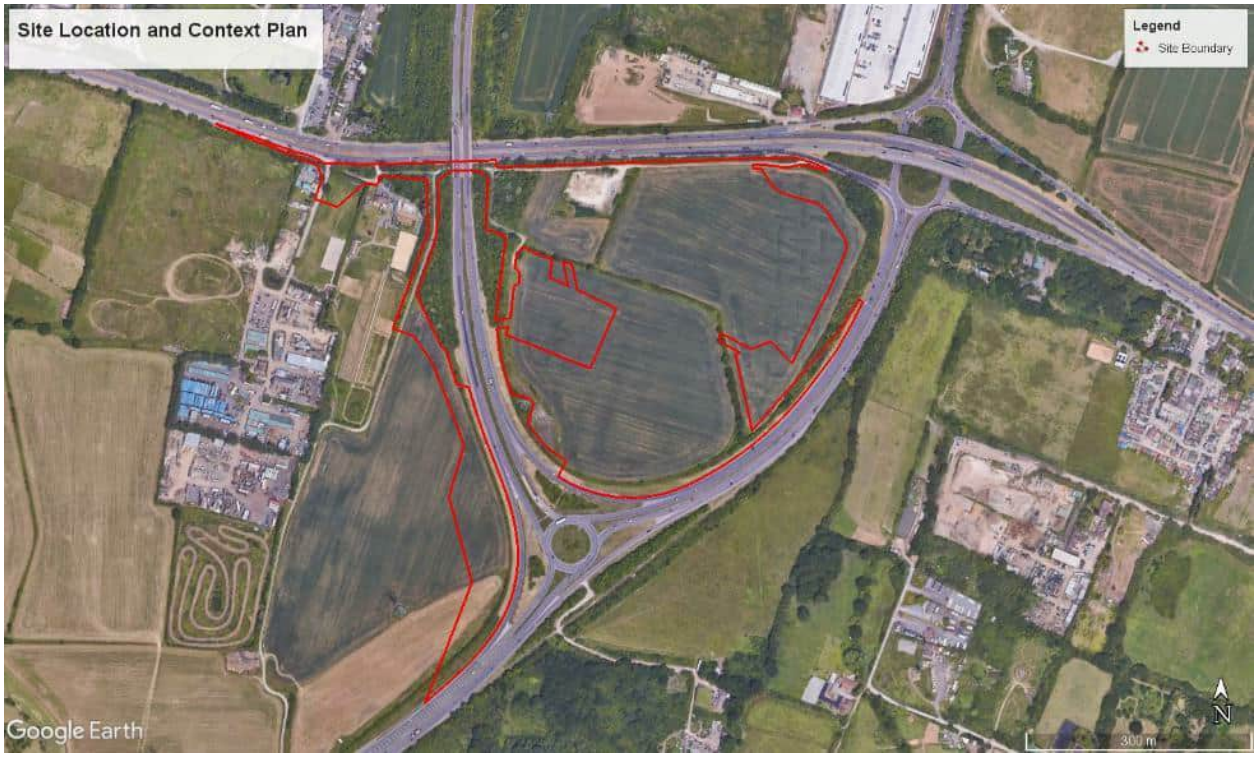
ii Section 211 of the Town and Country Planning Act 1990 makes provisions to protect trees which are within a conservation area, but not the subject of a TPO. These provisions require anyone intending to carry out works to a tree within a conservation area to give the local planning authority 6 weeks' notice before carrying out certain works unless an exemption applies.

iii The Forestry Act (1967) requires that a Felling Licence, issued by the Forestry Commission, is obtained before felling trees, unless an exemption applies; such exemptions include felling small quantities of trees (less than $5m^3$ of timber in any calendar quarter) or felling in specific areas (e.g. gardens).

2.3 Site Location and Context

i The site comprised large open grassland field compartments divided by hedgerows and tree groups located predominantly around the edges of the site. The site was located along the Southend Arterial Road, Bowers Gifford and North Benfleet, Basildon, Essex. The approximate Central Grid Reference for the site was TQ 77656 90588.

Figure 1: Site Location Plan



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3 SURVEY METHODOLOGY

3.1 Survey Methods

i The site was visited between the 25th to the 27th March 2025, the 7th to the 9th May 2025 and the 17th of June 2025 to carry out an assessment in accordance with BS 5837:2012 – Trees in relation to Design, Demolition and Construction - Recommendations.

ii The weather at the time was considered to be adequate for conducting the survey during which, the following information was collected:

- Sequential reference number (recorded on the tree survey plan), including reference to type (tree, group, woodland, or hedgerow).
- Species, listed by common name (a key to scientific names is provided at Appendix B).
- Height.
- Stem diameter measured @ 1.5m height (for trees with more than one stem, the combined stem diameter is recorded as per BS5837:2012 Section 4.6).
- Branch spread (measured at the four cardinal points).
- Existing height above ground level of first significant branch.
- Life stage:

  Y – Young,
  SM – Semi Mature,
  EM – Early Mature,
  M – Mature,
  OM – Over Mature.

- General observations, particularly of structural and/or physiological condition, and/or preliminary management recommendations as appropriate.
- Estimated remaining contribution (future life expectancy) in years (<10, 10+. 20+, 40+);
- Tree quality assessment category grading as per Section 4.5 and Table 1 of BS5837:2012. 'U' or 'A' to 'C' grading with the subcategory 1, 2 or 3 reflecting arboricultural, landscape or cultural values, respectively.

Notes: Only individual trees with a stem diameter of 75mm or greater are included in the survey. It is not always practical or necessary to record individual details for every tree within a group or woodland. Only basic details (height and species) for domestic hedgerows and significant shrubs were recorded. More substantial hedgerows (including evergreen screens) are generally recorded in a similar manner to groups of trees.

iii The measurement conventions used were as follows:

- Height, crown spread, and crown clearance was recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.
- Stem diameter was recorded in millimetres, rounded to the nearest 10mm.
- Any estimated dimensions (for offsite or otherwise inaccessible trees where accurate measurements cannot be taken) were clearly identified as such in the tree schedule (Appendix A).

iv The survey includes all trees plotted on the provided topographical survey. Should any relevant trees on or adjacent to the site have been missed on the topographical survey, these have been included where appropriate. However, the positions indicated on any plans included within this report for all trees not included on the provided topographical survey have been approximated for the purposes of identification only, and if accurate locations are required these should be confirmed on site.

4 LIMITATIONS

4.1 Survey

i Each of the surveyed trees has been plotted and recorded as an individual tree or a tree group in accordance with the criteria detailed in section 4.4.2.5 of BS 5837:2012.

ii The information contained within this report is based on the author's knowledge and experience in respect of tree related issues. Whilst the appropriate level of skill and care have been used, no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete, or not fully representative information.

iii Any survey work undertaken will have been subject to natural limitations, including seasonal and phenological aspects.

iv Trees were assessed from ground level using the Visual Tree Assessment (VTA) method. The trees included in the survey were not climbed, no samples were removed, and no detailed internal investigation of decay was made.

v Where other vegetation (e.g. ivy or dense ground cover) prevented full access to any tree, this is noted in the tree survey schedule (Appendix A). Dense ivy cover can prevent full access to a tree and so obscure the presence of cavities or other defects. Any such situations are noted in the tree survey schedule with, where appropriate, recommendations for the ivy to be removed and a re-inspection carried out. No ivy was removed from any tree during the survey.

vi No liability can be accepted by RammSanderson Ecology Ltd. in respect of the trees unless the recommendations of this report are carried out under their supervision and within their recommended timescales. Acceptance of this report represents an agreement with the guiding principles and the terms listed.

vii The findings and recommendations contained within this report are, assuming its recommendations are observed, valid for a period of twelve months from the date of survey. Trees are living organisms and their condition can change significantly over a relatively short period of time – good practice dictates they are inspected on a regular basis for reasons of safety.

viii Any hedgerows within the survey area were assessed solely for their general arboricultural condition and value. Further detailed assessment, following the Hedgerow Regulations 1997, is outside the scope of this report and no attempt has been made during this assessment to classify any hedgerow under the criteria within those Regulations.

ix Tree rooting characteristics and soils are both enormously variable as are their interactions. This makes any attempts to quantify tree related subsidence risk assessment impossible. No attempt has been made to assess subsidence risk potential nor should any be construed.

x The report relates only to the trees included within the Tree Schedule (Appendix A).

5 RESULTS

5.1 Surveyors

i The survey was carried out by:

- Andy Leese BSc (Hons) MSc, MArborA, is a professional member of the Arboricultural Association and is experienced within the arboricultural sector. He has also completed the LANTRA Professional Tree Inspection assessment examination.

ii The survey was completed during suitable conditions as detailed in the table below.

Table 1: Summary of conditions during survey

Abiotic Factor	Survey 1	Survey 2	Survey 3
Survey type	BS 5837:2012 Tree Survey	BS 5837:2012 Tree Survey	BS 5837:2012 Tree Survey
Date completed	25/03/2025-27/03/2025	07/05/2025-09/05/2025	17/06/2025
Temperature	12 °C	15	27
Wind speed (Beaufort Scale)	2/12	2/12	2/12
Cloud cover	20%	10%	5%
Precipitation	None	None	None

5.2 Statutory Tree Protection

i Basildon Council were contacted on the 24th of April 2025. They responded to confirm that that the site is not within a conservation area and that none of the trees detailed within this report are covered by a tree preservation order (TPO).

ii The trees on the site are therefore not currently subject to any statutory protection and there are no restrictions on tree works being carried out at this location. However, it is recommended that immediately prior to carrying out any future tree works, further confirmation is obtained from Basildon Council that the trees remain unprotected.

5.3 Tree Survey

i The survey assessed 75 individual trees, 41 groups of trees, and 8 hedgerows the quality and value of which are summarised in the table below whilst full results of the tree survey are provided in the Tree Schedule (Appendix A).

ii There was a moderate amount of tree cover on the site mainly confined to the site edges and adjacent to existing access routes. There was a general mix of moderate quality (category B) and low quality (category C) trees and tree groups with occasional high-quality (category A) trees.

Table 2: Survey Results

BS5837:2012 Tree Quality Assessment Category		Trees	Groups	Hedgerows	Total
A	**Trees of high quality** which are healthy and attractive with high visibility and no significant defects, and which can make a substantial contribution for a minimum of 40 years	4	0	0	**4**
B	**Trees of moderate quality** which are healthy and attractive but with some remediable defects such that they are in a condition to be able to make a significant contribution for a minimum of 20 years	26	3	1	**30**
C	**Trees of low quality** which are unremarkable, of limited merit and that are easily replaced, small-growing, young species which have a relatively low potential amenity value, and low landscape benefits. These trees typically include self-seeded trees of limited life span, small (below 150mm stem diameter) and young trees and trees of poor form and limited amenity value.	43	38	7	**88**
U	Trees which are in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years and/or are considered to be unsuitable for retention in the proximity of new dwellings or areas of public open space.	2	0	0	**2**
	Total	**75**	**41**	**8**	**124**

6 ARBORICULTURAL IMPACT ASSESSMENT

6.1 Introduction

i The arboricultural constraints, both above and below ground, identified during the tree survey (Section 5) and illustrated on the Tree Constraints Plan (Appendix A), have been used, through consultation with the project Design Team, to inform the proposed site layout design.

ii The following arboricultural impact assessment evaluates the direct and indirect effects of the proposed design, with recommendations for appropriate mitigation where necessary. It takes account of the effects of any tree loss required to implement the design and any proposed construction activities which may have the potential to damage retained trees.

