



GEOSPHERE ENVIRONMENTAL

REPORT NUMBER: 4990,EC,AR,DS/AIA/TC,RF,KL/03-08-21/Final

SITE: Land to the East of Henderson Road, Thorpe-le-Soken

DATE: 03/08/2021



DOCUMENT CONTROL SHEET

Report Number: 4990,EC,AR,DS/AIA/TC,RF,KL/03-08-21/Final
 Client: M Scott Properties Ltd
 Project Name: Land to the East of Henderson Road, Thorpe-le-Soken
 Project Number: 4990,EC,AR,DS
 Report Type: Arboricultural Impact Assessment
 Status: Final
 Date of Issue: 03 August 2021

Issued By:

Geosphere Environmental Ltd, Brightwell Barns, Ipswich Road, Brightwell, Suffolk, IP10 0BJ.

Confidentiality, Copyright and Reproduction:

This document has been prepared by Geosphere Environmental Ltd in connection with a contract to supply goods and/or services and is submitted only on the basis of strict confidentiality. The contents must not be disclosed to third parties other than in accordance with the terms of the contract. Geosphere Environmental Ltd accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known. Any such party relies upon the report at their own risk.

Prepared By:

Tom Cox
 Arboricultural and Ecological
 Consultant

Reviewed By:

Richard Fenna
 Senior Arboricultural and Ecological
 Consultant

Authorised By:

Katie Linehan
 Technical Director of Ecology

VERSION RECORD

Version	Date	Document Revision Details	Prepared By	Admin
Draft	30/07/2021	Draft Version of Report	TC	CJ
Final	03/08/2021	Final Version after Client Review	KL	CJ

Executive Summary

Report Description	<p>Geosphere Environmental Limited was commissioned by M Scott Properties Ltd to undertake an Arboricultural Survey and Impact Assessment of the land at Land to the East of Henderson Road, Thorpe-le-Soken.</p> <p>The site is located at National Grid Reference (NGR) 618610 222570. The report relates to the assumed redevelopment of the site for residential use. A development plan has been provided as Drawing ref. 942/01 H and is included within Appendix 6.</p> <p>The site covers an area of approximately 2 hectares (ha). This and the immediate surrounding area were surveyed.</p>
Summary of Main Findings	<p>The Tree Constraints Plan Drawing ref. 4990,EC,AR,DS/004/Rev0 in Appendix 6, shows the locations of all the trees surveyed with the canopy and root protection area plotted on the plan.</p> <p>A total of twelve trees and five groups were surveyed.</p> <p>One tree was classed as a category A tree. Ten trees and one group were classed as category B trees. One tree and four groups were classed as category C trees. No trees were classed as category U trees.</p> <p>The BGS digital mapping indicated that the site comprised of a bedrock layer of Thames Group – Clay, Silt and Sand, with no recorded superficial layer. These soils, potentially contain cohesive materials which could indicate a risk of shrink/swell that should be considered during foundation design.</p> <p>Tree Preservation Order 10/00007 is present onsite in total eighteen Oak trees along the southern border of the site have been included within the TPO. It is difficult to identify the exact trees which are included within the TPO however, T6-T12 and G5 are likely to be included.</p>
Arboricultural Impact Assessment	<p>The potential impacts of the proposed development are listed below;</p> <ul style="list-style-type: none"> • G1 – Category B – A section of this blackthorn hedge will have to be removed to facilitate the new access road for the site. • G2 – Category C – This is a Layland cypress hedge/ line of trees. The whole group will need to be removed to facilitate the residential housing and the new access road. • T2, T4, T5 and G5 – Category A, B and C – These trees around the site margins will need some works within small areas of the root protection areas. All Excavations within these areas will need to be undertaken by hand. • T1, T3, T9-T12, G3, G4 – Category A, B and C – These trees will be fully protected by tree protection barriers throughout the development and as such are unlikely to be affected by the development.

	<ul style="list-style-type: none">• T6-T12 and G5 are likely to be protected by TPO 10/00007. These trees will not be impacted by the proposed development. If unforeseen works to these trees is required, the local authority will need to be contacted before any tree work is carried out on these trees.
Conclusion	The impacts to trees on the site are considered to be minimal, with the majority of trees retained and protected during the works.

CONTENTS

Page No.

EXECUTIVE SUMMARY	3
1. INTRODUCTION	7
1.1 General	7
1.2 Aims	7
2. TECHNICAL APPROACH	8
2.1 Arboricultural Survey	8
2.2 Soil Assessment	8
2.3 Site-Specific Limitations	8
3. TREE SURVEY	9
3.1 Site Description	9
3.2 Tree Survey Results	9
3.3 Tree Constraints Plan	10
3.4 Soil Assessment	10
3.5 Council Restrictions	10
4. ARBORICULTURAL IMPACT ASSESSMENT	11
4.1 Proposed Development	11
4.2 Proposed Impact on Trees	11
4.3 Tree Preservation Order	11
5. TREE MANAGEMENT PLAN	12
5.1 Tree Construction Method Statement	12
5.2 Tree Protection Barriers	12
5.3 Arboricultural Supervision	12
5.4 Works within root protection areas	12
5.5 Services and Drainage	12
5.6 Tree Pruning	13
5.7 Tree Planting	13
6. CONCLUSIONS	14

CONTENTS

APPENDICES

APPENDIX 1 – REPORT LIMITATIONS AND CONDITIONS

APPENDIX 2 – REFERENCES

APPENDIX 3 – TREE SURVEY SCHEDULE

APPENDIX 4 – SURVEY SCHEDULE DESCRIPTIONS

APPENDIX 5 – KEY TO SCIENTIFIC NAMES

APPENDIX 6 – DRAWINGS

APPENDIX 7 – TREE PRESERVATION ORDER

APPENDIX 8 – ARBORICULTURAL METHOD STATEMENT

TABLES

Page No.

Table 1 – Proposed Impact of Construction on Trees

11

1. INTRODUCTION

1.1 General

Geosphere Environmental Limited was commissioned by M Scott Properties Ltd to undertake an Arboricultural Impact Assessment of the site at Land to the East of Henderson Road, Thorpe-le-Soken.

Any limitations and conditions pertaining to the report are stated within Appendix 1, with a full list of technical references provided within Appendix 2.

The site covers an approximate area of 2 hectares (ha) and is located at National Grid Reference (NGR) 618610 222570.

The site location is shown on Figure 1 below:

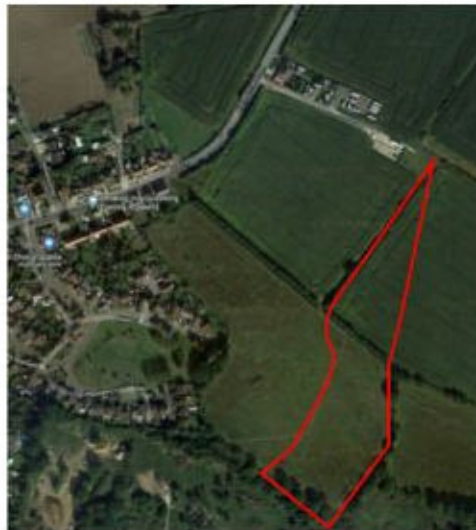


Figure 1 –The site location is outlined red

1.2 Aims

This report has been prepared to support a planning application. A tree survey has been undertaken to provide baseline data of the site. A tree Retention and Removal Plan has been designed to highlight trees which are planned to be removed during development. A tree protection plan has been included to detail the protection measures which are to be put in place to protect the trees retained throughout the development. An Arboricultural Impact Assessment, Tree Management Plan, and Arboricultural Method Statement has been included within this report.

2. TECHNICAL APPROACH

2.1 Arboricultural Survey

The arboricultural survey has been undertaken in general accordance with BS 5837:2012 (ref. **R.1**). The recommendations for tree remediation works are in accordance with current legislation and guidance, including BS 3998: 2010, 'Tree work – Recommendations' (ref. **R.2**).

The data collected during this survey is based entirely upon arboricultural grounds and reflects the condition of the trees on the day the survey was undertaken. The locations of the trees were detailed on a topographical survey provided by the client. All locations of trees are assumed to be correct. Any trees not noted on the topographical plan have been added where appropriate during the tree survey.

Scientific names and common names of plant species identified are as they appear in Stace (ref. **R.3**). For species not listed in Stace, scientific and common names were taken from Johnson and More (ref. **R.4**).

2.2 Soil Assessment

A desk-based assessment of the soil was undertaken to determine potential for volume changing soils onsite, using BGS mapping (ref. **R.5**).

2.3 Site-Specific Limitations

Trees were surveyed without undertaking vegetation clearance.

Some trees were covered with ivy or located within a thick hedgerow which limited the visibility of the stem size and structure. This may have increased the margin of error when recording measurements and assessing the quality of the trees. In cases where the trees were obscured or inaccessible, the parameters which could not be accurately measured were estimated as per BS 5837: 2012 (ref. **R.1**).

3. TREE SURVEY

The survey was undertaken by Tom Cox TechArborA, an experienced surveyor from Geosphere Environmental Ltd on 30 April 2021 to record data relevant to the assessment of the trees on and adjacent to the site.

3.1 Site Description

The site comprises an open grassland field bordered by hedgerows and trees. All of the trees on the site were located adjacent to the boundary with the exception of a small group of Leyland Cypress which ran across the centre of the site.

To the north and east of the site is arable, to the south is scrubby grassland and to the west is a newly constructed residential estate.

3.2 Tree Survey Results

The results of the tree survey are shown within the Tree survey schedule in Appendix 3. A full description of the surveyed parameters is included in the survey schedule description in Appendix 4. A key to the scientific names used is attached within Appendix 5. The results are summarised below:

- A total of twelve trees and five groups were surveyed;
- One tree was classed as a Category A tree. This is the highest classification available under BS 5837:2012. These trees are of high quality and confer particular visual importance on the landscape. These trees are likely to be required to be protected during the development;
- Ten trees and one group were classified as Category B trees. These trees are of moderate quality and confer considerable importance on the landscape. These trees should be retained where possible during development;
- One tree and four groups were classified as Category C trees. These trees are of low quality and confer lower levels of benefits to the landscape. The local authority may find it acceptable to remove these trees during development;
- No trees were categorised as Category U trees. These trees are of poor condition and are unlikely to provide significant value to the landscape for more than ten years.

3.3 Tree Constraints Plan

A Tree Constraints Plan Drawing referenced 4990,EC,AR,DS/004/Rev0 has been prepared for the site and is attached within Appendix 6.

The Tree Constraints Plan describes the constraints that the trees may place on the development. The tree canopy and root protection area have been calculated using the stem diameter as per BS 5837:2012 (ref. **R.1**).

