Arborterra Ltd

Arboricultural Impact Assessment

For proposed development of:

Land east of
Clacton Road
Weeley
Essex

Date:
27th January 2023

Project Ref: 904

[redacted]

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LIST OF APPENDICES

1 INTRODUCTION

1.1 Instructions

1.1.1 I am instructed by the applicant to prepare an Arboricultural Impact Assessment to form part of a planning application for proposed development at Land east of Clacton Road, Weeley, Essex.

1.1.2 I have been provided with the following information in preparation of this report:

- Topographical survey of Sterling Surveys (Drawing: 1929-1)
- Proposed Site Plan of Church & Green (Drawing: CR0037/03)

1.1.3 A professional profile outlining my qualifications and experience is contained at APPENDIX 1.

1.2 The Site & Proposal

1.2.1 The application site extends to approximately 2710 square metres and is located on the eastern side of Clacton Road, immediately north of the junction with Church Lane. Historically the site was occupied by a dwelling, but this has been long since removed. Currently there is a small, dilapidated shed.

1.2.2 There are numerous trees spread across the site. Many of these have regenerated naturally, but some are clearly garden remnants, e.g. walnut, apple, Norway spruce, cherry laurel. The trees form a small copse, at the western end of an informal avenue of trees extending north-eastwards either side of Church Lane. This woodland area appears to have previously extended north into the adjacent site but has since been removed to allow the development of Cravenwood Close.

1.2.3 A Tree Preservation Order (16/0007) applies to the site. Woodland designation W1 of the TPO, encompasses the entire application site.

1.2.4 The application seeks full planning permission for a single residential dwelling, detached garage, drive with access from Church Lane, and associated landscaping.

1.3 The Tree Survey

1.3.1 I first surveyed the trees on site on 13th March 2020. Unless otherwise stated all observations were made from ground level and tree dimensions were measured. The survey was to assess trees in relation to proposed development and should not be relied upon as a tree safety survey. The survey has not recorded the sapling trees and scrub vegetation present across the site. I have revisited the site on various occasions, most recently on 10th January 2023, when I reviewed and updated the tree survey.

1.3.2 Data from the survey is contained in the Tree Survey Schedule at APPENDIX 2. The Tree Survey Plan at APPENDIX 3 shows the location of the trees in relation to the existing site layout and their quality, as categorised in accordance with "Trees *in relation to design, demolition and*

construction – Recommendations" (BS:5837:2012). The categorisation is intended to assist in determining which trees should be removed or retained in the event of development. BS5837 is a standard reference document used by local planning authorities and the Planning Inspectorate when considering trees in the development context.

1.3.3 The categories are summarised as follows:

- Category U: trees not worthy of retention because of their condition
- Category A: trees of high quality
- Category B: trees of moderate quality
- Category C: trees of low quality
- Category X: trees approved for removal under the Tree Preservation Order

1.3.4 Ash T2, ash T9 and Norway spruce T23, as recorded in the Tree Survey Schedule at APPENDIX 2 and shown on the Tree Survey Plan at APPENDIX 3, have TPO consent for removal: T2 and T9 under reference 21/01215/TPO, and T23 under reference 22/01307/TPO. Their removal is not related to the proposed development, and they are excluded from further consideration as part of this report.

1.3.5 The numbers of trees, groups and hedges surveyed by category are detailed in Table 1 below.

	Trees	Groups
Category U	5	0
Category A	1	0
Category B	24	3
Category C	13	8
TOTALS	**43**	**11**

1.4 Photographs from the tree survey

Photo 1. View of site looking approximately north from western side of Clacton Road.

Photo 2. View along Church Lane boundary of site, which is on the left-hand side of Church Lane, as viewed in photograph.

Photo 3. View of trees on Clacton Road boundary of the application site.

Photo 4. View looking south along Clacton Road, away from the site. Note the ribbon development either side of the road.

Photo 5. View looking north along Clacton Road, away from the site. Note the ribbon development either side of the road.

Photo 6. View from Cravenwood Close looking south-west towards the site.

Photo 7. View from site looking north-north-west towards the buildings in Cravenwood Close.

Photo 8. View from site looking east-northeast towards the buildings in Cravenwood Close.

Photo 9. The dilapidated shed that occupies the site.

Photo 10. The existing entrance from Church Lane.

Photo 11. Looking into site along disused track/path leading from the entrance shown above.

2 Impact Assessment

2.1 Drawings

2.1.1 The Tree Constraints Plan at APPENDIX 4 shows the trees in relation to the proposed site layout, along with the following information:

- Trees proposed for removal or retention
- Root Protection Areas (RPAs) - a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority; and,
- Target notes in relation to the development proposals and arboricultural constraints.

2.2 Trees to be removed

2.2.1 The trees to be removed as a result of the development are listed by BS5837 'quality category' in the table below.

Quality category	Tree species and number
U	Norway spruce T21, Scots pine T24
A	
B	Yew T17, yew T18, Scots pine T19, ash T32
C	Hawthorn T3, field maple T4, bay T20, apple T26, apple T27, shrubs S1

2.2.2 The Category U trees have been recommended for removal due to their condition and not as a result of the development. Spruce T21 has a sparse impoverished crown, bordering on stagnation and is likely to die within 10 years. Scots pine T24 leans north. Dense ivy was present over the stem and hindered inspection, but extensive decay was apparent from 0-1.5m on the south-east side of the stem. The stem is at risk of collapse over the northern boundary.

2.2.3 The Category B and Category C trees to be removed are either as a result of direct construction impacts, or are to ensure that there is an appropriate relationship between the trees to be retained and the proposed development, e.g. to avoid excessive shading, perceived or actual risk from falling branches etc.

2.3 Protection of trees to be retained

<u>The private drive</u>

2.3.1 The proposed private drive leading from Church Lane passes over the RPAs of ash T1 and oak T5. It is recommended in "Trees in relation to design, demolition and construction - Recommendations" (BS5837:2012, p25, paragraph 7.4.2.3) that:

> *"New permanent hard surfacing should not exceed 20% of any existing unsurfaced ground within the RPA."*

[redacted]

2.3.2 In this instance the proportions of new hard surfacing to existing unsurfaced ground are 11.7% for ash T1 and 20% for oak T5. The existing surface level for the asphalt in Church Lane approximately 26.05 (nearest level taken from topographical survey). The nearest on-site level within the drive, which is directly between T1 and T5 is 25.77. As such, levels allow for a 'reduced-dig' construction that will minimise the impact of drive construction and use on T1, T5 and the other trees to be retained. See paragraph 3.7 below for further guidance on design and construction of an appropriate 'reduced-dig' drive.

The garage

2.3.3 The garage extends into the RPA and crown spread of walnut T13 and holly T16. The crowns of these trees will require cutting back of the crown to provide working space for construction, and manual excavation and root pruning to minimise damage arising from construction of foundations. However, based on the type of tree, its condition and the relatively small proportion of RPA affected, this is unlikely to cause significant long-term harm to the tree.

2.3.4 Working space for construction around the garage extends into the RPA of oak T6. However, the tree and its RPA can be protected by use of suitable ground protection during construction.

Other

2.3.5 In other respects, the trees to be retained can be protected during construction by suitable tree protective fencing.

2.4 Mitigation and Compensation

2.4.1 The layout has been designed in order to:

- maintain the woodland character of the Clacton Road and Church Lane boundaries;
- maintain screening between the application site and adjacent development known as Cravenwood Close; and
- ensure that the dwelling and its main garden area are not unduly affected by shade, overhanging crowns or perceived/actual risk of falling branches.

2.4.2 In addition, a landscape scheme will enhance the site by:

- re-establishing a native hedgerow along its Clacton Road and Church Lane boundaries;
- strengthening the visual screen along the boundaries with Cravenwood Close;
- planting native bulbs within the retained woodland; and
- creating a swale with native planting

2.4.3 Full details of the landscape scheme have been provided separately. Refer to "Soft works" plan of Arborterra (Drawing ref: 1191-01 Rev A).

2.5 The relationship between the trees to be retained and the development

2.5.1 The crowns of oak T6 and Holly T16 will just overhang the garage roof. Oak T6 is fully grown and no increase in crown overhang is anticipated. Holly T6 is not fully grown, but some crown overhang of a non-habitable garage is considered acceptable.

2.5.2 There is no crown overhang of the uncovered parking area or the house. The rear garden has 200m^2 with no canopy cover.

2.5.3 In terms of shading, APPENDIX 5 contains tree shadow traces across the day at various times of year. These have been produced using ArborShadow (v3.04). All times are local, i.e. GMT or BST as appropriate. These show that the dwelling and the garden will receive adequate sun each day throughout the year.

2.5.4 For instance, on 21st March, the western elevation of the dwelling is unshaded from 0900 until 1200. Further, the deciduous trees will not be in leaf at this time of year, and the crowns will be relatively transparent to sunlight. The main garden area to the north and east of the dwelling is also not excessively shaded.

2.5.5 The trees that are to be retained are not in conflict with the proposed post-development use of the site and enhance its setting.

2.6 Summary of Impact Assessment

2.6.1 The development will result in the removal of:

- Category U: 2 trees
- Category A: 0 trees
- Category B: 4 trees
- Category C: 5 trees and 1 group

2.6.2 The trees to be retained can be protected during construction by suitable tree protective fencing, ground protection and reduced-dig construction methods.

2.6.3 The proposals have been designed to retain the woodland character of the Clacton Road and Church Lane boundaries; maintain screening between the application site and adjacent development known as Cravenwood Close; and ensure that the dwelling and its main garden area are not unduly affected by shade, overhanging crowns or perceived/actual risk of falling branches. In addition, a landscape scheme will enhance the site by: re-establishing a native hedgerow along its Clacton Road and Church Lane boundaries; strengthening the visual screen along the boundaries with Cravenwood Close; planting native bulbs within the retained woodland; and creating a swale with native planting. Full details of the landscape scheme have been provided separately. Refer to “Soft works” plan of Arborterra (Drawing ref: 1191-01 Rev A).

2.6.4 The trees that are to be retained are not in conflict with the proposed post-development use of the site and enhance its setting.

3 METHOD STATEMENTS

3.1 Arboricultural Site Supervision

3.1.1 An Arboricultural Clerk of Works (ACoW) shall be appointed to oversee protection of trees during the development.

3.1.2 The ACoW should attend site:

- Prior to commencement of the development to ensure tree protective fencing and ground protection is in place.
- During construction of 'reduced-dig' surfaces within the RPAs of ash T1 and oak T6;
- During construction of garage foundations within the RPA of holly T16;
- Periodically during the development.

3.2 Enabling Tree Works

3.2.1 The tree works detailed in the Schedule at APPENDIX 2 shall be undertaken as part of the development.

3.3 Tree Protective Fencing & Ground Protection

3.3.1 Tree Protective Fencing and Ground Protection shall be erected in accordance with the layout shown on the Phase 1 Tree Protection Plan at APPENDIX 6 prior to the commencement the development.

3.3.2 Following demolition, the layout of Tree Protective Fencing and Ground Protection will be varied in stages to that shown on the Phase 2 Tree Protection Plan at APPENDIX 7.

3.3.3 The area of 'reduced-dig' driveway shall be subject to ground protection until such time as the Protectaweb base (or similar) has been installed.

3.3.4 Tree Protective Fencing shall be of the type shown at APPENDIX 8. Notices stating "Tree Protection Area – No Access" should be affixed to the fencing. A Suitable notice is included at APPENDIX 7.

3.3.5 Ground protection shall be fit for the purpose of preventing compaction or contamination of the Root Protection Area taking into account the type, intensity and proximity of work taking place around the retained trees. A suitable specification for Ground Protection is included at APPENDIX 9. Proprietary ground protection mats such as TuffTrak are a suitable alternative.

3.4 Site Facilities

3.4.1 All site huts, parking, delivery and storage areas, welfare facilities, cement/plaster mixing areas etc., should be sited outside of the RPAs of trees to be retained.