6.2 Trees Suitable for Retention

i Where possible, it is generally considered desirable for any Category 'A' and Category 'B' trees to be retained and appropriately integrated within the layout for new developments. Category 'U' trees are unsuitable for retention other than for the very short-term or exceptionally for their conservation value and therefore should not be considered to be a constraint to development.

ii In assessing the probable impact of the proposed development on the trees and vice versa, and therefore identifying which trees are suitable for retention and integration within the context of the proposed layout, the following factors have all been considered:

- Root Protection Areas for Retained Trees
- Shading
- Direct Damage
- Construction Activity
- Demolition/Ground Works
- Future Pressure for Tree Removal and Pruning
- Seasonal Nuisance
- Infrastructure
- Future Management

6.3 Root Protection Areas (RPAs)

i Recommended Root Protection Areas (RPA) for all individual trees on or immediately adjacent to the survey area are detailed within the Tree Schedule (Appendix A) and illustrated on the Tree Constraints Plan (Appendix C).

ii These RPAs have been calculated following the recommendations within BS5837:2012 Section 4.6 and are represented on the Tree Constraints Plan as a circle centred on the base of the tree's stem. Should any deviation from this circular RPA be considered appropriate, for example where previous site conditions (the presence of roads, structures, and underground apparatus), topography, or soil type/structure will have influenced root growth, any modifications to the RPA will be clearly explained and reflect a soundly based arboricultural assessment of the likely root distribution for the individual tree. Any such modified RPA will be of an overall area which is equivalent to the BS5837:2012 recommendation.

iii Recommendations for RPAs for any groups of trees, woodlands, or hedgerows, where the positions of individual trees are not included on the provided topographical survey, also reflect a soundly based arboricultural assessment of the likely collective root distribution of the constituent trees.

6.4 Recommendations for Tree Removals

i A total of 2 trees (T31- Oak and T63 Elm) were considered unsuitable for retention due to their condition. As long as no targets remain, it is considered acceptable for T31 to be retained, otherwise it should be removed. T63 should be removed or the owner notified of its condition.

ii In addition, the proposed development will require the removal of 5 individual low-quality trees (T10, T26, T27, T72 and T75) as well as the removal of small hedgerow sections for hedgerows H2, H3, H4 and H5. Pruning back, edge and section removals are also anticipated for groups G3, G4, G8, G9, G31, G32, G33, G34 and G35 for access purposes.

iii Table 5 (section 7.1) below provides a summary of all recommended tree works (pruning and removals).

iv All Arboricultural work should be carried out by qualified and competent Arborists working to BS 3998:2010 'Tree Work – Recommendations'.

6.5 Tree Loss Evaluation

i There is anticipated to be a low impact to the arboricultural and amenity value on the site only. It is nevertheless recommended to add tree planting to the landscape design where feasible and appropriate to compensate for losses and enhance the site.

ii Any arboricultural and amenity losses should be balanced against the overall benefits of the development and mitigated against/compensated for through appropriate new tree planting, as part of the overall landscaping scheme for the development with the aim of maintaining an appropriate amount of tree cover whilst improving the long-term arboricultural value of the site.

6.6 Recommendations for Tree Pruning

i Any recommendations within the Tree Survey Schedule (Appendix A) details pruning works **solely** in the context of the current use of the site that are recommended in the interest of good arboricultural management of the trees irrespective of any changes in use of the site. These recommendations should not be considered as necessary to implement or facilitate the proposed development.

ii Any additional pruning which is recommended solely to accommodate the proposed site layout (e.g. access facilitation pruning) is detailed within Table 5 (section 7.1).

iii All Arboricultural work should be carried out by qualified and competent Arborists working to BS 3998:2010 'Tree Work – Recommendations'.

6.7 Tree Protection Plan

i The Tree Protection Plan (Appendix D), when read in conjunction with this report, details the required tree protection and mitigation measures for all trees proposed to be retained and integrated within the proposed layout.

ii The Tree Protection Plan is superimposed on the proposed layout and includes details of;

- Trees selected for retention and trees proposed for removal.
- The precise location and specification of protective barriers to form a construction exclusion zone around the retained trees.
- The extent and type of any temporary ground protection, and/or any additional physical measures, that are recommended in association with any temporary access or other activities which are permitted within the construction exclusion zone.
- The position, extent and general construction specification of any new permanent new hard surfacing within the RPA.

6.8 Shading

i Although there are circumstances where shade from trees could be considered beneficial, excessive shading of buildings by trees can be a problem, particularly where it affects rooms which require natural light. Similarly, it is often considered that open spaces such as gardens and sitting areas benefit from direct sunlight, for at least part of the day, and therefore that excessive shading of these areas by trees is undesirable.

ii In this instance, no further investigation, illustration or mitigation is considered necessary due to the generally favourable layout orientation and the nature of the proposal (i.e. non-residential) which means that the development is not considered likely to be subjected to an unreasonable level of shading from trees.

6.9 Direct Damage

i All new developments should consider the likelihood of direct damage occurring to any new structures, hard surfacing or associated utilities from incremental tree stem/root growth or mechanical damage resulting from encroachment of branches.

ii The proposed layout locates all new structures and services outside of the recommended RPAs or to a level where direct damage is not anticipated.

iii For any proposed new planting, Table 3 below, taken from Annex A of BS 5837:2012, provides recommendations that are advised as minimum distances from structures and services for new tree plantings.

Table 3: Minimum distance between young trees or new planting and structure to avoid direct damage to a structure from future tree growth

Type of structure	Minimum distance between young trees or new planting and structure, in metres (m)		
	Stem dia. ≤300mm[A)]	Stem dia. 300mm to 600mm[A)]	Stem dia. ≥600mm[A]
Building and heavily loaded structures	---	0.5	1.2
Lightly loaded structures such as garages, porches etc.	---	0.7	1.5
Services			
≤1m deep	0.5	1.5	3.0
≥1m deep	---	1.0	2.0
Masonry boundary walls	---	1.0	2.0
In-situ concrete paths and drives	0.5	1.0	2.5
Paths and drives with flexible surfaces or paving slabs	0.7	1.5	3.0

A) Diameter of stem at 1.5m above ground level at maturity.

6.10 Temporary Ground Protection

i The proposed site layout does not include any conflict between the necessary construction working space and retained trees. Therefore, it is not considered that any temporary ground protection will be required to implement the development.

ii Suitable existing hard surfacing or compacted ground that is not proposed for re-use as part of the finished design should be retained to act as temporary ground protection during the construction and, development rather than being removed.

iii British Standard 5837:2012 advises that temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction to underlying soil and further provides the following note:

The ground protection might comprise one of the following:

a) for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;

b) for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;

c) for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

iv Final on-site measurements should be taken to ascertain the extent of any tree protection measures and provide an indication of whether incursions, which have not been anticipated, into the RPAs of retained trees might prove necessary.

6.11 Excavation/Ground Works

i The installation of any protective mitigation measures, if necessary, prior to the commencement of any works on site, will allow excavations and ground works to take place whilst minimising any anticipated adverse effect and/or impact on the retained trees.

ii All plant and vehicles engaged in ground works should either operate outside the RPAs, or run on appropriate ground protection, if necessary, in the proximity of retained trees.

iii Where trees stand adjacent to hard surfaces and/or buildings to be removed, excavation should be undertaken inwards, from within the footprint of the existing hard surfacing, or outside of the RPAs.

6.12 Construction Within the Root Protection Area

i The use of traditional strip foundations can result in extensive root loss and should be avoided. However, BS5837:2012 recommends that the insertion of specially engineered structures within RPAs may be justified if it enables the retention of a good quality tree (usually category A or B) that would otherwise be lost.

ii The foundation design should minimise any adverse impact on the trees and should take into consideration all relevant site-specific constraints. In order to arrive at a suitable solution, the combined advice of the project arboriculturist and an engineer will be required.

iii BS5837:2012 recommends that root damage can be minimised by using piles, located optimally to avoid any structural roots, by means of hand tools or compressed air soil displacement, to a minimum depth of 600mm, or beams laid at or above ground level to avoid tree roots.

iv Where piling is to be installed near to trees, the smallest practical pile diameter should be used to reduce the possibility of striking major tree roots. Temporary ground protection, appropriate to the size of the piling rig in use, should be used as detailed above in section 6.10.

v It may be appropriate for slabs for minor structures (e.g. a shed base) to be formed within the RPA. It should however be placed on the existing ground level with no new excavation and should not exceed an area greater that 20% of the unsurfaced ground within the RPA.

vi The proposed layout does not include any construction within the RPA and so there is no requirement for any specially engineered structures in this instance.

6.13 Hard Surfacing Within the Root Protection Area

i Minor incursions are anticipated from existing access track upgrading / resurfacing within the edges of the Root Protection areas of trees T39, T40, T43, T45, T67, T68 and groups G21, G22, and G33. It is therefore recommended to avoid excavation where possible when undertaking work to the existing access track within the Root Protection Areas of these trees to minimise root impacts. Where existing hard surfacing is in place, such as for trees T43 and T45, the existing sub-base should be retained to prevent impacts to root layers.

ii It is not anticipated that the installation of any specially engineered hard surfaces to protect the roots of retained trees will be necessary in this instance. However, general guidance on such surfacing is provided below for general future reference should a subsequent need arise.

iii BS5837:2012 recommends that three-dimensional cellular confinement systems, incorporating geotextile or impermeable barriers as necessary, may be appropriate sub-base options for new hard surfacing with the RPA.

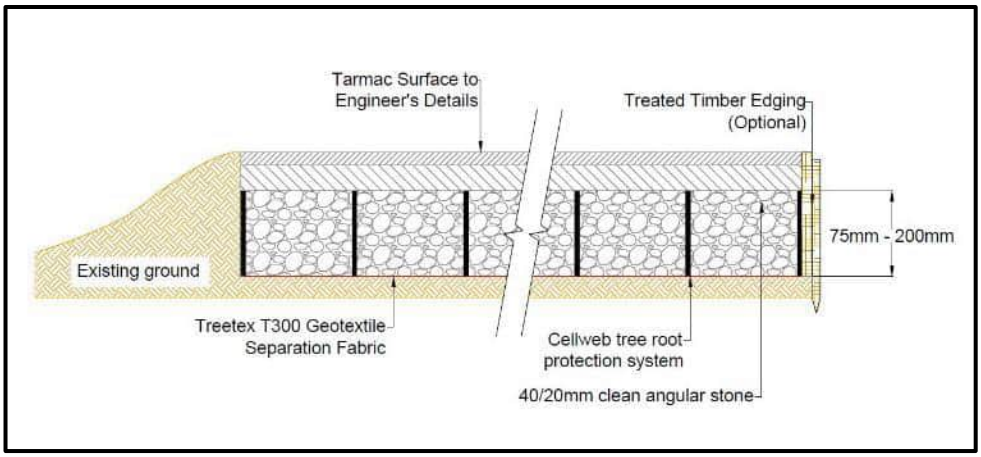
iv A 'no-dig' design should be used which does not require excavation into the soil other that the removal, using hand tools, of any turf layer or other surface vegetation. The structure of the hard surface should be designed to avoid localised compaction, and in all cases, the advice of a structural engineer should be sought to ensure that the design is suitable for the anticipated vehicle loads it will be subjected to.

v The new hard surfacing should be resistant to deformation by tree roots and should be set back from the tree's stem and above ground buttresses by a minimum distance of 500mm to allow for growth and movement. Where no-dig installations are proposed to be located particularly close to the main stems of retained trees then it is recommended that consideration is given to realigning the hard surfacing in order to reduce the total area (m^2) of RPAs affected in order to reduce the likelihood for future pruning pressure and minimise the potential for any detrimental impact on the retained trees.

vi It is recommended that the total area for all new permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA.

vii Indicative cross-sectional drawings of a suitable three-dimensional cellular confinement system (CellWeb™) are shown below (Figure 2).