3.4 Soil Assessment

The BGS digital mapping (ref. **R.5**) indicated that the site comprised of a bedrock layer of Thames Group (silty clay) with no recorded superficial layer. These soils potentially contain cohesive materials and therefore there is a risk of shrink swell soil present onsite. A further site investigation should be undertaken to confirm the findings of the BGS digital maps.

The combination of shrinkable soils and trees, hedgerows or shrubs represents a hazard to structures that requires special consideration. Trees and hedgerows can take moisture out of the ground. In cohesive soils this can cause volume change resulting in ground movement and damage to building foundations.

In order to minimise the risk, foundations should be designed in accordance to NHBC Standards Chapter 4.2 Building near Trees, (ref. **R.6**).

3.5 Council Restrictions

A request was made to Tendring District Council in respect of Tree Preservation Orders and Conservation Areas on 18 March 2016 as part of the previous outline application on land to the west. A copy of Tree Preservation Order number (TPO) 10/00007 was supplied by the council, and has been included in Appendix 7.

In total eighteen Oak trees along the southern border of the site have been included within the TPO. It is difficult to identify the exact trees which are included within the TPO, however T6-T12 and G5 are likely to be included.

All work to trees protected by Tree Preservation Orders, require special consideration as consent is required from the Local Authority, expect in specific circumstances.

4. ARBORICULTURAL IMPACT ASSESSMENT

4.1 Proposed Development

A proposed development Plan, Drawing ref. 942/01 H, has been supplied by the Client and is included within Appendix 6. The proposed development comprises of several residential units with associated gardens and access roads. The proposals indicate that trees will be included within the landscaping of the proposed development.

4.2 Proposed Impact on Trees

The potential impacts of the proposed development on the existing trees are listed within Table 1 below. Tree Constraints Plan, Drawing ref. 4990,EC,AR,DS/004/Rev0 , shows the locations of the trees present onsite at the time of the survey. The Tree Removal and Protection plan, Drawing ref.4990,EC,AR,DS/005 /Rev0, shows which trees will be removed and which trees will be retained along with the protection measures required for the retained trees. All plans are included within Appendix 6.

Table 1 – Proposed Impact of Construction on Trees

Tree Number	Category	Impact on Tree
G1	B	A section of this blackthorn hedge will have to be removed to facilitate the new access road for the site.
G2	C	This is a Leyland cypress hedge/ line of trees. The whole group will need to be removed to facilitate the residential housing and the new access road.
T2, T4, T5 and G5	A, B and C	These trees around the site margins will need some works within small areas of the root protection areas. All Excavations within these areas will need to be undertaken by hand.
T1, T3, T9-T12, G3, G4	A, B and C	These trees will be fully protected by tree protection barriers and as such are unlikely to be affected by the development.

4.3 Tree Preservation Order

T6-T12 and G5 are likely to be protected by TPO 10/00007. These trees will not be impacted by the proposed development. If unforeseen works to these trees is required, the local authority will need to be contacted before any tree work is carried out on these trees.

5. TREE MANAGEMENT PLAN

5.1 Tree Construction Method Statement

The Arboricultural Method Statement has been included in Appendix 8.

5.2 Tree Protection Barriers

Tree Protection and Removal Plan, Drawing ref. 4990,EC,AR,DS/005/Rev0 in Appendix 6, shows the location of protective barriers which will need to be put in place, prior to demolition/construction works. The type of barriers that will be required is detailed within the Arboricultural Method Statement in Appendix 8.

5.3 Arboricultural Supervision

A pre-commencement meeting should be held between the Local Authority Tree officer, the Consultant Arboriculturalist and the Site manager to ensure that roles and responsibilities are understood and that appropriate tree protection measures are put in place. Arboricultural monitoring should be implemented throughout the development (eg. monthly) to ensure Tree Protection measures are sufficient throughout development as per the Arboricultural Method Statement in Appendix 8.

5.4 Works within root protection areas

T2, T4, T5 and G5 will require works within the root protection area to facilitate the construction of new buildings and access road, as highlighted on Tree Protection and Removal Plan Drawing ref. 4990,EC,AR,DS/005/Rev0.

All excavations within these areas should be undertaken by hand, under supervision of the arboricultural consultant. Any roots encountered with a diameter of less than 25mm, may be pruned with a clean cut by a sharp tool. If roots over 25mm are encountered, they will be retained in situ where possible. The consultant Arboriculturalist may authorise the severance of roots, when the impact to the trees will be assessed and mitigated as appropriate, as per the Arboricultural Method Statement in Appendix 8.

5.5 Services and Drainage

Service and drainage trenches will be situated outside of the root protection area of trees.

5.6 Tree Pruning

An assessment of tree hazards with regard to the construction site and new development should be undertaken, to identify and remove hazardous branches/ deadwood etc. prior to the commencement of construction.

Remedial tree works should be undertaken following the completion of construction works. This will include removing any branches which have become hazardous as a result of accidental damage during construction works.

All specified tree work is to be carried out in general accordance with BS 3998:2010 Tree work – Recommendations, (ref. **R.2**), by a professional and specialist arboricultural contractor, who carries the appropriate experience and insurance cover.

5.7 Tree Planting

There is opportunity within the development scheme to plant up and repair the southern and eastern hedgerows onsite. Further tree planting is proposed within the public open space onsite.

New tree and hedgerow planting should be protected with appropriate tree guards, to protect the new planting from browsing mammals such as deer and rabbits. It should be expected that some trees will not survive after being planted, so trees should be replaced on a more than 1:1 basis, and an appropriate after care program should be put in place to ensure that any dead trees are replaced. Trees should be selectively thinned and formatively pruned where appropriate after the trees have established. After care should also include mulching and irrigation.

6. CONCLUSIONS

T6-T12 and G5, are likely to be protected by TPO 10/00007. These trees will not be impacted by the proposed development. If unforeseen works to these trees is required, the local authority will need to be contacted before any tree work is carried out on these trees.

A section of G1 and the entirety of G2 will need to be removed to facilitate the development.

T2, T4, T5 and G5 will require works within the root protection area to facilitate the new buildings and access road, as highlighted on Tree Protection and Removal Plan, Drawing ref. 4990,EC,AR,DS/005/Rev0.

All excavations within these areas should be undertaken by hand, under supervision of the arboricultural consultant. Any roots encountered with a diameter of less than 25mm, may be pruned with a clean cut by a sharp tool. If roots over 25mm are encountered, they will be retained in situ where possible. The consultant Arboriculturalist may authorise the severance of roots, when the impact to the trees will be assessed and mitigated as appropriate

There are opportunities to within the development scheme to plant up and repair the southern and eastern hedgerows onsite. Additional tree planting is proposed within the public open space onsite.

The impacts to trees on the site are considered to be minimal, with the majority of trees retained and protected during the works.

APPENDICES

Appendix 1 – Report Limitations and Conditions

General Limitations and Exceptions

This report was prepared solely for our Client for the stated purposes only and is not intended to be relied on by any other party or for any other use. No extended duty of care to any third party is implied or offered.

Geosphere Environmental Ltd does not purport to provide specialist legal advice.

The Executive Summary, Conclusions and Recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon, until considered in the context of the whole report.

Interpretations and recommendations contained within the report represent our professional opinions, which were arrived at in accordance with currently accepted industry practices at the time of reporting and based upon current legislation in force at that time.

Arboricultural Limitations and Exceptions

This report is prepared and written in the context stated in the introduction to this report and should not be used in a differing context. Furthermore, new information, improved practices and legislation may necessitate an alteration to the report in whole or in part after its submission. Therefore, with any change in circumstances or after the expiry of one year from the date of the report, the report should be referred to us for re-assessment and, if necessary, re-appraisal.

The trees were not climbed but surveyed from ground level. The survey recorded any defects which were observed, but a full tree health and safety inspection for the site is beyond the scope of this survey.

Any physical changes that happen to the site after the tree survey was undertaken have the potential to invalidate or change the findings of this report. Therefore, the consultant shall not be responsible for any event that may happen after the survey was undertaken due to factors that were not apparent at the time.

Any hazards that were visible on the day of the survey have been noted in the tree management recommendations section of the Tree Survey Schedule. However, this report should not be considered a substitute for a tree risk assessment or management plan, which would be required to minimise the risk and liability associated with the trees found onsite.

Appendix 2 – References

- R.1.** BSI (2012). BS 5837:2012 Trees in relation to design, demolition and constructions- Recommendations.
- R.2.** BSI (2010). BS 3998:2010 Trees work- Recommendations.
- R.3.** Stace, C. A. (2010). New Flora of the British Isles (third edition), Cambridge University Press.
- R.4.** Johnson and More (2006). Tree Guide, Harper Collins Publishers Ltd.
- R.5.** British Geological Survey (accessed 22 July 2021) Geology of Britain Viewer website: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>.
- R.6.** National House-Building Council, Standards, Chapter 4.2, 2003 'Building Near Trees'.

Appendix 3 – Tree Survey Schedule

TREE SURVEY SCHEDULE

Project Number: 4990,EC,AR,DS

Project Name: Land to the East of Henderson Road, Thorpe-Le-Soken

Date: 03/08/2021

1	2	3	4	5	6				7	8	9	10	11	12	13	14	15	16
Tree No.	Species	Height (m)	Stem Diameter (mm)	No. of Stems	Branch Spread (m)				First Branch Height (m)	Canopy Height (m)	Life Stage	Physiological Conditions	Structural Conditions	Remaining Contribution (years)	Category Grading	RPA (m2)	RPA Radius (m)	Tree Work Recommendations / Comments
					N	E	S	W										
# Denotes estimated values due to lack of access																		
T1	Pedunculate Oak	12	600	1	6	6	6	6	2	2	SM	G	G	40+	B	162.9	7.2	
T2	Pedunculate Oak	14	620	1	8	8	8	8	3	3	SM	G	G	40+	B	173.9	7.4	
T3	Pedunculate Oak	14	620	1	5	5	5	5	3	3	SM	G	G	40+	B	173.9	7.4	
T4	Pedunculate Oak	14	1020	1	8	8	8	8	3	3	M	G	F	40+	B	470.7	12.2	
T5	Pedunculate Oak	14	1210	1	10	10	10	10	3	3	OM	F	P	20+	A	662.3	14.5	A for conservation.
T6	Pedunculate Oak	1.7	500	1	5	5	5	5	1	1	SM	G	G	40+	B	113.1	6.0	
T7	Pedunculate Oak	12	100	4	5	5	5	5	2	2	SM	P	P	20+	C	4.5	1.2	
T8	Pedunculate Oak	15	500	1	5	5	5	5	2	2	SM	G	G	40+	B	113.1	6.0	
T9	Pedunculate Oak	15	500	1	5	5	5	5	2	2	SM	G	G	40+	B	113.1	6.0	
T10	Pedunculate Oak	15	707.11	2	5	5	5	5	2	2	SM	G	G	40+	B	226.2	8.5	
T11	Pedunculate Oak	15	500	1	5	5	5	5	2	2	SM	G	G	40+	B	113.1	6.0	
T12	Pedunculate Oak	15	500	1	5	5	5	5	2	2	SM	G	G	40+	B	113.1	6.0	
G1	Blackthorn, Pedunculate Oak	3.5	150	1	2	2	2	2	0	0	SM	G	G	40+	B	10.2	1.8	
G2	Leyland Cypress	4.5	150	1	1.5	1.5	1.5	1.5	0	0	SM	G	G	20+	C	10.2	1.8	
G3	Pedunculate Oak	12	300	1	3	3	3	3	2	2	SM	G	G	40+	C	40.7	3.6	