3.5 Demolition of the dilapidated shed

3.5.1 The dilapidated shed shall, as far as reasonably possible, be demolished by hand.Where machinery is necessary, it shall be restricted to operating from either:

- outside of the RPAs of trees to be retained; or
- from existing hard surfaces that provide an effective from of ground protection; or
- from newly installed ground protection that is to the satisfaction of the Arboricultural Clerk of Works

3.5.2 As far as reasonably practicable, foundations and similar sub-structures shall be pulled radially from the trees to be retained, taking care not to unnecessarily scrape, excavate or compact the ground outside of building footprint and within the RPA.

3.5.3 Non-rigid surface materials such as tarmac or aggregate sub-bases shall first be broken-up or loosened by manual or mechanical means (e.g. hydraulic jackhammer), taking care to minimise the disturbance of the underlying ground. The loosened material shall then be scraped in small incremental layers using a toothless bucket, again taking care to avoid disturbance of the underlying ground.

3.5.4 Rigid surfaces such as concrete and slab materials shall be removed in sections by lifting the edge closest to the tree with a toothless bucket and pulling away. Where this is not practicable, the surface shall be first broken up by mechanical means (e.g. hydraulic jackhammer) and then as scraped away in small incremental layers by toothless bucket, as above.

3.6 Reduced-dig surfaces

3.6.1 Proposed hard surfaces within the RPAs of trees to be retained shall be porous and constructed using 'Reduced-dig' techniques. Typically 'reduced-dig' utilises a cellular confinement system such as ProtectaWeb (www.wrekinproducts.com) to minimise the required depth of sub-base. An indicative design for a reduced-dig surface is included at APPENDIX 9.

3.6.2 Finished levels and construction details should be agreed with the Local Authority prior to commencement of the development in order to ensure trees to be retained are properly protected from damage during construction.

3.6.3 Reduced-dig surfaces shall be constructed in accordance with the finished levels and construction details (to be agreed) and under the supervision of the Arboricultural Clerk of Works (ACoW).

3.6.4 Tree Protective Fencing shall be realigned in order to provide access to the working area to the satisfaction of the ACoW. Subject to working conditions and methods, areas of the RPA outside of realigned fencing may require protection against compaction, e.g. using ground mats. Ground protection shall be installed as directed and to the satisfaction of the ACoW.

3.6.5 The 'reduced-dig' surface is then constructed in accordance with the manufacturer's and designer's instructions.

3.7 Foundations within the RPA of trees to be retained

3.7.1 Within the RPAs of holly T16, excavations for the garage foundations shall be carried out under the watching brief of the Arboricultural Clerk of Works. The edge of the excavation closest to the tree shall be excavated manually up to 450mm depth. Any roots encountered shall be cut cleanly back to the face of the excavation using clean, sharp, pruning tools.

3.7.2 For health and safety reasons, below 450mm depth excavations may be undertaken mechanically, providing that machinery shall be restricted to operating from either:

- outside of the RPAs of trees to be retained; or
- from existing hard surfaces that provide an effective from of ground protection; or
- from newly installed ground protection that is to the satisfaction of the Arboricultural Clerk of Works

3.7.3 Excavation shall proceed in small incremental layers. Where roots are encountered that in the opinion of the Arboricultural Clerk of Works are considered to be of significance, where safe and practicable to do so, they shall be cut cleanly back to the face of the excavation using clean, sharp, pruning tools.

3.8 Services

3.8.1 Where practicable, underground utility services, e.g. mains water, power, telecoms, drainage etc, shall be located outside of the RPAs of trees to be retained. Where services are proposed to pass through the RPAs of trees to be retained, the layout and method of installation for the services should be agreed with the Local Authority prior to commencement of the development in order to ensure trees to be retained are properly protected from damage during construction.

4 CONCLUSIONS

4.1.1 The application site extends to approximately 2710 square metres and is located on the eastern side of Clacton Road, immediately north of the junction with Church Lane. Historically the site was occupied by a dwelling, but this has been long since removed. Currently there is a small, dilapidated shed.

4.1.2 There are numerous trees spread across the site. Many of these have regenerated naturally, but some are clearly garden remnants, e.g. walnut, apple, Norway spruce, cherry laurel. The trees form a small copse, at the western end of an informal avenue of trees extending north-eastwards either side of Church Lane. This woodland area appears to have previously extended north into the adjacent site but has since been removed to allow the development of Cravenwood Close.

4.1.3 A Tree Preservation Order (16/0007) applies to the site. Woodland designation W1 of the TPO, encompasses the entire application site.

4.1.4 The application seeks full planning permission for a single residential dwelling, detached garage, drive with access from Church Lane, and associated landscaping.

4.1.5 A survey was carried out of the trees potentially affected by the development. The trees, groups and hedges were categorised for their quality / value in accordance with "Trees in relation to design, demolition and construction – Recommendations" BS5837:2012, as summarised in the table below:

	Trees	Groups
Category U	5	0
Category A	1	0
Category B	24	3
Category C	13	8
TOTALS	**43**	**11**

4.1.6 The development will result in the removal of:

- Category U: 2 trees
- Category A: 0 trees
- Category B: 4 trees
- Category C: 5 trees and 1 group

4.1.7 The trees to be retained can be protected during construction by suitable tree protective fencing, ground protection and reduced-dig construction methods.

4.1.8 The proposals have been designed to retain the woodland character of the Clacton Road and Church Lane boundaries; maintain screening between the application site and adjacent development known as Cravenwood Close; and ensure that the dwelling and its main garden area are not unduly affected by shade, overhanging crowns or perceived/actual risk of falling branches. In addition, a landscape scheme will enhance the site by: re-establishing a native hedgerow along its Clacton Road and Church Lane boundaries; strengthening the visual screen along the boundaries with Cravenwood Close; planting native bulbs within the retained

woodland; and creating a swale with native planting. Full details of the landscape scheme have been provided separately. Refer to “Soft works” plan of Arborterra (Drawing ref: 1191-01 Rev A).

4.1.9 The trees that are to be retained are not in conflict with the proposed post-development use of the site and enhance its setting.

Arborterra Ltd

Appendices to the Arboricultural Impact Assessment

For proposed development of:

Land east of
Clacton Road
Weeley
Essex

Date:
27th January 2023

Project Ref: 904

[redacted]

APPENDIX 1:
Professional Profile for Oisin Kelly

PROFESSIONAL PROFILE FOR OISIN KELLY

Oisin is an Arboricultural Consultant with over 30 years' experience across planning, subsidence, tree-risk management, aviation and utility sectors. He acts as an Expert Witness in relation to planning appeals, tree-related subsidence, tree-related property damage and personal injury, and alleged contraventions of tree preservation orders and felling licenses. Oisin has appeared in Magistrates Court, County Court and High Court (including the Technology and Construction Court). He has provided written representations on planning appeals and has appeared at Hearings. He also provides arboricultural services to planners, developers, local authorities, architects and their agents.

ACADEMIC QUALIFICATIONS

BSc Forestry (hons)
Diploma in Management Studies

MEMBERSHIPS

Member of the Arboricultural Association
Member of the Academy of Experts
Associate Member of the Institute of Chartered Foresters

EXAMPLE Projects

BPT Limited v Patterson & Patterson [2016] Central London County Court (TCC)
Brown v Harlow Council [2011] Central London County Court
Lovett, Newman and Barton v Epping Forest District Council [2011] Harlow Magistrates Court
Berent v Family Mosaic Housing [2011] EWHC 1353 (TCC)
Lamb & Lamb v Hampshire County Council [2010] Central London County Court
Loftus-Brigham v Ealing LBC [2003] EWCA Civ 1490,
Eiles v Southwark LBC [2006] EWHC 1411 (TCC)

University of Essex: Tree risk management and arboricultural consultancy at their Colchester, Loughton and Southend Campuses, which contain around 3000 individual trees, and many more in groups and woodlands, of which around 100 are veteran trees. Design of Tree Management Database.

Lawford House is a development of 10 residential units within a parkland setting containing veteran trees. The initial Arboricultural Survey identified the relevant constraints allowing appropriate impact avoidance and mitigation to be 'designed-in'. The consultation phase included representations on a new and existing TPO, which were subsequently revoked and a new TPO re-made in accordance with Oisin's recommendations.

Bolingbroke Park is a major development of 231 residential units and involved detailed consultation with planners at pre-application, application and during construction. Other inputs included Arboricultural Impact Assessments, Arboricultural Method Statements, Veteran Tree Management Plans and appointment as the Arboricultural Clerk of Works.

Bell School Development Site is a residential development of 270 dwellings, comprising houses and apartments, including affordable housing and 100-bed student living accommodation for the Bell Language School. The site is in the Southern Fringe Growth Area of Cambridge. I supported the scheme from design through to planning consent, including consultation meetings with the local planning authority.

Support of various Councils in the redevelopment and infill development of sites on the Housing Revenue Account for affordable housing, including surveys, reports, preliminary advice and public consultations.

CAREER HISTORY

Arborterra Ltd

2019 to present	Co-owner, Arboricultural Consultant	Expert Witness and Arboricultural Consultant providing clients with advice relating to trees and development, tree preservation, tree risk management and tree-related subsidence damage.

Self-employed Sole Trader

2015 – 2019	Arboricultural Consultant	Expert Witness and Arboricultural Consultant providing clients with advice relating to trees and development, tree preservation, tree risk management and tree-related subsidence damage.

Landscape Planning Group Limited

2013 - 2015	Principal Consultant	Arboricultural Consultant. To line manage and lead the Planning Team of Arboriculturists, Ecologists and Landscape Architects to meet sales and revenue targets. To manage projects within agreed deadlines, making maximum use of potential revenue opportunities, whilst maintaining client satisfaction.
2008 - 2013	Principal Consultant	Arboricultural Consultant. As above for delivery of Tree Risk Management Services.
2006 - 2008	Regional Manager	Regional Manager of Colchester Officer providing Arboriculture, Ecology and Landscape Services across planning, local government and risk management sectors. Arboricultural Consultant
2004- 2006	Director of Technical Services	To provide a focus for commercial innovation in technical skills, system evolution, equipment, software, hardware and R&D. Arboricultural Consultant
2002 – 2004	Head of Insurance of Services	Main client contact and technical authority for provision of tree-related subsidence services to loss adjusters, engineers and insurers across the UK. Line Management of Arboricultural Consulting Staff and administrative support. Arboricultural Consultant
1997 – 2002	Consulting Arboriculturalist	Fee earner specialising in tree-related subsidence.