Figure 2: Cross section illustrating a permeable tarmac surface finish



6.14 Construction Activity

i The installation of any recommended protective or mitigation measures prior to the commencement of any works on site will allow the development to take place whilst minimising any anticipated adverse effect and/or impact on the retained trees.

ii All plant and vehicles engaged in construction works should either operate outside the RPA, and/or run-on appropriate ground protection.

6.15 Future Pressure for Tree Pruning/Removal

i Whilst the presence of retained trees can often enhance the immediate environment upon completion, any proposed layout should provide sufficient space that will allow for future tree growth and to provide a subsequently reduced need for future, frequent remedial pruning.

ii The tree works detailed in Table 5 are considered, in this instance, to provide an environment and layout juxtaposition that will allow for the future growth of the retained trees whist minimising any immediate future pruning pressures.

6.16 Seasonal Nuisance

i Foliage, fruit, and cone fall can be considered by some to be a nuisance and requests to Local Planning Authorities to carry out pruning works to negate these issues are often refused due in part to their brief, seasonal nature of the problem.

ii Providing a suitable juxtaposition when considering new layouts will help in minimising issues experienced by people living in proximity to trees.

iii A certain level of leaf fall in the autumn will be inevitable due to the generally deciduous nature of the existing trees on the site. This it is however not considered to be unreasonable in the context of the site's use.

6.17 Infrastructure

i Infrastructure requirements have been considered and there is no evidence to suggest that retained trees will have an impact on lighting, signage, CCTV sightlines or visibility splays.

ii Where the installation of any underground apparatus and drainage is considered necessary then particular care should be taken in its routeing and methods of installation and wherever possible be routed outside RPAs.

iii Where routeing services outside RPAs is not possible then detailed plans showing the proposed routeing should be drawn up in conjunction with the project Arboriculturist. Trenchless insertion methods are considered appropriate for this purpose and British Standards 5837:2012 details solutions for differing utility apparatus requirements (see table 4 below).

iv British Standards 5837:2012, Section 7.7.2 suggests that in the event roots can be retained and appropriately protected during exposure, then excavation using hand-held tools might be acceptable for shallow service runs. The National Joint Utilities Group's publication 'NJUG Volume 4' contains further guidelines on the installation of new underground services in proximity to trees.

Table 4: Trenchless solutions for differing utility apparatus installation requirements

Method	Accuracy	Bore dia. A)	Max sub. B) length	Applications	Not suitable for
Micro tunnelling	≤20	100 to 300	40	Gravity-fall pipes, deep apparatus, watercourse/roadway undercrossing	Low-cost projects due to relative expense
Surface-launched directional drilling	≈100	25 to 1,200	150	Pressure pipes, cables including fibre optic	Gravity-fall pipes, e.g. drains and sewers C)
Pipe ramming	≈150	150 to 2,000	70	Any large-bore pipes and ducts	Rocky and other heavily obstructed soils
Impact moling D)	≈50 E)	30 to 180 F)	40	Gas, water and cable connections, e.g. from street to property	Any application that requires accuracy over distances in excess of 5m

A) Dependent on strata encountered.

B) Maximum subterranean length.

C) Pit-launched directional drilling can be used for gravity fall pipes up to 20m subterranean length.

D) Impact moling (also known as thrust-bore) generally requires soft, cohesive soils.

E) Substantial inverse relationship between accuracy and distance.

F) Figures given relate to single pass up to 300mm bore achievable with multiple passes.

6.18 Landscaping

i BS 5837:2012 advises that any new tree planting and associated landscaping proposals should consider the ultimate height and spread, form, habit and colour, density of foliage, and maintenance implications, in relation to both the built form of the new development, and the retained landscape features.

ii Consideration should also be given to the advice detailed in section 6.9 in respect of distances of newly planted trees in relation to new structures.

iii For all new tree planting, the guidance within BS 8545:2014 'Trees: from nursery to independence in the landscape – Recommendations' should be followed.

6.19 Issues to be addressed by an Arboricultural Method Statement

i The Arboricultural Method Statement (Section 7) details the general methodology for the implementation of those aspects of the proposed development that have the potential to result in damage to the retained trees.

7 ARBORICULTURAL METHOD STATEMENT

7.1 Recommended Tree Works/Removals

i Tree works tabled below (Table 5) have been identified as a result of one or more of the following reasons:

- to directly implement the proposal,
- to facilitate the implementation and construction of the proposals,
- to assist in the creation of a balanced and desirable layout juxtaposition and
- in the interests of reasonable arboricultural management.

ii All tree works should be carried out by qualified and competent Arborists working to BS 3998:2010 'Tree Work – Recommendations'.

Table 5: Summary of Recommended Tree Works

Tree No.	Species	BS5837:2012 Category	Recommended Works
T31	English oak	U	As long as no targets remain in it is considered acceptable for the tree to be retained, otherwise it should be removed.
T63	English elm	U	Remove – in the interests of appropriate arboricultural management or the owners notified of condition.
T10	Goat willow	C2	Remove - to accommodate the proposed development.
T26	Hawthorn	C2	
T27	Ash	C2	
T72	Ash	C2	
T75	Ash	C2	
G3	Various	C2	Pruning back, edge and section removals anticipated for access purposes.
G4	Various	C2	
G8	Various	C2	
G9	Various	C2	
G31	Various	C2	
G32	Various	C2	
G33	Various	C2	
G34	Various	C2	
G35	Various	C2	
H2	Various	C2	Partial sectional removal required to facilitate the proposals
H3	Various	C2	
H4	Various	C2	
H5	Various	C2	
T28	English oak	B2	Sever ivy at base of main stem.
T29	English oak	B2	
T29	English oak	B2	Remove deadwood >25mm diameter if in proximity to developments.

T4	Crack willow	C2	Annual monitor in light of condition.
T17	Ash	C2	
T30	English oak	A1	
G12	Various	B2	Optional recommendation to remove standing deadwood snags if preferred.

7.2 Summary of Mitigation

i The table below summaries the mitigation methods required for the site, specific to any trees where their RPA may be subject to impact by the proposed development.

ii Each specific requirement is detailed further in the subsequent sections of this report.

Table 6: Summary of Mitigation Requirements

Tree No.	Species	Works effecting	Mitigation Required
Throughout the site		Retained trees in general proximity to the proposed construction works	Create a construction exclusion zone, by erecting and maintaining temporary tree protection fencing for the duration of the construction works. The tree protection fencing should be installed as detailed on the Tree Protection Plan (Appendix D).

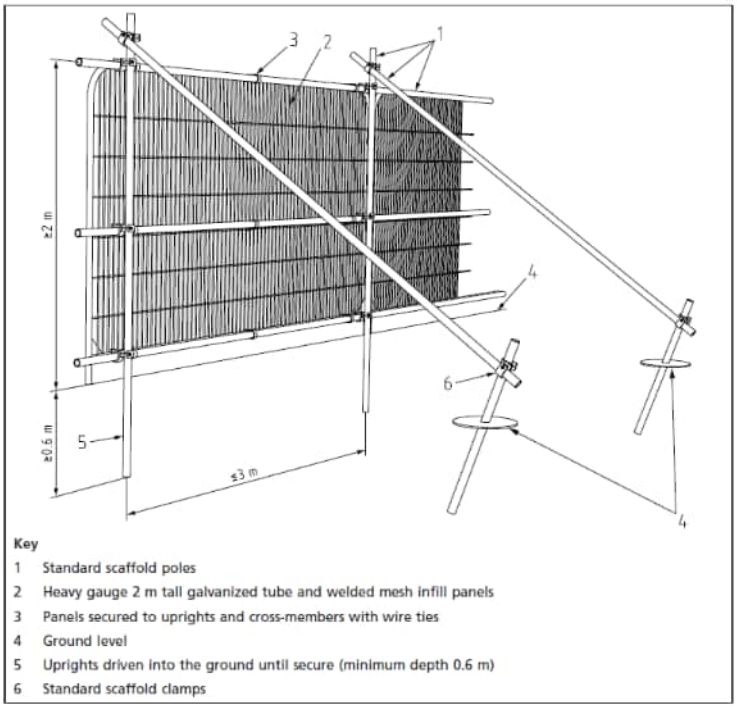
7.3 Erection of Protective Fencing

i It is recommended that temporary protective fencing should be erected in order to create a construction exclusion zone which adequately protects the retained trees from damage during the construction works. This fencing should be erected at the outset of the development works before any activities (including demolition and ground works) are carried out and materials/ plant are brought onto site.

ii The recommended position for protective fencing is detailed on the Tree Protection Plan (Appendix D).

iii The fencing should consist of a vertical and horizontal scaffold framework which is well braced to resist impacts as seen below in Figure 3.

Figure 3: Default specification for protective barrier © British Standards Institute

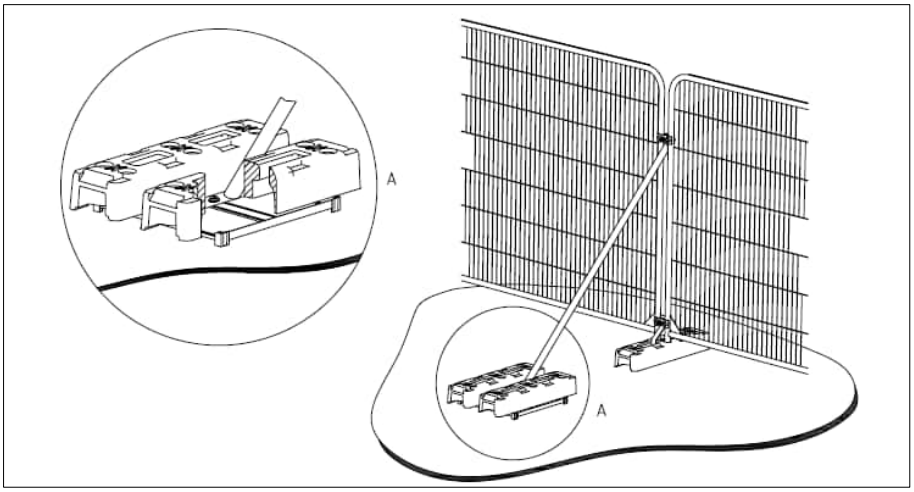


iv All-weather warning notices should be attached to the fencing to clearly identify the area as a tree protection exclusion zone into which access is not permitted

v Once erected, the protected area should be regarded as sacrosanct and the fencing should not be removed or altered unless recommended by the project Arboriculturist and, where necessary, approval from the local planning authority.

vi Where the site circumstances and associated risk of damaging incursion into the RPAs do not necessitate the default level of protection, an alternative specification may be considered to be appropriate. For example, 2m tall-welded mesh panels on rubber or concrete feet as illustrated below in Figure 4.

Figure 4: Alternative Specification for Protective Fencing © British Standards Institute



vii In this instance, it is considered that the associated risks to trees from the proposed development do not necessitate the default specification and therefore that use of the alternative specification will be appropriate.

7.4 Additional General Precautions Outside of the Exclusion Zone

i Fires on site should be avoided wherever possible. Where they are unavoidable, they should be kept well away from the exclusion zone, and only lit in positions where heat will not affect foliage or branches. The potential size of a fire and wind direction should be taken into account, and it should be attended at all times until safe to leave.

ii Any materials, fuel, or chemicals whose accidental spillage would cause damage to a tree should be stored and handled well away from the exclusion zone.

7.5 Site Monitoring

i Following consideration of the likely arboricultural impacts to the development, together with the recommended mitigation options, it is not considered that on-site arboricultural monitoring will necessary during the construction works.

ii Random site monitoring can take place throughout the duration of the construction to check that all guidelines are being adhered to.