TREE SURVEY SCHEDULE



Project Number: 4990,EC,AR,DS

Project Name: Land to the East of Henderson Road, Thorpe-Le-Soken

Date: 03/08/2021

1	2	3	4	5	6				7	8	9	10	11	12	13	14	15	16
Tree No.	Species	Height (m)	Stem Diameter (mm)	No. of Stems	Branch Spread (m)				First Branch Height (m)	Canopy Height (m)	Life Stage	Physiological Conditions	Structural Conditions	Remaining Contribution (years)	Category Grading	RPA (m ²)	RPA Radius (m)	Tree Work Recommendations / Comments
					N	E	S	W										
# Denotes estimated values due to lack of access																		
G4	Field Maple, Hawthorn	5	200	1	2	2	2	2	0	0	SM	G	G	40+	C	18.1	2.4	
G5	Blackthorn, Pedunculate Oak	1.7	150	1	1	1	1	1	0	0	SM	F	F	40+	C	10.2	1.8	

Appendix 4 – Survey Schedule Descriptions

TREE SURVEY SCHEDULE DESCRIPTIONS

Tree Survey Schedule Description		
Column Number	Heading	Description
1	Tree No.	Sequential reference number (as recorded on the tree constraints plan)
2	Species	Species listed by common name
3	Height (m)	Total height of the tree
4	Stem Diameter (mm)	Stem diameter measured at 1.5 m above ground level in accordance to BS 5837:2012
5	No of stems	Total number of stems of a tree
6	Branch spread (m)	Branch spread, taken at the four cardinal points, to derive an accurate representation of the crown (plotted on the tree constraints plan)
7	First branch hgt (m)	Existing height above ground level of first branch measured at the union with the stem
8	Canopy hgt (m)	Existing height of the average clearance of the canopy above ground level
9	Life stage	The age of the tree determined by life stage category: Y- young, SM- semi-mature, EM- early mature, M- mature, OM- over mature, V- veteran
10	Physiological condition	The physiological condition of a tree based on a tree health assessment: G- good, F- fair, P- poor, D- dead
11	Structural condition	The structural condition of a tree based on structural integrity and signs of structural defects which may cause failure: G- good, F- fair, P- poor, D- dead
12	Remaining contribution (yrs)	Estimated remaining contribution in years that the trees will have on the landscape in their current context. A tree will not necessarily remain safe for the entirety of the remaining years. The remaining contribution has been categorised as follows: <10, 10+, 20+ and 40+
13	Category grading	The trees have been graded as per BS 5837: 2012 recommendations. The grading is formed by a letter and a number. The letter denotes the quality grading of the tree, the number represents one of three sub categories. Sub categories 1, 2 and 3 reflect arboricultural, landscape and cultural qualities respectively. The primary letter grading is as follows: U- Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years A- Trees of high quality with an estimated remaining life expectancy of at least 40 years B- Trees of moderate quality with an estimated remaining life expectancy of at least 20 years C- Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm
14	RPA (m ²)	The root protection area calculated following BS 5837: 2012
15	RPA radius (m)	The root protection area radius calculated following BS 5837: 2012
16	Tree work recommendations/ comments	Work which is recommended for a tree to improve its longevity and safety in its present context. The recommendations are recorded primarily to assist with the categorisation of the trees. Please see Section 6, Tree Management for further limitations.

TITLE
Tree Survey Schedule Descriptions

DATE
30/07/2021

PAGE NO. 1 of 1

Appendix 5 – Key to Scientific Names

SCIENTIFIC NAMES KEY



Common Name	Scientific Name
Field Maple	<i>Acer campestre</i>
Hawthorn	<i>Crataegus monogyna</i>
Blackthorn	<i>Prunus spinosa</i>
Pedunculate Oak	<i>Quercus robur</i>
Leyland Cypress	<i>Cupressus x leylandii</i>

REFERENCE

Common and scientific names based on Stace (2010) New flora of the British Isles (3rd Edition), Cambridge University Press. For species not present in Stace, scientific and common names were taken from Johnson and More (2006). Tree Guide, Harper Collins Publishers Ltd.

TITLE
Scientific Names Key

DATE
30/07/2021

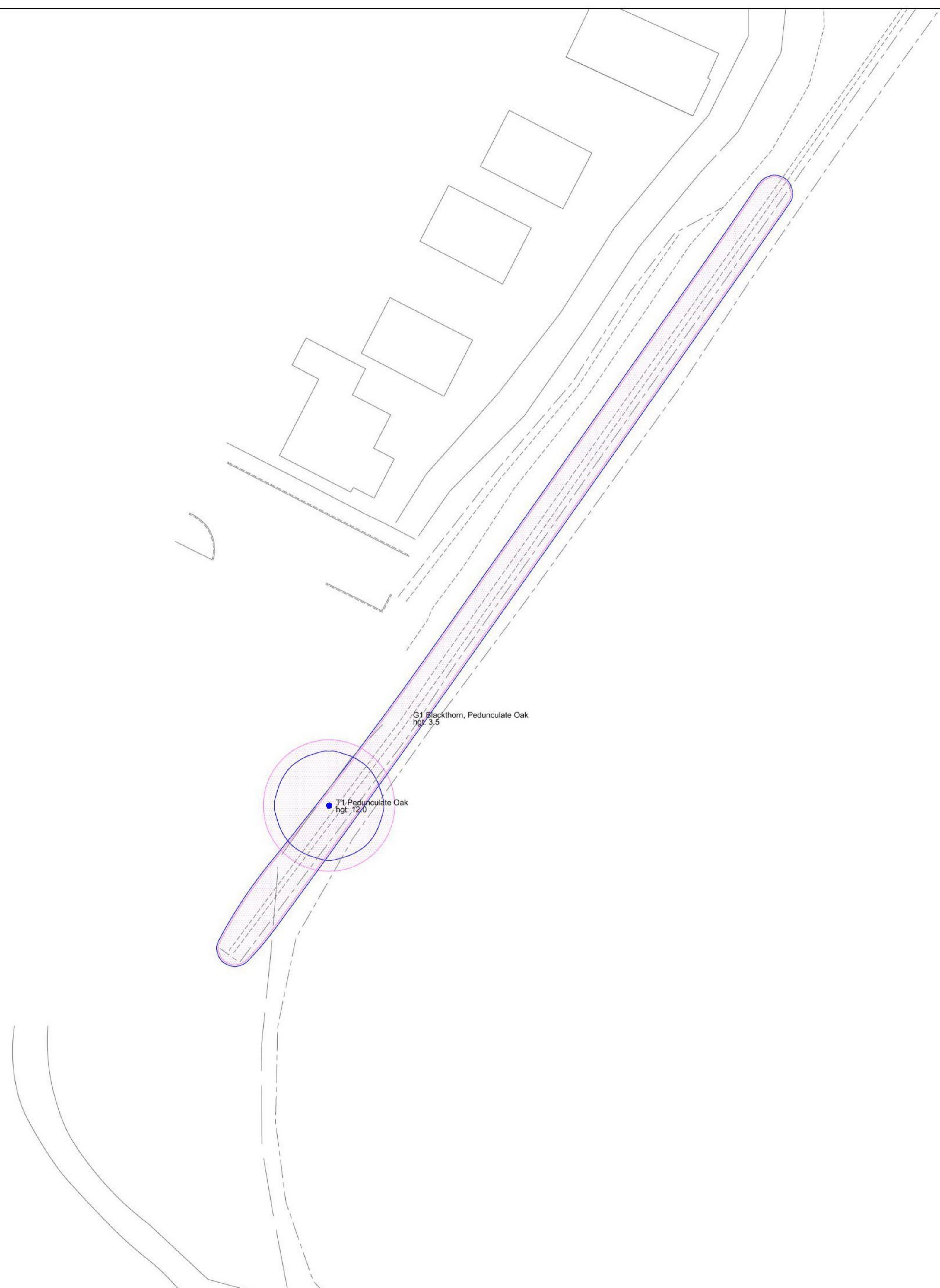
PAGE NO. 1 of 1

Appendix 6 – Drawings

Tree Constraints Plan – Drawing Ref. 4990,EC,AR,DS/004/Rev0






Tree Protection and Removal Plan – Drawing Ref. 4990,EC,AR,DS/005/Rev0

Proposed Development Plan – Drawing Ref. 942/01 H



REV	DATE	DESCRIPTION
-----	------	-------------

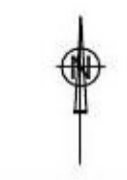
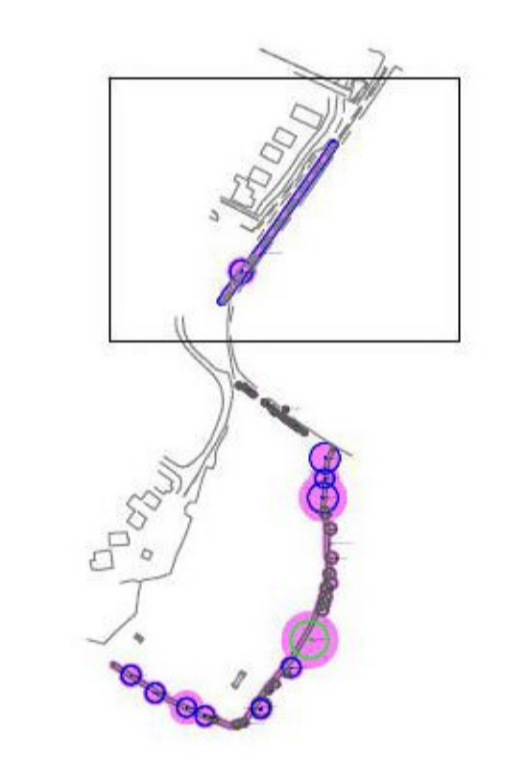
LEGEND

