Dean Brown
Contracts Director

Calvert Cottage
Carr Head Lane
Cowling
Keighley
West Yorkshire
BD22 0LD

treeplan

30/9/20 by email

BS 5837 Pre-Development Tree Works & Protection
The Orchard, Barrowford, BB9 6BN

Dear Dean

Please find attached some background to the site, arboricultural impact of the development, proposed tree works, tree protection measures through development and tree planting type and location to inform both yourself and the local planning authority (LPA). If you or the LPA need any clarification now or as the scheme proceeds, then please get in touch.

Site History

- The area relating to this document already has planning consent ref 13/16/0093P from 2016. Condition 5 of that planning consent details tree protection measures to ensure the health and longevity of the site trees. Tree protective fence and root protection specification was included in that condition
- Tree protective fence was installed, presumably at an agreed location with the LPA
- Groundworks in the form of access driveway', drainage and building foundations were excavated and installed
- The site was abandoned

Spring 2020 Development

- Pinnacle View Homes aims to re-instate the previous development and follow through to completion
- Dean Brown of Pinnacle View Homes contacted Ross Cannon of Treeplan to
    - Appraise the existing groundworks in relation to the current tree stock
    - Make recommendations on pruning and removal of trees where necessary
    - Provide an updated tree protection plan to ensure the development can be completed without detriment to the health and longevity of the retained trees
    - Provide a tree planting plan should any trees need to be removed through poor health or structural condition
- Ross Cannon met with Dean Brown to appraise the site groundworks and tree stock in January 2020
- On the 17 January 2020 Dean Brown then met with Lee Johnson of Pendle Borough Council to discuss the site history, agree tree works in principle and on supply of suitable documentation

September 2020

- Some tree work has taken place and some dwellings under construction, architect and LPA require tree related plans to be updated
- Ross Cannon of Treeplan again discussed the site with Lee Johnson of Pendle Borough Council to agree tree works and planting in principle and on supply of suitable documentation

Information Included in this Document

1. Brief appraisal of the site, groundworks taken place and tree work considerations
2. Table of recommended tree works, pruning and removal
3. Tree protection methodology
4. Recommended order of works
5. Tree Constraints Plan - current site and its trees
6. Arboricultural Impact Plan - proposed site, trees to remove labelled red
7. Tree Protection Plan - proposed site and tree protection locations
8. Tree Planting Plan - location and type of trees to be planted

1. Brief Appraisal of the Site, Groundworks Taken Place and Tree Work Considerations

Groundworks on the whole have already taken place, some variation will need to take place but essentially no further rooting area or root protection area (RPA) needs to be significantly altered. The majority of the retained trees, although inspected in winter (no leaf) appeared in good health, bar a few exceptions so it can be assumed the groundworks up to present have not been significantly detrimental.

A *BS5837 Trees in relation to design, demolition and construction* tree survey was undertaken in January 2020. This has been summarised in table 1 below.
Some trees have been recommended for removal -

- The horse chestnuts on the eastern boundary have suffered form bleeding canker (see https://www.forestresearch.gov.uk/tools-and-resources/pest-and-disease-resources/bleeding-canker-of-horse-chestnut/) and are recommended for removal and replacement
- The mature beech trees to the south east and south west could be lightly pruned to provide more clearance from the proposed dwellings. Small diameter pruning to live side branches can be undertaken on a cyclical basis without detriment to their health or longevity
- The cypress trees to the south eastern boundary are in good health, however they have reached a size where removal and replacement is considered the best option for the following reasons –
    - They suit as a boundary feature for a large garden but if retained would dominate the relatively small garden of the approved layout
    - They would cast year-round shade and be under pressure for pruning/removal due to this and apprehension in high winds from the new occupier
    - Cypress of this type are prone to structural branch failures (some seen to north already) in maturity
    - As such and in agreement with the LPA removal and replacement is proposed
- Maturing Ash saplings and early mature trees on the southern boundary are recommended for removal and replacement as they are unlikely to reach maturity due to Ash Dieback Disease (https://www.forestresearch.gov.uk/tools-and-resources/pest-and-disease-resources/ash-dieback-hymenoscyphus-fraxineus/) already present in the local area.
- Individual poor specimens that would not be appropriate in a new garden have also been recommended for removal and replacement
- Some poorly structured trees have been recommended for formative pruning
- All management recommendations subject to LPA approval, nesting bird and bat checks and where required consent of tree owner

