ATWORTH ARBORICULTURE LTD



BS5837 (2012) SURVEY ST MARY MAGDELENE'S CHURCH, STOCKLAND BRISTOL, BRIDGEWATER, TA5 2PZ.

Prepared for: Chantrey Conservation Architects Ltd

Reference: AA/5837-25.01.24

25th January 2025

Atworth Arboriculture Ltd 01225 708508 - 07970467918 vincentcainey@yahoo.co.uk The statements in this Report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire (Atworth Arboriculture Ltd) cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this Report ceases at any stated time limit within it, or if none stated after two years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the Report are carried out to, or affecting, the subject tree(s), whichever is the sooner.

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Instruction

Site: St Mary Magdalene's Church, Stockland Bristol, Bridgewater, TA5 2PZ.

Client: Chantrey Conservation Architects Ltd

Marcus Chantrey of Chantrey Conservation Architects Ltd instructed Atworth Arboriculture Ltd to visit the above site and conduct a tree survey in accordance with 'BS 5837:2012' a guide for 'Trees In Relation To Construction', section 4. We were also instructed to calculate and plot the Root Protection Area (RPA) for each tree, a schedule of the relevant trees, including the basic data and a condition assessment.

Tree Preservation Order Status: N/A

Local Planning Authority: Somerset Council

Planning reference: N/A

We were supplied with a site drawing and as part of the tree survey process have include a site plan prepared with PTMapper ProTM. Please be aware that I do not recommend scaling from the drawing, all measurements should be checked on site.

Please Note: All abbreviations introduced in brackets are used throughout the report.

Summary

The development proposal seeks to regrade the entrance path to the southwest corner for accessibility and to install a Trench Arch drainage system on the north side of the church.

We inspected all the trees that could be affected, and a schedule is appended as 5837 Survey Schedule. A total of **31** single trees were assessed in accordance with the cascade chart for tree quality (Table 1 section 4) of BS 5837:2012. 7 trees fall into category 'B', those of moderate quality. 24 trees falls into category "C", those of poor quality. 1 tree falls into category "U", those of such poor condition, they shouldn't be retained.

This survey should be read in conjunction with the following document:

AA/5837-25.01.25 Root Protection Area Drawing

Survey date: 12th September 2024

Surveyed by: Vincent Cainey BSc, Atworth Arboriculture Ltd

Report Author Vincent Cainey BSc Atworth Arboriculture Ltd

Ref: AA/5837-25.01.25

1.0 Tree Survey

1.1 This tree survey has been undertaken to the recommendations of BS 5837:2012 British Standard guide for 'Trees in Relation to Construction', section 4, each tree has been assessed and categorised with appropriate colour coding. The specific tree data is contained in the enclosed schedule.

- 1.2 This survey is concerned with the Arboricultural aspects of the site only and we are unaware of the planning status of the trees.
- 1.3 This survey does not set out the working specifications of tree protection measures or engineering design features. It does however set out the minimum area around each tree(s) to be protected during construction, the Root Protection Area (RPA).
- 1.4 The survey was conducted from ground level with the aid of binoculars, no internal investigations of the subject trees were undertaken, and no soil samples were removed. The trees were not tagged as they are easily identified on site and from the attached location plan.
- 1.5 The British Standard (5837) sets out to assist those concerned with trees in relation to construction. It does not set out to put arguments for or against development, or for the retention or removal of trees. It does set out how to decide upon trees for retention, means of protecting those trees during development and on means of incorporating trees into the developed landscape.
- 1.6 **Arboricultural Operations**: If pruning or felling operations are required, they must be undertaken in accordance with BS 3998:2010 Tree Works Recommendations and by suitably qualified and insured Arboricultural contractors.
- 1.7 **Ecological Constraints:** The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000 and Habitat Regulations 2007 & 2009 provides statutory protection to birds, bats and other tree dwelling species. They could impose significant constraints on the use and timing of any tree matters considered in this report.
- 1.8 **Mitigation:** This survey sets out the working specifications of tree protection measures and it provides generic mitigation for development within the RPA based upon similar projects and my experience of the subject. Specific detailed engineering principles and advice are beyond my area of expertise and you <u>must</u> seek advice from a suitably qualified individual in order to provide site specific information.
- 1.9 **Documents:** This survey should be read in conjunction with the site drawing(s) and documents as specified on page 1.
- 2.0 In making our assessment, consideration has been given to:
 - ❖ The health, vigour and condition of each tree
 - ❖ Any structural defects and safe life expectancy
 - ❖ The size and form of each tree
 - ❖ The rare, unusual or component part of a group or formal feature
 - Groups, woodland or avenues of trees that provide definite screening or Softening effect
 - Groups forming distinct landscape features
 - Significant historical, commemorative, conservation or other value i.e. Veteran tree or wood-pasture.
 - Cultural benefit

3.0 RPA: Root Protection Area

Using BS 5837:2012 a Root Protection Area (RPA) for each retained tree can be calculated by reference to section 4.6 of BS. The RPA is frequently described as a circle with a radius of prescribed distance within which no unspecified activity should occur. The shape and position of the RPA can be modified by an Arboriculturalist to meet the individual site constraints according to the likely

distribution of the tree roots. Intrusion into the RPA can take place only where the ground is adequately protected in accordance with the requirements of section 7 of the BS.

Table 2 – Calculating the RPA (BS 5837:2012 – extract)

Number of stems	Calculation
Single stem Tree	RPA(m5) = Stem diameter (mm) @1.5m x 12 \times 3.142 1000 with 2 to stems (stem diameter 1)2 + (stem diameter 2)2 + (stem diameter 5)2 stems (mean stem diameter)2 × number of stems e than 5
Trees with 2 to 5 stems	(stem diameter 1)2 + (stem diameter 2)2 + (stem diameter 5)2
Trees with more than 5 stems	(mean stem diameter)2 × number of stems
N	OTE The 12x multiplier is based on NJUG 10 (9) and published work by Matheny

4.0 Survey Codes

NO: Tree number on survey plan

SPECIES: Common/English name

HEIGHT: Height in meters

STEM DIAMETER: In millimetres measured at 1.5m above ground level

BRANCH SPREAD: In meters taken at the four cardinal points (N.E.S.W.)

