

Land at Swanwick, Alfreton

Arboricultural Assessment

Client: Peveril Homes

August 2021 – Issue 2

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A	GL1201 ARBORICULTURAL SURVEY SCHEDULE
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1 INTRODUCTION

- 1.1 Golby & Luck have been instructed by Peveril Homes to produce this report in relation to proposed access works for residential development on land at Swanwick, Alfreton. The site is subject to an extant outline planning consent, ref: AVA/2014/1154, for mixed used development comprising up to 600 dwellings, a school, playing fields, public open space, up to 55,000 sqm of employment floorspace and associated highway and drainage infrastructure. A site visit was made on the 10th November 2020 to carry out the arboricultural survey.
- 1.2 The purpose of this document is to assess the site's existing tree stock in accordance with British Standard 5837:2012 Trees in relation to Design, Demolition and Construction. The survey results define the arboricultural constraints of the site. The Arboricultural Impact Assessment assesses the associated impact of the development on these trees, with the Arboricultural Method Statement setting out detailed tree protection measures for those trees identified for retention.
- 1.3 This report should be read in conjunction with GL1201 01 to 04 Tree Constraints Plans & GL1201 05 & 06 Tree Protection Plans, see **Figures**, and the Arboricultural Survey Schedule, see **Appendix A**.

Site Description

- 1.4 The site comprises agricultural land located to the north of Swanwick extending to approximately 40ha in size. To the north and west the site is contained by the A38, with vegetation present consistently throughout, comprising tree cover outside the side boundary and an extensive linear woodland within the site. To the south, the boundary is defined by a series of hedgerows and post & wire fencing, together with a single block of semi-mature woodland central to the boundary. To the east, the site is defined by a ditch and watercourse which form the boundary of the consented first phase reserved matters for 157 dwellings, ref: AVA/2017/0963, and continues north through the site. Access points are present to the north and south of the east boundary.
- 1.5 Internally, a series of hedgerows define field boundaries in a rectilinear pattern. A former farmstead was present in the north of the site and has now been demolished. There are two small broadleaved copses standing immediately west of this. Groundcover is predominantly grassland.



- 1.6 In terms of topography, the site rises to a high point of approximately 132m AOD, central to the south boundary. Landform falls away in a broadly northerly direction to approximately 109m AOD at the northern boundary of the site, approximately 120m AOD central to the west boundary and 116m AOD central to the east boundary.

Development Proposal

- 1.7 The development proposal will comprise a series of reserved matters applications for the remaining housing on the site (up to 443 dwelling), a school, playing fields, public open space, up to 55,000 sqm of employment floorspace and associated highway and drainage infrastructure.

Statutory Protection

- 1.8 There are no Conservation Area designations or Tree Preservation Order's applicable to trees included in this Assessment.
- 1.9 Hedgerows are afforded protection by the Hedgerow Regulations 1997. They must not be removed without consent secured by a full planning permission or Hedgerow Removal Notice.
- 1.10 In addition, the Forestry Act 1967 stipulates that no more than 5m³ of timber may felled in any calendar quarter, unless approved under a Felling License or full planning permission.
- 1.11 It is advised that consent for removal of trees considered in this Assessment is sought through the planning application process.



2 DATA COLLECTION

2.1 Information has been produced on all hedgerows and trees (>75mm dbh) present within or adjacent the application site. All trees have been surveyed individually, but may in some instances be categorised in groups or woodlands. Groups are specified where overall condition, species type or quality is uniform or closely assimilates. Branch spreads and root protection areas of groups are assessed individually, but may be displayed collectively.

2.2 Life stage was assessed as follows:

Young (Y)	Recently established and/or showing juvenile form.
Semi-mature (S/M)	An established tree, but with growth to make before reaching its potential maximum size. Within the first 1/3rd of life span.
Early-mature (E/M)	A tree that is reaching its ultimate potential height, whose growth rate is slowing down but, if healthy, will still increase in stem diameter and crown spread. Within the second 1/3rd of life span.
Mature (M)	A mature specimen with limited potential for any significant increase in size, even if healthy. A tree within its final 1/3rd of life span.
Over-mature (O/M)	A senescent or moribund specimen of low vigour within its final third of life span. Possibly also containing structural defects requiring remedial work.
Veteran (V)	Specimens exhibiting 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.
Dead (D)	The tree is dead. Its age up till death is of no significance.

2.3 Measurements have been recorded for height, stem diameter, crown clearance and branch spread at the cardinal points for all trees surveyed. Height measurements above 10m are accurate within 1m. Height, stem diameter and width measurements for hedgerows are provided as an average of the overall length.

2.4 Measurements of stem diameter were taken at 1.5m from ground level where conditions allowed. The diameters for multi-stemmed trees were recorded and root protection areas (RPAs) calculated in accordance with formulae outlined in section 6 of British



Standard 5837:2012. Hedgerow root protection area radii are to be plotted from the centreline of the hedge, unless specific stem locations have been identified.

2.5 Physiological and structural condition has been recorded has one of the following categories:

- | | |
|-----------------|--|
| Good (G) | A tree or hedgerow in good health typical of the species. Needling little, if any, remedial work. Few minor defects of minimal significance such as physical damage or suppressed branches. Showing no adverse risk of failure or decline. |
| Fair (F) | A tree or hedgerow with minor but rectifiable defects or in the early stages of stress, from which it may recover. Showing minor signs of decline, including major defects in early life stages, or multiple minor defects. Remedial work possibly required. |
| Poor (P) | A tree with major structural or physiological defects such that it would be inappropriate to retain in its current or future environment. Unlikely to return to a good condition given time or remedial work. |
| Dead (D) | A tree no longer alive. |

2.6 Estimated remaining contribution (ERC) has been categorised as: 0 - 10 years, 10+ years, 20+ years or 40+ years, based upon an assessment of the tree's potential safe and useful life expectancy relative to its species type and environment.

2.7 Deadwood has been defined as the following:

- | | |
|-----------------------|---|
| Twigs | Small branch material up to 10mm diameter |
| Minor deadwood | Deadwood 10mm to 50mm diameter |
| Major deadwood | Deadwood greater than 50mm diameter |

2.8 Structural defects, pathogens, disease and other relevant observations of trees condition have been noted. These are recorded under 'Observations' in the appended schedule and are accompanied by recommendations for any responsive work.



2.9 Where remedial works have been recommended they have been assigned a priority code 1, 2 or 3:

- (1) Works to be completed immediately due to significant risk of failure in a high risk area.
- (2) Works to be completed prior to the commencement of development or at the earliest opportunity to address moderate safety risk.
- (3) Works to be completed prior to the completion of development or in the interests of good arboricultural management, where budget allows.

