# ARBORICULTURAL IMPACT ASSESSMENT

Llaniltud Faerdref

School

October 2021

Barton Hyett Associates

Arboricultural Consultants

In association with

CSA environmental

| Summary table | | |
|---|---|---|
| **Site Name:** | Llaniltud Faerdref Primary School | |
| **Project reference:** | 4371 | |
| **Site Address:** | St. Illtyds Rd, Church Village, Pontypridd | |
| **Nearest Postcode:** | CF38 1DB | |
| **Central Grid reference:** | ST 08626 86048 | |
| **Local Planning Authority:** | Rhondda Cynon Taf County Borough Council | |
| **Relevant planning policies:** | Adopted LDP - Area Wide Policies: AW8 - Protection & Enhancement of the Natural Environment, AW10 - Environmental Protection & Public Health | |
| **Statutory Controls:** | **Tree Preservation Order** | **Conservation Area** |
| | None | None |
| **Soil Type:** (Source: BGS online soils map © NERC 2021) | **Superficial/Drift** | **Bedrock** |
| | Till, devensian - diamicton | Hughes member - sandstone |
| **Topographical Survey:** | 4436-0819-01 Revison A, dated: 20/08/2019 | |
| **Notes:** | Ancient semi-natural woodland (G3) on adjacent site. | |
| **Report author:** | David Holmes, *FdSc, MArborA* | |
| **Checked by:** | Paul Barton *MSc, BSc (Hons), MArborA, RCArborA* | |
| **Date of issue:** | 15th October 2021 | |

Arboricultural Association Professional Member

PR01027

Institute of Chartered Foresters registered

Barton Hyett Arboricultural Consultants

REPORT CONTENTS:

## 1. INSTRUCTION

1.1. I am David Holmes, an arboriculturist with 13 years of experience and a professional member of the Arboricultural Association.

1.2. Barton Hyett Associates Ltd have been instructed by CSA on behalf of HSP to survey trees located at Llaniltud Faerdref Primary School in Pontypridd ('the site') in accordance with the recommendations of British Standard 5837:2012 'Trees in relation to design, demolition and construction - recommendations'.

1.3. The scope of the instruction was to inspect trees relevant to a planning application at the site and to provide written advice on how they inform feasibility and design options for the site. The instruction also required an assessment of the potential impact (the arboricultural impact assessment) of the proposed development on the site's arboricultural resource to be undertaken.

## 2. SITE DESCRIPTION

2.1. The site is located centrally within Church Village, South Wales and consists of the single-storey school building, surrounded by hard-standing with associated access and parking, and two grassed playing fields to the east and west of the main building.

2.2. Church Village is approximately 3 miles south-east of Pontypridd and 10 miles north-west of Cardiff.

2.3. The site covers approximately 2.2 hectares. The site boundaries are enclosed to the east, south and west by ring-wire fencing with an area of mature woodland to the north of the site. The surrounding area is made up of residential properties, a multi-use sports pitch, car-parking and several commercial properties.

2.4. The mature woodland north of the site contains a watercourse named Nant yr Arian. The B4595 / Main Road runs east-west just south of the site.

2.5. The site is relatively flat, sloping gently from 109m above mean sea level in the west to 102m in the east.

2.6. Vehicular access into the site is facilitated by a single-track roadway from St. Illyds Road, with pedestrian access provided by a path running down to Main Road. A service access point for mowing operations is provided in the upper north-east corner of the site. This opens onto a small service road where additional parking is provided.

## 3. TREE SURVEY FINDINGS

3.1. A total of 12 trees and 10 groups of trees were surveyed. These are summarised in terms of their quality in accordance with the recommendations of BS5837 below, and shown in more detail on the Tree Survey and Constraints Plan (Section 2) and within the Tree Survey Schedule (Section 3).

| | Total | A - High quality trees whose retention is most desirable. | B - Moderate quality trees whose retention is desirable. | C - Low quality trees which could be retained but should not significantly constrain the proposal. | U - Very poor quality trees that should be removed unless they have high conservation value. |
|---|---|---|---|---|---|
| **Trees** | **12** | - | 5 | 7 | - |
| **Groups** | **10** | 1 | 4 | 5 | - |
| **Total** | **22** | **1** | **9** | **12** | **-** |

*Table 1: Summary of arboricultural features of each BS5837 quality category*

## 4. KEY ARBORICULTURAL FEATURES

4.1. To the north of the site group G3, which is on adjoining land, provides an interesting visual amenity and local wildlife habitat. This woodland is designated ancient semi-natural woodland (ASNW).

4.2. Across the site Corsican pine (T1), English oak (T2), and pines (G2) are the most prominent trees.

## 5. DEVELOPMENT PROPOSAL

5.1. The development proposal is to construct a new school building to the south-east of the existing building. The existing school will then be demolished and the surrounding site reconfigured. The proposed site layout is shown on the proposed site plan entitled 'Landscape Illustrative Masterplan', drawing No: RH0301-ALA-00-XX-DR-L-00005 S3 Rev. P04, dated 25-05-2021 (as amended and submitted).

## 6. IMPACT ASSESSMENT

6.1. A total of 2 individual trees, 3 groups and part of 1 group of trees are proposed to be removed. These removals are summarised by quality category in the table below and shown on the Tree Retention and Removal Plan in Section 3.

| | Total | A - High quality trees whose retention is most desirable. | B - Moderate quality trees whose retention is desirable. | C - Low quality trees which could be retained but should not significantly constrain the proposal. | U - Very poor quality trees that should be removed unless they have high conservation value. |
|---|---|---|---|---|---|
| **Trees** | **2** | - | **T10** | **T11** | - |
| **Groups** | **4** | - | **G6 (partial)** | **G4, G5 (partial), G9** | - |
| **Total** | **6** | - | **2** | **4** | - |

*Table 2: summary of proposed removals of each BS5837 quality category*

6.2. The key arboricultural constraint to consider is G3 (ASNW) on the adjacent site to the north. Following the standing advice from the Forestry Commission and Natural England, a 15-metre buffer zone should be applied around the woodland (see Section 5). Whilst this policy is not directly applicable to Wales, following the guidance would ensure the longevity of G3 with the added benefit that it would ensure there is sufficient distance from a potential proposal. Under BS5837, the calculated RPA for G3 is 7.2m. Practical demonstrations have proven this method of calculation is insufficient where mature veteran woodlands are concerned since significant roots are consistently found beyond the calculated RPA.

