From: Neil Duffield
Sent: 31 January 2019 17:13
To: Hilary Saunders
Subject: NYM/20108/0653/FL St Athanasius Monastery Langdale End E62 NYMNP details 31-01-19

Hi Hilary,

Following various requests for further information I now confirm/attach the following:-

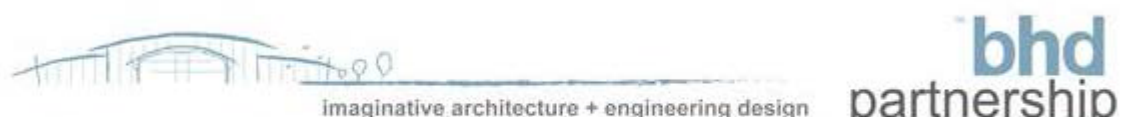
- Elliot Consultancy Arboricultural report using new topographical survey showing full extent of trees
- D11161-02F, Floor Plans showing minor design alteration, windows to Lower ground
- D11161-03H, Elevations, added windows also materials to externals altered.
- D11161-04B, Revised existing topographical survey produced to show further trees as noted in Astute Ecology Report
- D11161-05E, Proposed Block Plan/Topo, building moved to prevent encroachment on Car Park
- D11161-06B, Amended site sections following building position change
- D11161-07A, Car Parking drawing

In addition and relating to Officers comments re Archaeology would it be possible for the WSI and watching brief to be conditioned. Given they will be carried out can the Archaeological Heritage Statement be omitted from the requirements?

I hope the above details allow validation of the scheme as they answer all requests for

information/alteration, made but if you have any further queries just let me know.

Kind regards
Neil



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Location:
St Athanasius Monastery

Report Type:
Arboricultural Impact Assessment

Ref:
ARB/CP/2005

Date:
January 2019

Wrens Nest, Underhill, Glaisdale, North Yorkshire, YO21 2PF

www.elliottconsultancy.com

Company Registration No: 5515572 VAT No: 889226571

Contents

Appendices

1 Introduction

1.1 Acting upon the request of the client a survey of trees on an area of land at the St Athanasius Monastery, Langdale End was carried out on the 7th of January 2019 to form the basis of this impact assessment. The tree survey and report production were undertaken by Charles Prowse of Elliott Consultancy Ltd.

1.2 Scope of the report:

- This report provides arboricultural information and advice in relation to inform re-development decisions for the site.
- All trees within the site were assessed and categorised with regard to their quality and a retention value was assigned using criteria outlined in British Standard 5837:2012 – 'Trees in Relation to Design, Demolition & Construction' (BS5837:2012). Appendix 4 provides information regarding the categorisation.
- Matters pertinent to tree retention and protection are briefly discussed within Section 4. Following receipt of detailed engineering drawings providing service runs and ground level alterations all measures relating to tree removal, tree retention and protection should be finalised within an Arboricultural Method Statement.
- Section 5 evaluates the proposals in context to the existing trees, with potential issues discussed and remedial options offered.

1.3 This report should be read in conjunction with the Tree Constraints Plans (Appendix 2) and the Arboricultural Impact Plan (Appendix 3).

2 Site Information

2.1 The area surveyed is located to the east of the entrance driveway for the St Athanasius Monastery in Langdale End. Figure 1 shows the extent of the site.

Figure 1: Area Surveyed Highlighted

Map data ©Google Imagery

2.2 The survey area is primarily situated upon a wooded bank that rises from the driveway up to the level of the road. A small section to the west of the driveway was also included.

2.3 On the day the site was surveyed the sky was clear which presented good levels of light. Any visibility issues encountered are noted within Appendix 1).

3 Tree Category Evaluation

3.1 The criteria used for evaluating how suitable each tree is for retention within a development is that suggested within 5837:2012; a copy of the categorisation sheet can be found within Appendix 4.

3.2 BS5837:2012 notes that all trees apart from those with stem diameters <150mm or classified as Category U should be considered for retention and viewed as a potential site constraint. When inspected, each tree and or group feature is assigned one of four categories that signify how suitable that tree/group would be for retention within any development proposals, and therefore the degree to which it should constrain the site. The four categories are as follows:

3.2.1 **Category A** (coloured green) trees are those of high quality and value, and of a condition whereby they could make a substantial contribution to the site. The retention of Category A trees should be considered during the design phase and afforded adequate physical protection during the construction phase in accordance with BS 5837:2012 where retained. This means keeping proposed features and alterations to ground levels outside of root protection areas and crown spreads so as to ensure that the tree remains in an adequate condition post-development. Root protection areas and crown spreads are displayed upon the Tree Constraints Plan, Appendix 2. Five trees, numbers 10, 14, 20, 22 and 26, were classified as Category A.

3.2.2 **Category B** (coloured blue) trees are those of moderate quality and value, and of a condition that they make a substantial contribution to the site. The retention of Category B trees should be considered during the design phase and afforded adequate physical protection during the construction phase in accordance with BS 5837:2012 where retained. Twenty-six trees and one hedge were classified as Category B; their numbers being Trees 1, 2, 5-9, 11-13, 16-18, 21, 23-25, 27, 28, 30, 35, 37, 39, 40, 49, 53 and Hedge 1.

3.2.3 **Category C** (coloured grey) trees are considered to be of low quality and value, but of an adequate condition to remain in the short-term. Trees with a stem diameter of less than 150mm (measured at 1.5m above ground level) are classified as Category C; these trees should also be retained where possible but where they form a significant constraint to development their

removal should be permitted. Where they are to be retained they should be afforded adequate consideration during the design phase and physical protection during the construction phase in accordance with BS 5837:2012. Twenty-five trees, numbers 3, 4, 15, 19, 29, 32-34, 38, 41-48, 50-52 and 54-58, were classified as Category C.

3.2.4 **Category U** (coloured red) trees are of such a condition that any existing value would be lost within 10 years. As a result it is recommended that Category U trees are not considered a constraint for development and are removed prior to construction commencing. Two trees, numbers 31 and 36 were classified as Category U.

3.2.5 In addition to the four main categories explained above, each tree/group is assigned a sub-category which signifies its overriding value as determined by the surveyor, which is noted by adding a suffix of 1, 2 or 3 alongside the category letter. 1 signifies that the trees/groups main value is arboricultural e.g. it may be a particularly good example or may be rare. 2 signifies that the overriding factor was due to the landscape value that the tree/group provides e.g. it may be part of a group feature such as a screen. 3 indicates that a cultural factor was the overriding value e.g. it may have historical or commemorative importance.

Summary of Categories Awarded			
Category	Tree Numbers	Group Numbers	Hedgerow Numbers
A	10, 14, 20, 22 and 26		
B	1, 2, 5-9, 11-13, 16-18, 21, 23-25, 27, 28, 30, 35, 37, 39, 40, 49, 53	1	
C	3, 4, 15, 19, 29, 32-34, 38, 41-48, 50-52 and 54-58		
U	31, 36		

3.3 Overall the majority of the trees within the site are of reasonable to good physiological and structural condition with few arboricultural issues noted. Specific details for trees, groups and hedgerows can be found within Appendix 1.

4 Constraints and Retention Considerations

4.1 The vast majority of the trees inside the survey area form a group structure with a contiguous canopy and as such specific consideration may be required regards the aesthetic and structural impact that could occur should trees from the group be removed.

4.2 Any tree retained within the design will require protection in accordance with *BS 5837 'Trees in relation to design, demolition and construction'* 2012 regardless of its initial retention category. This protection will usually require trees enclosed by a barrier in areas equal to the Root Protection Areas (As detailed within Appendix 2); this should be undertaken prior to any work beginning, including demolition and site preparation works. The specification for the fencing and for any other protection measures required must be provided within the **Arboricultural Method Statement** and approved by the Local Planning Authority.