HEIGHT OF CROWN: Clearance above ground level in meters

AGE CLASS:

Y Young
SM Middle aged
M Mature
OM Over mature
V Veteran
D Dead

PHYSICAL CONDITION:

G Good F Fair P Poor D Dead

STRUCTURAL CONDITION:

Presence of any decay or physical defect

PRELIMINARY RECCOMENDATIONS:

i.e. further investigation, aerial inspection, decay detection, wildlife study.

ESTIMATED REMAINING CONTRIBUTION IN YEARS:

EG: less than 10, 10 to 20, 20 to 40, and 40+. This is a subjective evaluation only.

CATEGORY GRADING:

See table in appendix for full explanation.

Code U	Trees in such a condition they	
	Cannot realistically be retained	Dark Green
Code A	High Quality Category	GREEN
Code B	Moderate Category	BLUE
Code C	Low Category	GREY

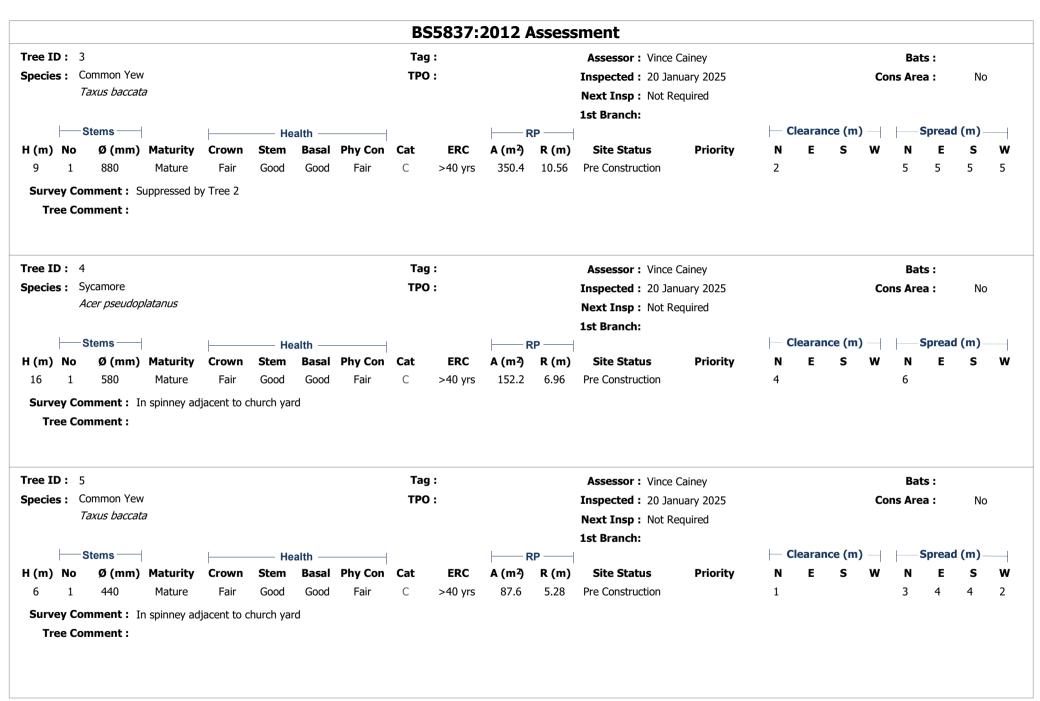
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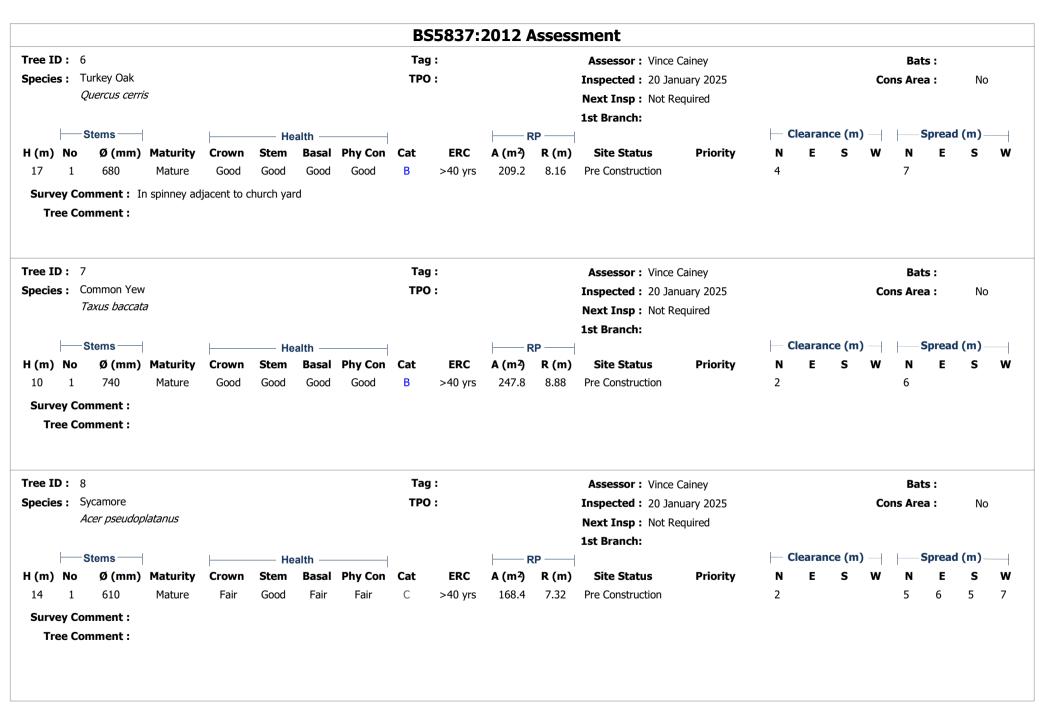
V.Cainey BSc