6.3. The service access at the northeast of the site from the Parish Hall car park could be considered a convenient point for construction access and egress. However, the woodland G3 would require extensive facilitative pruning along with temporary ground protection to facilitate this. As the perimeter fence along the east boundary may be replaced, it is strongly recommended that the construction access is planned to allow a 15m buffer to the woodland to prevent unnecessary soil compaction and pruning.

6.4. The proposed removal of the low-quality trees T11, G4, G5 and G9 is acceptable since these trees are category C and should not constrain a development. The trees T11, G4 and the south-eastern tip of G5 are within the proposed layout change, making retention not feasible. The group G9 is a self-seeded thicket and mid to long-term retention of this group would be ill-advised.

6.5. The proposed removal of T10 and the removal of a part of G6 (to the south of the group) is unavoidable. However, these are moderate quality trees and can be replaced through mitigation planting as part of a proposal. The tree T10 is within the proposed multi-use games area (MUGA) and retention is not feasible. The bulk of G6 is to be retained, however, a small section to the south of the group is proposed for removal to facilitate a change in the layout of the playing fields.

6.6. A cycle store, parking space and block paving are proposed within the root protection area (RPA) of T1 and a ground source heat pump and refuse bin store are proposed within the RPA of T2 along with parking spaces within the RPA of T12. The use of a cellular confinement system with a site-specific engineer-lead design is advised to install the hard-standing within the RPA in order to minimise the impact upon these retained trees.

6.7. The trees T8, T9 and G10 are adjacent to the existing vehicular entrance which is to be retained as part of the proposal. These trees along with T4, T5, T6, T7, G7 and G8 can be successfully retained with the use of temporary protective fencing.

6.8. The groups G1 and G2 can be retained and have sufficient clearance from the fence-line that if the fence were to be replaced, this would remain feasible. The tree T3 is very close to the fence-line, with parts of the foliage passing through the fence. If the fencing were to be replaced, T3 would not sustain the amount of pruning required to clear the fence and given the categorisation of the tree as C, removal would be recommended.

6.9. During the demolition phase, it is strongly advised that the 'top-down, pull back' method of demolition is used where masonry is toppled inwards of the building footprint. The foliage of the retained trees should be rinsed off at the end of each working day to prevent excessive dust build-up.

6.10. The most likely requirement for facilitation pruning would be to crown lift trees above the ground levels in order to allow safe working. Where required, the tree work should be carried out to comply with BS 3998:2010 to ensure the longevity of the retained trees.

6.11. Service runs should be designed to not enter the RPAs of retained trees. An assessment of the site layout indicates this will be possible. Should services need to be installed near, or within, RPAs the project arboriculturist should be consulted and an appropriate installation method statement prepared.

6.12. Ground levels should be retained within the RPAs of retained trees. Existing hard-standing should be retained as long as possible to provide adequate ground protection. Where existing hard-standing routes are to be retained and re-surfaced, only the wearing surface should be replaced and the sub-base should not be disturbed.

6.13. The proposed building foundations would not incur into the RPAs of retained trees and therefore no specialist construction techniques need to be used.

6.14. The proposal is feasible from an arboricultural perspective, and if carefully implemented according to an approved Arboricultural Method Statement there would be no, or only a low, potential negative impact on the retained trees. A combined draft Tree Retention and Removal and Tree Protection Plan is included in Section 3.

6.15. New trees are shown indicatively on the proposed plans and there is clearly sufficient space to accommodate planting to compensate for those trees lost to facilitate the development. The planting of new hedges in place of fences will enhance the development and increase biodiversity.

## 7. HEADS OF TERMS FOR AN ARBORICULTURAL METHOD STATEMENT (AMS)

7.1. BS5837:2012 (Figure 1) recommends that detailed/technical design of tree protection and arboricultural methodologies should be resolved and finalised following on from the approval of the feasibility of a scheme by the Local Planning Authority.

7.2. Annex B and Table B.1 of BS5837:2012, an informative, advises that arboricultural method statement heads of terms are a sufficient level of information in order to deliver tree-related information into the planning system. The table also advises that a detailed Arboricultural Method Statement might reasonably be required as a 'reserved matter' or planning condition.

7.3. In relation to the site, it is anticipated that arboricultural working methods are likely to be quite straightforward. A brief summary of the principles of tree protection on development sites is included in Section 7. A draft, 'heads of terms' for an Arboricultural Method Statement is set out below:

- Project arboriculturist – schedule of monitoring and supervision to be agreed with the applicant and LPA

- Pre commencement site meeting - project arboriculturist to brief the main contractor on tree protection requirements and ensure copies of the tree protection plan have been distributed
- Tree removals and facilitation pruning - as per the approved tree retention/removal plans
- Erection of tree protection barriers and temporary ground protection as may be required - as per the approved Tree Protection plan
- Main construction phase - all tree protection barriers to remain in place and intact at all times
- Removal of tree protection barriers - only to occur once all construction and demolition have been completed and signed off by the project arboriculturist
- Final landscaping including tree planting.

## 8. RECOMMENDATION AND SUMMARY

8.1. Subject to the implementation of the advice contained within this report the proposed development is acceptable from an arboricultural perspective. The loss of trees can be readily mitigated and the retained trees can be adequately protected during construction activities to sustain their health and longevity.

8.2. The feasibility and specification of a no-dig cellular confinement system construction for the proposed hard-standing within the RPAs of T1, T2 and T12 should be the subject of further technical design.