Tree Categorisation

2.10 Trees and hedgerows, as individuals, groups or woodlands, are assigned a category in accordance with Table 1 of BS5837:2012 (below):

BS5837:2012 Table 1 – Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)		
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	<ul style="list-style-type: none">• 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 <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see [BS5837:2012] 4.5.7.</i></p>		
	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)
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
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

Extract - BS5837:2012 Trees in relation to design, demolition and construction - Recommendations cascade chart for tree quality assessment.



Limitations

- 2.11 The survey was a visual assessment undertaken from ground level - no aerial inspection or invasive inspection techniques (e.g. drilling, excavation) were undertaken. Only binoculars, polythene mallet and a metal probe have been used to aid tree assessment. Trees and hedgerows were in full leaf when assessed and weather conditions were windy.
- 2.12 Where physical objects or vegetation obstructed inspection, measurements may have been estimated. A hash symbol # is indicated where measurements are estimated due to impeded access.
- 2.13 Specimens, such as shrubs or trees with a stem diameter less than 75mm, or those such a distance from the proposals to be of no significance, have been not been fully assessed.
- 2.14 The recommendations and conclusions in this report relate only to the conditions found on this site at the time of the site visit and inspection. Trees are living organisms the condition of which can change significantly and sometimes unpredictably in short time periods, particularly when the surrounding environment is subject to change or extreme weather conditions.
- 2.15 The findings of this report are valid for a period of twelve months only from the date of survey. Any major alteration to the site or unforeseeable events (level changes, hydrological changes, severe weather events, tree works undertaken without seeking arboricultural advice etc) may affect the trees and necessitate a re-assessment of those specimens affected. Potential hazards and levels of risk may change as the site usage alters during and following completion of the development. Unless otherwise stated, all trees should be re-inspected in 12 months from the date of survey or following any major storm event.
- 2.16 This report relates strictly to the condition of existing trees and hedges and is intended to form a guidance document for their retention and management. It is in no way intended to address subsidence or heave, a future risk thereof, or a detailed assessment of site soils. It remains the client's responsibility to ensure any building design or future tree removal is fully considered and supported with appropriate engineering advice.



3 ARBORICULTURAL SURVEY RESULTS

Trees and Tree Groups

- 3.1 There are a series of individual trees and one tree group in the south-west of the site. T005 is a hybrid poplar growing on the south-eastern edge of woodland W002. It is distinct from the wider woodland, owing to its size and maturity. It is a typical example of the species, with a tall crown comprising acutely angled lateral branching. It appears in normal physiological condition and is attributed category B. Development in proximity to the tree should be avoided due to the species high water demand and propensity to suffer storm damage.
- 3.2 At the south-west corner of the site is G006, a collection of early-mature oak. The trees have relatively squat crowns, likely attributable to their position on exposed higher landform. The canopies have developed cohesively and all display typical twig and bud density, indicating normal physiological condition. The trees are representative of the local landscape and in moderate condition with a remaining contribution of at least 40 years. They are considered category B.
- 3.3 Moving eastward along the south of the site, a more significant group of mature oak are present in the boundary hedgerow. Trees T008, T010 and T011 are of significant age and stem diameter, indicating notable arboricultural and landscape value. The trees have developed independently and have well-developed dominant canopies. They are of particular importance as landscape features in terms of their age and conservation value. T008 exhibits some basal decay and colonisation by the decay fungus *Fistulina hepatica*. Oak tolerate basal decay extremely well and this should not be considered a significant defect and a typical feature of aging oaks with significant biodiversity value. These trees are considered category A. It is advised the constraints they present are observed in full in site design and the trees retained in public open space or a wildlife corridor in single management.
- 3.4 T009, while of similar stature, has evidence of historic storm damage throughout the canopy, including a significant longitudinal split in a primary scaffold limb in the southern canopy. The tree is considered to be moderate quality, category B, with potential to increase in value over time.
- 3.5 The remaining individual trees and tree groups are concentrated in the north of the site. Trees T017 to T026 and T028 to T030 are situated beyond the site boundary and are generally semi-mature and early-mature ash, with occasional oak and goat willow. The



trees occupy the highway verge and adjoining woodland edge. They are generally small specimens of low or moderate quality. Their constraints on the site are, at this time, restricted, though allowance should be made for future growth given they are in third party ownership.

- 3.6 Groups G026 and G027 comprise two copses of lime, with occasional oak and sycamore. The trees have developed cohesively and appear in good physiological condition with no significant defects noted. Evidence of livestock accessing the ground below is visible, which will have caused soil compaction. The trees, collectively, have moderate landscape and arboricultural value, being considered category B. They should be retained with appropriate provision made to remediate ground conditions and safeguard their remaining contribution.
- 3.7 T032 is a goat willow situated on the watercourse edge in the north of the site. Its canopy is heavily asymmetric and liable to failure. The tree is unsuitable for retention and should be felled or coppiced; category U.

Hedgerows

- 3.8 The site has a framework of internal hedgerows which are generally of poor quality, exhibiting frequent gaps and sparsity and with species diversity generally restricted to hawthorn. These include H001, H003, H004, H015, H016, H033 & H034. The hedgerows are established at approximately 1.5m in height and all display evidence of recent cutting, with estimated previous heights of 2.5 – 3m. The branch structure within the hedgerows is truncated where cut and would benefit from normal laying practices. These hedgerows are all considered to be category C. It is recommended that, where retained, they are subject to enhancement works, including laying and gapping up with species-rich native planting.
- 3.9 Occupying the southern site boundary are hedgerows of better quality, generally established with more consistent, dense canopy growth and limited gaps. H007 exhibits some gaps, particularly where suppressed by tree cover, but occupies a prominent position on high ground and hosts the aforementioned category A oak trees in its western extent. Similarly, H014 has a wide sparse area in its southern extent, but is otherwise of good, consistent structure. H012 is a continuous, well-established hedgerow. These hedgerows are considered to be of moderate quality with material conservation value; category B.