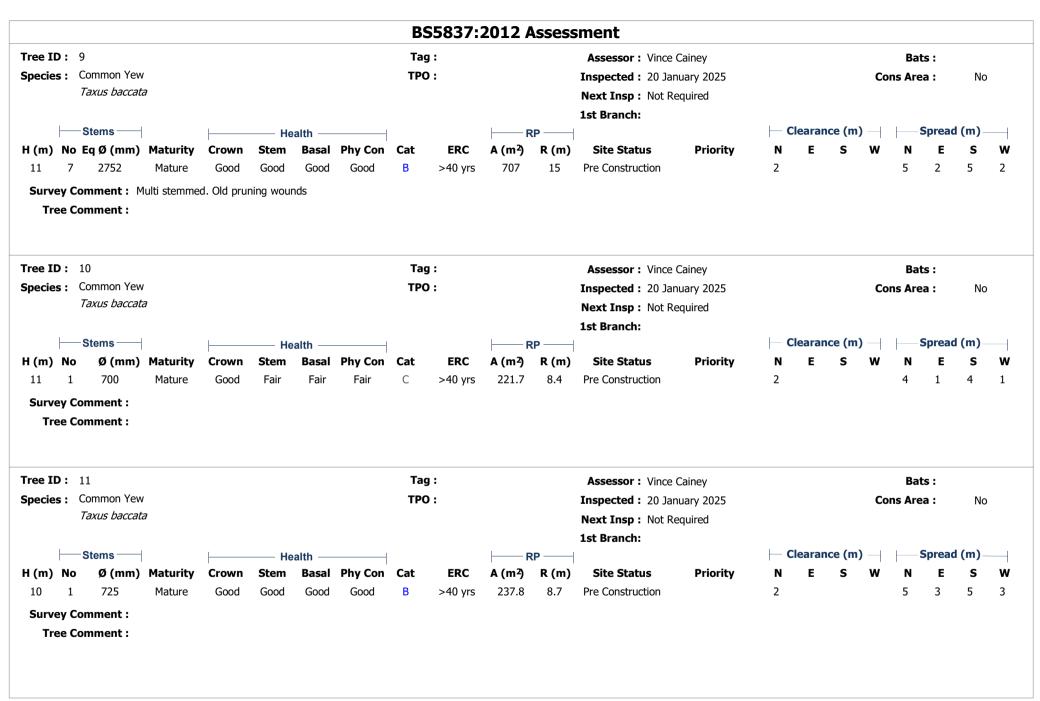
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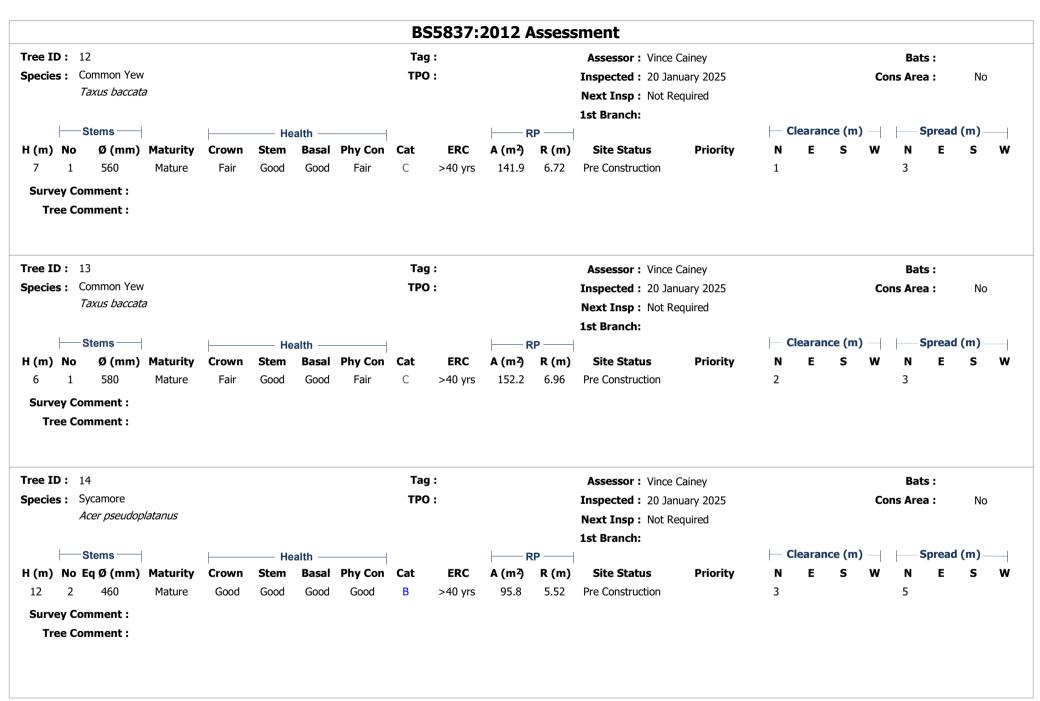
St Mary Magdalene's Church **Atworth Arboriculture Ltd** Stockland Bristol 189, Purlpit Bridgewater Atworth Phone: 01225 708508 TA5 2PZ Melksham Mobile: 07970 467918 vincentcainey@yahoo.co.uk Wiltshire SN12 8HJ BS5837:2012 Assessment BS5837(2012) Tree Survey St Mary Magdalene's Stockland Bristol Tree ID: 1 Tag: **Assessor:** Vince Cainey Bats: No Species: Holm Oak TPO: **Inspected:** 20 January 2025 Cons Area: No Quercus ilex Next Insp: Not Required 1st Branch: ----Stems Clearance (m) Spread (m) Health -RP -H (m) No Eq Ø (mm) Maturity Crown Stem Basal Phy Con Cat **ERC** R (m) **Site Status Priority** w A (m²) 158 Semi-mature Fair Good Good Fair C >40 yrs 11.4 1.9 Pre Construction **Survey Comment:** Suppressed by neighbouring tree **Tree Comment:** Tree ID: 2 Tag: **Assessor:** Vince Cainey Bats: Species: Common Beech TPO: Inspected: 20 January 2025 Cons Area: No Fagus sylvatica Next Insp: Not Required 1st Branch: Stems Clearance (m) Spread (m) Health -RP -H(m) No Ø (mm) Maturity Stem **Basal Phy Con Cat ERC** R (m) **Site Status Priority** S W Crown A (m²) 960 Mature Poor Fair Fair Poor <10 yrs 417 11.52 Post Construction **Survey Comment:** In spinney adjacent to church yard. Very sparse crown Tree Comment:

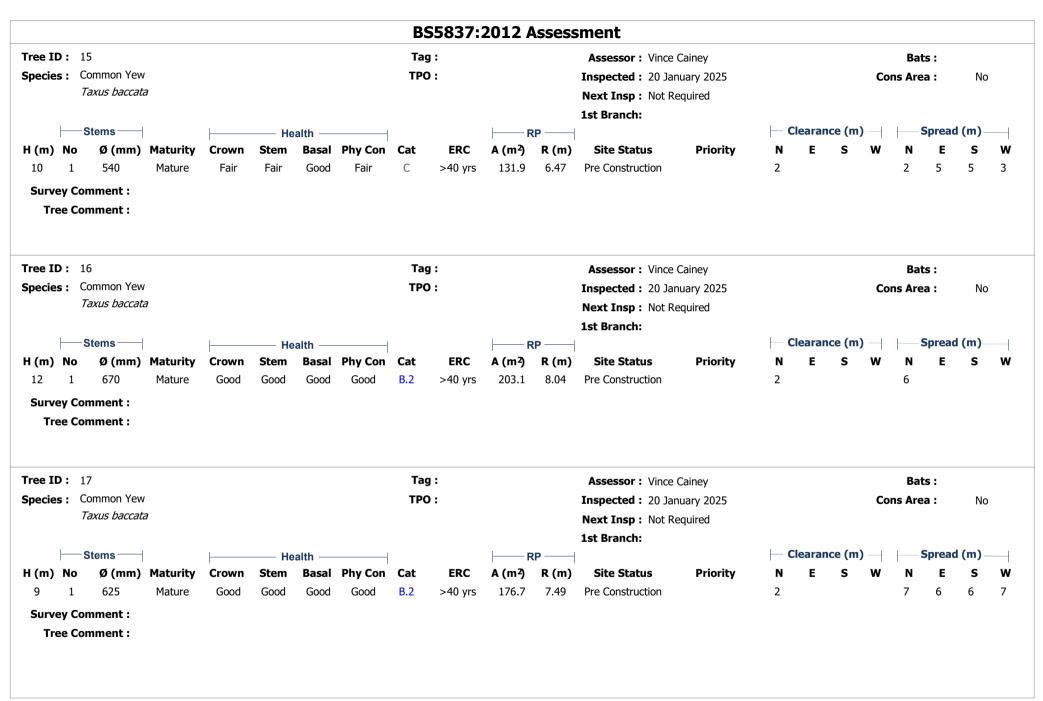
Page 1 BS5837 Survey Report Pear Technology TreeMinder 20/01/2025