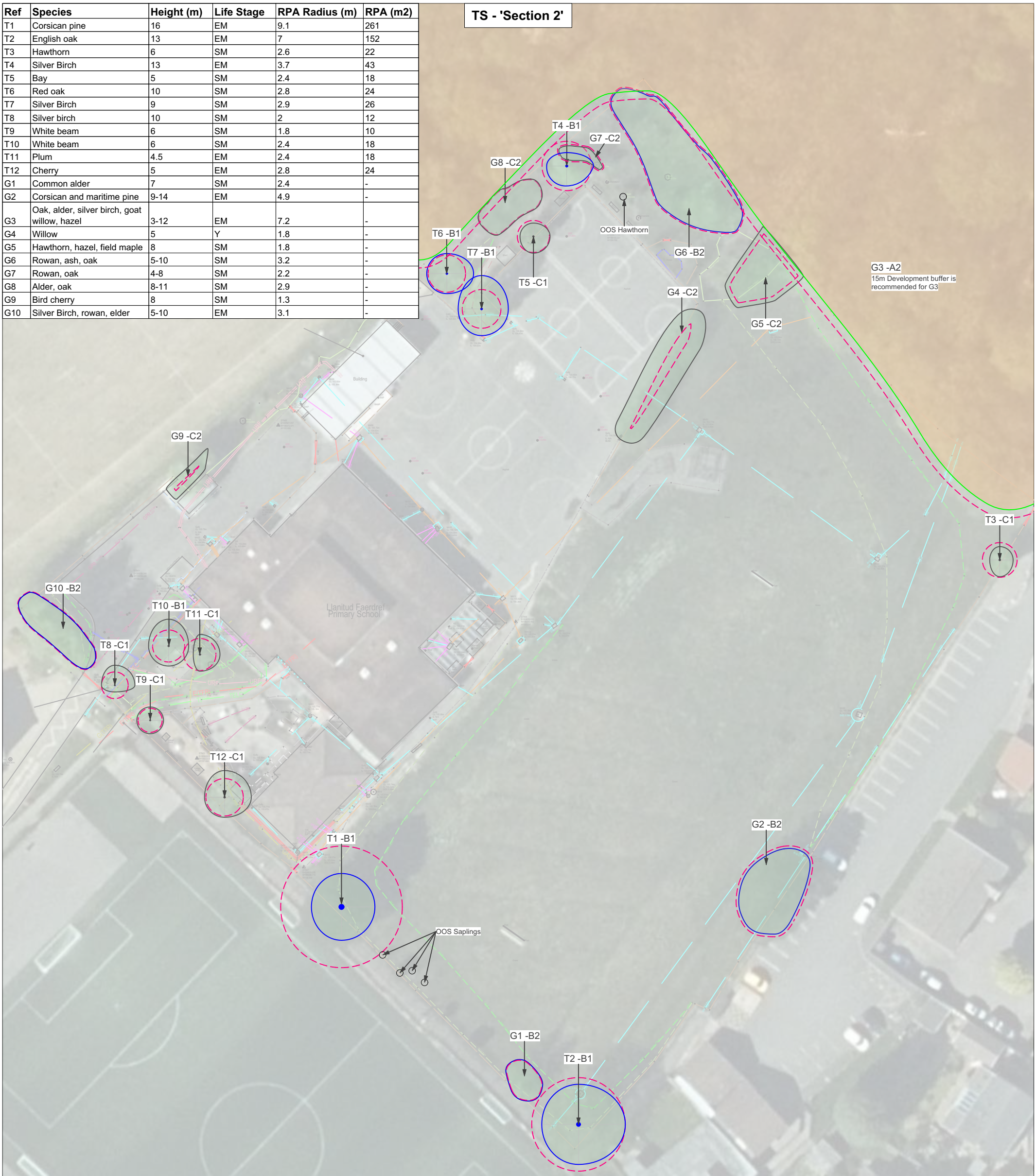
8.3. Construction access on to the site should be arranged to be a minimum distance of 15 metres from the off-site woodland G3.

8.4. An Arboricultural Method Statement and finalised Tree Protection Plan will need to be produced. Where the feasibility of a scheme has been agreed by the Local Planning Authority, this detail can be agreed and submitted at a later date as part of a reserved matters application or pre-commencement planning condition (by agreement with the applicant).

8.5. The developable area of the site is relatively free from arboricultural constraints and there is ample opportunity across the site to establish new trees and to plant new hedgerows in place of fences.

David Holmes, *FdSc, MArborA,* Arboriculturist

| Ref | Species | Height (m) | Life Stage | RPA Radius (m) | RPA (m2) |
|---|---|---|---|---|---|
| T1 | Corsican pine | 16 | EM | 9.1 | 261 |
| T2 | English oak | 13 | EM | 7 | 152 |
| T3 | Hawthorn | 6 | SM | 2.6 | 22 |
| T4 | Silver Birch | 13 | EM | 3.7 | 43 |
| T5 | Bay | 5 | SM | 2.4 | 18 |
| T6 | Red oak | 10 | SM | 2.8 | 24 |
| T7 | Silver Birch | 9 | SM | 2.9 | 26 |
| T8 | Silver birch | 10 | SM | 2 | 12 |
| T9 | White beam | 6 | SM | 1.8 | 10 |
| T10 | White beam | 6 | SM | 2.4 | 18 |
| T11 | Plum | 4.5 | EM | 2.4 | 18 |
| T12 | Cherry | 5 | EM | 2.8 | 24 |
| G1 | Common alder | 7 | SM | 2.4 | - |
| G2 | Corsican and maritime pine | 9-14 | EM | 4.9 | - |
| G3 | Oak, alder, silver birch, goat willow, hazel | 3-12 | EM | 7.2 | - |
| G4 | Willow | 5 | Y | 1.8 | - |
| G5 | Hawthorn, hazel, field maple | 8 | SM | 1.8 | - |
| G6 | Rowan, ash, oak | 5-10 | SM | 3.2 | - |
| G7 | Rowan, oak | 4-8 | SM | 2.2 | - |
| G8 | Alder, oak | 8-11 | SM | 2.9 | - |
| G9 | Bird cherry | 8 | SM | 1.3 | - |
| G10 | Silver Birch, rowan, elder | 5-10 | EM | 3.1 | - |




## KEY

- Category A Tree - High quality (Retention highly desirable)
- Category A - Hedgerow, Group, Woodland - High quality (Retention highly desirable)
- Category B Tree - Moderate quality (Retention desirable)
- Category B - Hedgerow, Group, Woodland - Moderate quality (Retention desirable)
- Category C Tree - Low quality (May be retained but should not constrain development)
- Category C - Hedgerow, Group, Woodland - Low quality (May be retained but should not constrain development)
- Category U Tree - Very low quality (Mostly unsuitable for retention)
- Category U - Hedgerow, Group, Woodland - Very low quality (Mostly unsuitable for retention)
- Root Protection Area (RPA) - Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and soil volume to maintain the tree's viability
- Shrub mass/offsite tree/out of scope (OOS)