-  Category U
-  Category A
Trees of high quality
-  Category B
Trees of moderate quality
-  Category C
Trees of low quality
-  RPA using formula in accordance with BS5837:2012

denotes estimated values due to lack of access

Trees categorised in accordance with BS5837:2012 "Trees in relation to design, demolition and construction – Recommendations"

The original of this drawing was produced in colour – a monochrome copy should not be relied upon



LOCATIONS ARE APPROXIMATE

PROJECT
Land to the East of Henderson Road,
Thorpe Le Soken, CO17 0LW

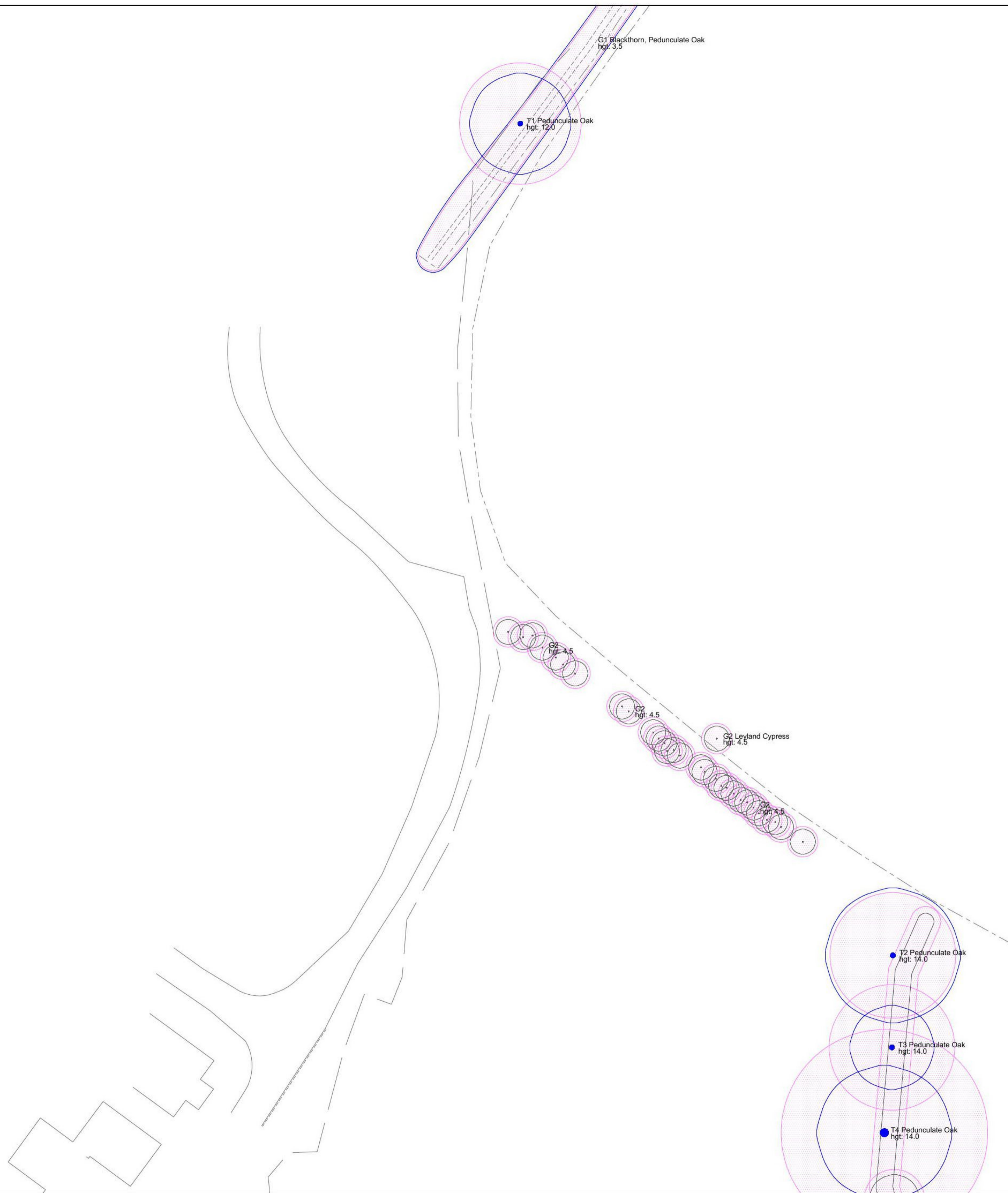
TITLE
Tree Constraints Plan

DRAWING NUMBER
4990,EC,AR,DS/004-1/Rev0

CLIENT
Scott Properties Ltd

SCALE 1:250 @ A1 **DATE** 04/05/21





REV | DATE | DESCRIPTION

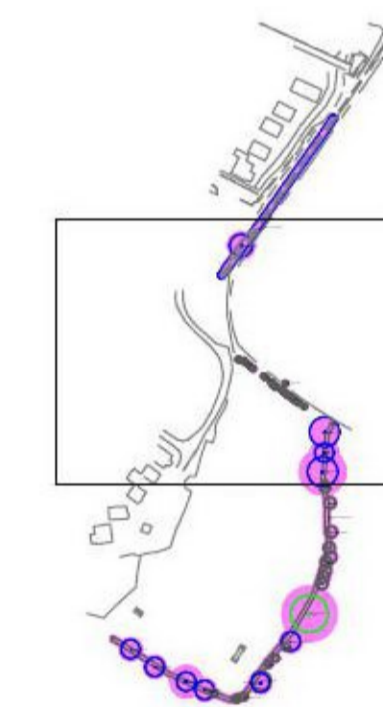
LEGEND

- Category U
- Category A
Trees of high quality
- Category B
Trees of moderate quality
- Category C
Trees of low quality
- RPA using formula in accordance with BS5837:2012

denotes estimated values due to lack of access

Trees categorised in accordance with BS5837:2012 "Trees in relation to design, demolition and construction – Recommendations"

The original of this drawing was produced in colour – a monochrome copy should not be relied upon



LOCATIONS ARE APPROXIMATE

PROJECT
Land to the East of Henderson Road,
Thorpe Le Soken, CO17 0LW

TITLE
Tree Constraints Plan

DRAWING NUMBER
4990_EC_AR_DS/004-2/Rev0

CLIENT
Scott Properties Ltd

SCALE 1:250 @ A1 **DATE** 04/05/21



REV	DATE	DESCRIPTION

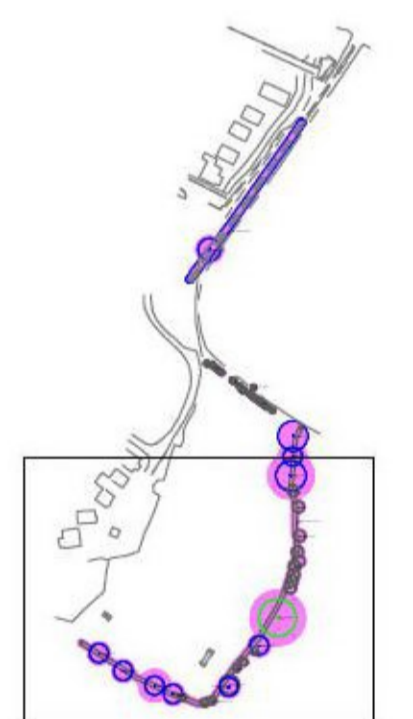
LEGEND

-  Category U
-  Category A
Trees of high quality
-  Category B
Trees of moderate quality
-  Category C
Trees of low quality
-  RPA using formula in accordance with BS5837:2012

denotes estimated values due to lack of access

Trees categorised in accordance with BS5837:2012 "Trees in relation to design, demolition and construction – Recommendations"

The original of this drawing was produced in colour – a monochrome copy should not be relied upon