7.6 Biosecurity

i 'Biosecurity' is the control of infectious diseases and invasive alien species that pose a threat to the health of plants in the UK. Tree pests and diseases can be transported via several pathways, including:

- Live plants & tree products, such as potted plants.
- Timber and wood packaging materials (WPM), such as shipping crates and pallets.
- Dirty tools, kit, machinery, and vehicles, such as chainsaws, boots and all-terrain vehicles.
- Soil and organic material, such as leaf litter.
- Natural methods, such as wind and water.

ii Rising Biosecurity awareness within the public and professional industries is one of the ways we can help to prevent the careless spread of pests and diseases. Due to the sites current use and the high population, cautions should be taken by:

- Drive & park your vehicle only on hard-standing surfaces when visiting outdoor areas such as woodlands, parks or gardens.
- Clean organic material off your boots, bikes, and the dog before you leave, pest & diseases can live in these materials.
- Report any trees that you suspect are in ill-health to the Forestry Commission using Tree Alert

iii Professionals working in the site are at high-risk of potentially spreading tree pests and diseases. A biosecurity kit will help you implement simple measures limiting the introduction & spread of pests and diseases. The following are items to include in your kit which should include: a bucket (big enough to fit your boot and a few inches of water,) boot pick, brush, disinfectant, hand sanitiser, water container (or a large re-used water bottle) and a portable pressure washer (optional handy for cleaning equipment that won't fit in a bucket).

7.7 Ground Works, Demolition & Construction Works

i Installation of all recommended protective mitigation measures prior to the commencement of any works, combined with use of temporary ground protection and/or the retention of existing hard surfacing within the

RPAs, will allow the ground works to take place whilst minimising any adverse effect or impact on the retained trees.

ii All plant and vehicles engaged in ground works should either operate outside the RPA or run-on temporary ground protection or existing hard standing, where appropriate.

iii During ground works and demolition, the utmost caution should be used to not sever any roots, especially those measuring ≥25mm in diameter. Any roots uncovered roots should be wrapped/covered to prevent them from desiccation and rapid temperature changes (any wrapping should be removed prior to backfilling).

iv In the case where plant or wide/tall loads are being used, it must be ensured that all parts of the equipment remain outside of the RPAs, in order that they can operate without coming into contact with any of the on-site or adjacent trees. All works must have appropriate supervision by a banksman, to ensure that adequate clearance from trees is maintained at all times.

v Access facilitation pruning should not be necessary on site but if it does become necessary to maintain a safe clearance. All work must be approved by the project Arboriculturist and carried out by a qualified and competent Arborist working to BS 3998:2010.

vi If damage occurs to part of a tree during the works, the project Arboriculturist must be contacted without delay.

7.8 Soil Compaction and Remediation Measures

i Soil that has been compacted will not provide suitable conditions for the survival and growth of vegetation, whether existing or new, and is a common cause of post-construction tree loss on development sites.

ii Compacted soil will adversely affect drainage, gas exchange, nutrient uptake, and organic content, and will seriously impede or restrict root growth.

iii Soil compaction should be avoided around existing vegetation, including trees, and in areas where new planting or seeding is proposed.

iv Where soil compaction has occurred near to existing trees, remedial works might include sub-soil aeration using compressed air, and the addition of other materials, preferably of a bulky, organic nature (but excluding peat), to improve structure.

v Heavy mechanical cultivation such as ploughing or rotavating should not occur within the RPA.

vi Any cultivation operations should be undertaken carefully by hand to minimize damage to the tree, particularly the roots.

vii Decompaction measures include forking, spiking, soil augering and tilthed radial trenching. Care should be taken during such operations to minimize the risk of further damage of tree roots.

7.9 Contractors Storage, Parking & Access

i Provision should be made for welfare facilities, the site office, contractor parking, storage for materials, plant and spoil, and space for mixing, all outside of the RPAs of retained trees.

ii In this instance, it is considered that there is sufficient space for provision of the above, without placing significant constraints on the working space available for the construction and its associated activities.

7.10 Completion

i At the completion of the construction works, before removal of any of the tree protection measure at the completion of the project, it is recommended that the advice of the project Arboriculturist is sought regarding whether a re-survey of the retained trees is necessary for signs or symptoms of damage and/or stress that the construction may have caused.

ii The protective fencing and ground protection measures should remain in position until its use is considered unnecessary and any risk of damage to the retained trees and/or their respective RPAs e.g. soil compaction from vehicular plant or machinery, has completely passed.

7.11 Tree Planting & After Care

i When planning or implementing any new tree planting scheme, it is recommended that the guidance within BS 8545:2014 'Trees: from nursery to independence in the landscape – Recommendations' is followed.

ii The following points summarise good after care for newly planted trees with an additional consideration to any necessary formative, corrective and maintenance pruning:

iii Water the trees immediately after planting and weekly throughout the first growing season by allowing 10 – 20 litres of water for each tree. This is especially important during prolonged periods of dry weather in which case the frequency of watering may need to be increased.

iv Do not allow weeds or grass to grow within a 500mm radius of the stem.

v Maintain an organic mulch (e.g. composted woodchip or bark) to a minimum depth of 75mm for a radius of 500mm around the base of new trees.

vi At the end of each growing season, check that tree-ties are not damaging the tree stems and loosen if necessary.

vii Ensure that the tree stakes remain firm while the new planting becomes established and only remove when the tree can support itself, usually after a period of 2 -3 years.

viii Carry out formative pruning to the young trees by removing dead, weak, and crossing branches, epicormic growth, and suckers arising from the roots.

7.12 Contacts

i RammSanderson Ltd. 0115 930 2493, info@rammsanderson.com

Appendix A: Tree Schedule

Appendix A: Tree Schedule **June 2025**

Tree No	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
T1	English Oak	EM	5	300 (Est)	4	4	4	4	20+	B2	Fair	Larger diameter oak towards middle of hedgerow. Some ivy cover limiting VTA. No direct access.	No work recommended at time of survey.	41	3.6
T2	Crack Willow	EM	6	464 (Est)	5	5	5	5	10+	C2	Fair	Larger diameter tree towards middle of hedgerow. Multi-stem. Rooted in ditch bottom. No direct access.	No work recommended at time of survey.	99	5.6
T3	Ash	M	13	400 (Est)	5	5	5	5	20+	B2	Fair	Larger diameter tree in hedgerow. No direct access. Stem towards North side of deep ditch.	No work recommended at time of survey.	72	4.8
T4	Crack Willow	M	12	687 (Est)	5	5	4	5	10+	C2	Poor	Larger diameter multi-stem tree in middle of hedgerow. No direct access and limited VTA with ivy cover. From limited vantage point, appears to have one previously failed split leader and general lean towards road. Previously managed. Ivy cover limiting VTA.	Annual monitor.	211	8.2
T5	English Oak	EM	5	350 (Est)	4	4	4	5	20+	B2	Fair	Larger diameter tree near edge of carriageway. No direct access. General roadside amenity value considered. Located on North side of 1m deep ditch.	No work recommended at time of survey.	55	4.2
T6	English Oak	M	10	550 (Est)	5	5	5	5	20+	B2	Fair	Larger diameter tree near edge of carriageway. No direct access within hedgerow. General roadside	No work recommended at time of survey.	137	6.6

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
												amenity value considered. Some twisting and stem fusion. Located on North side of 1m deep ditch.			
T7	English Oak	EM	6	391 (Est)	4	4	4	4	20+	B2	Fair	Larger diameter tree near edge of carriageway offsite. No direct access. General amenity value considered. Establishing tree.	No work recommended at time of survey.	69	4.7
T8	English Oak	EM	7	374 (Est)	4	4	4	4	20+	B2	Fair	Larger diameter tree near edge of carriageway offsite. No direct access. General amenity value considered. Establishing tree.	No work recommended at time of survey.	64	4.5
T9	Ash	EM	7	260 (Est)	4	4	4	4	20+	B2	Fair	Larger diameter tree in hedgerow. No direct access. Establishing tree with roadside amenity value.	No work recommended at time of survey.	30	3.1
T10	Goat Willow	EM	12	457	4	4	4	4	10+	C2	Fair	Larger diameter tree on group edge next to gravel track. Establishing tree.	No work recommended at time of survey.	95	5.5
T11	English Oak	M	10	600	3	3	5	4	10+	C3	Poor	Larger diameter tree on group edge. Deadwood throughout. Significant dieback on north aspect. Poor vitality. Habitat value considered for remaining contribution. No present targets. Consider removal if located to proposals.	No work recommended at time of survey. Consider removal if located in close proximity to proposals.	163	7.2
T12	Blackthorn	SM	4	80	1	1	1	1	10+	C2	Fair	Small diameter scrub near fence.	No work recommended at time of survey.	3	1

Tree No	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
T13	Hawthorn	SM	4	100	2	2	2	2	10+	C2	Fair	Small diameter multi-stem hawthorn growing through fence.	No work recommended at time of survey.	5	1.2
T14	English Oak	SM	3	80	1	1	1	1	10+	C2	Fair	Small diameter tree growing near fence.	No work recommended at time of survey.	3	1
T15	Goat Willow	EM	8	365	4	4	4	4	10+	C2	Fair	Multi-stem goat willow near fence.	No work recommended at time of survey.	61	4.4
T16	Goat Willow	EM	5	381	4	4	4	4	10+	C2	Fair	Multi-stem goat willow. General localised bark wounding.	No work recommended at time of survey.	66	4.6
T17	Ash	EM	10	315 (Est)	4	4	4	4	10+	C2	Poor	Larger diameter tree on group edge next to wet ditch on south side. No direct access. Decay observed to base.	Annual monitor if in close proximity to developments.	45	3.8
T18	English Oak	EM	8	350 (Est)	5	5	5	5	20+	B2	Fair	Larger diameter tree on group edge next to wet ditch on south side. No direct access.	No work recommended at time of survey.	55	4.2
T19	English Oak	M	10	580	5	5	5	5	20+	B2	Fair	Larger diameter tree at edge of gappy hedgerow. Localised decay to lower main stem. General main stem lean east that has self-correction.	No work recommended at time of survey.	154	7
T20	English Oak	M	10	780	5	5	3	5	40+	A1	Fair	Good landscape and general arboricultural value considered. Larger diameter tree at south side of ditch edge. General epicormic growth to main stem.	No work recommended at time of survey.	278	9.4

Tree No	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
												Broken bird nest box attached to tree.			
T21	English Oak	M	11	510	5	5	4	4	20+	B2	Fair	Larger diameter tree at South side of ditch edge. General minor epicormic growth to main stem. Occasional hanging branches up to 100mm diameter. No present targets.	No work recommended at time of survey.	117	6.1
T22	English Oak	M	5	460	4	4	3	4	10+	B3	Poor	Larger diameter tree at south side of ditch edge. General decay to main stem base. Generally stunted form. Frequent minor deadwood. Considered mainly for habitat value.	No work recommended at time of survey.	95	5.5
T23	English Oak	M	5	377	4	4	4	4	10+	C2	Fair	Larger diameter tree at west side of ditch edge. Multi-stem connected below surface. Frequent minor snaps and one failed leader.	No work recommended at time of survey.	64	4.5
T24	English Oak	M	6	430	4	4	4	3	20+	B2	Fair	Larger diameter tree at west side of ditch edge. Frequent minor deadwood. Establishing tree along hedgerow boundary.	No work recommended at time of survey.	85	5.2
T25	Ash	M	12	541	5	5	5	5	20+	B2	Fair	Larger diameter tree at west side of ditch edge. Multi-stem. Frequent minor deadwood and localised bark wounding. Establishing tree along hedgerow boundary.	No work recommended at time of survey.	133	6.5