2. Table of Recommended Tree Works, Pruning and Removal

Tree No.	Tree Type	Height (m)	Stem Diameter (mm)	Root Protection Area (Radius, m)	BS Category	Management Recommendations, subject to LPA Approval Pre work checks for Nesting Birds and Bats required Tree Ownership checks required
1.1.	Norway Maple	15	500	6.00	B	Crown lift to 6m and remove dead branches, reduce lateral growth to west from current 7m to 5m to suitable side branch
1.2.	Chestnut	12	350	4.20	U	Tag 8960, significant bleeding canker, remove tree, grind stump
1.3.	Sorbus	15	400	4.80	B	None
1.4.	Sorbus	15	400	4.80	B	Remove major dead branches
1.5.	Chestnut	13	350	4.20	U	Significant bleeding canker, remove tree, grind stump
1.6.	Norway Maple	17	500	6.00	B	Crown lift to 6m and remove dead branches, reduce lateral growth to west from current 7m to 5m to suitable side branch
1.7.	Beech	10	350	4.20	C	Crown lift to 6m to east, remove two lowest branches to west (8cm & 5cm diam.), third lowest branch to west (15cm diam.) reduce this to upright (5cm diam.) 20cm along its length, measured from main stem
1.8.	Hawthorn	8	200	2.40	C	Crown lift to 6m to east
1.9.	Norway Maple	15	700	8.40	B	Crown lift to 5m, no wound >5cm diameter, reduce lateral growth to north from current 5m to 4m, sever ivy at base
1.10.	Lime	17	750	9.00	B	Crown lift and remove epicormic growth to 5m, no wound >5cm diameter, reduce length of lowest lateral to north from current 8.5m to upright at 6m, remove dead branches >2.5cm diameter
1.11.	Oak	12	500	6.00	A	Crown lift to 2.5m, remove major dead branches
1.12.	Irish Yew	5	250	3.00	C	Sever bramble at base, trim/remove any poorly formed branches to provide a more ornamental form
1.13.	Norway Maple	7	300	3.60	B	Crown lift to 3m to site and 5m to east
1.14.	Ash Saplings	5	50	0.60	C	Remove and grind stump/grub out
1.15.	Irish Yew	5	300	3.60	C	Trim/remove any poorly formed branches to provide a more ornamental form
1.16.	Yew	6	350	4.20	C	Reduce lateral growth to west from current 6.5m to 4m
1.17.	Beech	18	700	8.40	A	Crown lift to 6m to east, reduce lateral growth to west from current 9m to 6m to suitable side branch, clear streetlight to east by 1.5m
1.18.	Beech	18	700	8.40	A	Crown lift to 7m to west (no wound >5cm diam.)