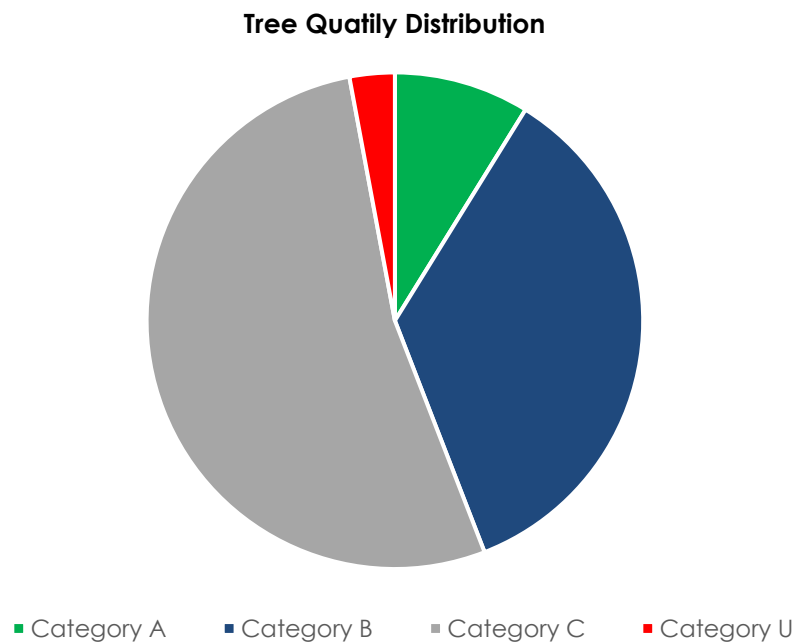
Woodlands

- 3.10 There are three woodlands on and adjoining the site. These include W002, W013 and W031.
- 3.11 W002 flanks the majority of the west boundary to the A38. It is a relatively young woodland with trees appearing to be of semi-mature to early-mature age class. Trees are planted in consistent rows and will, in the near future, require first thinnings to promote successful canopy growth. Species composition is diverse, with a wide selection of native broadleaf species and Scots pine. Livestock has been able to access the woodland freely and there is subsequent abrasion damage to stems and compacted ground, devoid of ground flora. These ground conditions appear to have impacted the development of some trees, with suppressed growth being common. The woodland edge adjoining the site is characterised largely by ash, with occasional hawthorn and alder. Overall, the woodland is in need of positive management and stock fencing to prevent cattle entering and causing damage to ground conditions. Notwithstanding, it is an extensive landscape feature with good collective value. It is considered category B.
- 3.12 W013 is a smaller woodland belt located on the southern boundary. It comprises similar species composition to W002, though trees are younger. Tree cover is weak in the middle of the belt and livestock damage is also evident. Again, while requiring management, the woodland attracts value collectively and has significant potential to develop as a landscape and biodiversity asset. It is also attributed category B.
- 3.13 W031 is located beyond the site boundary and comprises highway planting to the A38. Access to the woodland was not available at the time of survey, however, it consists of mixed broadleaf species and has notable screening value to the adjoining road. Towards its western end, the woodland thins, fading into sporadic groups of individual trees distributed throughout the highway verge. It is considered category B.
- 3.14 Suitable buffers should be afforded to retained woodland to allow for maintenance access, shading and future canopy development.



Tree Quality Distribution

3.15 The chart below displays the distribution of tree quality recorded on the site, as assessed in accordance with the cascade chart for tree quality assessment, Table 1, BS5837:2012:





4 ARBORICULTURAL IMPACT ASSESSMENT

- 4.1 This section should be read in conjunction with the Tree Protection Plan & Method Statement, see **GL1457 04**. This drawing sets out details of the proposed development and the associated tree removal and retention.

Facilitation Works - Tree removal & pruning

- 4.2 The comprehensive development of the site requires the removal of 6no individual trees and 1632 linear metres of existing hedgerow to facilitate its construction.
- 4.3 The construction of the road serving the employment area conflicts with group G027, identified as moderate quality - category B2/3, resulting in the loss of 6no limes from the group. In the context of the wider site, this loss of tree cover is not significant. The remaining group will not be affected and together with G026 will be retained as an attractive feature visible from the main highway route into the site. Furthermore, the employment scheme is accompanied by landscape proposals which makes provision for 297no new trees.
- 4.4 The 1632m of hedgerow requiring removal is a result of proposed highways, drainage, the hot food takeaway, employment buildings and residential scheme. The hedgerows are identified of being of low quality, category C, and are generally of fragmented form with frequent large gaps, livestock damage and restricted species diversity. The comprehensive development of the site will afford for **2929m** of new native hedgerow species, of which 1384m is mixed native hedgerow and 1545m single species hedgerow (hawthorn and hornbeam). In addition, **8716m²** of species rich native tree and shrub planting is proposed and a total of **926no new trees**. Collectively, this provision is considered to fully mitigate the proposed hedgerow removal.
- 4.5 It should be noted T032 is proposed to be removed as it is unsuitable for retention - category U tree. This is a consequence of the tree's declining condition, not the development proposal.

Construction within Root Protection Areas

- 4.6 There are no significant areas of construction noted within RPAs. Plot 335 is proposed on the fringe of W013. However, it will be possible to remove existing edge trees to facilitate



its construction. The trees within the wider woodland are young (typically <100mm stem diameter) and will therefore not be affected by these works.

Indirect Construction Impact

- 4.7 There is a risk that trees & hedgerows to be retained could become damaged during associated demolition and construction works if not appropriately protected during the build process. It is essential an appropriate working area is established to restrict the space over which potentially damaging activities are carried out.
- 4.8 There is adequate space to establish a suitable construction exclusion zone to all retained trees. A protection plan & method statement should be prepared, utilising protective fencing where required. This should be supplemented with guidance for site contractors on operating in proximity to retained trees and hedgerows, to ensure adverse damage is prevented.
- 4.9 These risks are typical of all development sites containing trees and should not be considered unreasonable.

Residual Impact

- 4.10 Following completion of the development, it is not anticipated that retained tree cover will be subject to any residual pressures for removal or improper maintenance. The majority of trees will be a notable distance from proposed buildings or set adjacent to sizeable open spaces or gardens. There are a three instances where trees will be retained in close proximity to buildings. These are appraised below.
- 4.11 Plot 335 is located immediately adjacent to woodland W013. While it is noted the woodland has notable growth potential, the dwelling benefits from a south facing garden that will still benefit from natural light for the majority of the day. Future minor pruning to address branches overhanging the garden would not affect the overall integrity or quality of the woodland as it matures.
- 4.12 T011, category A oak, is located to the southwest of plot 568. However, the dwelling is afforded a particularly large plot which will still benefit from nature light and space. The tree is late mature and unlikely to increase in canopy size.
- 4.13 G027 is retained in close proximity to Unit 1 of the employment scheme. The canopy of trees in the southwest of the group will sit in close proximity to the façade of the new



building. This is commonplace for commercial buildings which are typically set within landscape buffers with trees growing close to them. The building is not habitable and the trees therefore unlikely to cause any major nuisance. Infrequent minor pruning (e.g. shortening of branches up to 2m max). to allow for building maintenance would not result in any long term adverse impact to the collective value or condition of group G027.