London Borough of Hounslow

1994 - 1997	Senior Arboricultural Officer	Team leader with responsibility for budgetary control and staff. Maintaining Council owned trees. Providing arboricultural advice to the Planning Department in respect of development control, enforcement and tree preservation

London Borough of Redbridge

1991 - 1994	Assistant Arboricultural Officer	Maintaining Council owned trees. Providing arboricultural advice to the Planning Department in respect of development control and tree preservation

APPENDIX 2:
Tree Survey Schedule

Survey By: Oisin Kelly
Survey Date: 10/01/2023

Tree Survey at
Land east of Clacton Road, Weeley

Arborterra Ltd

Tree No.	Species	Stem Diam @ 1.5m (mm)	Height (m)	Crown Spread				Age Range	Physiological Condition	First main branch	Crown Clearance	Comments	Recommendations	Remaining contribution (Yrs)	Amenity	RPA Radius	RPA Area
				N	S	E	W										
T1	Ash	400 x1 150 x1	14.5	3	7	3	6	EM	G	-	6	Growing from water-filled ditch. DBH estimated.		20+	B2	5.13	0
T2	Ash	500 x1	14.5	6	6	3	4	MA	F	-	6	Impoverished crown. I. hispidus bracket at 3.5mS.	Approval to fell in accordance with approval 21/01215/TPO.	10+	X	6	0
T3	Hawthorn	140 x1 100 x1 70 x1	5	0.5	3.5	2	2	EM	F	-	2	Crown biased S and S. Crown mixed with crowns of adj holly.	Fell for development	20+	C2	2.23	0
T4	Field Maple	260 x1	9	2	3	2	4	EM	G	-	4		Fell for development	40+	C1	3.12	0
T5	English Oak	650 x1	15	5	7	7	10	MA	F	6W	6	Dense ivy over stem and into crown. Long low branches (x2) extending W. One dead.		40+	B1	7.8	0
T6	English Oak	920 x1	20	12	9	10	12	FM	G	-	7			40+	A1	11	0
T7	Ash	350 x1	14	1	5	2	2	EM	P			Severe die-back of crown. Weak epicormic response. Shaded. Terminal decline.		<10	U	4.2	0
T8	Ash	470 x1	16	5	7	7	5	MA	G			Moderate die-back of upper crown. Moderate epicormic response high in crown (orthotropic). Two quasi-independent epicormic stems from buttresses - 150 x2.		20+	B1	5.64	0
T9	Ash	210 x1 380 x1	11	1.5	3	8	3	MA	P	-	7	Storm damaged/topped at 5 - 6.5m. Decay znd hollowing afound bssd of secondary epicormic crown -liable to collapse. Impoverishdc / stagnating crown.	Approval to fell in accordance with approval 21/01215/TPO.	<10	X	5.21	0
T10	English Oak	710 x1	16	8	8	8	8	MA	F	-	7	Impoverished crown.		40+	B1	8.52	0

* Denotes estimated dimension

Survey By: Oisin Kelly
Survey Date: 10/01/2023

Tree Survey at
Land east of Clacton Road, Weeley

Arborterra Ltd

Tree No.	Species	Stem Diam @ 1.5m (mm)	Height (m)	Crown Spread				Age Range	Physiological Condition	First main branch	Crown Clearance	Comments	Recommendations	Remaining contribution (Yrs)	Amenity	RPA Radius	RPA Area
				N	S	E	W										
T11	Ash	300 x1	16	6	3.5	6	6	EM	F	-	7.5	Moderately sparse (impoverishdd) crown.		20+	B1	3.6	0
T12	Walnut	330 x1	14	5	5	5	5	EM	G	-	6	Ivh ovdr stem and into crown.		40+	B1	3.96	0
T13	Walnut	330 x1	14	8	6.5	6.5	6.5	MA	G	3S250 4W250 4.5N250	5W 8E 5N 2.5-8S		Fell for development	40+	B1	3.96	0
T14	Ash	250 x1	15	3.5	3.5	3.5	3.5	EM	G					40+	C1	3	0
T15	Ash	250 x1	15	3.5	3.5	3.5	3.5	EM	G					40+	C1	3	0
T16	Holly	320 x1 250 x1 170 x1	10	4	4	4	4	FM	G				Cut back crown on N side by 1.5m for working space around proposed garage.	40+	C2	5.28	0
T17	Yew	480 x1	10	6	6	6	6	MA	G				Fell for development	40+	B1	5.76	0
T18	Yew	410 x1	11	5	3.5	5	4	EM	G				Fell for development	40+	B1	4.92	0
T19	Scots Pine	770 x1	19	3	6	5	8	FM	G	8SW	8		Fell for development	40+	B1	9.24	0
T20	Bay	130 x3	12	5	5	1	5	FM	F	2N	2	Northerly stem bends down.	Fell for development	20+	C2	2.7	0
T21	Norway Spruce	290 x1	14	4	4	4	4	EM	P			Sparse crown, impoverished, bordering on stagnation.	Fell for development	<10	U	3.48	0
T24	Scots Pine	400 x1	11	3	2.5	4	2	EM	G			Leans north. Ddnse ivh over stem obscurind extensive decay from 0-1.5m on SEside of stem. Failure potential.	Fell due to condition	10+	U	4.8	0
T26	Apple	150 x1 100 x3	5	0	4	1	4	EM	F			Stem lose to horizontal for 2mN, crown bias to W due to competition.	Fell for development	10+	C2	2.75	0
T27	Apple	230 x1	6	1	7	3	3	MA	G	2S	2		Fell for development	40+	C2	2.76	0
T28	Wild Cherry	380 x1	14	4	4	4	4	MA	G	-	6			40+	B1	4.56	0
T29	Hazel	150 x6 100 x6	9	4.5	4.5	4.5	4.5	FM	G				Coppice in accordance with approval 22/005567/TPO	40+	C2	5.3	0
T30	Sycamore	450 x1	16	5	5	5	5	EM	G					40+	B1	5.4	0

* Denotes estimated dimension

Survey By: Oisin Kelly
Survey Date: 10/01/2023

Tree Survey at
Land east of Clacton Road, Weeley

Arborterra Ltd

Tree No.	Species	Stem Diam @ 1.5m (mm)	Height (m)	Crown Spread				Age Range	Physiological Condition	First main branch	Crown Clearance	Comments	Recommendations	Remaining contribution (Yrs)	Amenity	RPA Radius	RPA Area
				N	S	E	W										
T32	Ash	270 x1	14	4.5	4.5	4.5	4.5	EM	G	-	6		Fell for development	40+	B1	3.24	0
T33	Bay	100 x10	10	3.5	3.5	3.5	3.5	MA	G					40+	C1	3.79	0
T34	Horse Chestnut	250 x2	10	4	2	5	5	EM	G					40+	B1	4.24	0
T35	Ash	310 x1	12	2	5	5	5	EM	G					40+	B1	3.72	0
T36	Sycamore	150 x1	10	3	3	3	3	EM	F			Dense ivy over sten and into crown. DBH estimated.		20+	C2	1.8	0
T37	Hawthorn	320 x1	9	4	4	4	4	FM	G					40+	B2	3.84	0
T38	Ash	270 x1	14	5	5	5	5	EM	F	-	5	Moderately impoverished crown.		20+	B1	3.24	0
T39	Ash	200 x1	12	3.5	3.5	3.5	3.5	EM	G			Moderately impoverished crown.		20+	B2	2.4	0
T40	Ash	260 x1	15	5	5	5	5	EM	G			Moderately impoverished crown.		20+	B1	3.12	0
T41	Ash	250 x1	12	0	4	4	2	EM	F			Impoverished crown.		20+	C2	3	0
T42	Horse Chestnut	250 x1 170 x1	12	4	4	4	4	EM	G	-	2			40+	B1	3.63	0
T43	Ash	210 x1	14	3.5	3.5	3.5	3.5	EM	F	-	7	Slightly impoverished crown.		20+	B1	2.52	0
T44	Cherry Plum	160 x1	6	3	3	3	3	EM	D					0	U	1.92	0
T45	Sycamore	240 x1	14	4	4	4	4	EM	F			Moderately impoverished crown.		20+	B1	2.88	0
T46	Silver Birch	150 x1	7	1	1	1	1	EM	D					0	U	1.8	0
T47	Walnut	150 x1	9	3	1	2	4	SM	F			Shaded.		40+	C1	1.8	0
T48	Silver Birch	220 x1	14	4	4	4	4	EM	G	-	5			40+	B1	2.64	0
T49	Ash	350 x1 280 x1	15	6	6	6	6	EM	F	-	7	Moderate impoverishment.		20+	B1	5.38	0
S1	Privet, Cherry Laurel	100 x1	5					FM	F				Fell for development	10+	C2		

* Denotes estimated dimension

Survey By: Oisin Kelly
Survey Date: 10/01/2023

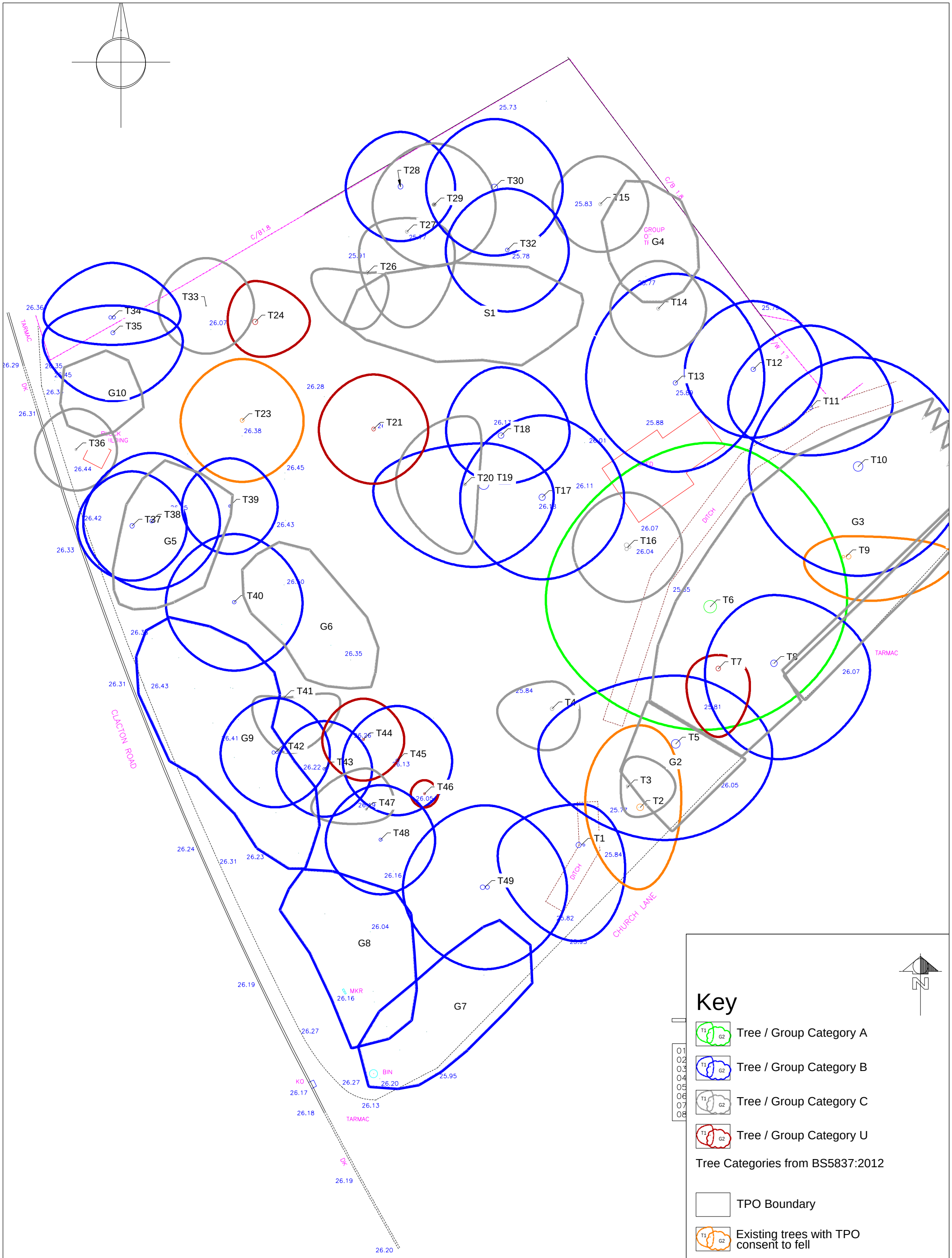
Tree Survey at
Land east of Clacton Road, Weeley

Arborterra Ltd

Tree No.	Species	Stem Diam @ 1.5m (mm)	Height (m)	Crown Spread				Age Range	Physiological Condition	First main branch	Crown Clearance	Comments	Recommendations	Remaining contribution (Yrs)	Amenity	RPA Radius	RPA Area
				N	S	E	W										
G1	Blackthorn, Hawthorn, Honeysuckle	0 x0	5	0	0	0	0	MA	P			Gappy, boundary hedgerow.		10+	C3	0	0
G2	Holly	70 x1	5	0	0	0	0	EM	G					20+	C2	0	0
G3	Elder,elm, Blackthorn, Hawthorn	150 x0	6	0	0	0	0	EM	F			Mostly young saplings 2-3m tall, occasional hawthorm elm to 6m, 130mm DBH.		40+	C3	0	0
G4	Ash	120 x1	15					EM	G					40+	C2		
G5	Cherry laurel	200 x1	5					MA	G					40+	C3		
G6	Cherry plum	300 x1	9					FM	F			Shaded. Broken branches.		20+	C3		
G7	Field maple, hawthorn	250 x1	12					EM	G			Hawthorn forming understorey.		40+	B2		
G8	Goat willow, sycamore	250 x2	12					EM	G					40+	B2		
G9	Ash, oak, sycamore	300 x1	13					EM	G					40+	B2		
G10	Elm	70 x1	5					YO	F					10+	C2		