LOCATIONS ARE APPROXIMATE

PROJECT
Land to the East of Henderson Road,
Thorpe Le Soken, CO17 0LW

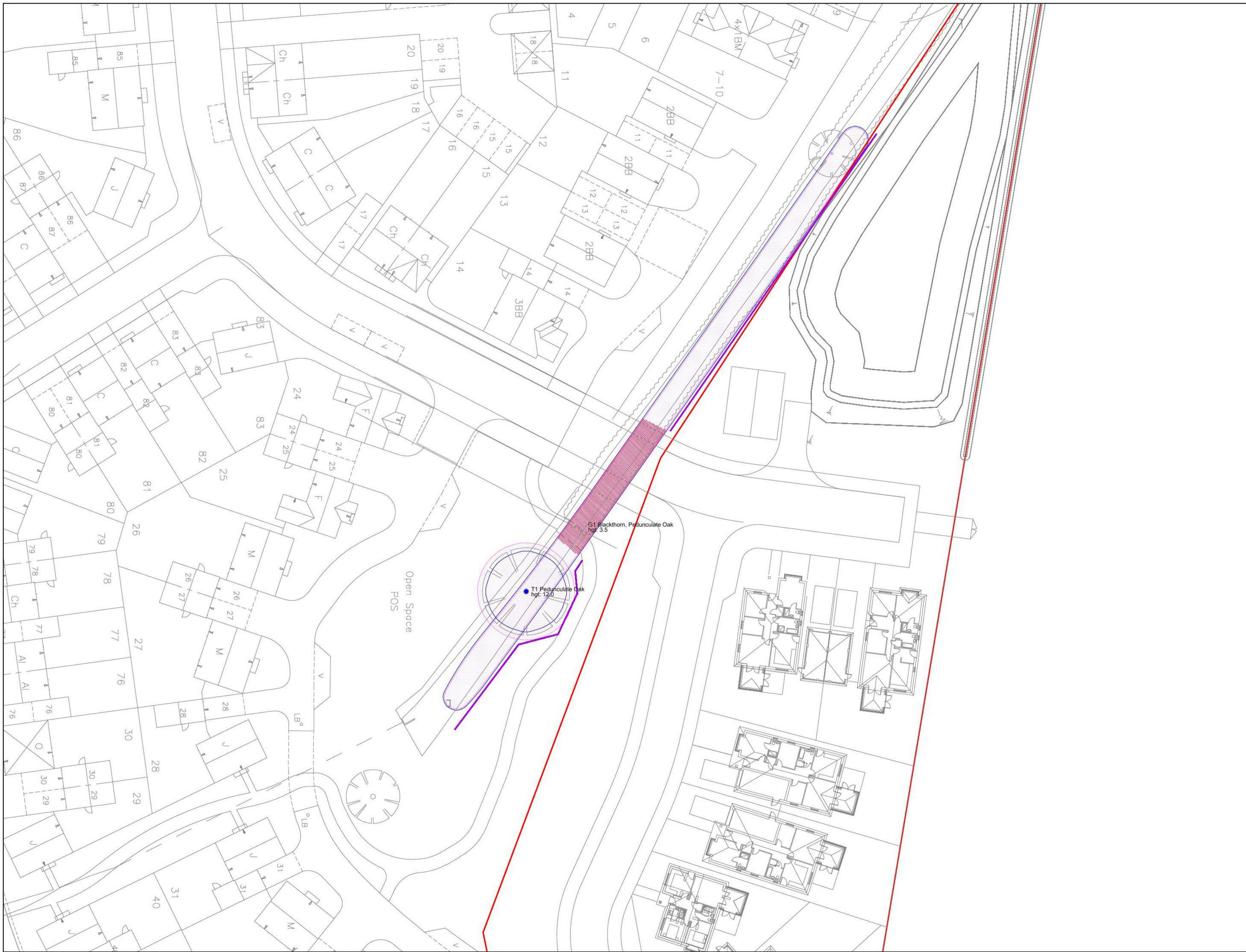
TITLE
Tree Constraints Plan

DRAWING NUMBER
4990,EC,AR,DS/004-2/Rev0

CLIENT
Scott Properties Ltd

SCALE 1:250 @ A1 DATE 04/05/21





REV	DATE	DESCRIPTION
-----	------	-------------

LEGEND

- Category U
 - Category A
Trees of high quality
 - Category B
Trees of moderate quality
 - Category C
Trees of low quality
 - RPA using formula in accordance with BS5837:2012
 - Trees to be removed
 - Location of Protective Fencing
 - Root Protection Area not protected by protective barriers (special care needed)
- # denotes estimated values due to lack of access

Trees categorised in accordance with BS5837:2012 "Trees in relation to design, demolition and construction – Recommendations"

The original of this drawing was produced in colour – a monochrome copy should not be relied upon



LOCATIONS ARE APPROXIMATE

PROJECT
Land to the East of Henderson Road, Thorpe Le Soken, CO17 0LW

TITLE
Tree Protection and Removal Plan

DRAWING NUMBER
4990_EC_AR_DS/005-1/Rev0

CLIENT
Scott Properties Ltd

SCALE 1:250 @ A1 **DATE** 13/07/21





REV	DATE	DESCRIPTION
-----	------	-------------

LEGEND

- Category U
 - Category A
Trees of high quality
 - Category B
Trees of moderate quality
 - Category C
Trees of low quality
 - RPA using formula in accordance with BS5837:2012
 - Trees to be removed
 - Location of Protective Fencing
 - Root Protection Area not protected by protective barriers (special care needed)
- # denotes estimated values due to lack of access

Trees categorised in accordance with BS5837:2012 "Trees in relation to design, demolition and construction – Recommendations"

The original of this drawing was produced in colour – a monochrome copy should not be relied upon



LOCATIONS ARE APPROXIMATE

PROJECT
Land to the East of Henderson Road, Thorpe Le Soken, CO17 0LW

TITLE
Tree Protection and Removal Plan

DRAWING NUMBER
4990_EC,AR_DS/005-2/Rev0

CLIENT
Scott Properties Ltd

SCALE 1:250 @ A1 **DATE** 13/07/21





REV	DATE	DESCRIPTION
-----	------	-------------

LEGEND

- Category U
 - Category A
Trees of high quality
 - Category B
Trees of moderate quality
 - Category C
Trees of low quality
 - RPA using formula in accordance with BS5837:2012
 - Trees to be removed
 - Location of Protective Fencing
 - Root Protection Area not protected by protective barriers (special care needed)
- # denotes estimated values due to lack of access

Trees categorised in accordance with BS5837:2012 "Trees in relation to design, demolition and construction – Recommendations"

The original of this drawing was produced in colour – a monochrome copy should not be relied upon



LOCATIONS ARE APPROXIMATE

PROJECT
Land to the East of Henderson Road, Thorpe Le Soken, CO17 0LW

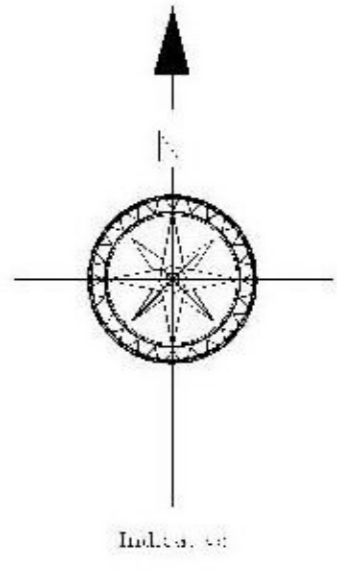
TITLE
Tree Protection and Removal Plan

DRAWING NUMBER
4990_EC_AR_DS/005-3/Rev0

CLIENT
Scott Properties Ltd

SCALE 1:250 @ A1 **DATE** 13/07/21





PROPOSED DEVELOPMENT
LAND TO THE EAST OF
HENDERSON ROAD
THORPE-LE-SOKEN
ESSEX
SITE PLAN

Tim Snow Architects
9A High Street, Brightlingsea
Colchester, Essex CO1 0AN

Scale: 1:500 @ A1
Date: JUNE 2021
Drawing No. 942/01 H

Appendix 7 – Tree Preservation Order

TENDRING DISTRICT COUNCIL

MEMORANDUM

To: WEELEY RECEPTION
FAO MARTIN FORTH

From: Principal Tree and Landscape Officer

Our Ref: CPD/10/00007/TPO
Please Contact: Clive Dawson
Extn: 6155

20 August 2010

**TOWN AND COUNTRY PLANNING ACT 1990 – SECTION 201
TOWN AND COUNTRY PLANNING (TREES) REGULATIONS 1999
TREE PRESERVATION ORDER: 10/00007/TPO
LOCATION – Land West of Byng Crescent, Thorpe Le Soken, Essex**

I am writing to advise you that on 11 August 2010 the Council decided to confirm the above tree preservation order.

Please find attached copy of the Certificate of Confirmation and an updated copy of the Parish TPO Register for Weeley, your records.

✓ see 10/08

Please ask our Intranet Co-ordinator to add the above details to the Members Bulletin together with Clive Dawson's contact details.

Clive Dawson
Principal Tree and Landscape Officer

CONFIRMATION OF ORDER 10/00007/TPO

This Order was confirmed by the Tendring District Council without
modification on the 11th day of August 2010



Authorised by the Council to sign in that behalf



SEAL REGISTER
15499
NUMBER

IMPORTANT - THIS COMMUNICATION MAY AFFECT YOUR PROPERTY

THE TENDRING DISTRICT COUNCIL
TOWN AND COUNTRY PLANNING ACT 1990
TOWN AND COUNTRY PLANNING (TREES) REGULATIONS 1999
As amended by the Town and Country Planning
(Trees)(Amendment)(England) Regulations 2008

(Land West of Byng Crescent, Thorpe Le Soken, Essex)

TREE PRESERVATION ORDER 10/00007/TPO

THIS IS A FORMAL NOTICE to let you know that on the 23 June 2010 the Council made the above tree preservation order.

A copy of the order is enclosed. In simple terms, it prohibits anyone from cutting down, topping or lopping any of the trees described in the First Schedule and shown on the map without the Council's consent.

Some explanatory guidance on tree preservation orders is given in the enclosed leaflet, *Protected Trees: A Guide to Tree Preservation Orders*, produced by the Office of the Deputy Prime Minister.

The Council have made the order because it is considered that the trees make a significant contribution to the public amenity.

The order took effect, on a provisional basis, on 30 June 2010 it will continue in force on this basis for a further 6 months or until the order is confirmed by the Council, whichever first occurs.

The Council will consider whether the order should be confirmed, that is to say, whether it should take effect formally. Before this decision is made, the people affected by the order have a right to make objections or other representations about any of the trees, groups of trees or woodlands covered by the order.

If you would like to make any objections or other comments, please make sure we receive them in writing by **30 July 2010**. Your comments must comply with regulation 4 of the Town and Country Planning (Trees) Regulations 1999, a copy of which is provided overleaf. Send your comments to Assistant Chief Executive, Planning Services, Tendring District Council, Council Offices, Weeley, Clacton on Sea, Essex CO16 9AJ. All valid objections or representations are carefully considered before a decision on whether to confirm the order is made.

The Council will write to you again when that decision has been made. In the meantime, if you would like any further information or have any questions about this letter, please contact Mr C Dawson, Principal Tree and Landscape Officer, Planning Services, Tendring District Council, Council Offices, Weeley, Clacton on Sea, Essex CO16 9AJ - telephone 01255 686155

Dated: 30 June 2010

Signed on behalf of Tendring District Council



Roger Stewart
Assistant Chief Executive

COPY OF REGULATION 4 OF THE TOWN AND COUNTRY PLANNING (TREES) REGULATIONS 1999

Objections and representations

4(1) *Subject to paragraph (2), objections and representations -*

(a) *shall be made in writing and -*

(i) *delivered to the authority not later than the date specified by them under regulation 3(2)©; or*

(ii) *sent to the authority in a properly address and pre paid letter posted at such time that, in the ordinary course of post, it would be delivered to them no later than that date;*

(b) *shall specify the particular trees, groups of trees or woodlands (as the case may be) in respect of which the objections or representations are made; and*

(c) *in the case of an objection, shall state the reasons for the objection.*

4(2) *The authority may treat as duly made objections and representations which do not comply with the requirements of paragraph (1) if, in the particular case, they are satisfied that compliance with those requirements could not reasonably have been expected.*

10/00007/TPO

**THE TENDRING DISTRICT COUNCIL
TOWN AND COUNTRY PLANNING ACT 1990
TOWN AND COUNTRY PLANNING (TREES) REGULATIONS 1999
As amended by the Town and Country
Planning(Trees)(Amendment)(England) Regulations 2008**

Land West of Byng Crescent, Thorpe Le Soken, Essex

TREE PRESERVATION ORDER No. 10/00007/TPO

The Tendring District Council, in exercise of the powers conferred on them by sections 198, 201 and 203 of the Town and Country Planning Act 1990 hereby make the following Order—

Citation

1. This Order may be cited as the Tendring District Council
Land West of Byng Crescent, Thorpe Le Soken, Essex
Tree Preservation Order 2010.

Interpretation

2. In this Order "the authority" means the Tendring District Council and unless the context otherwise requires, any reference in this Order to a numbered section is a reference to the section so numbered in the Town and Country Planning Act 1990.