4.3 Root protection areas should be considered sacrosanct from any disturbance throughout the entire development process - with no ground disturbance, material storage, or physical encroachment allowed. Where possible trees should be protected with continuous barriers protecting trees as groups rather than individual specimens – this is of particular merit around the periphery of the site to protect boundary trees on and off-site.

4.4 Areas that have been identified for post-development tree planting should also be protected to ensure that the soil does not become compacted or contaminated.

4.5 No new utility runs must be located within any of the retained trees root protection areas. Any works to existing utilities will be undertaken with regard for the retained tree cover and will be in accordance with NJUG (National Joint Utility Groups) guidelines.

5 Arboricultural Impact Assessment

5.1 This section concentrates on the proposed development and how it relates to the current tree population within the site. Any conflict issues between the proposed layout and existing trees are discussed and remedial options, where possible, suggested.

5.2 It is proposed that a church will be constructed within the site with a new access driveway and car parking, as displayed in figure 2 and in greater detail within the Arboricultural Impact Plan (Appendix 3).

Figure 2: Proposed Layout

5.3 **Conflict 1: Loss of trees due to the proposed layout**.

As shown within Figure 2 the construction of the proposed church and driveway will necessitate the removal of thirty-one trees and one hedge.

Mitigation / Countermeasure: Of those that require removal to enable the layout, one tree, number 10, was classified as Category A. Ten were classified as Category B, sixteen as Category C and one as Category U. In addition we would recommend the removal of Tree 36 due to poor condition. The majority of the trees that will need to be removed are positioned upon the bank rising up to the roadside and as such there will be a visual impact but one that will be softened by the larger number

of trees that will be retained. There would also be an opportunity to undertake some post-development tree planting on the eastern side of the proposed driveway.

5.4 **Conflict 2: Construction within root protection areas.**

The proposed driveway encroaches within the root protection areas of Trees 5 and 35.

Mitigation / Countermeasure: The encroachment for Tree 5 is minor and unlikely to impact its condition. The encroachment for Tree 35 is larger and would require excavation resulting in an approximate 10% loss of its root protection area. The tree is a Holm Oak of moderate quality which is unlikely to be significantly detrimentally affected by the root loss so worth retaining rather than removing.

5.5 **Potential Conflict 3: Location of utilities runs with Root Protection Areas.**

Damage can be caused to root tissue during the installation of utilities runs.

Mitigation / Countermeasure: New utility runs must not be located within any of the retained trees root protection areas. Any works to existing utilities will be undertaken with regard for the retained tree cover and will be in accordance with NJUG (National Joint Utility Groups) guidelines. Details of intended service runs should be made available once the technical information has been drafted in order to complete the Arboricultural Method Statement.

5.6 **Potential Conflict 4: Damage to trees within site during demolition and construction.**

Trees may be damaged due to a variety of reasons during a demolition and development process.

Mitigation / Countermeasure: A physical demarcation will be created between the retained trees and demolition/development areas to ensure that the trees and the medium within which they are rooting are protected from damage. The actual method of creating the demarcation might vary, where appropriate, but will typically be a physical barrier. The barrier, along with any additional tree protection requirements should be specified within an Arboricultural Method Statement prior to **any** site works commencing.

5.7 **Potential Conflict 5: Damage to structures from trees.**

Trees are capable causing damage to structures either directly, such as physical contact damage or indirectly given the right conditions, such as subsidence.

Mitigation / Countermeasure: Chapter 4.2 ‘Building near Trees’ of the NHBC Standards should be consulted by those responsible regarding building foundation depths required according to the species of adjacent trees, and for suitable species to be planted given their intended positions to new and existing structures.

Appendix 1 Tree Details

Key for Tree & Group Data tables:

No.	Tree Number
Species	Tree Name (common)
Age	Y = Young; SM = Semi-mature; EM = Early-mature M = Mature; OM = Over-mature; V = Veteran; D = Dead
DBH	Diameter at Breast Height (measured at 1.5m above ground level to the nearest cm)
Stems	The number of stems the tree has
Height	Overall tree height measured in metres
Crown Spread	Measured along the four cardinal points in metres
CH	Canopy Height (height of crown above ground)
1st Branch	The height and aspect of the 1st significant limb e.g. 2 NE = 1st limb at 2m growing in a north-easterly direction.
EstD	Indication of whether any of the trees dimensions were estimated: Y=Yes, N=No.
General Observations	Appraisal of trees general condition
EstCont	Estimated remaining contribution (years)
BS Cat	British Standard 5837:2012 retention category
Recommendation	Remedial works that may be required should the tree be retained (Note: these recommendations do not relate to proposed development requirements – such recommendations should be covered within the Arboricultural Method Statement)

Tree Survey Data

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
1	Lawson Cypress	SM	42	1	9	2	2	2	2	0.5	N	Continuous canopy with adjacent tree(s).	40+	B2	No work required
2	Lawson Cypress	SM	38	1	8.5	2	2	2	2	0.5	N	Continuous canopy with adjacent tree(s).	40+	B2	No work required
3	Oak spp	Y	9	1	3.5	1	1	1	1	0.5	N		40+	C1	No work required
4	Cherry spp	Y	11	1	3	2	2	1	2	1	N	Included bark union(s) present	40+	C1	No work required
5	Birch spp	M	42	1	16	3	3	3	3	3.5	N	Codominant stems at 2m. Branch failure stubs. Minor deadwood. Continuous canopy with adjacent tree(s).	40+	B2	No work required
6	Lime spp	Y	29	1	9	2	3	3	3	0.5	N	Continuous canopy with adjacent tree(s).	40+	B2	No work required
7	Fir spp	SM	34	1	18	3	2	3	1	8	N	Continuous canopy with adjacent tree(s). Minor deadwood.	40+	B1	No work required
8	Birch spp	SM	35	1	14	3	1	1	3	4	N	Stem sweep. Continuous canopy with adjacent tree(s).	40+	B2	No work required
9	Lime spp	SM	50	1	15	3	3	4	3	2	N	Codominant stems at 5m. Continuous canopy with adjacent tree(s).	40+	B1	No work required
10	Fir spp	SM	52	1	20	4	3	3	3	4	N	Minor deadwood.	40+	A1	No work required

Note: Recommendations are arboriculturally based and do not relate to any development proposals at this stage. Such information would be detailed within an Arboricultural Method Statement

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
11	Scots Pine	SM	42	1	19	1	4	2	3	7	N	Branch failure stubs. Minor deadwood. Continuous canopy with adjacent tree(s).	40+	B2	No work required
12	Scots Pine	SM	46	1	16	2	2	4	3	6	N	Branch failure stubs. Minor deadwood. Continuous canopy with adjacent tree(s).	40+	B2	No work required
13	Lime spp	Y	39	1	15	4	2	4	4	2.5	N	Codominant stems with included bark union(s) at 3.5m. Continuous canopy with adjacent tree(s).	40+	B2	No work required
14	Scots Pine	EM	52	1	16	3	3	4	4	4	N	Stem leaning 10 degrees. Branch failure stubs. Minor deadwood. Continuous canopy with adjacent tree(s).	40+	A2	No work required
15	Fir spp	Y	32	1	17	1	2	2	1	3	N	Stem leaning 15 degrees. Minor deadwood. Continuous canopy with adjacent tree(s).	40+	C2	No work required
16	Spruce spp	SM	31	1	17	1	1	2	1	3.5	N	Minor deadwood. Continuous canopy with adjacent tree(s).	40+	B2	No work required
17	Scots Pine	EM	48	1	21	2	2	0.5	3	6.5	N	Branch failure stubs - loss of large limb from lower crown.	40+	B1	No work required
18	Lime spp	EM	55	1	18	4	5	5	5	1	N	Codominant stems at 4m. Continuous canopy with adjacent tree(s).	40+	B1	No work required
19	Horse Chestnut	Y	41	1	8	2	3	4	1	2.5	N	Suppressed form.	40+	C2	No work required