4.14 In terms of site wide hydrology, the proposed drainage strategy works with the existing contours of the site to manage surface water. Some change in hydrology can be expected to the lower parts of the site in the north, in particular around the employment building which will require the formation of large plateaus and structures that will interrupt overland flow. While this will change localised soil hydrology, tree cover on the north site boundary is sparse and generally of semi or early mature age class that should readily adapt to changes beyond the identified root protection areas. W031 is located on higher landform and would not be affected by changes within the site boundary. Similarly, G026 and G027 are set within large open areas which afford sufficient soil volume for continuing growth and vitality. Other trees around the west and south of the site are not expected to be affected.

4.15 In terms of subsidence risk, it is the responsibility of the project engineer to ensure site soils have been assessed and foundation design is adequate to address the potential influence of retained trees and vegetation. This will be required for building regulations and therefore risk of future pressure to remove trees owing to subsidence is not likely.

Summary

4.16 No material adverse arboricultural impact has been identified as part of the development proposal. Conversely, the development proposal affords for significant landscape enhancement through widespread new tree planting provision. This is a significant benefit to the site that otherwise displays restricted arboricultural or landscape quality. This benefit should be regarded as a material consideration and relevant to the planning decision making process.



5 ARBORICULTURAL METHOD STATEMENT & TREE PROTECTION

- 5.1 This section should be read in conjunction with the Tree Protection Plan & Method Statement, see **GL1201 05-06**, and survey schedule, see **Figures**.

Facilitation Works

- 5.2 The following tree surgery operations are to be completed prior to any construction works commencing on site. They are to be carried out by an appropriately qualified and insured arboricultural contractor and in strict accordance with British Standard 3998:2010 Tree Work – Recommendations.

H001, H003, H004, H015, Remove
H0016, H033, H034

H012 Remove section of removal indicated for removal only.

G027 Fell to ground level & no trees indicated for removal in south of group only.

T032 Fell to ground level.

Tree Protection

- 5.3 Tree Protection fencing and ground protection is to be erected following the completion of facilitation tree surgery works. The alignment and format of fencing shall be in accordance with the protection plans. The method statement and guidance for tree protection measures set out on the plans must be strictly accorded to at all times.



6 CONCLUSION

- 6.1 This Assessment has been produced in relation to proposed development by Peveril Homes on land at Swanwick, Alfreton. The report has outlined an assessment of tree condition and quality on the site, highlighted constraints and categorized specimens in accordance with British Standard 5837:2012.
- 6.2 The Assessment has found that the tree and hedgerow stock on the site is generally of low (category C) to moderate quality (category B), with three high quality (category A) oak trees identified in the south east corner. It is essential these trees, together with category B groups, are integrated into site design and afforded sufficient space to safeguard their condition. In terms of woodland, it is recommended all areas are afforded suitable buffers to ensure they do not succumb to removal or pruning pressure as a consequence of shading and maintenance issues to new buildings. In terms of hedgerows, any low quality hedgerows that are retained should be subject to positive management to improve their structure and species diversity. In addition, moderate quality hedgerows should be afforded suitable buffers to safeguard their condition and landscape value.
- 6.3 An Arboricultural Impact Assessment has been completed and concludes there are no adverse arboricultural impacts that should inform the planning decision making process. The comprehensive development of the site will, however, secure important benefits through new tree planting and landscaping proposals.
- 6.4 An Arboricultural Method Statement has been prepared in relation to the proposed development, clearly defining trees to be retained and setting out a tree protection plan that will safeguard trees throughout the construction process.



Figures

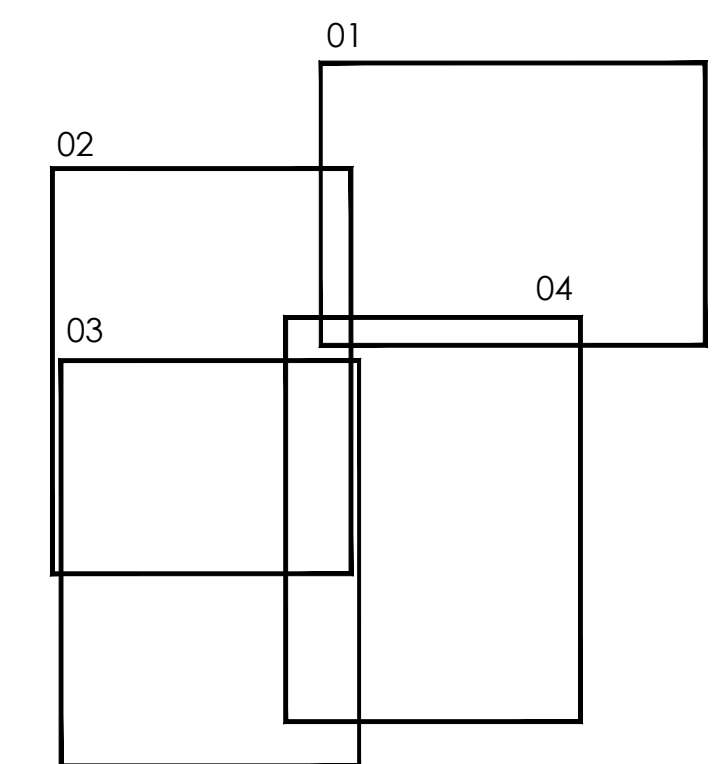


- KEY**
- Category A
 - Category B
 - Category C
 - Category U
 - Root protection area
 - Shade Pattern
 - Reference number & BS5837:2012 category
- T - Individual tree, G - Group, W - Woodland H - Hedgerow
Refer to survey schedule for full BS category details.
- 1691 C1

Drawing to be read in conjunction with GL1201 Arboricultural Survey Schedule.

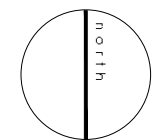
Tree stem positions as taken from topographical survey.

- Denotes tree/hedgerow not included on topographical survey. tree/hedgerow location and spread is approximate and should be subject to topographical re-survey to identify accurate position.