Application of section 201

3. The authority hereby direct that section 201 (provisional tree preservation orders) shall apply to this Order and, accordingly, this Order shall take effect provisionally on **30 June 2010**

Prohibited acts in relation to trees

4. Without prejudice to subsections (6) and (7) of section 198 (power to make tree preservation orders) [or subsection (1) of section 200(d) (tree preservation orders: Forestry Commissioners), and subject to article 5, no person shall—

- (a) cut down, top, lop, uproot, wilfully damage or wilfully destroy; or
- (b) cause or permit the cutting down, topping, lopping, uprooting, wilful damage or wilful destruction of,

any tree specified in Schedule 1 to this Order or comprised in a group of trees or in a woodland so specified, except with the consent of the authority and, where such consent is given subject to conditions, in accordance with those conditions.

Exemptions

5.—(1) Nothing in article 4 shall prevent—

- (a) the cutting down, topping, lopping or uprooting of a tree by or at the request of a statutory undertaker, where the land on which the tree is situated is operational land of the statutory undertaker and the work is necessary—
 - (i) in the interests of the safe operation of the undertaking;
 - (ii) in connection with the inspection, repair or renewal of any sewers, mains, pipes, cables or other apparatus of the statutory undertaker; or
 - (iii) to enable the statutory undertaker to carry out development permitted by or under the Town and Country Planning (General Permitted Development) Order 1995;
- (aa) the cutting down, topping, lopping or uprooting of a tree where that work is required to enable the implementation of an order made or confirmed under paragraph 8(1) or paragraph 15(1) of Schedule 1 to the Highways Act 1980 (c) (procedures for making or confirming certain orders and schemes);
- (ab) the cutting down, topping, lopping or uprooting of a tree where that work is urgently necessary for national security purposes;
- (b) the cutting down, topping, lopping or uprooting of a tree cultivated for the production of fruit in the course of a business or trade where such work is in the interests of that business or trade;
- (c) the pruning, in accordance with good horticultural practice, of any tree cultivated for the production of fruit;
- (d) the cutting down, topping, lopping or uprooting of a tree where that work is required to enable a person to implement a planning permission (other than an outline planning permission or, without prejudice to paragraph (a)(iii), a permission granted by or under the Town and Country Planning (General Permitted Development) Order 1995) granted on an application under Part III of the Act, or deemed to have been granted (whether for the purposes of that Part or otherwise);
- (e) the cutting down, topping, lopping or uprooting of a tree by or at the request of the Environment Agency to enable the Agency to carry out development permitted by or under the Town and Country Planning (General Development Order) 1995;

- (f) the cutting down, topping, lopping or uprooting of a tree by or at the request of a drainage body where that tree interferes, or is likely to interfere, with the exercise of any of the functions of that body in relation to the maintenance, improvement or construction of watercourses or of drainage works, and for this purpose "drainage body" and "drainage" have the same meanings as in the Land Drainage Act 1991; or
- (g) without prejudice to section 198(6)(b), the felling or lopping of a tree or the cutting back of its roots by or at the request of, or in accordance with a notice served by, a licence holder under paragraph 9 of Schedule 4 to the Electricity Act 1989.

(2) In paragraph (1), "statutory undertaker" means any of the following—

- a person authorised by any enactment to carry on any railway, light railway, tramway, road transport, water transport, canal, inland navigation, dock, harbour, pier or lighthouse undertaking, or any undertaking for the supply of hydraulic power,
- a relevant airport operator (within the meaning of Part V of the Airports Act 1986),
- the holder of a licence under section 6 of the Electricity Act 1989,
- a public gas transporter,
- the holder of a licence under section 7 of the Telecommunications Act 1984 to whom the telecommunications code (within the meaning of that Act) is applied,
- a water or sewerage undertaker,
- the Civil Aviation Authority or a body acting on behalf of that Authority,
- the Post Office.

6. —Article was revoked by the Town and Country Planning (Trees)(Amendment)(England) Regulations 2008 and that the form of application is governed by regulation 9A of the 1999 Regulations

Application of provisions of the Town and Country Planning Act 1990

7.—(1) The provisions of the Town and Country Planning Act 1990 relating to registers, applications, permissions and appeals mentioned in column (1) of Part 1 of Schedule 2 to this Order shall have effect, in relation to consents under this Order and applications for such consent, subject to the adaptations and modifications mentioned in column (2).

(2) The provisions referred to in paragraph (1), as so adapted and modified, are set out in Part II of that Schedule.

Directions as to replanting

8.—(1) Where consent is granted under this Order for the felling in the course of forestry operations of any part of a woodland area, the authority may give to the owner of the land on which that part is situated ("the relevant land") a direction in writing specifying the manner in which and the time within which he shall replant the relevant land.

(2) Where a direction is given under paragraph (1) and trees on the relevant land are felled (pursuant to the consent), the owner of that land shall replant it in accordance with the direction.

(3) A direction under paragraph (1) may include requirements as to—

- (a) species;
- (b) number of trees per hectare;
- (c) the preparation of the relevant land prior to the replanting; and
- (d) the erection of fencing necessary for the protection of the newly planted trees.

Compensation

9.—(1) If, on a claim under this article, a person establishes that loss or damage has been caused or incurred in consequence of—

- (a) the refusal of any consent required under this Order; or
- (b) the grant of any such consent subject to conditions,

he shall, subject to paragraphs (3) and (4), be entitled to compensation from the authority.

(2) No claim, other than a claim made under paragraph (3), may be made under this article—

- (a) if more than 12 months has elapsed since the date of the authority's decision or, where such a decision is the subject of an appeal to the Secretary of State, the date of the final determination of the appeal; or
- (b) if the amount in respect of which the claim would otherwise have been made is less than £500.

(3) Where the authority refuse consent under this Order for the felling in the course of forestry operations of any part of a woodland area, they shall not be required to pay compensation to any person other than the owner of the land; and such compensation shall be limited to an amount equal to any depreciation in the value of the trees which is attributable to deterioration in the quality of the timber in consequence of the refusal.

(4) In any other case, no compensation shall be payable to a person—

- (a) for loss of development value or other diminution in the value of the land;
- (b) for loss or damage which, having regard to the application and the documents and particulars accompanying it, was not reasonably foreseeable when consent was refused or was granted subject to conditions;
- (c) for loss or damage reasonably foreseeable by that person and attributable to his failure to take reasonable steps to avert the loss or damage or to mitigate its extent; or
- (d) for costs incurred in appealing to the Secretary of State against the refusal of any consent required under this Order or the grant of any such consent subject to conditions.

(5) Subsections (3) to (5) of section 11 (terms of compensation on refusal of licence) of the Forestry Act 1967 shall apply to the assessment of compensation under paragraph (3) as it applies to the assessment of compensation where a felling licence is refused under section 10 (application for felling licence and decision of Commissioners thereon) of that Act as if for any reference to a felling licence there were substituted a reference to a consent required under this Order and for the reference to the Commissioners there were substituted a reference to the authority.

(6) In this article—

"development value" means an increase in value attributable to the prospect of development; and, in relation to any land, the development of it shall include the clearing of it; and

"owner" has the meaning given to it by section 34 of the Forestry Act 1967.

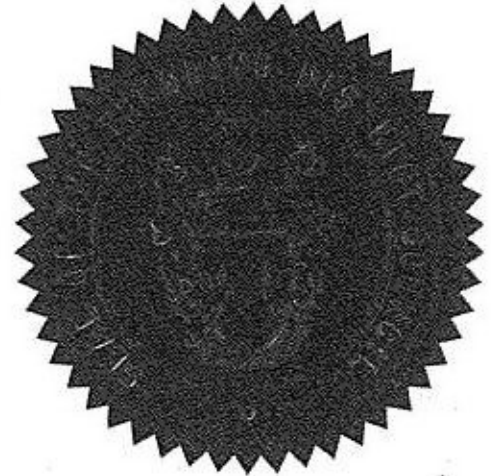
[Application to trees to be planted pursuant to a condition

[10.] In relation to the tree[s] identified in the first column of Schedule 1 by the letter "C", being [a tree] [trees] to be planted pursuant to a condition (being a condition imposed under paragraph (a) of section 197 (planning permission to include appropriate provision for preservation and planting of trees)), this Order takes effect as from the time when [that tree is planted] [those trees are planted].]

[Orders made by virtue of section 300

[11.] This Order takes effect in accordance with subsection (3) of section 300 (tree preservation orders in anticipation of disposal of Crown land).]

Dated this 23rd day of June 2010



SEAL REGISTER
15420
NUMBER

The Common Seal of the Tendring District Council
was hereunto affixed in the presence of -



Principal Solicitor

CONFIRMATION OF ORDER 10/00007/TPO

This Order was confirmed by the Tendring District Council without modification on the day of 2010

OR

This Order was confirmed by the Tendring District Council, subject to the modifications indicated by [*state how indicated*], on the [] day of [*insert month and year*]

.....
Authorised by the Council to sign in that behalf

DECISION NOT TO CONFIRM ORDER

[A decision not to confirm this Order was taken by Tendring District Council on the [] day of [*insert month and year*]

.....
Authorised by the Council to sign in that behalf

VARIATION OF ORDER

[This Order was varied by the Tendring District Council on the [] day of [*insert month and year*] under the reference number [*insert reference number of the variation order*]

.....
Authorised by the Council to sign in that behalf]

REVOCATION OF ORDER

[This Order was revoked by the Tendring District Council on the [] day of [*insert month and year*] under the reference number [*insert reference number of the revocation order*]

.....
Authorised by the Council to sign in that behalf

SCHEDULE 1

SPECIFICATION OF TREES

Trees specified individually
(encircled in black on the map)

Reference on map	Description	Situation
T1 –T18	Oak	Land West of Byng Crescent, Thorpe Le So

by reference to an area
(within a dotted black line on the map)

Reference on map	Description	Situation
	NONE	

Groups of trees
(within a broken black line on the map)

Reference on map	Description	Situation
	NONE	

Woodlands
(Within a continuous black line on the map)

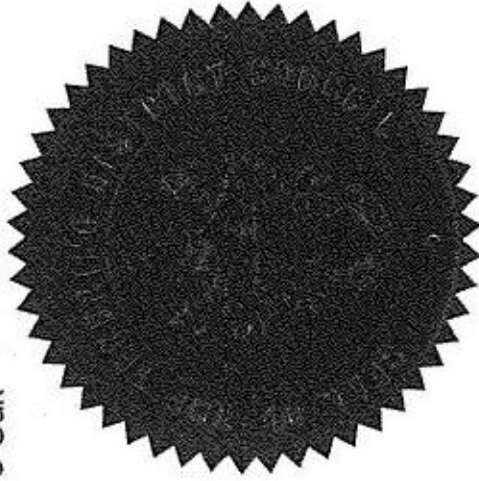
Reference on map	Description	Situation
	NONE	

Tending District Council
Council Offices, Weeley
Clacton-on-Sea, Essex CO16 9AJ
TREE PRESERVATION ORDER
NO 10/00007

Section: 201

Location: Land west of Byng Crescent,
Thorpe-le-Soken, Essex.