Note: Recommendations are arboriculturally based and do not relate to any development proposals at this stage. Such information would be detailed within an Arboricultural Method Statement

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
20	Pine spp	M	58	1	20	4	4	4	3	7	N	Stem leaning 15 degrees. Branch failure stubs. Minor deadwood. Continuous canopy with adjacent tree(s).	40+	A2	No work required
21	Norway Maple	SM	44	1	9	3	4	4	4	3	N	Codominant stems at 2m 1 stem removed.	40+	B2	No work required
22	Pine spp	EM	63	1	19	3	4	4	3	8	N	Stem leaning 10 degrees. Minor deadwood. Continuous canopy with adjacent tree(s).	40+	A2	No work required
23	Scots Pine	EM	58	1	17	5	4	4	6	8	N	Branch failure stubs. Minor deadwood.	40+	B2	No work required
24	Fir spp	SM	48	1	20	2	3	3	3	4	N	Continuous canopy with adjacent tree(s).	40+	B2	No work required
25	Larch spp	SM	28	1	15	2	2	2	2	2.5	N		40+	B1	No work required
26	Fir spp	SM	46	1	19	3	3	3	4	9	N	Branch failure stubs. Continuous canopy with adjacent tree(s).	40+	A1	No work required
27	Larch spp	SM	32	1	16	2	2	2	2	7	N	Minor deadwood. Continuous canopy with adjacent tree(s).	40+	B2	No work required
28	Lime spp	SM	49	1	12	4	3	5	3	2	N	Codominant stems at 1.8m. Cotc.	40+	B1	No work required
29	Lime spp	Y	15	2-5	6	3	3	4	2	1	N	Codominant stems at base. Continuous canopy with adjacent tree(s).	40+	C1	No work required
30	Oak spp	SM	56	1	7	5	5	3	6	1.5	N	Stem leaning 15 degrees. Codominant stems with included bark union(s) at 1.2m.	40+	B2	No work required

Note: Recommendations are arboriculturally based and do not relate to any development proposals at this stage. Such information would be detailed within an Arboricultural Method Statement

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
31	Oak spp	Y	17	1	6	0.5	2	0	4	2	N	Stem leaning 45 degrees. Topped due to proximity to overhead lines.	<10	U	No work required
32	Ash	Y	25	2-5	9	2	2	0	4	1.5	N	Codominant stems at base. Continuous canopy with adjacent tree(s).	40+	C2	No work required
33	Oak spp	Y	12	1	7	1	1	1	1	3	N		40+	C1	No work required
34	Ash	Y	19	2-5	7	2	2	3	1	3	N	Codominant stems at base.	40+	C2	No work required
35	Holm oak	SM	44	1	7	2	4	2	4	2	N	Multi-stemmed. Continuous canopy with adjacent tree(s).	40+	B2	No work required
36	Birch spp	SM	18	1	6	0.5	0.5	0.5	0.5	3	N	Crown removed diue to overhead lines	<10	U	No work required
37	Ash	Y	17	1	8	2	2	2	2	4	N	Proximity to overhead line may limit life.	20+	B1	No work required
38	Ash	Y	15	1	8	0.5	1	1	1	4	N		40+	C1	No work required
39	Norway Maple	Y	21	1	8	4	2	2	3	2	N	Continuous canopy with adjacent tree(s).	40+	B2	No work required
40	Norway Maple	EM	29	1	8	4	5	5	2	2	N	Continuous canopy with adjacent tree(s).	40+	B2	No work required
41	Ash	Y	15	1	8.5	0.5	1	2	2	3.5	N		40+	C1	No work required
42	Willow spp	EM	40	5+	8	4	4	3	5	1.5	N	Multi-stemmed at base. Continuous canopy with adjacent tree(s).	20+	C1	No work required

Note: Recommendations are arboriculturally based and do not relate to any development proposals at this stage. Such information would be detailed within an Arboricultural Method Statement

No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
43	Norway Maple	Y	12	1	8	1	1	1	1	3	N	Proximity to overhead line may limit life. Continuous canopy with adjacent tree(s).	40+	C1	No work required
44	Norway Maple	Y	13	1	8	1	1	1	1	1	N	Proximity to overhead line may limit life. Continuous canopy with adjacent tree(s).	40+	C1	No work required
45	Ash	Y	11	1	8	1	1	1	1	1	N	Proximity to overhead line may limit life. Continuous canopy with adjacent tree(s).	40+	C1	No work required
46	Ash	Y	12	1	8	1	1	1	1	1	N	Proximity to overhead line may limit life. Continuous canopy with adjacent tree(s).	40+	C1	No work required
47	Lime spp	Y	19	1	7	0.5	2	3	2	1	N	Stem leaning 5 degrees. Continuous canopy with adjacent tree(s).	40+	C2	No work required
48	Alder spp	Y	19	1	7	2	1	4	3	1	N	Stem leaning 5 degrees. Continuous canopy with adjacent tree(s).	40+	C2	No work required
49	Birch spp	SM	31	2-5	18	3	2	2	3	3.5	N	Codominant stems at base.	40+	B1	No work required
50	Ash	Y	15	1	13	1	3	0.5	3	3	N	Stem leaning 15 degrees. Continuous canopy with adjacent tree(s).	40+	C1	No work required
51	Birch spp	Y	10	1	5	0.5	0.5	0.5	1	1.5	N	Suppressed form.	20+	C2	No work required
52	Willow spp	M	54	5+	8	7	7	0	8	3.5	N	Multi-stemmed at base. Stem leaning 20 degrees. Continuous canopy with adjacent tree(s).	20+	C1	No work required

Note: Recommendations are arboriculturally based and do not relate to any development proposals at this stage. Such information would be detailed within an Arboricultural Method Statement