* Denotes estimated dimension

APPENDIX 3:
Tree Survey Plan (ref: 904-101)



Key

- Tree / Group Category A
- Tree / Group Category B
- Tree / Group Category C
- Tree / Group Category U

Tree Categories from BS5837:2012

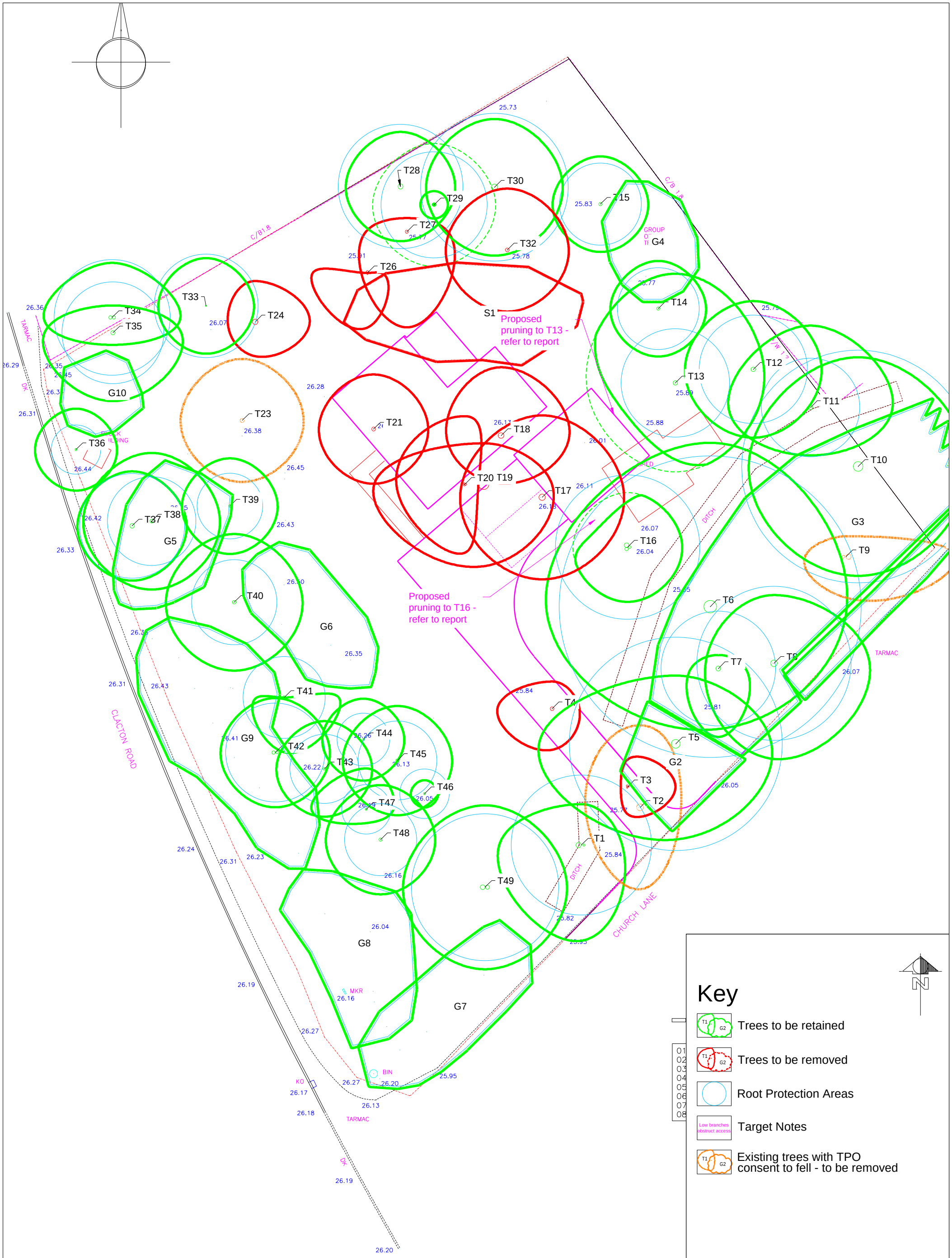
- TPO Boundary
- Existing trees with TPO consent to fell

DRAWING TITLE:	DRAWING NUMBER:	REV.:	COMMENT:	DATE:	NOTES:
Tree Survey Plan	904-101	-	Original issue	24/03/2020	
CLIENT:	ISSUE:	A	Drawing renumbered	14/04/2020	
Dan Akers	For Planning	B	Resurveyed, Drawing renumbered	27/01/2023	
LOCATION:	SCALE:				
Land at Church Lane, Weeley	1:250 @ A3				

PREPARED BY:

Arborterra Ltd

APPENDIX 4:
Tree Constraints Plan (ref: 904-201)



Key

- Trees to be retained
- Trees to be removed
- Root Protection Areas
- Target Notes (Low branches obstruct access)
- Existing trees with TPO consent to fell - to be removed

DRAWING TITLE:	DRAWING NUMBER:	REV.:	COMMENT:	DATE:	NOTES:
Tree Constraints Plan	904-201	-	Drawing renumbered	14/04/2020	
CLIENT:	ISSUE:	A	Resurveyed, Drawing renumbered	27/01/2023	
Dan Akers	For Planning				
LOCATION:	SCALE:				
Land at Church Lane, Weeley	1:250 @ A3				

PREPARED BY: Arborterra Ltd

APPENDIX 5:
Tree Shadow Traces

Table of Figures

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07570 977449

Figure 1. Mar-21, 0900, 40% shadow opacity (trees not in leaf) (Trees circled red have been removed)

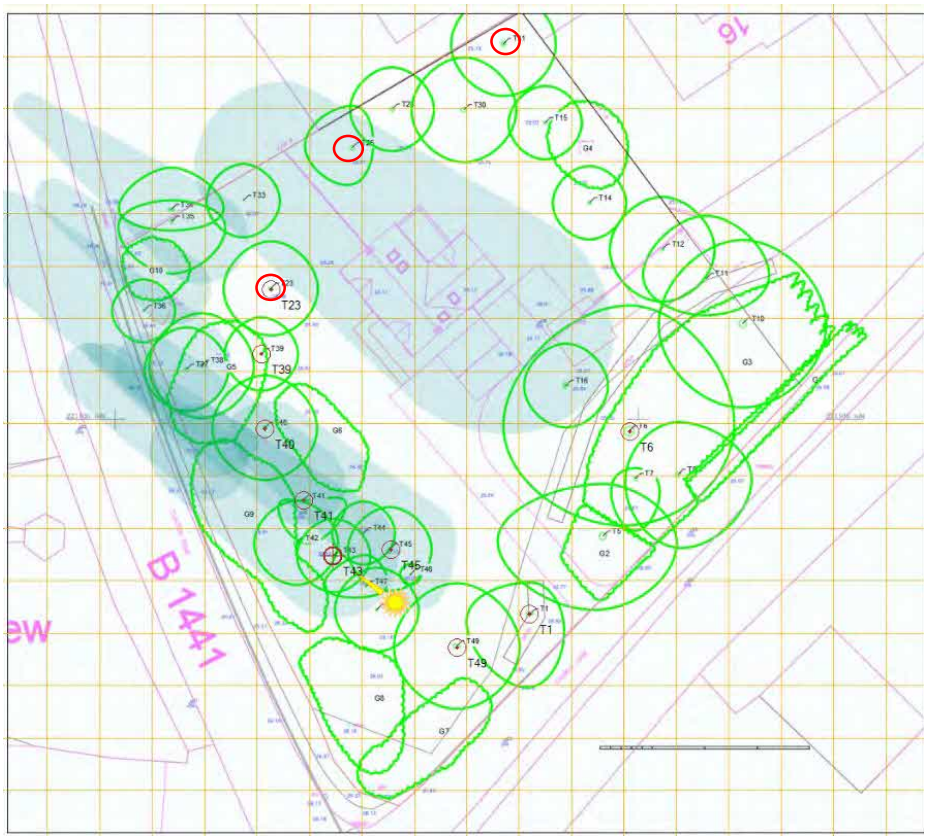

Figure 2. Mar-21, 1200, 40% shadow opacity (trees not in leaf) (Trees circled red have been removed)

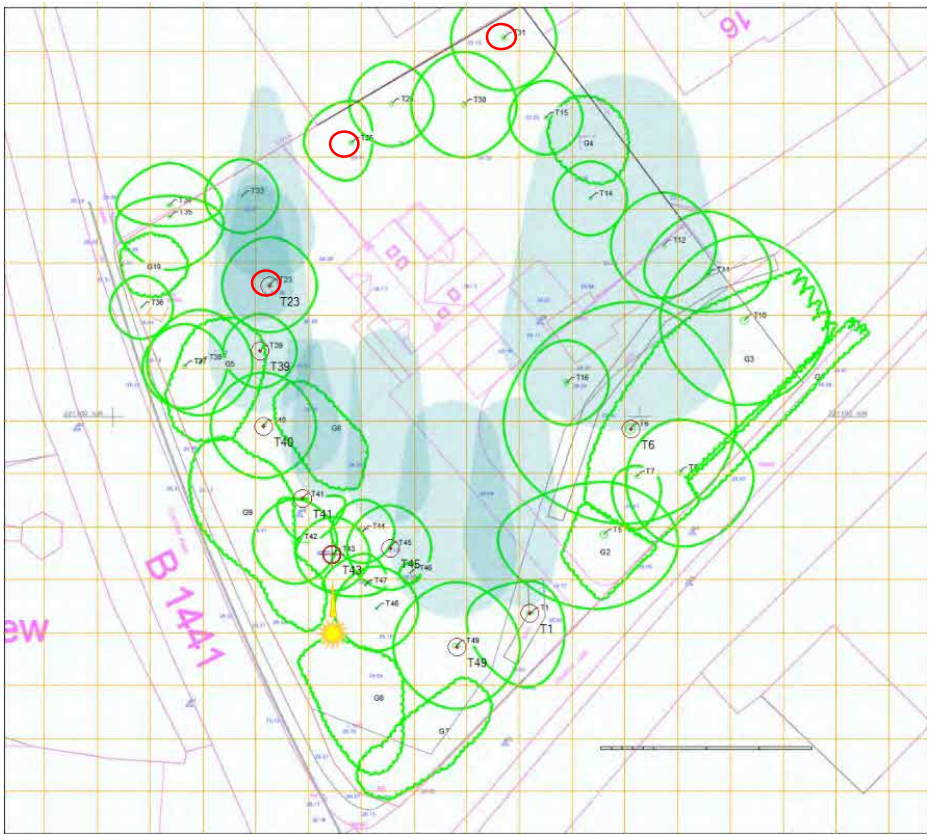

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Figure 3. Mar-21, 1500, 40% shadow opacity (trees not in leaf) (Trees circled red have been removed)