Tree No	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
T26	Hawthorn	Y	3	60	1	1	1	1	10+	C2	Fair	Small diameter hawthorn growing near gate entrance.	No work recommended at time of survey.	2	0.7
T27	Ash	Y	3	87	1	1	1	1	10+	C2	Fair	Small diameter tree growing near gate entrance.	No work recommended at time of survey.	3	1
T28	English Oak	M	11	500 (Est)	4	4	3	3	20+	B2	Fair	Located in group. Ivy throughout limiting VTA and limited direct access as located in dense scrub clutter.	Remove / sever ivy and reinspect.	113	6
T29	English Oak	M	10	400	3	3	3	3	20+	B2	Fair	Located in group. Ivy throughout limiting VTA and limited direct access as located in dense scrub clutter. Large amount of deadwood in upper canopy. No direct targets at present.	Remove / sever ivy and reinspect. Remove deadwood >25mm diameter if in proximity to developments.	72	4.8
T30	English Oak	M	13	740	5	5	5	5	40+	A1	Fair	Good arboricultural and landscape value considered. Frequent deadwood up to 250mm diameter no targets.	Annual monitor if in close proximity to developments.	249	8.9
T31	English Oak	M	10	400	3	3	3	3	<10	U	Dead	Appears to be standing dead from vantage point within offsite wooded group. No current targets.	Retain for habitat benefits if no targets remain, or remove tree.	/	/
T32	Ash	SM	5	120	2	2	2	2	10+	C2	Fair	Located along hedgerow.	No work recommended at time of survey.	6	1.4
T33	English Oak	SM	5	130	2	2	2	2	10+	C2	Fair	Located along hedgerow.	No work recommended at time of survey.	8	1.6

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
T34	Ash	SM	5	160	2	2	2	2	10+	C2	Fair	Located along hedgerow.	No work recommended at time of survey.	11	1.9
T35	Ash	SM	5	130	2	2	2	2	10+	C2	Poor	Located in hedgerow. General poor condition.	No work recommended at time of survey.	8	1.6
T36	Ash	EM	5	250	3	3	3	3	10+	C2	Poor	No direct access due to scrub clutter. Located in hedgerow. General poor condition with frequent deadwood.	Annual monitor.	28	3
T37	Goat Willow	SM	4	100	2	2	2	2	10+	C2	Fair	Multi-stem goat willow	No work recommended at time of survey.	5	1.2
T38	Ash	SM	6	150	2	2	2	2	10+	C2	Fair	No direct access. Located on group edge.	No work recommended at time of survey.	10	1.8
T39	Crack Willow	EM	14	430	5	5	5	5	20+	B2	Fair	No direct access. Located within group over fence.	No work recommended at time of survey.	85	5.2
T40	English Oak	M	10	600	6	6	5	5	20+	B2	Fair	Located in group with no direct access due to dense impenetrable clutter.	No work recommended at time of survey.	163	7.2
T41	Ash	M	11	400	5	5	5	5	20+	B2	Fair	Located in group with limited direct access. Low leaf cover at time of survey. Twin stem from 2m	Monitor by checking vitality in later summer months with lack of leaf cover and limited vantage point.	72	4.8
T42	English Oak	M	10	480	4	5	5	5	10+	C2	Poor	Located in group in shallow ditch. Tree partially uprooted in the past with very heavy	Closely annually monitor if	106	5.8

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m) N	E	S	W	Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
												southern lean therefore questionable remaining stability and contribution. Some self-correction in canopy observed. Occasional deadwood. Approximately 4m height existing clearance in place. Not suitable for retention if introducing new targets and if access track gets frequently used.	introducing potential targets.		
T43	English Oak	M	13	570	6	6	6	6	20+	B2	Fair	Located in group within shallow dry ditch.	No work recommended at time of survey.	145	6.8
T44	Goat Willow	EM	6	283	4	4	4	4	10+	C2	Fair	Multi-stem goat willow.	No work recommended at time of survey.	36	3.4
T45	English Oak	M	15	760	4	6	6	6	40+	A1	Fair	Good arboricultural and amenity value. Located next to existing track. Cables through canopy with previous management. Occasional deadwood and wound wood.	No work recommended at time of survey.	260	9.1
T46	Grey Poplar	EM	9	270	3	5	5	3	10+	C2	Fair	Part of poplar group. Plotted for RPA reference. Minor deadwood. Estimated location. Approx 4m existing canopy clearance within whole group.	No work recommended at time of survey.	32	3.2
T47	Grey Poplar	EM	5	250	3	2	3	3	10+	C2	Fair	Part of poplar group. Plotted for RPA reference. Minor deadwood. Estimated location and diameter.	No work recommended at time of survey.	28	3

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
T48	Grey Poplar	EM	14	390	4	5	4	3	10+	C2	Fair	Larger tree in group plotted for RPA reference, limited direct access due to fence impenetrable scrub. Estimated location.	No work recommended at time of survey.	69	4.7
T49	Grey Poplar	EM	5	260	3	3	2	2	10+	C2	Fair	Part of poplar group. Plotted for RPA reference. Minor deadwood. Estimated location. General stem lean north.	No work recommended at time of survey.	30	3.1
T50	Grey Poplar	EM	11	290	6	4	2	2	10+	C2	Poor	Part of poplar group. Plotted for RPA reference. Minor deadwood. Estimated location. Heavy stem lean northeast from base, therefore questionable remaining long-term contribution. Limited VTA due to dense scrub clutter.	Annual monitor.	38	3.5
T51	Grey Poplar	EM	12	360	5	5	5	3	10+	C2	Fair	Part of poplar group. Plotted for RPA reference. Minor deadwood. Estimated location.	No work recommended at time of survey.	58	4.3
T52	Grey Poplar	EM	12	420	5	5	2	4	10+	C2	Fair	Part of poplar group. Plotted for RPA reference. Minor deadwood. Estimated location.	No work recommended at time of survey.	79	5
T53	Grey Poplar	EM	12	360	6	5	1	3	10+	C2	Fair	Part of poplar group. Plotted for RPA reference. Minor deadwood. Estimated location.	No work recommended at time of survey.	58	4.3
T54	Grey Poplar	EM	11	330	4	4	3	3	10+	C2	Fair	Part of poplar group. Plotted for RPA reference. Minor	No work recommended at time of survey.	50	4

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
												deadwood. Estimated location.			
T55	Grey Poplar	EM	12	320	4	5	2	4	10+	C2	Fair	Part of poplar group. Plotted for RPA reference. Minor deadwood. Estimated location.	No work recommended at time of survey.	45	3.8
T56	Grey Poplar	EM	12	520	4	6	4	4	10+	C2	Fair	Part of poplar group. Plotted for RPA reference. Minor deadwood. Estimated location.	No work recommended at time of survey.	121	6.2
T57	Grey Poplar	EM	13	420	6	6	2	2	10+	C2	Fair	Part of poplar group. Plotted for RPA reference. Minor deadwood. Estimated location. General stem and canopy lean northeast. Limited direct access.	Annual monitor.	79	5
T58	Grey Poplar	EM	11	380	7	6	2	4	10+	C2	Poor	Part of poplar group. Plotted for RPA reference. Minor deadwood. Estimated location. Stem and canopy leans heavily northeast, no targets.	Annual monitor.	66	4.6
T59	Goat Willow	EM	12	381	4	4	4	4	10+	C2	Fair	Part of group. Plotted for RPA reference. Minor deadwood. Estimated location and diameter. Located in fenced off area.	No work recommended at time of survey.	66	4.6
T60	English Oak	M	14	770	6	6	6	6	40+	A2	Fair	Located in horse field. Good amenity and landscape value. Has woodpecker hole at approximately 4m north. Otherwise just minor deadwood. Minor bark wounding to lower main stem. Service cables	Manage canopy clearance to service cables.	266	9.2

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
												observed through West canopy.			
T61	Monterey Cypress	EM	11	350	4	4	4	4	10+	C2	Poor	Offsite Cypress located along side of hard surfacing track/road. Stem covered in ivy limiting VTA with limited direct access. Generally sparse canopy with some reduced vitality.	Annual monitor.	55	4.2
T62	Italian Alder	M	7	618 (Est)	4	4	4	4	10+	B2	Fair	Located along side of hard surfacing track/road. Covered in ivy limiting VTA with no direct access to measure stems. Multi-stem with stems connected below surface. Service cables through canopy tip.	Manage clearance to service cables.	172	7.4
T63	English Elm	SM	4	120	1	1	1	1	<10	U	Poor	Offsite located along track/roadside. Very poor vitality and completely supressed by ivy as a remaining snag.	Remove tree.	6	1.4
T64	Ash	EM	10	328 (Est)	4	4	4	4	20+	B2	Fair	Triple-stem tree located in scrub with no direct access.	No work recommended at time of survey.	48	3.9
T65	Elder	EM	3	269 (Est)	4	4	4	4	10+	C2	Fair	Multi-stem located in scrub no direct access.	No work recommended at time of survey.	32	3.2
T66	Ash	EM	10	391 (Est)	4	4	4	4	20+	B2	Fair	Triple-stem located in scrub no direct access. Some sparse canopy areas observed.	Annual monitor canopy vitality for potential ash dieback and manage appropriately.	69	4.7

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
T67	Ash	M	15	430	4	5	4	4	20+	B2	Fair	Located on edge of island group. Note existing hard surfacing in place to south. Some deadwood and sparse canopy areas observed may represent beginnings of ash dieback symptoms. Canopy managed around service cables.	Annual monitor canopy vitality for potential ash dieback and manage appropriately.	85	5.2
T68	Ash	M	15	480	3	5	4	3	20+	B2	Fair	Located on edge of island group. Note existing hard surfacing in place. Frequent deadwood and sparse canopy areas observed which may represent beginnings of Ash dieback.	Remove deadwood over 25mm diameter with precautionary biosecurity measures. Annual monitor canopy vitality for potential ash dieback and manage appropriately.	106	5.8
T69	English Oak	M	11	430	4	5	6	4	20+	B2	Fair	Located on edge of island group. Note existing hard surfacing in place. Minor deadwood. Good general amenity value considered.	No work recommended at present time.	85	5.2
T70	English Oak	EM	6	350	3	5	4	1	20+	B2	Fair	Located on edge of island group. Note existing hard surfacing in place. Minor deadwood. Good general amenity value. Generally suppressed in group. General Eastern stem lean and covered in ivy limiting VTA.	No work recommended at present time.	55	4.2

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
T71	Blackthorn	EM	6	274	3	3	3	3	10+	C2	Fair	Located in group. Occasional deadwood.	No work recommended at time of survey.	34	3.3
T72	Ash	SM	10	269	3	3	3	3	10+	C2	Fair	Larger stemmed tree located on edge of island group. Establishing tree. Note, existing nearby hard surfacing in place. Considered to have some localised amenity value on group edge.	No work recommended at time of survey.	32	3.2
T73	Blackthorn	SM	4	220	3	3	3	3	10+	C2	Fair	Located in group. Occasional deadwood. Heavy lean from base with previous pruning.	No work recommended at time of survey.	21	2.6
T74	Crab Apple	EM	4	300	3	3	3	3	10+	C2	Fair	Located in group. No direct access to measure stem in dense scrub.	No work recommended at time of survey.	41	3.6
T75	Ash	SM	13	277	3	4	3	4	10+	C2	Poor	Larger stemmed tree located on edge of island group. Establishing tree. However, has some general sparse canopy areas observed which may represent beginnings of ash dieback symptoms.	Annual monitor canopy vitality for potential ash dieback and manage appropriately.	34	3.3
G1	Hawthorn, Ash, Goat Willow	SM	4 (Est avg)	80 (Est avg)	/	/	/	/	10+	C2	Fair	Scattered small diameter scrub line along fence amongst brambles.	No work recommended at time of survey.	/	1
G2	Ash, English Oak	EM	5 (Est avg)	300 (Est avg)	/	/	/	/	10+	C2	Fair	Larger diameter ash and oak along hedgerow, ditch area. Frequent heavy pruning observed.	No work recommended at time of survey.	/	3.6