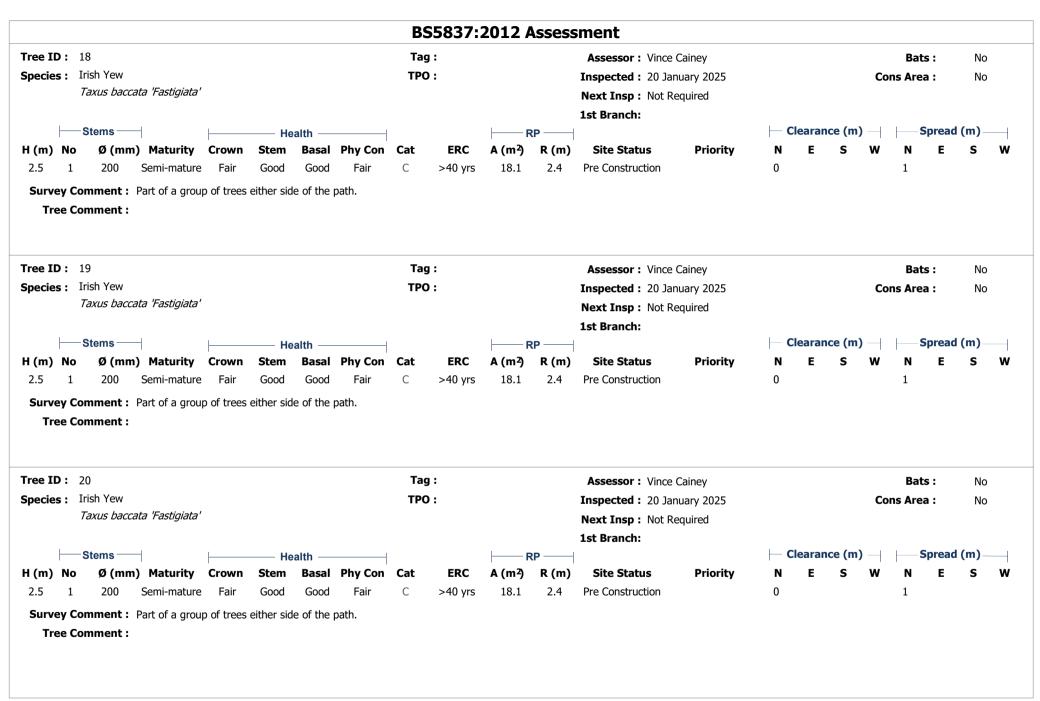


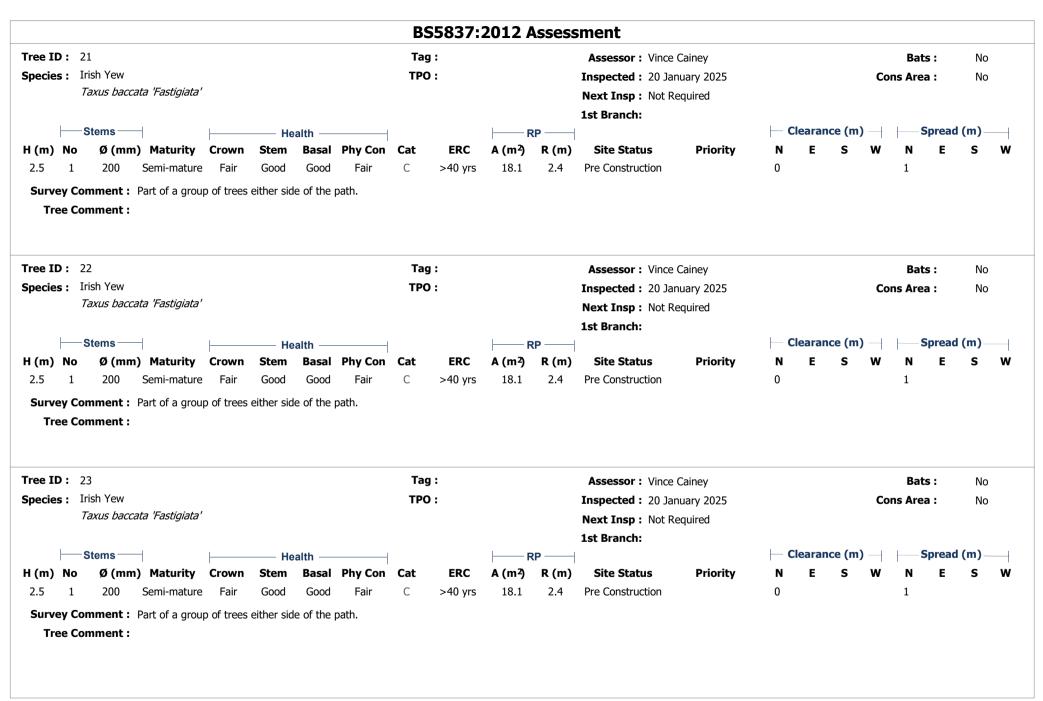


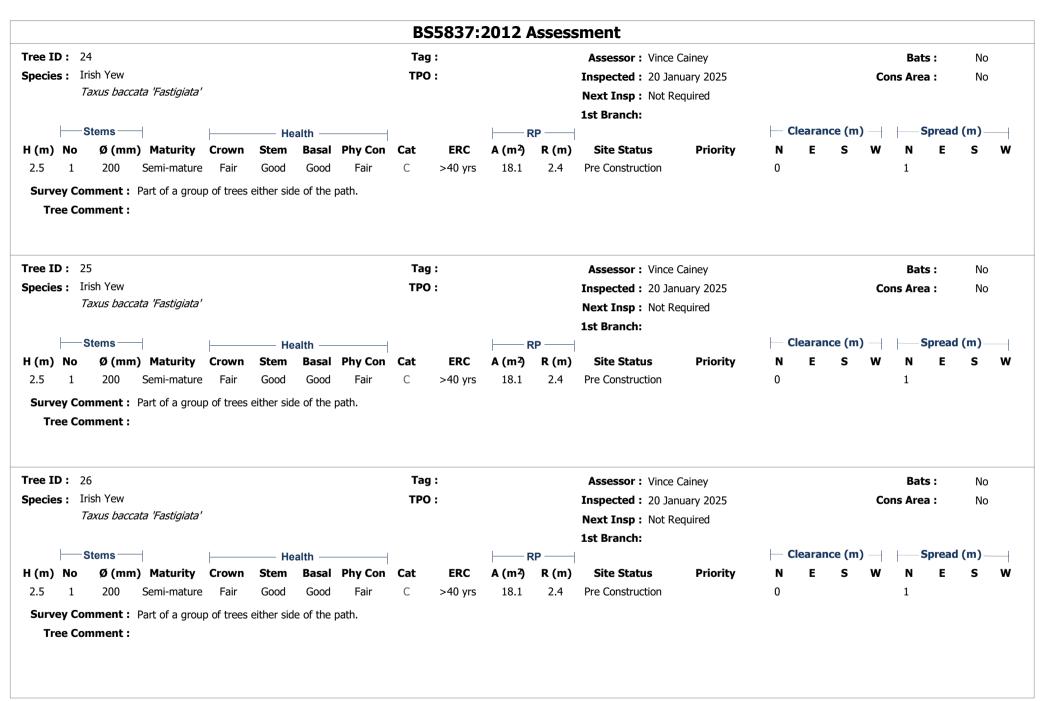


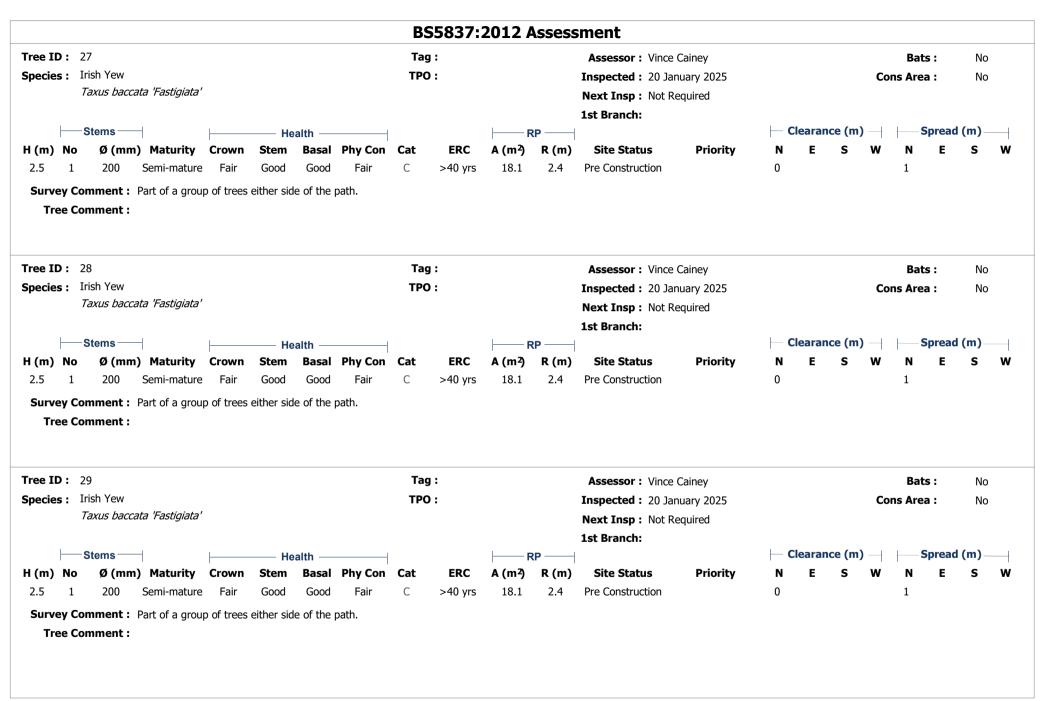




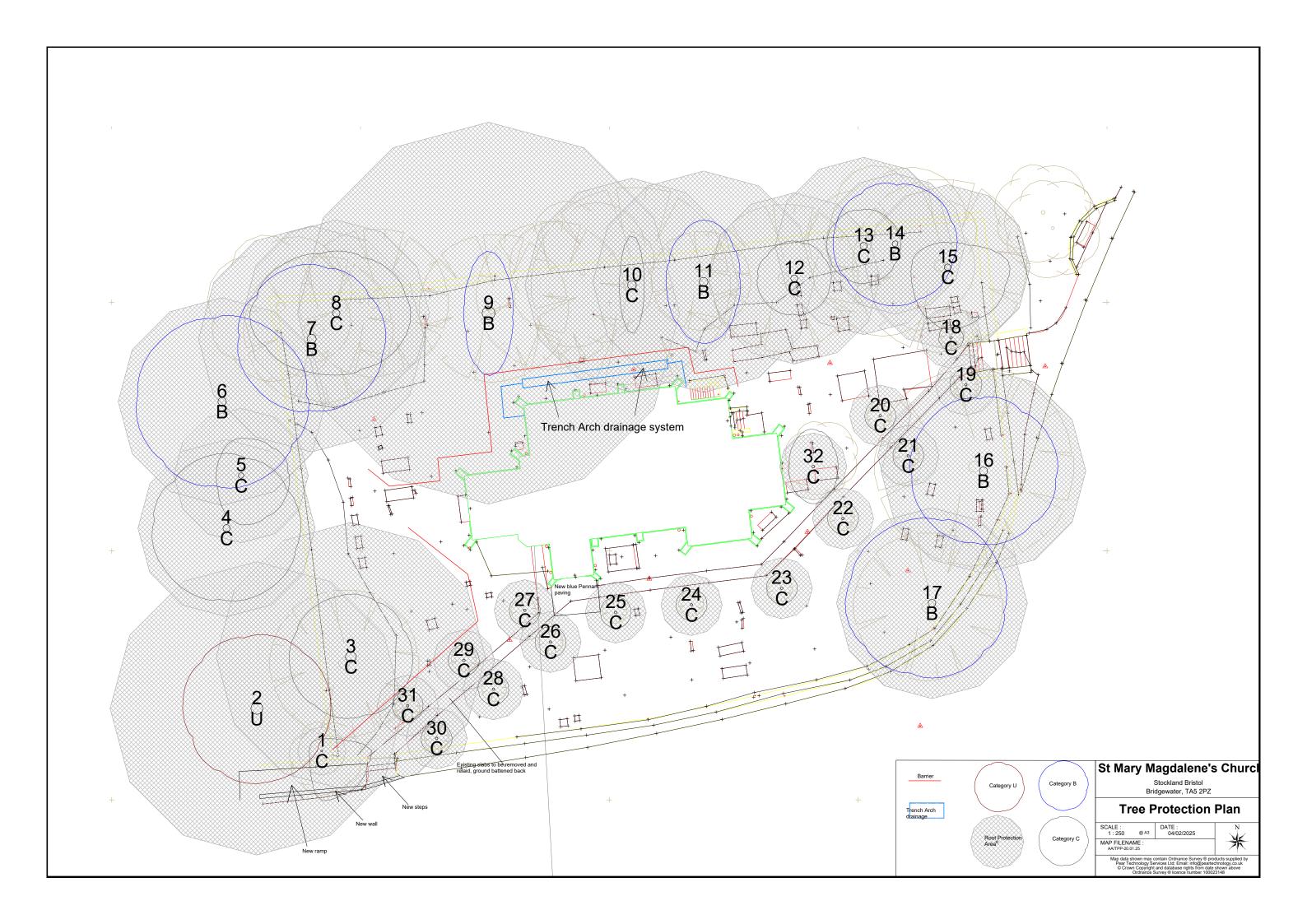


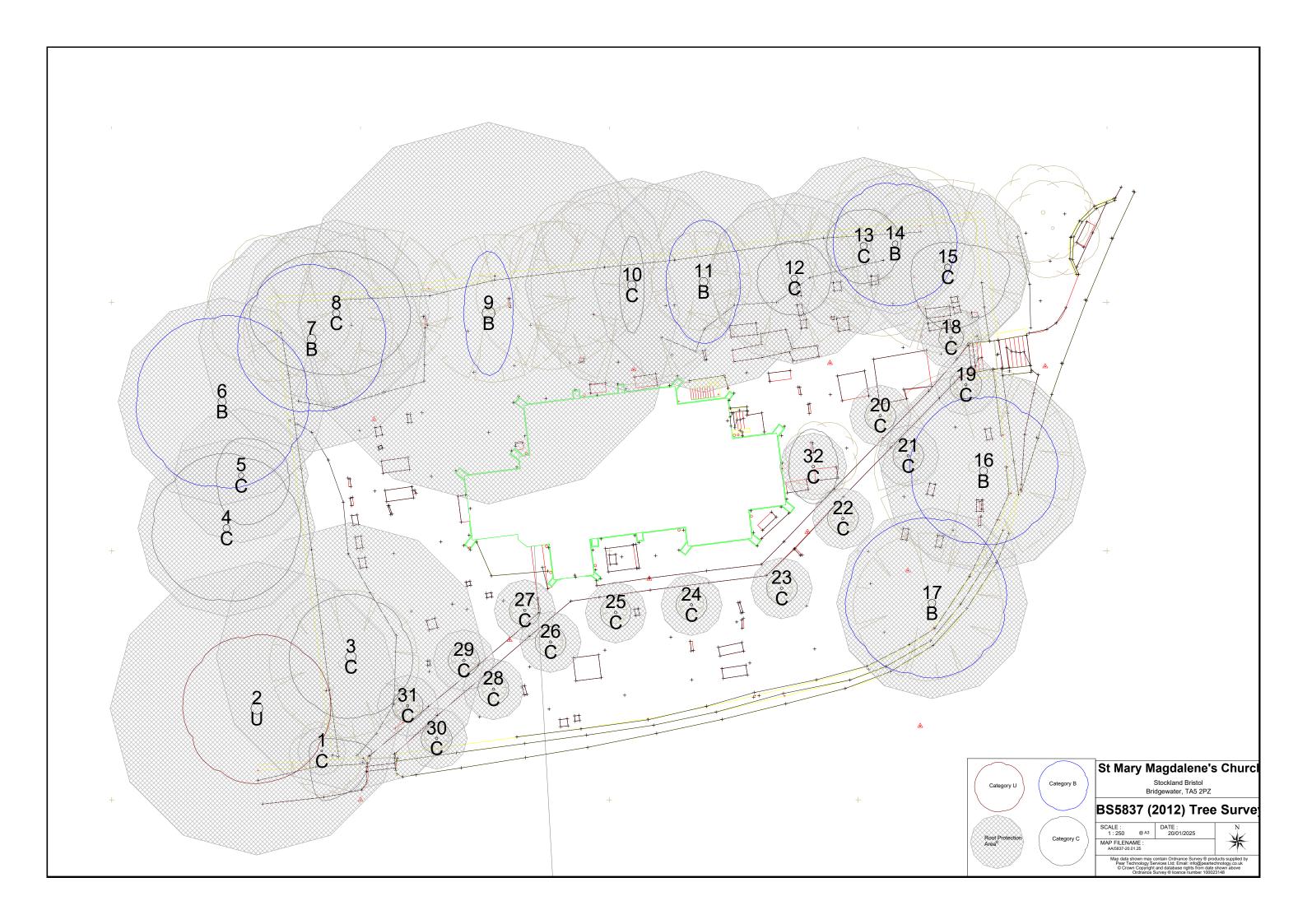






				BS	55837:	2012 A	ssess	sment							
Tree ID: 30 Species: Irish Yew Taxus baccata 'Fastigiata'				Tag TPC	-			Assessor : Vince of Inspected : 20 Jan Next Insp : Not Re	nuary 2025			Co	Bats :	No No	
Stems————————————————————————————————————	rown St	– Health — em Basal	Phy Con	Cat	ERC	├── R A (m²)	P ————————————————————————————————————	1st Branch: Site Status	Priority	⊢ CI	learance (m) — W	Sprea N E	d (m) – S	W
2.5 1 200 Semi-mature	Fair Go	ood Good	Fair	С	>40 yrs	18.1	2.4	Pre Construction	_	0			1		
Survey Comment: Part of a group of Tree Comment:	f trees eithe	er side of the	path.												