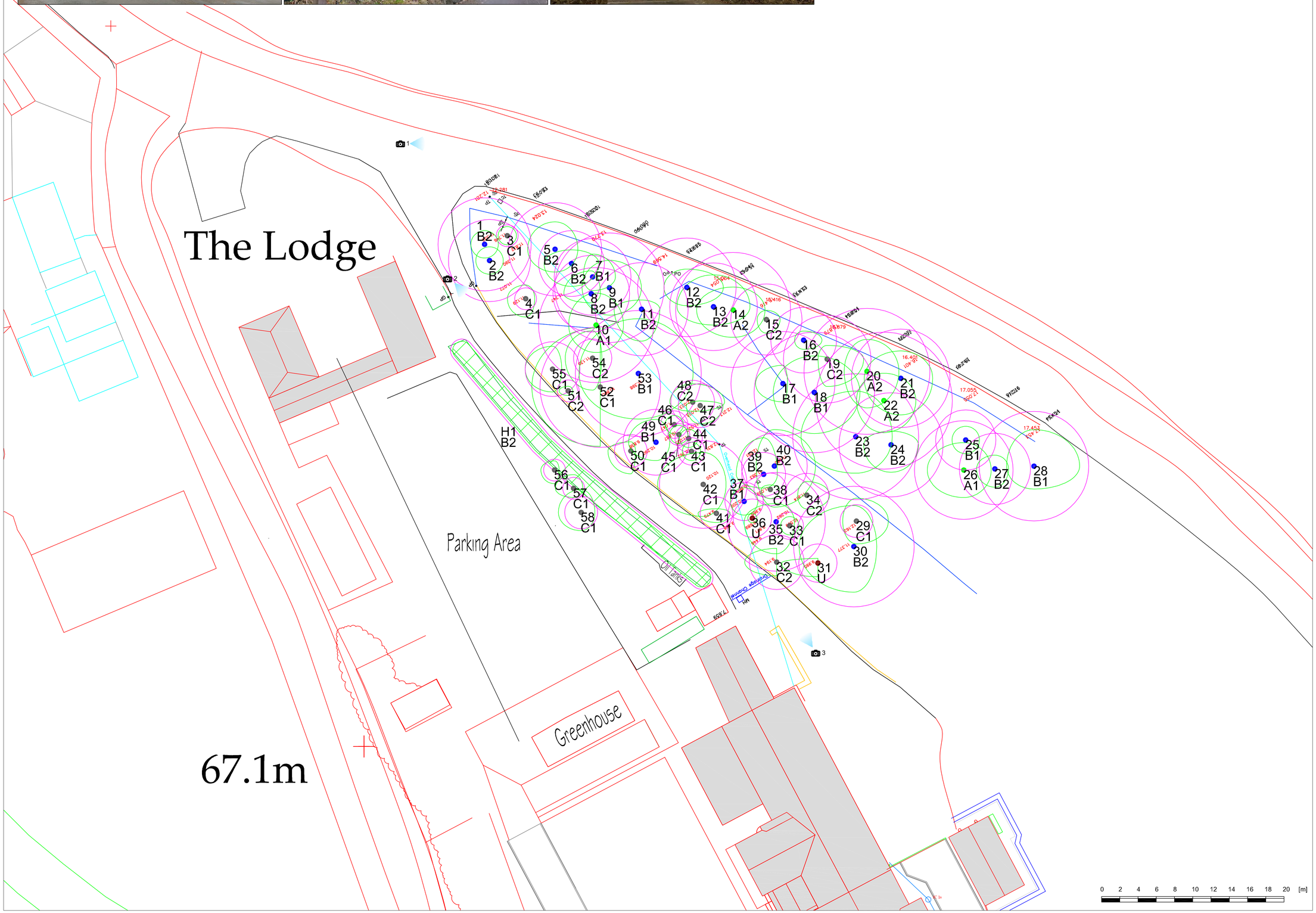
No.	Species	Age	DBH	Stems	Height	Crown Spread				CH	EstD	General Observations	EstCont	BS Cat	Recommendation
						N	S	E	W						
53	Norway Maple	EM	57	1	14	6	5	6	7	1.5	N	Codominant stems at 2m. Continuous canopy with adjacent tree(s).	40+	B1	No work required
54	Norway Maple	Y	17	1	7	3	4	1	3	0.5	N	Slightly suppressed form.	40+	C2	No work required
55	Fir spp	Y	24	1	6	3	3	1	3	1	N	Stem leaning 10 degrees. Slightly suppressed form.	40+	C1	No work required
56	Oak spp	Y	11	1	2	1	2	0.5	2	0.5	N		40+	C1	No work required
57	Oak spp	Y	11	1	2	2	1	1	2	0.5	N		40+	C1	No work required
58	Cherry spp	SM	16	1	4	3	2	2	3	0	N	Previously had codominant stems at but 1stem removed.	20+	C1	No work required

Note: Recommendations are arboriculturally based and do not relate to any development proposals at this stage. Such information would be detailed within an Arboricultural Method Statement

Hedgerow Data

Hedge Number	Dominant Species	Lesser Species	Age	Average Height	Average Depth	Historically Managed Height	Historically Managed Depth	Condition/Comments	Recommendations	EstCont	BS Cat
1	Beech		SM	2	0.5	As current height	As current depth	Well maintaned Beech hedge	No work required	40+	B1

Note: Recommendations are arboriculturally based and do not relate to any development proposals at this stage. Such information would be detailed within an Arboricultural Method Statement



elliottconsultancyltd.
arboricultural consultants

Wrens Nest, Underhill, Glaisdale
North Yorkshire YO21 2PF

Tree Position Showing Crown Extents and BS5837 Category A

Tree Position Showing Crown Extents and BS5837 Category B

Tree Position Showing Crown Extents and BS5837 Category C

Tree Position Showing Crown Extents and BS5837 Category U

Root Protection Area - to remain free from disturbance (merged where over-lapping)

Group of Trees

Hedgerow

1/G1/H1 Tree/Group/Hedgerow Number

A1/B1/ C1/U BS5837 Retention Category

Tree and Root Protection Area within Adjacent Property (position and size possibly estimated)

Sycamore
M
0.8m
15m

Species
Age-Class (M-Mature, EM-Early-Mature, SM-Semi-mature, Y-Young)
DBH
Height

Group within Adjacent Property (size and position possibly estimated)

Hedgerow within Adjacent Property (size and position possibly estimated)

1 Photo Number, Position and Aspect

APPENDIX 2

Drawing Title:	Tree Constraints Plan
Project:	St Athanasius Monastery
Drawing Number:	ARB/CP/2005/TCP
Date:	January 2019
Scale:	1:200 @ A1

68.9m

67.1m

Existing Drive (to be sealed)

New Drive

The Lodge

Line of existing car park

Parking Area

Solar panels

Air source

Path

Entrance

Greenhouse

0 2 4 6 8 10 12 14 16 18 20 [m]

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- Tree to be Removed
- Hedgerow to be Removed
- Tree Position Showing Crown Extents and BS5837 Category A
- Tree Position Showing Crown Extents and BS5837 Category B
- Tree Position Showing Crown Extents and BS5837 Category C
- Tree Position Showing Crown Extents and BS5837 Category U
- Root Protection Area - to remain free from disturbance (merged where over-lapping)
- Group of Trees
- Hedgerow
- 1/G1/H1 Tree/Group/Hedgerow Number
- A1/B1/C1/U BS5837 Retention Category
- Tree and Root Protection Area within Adjacent Property (position and size possibly estimated)
  - Species
  - Age-Class (M-Mature, EM-Early-Mature, SM-Semi-mature, Y-Young)
  - DBH
  - Height
- Group within Adjacent Property (size and position possibly estimated)
- Hedgerow within Adjacent Property (size and position possibly estimated)

APPENDIX 3

Drawing Title:	Arboricultural Impact Plan
Project:	St Athanasius Monastery
Drawing Number:	ARB/CP/2005/AIP
Date:	January 2019
Scale:	1:200 @ A1

Appendix 4 BS 5837 Tree Quality Assessment Chart

Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category 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	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see **4.5.7**.*			See Table 2
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	See Table 2
Category 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	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	See Table 2

Table excerpt from BS5837:2012

Appendix 5 Arboricultural Glossary

Abiotic Factors – Nonliving factors of the environment, including temperature & wind.

Age-class – A general classification of the tree into either - young, semi-mature, early-mature, mature, over-mature, or senescent.

Amenity Value – A general classification based on the trees contribution to local amenity. Factors such as location and visibility from public spaces, size, maturity and species are taken into account.

Apical Bud/Shoot – The apical bud, also known as the leading shoot, is responsible for shoot extension and is dominant.

Apical Dominance – A singular, leading shoot remains dominant.

Biotic factors - Living factors. For example, animals and pathogens.

Bottle Butt – Term used to describe shape of stem base, usually associated with an internal defect – refer to 'Reaction Wood' below.