Location Plan

Project
Lily Street, Swanwick,
Alfreton
Drawing title
Tree Constraints Plan
Client
Peveril Homes
Scale
1:500 @ A0
Date
17/11/2020
Checked
DC
Number/Sign
GL1201 01



KEY

Category A

Category B

Category C

Category U

Root protection area

Shade Pattern

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Location Plan

Project:
Jilly Street, Swanwick,
Aldreton

Drawing No:
Tree Constraints Plan

Client:
Peveril Homes

Scale:
1:500 @ A0

Checked:
DC

Date:
17/11/2020

Number/figure:
GL1201 02

Landscape
architects
Registered
Practice

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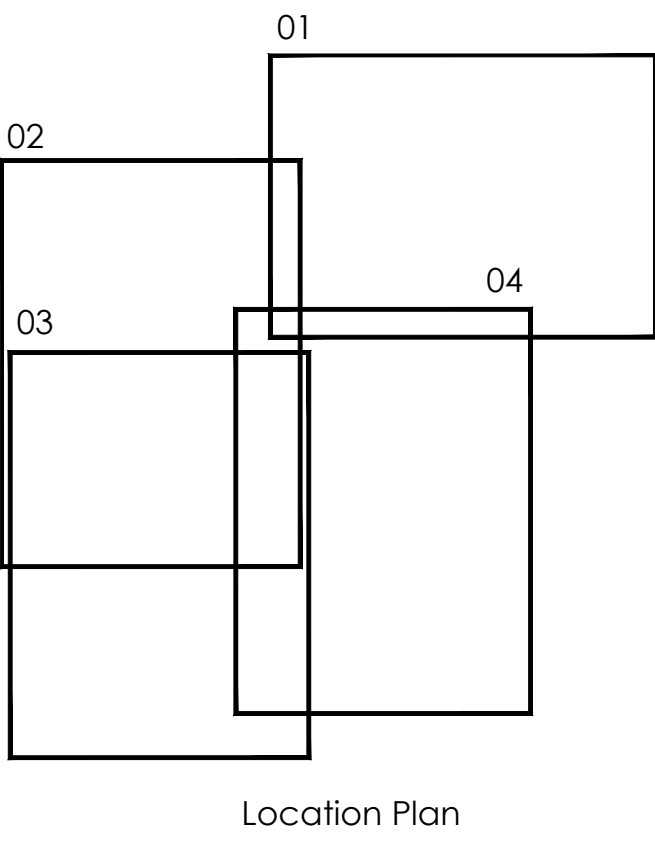
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landscape architects

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Location Plan

Project:
Jilly Street, Swanwick,
Aldreton

Drawing title:
Tree Constraints Plan

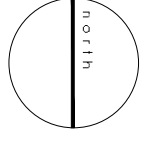
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Peveril Homes

Scale:
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Checked:
DC

Date:
17/11/2020

Number/figure:
GL1201 03



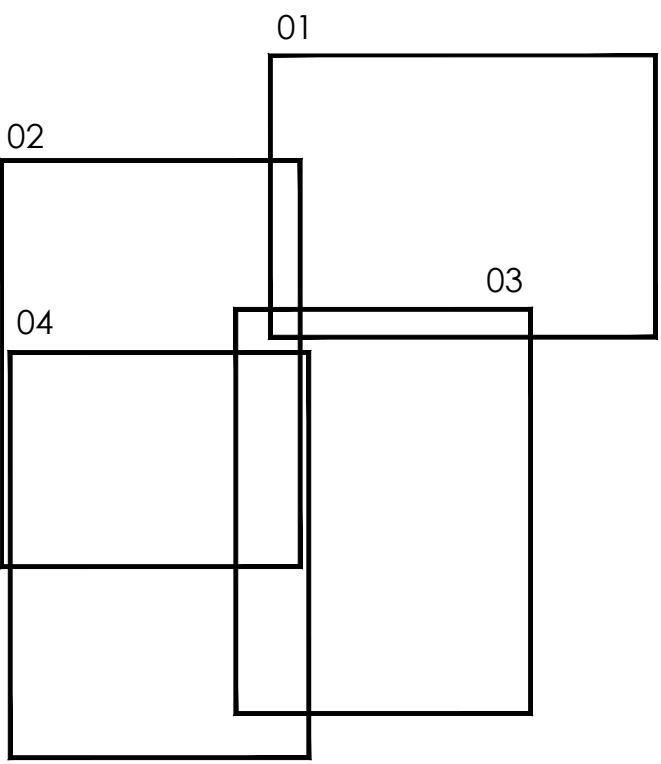
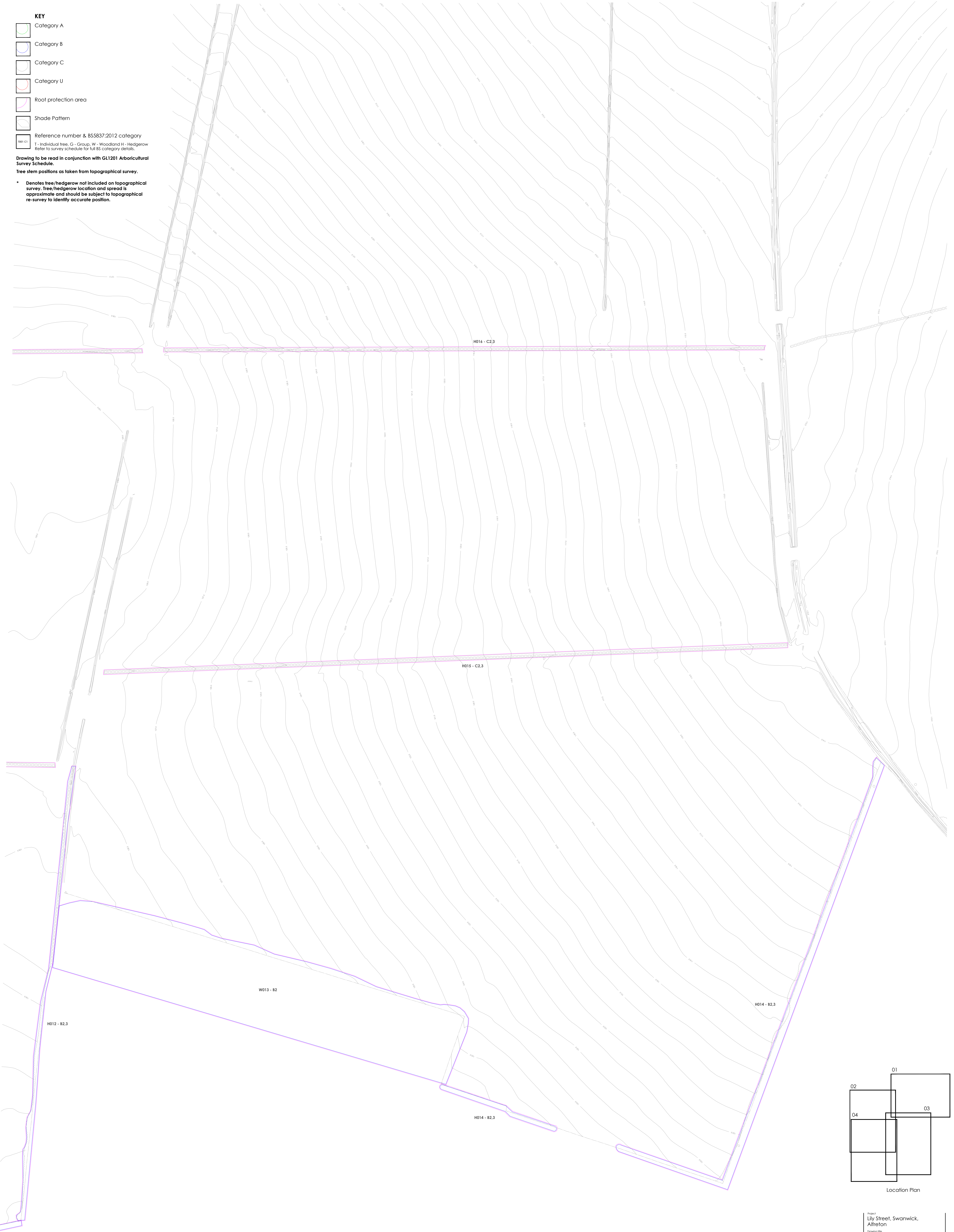
KEY