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
G3	Ash, English Oak, Goat Willow, Field Maple, Hazel, Crack Willow, Gorse	SM	6 (Est avg)	150 (Est avg)	/	/	/	/	10+	C2	Fair	Small diameter general scrub. Has screening and landscape value but general small diameter at present. Includes occasional gorse scrub.	No work recommended at time of survey.	/	1.8
G4	Ash, English Oak, Goat Willow, Field Maple, Hazel, Holly, Hawthorn	SM	6 (Est avg)	200 (Est avg)	/	/	/	/	10+	C2	Fair	Small diameter general scrub. Has screening value but general small diameter low quality. Dense and continuous with no direct access.	No work recommended at time of survey.	/	2.4
G5	Hawthorn, Blackthorn	Y	4 (Est avg)	70 (Est avg)	/	/	/	/	10+	C2	Fair	Small diameter scrub.	No work recommended at time of survey.	/	0.8
G6	Hawthorn, Blackthorn, Elder	Y	2 (Est avg)	50 (Est avg)	/	/	/	/	10+	C2	Fair	Small diameter scattered self-seed sapling scrub in fenced disturbed area. Plotted for reference.	No work recommended at time of survey.	/	0.6
G7	Goat Willow	SM	5 (Est avg)	150 (Est avg)	/	/	/	/	10+	C2	Fair	Small diameter goat willow group.	No work recommended at time of survey.	/	1.8
G8	English Oak	EM	7 (Est avg)	300 (Est avg)	/	/	/	/	20+	B2	Fair	Scattered establishing larger tree group within hedgerow scrub boundary.	No work recommended at time of survey.	/	3.6
G9	English Elm, English Oak	SM	7 (Est avg)	150 (Est avg)	/	/	/	/	10+	C2	Fair	Scattered group of mostly elm in scrub group. Some with bark wounding and poor condition. Occasional standing dead.	Remove small diameter standing dead as preferred /required and monitor	/	1.8
G10	Hawthorn, Blackthorn, Goat Willow, Ash	SM	4 (Est avg)	70 (Est avg)	/	/	/	/	10+	C2	Fair	General small diameter boundary scrub mixed with brambles. Plotted for reference. Located along	No work recommended at time of survey.	/	0.8

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m) N	E	S	W	Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
												west side of grassed over track.			
G11	Hawthorn, Blackthorn, Goat Willow, Ash	SM	4 (Est avg)	70 (Est avg)	/	/	/	/	10+	C2	Fair	General small diameter scattered scrub mixed with brambles. Plotted for reference. Located along east side of grassed over track.	No work recommended at time of survey.	/	0.8
G12	Hawthorn, Blackthorn, English Oak, Field Maple, Ash	EM	8 (Est avg)	250 (Est avg)	/	/	/	/	20+	B2	Fair	General boundary group, mostly scrub. General screening to busy A road. Considered for landscape screening value as a whole. Individuals mostly considered low quality. Occasional small diameter standing deadwood.	Remove standing deadwood snags if preferred or if in proximity to developments.	/	3
G13	Hawthorn, Elder, Crack Willow	SM	5 (Est avg)	100 (Est avg)	/	/	/	/	10+	C2	Fair	General small diameter scrub. Likely offsite. Part of wider extending group away from site.	No work recommended at time of survey.	/	1.2
G14	Brambles	SM	3 (Est avg)	100 (Est avg)	/	/	/	/	10+	C2	Fair	Brambles growing on fence next to access gate plotted for reference.	No work recommended at time of survey.	/	1.2
G15	Blackthorn, Hawthorn	Y	3 (Est avg)	50 (Est avg)	/	/	/	/	10+	C2	Fair	Scattered saplings along road verge plotted for reference. Along South side of existing hard surface path.	No work recommended at time of survey.	/	0.6
G16	Cherry Plum, Crab apple, Sour cherry, Dog rose	Y	4 (Est avg)	50 (Est avg)	/	/	/	/	10+	C2	Fair	Scattered young scrub on North side of path.	No work recommended at time of survey.	/	0.6

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
G17	Hawthorn	Y	3 (Est avg)	50 (Est avg)	/	/	/	/	10+	C2	Fair	Scattered young scrub on North side of path.	No work recommended at time of survey.	/	0.6
G18	Hawthorn, Field Maple, Wild Cherry	Y	4 (Est avg)	60 (Est avg)	/	/	/	/	10+	C2	Fair	Continuous saplings forming scrub line along road verge plotted for reference. Along South side of existing hard surface path.	No work recommended at time of survey.	/	0.7
G19	Hawthorn, Crab Apple, Field Maple, Blackthorn, Ash, Dogwood, Rowan	SM	5 (Est avg)	100 (Est avg)	/	/	/	/	10+	C2	Fair	Continuous small diameter group starting east of existing gate. Screening value to road.	No work recommended at time of survey.	/	1.2
G20	Hawthorn, Field Maple, Blackthorn, Ash, English Oak, Crack Willow, Wild Cherry	SM	5 (Est avg)	100 (Est avg)	/	/	/	/	10+	C2	Fair	General scrub group. Limited direct access due to carriageway, fences and clutter.	No work recommended at time of survey.	/	1.2
G21	Hawthorn, Blackthorn, English Elm	SM	5 (Est avg)	120 (Est avg)	/	/	/	/	10+	C2	Fair	General linear continuous scrub group along dry ditch. Includes bramble. Includes frequent small diameter standing dead elms in group as a result of Dutch Elm disease with symptomatic pattern observed on stems.	Remove small diameter standing dead as preferred/required with standard biosecurity measures.	/	1.4
G22	Hawthorn, Blackthorn, English Elm	SM	5 (Est avg)	120 (Est avg)	/	/	/	/	10+	C2	Fair	General linear continuous scrub group along dry ditch. Includes bramble. Includes frequent small diameter standing dead elms in group as a result of Dutch Elm	Remove small diameter standing dead as preferred/required with standard	/	1.4

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m) N	E	S	W	Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
												disease with symptomatic pattern observed on stems.	biosecurity measures.		
G23	Elder	Y	4 (Est avg)	70 (Est avg)	/	/	/	/	10+	C2	Fair	Elder scrub below pylon. No direct access.	No work recommended at time of survey.	/	0.8
G24	Hawthorn	SM	4 (Est avg)	80 (Est avg)	/	/	/	/	10+	C2	Fair	Scattered scrub group with gorse and brambles. Located adjacent existing access track.	No work recommended at time of survey.	/	1
G25	Hawthorn, Blackthorn, Goat Willow	Y	4 (Est avg)	70 (Est avg)	/	/	/	/	10+	C2	Fair	Blackthorn dominated scrub group with roses and brambles. Adjacent existing access track.	No work recommended at time of survey.	/	0.8
G26	Hawthorn, Leyland Cypress, Field Maple, Blackthorn, Elder, Crab apple, Hybrid black poplar	SM	5 (Est avg)	100 (Est avg)	/	/	/	/	10+	C2	Fair	General mostly scrub group along West side of existing track mixed with brambles. Frequent dead elms at South end of group that have succumb to Dutch Elm disease.	Remove dead specimens with standard biosecurity measures.	/	1.2
G27	Hawthorn, Blackthorn	Y	4 (Est avg)	50 (Est avg)	/	/	/	/	10+	C2	Fair	General small diameter scrub group.	No work recommended at time of survey.	/	0.6
G28	Grey Poplar, Leyland Cypress	EM	12 (Est avg)	300 (Est avg)	/	/	/	/	10+	C2	Fair	Not plotted. Limited direct access due to dense scrub clutter. Poplar dominated group along-side existing gravel access track between track and steel building/structure. Occasional cypress. Approx 4-5m existing canopy clearance. Some trees leaning form and previous	No work recommended at time of survey.	/	3.6

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m) N	E	S	W	Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
												pruning with occasional smaller diameter cypress in poor condition. Minor deadwood. Stems mostly 3m plus from track.			
G29	Field Maple, Blackthorn, Goat Willow	SM	4 (Est avg)	100 (Est avg)	/	/	/	/	10+	C2	Fair	General small diameter boundary group along North side of access track 1m verge.	No work recommended at time of survey.	/	1.2
G30	Leyland Cypress	SM	3 (Est avg)	70 (Est avg)	/	/	/	/	10+	C2	Fair	General scattered small diameter scrub mixed with bramble along-side access track.	No work recommended at time of survey.	/	0.8
G31	Leyland Cypress, Blackthorn, Hawthorn, Dogwood, Crab Apple	SM	4 (Est avg)	90 (Est avg)	/	/	/	/	10+	C2	Fair	General scrub mixed with bramble alongside access track.	No work recommended at time of survey.	/	1.1
G32	Blackthorn, Hawthorn, Field Maple, Ash, English Oak, Crack Willow, Hazel, Aspen	SM	8 (Est avg)	150 (Est avg)	/	/	/	/	10+	C2	Fair	General group mixed with bramble alongside access track over barb wire fence. Some larger set back willows towards middle of group.	No work recommended at time of survey.	/	1.8
G33	Goat Willow, Ash, Hawthorn	SM	5 (Est avg)	100 (Est avg)	/	/	/	/	10+	C2	Fair	Linear scattered scrub along fence.	No work recommended at time of survey.	/	1.2
G34	Hawthorn, Blackthorn	SM	5 (Est avg)	100 (Est avg)	/	/	/	/	10+	C2	Fair	Linear scrub group mixed with brambles along gravel track.	No work recommended at time of survey.	/	1.2
G35	Hawthorn, Blackthorn, Crab Apple,	EM	8 (Est avg)	100 (Est avg)	/	/	/	/	20+	B2	Fair	General scrub group around pond area with scattered	No work recommended at time of survey.	/	1.2

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m) N	E	S	W	Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
	English Oak, Ash, Goat Willow											larger individuals trees highlighted as individuals.			
G36	Elder, Leyland Cypress	EM	10 (Est avg)	300 (Est avg)	/	/	/	/	10+	C2	Fair	Cypress and elder boundary group.	No work recommended at time of survey.	/	3.6
G37	Leyland Cypress,	SM	8 (Est avg)	200 (Est avg)	/	/	/	/	10+	C2	Fair	Cypress linear boundary group with existing hard surfacing road to the north.	No work recommended at time of survey.	/	2.4
G38	Cherry Laurel, Ash	SM	4 (Est avg)	70 (Est avg)	/	/	/	/	10+	C2	Fair	Scattered general boundary group.	No work recommended at time of survey.	/	0.8
G39	Firethorn, Blackthorn, Cherry Laurel, Dutch Elm, Japanese Lilac	SM	3 (Est avg)	100 (Est avg)	/	/	/	/	10+	C2	Fair	Small diameter boundary edge group.	No work recommended at time of survey.	/	1.2
G40	Crab Apple, Hawthorn	EM	4 (Est avg)	100 (Est avg)	/	/	/	/	10+	C2	Fair	General scrub group.	No work recommended at time of survey.	5	1.2
G41	Crab Apple, Hawthorn, Dogwood, Blackthorn	SM	4 (Est avg)	150 (Est avg)	1	1	1	1	10+	C2	Fair	General scrub group.	No work recommended at time of survey.	10	1.8
H1	Hawthorn, Blackthorn, English Oak	EM	5 (Est avg)	150 (Est avg)	/	/	/	/	20+	B2	Fair	Partially managed hedgerow. Blackthorn dominated. General screening to busy A road. Considered for screening value as a landscape feature. Individuals considered low quality.	No work recommended at time of survey.	/	1.8