Branch union/junction - The point at which a branch joins a larger stem. Can be a point of weakness, especially in certain species.

Cambium - A lateral meristem (see below) in vascular plants located just beneath the bark responsible for secondary growth, e.g. production of annual growth rings.

Canker – A clearly defined area of dead and sunken or malformed bark, caused by bacteria or fungi. Can have a bearing on structural integrity of infected limb(s) depending on size and location.

Chlorosis/Chlorotic – Abnormal yellow or yellow-green coloration of usually green leaves. Essentially a reduction of chlorophyll levels often as a result disease or nutrient deficiency.

Co-dominant stems - A growth characteristic, where two or more stems of similar size grow from the same point. Can create an inherent weakness.

Coppice - The method of managing trees by cutting the stems at between 1.0 inch and 1.0 foot from the ground level on a regular cycle, the cut stumps of the trees or shrubs are allowed to re-grow many new stems.

Crown spread - Gives distances between extreme limits of the crown and the stem, usually along the four compass points. Helps to show crown symmetry.

Crown Reduction – The removal of branch ends to reduce the extreme limits of a trees branch spread and height.

Crown Thin – The removal of selected branches within the crown to thin the internal branch structure.

D.B.H. - 'Diameter at Breast Height', an industry standard to gauge tree stem size and development. Within arboriculture, breast height is taken to be 1.5m above ground level.

Dieback - The reduction in crown vigour and extension growth progressing to death of distal parts; often associated with decline.

Epicormic/adventitious growth - New growth from dormant buds that can often form tenuous attachments. Although some species readily form such shoots, it can be an indication of stress.

Hanger – Term used to describe a branch that has become detached and is being supported by other branches. Can be a hazard to persons and property below.

Hazard Beam – After the loss of a distal part, a limb concentrates growth upwards creating adverse end weights that can render the limb susceptible to failure.

Hyphae – Fine branching tubes that make up the body (or mycelium) of a multi-cellular fungus.

Included bark – Growth characteristic usually caused when two or more stems/branches growing in close proximity 'fuse' together entrapping the bark from when the parts were separate in the middle, creating a potential structural weakness. Some trees are able to strengthen such 'weakened' unions with adaptive growth.

Meristem - The undifferentiated plant tissue from which new cells are formed, such as that at the tip of a stem or root.

Meristematic Disorder – A growth disorder caused by a disruption of the meristem (see above) from any of a number of biotic factors (see above). Manifests as growths such as 'Witches Brooms' & 'Galls'.

Mycelium – Mass of hyphae that constitutes the vegetative part of a fungus.

Necrosis/Necrotic – Death of tissues usually characterised by a blackening in colour.

Occlusion/Occluded – Normally used to describe the overgrowth of a wound. Also, immoveable foreign objects in contact with a tree part can become encased or 'occluded' by the tree as it grows incrementally.

Pathogen - An agent that causes disease, especially a living micro-organism such as a bacterium or fungus.

Pollard – The removal and subsequent regular re-removal of the crown of a tree above animal browsing height. Can be an effective method of controlling the size of trees in urban areas. This is ideally begun in the trees early stages and maintained throughout its life.

PSULE – Potential Safe Useful Life Expectancy. A general classification as to the trees life expectancy.

Reaction wood - Essentially additional wood laid down by the tree to compensate for structural defects such as a cavities.

Ring barking/Girdling – the removal of bark around the entire circumference of a stem or branch, causing the death of all distal parts.

Rhizomorphs – Dense bundles of mycelium, blackened by melanin for protection, that aid in the spread of the fungus.

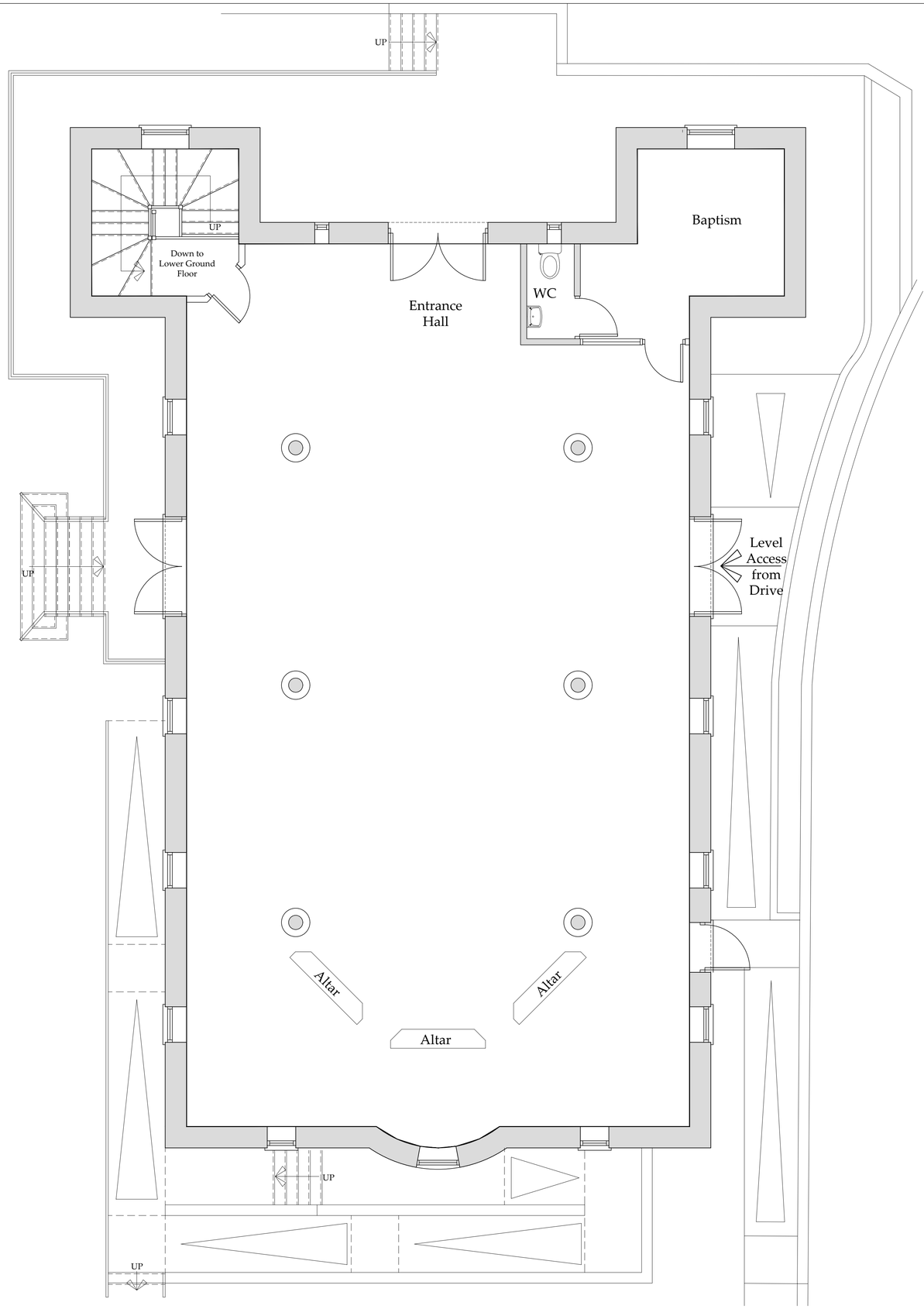
Root Protection Area – An area, usually represented as a circle, around each tree which should remain free from disturbance during a development in order to protect the roots of a tree.

Saprophyte – An organism which exists on dead plant material.