- Category A
- Category B
- Category C
- Category U
- Root protection area
- Shade Pattern
- Reference number & BS5837:2012 category
T - Individual tree, G - Group, W - Woodland H - Hedgerow
Refer to survey schedule for full BS category details.

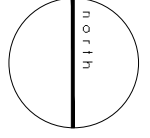
Drawing to be read in conjunction with GL1201 Arboricultural Survey Schedule.

Tree stem positions as taken from topographical survey.

- * Denotes tree/hedgerow not included on topographical survey. Tree/hedgerow location and spread is approximate and should be subject to topographical re-survey to identify accurate position.



Location Plan



All tree works and felling are to be carried out in accordance with the Arboricultural Survey and approved by the Planning Authority prior to the erection of the protective fence. All works are to be carried out by skilled operatives in accordance with BS 3998: 201 'Tree Works - Recommendations' and all relevant Health & Safety standards. Prior to commencement of works the Contractor must submit written proof of the appropriate and valid public liability insurance, along with a full working method statement and risk assessment.

Tree & landscape protection is to be constructed in accordance with the approved detail. Alignment of fencing and ground protection is to be approved by the Planning Authority and erected prior to commencement of construction works on site to establish the protection zone. At no time will the alignment of the fencing or ground protection be altered and no section of fencing taken down, unless otherwise detailed to facilitate works set out on this drawing. Any other alterations or removals must be agreed with the Planning Authority prior to being carried out.

Signage will be attached to the fencing stating 'Tree & Landscape Protection Fencing - DO NOT move or dismantle for any reason'. **All fencing and signage will be checked on a daily basis by the Site Manager and any breach of the protection zone or damage to the retained trees must be photographed, reported and rectified that day.**

The protection zone is not to be used as a working area, no materials are to be mixed or partially constructed in this area. No materials, equipment or plant machinery will be stored or used within the protection zone. No fires are to be lit within the protection zone or within 25m of existing trees. Ground levels within the protection zone are not to be altered.

All works within or around the protection zone will be carried out in accordance with BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations, a copy of which is to be included within the site information pack to be handed to the Site Manager. Where construction/service installation has been approved in the protection zone, a suitable method statement must be agreed with the Planning Authority, in line with the recommendations and details set out in BS5837:2012.

To allow access to the protection zone for approved works, panels will be removed from the fence **under the supervision of the project arboriculturalists**. Areas of the RPA not affected by the approved construction will be covered with ground protection until the protection zone or the project defence fence is reinstated. All materials will be transported into the protection zone by hand or wheelbarrow, in accordance with all relevant Health & Safety policies and CD4 Regulations. At no time will vehicles or heavy machinery will be allowed access into the protection zone. Once works are complete the protection fence will be reinstated under the supervision of the project arboriculturalists. The protection fence/ground protection may only be removed once all works on site, including the removal of site cabins, machinery etc. are complete and construction ceased.

Category A

Category B

Category C

Category U

100

Root protection area

[illegible]

Existing tree/hedgerow to be removed.

Reference number: RS5827/2012_eato

C1 T - Individual tree G - Group W - Woodland H - Habitat

Refer to survey schedule for full BS category details

☒ Tree & hedge protection fencing

Proposed alignment of tree protection fencing - All work

or around the tree protection zone are to be carried out in accordance with BS5837:2012 Trees in relation to design, demolition & construction.

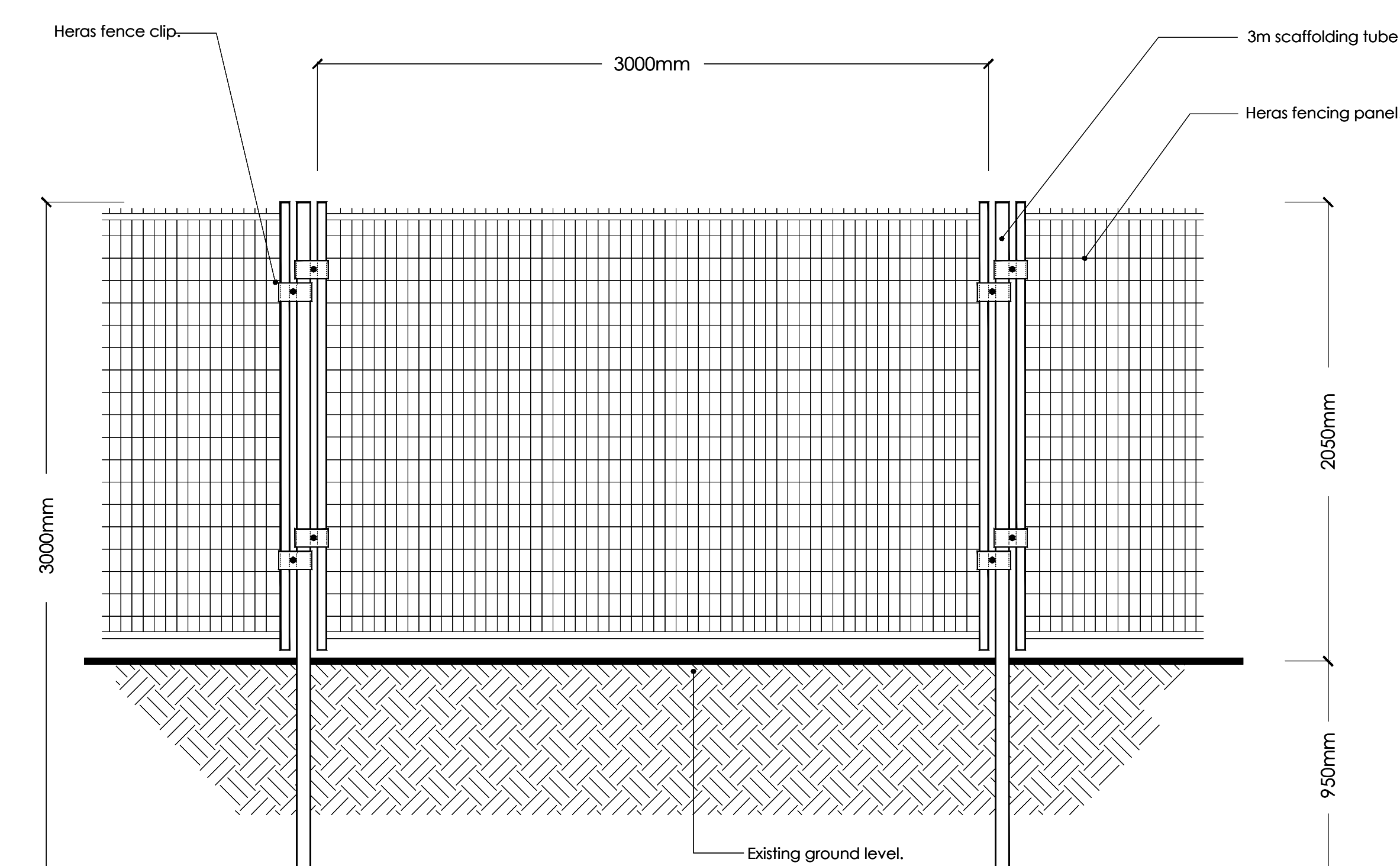
Recommendations, Tree Protective fencing to be erected in accordance with the approved detail, as