**Ancient Tree / Woodland or Veteran Trees**

- Ancient tree/woodland or Veteran tree: Important trees that require special consideration

N
GRID NORTH

0 2 4 6 8 10 Meters

**Note:** The original of this drawing was produced in colour – a monochrome copy should not be relied upon. This drawing should be interpreted with reference to the accompanying tree schedule and written advice

PROJECT TITLE
**Llanilltud Faerdref School**

DRAWING TITLE
Tree Survey & Constraints Plan

| SCALE | DRAWING NUMBER |
|---|---|
| 1:550 @ A3 | BHA_1122_01 |

| DRAWN BY | APPROVED BY | REVISION | SHEET | DATE |
|---|---|---|---|---|
| DV | DH | - | - | 11/05/2021 |

LAYOUT USED WITHIN DRAWING **xxxxxxxxxx**

CLIENT **CSA Environmental**

COORDINATE SYSTEM / DATUM **British National Grid / Newlyn Datum (AOD)**



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CSA environmental

| Ref | Species | Height (m) | Life Stage | RPA Radius (m) | RPA (m2) |
|---|---|---|---|---|---|
| T1 | Corsican pine | 16 | EM | 9.1 | 261 |
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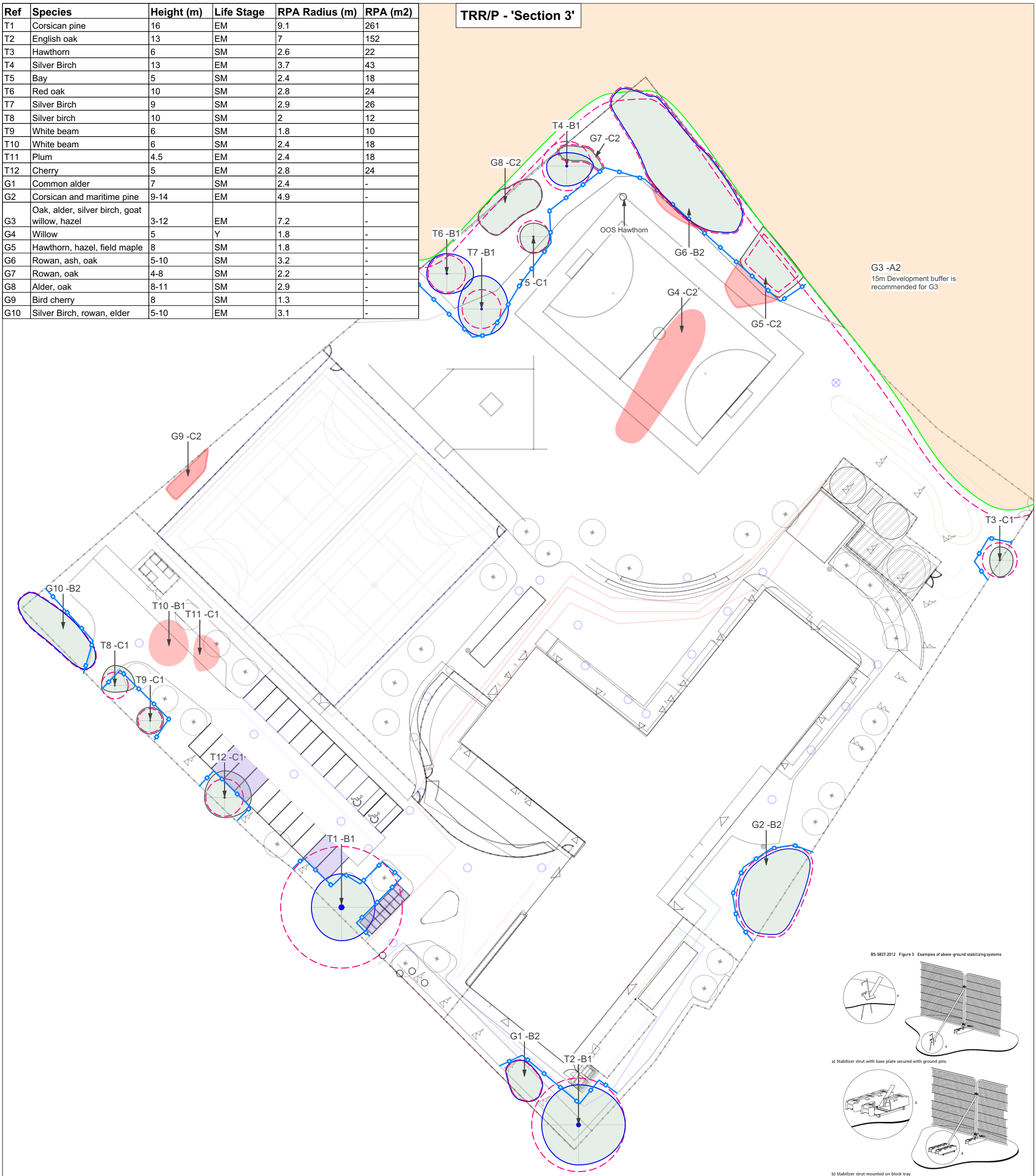
| T8 | Silver birch | 10 | SM | 2 | 12 |
| T9 | White beam | 6 | SM | 1.8 | 10 |
| T10 | White beam | 6 | SM | 2.4 | 18 |
| T11 | Plum | 4.5 | EM | 2.4 | 18 |
| T12 | Cherry | 5 | EM | 2.8 | 24 |
| G1 | Common alder | 7 | SM | 2.4 | - |
| G2 | Corsican and maritime pine | 9-14 | EM | 4.9 | - |
| G3 | Oak, alder, silver birch, goat willow, hazel | 3-12 | EM | 7.2 | - |
| G4 | Willow | 5 | Y | 1.8 | - |
| G5 | Hawthorn, hazel, field maple | 8 | SM | 1.8 | - |
| G6 | Rowan, ash, oak | 5-10 | SM | 3.2 | - |
| G7 | Rowan, oak | 4-8 | SM | 2.2 | - |
| G8 | Alder, oak | 8-11 | SM | 2.9 | - |
| G9 | Bird cherry | 8 | SM | 1.3 | - |
| G10 | Silver Birch, rowan, elder | 5-10 | EM | 3.1 | - |