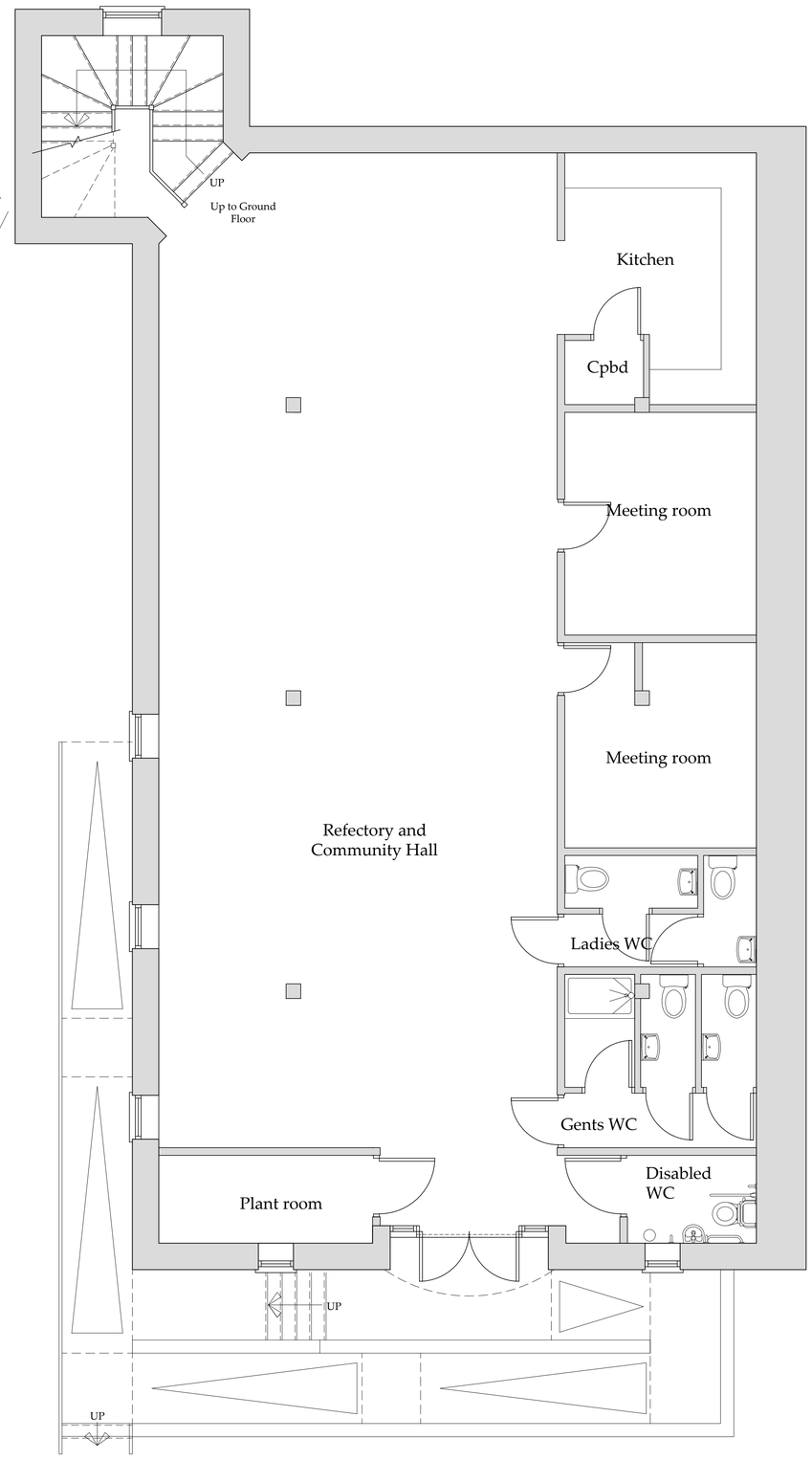
Scaffold branches - The main structural branches within the crown.

Veteran tree – Tree that, by recognised criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Vigour - A general classification, as to the present and future potential growth and development of a tree. A comment regarding the health status of the tree specific to its species.



Ground Floor Plan
Scale 1:50



Basement Plan
Scale 1:50

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Drawings for client and planning consideration only.

Planning

REV	DATE	BY	AMENDMENT
F	22/01/19	CE	Lower ground floor windows added
E	15/01/19	CE	Building moved
D	24/08/18	CE	Issued for planning
C	12/06/18	CE	Amended to suit clients
B	18/05/18	CE	Amended to suit client
A	18/12/17	CE	Issued for Approval

bhd partnership
Architecture + Engineering
Airy Hill Manor, Waterstead Lane,
Whitby, N. Yorks. YO21 1QB.

CLIENT:
Coptic Orthodox Patriarchate

PROJECT:
New church at
St Athanasius Monastery

Drawing:
Proposed Plans

DRAWING STATUS:
Preliminary

DRAWN:	CHECKED:
C Eynon	N I Duffield
SCALE @ SIZE: 1:100@ A1	DATE: 18/12/17

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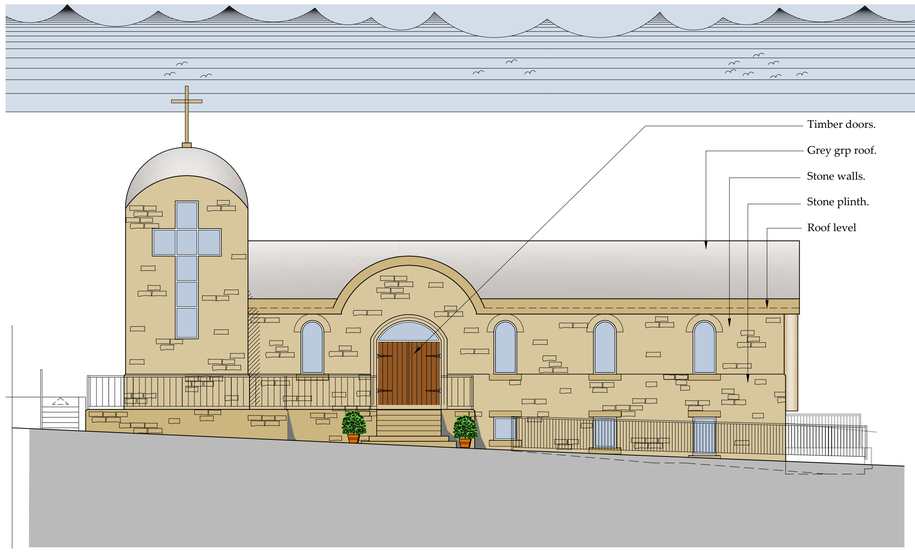
REV: F



West Elevation
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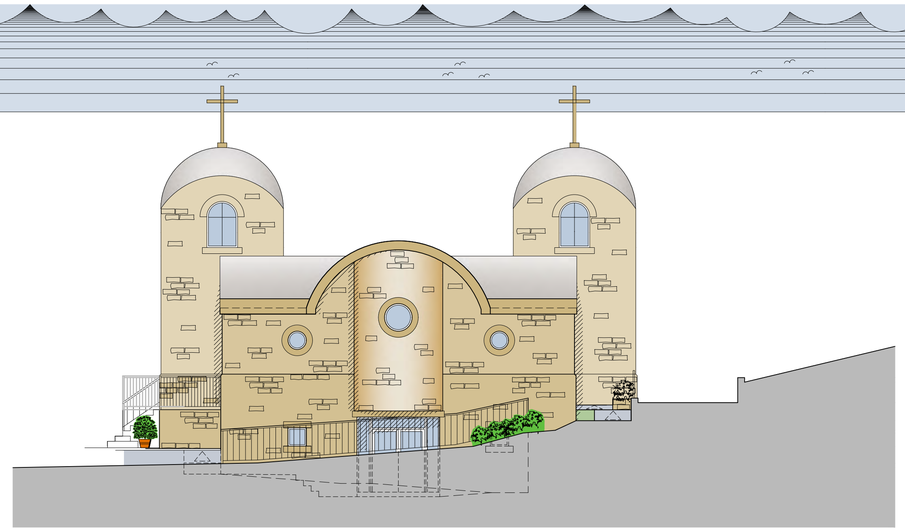