Examples may include, but are not limited to, the following measures:

Fencing must be checked daily by the site manager. A
reinstated immediately.

The removal of fencing must be agreed with the project architect/arboriculturalist and Planning Authority.

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TREE PROTECTION FENCE DETAIL (1:20)



Appendix A



Arboricultural Survey Schedule

Recommendations - Priority Code

(1) Works to be completed immediately due to significant risk of failure in a high risk area.

(2) Works to be completed prior to the commencement of development or at the earliest opportunity to address moderate safety risk.

(3) Works to be completed prior to the completion of development or in the interests of good arboricultural or silvicultural management.

= Measurement estimated

Refer to Section 2 for details of data collection and schedule key.

Ref	Species	Life Stage	Stem Diam (mm)	Crown Clearance (m)	Ht. (m)	N	E	S	W	Phys. Condition	Strut. Condition	Comments	Recommendations	Ret. Category	Rem. Contrib.	RPA
H001	Common Hawthorn (Crataegus monogyna) Elder (Sambucus nigra)	M	80 avg	0	1.5	Refer to plan.				Fair	Fair	Restricted species diversity. Frequent sparse areas or gaps. Cut at a height of 1.5m. Previous est. height 3m.	-	C1	20+ Years	Refer to plan.
W002	Common Ash (Fraxinus excelsior) Sweet Chestnut (Castanea sativa) Downy Birch (Betula pubescens) Common Alder (Alnus glutinosa) Goat Willow (Salix caprea) Common Hawthorn (Crataegus monogyna) Aspen (Populus tremula) Pedunculate Oak (Quercus robur) Sycamore (Acer pseudoplatanus) Small-leaved Lime (Tilia cordata) Scots Pine (Pinus sylvestris)	S/M	200 avg	1	15 avg	Refer to plan.						Semi mature mixed broadleaf and coniferous woodland. Edge characterised frequented by ash and alder. Occasional windblown trees. Livestock damage.	Restrict livestock access.	B2	40+ Years	Refer to plan.
H003	Elder (Sambucus nigra) Common Hawthorn (Crataegus monogyna)	M	70 avg	0	1.5	Refer to plan.				Fair	Poor	Recently topped at 1.5m. Estimated previous height 3.5m. Particularly fragmented.	-	C2,3	10+ Years	Refer to plan.



Ref	Species	Life Stage	Stem Diam (mm)	Crown Clearance (m)	Ht. (m)	N	E	S	W	Phys. Condition	Strut. Condition	Comments	Recommendations	Ret. Category	Rem. Contrib.	RPA
H004	Common Hawthorn (Crataegus monogyna) Elder (Sambucus nigra)	M	80 avg	0	1.5	Refer to plan.				Good	Fair	Recently topped at 1.5m. Estimated previous height 3m Some fragmented areas .	-	C1,2,3	20+ Years	Refer to plan.
T005	Black Hybrid Poplar (Populus x canadensis)	E/M	620	3	20	8	8.5	8	8	Good	Fair	Large specimen with typical acute branching.	-	B1		Radius: 7.4m. Area: 172 sq m.
G006	Pedunculate Oak (Quercus robur)	E/M	400 avg	1.5	13	Refer to plan.				Good	Good	Group of oak situated on site boundary. Small, cohesive canopy structure.	-	B1,2,3	40+ Years	Refer to plan.
H007	Common Hawthorn (Crataegus monogyna) Blackthorn (Prunus spinosa) Elder (Sambucus nigra) Field Maple (Acer campestre)	M	90	2	3.5	Refer to plan.				Good	Fair	Sections of outgrown hedgerow forming a fairly continuous hedgerow interspersed with individual mature trees (see T008-T011).	-	B2,3	20+ Years	Refer to plan.
T008	Pedunculate Oak (Quercus robur)	M	970	1.5	15	6	5.5	6	5.5	Good	Good	Good example of species. Minor basal cavity with desiccated Fistulina hepatica fruiting body.	-	A1,2,3	40+ Years	Radius: 11.6m. Area: 423 sq m.
T009	Pedunculate Oak (Quercus robur)	M	730	1	16	7	7	7	7	Good	Fair	Historic storm damage visible mid-crown. Longitudinal wound visible on primary scaffold stem, south crown.	-	B1	40+ Years	Radius: 8.8m. Area: 243 sq m.
T010	Pedunculate Oak (Quercus robur)	M	1450	1		8	9	8	9	Good	Good	Excellent example of species of significant age. Hung-up broken branch in lower north crown.	Remove hung-up branch.	A1,2,3	40+ Years	Radius: 15.0m. Area: 707 sq m.
T011	Pedunculate Oak (Quercus robur)	M	800	1.5	19	7.5	8	8	8	Good	Good	Good example of species.	-	A1,2,3	40+ Years	Radius: 9.6m. Area: 290 sq m.
H012	Common Hawthorn (Crataegus monogyna)	M	120	0	2.5	Refer to plan.				Good	Good	Good continuous canopy. Limited species diversity.	-	B2,3	20+ Years	Area: 383.59 sq m.