## KEY

- Category A Tree - High quality (Retention highly desirable)
- Category A - Hedgerow, Group, Woodland - High quality (Retention highly desirable)
- Category B Tree - Moderate quality (Retention desirable)
- Category B - Hedgerow, Group, Woodland - Moderate quality (Retention desirable)
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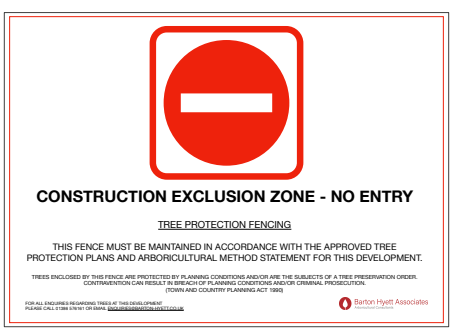
- Category C - Hedgerow, Group, Woodland - Low quality (May be retained but should not constrain development)
- Category U Tree - Very low quality (Mostly unsuitable for retention)
- Category U - Hedgerow, Group, Woodland - Very low quality (Mostly unsuitable for retention)
- Root Protection Area (RPA) - Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and soil volume to maintain the tree's viability
- Shrub mass/offsite tree/out of scope (OOS)
- Tree Protection Barrier
- Tree / Hedgerow / Group to be removed
- Area of 'No Dig' Construction to BS 5837:2012

**Ancient Tree / Woodland or Veteran Trees**

- Ancient tree/woodland or Veteran tree: Important trees that require special consideration




The protective measures specified on this Tree Protection Plan must be used in combination with an approved Arboricultural Method Statement, and with reference to the overarching conditions of planning consent.

N
GRID NORTH

0 2 4 6 8 10 Meters

**Note:** The original of this drawing was produced in colour – a monochrome copy should not be relied upon. This drawing should be interpreted with reference to the accompanying tree schedule and written advice

PROJECT TITLE
**Llanilltud Faerdref School**

DRAWING TITLE
Tree Retention, Removal & Protection Plan

| SCALE | DRAWING NUMBER |
|---|---|
| 1:550 @ A3 | BHA_1122_02 |

| DRAWN BY | APPROVED BY | REVISION | SHEET | DATE |
|---|---|---|---|---|
| DV | DH | - | - | 14/10/2021 |

LAYOUT USED WITHIN DRAWING **RH0301-ALA-00-00-M2-L-00001 cdps01 - llanilltud**

CLIENT **CSA Environmental**

COORDINATE SYSTEM / DATUM **British National Grid / Newlyn Datum (AOD)**



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CSA environmental

**BS5837:2012 TREE SURVEY SCHEDULE**

LLANILTUD FAERDREF PRIMARY SCHOOL

PROJECT NO: 4371

SURVEYOR: DAVID HOLMES/ PAUL BARTON

CLIENT: HSP

SURVEY DATE: 28/04/2021

Barton Hyett
Arboricultural Consultants

## INDIVIDUAL TREES

| Ref | Species | On/off site | Top Height (m) | No. of Stems | Est diam? | Calc. / Actual Stem Dia. (mm) | Crown radii (m) N-E-S-W | Avg. low crown height (m) | 1st branch ht (m) | 1st branch dir. | Life Stage | Special importance | General Observations | Health & vitality | Structural condition | Estimated Remaining Contribution (Years) | BS5837 Category | RPA Radius (m) | RPA m² |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T1 | Corsican pine | On | 16.0 | 1 | - | 760 | 5.0-5.0-5.0-4.5 | 2.0 | 2 | N | EM | None | Multi-stemmed from 0.5m with tight union. Stem diameter measured at 0.5m due to merged secondary stems. Crown overhanging footway and adjacent sports pitch. | Fair | Fair | 20+ | B1 | 9.1 | 261 |
| T2 | English oak | On | 13.0 | 1 | - | 580 | 6.0-7.0-6.0-5.5 | 1.5 | 2.5 | N | EM | None | Good form and vitality. | Good | Good | 40+ | B1 | 7.0 | 152 |
| T3 | Hawthorn | On | 6.0 | 4 | - | 220 | 2.0-2.0-2.5-1.5 | 0.5 | - | - | SM | None | Multi-stemmed tree abutting boundary fence. Swathed in ivy. | Fair | Fair | 10+ | C1 | 2.6 | 22 |
| T4 | Silver Birch | On | 13.0 | 1 | - | 310 | 2.0-4.0-300.0-3.0 | 1.5 | 2 | E | EM | None | Twin-stemmed from 2.5m, several clumps of witches broom | Good | Good | 20+ | B1 | 3.7 | 43 |
| T5 | Bay | On | 5.0 | 6 | - | 200 | 2.0-2.5-2.5-2.0 | 0.0 | -. | - | SM | None | Multi-stemmed next to fence | Good | Good | 10+ | C1 | 2.4 | 18 |
| T6 | Red oak | On | 10.0 | 1 | - | 230 | 3.0-4.0-3.0-3.0 | 4.0 | 4 | W | SM | None | Establishing well, potential to become large specimen | Good | Good | 20+ | B1 | 2.8 | 24 |
| T7 | Silver Birch | On | 9.0 | 1 | - | 240 | 5.0-4.0-4.0-3.5 | 2.0 | 2 | S | SM | None | Good form & condition | Good | Good | 20+ | B1 | 2.9 | 26 |
| T8 | Silver birch | On | 10.0 | 1 | - | 160 | 3.0-3.0-1.0-2.0 | 2.0 | 2 | S | SM | None | Slender form | Good | Fair | 10+ | C1 | 2.0 | 12 |
| T9 | White beam | On | 6.0 | 1 | - | 150 | 2.0-2.0-2.0-2.0 | 2.0 | 2.5 | N | SM | None | Growing through decking within play area | Good | Good | 10+ | C1 | 1.8 | 10 |
| T10 | White beam | On | 6.0 | 3 | - | 200 | 4.0-3.0-3.0-3.0 | 1.0 | 1.5 | N | SM | None | Multi-stemmed from 0.5m, tight union | Good | Fair | 10+ | C1 | 2.4 | 18 |
| T11 | Plum | On | 4.5 | 6 | - | 200 | 3.0-3.0-2.5-1.0 | 1.0 | 1 | E | EM | None | Multi-stemmed untidy tree | Good | Fair | 10+ | C1 | 2.4 | 18 |
| T12 | Cherry | On | 5.0 | 2 | - | 230 | 4.0-4.0-3.0-3.0 | 2.0 | 2 | S | EM | None | Growing through decking, enclosed by fencing | Fair | Fair | 10+ | C1 | 2.8 | 24 |