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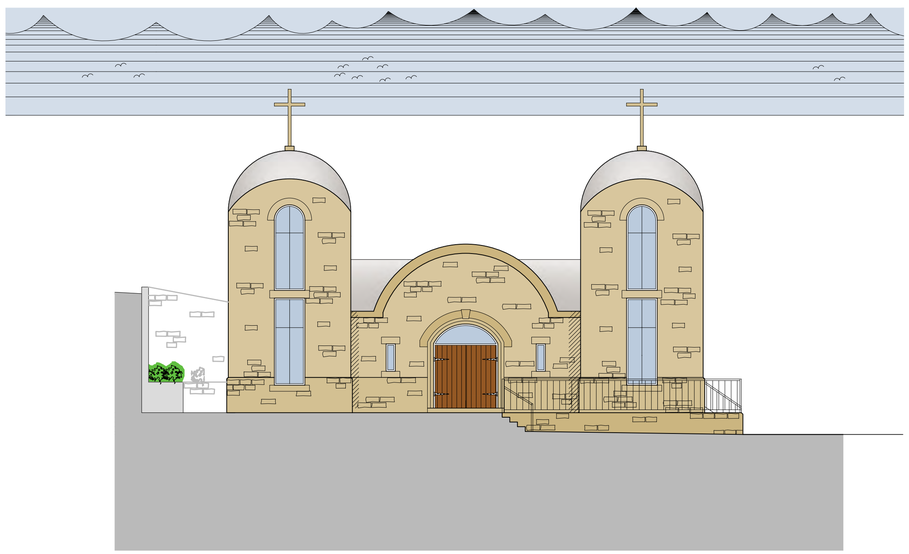

North Elevation
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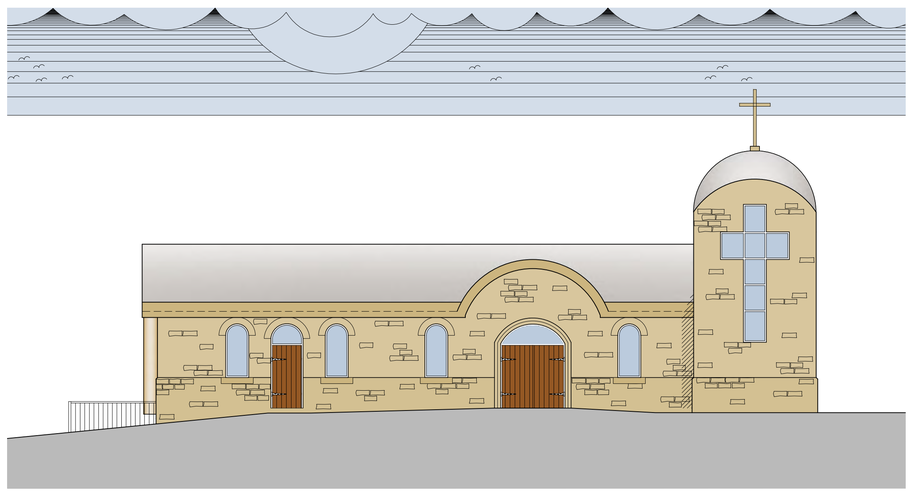

East Elevation
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Planning

REV	DATE	BY	AMENDMENT
H	29/01/19	CE	Build materials change
G	22/01/19	CE	Lower ground floor windows added
F	15/01/19	CE	Building moved
E	26/10/18	CE	Roof amended
D	24/08/18	CE	Issued for planning
C	12/06/18	CE	Amended to suit clients
B	18/05/18	CE	Amended to suit clients
A	18/12/17	CE	Issued for Approval

bhd partnership
Architecture + Engineering
Airy Hill Manor, Waterstead Lane,
Whitby, N. Yorks. YO21 1QB.

CLIENT:
Coptic Orthodox Patriarchate

PROJECT:
New church at
St Athanasius Monastery

Drawing:
Proposed Elevations

DRAWING STATUS:
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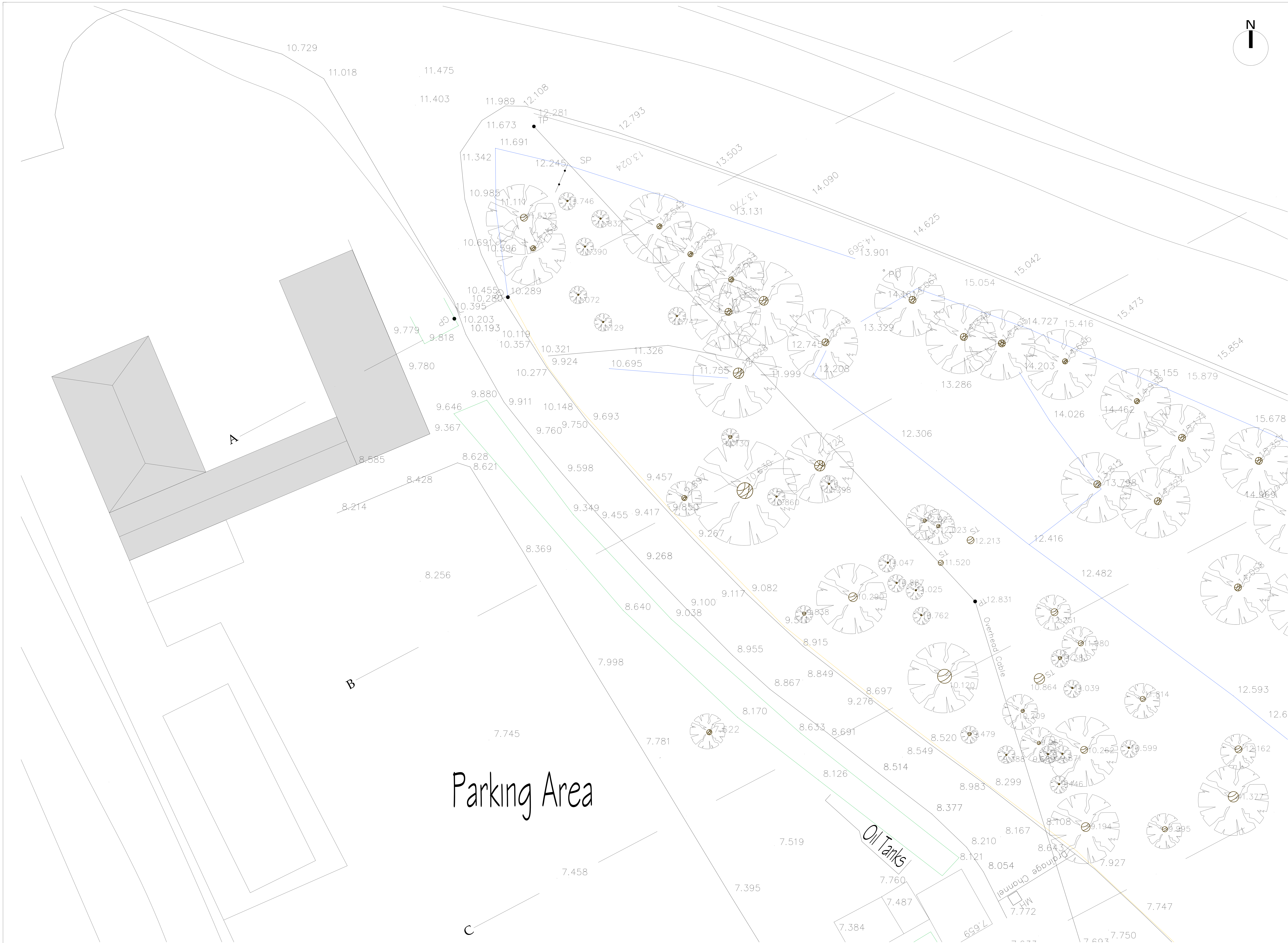

Block Plan
Scale 1:100

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Planning

REV	DATE	BY	AMENDMENT
B	07/01/19	CE	Trees added
A	21/08/18	CE	Issued for Approval

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Airy Hill Manor, Waterstead Lane,
Whitby, N. Yorks. YO21 1QB.