Tree Nº	Species	Age	Height (m)	Dia. (mm)	Crown Spread (m)				Life Exp.	Cat.	Cond.	General Observations	Preliminary Management Recommendations	RPA (m^2)	RPA Radius (m)
					N	E	S	W							
H2	Hawthorn, Blackthorn	EM	4 (Est avg)	100 (Est avg)	/	/	/	/	10+	C2	Fair	Managed hedgerow section. Hawthorn dominated. Growing in and along ditch.	No work recommended at time of survey.	/	1.2
H3	Hawthorn, Blackthorn, Field Maple, English Oak	EM	4 (Est avg)	150 (Est avg)	/	/	/	/	10+	C2	Fair	Scattered gappy hedgerow section along ditch. Growing in and along ditch.	No work recommended at time of survey.	/	1.8
H4	Hawthorn, Blackthorn, Field Maple, Ash, Goat Willow	SM	4 (Est avg)	100 (Est avg)	/	/	/	/	10+	C2	Fair	General establishing hedgerow section along fence.	No work recommended at time of survey.	/	1.2
H5	Hawthorn, Crab Apple, Field Maple, Blackthorn, Ash, Dogwood, Rowan	SM	5 (Est avg)	100 (Est avg)	/	/	/	/	10+	C2	Fair	Continuation of group but managed as a hedgerow. Screening value to road.	No work recommended at time of survey.	/	1.2
H6	Brambles	Y	1 (Est avg)	50 (Est avg)	/	/	/	/	10+	C2	Fair	Brambles growing on fence only. Plotted for reference.	No work recommended at time of survey.	/	0.6
H7	Brambles	Y	1 (Est avg)	50 (Est avg)	/	/	/	/	10+	C2	Fair	Brambles growing on fence only. Plotted for reference.	No work recommended at time of survey.	/	0.6
H8	Firethorn, Hawthorn, Elder, Blackthorn	SM	1 (Est avg)	50 (Est avg)	/	/	/	/	10+	C2	Fair	Small diameter managed firethorn hedgerow with occasional hedge bindweed.	No work recommended at time of survey.	/	0.6

Note; The majority of trees were not plotted on the provided topographical plan apart from trees T19, T20, T21 and T44. The positions for the remaining trees as shown on the Tree Constraints Plan are therefore indicative only and should be confirmed on site if accurate locations are required.

Tree Schedule Key:

Reference:	Description:
Tree No.	Sequential reference number as recoded within the Tree Constraints Plan (and subsequent plans). T: Individual Tree G: Group of trees H: Hedgerow W: Woodland
Species	Common name (list of scientific names will be included within the appendix within the arboricultural impact assessment or can be provided upon request).
Age	Y: Young (usually self-seeded or recently planted) SM: Semi-mature (within its first one third of life expectancy) M: Mature (within its final one third of life expectancy) OM: Over-mature (having reached its maximum life span and now in declining)
Height	Estimated height calculated in metres
Diameter	Stem diameter measured to the nearest 10 millimetres at approximately 1.5m above ground level. For trees with more than one stem, the combined diameter is recorded as per BS5837:2012 Section 4.6. (Avg.): Average stem diameter for a group of trees (Est.): Estimate stem diameter due to no access for exact measuring (e.g. offsite or inaccessible)
Crown Spread	Radial crown spread measured to the nearest metre from the centre of the trunk, for each of the four cardinal points
Life Expectancy	An estimate of the remaining life expectancy of the tree, given its condition during the survey taking into account the context of the site <10: Less than 10 years 10+: More than 10 years 20+: More than 20 years 40+: More than 40 years
Category	Quality and value grade classification according to the British Standard 5837:2012 as per section 4.5 and Table 1

Category (continued)	A: Trees of high arboricultural value (typically with 40+ years life expectancy) B: Trees of moderate arboricultural value (typically with 20+ years life expectancy) C: Trees of low arboricultural value (typically with 10+ years of life expectancy) U: Trees unsuitable for retention (typically due to poor condition with <10 years of life expectancy) Subcategory: 1: Mainly arboricultural qualities 2: Mainly landscape/ amenity qualities 3: Mainly cultural values/ habitat value/ conservation value
Condition	A visual assessment considering both the physiological and structural condition of the tree, categorised as per the below: Fair: Generally in good health given the age and context of the tree with no significant defects Poor: Generally poor health (including structurally) which can't be remediated Dead: Dead tree
General Observations	Comments on the tree resulting from the visual tree inspection
Preliminary Management Recommendations	In light of the condition, location, and context of the tree, preliminary management recommendations may be provided resulting from the visual tree inspection. These are recommended solely in the context of the current site use and are considered to be good arboricultural management irrespective of any development proposals which may be in place on the site, or currently being considered.
RPA	Root Protection Areas are calculated in square metres (m2) following the recommendations within BS5837:2012 Section 4.6. They are detailed on the Tree Constraints Plan as a circle centred on the base of the stem
RPA Radius	The Root Protection Area Radius is calculated in metres and is the distance from the base of the tree to the edge of the root protection area

NOTES:

i. Any survey work undertaken will have been subject to natural limitations, including seasonal and phenological aspects.
ii. Trees were assessed from ground level using the Visual Tree Assessment (VTA) method. The trees included in the survey were not climbed, no samples were removed, and no detailed internal investigation of decay was made.
iii. Where other vegetation (e.g. ivy or dense ground cover) prevented full access to any tree, this is noted in the tree survey schedule. Dense ivy cover can prevent full access to a tree and so obscure the presence of cavities or other defects. Any such situations are noted in the tree survey schedule with, where appropriate, recommendations for the ivy to be removed and a re-inspection carried out. No ivy was removed from any tree during the survey.
iv. Tree rooting characteristics and soils are both enormously variable as are their interactions. This makes any attempts to quantify tree related subsidence risk assessment impossible. No attempt has been made to assess subsidence risk potential nor should any be construed.
v. Only individual trees with a stem diameter of 75mm or greater are included in the survey. It is not always practical or necessary to record individual details for every tree within a group or woodland. Should any relevant trees on or adjacent to the site have been missed on the topographical survey, these have been included where appropriate. However, the positions indicated on any plans included within this report for all trees not included on the provided topographical survey have been approximated for the purposes of identification only, and if accurate locations are required these should be confirmed on site.

Appendix B: Key to Species Scientific Names

Common Name	Scientific Name
Ash	*Fraxinus excelsior*
Aspen	*Populus tremula*
Blackthorn	*Prunus spinosa*
Cherry plum	*Prunus cerasifera*
Crab apple	*Malus sylvestris*
Crack willow	*Salix fragilis*
Dogwood	*Cornus sanguinea*
English elm	*Ulmus procera*
English oak	*Quercus robur*
Elder	*Sambucus nigra*
Field maple	*Acer campestre*
Firethorn	*Pyracantha*
Goat willow	*Salix caprea*
Grey poplar	*Populus × canescens*
Hawthorn	*Crataegus monogyna*
Hazel	*Corylus avellana*
Holly	*Ilex aquifolium*
Hybrid black poplar	*Populus × canadensis*
Italian alder	*Alnus cordata*
Japanese lilac	*Syringa reticulata*
Leyland Cypress	*Cupressus x leylandii*
Monterey Cypress	*Cupressus macrocarpa*
Rowan	*Sorbus aucuparia*
Silver birch	*Betula pendula*
Sour cherry	*Prunus cerasus*
Sycamore	*Acer pseudoplatanus*
Wild cherry	*Prunus avium*

Appendix C: Tree Constraints Plans

RSE_9244_TCP1_V1

RSE_9244_TCP2_V1

RSE_9244_TCP3_V2

N

T9-B2
T8-B2
T7-B2
G2-C2
T6-B2
T5-B2
T4-C2
T3-B2
T2-C2
H1-B2
T1-B2
T27-C2
T26-C2
G1-C2
T16-C2
T28-B2
T29-B2
T30-A1
T31-U
T12-C2
T13-C2
T14-C2
G4-C2
T11-C3
G7-C2
T44-C2
G6-C2
G5-C2
T15-C2
H2-C2
T10-C2
T17-C2
T18-B2
G3-C2
T19-B2
T20-A1
T21-B2
H3-C2
T22-B3
G12-B2
T23-C2
T24-B2
T25-B2
G11-C2
G8-B2
T34-C2
T35-C2
G10-C2
G9-C2
H5-C2
H4-C2
T33-C2
T32-C2

LEGEND:

TX-A — Category A - Trees of High Quality

TX-B — Category B - Trees of Moderate Quality

TX-C — Category C - Trees of Low Quality

TX-U — Category U - Trees Unsuitable for Retention

Tree Trunk
Root Protection Areas (RPA)
Tree Canopy Spread

Note: The majority of trees were not plotted on the provided topographical survey apart from: T19, T20, T21 and T44.
The positions for the remaining trees as shown on this plan are therefore indicative only and should be confirmed on site if accurate locations are required.

RammSanderson ARBORICULTURE

Client :
Renewable Energy Systems Ltd

Project:
Fairgreen BESS

Drawing Title :
Tree Constraints Plan

Drg No.	Rev :
RSE_9244_TCP1	V1

Drn By :	Scale :	Date :
AL	1:900@A1	09/05/2025

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West Midlands: Cabin 53, Dunston Business Village, Stafford, ST18 9AB T: 01785 711 575
Yorkshire: SUM Studios, Studio 11, 1 Hartley Street, Heeley, Sheffield, S2 3DJ
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N

G27-C2

T33-C2

T32-C2

T36-C2

H5-C2

G26-C2

G19-C2

G25-C2

G23-C2

G24-C2

H7-C2

H6-C2

G22-C2

G21-C2

G17-C2

G18-C2

G15-C2

G16-C2

G13-C2

G14-C2

LEGEND:

TX-A — Category A - Trees of High Quality

TX-B — Category B - Trees of Moderate Quality

TX-C — Category C - Trees of Low Quality

TX-U — Category U - Trees Unsuitable for Retention

Tree Trunk

Root Protection Areas (RPA)

Tree Canopy Spread

Note: The majority of trees were not plotted on the provided topographical survey apart from: T19, T20, T21 and T44.
The positions for the remaining trees as shown on this plan are therefore indicative only and should be confirmed on site if accurate locations are required.

RammSanderson ARBORICULTURE

Client :
Renewable Energy Systems Ltd

Project:
Fairgreen BESS

Drawing Title :
Tree Constraints Plan

Drg No.	Rev :
RSE_9244_TCP2	V1

Drn By :	Scale :	Date :
AL	1:1000@A1	09/05/2025

RammSanderson Ecology Ltd
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Yorkshire: SUM Studios, Studio 11, 1 Hartley Street, Heeley, Sheffield, S2 3DJ
www.rammsanderson.com

N

G40-C2 T66-B2 T65-C2 T64-B2 G36-C2 T67-B2 T68-B2 T69-B2 T71-C2 T70-B2 T73-C2 T74-C2 G35-C2 T76-C2 T46-A1 G41-C2 T63-U G39-C2 T62-B2 T60-A2 T61-C2 G38-C2 H8-C2 G37-C2 T72-C2 T43-B2 G34-C2 T42-C2 T41-B2 G33-C2 T40-B2 T59-C2 T39-B2 G32-C2 T9-B2 T8-B2 T7-B2 G2-C2 T6-B2 T5-B2 T4-C2 T3-B2 T2-C2 G1-C2 T16-C2 T12-C2 T13-C2 T14-C2 G7-C2 T44-C2 G6-C2 G5-C2 T15-C2 H2-C2 G4-C2 T11-C3 T10-C2 T17-C2 T18-B2 G3-C2 T38-C2 T19-B2 T20-A1 T21-B2 G20-C2 G31-C2 G11-C2 T34-C2 T35-C2 G10-C2 H5-C2 G30-C2 T58-C2 T57-C2 T56-C2 G29-C2 T55-C2 T54-C2 T53-C2 T37-C2 T51-C2 T52-C2 G28-C2 T50-C2 T49-C2 T48-C2 T47-C2 T46-C2 G27-C2 T33-C2 T32-C2 H5-C2 T36-C2 G26-C2

Note: The majority of trees were not plotted on the provided topographical survey apart from: T19, T20, T21 and T44.
The positions for the remaining trees as shown on this plan are therefore indicative only and should be confirmed on site if accurate locations are required.