**BS5837:2012 TREE SURVEY SCHEDULE**

LLANILTUD FAERDREF PRIMARY SCHOOL

PROJECT NO: 4371

SURVEYOR: DAVID HOLMES/ PAUL BARTON

CLIENT: HSP

SURVEY DATE: 28/04/2021

Barton Hyett
Arboricultural Consultants

## GROUPS OF TREES

| Ref | Species | On/off site | Height range (m) | No. of trees | Est diam? | Max stem diam (mm) | Av. Crown radius (m) | Avg. low crown height (m) | Life Stage | Special importance | General Observations | Health & vitality | Structural condition | Estimated Remaining Contribution (Years) | BS5837 Category | RPA Radius (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G1 | Common alder | On | 7 | 2 | - | 200.0 | 2.5 | 1.5 | SM | None | Attractive pair of good form. | Good | Good | 40+ | B2 | 2.4 |
| G2 | Corsican and maritime pine | On | 9-14 | 3 | - | 410.0 | 4.5 | 2.0 | EM | None | Slightly sparse foliage. Minor deadwood over adjacent car park. | Fair | Fair | 20+ | B2 | 4.9 |
| G3 | Oak, alder, silver birch, goat willow, hazel | Off | 3-12 | 50 | # | 600.0 | 6 | 1.5 | EM | **ASNW** | Off-site ancient semi-natural woodland with canopy overhanging the school field. Low branches of oak at east end near gated access may need pruning if construction access is used here. | Good | Good | 40+ | A2 | 7.2 |
| G4 | Willow | On | 5 | 7 | - | 150.0 | 4 | 1.5 | Y | None | Small multi-stemmed trees along playground fence. | Fair | Fair | 10+ | C2 | 1.8 |
| G5 | Hawthorn, hazel, field maple | On | 8 | 20 | - | 150 | 2.5 | 0.0 | SM | None | Dense shrubby mass. | Good | Fair | 10+ | C2 | 1.8 |
| G6 | Rowan, ash, oak | On | 5-10 | 11 | - | 270 | 3 | 2.0 | SM | None | Larger ash north boundary with smaller rowan to south, canopy merges with adjacent woodland | Good | Good | 20+ | B2 | 3.2 |
| G7 | Rowan, oak | On | 4-8 | 2 | - | 180 | 2 | 1.0 | SM | None | Small suppressed trees with prolific ivy | Fair | Fair | 20+ | C2 | 2.2 |
| G8 | Alder, oak | On | 8-11 | 3 | - | 240 | 3 | 2.0 | SM | None | Oak at northern edge has extensive squirrel damage, causing crown dieback | Good | Fair | 10+ | C2 | 2.9 |
| G9 | Bird cherry | On | 8 | 6 | # | 100 | 3 | 0.0 | SM | None | Thicket growing behind container | Good | Good | 10+ | C2 | 1.3 |
| G10 | Silver Birch, rowan, elder | On | 5-10 | 5 | - | 260 | 3 | 1.5 | EM | None | 2x mature birch with other stems as understorey | Good | Good | 20+ | B2 | 3.1 |


*IMAGE 1: T1 - viewed looking south-west.*


*IMAGE 2: Pines in G2 looking south-east.*


*IMAGE 3: G10 looking south-west*


*IMAGE 4: T8; T10 and G10 looking south-west*


*IMAGE 5: G9 looking north-east*


*IMAGE 6: The ASNW woodland canopy of G3 looking south-east*

- The tree survey was carried out with reference to the methodology set out in BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- Trees were surveyed individually or as groups where it was considered that they had grown together to form cohesive arboricultural features either aerodynamically (trees that provide companion shelter), visually (e.g. avenues or screens) or culturally (including for biodiversity). However, where it was considered that there was an arboricultural need to differentiate between attributes trees within groups and / or woodlands were also surveyed as individuals.
- The full tree survey findings are recorded in the following tree survey schedule.
- Within the tree survey schedule, each surveyed TREE (T), GROUP (G), HEDGEROW (H), WOODLAND (W) or SHRUB MASS on or adjacent to the site is given a reference number which refers to its position on the tree survey and constraints plan.
- TREE SPECIES are listed by common name.

The **DIMENSIONS** taken are:

- STEM-No. Indicates the number of main stems (i.e. whether the trunk divides at or below 1.5m; (Used in the calculation of RPA.) "m-s" = Multi-stemmed.
- STEM DIAMETER (measured in millimetres), obtained from the girth measured at approx. 1.5m. For trees with 2 to 5 sub-stems a notional figure is derived from the sum of their cross-sectional areas. For multi-stemmed trees, the notional diameter may be estimated on the basis of the average stem size x the number of stems. (A notional diameter may be estimated where measurement is not possible.)
- HEIGHT (measured in metres), recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.
- The CROWN SPREAD, taken at the four cardinal points to derive an accurate representation of the tree crown, recorded up to the nearest half metre for dimensions up to 10m and to up the nearest whole metre for dimensions over 10m.
- CROWN CLEARANCES are expressed both as existing height above ground level of first significant branch along with its direction of growth (e.g. 2.5m-N), and also in terms of the overall crown e.g. the average height of the crown above ground level. Measurements are recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.
- ESTIMATES. Where any measurement has had to be estimated, due to inaccessibility for example, this is indicated by a "#" suffix to the measurement as shown in the tree survey schedule.

**LIFE STAGE** is defined as follows:

Y Young: Normally stake dependent, establishing trees. Should be growing fast, usually primarily increasing in height more than spread but as yet making limited impact upon the landscape.

SM Semi-mature: Established young trees, normally of good vigour and still increasing in height but beginning to spread laterally. Beginning to make an impact upon the local landscape and environment. Semi-Mature (still capable of being transplanted without preparation, up to 30cm girth and not yet sexually mature).