CLIENT: Coptic Orthodox Patriarchate

PROJECT: New church at St Athanasius Monastery

Drawing: Existing Block Plan

DRAWING STATUS: Preliminary

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Block Plan
Scale 1:100

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Planning

REV	DATE	BY	AMENDMENT
E	15/01/19	CE	Building moved
D	07/01/19	CE	Topo updated, Alt church position
C	26/10/18	CE	Notes added
B	25/09/18	CE	Extra info added
A	21/08/18	CE	Issued for Approval

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Architecture + Engineering
Airy Hill Manor, Waterstead Lane,
Whitby, N. Yorks. YO21 1QB.

CLIENT: Coptic Orthodox Patriarchate

PROJECT: New church at St Athanasius Monastery

Drawing: Proposed Block Plan

DRAWING STATUS: Preliminary

DRAWN:	CHECKED:
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SCALE @ SIZE: 1:100@ A1	DATE: 21/08/18

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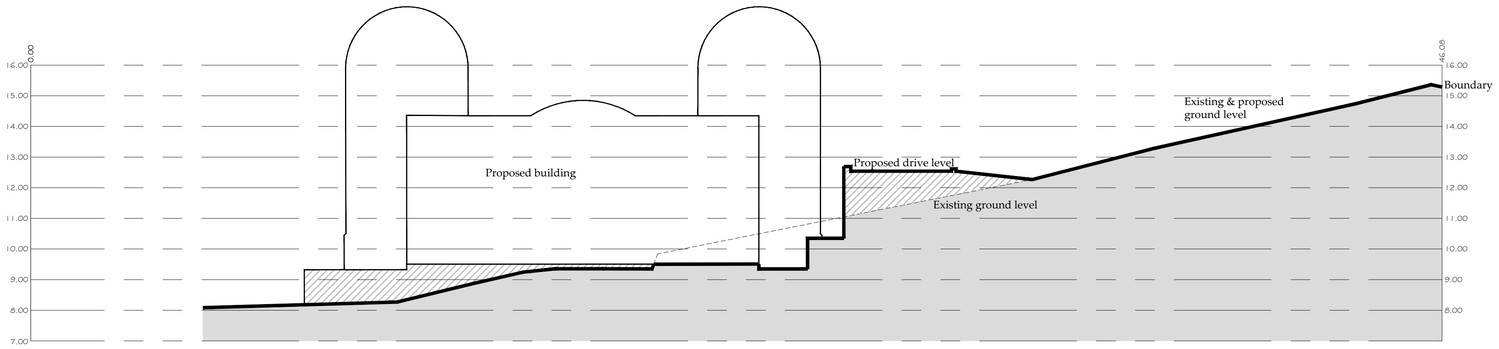

Section B-B
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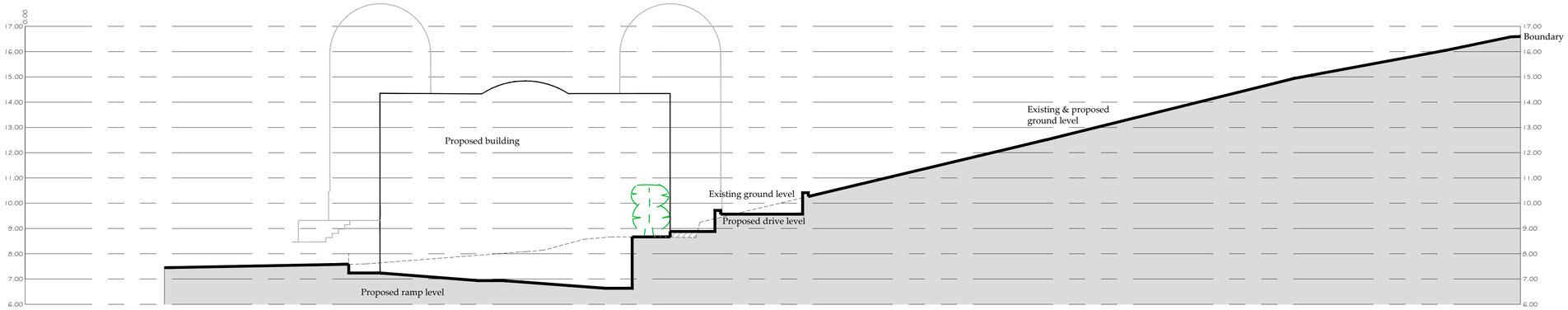

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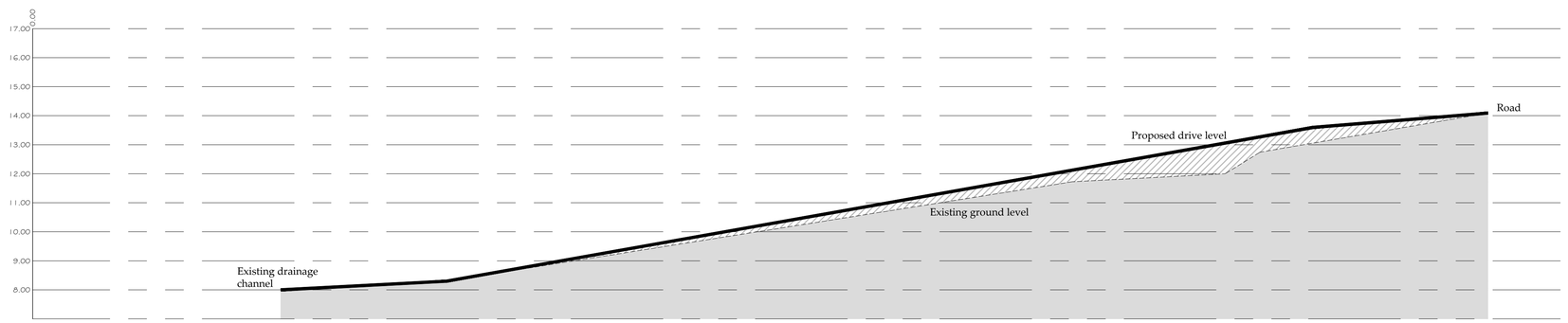

Section E-E (centre line of new drive)
Scale 1:100

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Planning

REV	DATE	BY	AMENDMENT
B	15/01/19	CE	Building moved
A	25/09/18	CE	Issued for Approval

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Whitby, N. Yorks. YO21 1QB.

CLIENT:
Coptic Orthodox Patriarchate

PROJECT:
New church at
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Drawing:
Sections
B-B, C-C
and E-E

DRAWING STATUS: Preliminary

DRAWN:	CHECKED:
C Eynon	N I Duffield
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DRAWING No: D11161-06 REV: B