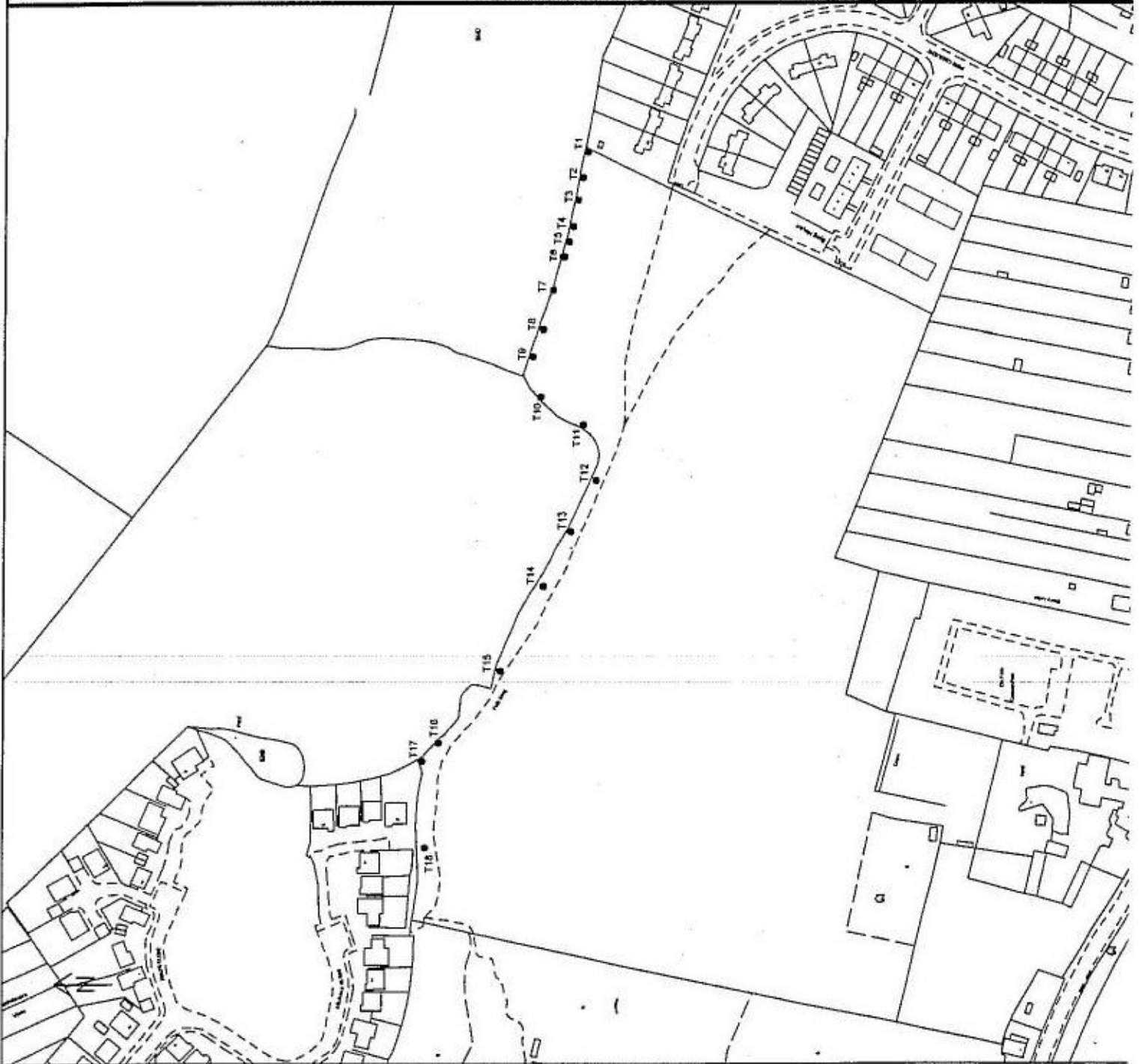
Description:-
T1-T18-Oak



SEAL REGISTER
15480
NUMBER

Date 23/11/2015 Scale 1:2500

Reproduced from the Ordnance Survey Mapping with the permission of the
Controller of Her Majesty's Stationary Office (C) Crown Copyright.
Unauthorized reproduction infringes Crown Copyright and may lead to
prosecution or civil proceedings. Tending District Council Licence No.
10001894, 2010



Appendix 8 – Arboricultural Method Statement

ARBORICULTURAL METHOD STATEMENT FOR A PROPOSED RESIDENTIAL DEVELOPMENT AT LAND TO THE EAST OF HENDERSON ROAD, THORPE-LE-SOKEN

1. INTRODUCTION

1.1 Aim

The aim of this Arboricultural Method Statement is to outline working practices to ensure that planning conditions are fulfilled during the construction works at the site located at Land to the East of Henderson Road, Thorpe-le-Soken.

1.2 Root Protection Area

The Root Protection Area refers to an area of ground around a tree which needs to be protected to comply with planning conditions. It is calculated as the area a tree will need to be sufficiently rooted to the ground in order to survive and remain safe. If any damage is caused to the roots within this area, a tree will suffer health consequences and may become a hazard.

The Root Protection Area is plotted on the Tree Protection and Removal Plan Drawing ref. 4990,EC,AR,DS/005/Rev0 details the type of protection that is suitable, for example protective barriers to limit access to an area, or ground protection to protect the roots under the ground.

1.3 Construction Exclusion Zones

Barriers will be erected to protect tree canopies and Root Protection Areas. These barriers should remain in place until construction works are complete. Once the barriers are erected, they delineate the boundary between the construction zone and the construction exclusion zone. No construction activities should be undertaken within the construction exclusion zones without the specification from the Project Arboriculturalist.

The Project Arboriculturalist can authorise the movement of the construction exclusion zone at stages of development when required, for example to allow specified work to commence within the Root Protection Areas, under specific circumstances as outlined below in section 3.2 - Works within the Root Protection Area.

1.4 Development Phases

Table 1	
Phase of Development	Arboricultural Input
Phase 1 - Preconstruction	<ul style="list-style-type: none"> • Planning; • Tree pruning; • Install tree protection fencing; • Install ground protection; • Inspect site to ensure tree protection is installed correctly.
Phase 2 - Construction Process	<ul style="list-style-type: none"> • Monthly monitoring to ensure protective barriers are in place, and appropriately maintained; • Supervision of any works within Root Protection Areas; • Recording evidence for submission to the local authority.
Phase 3 - Post Construction	<ul style="list-style-type: none"> • Post development inspection; • Removal of protective fencing; • Remedial tree pruning or other works; • Signing off and closing report.

2. PHASE 1- PRECONSTRUCTION

2.1 Appoint a Project Arboriculturalist

A Project Arboriculturalist will be appointed to oversee all the arboricultural aspects of the development project outlined in this method statement. It is recommended that the Arboriculturalist takes an active role in the development from the beginning of the project to advise in the planning stage, and supervise site works throughout development. The Arboriculturalist should be appropriately qualified and experienced. Potential Damage to Stems and Limbs

The trees will be pruned prior to the beginning of construction to allow adequate clearance for construction work to commence. Beyond this, care must be taken to ensure that all activities on site are planned so that no plant or materials come into contact with the remaining trees.

In the event of damage to trees, the project Arboriculturalist must be contacted, in order that they may assess any hazards that may have arisen from the damage.

2.2 Protective Barriers

Temporary protective barriers will be erected as detailed in the Tree Protection and Removal Plan Drawing ref. 4990,EC,AR,DS/005/Rev0. The designs for barriers are specified in BS 5837: 2012. The barriers must be fit for the purpose of excluding construction activity and be appropriate to the degree and proximity of the work to the protected tree.

Where construction activities are limited, and there is a low risk of incursions into the protected area it is acceptable to use 2m high weldmesh panels, with rubber or concrete supports and back stay supports as shown in Figure 1 on Page 4.

In cases where construction activities provide a higher risk than in low-risk situations, more sturdy barriers will be required. BS 5837: 2012 stipulates that in such situations a scaffolding frame should be driven at least 0.6m into the ground with mesh panels attached, as shown in Figure 2 on Page 5.

Once the exclusion zone has been protected by barriers and/or ground protection, construction can commence. All weather notices should be fixed to the barriers with the words: "Construction exclusion zone – Keep out" or similar.