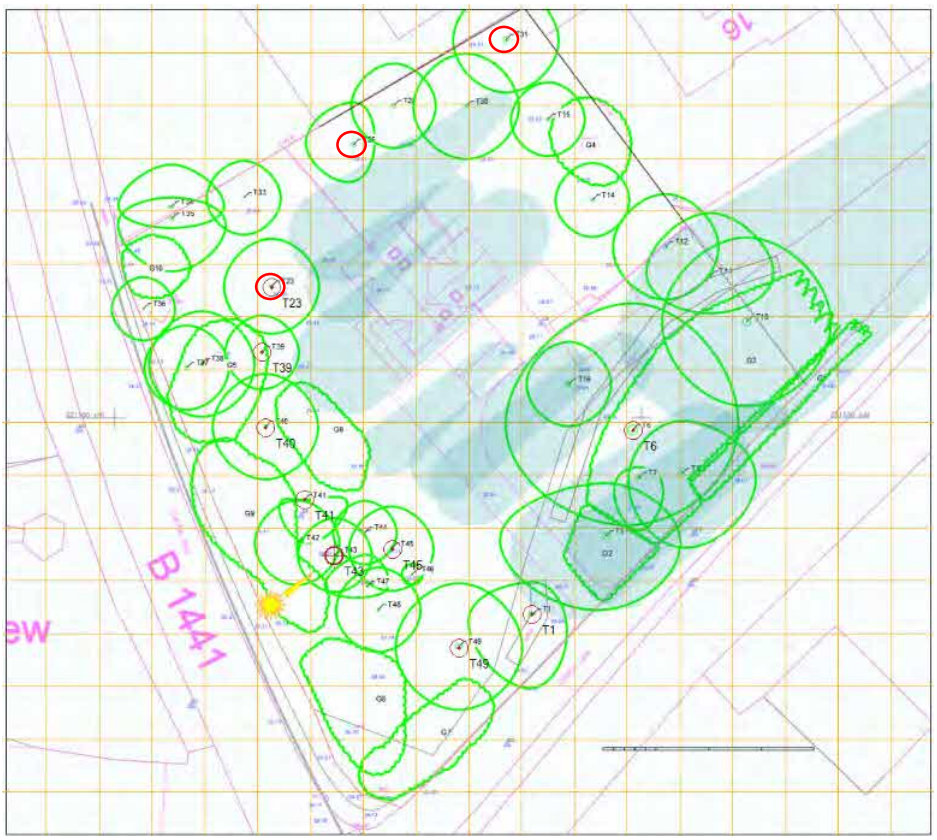

Figure 4. Mar-21, 1700, 80% shadow opacity (trees in leaf) (Trees circled red have been removed)

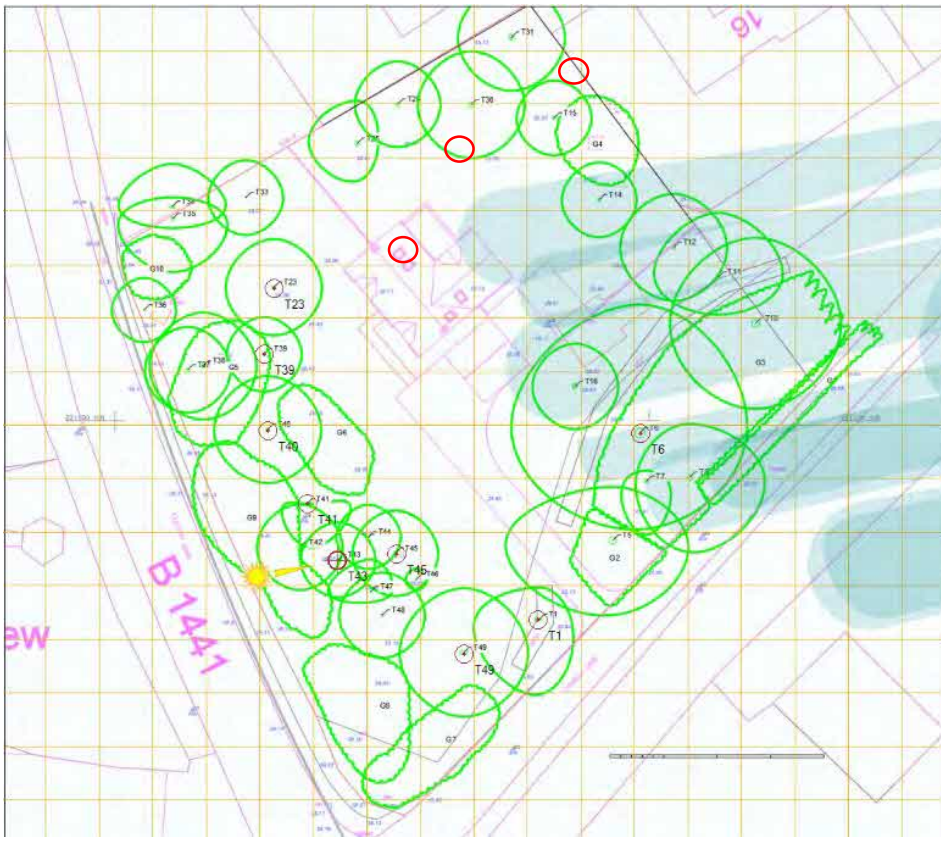

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Figure 5. Jun-21, 0900, 80% shadow opacity (trees in leaf) (Trees circled red have been removed)

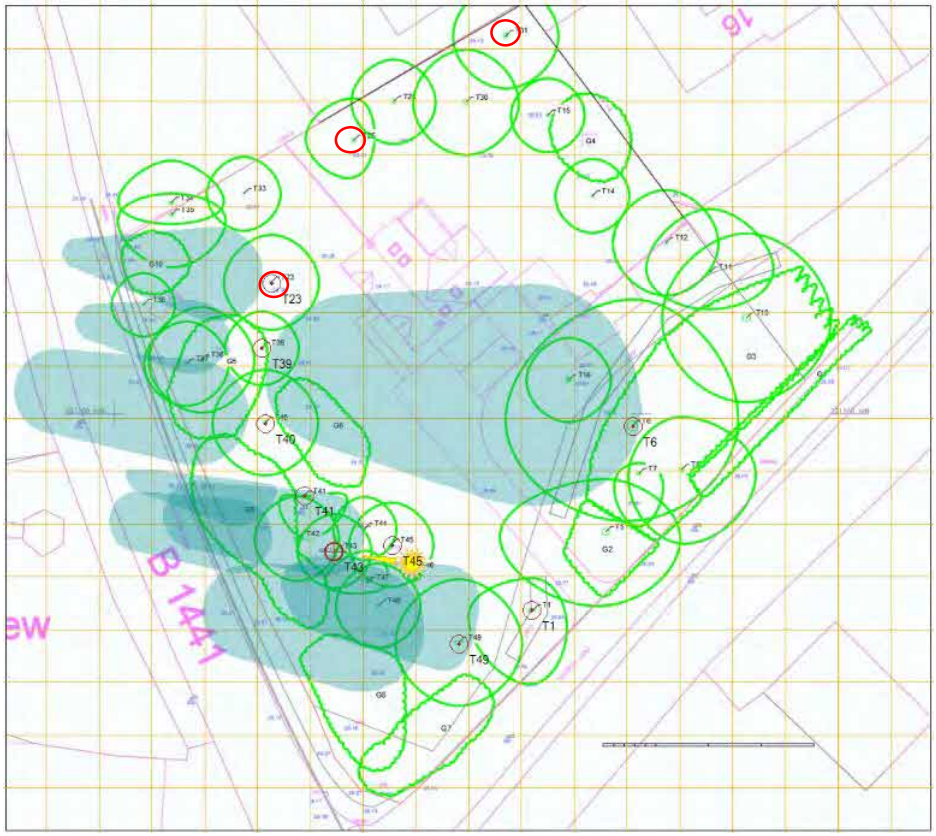
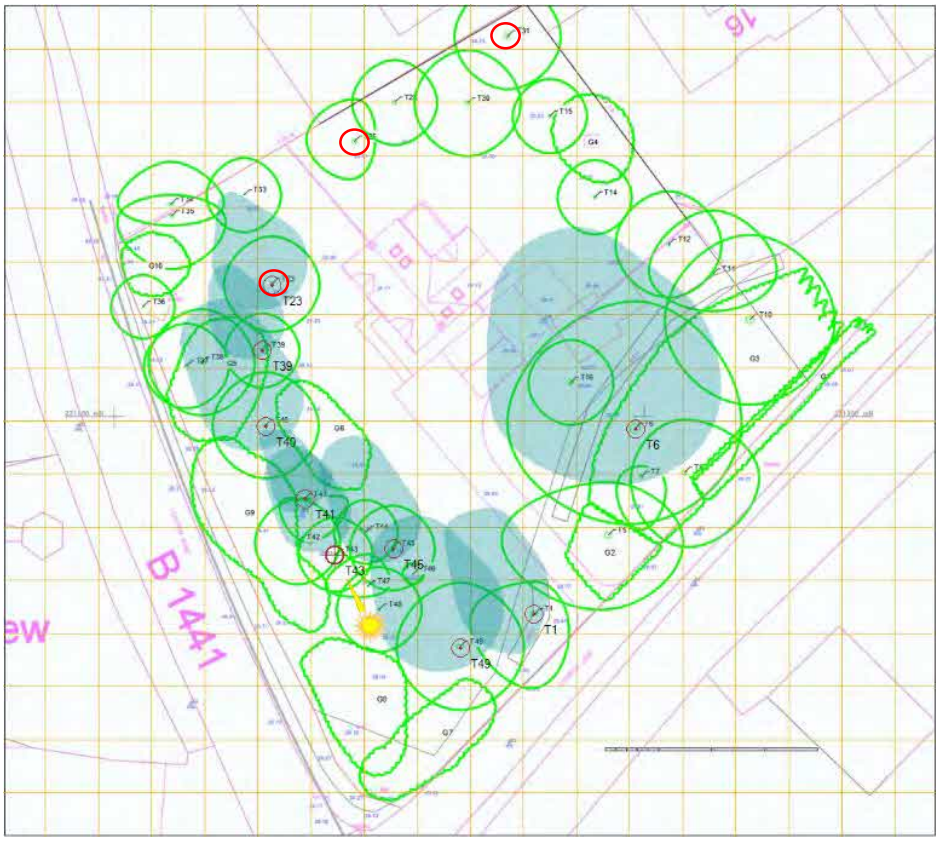


Figure 6. Jun-21, 1200, 80% shadow opacity (trees in leaf) (Trees circled red have been removed)



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07570 977449

Figure 7. Jun-21, 1500, 80% shadow opacity (trees in leaf) (Trees circled red have been removed)

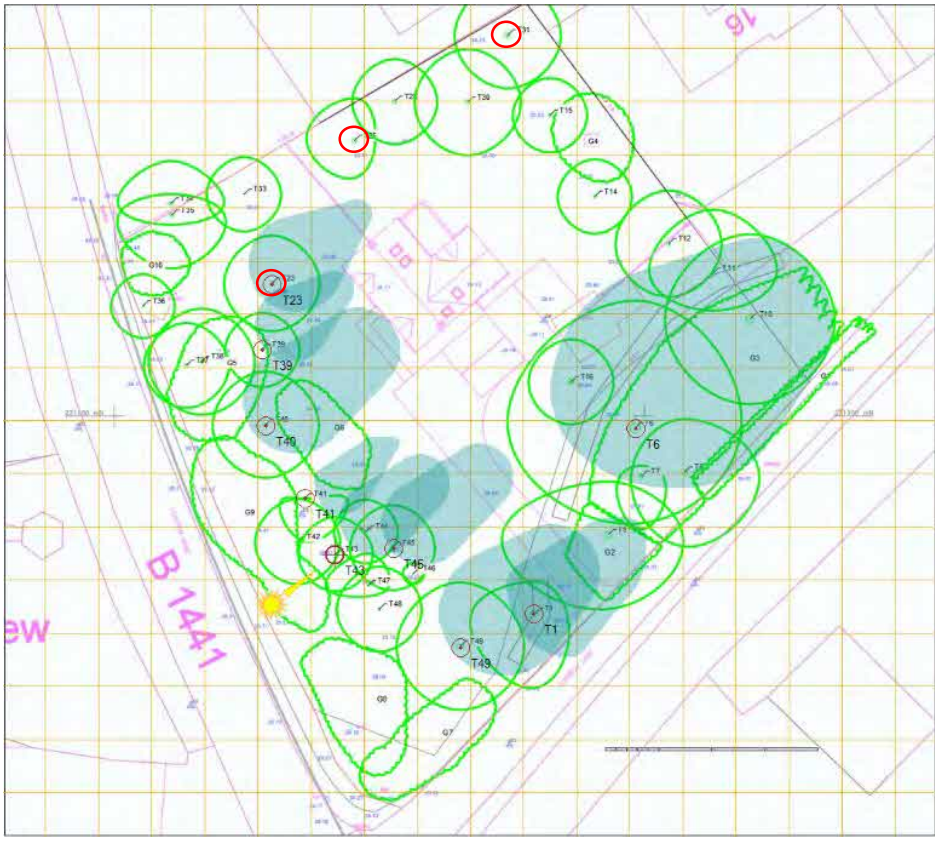

Figure 8. Jun-21, 1800, 80% shadow opacity (trees in leaf) (Trees circled red have been removed)