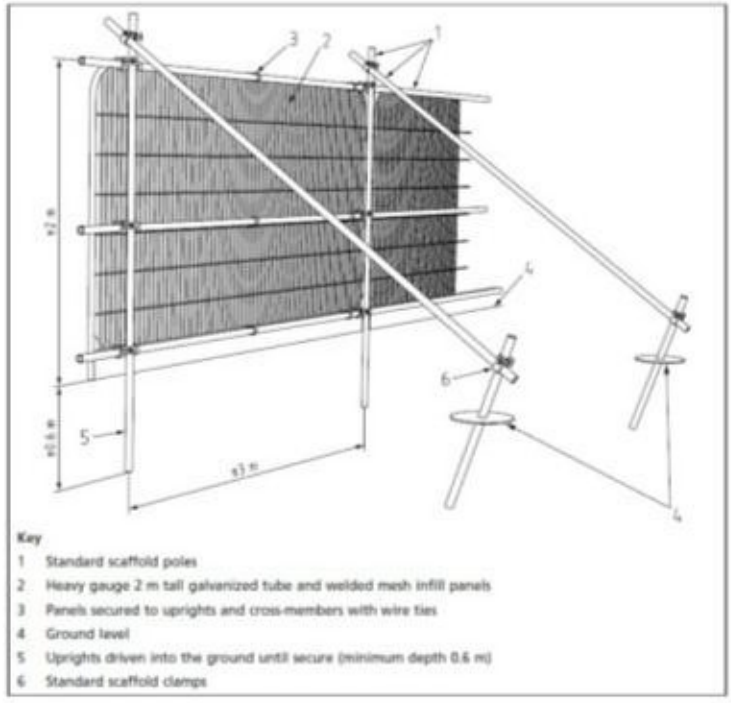
Tree No.	Tree Type	Height (m)	Stem Diameter (mm)	Root Protection Area (Radius, m)	BS Category	Management Recommendations, subject to LPA Approval Pre work checks for Nesting Birds and Bats required Tree Ownership checks required
1.19.	Yew	7	200	2.40	C	Crown lift to 1m, reduce lateral growth to west from current 6m to 4m
1.20.	Beech	18	600	7.20	A	Crown lift to 6m to east
1.21.	Irish Yew	5	350	4.20	C	Trim/remove any poorly formed lateral branches to provide a more ornamental, upright form
2.1.	Holly Hedge	2	200	2.40	C	None
2.2.	Group of Cypress & Broadleaves	17	350	4.20	C	Approx. 9 Cypress, 2 Sycamore, 2 Irish Yew, 1 Ash, 3 Holly, 1 Elder and 1 Elm Remove whole group and grind stumps
2.3.	Yew	7	300	3.60	C	Remove dead branch stubs, reduce lateral branch to north from current 4m to 3m
2.4.	Ash & Elder		150	1.80	C	Remove Ash, reduce Elder to 2m in height
2.5.	Yew	7	250	3.00	C	Prune to clear garage roof by 1m, crown lift to 1m, remove dead branches, reduce lateral growth to north from current 5m to 3m
2.6.	Irish Yew	7	300	3.60	C	Remove, grind stump
2.7.	Ash	12	300	3.60	C	Remove, grind stump
2.8.	Holly	9	250	3.00	C	Reduce to 2m in height
2.9.	Ash	12	150	1.80	C	Remove, grind stump
2.10.	Beech	8	150	1.80	C	Remove, grind stump
2.11.	Ash	10	200	2.40	C	Remove, grind stump
2.12.	Holly Hedge	2	200	2.40	C	None
2.13.	Holly	7	150	1.80	U	Remove, grind stump
2.14.	Ash	8	200	2.40	C	Remove, grind stump
2.15.	Oak	20	700	8.40	A	None
3.01.	Oak	20	750	9.00	A	Reduce lateral growth to east (between 3 & 6m height) by 2.5m to suitable side branch Reduce lateral growth to east (between 6 & 15m height) by 1m to suitable side branch
3.02.	Beech	14	450	5.40	A	None
3.03.	Beech	20	900	10.80	B	Crown lift to 4m to east, reduce lateral growth to east by 3m to suitable side branch/upright

Tree No.	Tree Type	Height (m)	Stem Diameter (mm)	Root Protection Area (Radius, m)	BS Category	Management Recommendations, subject to LPA Approval Pre work checks for Nesting Birds and Bats required Tree Ownership checks required
3.04.	Beech	20	750	9.00	C	Re-inspect tree in summer, bark necrosis and sparse canopy evident, early decline? Crown lift to 4m to east, reduce lateral growth to east by 2m to suitable side branch
3.05.	Oak	12	500	6.00	A	Crown lift to 3m to east, reduce lateral growth (strong horizontal laterals to upright) to east
3.06.	Pine	10	500	6.00	B	Sever Ivy at base
3.07.	Oak	10	600	7.20	A	Crown lift to 2m to east, reduce lateral to north east from current 8.5m to 7m to suitable side branch

3. Tree Protection Methodology

Temporary Tree Protective Fencing
Protective fencing should be erected as shown on the Tree Protection Plan. The area inside this fence line becomes the '*Construction Exclusion Zone*' (CEZ).