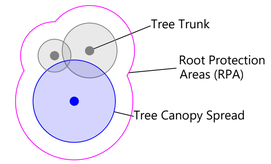
LEGEND:

TX-A — Category A - Trees of High Quality

TX-B — Category B - Trees of Moderate Quality

TX-C — Category C - Trees of Low Quality

TX-U — Category U - Trees Unsuitable for Retention



RammSanderson ARBORICULTURE

Client :
Renewable Energy Systems Ltd

Project:
Fairgreen BESS

Drawing Title :
Tree Constraints Plan

Drg No. RSE_9244_TCP3 | Rev : V1

Drn By : AL | Scale : 1:1000@A1 | Date : 18/06/2025

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Appendix D: Tree Protection Plans

RSE_9244_TPP1_V1

RSE_9244_TPP2_V1

RSE_9244_TP3_V1

SM
Annwood Bridge
Co Const, ED & Ward Bdy
SOUTHEND ARTERIAL ROAD
A 127
14.0m
16.2m
CR
SM
EK
Boro Const Bdy
T9-B2
T8-B2
T7-B2
G2-C2
T6-B2
T5-B2
T4-C2
T3-B2
T2-C2
H1-B2
T1-B2
T26-C2
G1-C2
T16-C2
Existing track section to be retained
T12-C2
T13-C2
T14-C2
G4-C2
T11-C3
G7-C2
T44-C2
G6-C2
G5-C2
T15-C2
H2-C2
EG=14.12
FG=14.75
EG=14.88
FG=14.75
T28-B2
T29-B2
T30-A1
T31-U
DNO 132kV
SUBSTATION
COMPOUND
Trees T28, T29 T30 and group G12
considered far enough from proposals
to not require further protection fencing.
A1245
RH
Const Bdy
t, CP & ED Bdy
H1-C2
T17-C2
T18-B2
FB
Trees T17 and T18 located to
south of existing ditch.
No new impacts to
trees anticipated
T19-B2
T20-A1
T21-B2
G3-C2
Drain
H3-C2
BESS 132kV
SUBSTATION
COMPOUND
G12-B2
EG=15.80
FG=16.25
BESS 33kV
SUBSTATION
COMPOUND
EG=16.78
FG=16.25
Trees T19, T20,T21 and groups G10 and G11
considered far enough from proposals
to not require further protection fencing.
EG=16.68
FG=18.15
T22-B3
EG=16.81
FG=18.15
T23-C2
T24-B2
T25-B2
G8-B2
G11-C2
Track
T34-C2
Drain
T35-C2
G10-C2
G9-C2
H4-C2
H5-C2
EG=19.66
FG=19.35
EG=18.58
FG=19.35
EG=21.75
FG=20.10
EG=20.80
FG=20.10
H4-C2
Drain
GATE
(TO E
BESS
COMPOUND
FF
ED Bdy
A1245
T33-C2
T32-C2

LEGEND:

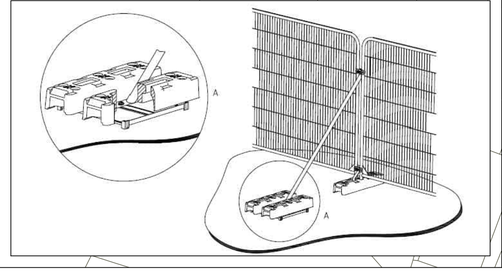
- TX-A — Category A - Trees of High Quality
- TX-B — Category B - Trees of Moderate Quality
- TX-C — Category C - Trees of Low Quality
- TX-U — Trees proposed for Removal
- TX-U — Category U - Trees Unsuitable for Retention
- Tree Trunk
- Tree Canopy Spread
- Tree Protection Fencing

Tree Protection Fencing

Tree protection fencing is to be installed at the positions shown at the commencement of works, before any ground works or soil stripping are carried out and before vehicles or materials are brought onto site.

The fencing will consist of a robust framework which is well braced to resist impacts as shown. The areas enclosed are to be maintained as a total exclusion zone to all construction activity. All-weather warning notices will be attached to the fencing to clearly identify the area as a tree protection exclusion zone into which access is not permitted.

No working activity, storage of materials, ground level changes, excavations or vehicular access is permitted within the protected area. Once erected, the protected area are to be regarded as sacrosanct and the fencing must not be removed or altered unless recommended by the project Arboriculturist and, where necessary, approval from the local planning authority.



RammSanderson ARBORICULTURE

Client :
Renewable Energy Systems Ltd

Project:
Fairgreen BESS

Drawing Title :
Tree Protection Plan

Drg No.
RSE_9244_TPP1

Rev :
V1

Drn By :
AL

Scale :
1:900@A1

Date :
18/06/2025

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N

Trees T36, T46-T58, G13-G19 and G21-G30, , considered far enough from proposals to not require further protection fencing.

G27-C2
T36-C2
G26-C2
Track
Drain
G25-C2
ETL
G23-C2
G24-C2
H7-C2
H6-C2
G22-C2
G21-C2
Drain
Drain
G17-C2
G18-C2
G15-C2
G16-C2
Lay-by
GP & ED Bldg
Barn Covey Bldg
ET
G13-C2
G14-C2
Balancing Ponds
Ponds
T33-C2
T32-C2
H5-C2
A1245
SM

LEGEND:

- TX-A — Category A - Trees of High Quality
- TX-B — Category B - Trees of Moderate Quality
- TX-C — Category C - Trees of Low Quality
- TX-U — Trees proposed for Removal
- TX-U — Category U - Trees Unsuitable for Retention
- Tree Trunk
- Tree Canopy Spread
- Tree Protection Fencing

Tree Protection Fencing

Tree protection fencing is to be installed at the positions shown at the commencement of works, before any ground works or soil stripping are carried out and before vehicles or materials are brought onto site.

The fencing will consist of a robust framework which is well braced to resist impacts as shown. The areas enclosed are to be maintained as a total exclusion zone to all construction activity. All-weather warning notices will be attached to the fencing to clearly identify the area as a tree protection exclusion zone into which access is not permitted.

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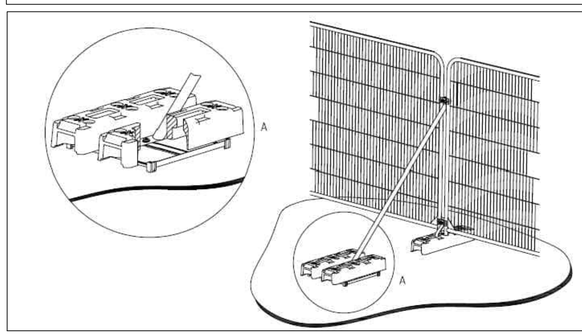

RammSanderson ARBORICULTURE

Client :
Renewable Energy Systems Ltd

Project:
Fairgreen BESS

Drawing Title :
Tree Protection Plan

Drg No. RSE_9244_TPP2
Rev : V1

Drn By : AL
Scale : 1:1000@A1
Date : 18/06/2025

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Yorkshire: SUM Studios, Studio 11, 1 Hartley Street, Heeley, Sheffield, S2 3DJ
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N

Pruning back and removal of G33 anticipated.

For any resurfacing or track upgrade work within Root Protection Area, excavation to be minimised to avoid root damage.

Pruning back and edge removal of G36 and G41 anticipated.

Existing hard surfacing within RPA

Pruning back anticipated.

For any resurfacing or track upgrade work within Root Protection Area of T43 and T45, excavation prohibited to avoid root damage. Sub-base of existing hard surfacing to be retained.

Existing track section to be retained

Trees T17 and T18 located to south of existing ditch. No new impacts to trees anticipated

Trees T19, T20,T21 and groups G10 and G11 considered far enough from proposals to not require further protection fencing.

Trees T36, T46-T58, G13-G19 and G21-G30, , considered far enough from proposals to not require further protection fencing.

Cycle Path

SOUTHEND ARTERIAL ROAD

Annwood Bridge

Track

Drain

Pond

Bonville House

Bonville Farmhouse 2

Bonville Farmhouse 1

Bonvilles Cottages

A1245

SM

FB

CR

14.0m

EG=14.12 FG=14.75

EG=16.68 FG=18.15

EG=19.66 FG=19.35

EG=21.75 FG=20.10

G40-C2 T66-B2 T65-C2 T64-B2 G36-C2 T69-B2 T68-B2 T67-B2 T71-C2 T70-B2 T73-C2 T74-C2 G35-C2 T43-B2 T42-C2 G34-C2 T41-B2 T45-B2 G33-C2 T45-A1 G41-C2 G39-C2 T62-B2 T60-A2 T61-C2 G38-C2 H8-C2 T59-C2 T49-B2 G32-C2 G37-C2 T9-B2 T8-B2 T7-B2 G2-C2 T6-B2 T5-B2 T4-C2 T3-B2 T2-C2 H1-B2 G1-C2 T16-C2 T12-C2 T13-C2 T14-C2 G7-C2 T44-C2 G6-C2 G5-C2 T15-C2 H2-C2 G4-C2 T11-C3 T17-C2 T18-B2 T38-C2 T19-B2 T20-A1 T21-B2 H3-C2 G40-C2 G3-C2 G31-C2 G11-C2 T34-C2 T35-C2 G10-C2 H5-C2 T33-C2 T32-C2 H4-C2 G30-C2 T58-C2 T57-C2 T56-C2 G29-C2 T55-C2 T54-C2 T53-C2 T52-C2 T51-C2 G28-C2 T50-C2 T49-C2 T48-C2 T47-C2 T46-C2 G27-C2 T37-C2 T36-C2

LEGEND:

- TX-A — Category A - Trees of High Quality
- TX-B — Category B - Trees of Moderate Quality
- TX-C — Category C - Trees of Low Quality
- TX-U — Trees proposed for Removal
- TX-U — Category U - Trees Unsuitable for Retention

Tree Trunk

Tree Canopy Spread

Tree Protection Fencing

Tree Protection Fencing

Tree protection fencing is to be installed at the positions shown at the commencement of works, before any ground works or soil stripping are carried out and before vehicles or materials are brought onto site.

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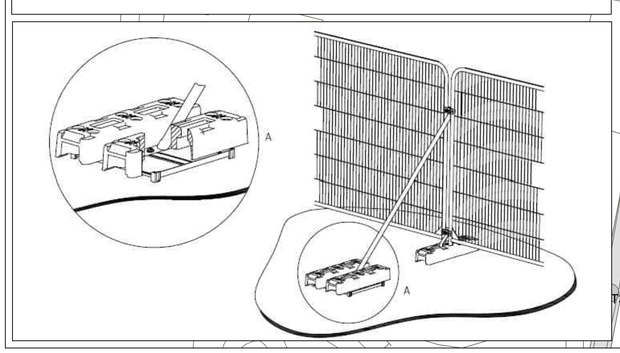

RammSanderson ARBORICULTURE

Client :
Renewable Energy Systems Ltd

Project:
Fairgreen BESS

Drawing Title :
Tree Protection Plan

Drg No. RSE_9244_TPP3

Rev : V1

Drn By : AL

Scale : 1:1000@A1

Date : 23/06/2025

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