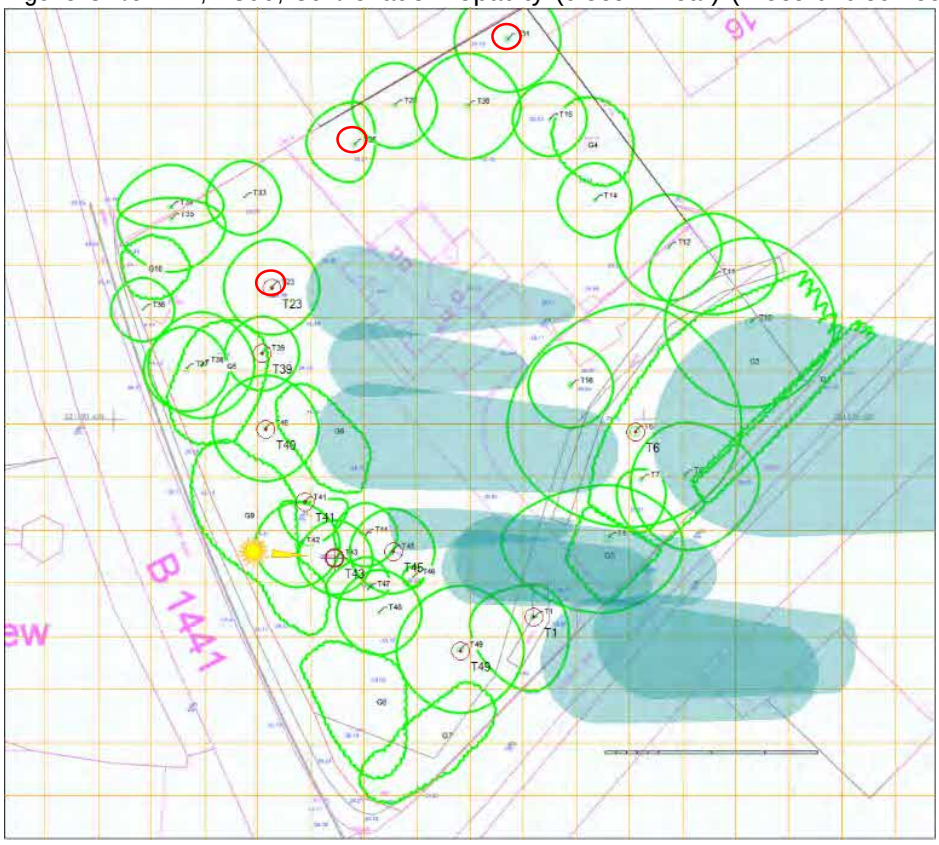

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Figure 9. Sep-21, 0900, 80% shadow opacity (trees in leaf) (Trees circled red have been removed)

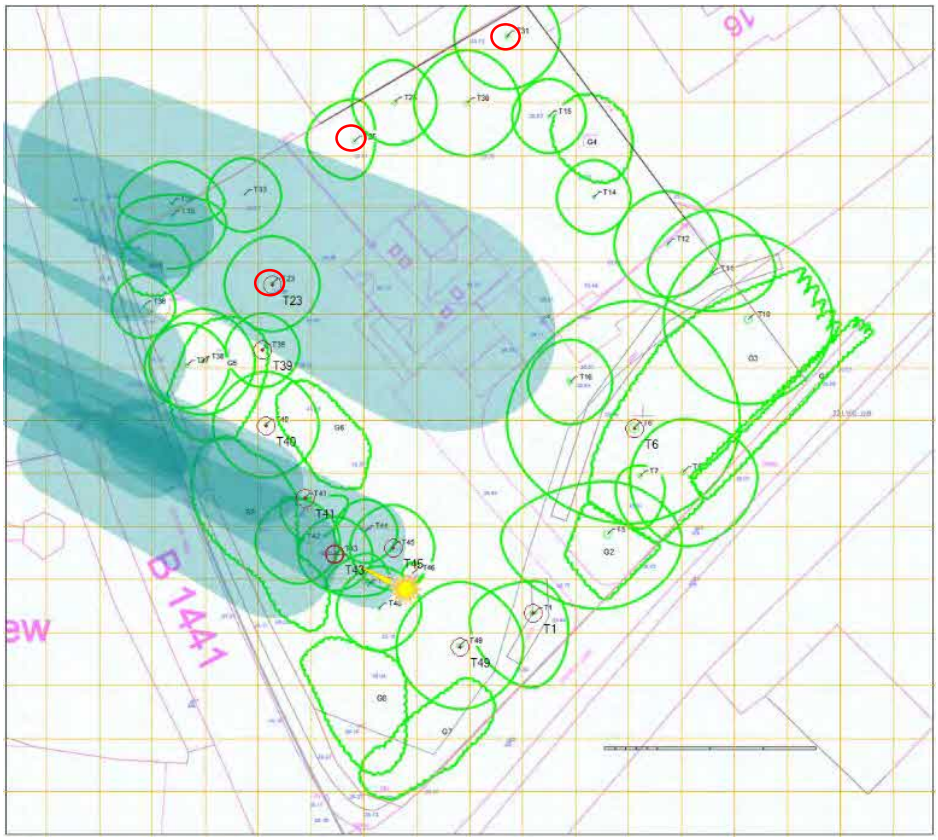

Figure 10. Sep-21, 1200, 80% shadow opacity (trees in leaf) (Trees circled red have been removed)

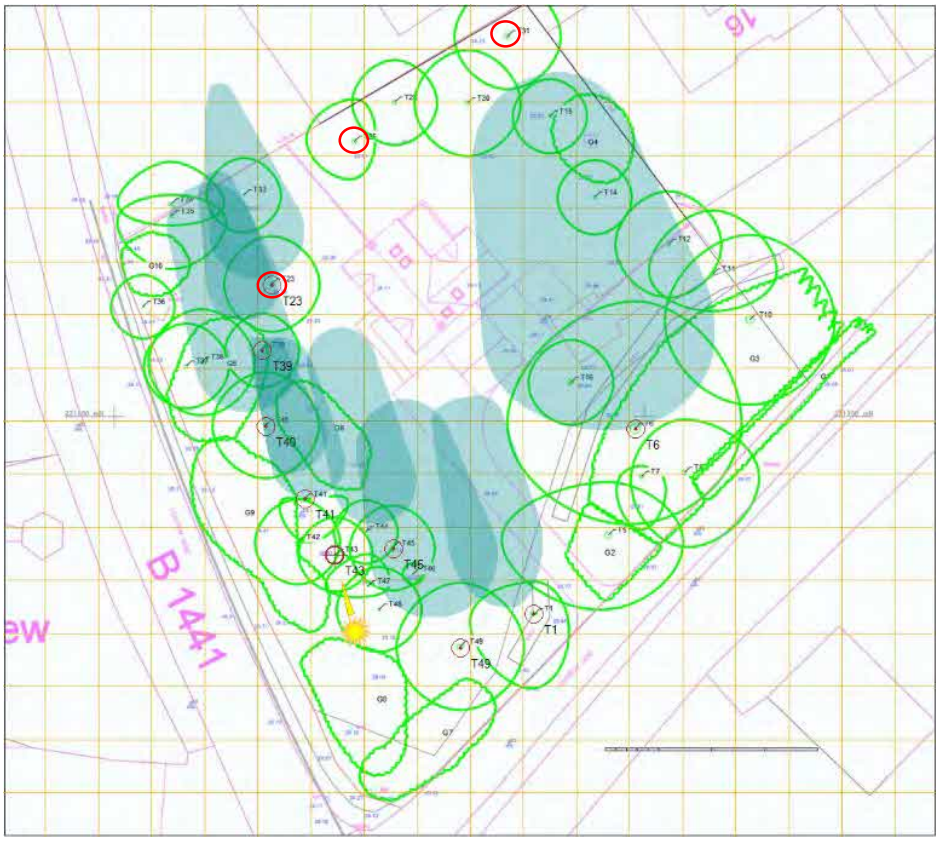

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Figure 11. Sep-21, 1500 (BST), 80% shadow opacity (trees in leaf) (Trees circled red have been removed)