Tree ID: 31				Tag) :			Assessor: Vince	Cainey				Bats:	No	
Species: Irish Yew Taxus baccata 'Fastigiata'			TPC) :			Inspected: 20 Jan Next Insp: Not Re 1st Branch:				Co	ns Area :	No		
Stems —		– Health —				R	P	15t Branch.		- C	learance (m) —	Sprea	d (m)	
		em Basal ood Good	Phy Con Fair	Cat	ERC >40 yrs	A (m²) 18.1	R (m) 2.4	Site Status Pre Construction	Priority	N 0	E S	W	N E 1	S	٧
Survey Comment: Part of a group of Tree Comment:	f trees eithe	er side of the	path.												
Tree ID: 32				Tag	j :			Assessor : Vince	Cainey				Bats :	No	
Species: Sycamore Acer pseudoplatanus				TPC) :			Inspected: 20 Jan Next Insp: Not Re 1st Branch:	•			Co	ns Area :	No	
Stems		Health —				R	P			├ CI	learance (m) —	Sprea	d (m)_	
		em Basal ood Good	Phy Con Good	Cat	ERC >40 yrs	A (m²) 21.9	R (m) 2.64	Site Status Post Construction	Priority	N 2	E S	W	N E 3 2	S 3	2





ATWORTH ARBORICULTURE LTD



Arboricultural Method Statement Arboricultural Implications Assessment

AT ST MARY MAGDALENE CHURCH. STOCKLAND BRISTOL, BRIDGEWATER, **TA5 2PZ.**

Prepared for: **Chantrey Conservation Architects Ltd.**

Instruction

1.0 Site: St Mary Magdalene Church, Stockland Bristol, Bridgewater, TA5 2PZ.

Planning ref: N/A

Client: Chantrey Conservation Architects Ltd

- 1.1 Atworth Arboriculture Ltd was instructed to supply an Arboricultural Method statement and Arboricultural Implications Assessment for the proposed development at the site above.
- 1.2 Local Planning Authority Somerset Council.
- 1.3 The proposed development is to alter the access in the southwest corner of the church yard, level the access path and entrance to the church and install a Trench Arch drainage system at St Mary Magdalene Church.