EM Early-mature: Not yet having reached 75% of expected mature size. Established young trees, normally of good vigour and still increasing in height but beginning to spread laterally. Beginning to make an impact upon the local landscape and environment.

M Mature: Well-established trees, still growing with some vigour but tending to fill out and increase spread. Bark may be beginning to crack and fissure. In the middle half of their safe, useful life expectancies.

LM Late-Mature: In full maturity but possibly beyond mature and in a state of natural decline). Still retaining some vigour but any growth is slowing.

A Ancient: A tree that has passed beyond maturity and is old/aged compared with other trees of the same species. Typically having a very wide trunk and a small canopy.

**PHYSIOLOGICAL CONDITION (HEALTH & VITALITY):**

Essentially a snapshot of the general health of the tree based upon its general appearance, it's apparent vigour and the presence or absence of symptoms associated with poor health, physiological stress etc. (Fungal infections may be recorded here but decay giving rise to structural weakness would be recorded under 'Structural Condition' – see next parameter):

Good: No significant health issues.
Fair: Indications of slight stress or minor disease (e.g. the presence of minor dieback/deadwood or of epicormic shoot growth).
Poor: Significant stress or disease noted; larger areas of dieback than above.
Dead: (or Moribund).

**STRUCTURAL CONDITION:**

Defects affecting the structural stability of the tree including decay, significant dead wood, root-plate instability or significant damage to structural roots, weak forks (e.g. those where bark is included between the members) etc. Classified as:

Good: No obvious structural defects: basically sound.
Fair: Minor, potential or incipient defects.
Poor: Significant defect(s) likely to lead to actual failure in the medium to long-term.
Dead: (or Moribund).

**ESTIMATED REMAINING CONTRIBUTION:**

An estimate of the length of time in years that a tree might be expected to continue to make a useful contribution to the locality at an acceptable level of risk (based on an assumption of continued routine maintenance):

- Less than 10 years
- 10+ years
- 20+ years
- 40+ years

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**SPECIAL IMPORTANCE:**

Trees that are particularly notable as high value trees such as ancient trees/woodland or veteran trees. Such trees may be regarded as the principal arboricultural features of a site and pose a significant constraint to potential development.

An *ancient* tree is one that has passed beyond maturity and is very old compared with other trees of the same species. Very few trees reach the ancient life-stage.

*Veteran* trees are often very old but not necessarily so; they may be regarded as 'survivors' that have developed some of the characteristic features of an ancient tree but have not necessarily lived as long. All ancient trees are veterans but not all veteran trees are ancient.

An ancient woodland is an area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland (ASNW), plantations on ancient woodland sites (PAWS) and ancient replanted woodland (ARW)

**QUALITY CATEGORY:**

Trees are classed as category U, A, B or C, based on criteria given in BS5837:2012; summary definitions as follows (see BS5837 for further details). Categories A, B and C are further characterised by the use of sub-categories, which attempt to identify what aspect of the tree is the main source of its perceived value, These are:

(1) arboricultural qualities
(2) landscape qualities, and
(3) cultural, historic or ecological/conservation qualities.

Examples of these qualities for each of the three categories are given below, although these are indicative only.

Note: This is NOT a health and safety classification; the classification does not take into account any requirement for remedial tree care or ongoing maintenance apart from that which may affect the trees' general suitability for retention.

**CATEGORY A: HIGH QUALITY:**

Trees or groups whose retention should be given a particularly high priority within the design process. Normally with an expected useful life expectancy of at least 40 years.

A1: Notably fine specimens; rare or unusual specimens; essential component trees within groups, semi-formal or formal plantings (e.g. dominant trees within an avenue etc.).
A2: Trees, groups or woodlands of particular visual importance as landscape features.
A3: Trees, groups or woodlands of particular significance by virtue of their conservation, historical, commemorative or other value (e.g. veteran trees or wood pasture.)

**CATEGORY B: MODERATE QUALITY:**

Trees or groups of some importance with a likely useful life expectancy in excess of 20 years. Their retention would be desirable; selective removal of certain individuals may be acceptable but only after full consideration of all alternative courses of action.

B1: Fair quality but not exceptional; good specimens showing some impairment (e.g. remediable defects, minor storm damage or poor past management.)
B2: Acceptable trees situated such as to have little visual impact within the wider locality. Also numbers of trees, perhaps in groups or woodlands, whose value as landscape features is greater collectively than would warrant as individuals (such that the selective removal of an individual would not impact greatly upon the trees' overall, collective value).
B3: Trees, groups or woodlands with clearly identifiable conservation or other cultural benefits.

**CATEGORY C: LOW QUALITY:**

Trees or groups of rather low quality, although potentially capable of retention for at least approx. 10 years. Also small trees with stems below 15cm diameter.

Potentially retainable, but not of sufficient value to be regarded as a significant planning constraint.

C1: Unremarkable trees of very limited merit or of significantly impaired condition.
C2: Trees offering only low or short-term landscape benefits; also secondary specimens within groups or woodlands whose loss would not significantly diminish their landscape value.
C3: Trees with extremely limited conservation or other cultural benefit.

**CATEGORY U:**

Trees likely to prove to be unsuitable for retention for longer than 10 years should any significant increase in site usage arise as a result of development.

E.g. dead or moribund trees; those at risk of collapse or in terminal decline; trees that will be left unstable by other essential works such as the removal of nearby category U trees; trees infected by pathogens that could materially affect other trees; low quality trees that are suppressing better specimens.

(Category U trees may have conservation values that it might be desirable to preserve. This category may also include trees that should be removed irrespective of any development proposals.)

**ROOT PROTECTION AREA (RPA):**

These are normally represented as a circle centred on the base of each tree stem with a radius of 12 times stem diameter, measured at 1.5m above ground level. The shape of the RPA may be altered where site conditions dictate that there are sound reasons to do so.

**VETERAN OR ANCIENT TREE BUFFER (VTB/ATB)**

In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone (in metres) around an ancient or veteran tree that should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's stem diameter.

**ANCIENT WOODLAND BUFFER (FOR ASNW, PAWS OR ARW)**

In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, a larger buffer zone may be required.

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## THE IMPORTANCE OF TREES

### Wider benefits:

There is a growing body of evidence that trees bring a wide range of benefits to the places people live.