Fencing will prevent construction activity that could cause damage occurring close to retained trees. No plant, equipment or vehicles should operate within the protective fencing. The fencing must be robust enough to withstand impacts from machinery and plant equipment operating in the area. Paragraph 6.2.2 and Fig. 2 & 3 of BS5837 details the appropriate fencing specification. The appropriate fencing is shown below. The support poles should be inside the fence line/CEZ, the side closest to the retained/protected tree.



Key
1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

This sign (below) must be laminated and securely fixed to the outside/site side of the Tree Protective Fence line every 6m. Replace when weathered or lost.

Temporary Ground Protection
Temporary ground protection should be installed as shown on the Tree Protection Plan. This needs to be installed as one of the first operations after temporary protective fence installation to prevent rooting areas being compacted or degraded by plant/machinery movements.

Plant, machinery or vehicles must not track or drive across unprotected ground within retained trees RPA's unless the ground is protected.

The type of temporary ground protection to use must be determined by the machinery the chosen contractor will use. The contractor must use the following guidance -

BS 5837 recommends '*temporary ground protection should be capable of supporting any traffic entering the site without being distorted or causing compaction of underlying soil*'

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

b) for pedestrian-operated plant up to a gross weight of 2t, a proprietary, interlinked ground protection boards placed on top of a compression resistant layer (e.g. 150mm depth of woodchip) laid on a geotextile membrane; Non-slip wearing surface can be installed such as http://www.ground-guards.co.uk/solutions/tree-root-protection/

c) for wheeled or tracked construction traffic exceeding 2t gross weight, an alternative system (engineer approved) designed with arboricultural input to accommodate the likely loading to which it will be subjected'
This could include no-dig three-dimensional cellular confinement system.

4. Recommended Order of Works & Responsibilities

TPP - Tree Protection Plan LPA – Local Planning Authority Client – Pinnacle View Homes

Phase	Task	Responsibility	Signature and Date of Completion
1	Issue this document and plans to LPA for approval	Client	
2	Adjust if required by LPA, otherwise issue this document and TPP for temporary tree protective fencing and ground protection installation	Client	
3	Subject to LPA approval undertake tree works as per section 2 of this document	Client	
4	Temporary tree protective fencing and ground protection to remain in place throughout development. Contact this documents author with any queries	Client	
5	Undertake tree planting as per supplying nurseries recommendations	Client	
6	At the end of the development when all plant, machinery, materials removed from site request permission to remove the temporary tree protective fencing and ground protection from LPA	Client	

treeplan
Arboricultural Consultants

tree@treeplan.co.uk
www.treeplan.co.uk
07599 358 056

Site: The Orchard	1:200 @ A1
Drawing Title: Arboricultural Impact Assessment	Sept 2020