2.0 Arboricultural Method Statement Methodology.

- 2.1. The Arboricultural method statement provides the means by which areas of construction within or near to the Root Protection Area (RPA) of retained trees can be achieved whilst minimising the impact of construction activity on nearby trees.
- 2.2 This Statement is written assuming approved Preliminary Management Recommendations (if any) to trees stated in the Tree Schedule Table have since been carried out.
- 2.3 Demolition and the excavation of foundations for any structure on sites where trees are present may result in root damage and removal. Where root loss is likely to occur, it is important that a method of demolition and construction that minimises the impact on tree roots is utilised.
- 2.4 Copies of this document will be available for inspection on site.

3.0 Tree Protection Measures

- 3.1 Before the commencement of any works on site, protective fencing will be erected as specified by the planning conditions to be imposed. The local planning authority will be notified in writing once the fencing is in place. The position of the fencing is shown on the appended Tree Protection Plan (TPP), AA/TPP-25.01.25. No retained trees are close to the proposed development, but the barrier will stop any movement near trees.
- 3.2 The purpose of the protective fencing is to minimize damage to the tree's roots and the soil structure surrounding them. Construction activities such as trenching, changing of levels and the storage of spoil and materials is particularly damaging to tree roots, either directly (by physical damage) or indirectly (through the destruction of nearby soil structure through compaction or 'capping' which inhibits further root function).
- 3.3 Around the entrance to the churchyard it would be impossible to work with fencing erected or ground protection.
- 3.4 The specification of the tree protection fencing is illustrated within BS5837:2012 and is a suitable fencing design which should resist light vehicular impact and be difficult to remove casually. The British Standard also provides a more practical, less costly fencing specification which may be suitable for smaller sites. See Figure 1 and 2 below, which provides an example of both RPA protective fencing specifications, in line with BS5837:2012.

3.5

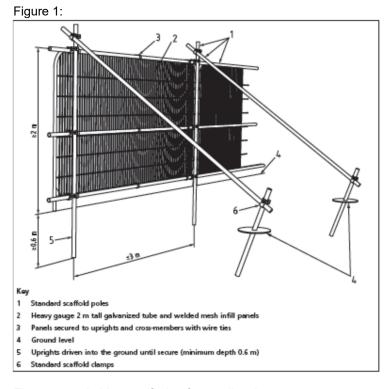
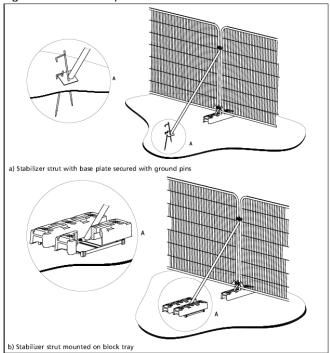


Figure 2 – suitable specifiation for smaller sites:



- 4.0 Works within RPA.
- 4.1 The proposal is to alter the existing entrance to the churchyard, which is at present steps from the roadway up to the path. The proposal is to install an access ramp from the west which slopes up to the entrance gate. There will be a small wall at the edge of the ramp. New steps will be installed to accommodate the new ramp.

All of this is within the RPA of T2, a category U tree in the adjacent spinney and T3 a category C tree in the churchyard.

All works in this area will be done manually to protect the roots.

- 4.2 The existing path is to be lifted and re-set at a gradient with the ground battened back and a gentle grass slope to the path.
- 4.3 New Blue Pennant paving is to be laid immediately outside the south porch. This is partially within the RPA of one of the small ornamental yew trees, T25. This work will be done manually.
- 4.4 A new Trench Arch drainage system is to be installed to the north of the church to take waste from the kitchen at the east end and the W/C to the west.
- 4.3 The Trench arch system of drainage has been designed specifically for churches. The usage of toilets in rural churches is infrequent and often far away from any mains sewerage or not possible to install a septic tank. A trench 1000mm wide and 400mm deep will be hand dug beneath the existing path. In very free-draining soils with low water tables a hole at least a meter wide and deep might be excavated and filled with rocks the size of bricks. This is then capped over with some of the excavated soil. This is a soak away pit. However, such systems provide little treatment and should not be used where there is a possibility of groundwater contamination. 6 In soils which are less able to accept water a larger area is required to ensure that the water disperses. This is done using a leachfield (aka 'tail drains', 'herring bone drains' etc). This is a network of perforated pipes which fall very gradually from the inlet and lets the water go into the clean stone which surrounds the pipes and then into the soil. Such systems are usually very good at treating the wastewater and there are hardly any concerns for the water table in such cases. (a copy of a paper explaining this type of drainage is appended).

Arboricultural Implications Assessment (AIA)

5.0 Above Ground Constraints

- 5.1 The effects of the proposals will bring no change to the amenity value of the trees around the site. The drainage is below ground and can't be seen and the entrance will be little changed.
- 5.2 Pruning and felling works to facilitate development.No pruning or felling is required to facilitate the development.

6.0 Below Ground Constraints

The drainage will go through the RPA of T9, T10 and T11, installation method is described above.

7.0 Precautionary Measures

- 7.1 It should be the arboriculturist's duty to monitor site works relating to trees and where necessary take photographs to inform the LPA that the works are taking place in accordance with LPA planning conditions in relation to trees. It remains the responsibility of the LPA to enforce any breach in conditions.
- 7.2 Any tree roots whilst exposed should immediately be wrapped or covered to prevent desiccation and to protect them from rapid temperature changes. Hessian sacking is recommended. Any wrapping should be removed prior to backfilling, which should take place as soon as possible.
- 7.3 If roots are found to be in the way during works, they may be pruned back neatly with an appropriate hand saw or bypass secateurs so long as they are below 25mm in diameter. Roots larger than this require arboriculturist advice.
- 7.4 No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement (including cement washings) should be stored and handled well away from the outer edge of the RPA.
- 7.5 Fires on site should be avoided. When they are unavoidable, they should not be lit in a position where heat could affect foliage or branches. The potential size of fire and wind direction should be taken into account when determining its location and it should be attended at all times until safe enough to leave. Also take note of statutory litigations in force in the area before lighting fires.
- 7.6 No vehicles or pedestrian traffic will be allowed to enter areas once protected by fencing, unless permitted otherwise by the LPA and should be accompanied by the arboriculturist at all times.

Vince Cainey BSc

3rd February 2025