Ref	Species	Life Stage	Stem Diam (mm)	Crown Clearance (m)	Ht. (m)	N	E	S	W	Phys. Condition	Strut. Condition	Comments	Recommendations	Ref. Category	Rem. Contrib.	RPA
W013	Scots Pine (Pinus sylvestris) Downy Birch (Betula pubescens) Sycamore (Acer pseudoplatanus) Common Hawthorn (Crataegus monogyna) Sweet Chestnut (Castanea sativa) Goat Willow (Salix caprea) Small-leaved Lime (Tilia cordata) Aspen (Populus tremula) Pedunculate Oak (Quercus robur) Common Ash (Fraxinus excelsior) Common Alder (Alnus glutinosa)	S/M	200 avg	1	16	Refer to plan.				Good	Fair	Semi mature mixed broadleaf and coniferous woodland. Livestock damage. Sparse central area.	Restrict livestock access.	B2	40+ Years	Area: 5934.78 sq m.
H014	Common Hawthorn (Crataegus monogyna)		120	0	2	Refer to plan.				Good	Good	Good continuous canopy. Limited species diversity.	-	B2,3	20+ Years	Area: 796.42 sq m.
H015	Common Hawthorn (Crataegus monogyna) Elder (Sambucus nigra)	M	70 avg	0	1.5	Refer to plan.				Fair	Poor	Recently topped at 1.5m. Estimated previous height 3.5m. Particularly fragmented.	-	C2,3	10+ Years	Area: 514.3 sq m.
H016	Elder (Sambucus nigra) Common Hawthorn (Crataegus monogyna)	M	70 avg	0	1.5	Refer to plan.				Fair	Poor	Recently topped at 1.5m. Estimated previous height 3.5m. Particularly fragmented.	-	C2,3	10+ Years	Area: 384.88 sq m.
T017	Common Ash (Fraxinus excelsior)	S/M	#200	2	10	2.5	2.5	2.5	2.5	Good	Good	Small, roadside tree.	-	C1	20+ Years	Radius: 2.4m. Area: 18 sq m.
T018	Pedunculate Oak (Quercus robur)	Y	#80	2	4	1	1	1	1	Good	Fair	Small, roadside tree.	-	C1	40+ Years	Radius: 1.0m. Area: 3 sq m.
T019	Common Ash (Fraxinus excelsior)	S/M	#170	2	6	2	2	2	2	Good	Fair	Small, roadside tree.	-	C1	10+ Years	Radius: 2.0m. Area: 13 sq m.



Ref	Species	Life Stage	Stem Diam (mm)	Crown Clearance (m)	Ht. (m)	N	E	S	W	Phys. Condition	Strut. Condition	Comments	Recommendations	Ref. Category	Rem. Contrib.	RPA
T020	Goat Willow (Salix caprea)	S/M	#200 #300	2	6	4.5	4.5	4.5	4.5	Good	Poor	Poor, multi-stemmed form.	-	C1	10+ Years	Radius: 4.3m. Area: 58 sq m.
T021	Goat Willow (Salix caprea)	S/M	#150	2	5	3	3	3	3	Good	Poor	Poor, multi-stemmed form.	-	C1	10+ Years	Radius: 2.5m. Area: 20 sq m.
T024	Pedunculate Oak (Quercus robur)	S/M	#250	1.5	8	2	5	2	2	Good	Poor	Assymetric form.	-	C1	40+ Years	Radius: 3.0m. Area: 28 sq m.
T022	Pedunculate Oak (Quercus robur)	S/M	#250	1	5	3	3	3	3	Good	Good	Small, roadside tree.	-	C1	40+ Years	Radius: 4.2m. Area: 55 sq m.
T023	Pedunculate Oak (Quercus robur)	S/M	#250	1.5	8	2	5	2	2	Good	Poor	Assymetric form.	-	C1	40+ Years	Radius: 3.0m. Area: 28 sq m.
T025	Pedunculate Oak (Quercus robur)	S/M	#220	1.5	8	2	4	3	2	Good	Poor	Assymetric form.	-	C1	40+ Years	Radius: 2.6m. Area: 21 sq m.
G026	Sycamore (Acer pseudoplatanus) Lime (Tilia sp.)	E/M	500 avg	2	18	Refer to plan.				Good	Good	Group containing predominantly lime. Minor livestock damage. Good collective value.	-	B1,2	40+ Years	Refer to plan.
G027	Lime (Tilia sp.) Sycamore (Acer pseudoplatanus) Oak (Quercus sp.)	E/M	500 avg	2	18	Refer to plan.				Good	Good	Group containing predominantly lime. Minor livestock damage. Good collective value.	-	B1,2	40+ Years	Refer to plan.
T028	Pedunculate Oak (Quercus robur)	S/M	#350	1.5	9	5	5	5	3	Good	Fair	Woodland edge tree.	-	B1	40+ Years	Radius: 4.2m. Area: 55 sq m.



Ref	Species	Life Stage	Stem Diam (mm)	Crown Clearance (m)	Ht. (m)	N	E	S	W	Phys. Condition	Strut. Condition	Comments	Recommendations	Ret. Category	Rem. Contrib.	RPA
T029	Common Ash (Fraxinus excelsior)	S/M	#250	2	10	2.5	2.5	2.5	2.5	Good	Good	Woodland edge tree.	-	C1	20+ Years	Radius: 3.0m. Area: 28 sq m.
T030	Common Ash (Fraxinus excelsior)	S/M	290	2	11	3	3	3	3	Good	Fair	Woodland edge tree.	-	C1	20+ Years	Radius: 3.5m. Area: 38 sq m.
W031	Mixed species.	E/M	#200 avg	0	10 avg	Refer to plan.				Good	Fair	Off-site woodland belt on highway embankment. Screening value. Scrubby margin to site boundary.	-	B2	20+ Years	Refer to plan.
T032	Goat Willow (Salix caprea)	M	#350	2	10	5	5	2	8	Good	Poor	Heavily suppressed and asymmetric tree.	Coppice or fell (2)	U	<10 Years	None - due to Retention Category of U.
H033	Common Hawthorn (Crataegus monogyna)	E/M	80 avg	0	1.5	Refer to plan.				Fair	Poor	Recently topped at 1.5m. Estimated previous height 3m. Particularly fragmented.	-	C1,2	20+ Years	Refer to plan.
H034	Common Hawthorn (Crataegus monogyna)	E/M	80 avg	0	1.5	Refer to plan.				Fair	Poor	Recently topped at 1.5m. Estimated previous height 3m. Particularly fragmented.	-	C1,2	20+ Years	Refer to plan.



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