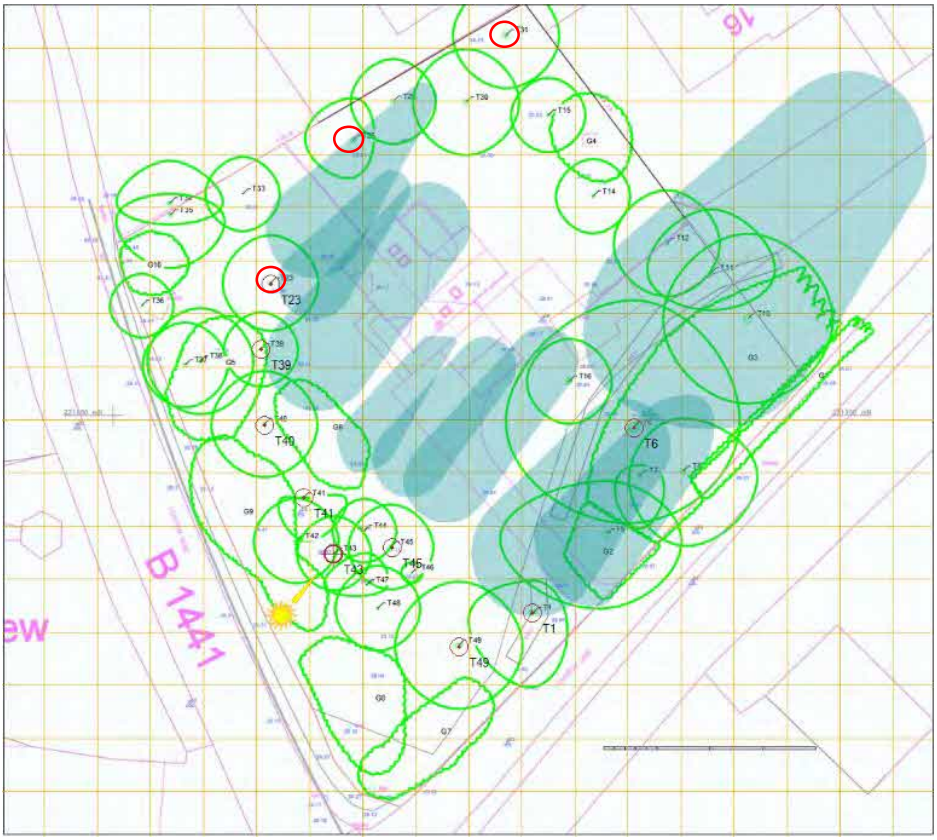
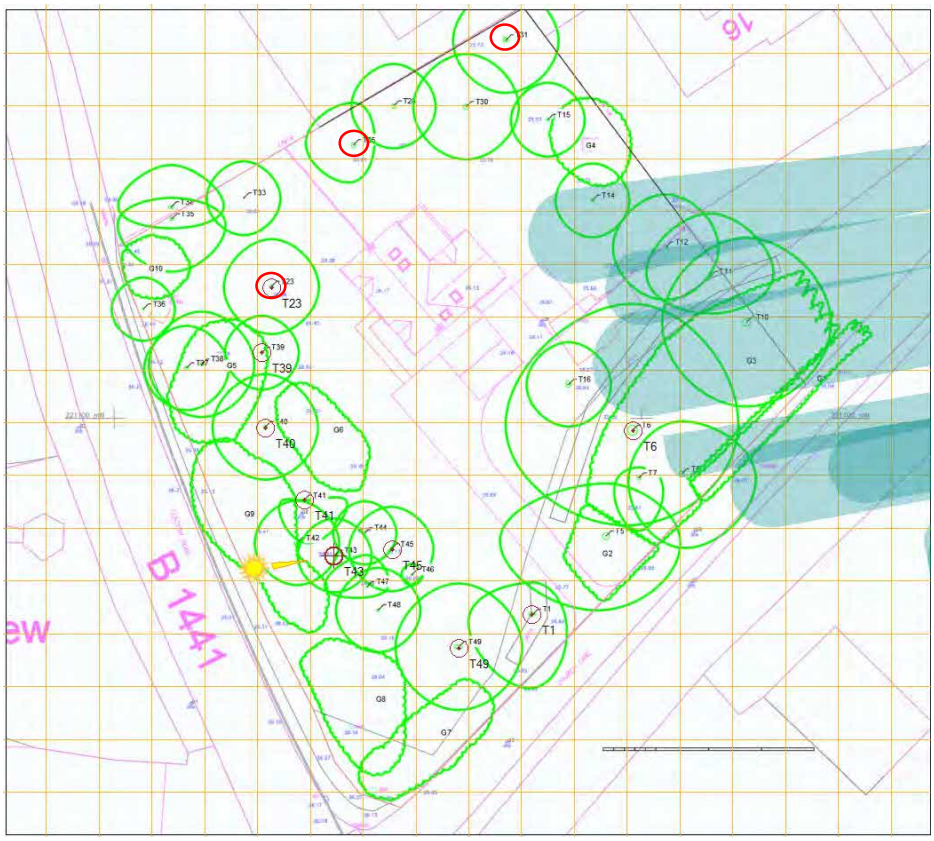
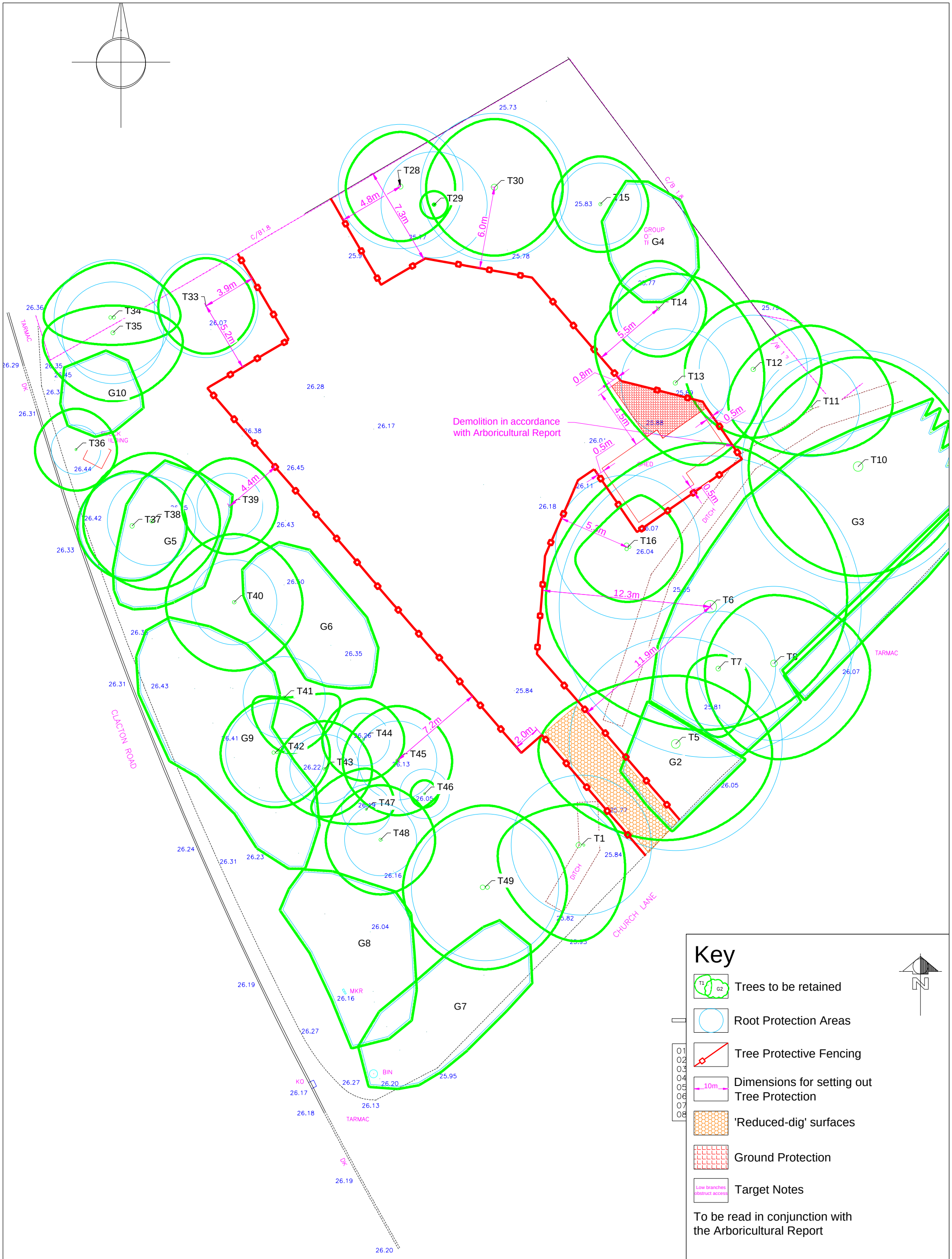


Figure 12. Sep-21, 1800 (BST), 80% shadow opacity (trees in leaf) (Trees circled red have been removed)



APPENDIX 6:
Phase 1 Tree Protection Plan
(ref: 904-301)



Key

- Trees to be retained
- Root Protection Areas
- Tree Protective Fencing
- Dimensions for setting out Tree Protection (10m)
- 'Reduced-dig' surfaces
- Ground Protection
- Target Notes (Low branches obstruct access)

To be read in conjunction with the Arboricultural Report

DRAWING TITLE:	DRAWING NUMBER:	REV.:	COMMENT:	DATE:	NOTES:
Phase 1 Tree Protection Plan	904-301	-	Drawing renumbered	14/04/2020	
CLIENT:	ISSUE:	A	Resurveyed, Drawing renumbered	27/01/2023	
Dan Akers	For Planning				
LOCATION:	SCALE:				
Land at Church Lane, Weeley	1:250 @ A3				

PREPARED BY: Arboterra Ltd

APPENDIX 7:
Phase 2 Tree Protection Plan
(ref: 904-302)

Key

- Trees to be retained
- Root Protection Areas
- Tree Protective Fencing
- Dimensions for setting out Tree Protection
- 'Reduced-dig' surfaces
- Ground Protection
- Manual-dig and root-prune
- Target Notes

To be read in conjunction with the Arboricultural Report

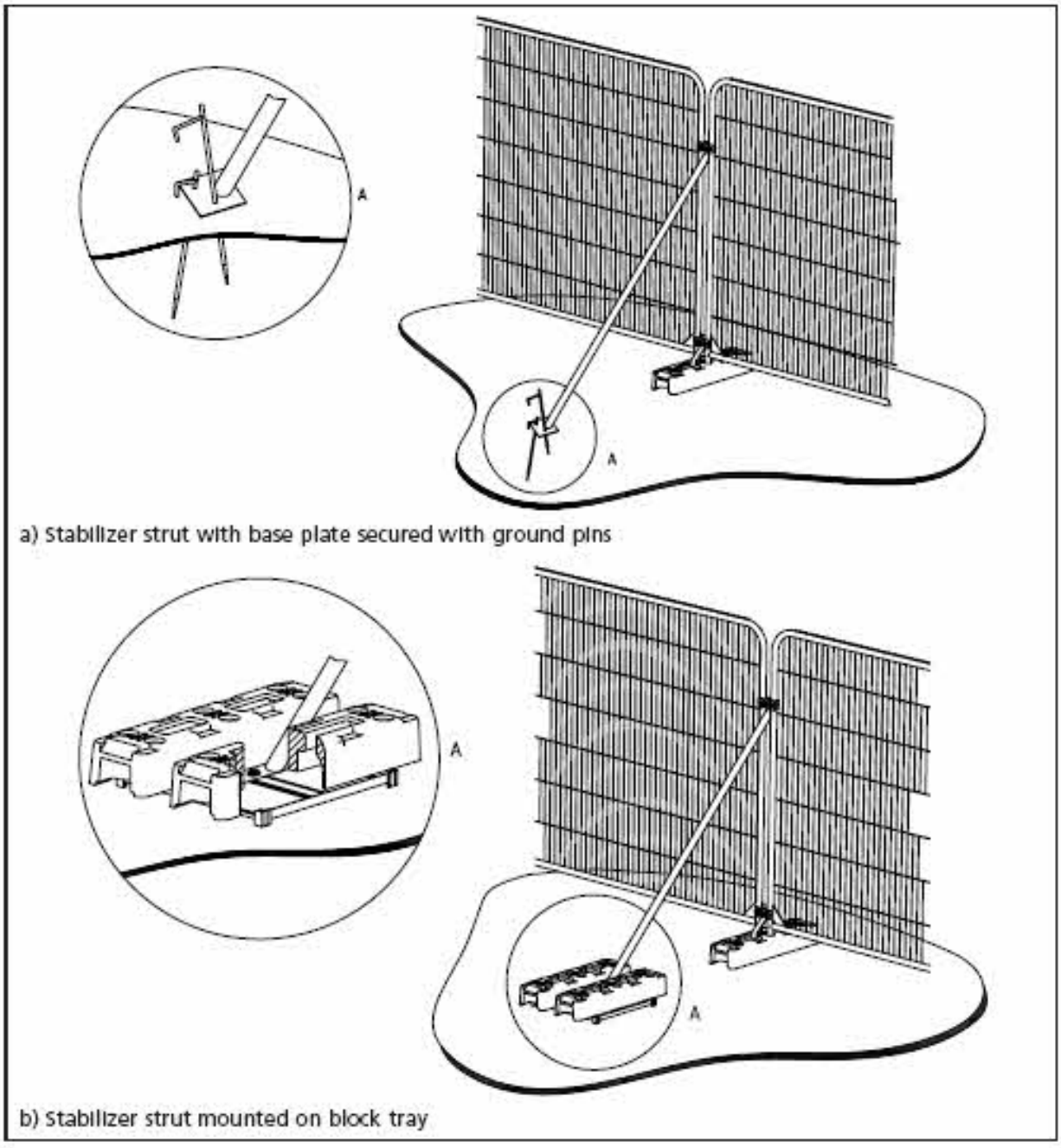
DRAWING TITLE:	DRAWING NUMBER:	REV.:	COMMENT:	DATE:	NOTES:	PREPARED BY:
Phase 2 Tree Protection Plan	904-302	-	Drawing renumbered	27/01/2023		Arborterra Ltd
CLIENT:	ISSUE:					
Dan Akers	For Planning					
LOCATION:	SCALE:					
Land at Church Lane, Weeley	1:250 @ A3					

APPENDIX 8:
Tree Protective Fencing

Tree Protective Fencing

Alternative Specification

Taken from Figure 3 of BS5837:2012 “Trees in relation to design, demolition and construction – Recommendations”