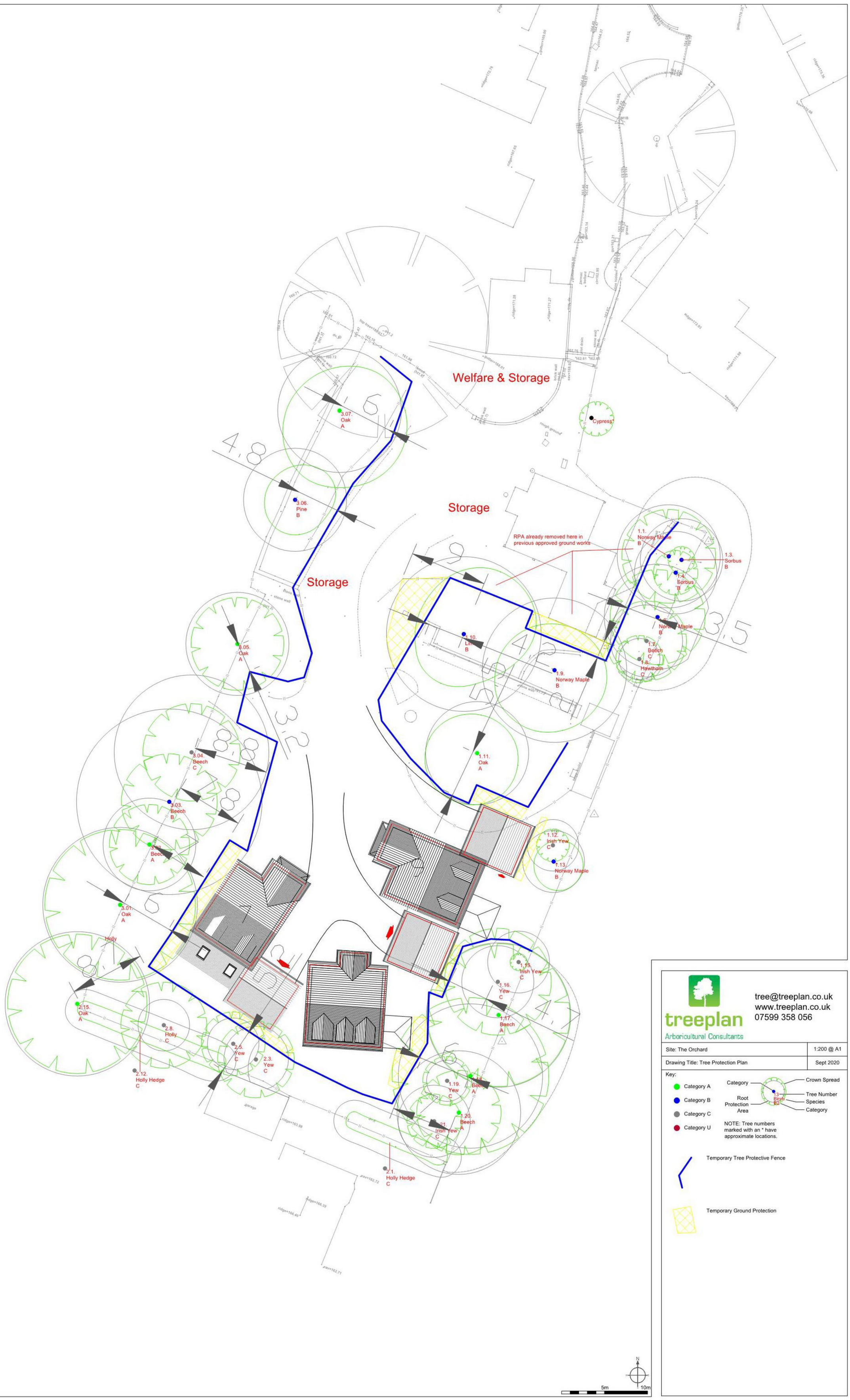
Key:

- Category A
- Category B
- Category C
- Category U

Category — Crown Spread
Root Protection Area — 13 Birch B2 — Tree Number, Species, Category

NOTE: Tree numbers marked with an * have approximate locations.

Tree to be removed and replaced



tree@treeplan.co.uk
www.treeplan.co.uk
07599 358 056

treeplan
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Site: The Orchard	1:200 @ A1
Drawing Title: Tree Protection Plan	Sept 2020

Key:

- Category A
- Category B
- Category C
- Category U

Category — Crown Spread
Root Protection Area — 13 Birch B2 — Tree Number, Species, Category

NOTE: Tree numbers marked with an * have approximate locations.

Temporary Tree Protective Fence

Temporary Ground Protection

tree@treeplan.co.uk
www.treeplan.co.uk
07599 358 056

treeplan
Arboricultural Consultants

Site: The Orchard	1:200 @ A1
Drawing Title: Tree Planting Plan	Sept 2020

Key:

- Holly 60/90cm or 2lt Pots
- Hornbeam Hedge 90cm, staggered double row at 40cm centre
- Small Leaved Lime Standard sized
- Scots Pine Standard sized/pot

All trees to be planted, maintained, supported and weeded as per supplying nurseries recommendations.

If any die or fail within the first 5 years they are to be replaced as per original