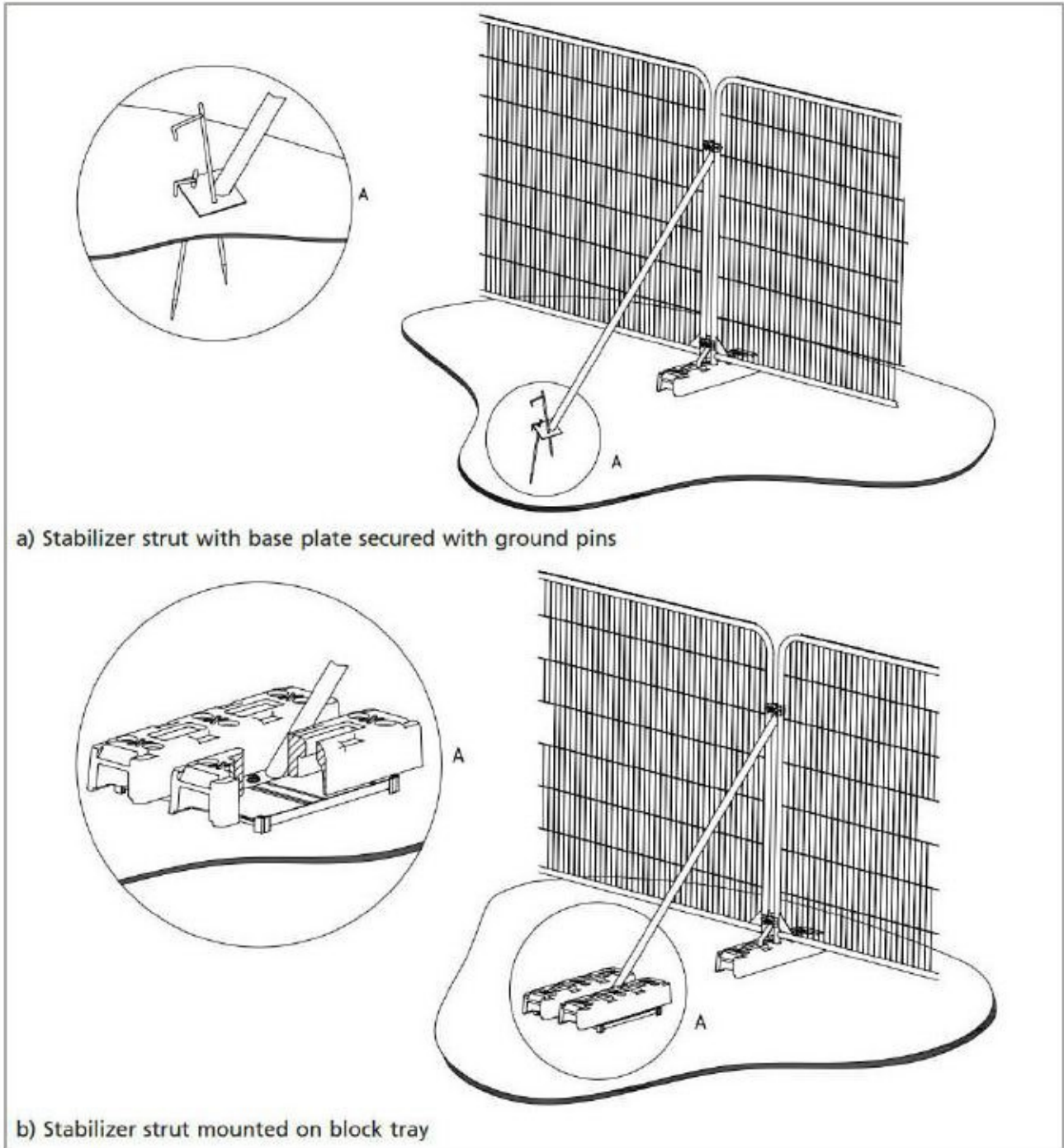


Figure 1. Low risk fencing solution from BS 5837: 2012

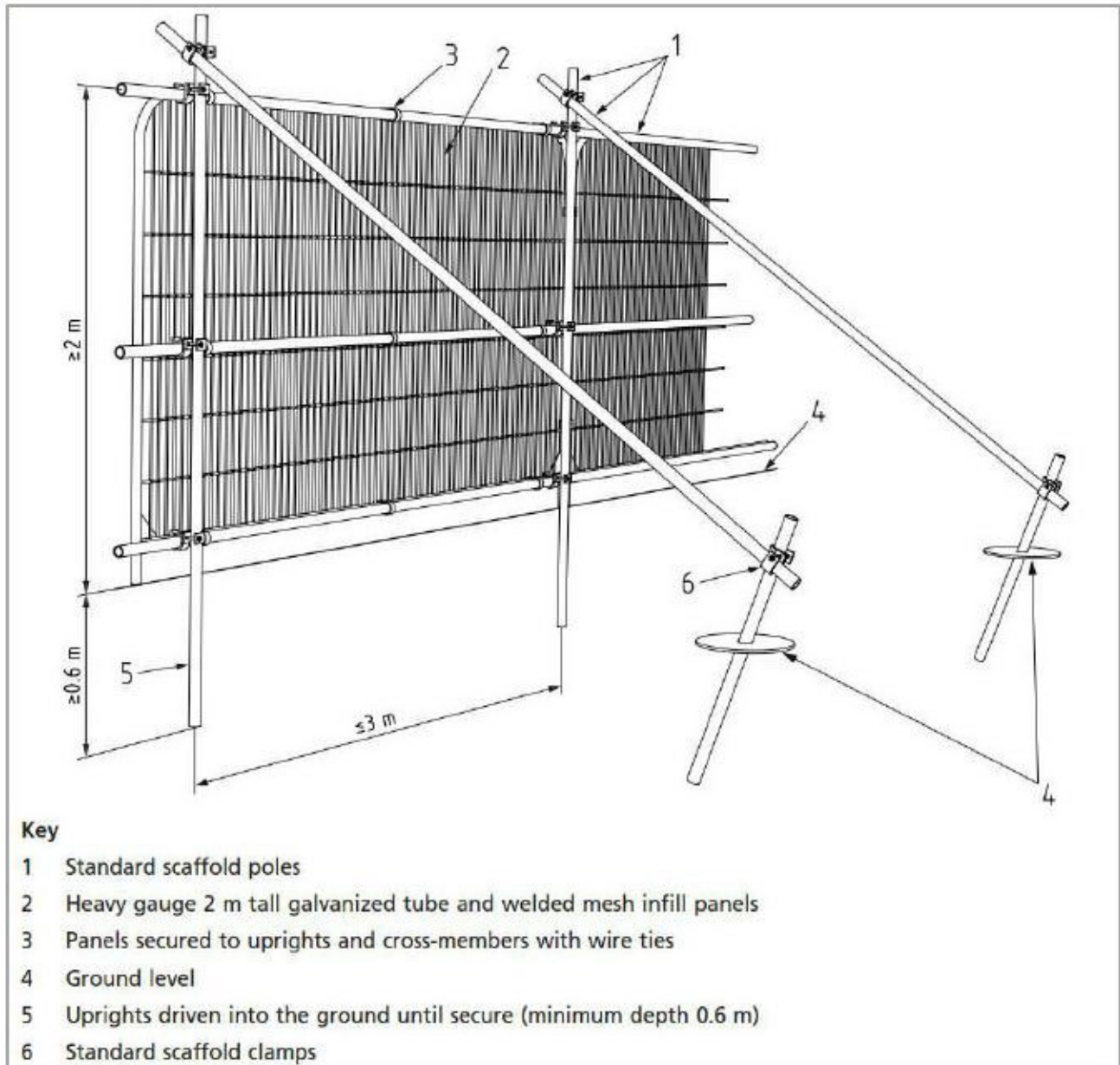


Figure 2. Standard fencing solution from BS 5837: 2012

2.3 Ground Protection

It is not anticipated that ground protection will be required, however if access through the Root Protection Area or construction working space is required within a Root Protection Area, the protective barrier will be set back and adequate protection for the roots will be provided.

The ground protection must be suitable for the type of traffic which is expected to enter the Root Protection Area, without causing any compaction of the underlying soil.

Areas of hard surfacing should be retained during construction works to act as temporary ground protection as far as practicable. New surfaces which are laid as part of the development such as driveways and roads

can be laid to form ground protection within the Root Protection Areas, as long as they are constructed following the guidance.

Where retention of old surfaces or creation of new surfaces is not required, any areas of Unmade Ground which are exposed must be protected by additional precautions.

For pedestrians it is acceptable to lay woodchip over a geotextile membrane with scaffolding boards placed on top.

For light traffic of less than 2 t, it is acceptable to create a temporary ground barrier by laying a non-compressible material over a geotextile membrane, with interlocking ground protection boards placed on top.

For traffic of over 2 t it is required to use a system designed to engineering specifications capable of handling the expected loads, without causing any compaction to the soil beneath.

2.4 Pre-development Inspection

The pre-development pruning works, protective fencing and ground protection will be signed-off by the project Arboriculturalist before proceeding to the construction phase.

3. PHASE 2- CONSTRUCTION PROCESS

Areas behind protective barriers are to be considered construction exclusion zones unless specified by the project Arboriculturalist. When entry is required by the construction process, additional precautions will need to be taken as detailed in section 3.2 below.

3.1 Monitoring

The site will be monitored on a monthly basis by the Project Arboriculturalist to gather evidence that the construction works follow the recommendations of the Arboricultural Method Statement. Accurate records must be kept so a closing report can be submitted after development has been completed.

3.2 Works within Root Protection Areas

All works within the Root Protection Areas will need to be authorised by the Project Arboriculturalist and may require onsite supervision. Adequate Ground Protection must be in place during any works.

3.2.1 Excavation in the Root Protection Area

The project Arboriculturalist can authorise excavation within the Root Protection Area subject to justification and special precautions. Where Excavations are required within the root protection areas, the excavation will be made manually with hand tools. It is anticipated that excavations will be required for a service trench, and potentially for removal of existing foundations.

If any major roots are discovered, the roots will have to remain in place and the excavation will have to continue around the roots. Any roots encountered with a diameter of less than 25mm, may be pruned with a clean cut by a sharp tool. The project Arboriculturalist will be consulted before severing any roots or clumps larger than the specified 25mm, to ensure the impact to the trees is assessed and mitigated appropriately. Figure 3 below, shows examples of retained roots for a service trench.

Any roots exposed during the excavations will be protected from desiccation by a suitable cover. Prior to back-filling, the protective cover will be removed and a suitable topsoil will be used to surround any exposed roots.

Back-fill of removed soil will be carried out manually. The soil will be replaced carefully, so as not to damage the roots and to ensure the soil is not compacted. The soil should be backfilled so the original ground level is maintained.



Figure 3 – Example of Retained roots in service trench

3.2.2 Ground Level

The ground level within the Root Protection Area of trees will be maintained at the pre-development levels, throughout the works. Any changes of ground level near Root Protection Areas, will consider the impacts of irrigation and drainage on protected tree roots.

3.3 Works Outside the Construction Exclusion Zones

Other works onsite which may damage trees will have to be controlled so the damage to trees is limited. For example, excessive dust generated through demolition and construction works will be removed from trees by spraying water over the trees.

4. PHASE 3- POST CONSTRUCTION

4.1 Post Construction Inspection

When the construction process is complete, the site should be inspected by the project Arboriculturalist or Local Authority Tree Officer. The inspection will be used to gather evidence on the condition of trees post construction and to advise any remedial action that may need to be taken. The evidence gathered during the inspection will be used for a closing report which provides evidence that the work was carried out following the recommendations of this Arboricultural Method Statement.

4.2 Removal of Tree Protection

Following the Post construction inspection, the Project Arboriculturalist can authorise the removal of the protective fencing and ground protection. Any proposed landscaping operations by heavy machinery should be carried out before the protective fencing is removed.

4.3 Remedial Tree Works

During the Post Construction Inspection, the condition of the trees will be assessed. Any damage caused during construction will be noted, and remedial action will be recommended. Any tree works undertaken will comply with BS 3998:2010 Trees work- Recommendations.

4.4 Planting of trees lost during development

Trees should be planted onsite to mitigate any trees lost during development. The details of the planting scheme should be included in the landscape plans. The post construction inspection will include checking the condition of newly planted trees.

4.5 Closing Report

Once the construction works have been completed, a closing report will be submitted detailing evidence that works have been carried out correctly.



GEOSPHERE ENVIRONMENTAL

Ec

Ecology.

Fr

Flood Risk.

Ge

Geotechnical.

En

Environmental.

Kw

Knotweed.

GEOSPHERE ENVIRONMENTAL LTD

Brightwell Barns, Ipswich Road, Brightwell, Suffolk, IP10 0BJ