Tree Protection Area

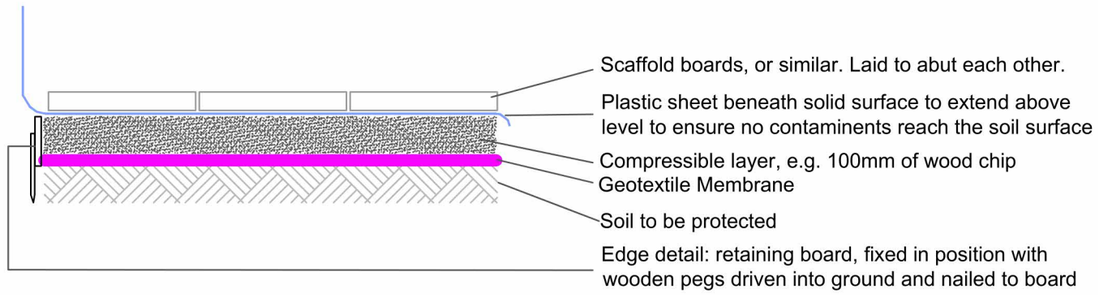
No Access

Contact: Oisin Kelly, Arboricultural Consultant

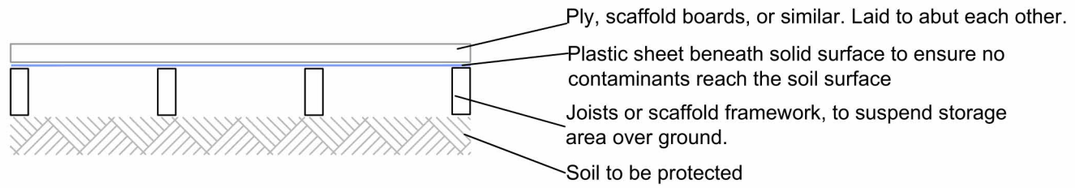
[redacted]

APPENDIX 9:
Ground Protection

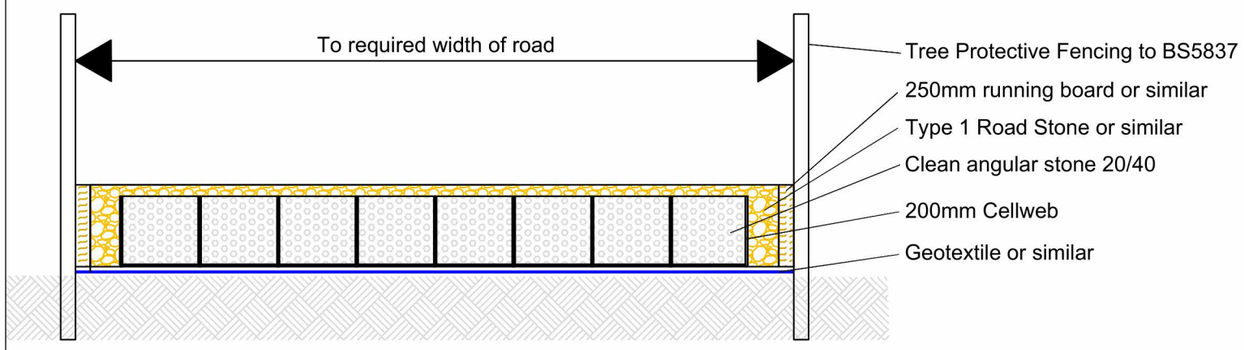
Ground protection - pedestrian traffic



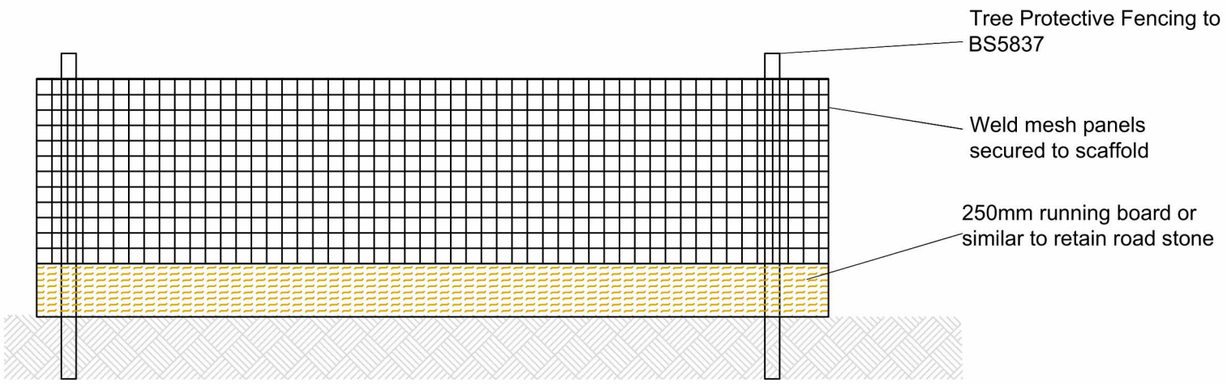
Ground protection for material storage within Root Protection Areas of Trees to be retained,



Temporary Road Detail 1



Temporary Road Detail 2



DRAWING TITLE: Ground Protection	DRAWING NUMBER: -	REV.: -	DRAWING BY: Oisin Kelly Arboricultural Consultant [redacted]
CLIENT: -	ISSUE: -	SCALE: NTS	
LOCATION: -	DATE: March 2019		

REVISIONS

No	Description	By	Date	Chkd

ArborTerra

TuffTrak®

Ground Protection Solutions

TUFFTRAK® ST

STANDARD HEAVY DUTY
ROAD MAT

TuffTrak® ST is the ultimate standard heavy duty road mat ideal for use as temporary roadways, work areas for heavy plant and machinery, drilling rigs, depot or storage areas.

Incorporating a dual grip design featuring our chevron traction® surface, and a low profile surface on the reverse both incorporating micro traction™ to further increase grip. This substantially improves mud dispersal and forward motion of vehicles. TuffTrak® ST's low profile surface reduces the risks of slips, trips, and falls.

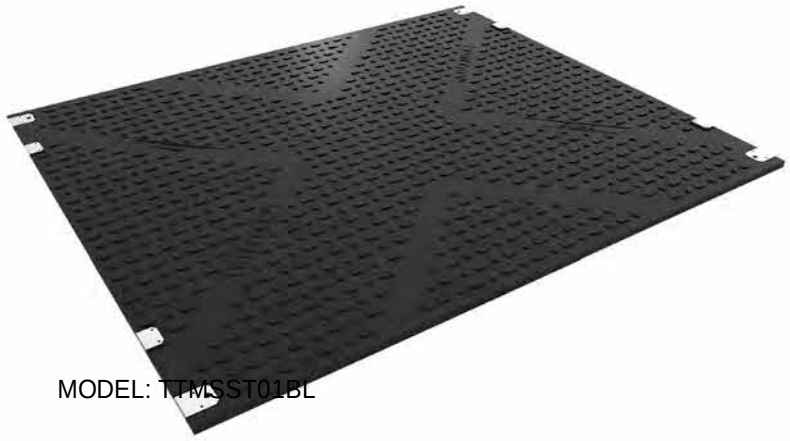
TuffTrak® ST has a range of connector options available for use with different ground conditions and projects, with 4 connector points at each corner allows mats to be seamlessly connected together.

- 100% recycled High Density Polyethylene or Ultra High Molecular Weight Polyethylene
- Chevron traction® surface nub design for maximum grip
- One piece solid construction provides superior strength
- Various connector options available
- 4 connector points, allowing seamless connection
- Low profile surface on the reverse ideal for pedestrian applications

TuffTrak® ST is a standard heavy duty ground protection solution specially designed for use as a trackway or workpad providing superior strength and a load bearing capacity of up to 150 tons.*

Material: High Density or Ultra High Molecular Weight Polyethylene

- 3000 mm x 2500 mm x 38 mm
- Usable surface area 7.5 m^2
- Weight 295 kg
- Pure compressive load capacity 150 tons*
- 80 mats per truck / 40 ft container
- Chevron traction® surface design



MODEL: TTMSST01BL

APPLICATIONS

- Civil Engineering
- Construction
- Oil & Gas
- Utilities
- Transmission
- Infrastructure
- Military Sites
- Events

ACCESSORIES

2-WAY CONNECTOR

4-WAY CONNECTOR

Model	Description	Length	Width	Depth	Weight
TTMSST01BL	TuffTrak® ST PE1000	3000 mm (9'8")	2500 mm (8'2")	38 mm (1.5")	295 kg (650.4 lbs)
TTMSST05BL	TuffTrak® ST PE500	3000 mm (9'8")	2500 mm (8'2")	38 mm (1.5")	295 kg (650.4 lbs)
TTMSST03BL	TuffTrak® ST PE300	3000 mm (9'8")	2500 mm (8'2")	38 mm (1.5")	295 kg (650.4 lbs)
TTASEM2WBL	2-Way Polyurethane Connector	180 mm (7")	50 mm (1.9")	-	0.1 kg (0.22 lbs)
TTASEM4WBL	4-Way Polyurethane Connector	180 mm (7")	180 mm (7")	-	0.3 kg (0.66 lbs)

*Load bearing capacity is dependent on ground conditions. Sizing is subject to a manufacturing variance of +/- 5%.

TuffTrak® offers a full range of market leading composite ground protection mats delivering a safer work environment for temporary access roadways, trackways, working platforms, and turf protection.

[redacted]

www.tufftrak-safety.com

A PRODUCT OF:

CHECKERS
Justrite Safety Group

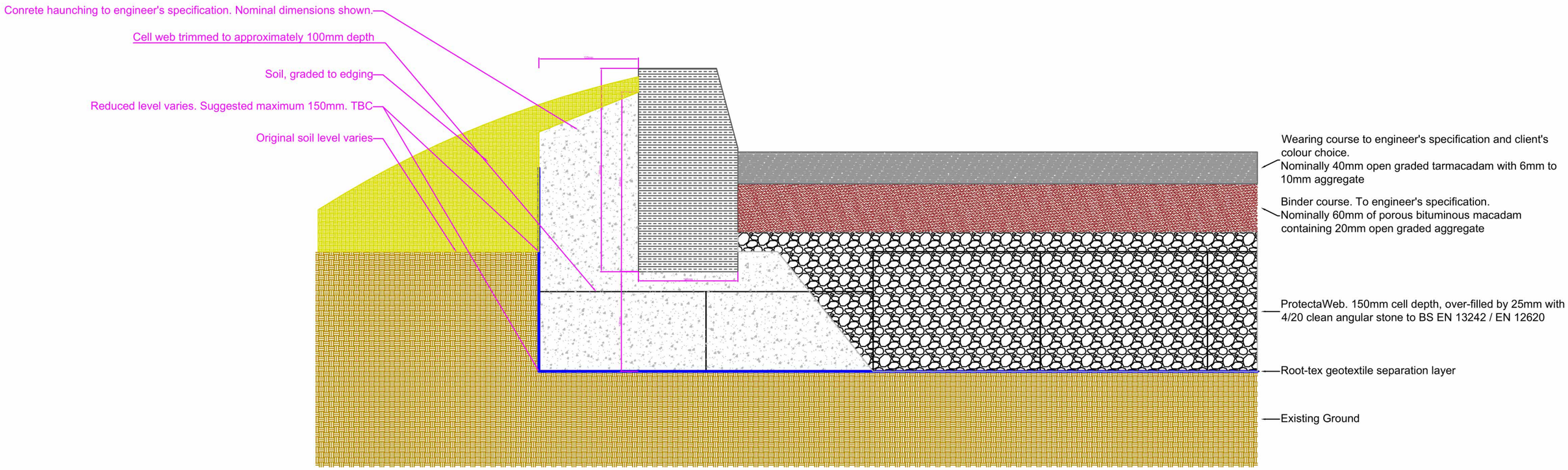
For more information visit: www.checkers-safety.com

CHECKERS' FAMILY OF BRANDS:

NOTRAX® MATS FOR PROFESSIONAL USE
TuffTrak® Ground Protection Solutions
MONSTER MOTION SAFETY
LINEBACKER CABLE MANAGEMENT

Checkers Safety Group is committed to providing revolutionary product designs and visionary safety solutions that protect people, assets, and the environment.

APPENDIX 9:
Reduced dig construction



DRAWING TITLE: ProtectaWeb (150mm): vehicular, asphalt (porous)	DRAWING NUMBER: xxx-xx	REV.: -		REVISIONS					Arborterra Ltd [redacted]
CLIENT: -	ISSUE: Generic Detail	SCALE: NTS		No	Description	By	Date	Chkd	
LOCATION: -	DATE: January 2019								

Arborterra Ltd

[redacted]