Some *Economic* benefits of trees include:

- Trees can increase property values
- As trees grow larger, the lift they give to property values grows proportionately
- They can improve the environmental performance of buildings by reducing heating and cooling costs, thereby cutting bills
- Mature landscapes with trees can be worth more as development sites
- Trees create a positive perception of a place for potential property buyers
- Urban trees improve the health of local populations, reducing healthcare costs

Some *Social* benefits of trees include:

- Trees help create a sense of place and local identity
- They benefit communities by increasing pride in the local area
- They can create focal points and landmarks
- They have a positive impact on people's physical and mental health
- They can have a positive impact on crime reduction

Some *Environmental* benefits of trees include:

- Urban trees reduce the 'urban heat island effect' of localised temperature extremes
- They provide shade, making streets and buildings cooler in summer
- They help remove dust and particulates from the air
- They help to reduce traffic noise by absorbing and deflecting sound
- They help to reduce wind speeds
- By providing food and shelter for wildlife, they help increase biodiversity
- They can reduce the effects of flash flooding by slowing the rate at which rainfall reaches the ground
- They can help remediate contaminated soil

### On new development sites:

Trees bring many benefits to new development. Where retained successfully they can form important and sustainable elements of green infrastructure, contribute to urban cooling and reduce energy demands in buildings. Their importance is acknowledged in relation to adaptation to the effects of climate change. Other benefits brought by trees include:

- Increasing property values
- Visual amenity
- Softening, complementing and adding maturity to built form
- Displaying seasonal change
- Increasing wildlife opportunities in built-up areas
- Contributing to screening and shade
- Reducing wind speed and turbulence

## NATIONAL PLANNING POLICY

The National Planning Policy Framework 2021 (NPPF paragraph 180) states that, when determining planning applications, local planning authorities should apply the following principle:

*c) 'development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists.'*

In this respect the following definitions apply:

*'Ancient woodland: An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS)', and*

*'Ancient or veteran tree: A tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran trees are old enough to be ancient, but are old relative to other trees of the same species. Very few trees of any species reach the ancient life-stage.'*

*Note: Further information from the National Planning Policy Guidance Suite and Standing Advice is provided in the design guidance section.*

Other paragraphs of the NPPF 2021 of relevance to this report are:

Paragraph 131: *'Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users.'*

Paragraph 174: *'Planning policies and decisions should contribute to and enhance the natural and local environment by:*
*b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.'*

## STATUTORY CONTROLS

Statutory tree protection

Works to trees which are covered by Tree Preservation Orders (TPOs) or are within a Conservation Area (CA) require permission or consent from the Local Planning Authority. Where information is available on any Statutory designations such as this they are identified within the summary table in Section 1 and on the Tree Survey and Constraints Plan at Section 2.

Notwithstanding specific exceptions and in general terms, a TPO prevents the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of protected trees or woodlands without the prior written consent of the LPA.

Penalties for contravention of a TPO tend to reflect the extent of damage caused but can, in the event of a tree being destroyed, result in a fine of up to £20,000 if convicted in a Magistrates' Court, or an unlimited fine is the matter is determined by the Crown Court.

Similarly, and again notwithstanding specific exceptions, it is an offence to carry out any works to a tree in a Conservation Area with a trunk diameter greater than 75mm diameter at 1.5 height without having first provided the LPA with 6 weeks written notification of intent to carry out the works.

On many non-residential sites (excluding specific exemptions) there is also a statutory restriction relating to tree felling that relates to quantities of timber that can be removed within set time periods. In basic terms, it is an offence to remove more than 5 cubic metres of timber in any one calendar quarter without having first obtained a felling licence from the Forestry Commission.

Any proposed tree works that are planned to be carried out on site must be carried out in accordance with the statutory controls outlined.

Statutory Wildlife Protection

Although preliminary visual checks from ground level of likely wildlife habitats are made at the time of surveying, detailed ecological assessments of wildlife habitats are not made by the arboriculturist and fall outside of the scope for this report.

Trees which contain holes, splits, cracks and cavities could potentially provide a habitat for protected species such as bats in addition to birds and small mammals. It is advised that in some instances specialist ecological advice may be required. This may result in tree works being carried out following a detailed climbing inspection to the tree to ensure that protected species or their nests/roosts are not disturbed. If any are found, the site manager, site owner or consulting arboriculturist should be informed and appropriate action taken as recommended by the appointed Ecologist or the relevant Statutory Nature Conservation Organisation (SNCO): Natural England, Scottish Natural Heritage or Natural Resources Wales.

It is advised that tree/hedgerow works are carried out with the understanding that birds will generally nest in trees, hedges and shrubs between March and August. This time period only provides an indication of likely nesting times and as such diligence is required when undertaking tree works at all times.

Irrespective of the time of year and other than any actions approved under General Licence, it is an offence to intentionally kill, injure or take any wild bird or to intentionally take, damage or destroy the nest or eggs of any wild bird. Ideally, tree operations should be avoided during the likely bird nesting period. However, any tree works should always only be carried out following a preliminary visual check of the vegetation.

For information, the Wildlife and Countryside Act 1981 (as amended), The Countryside and Rights of Way Act 2000 (as amended) and the Conservation of Habitat and Species Regulations 2010, form the basis of the statutory legislation for flora and fauna in England and Wales. A different legislative framework applies in Scotland and Northern Ireland.

Any proposed tree works that are planned to be carried out on site must be carried out in accordance with any relevant statutory controls, outlined above.

DESIGN GUIDANCE

Approach

The approach adopts the guidelines set out in the British Standard BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations. The process is broken down to coordinate with the key elements within both the RIBA Plan of Work (2013) and British Standard 5837:2012 as set out in the table below:

| Information Stage | RIBA Stage | BS5837:2012 |
|---|---|---|
| **Stage A – Tree Survey** | 2: Concept | 4: Feasibility |
| **Stage B – Arboricultural Impact Assessment** | 3: Developed design | 5: Proposals |
| **Stage C – Arboricultural Method Statement** | 4: Technical design | 6: Technical Design |
| **Stage D – Arboricultural Site Supervision** | 5: Construction | 7: Demolition and construction |

A hierarchical approach is adopted in order to achieve optimum use of the site and location of built structures. This is set out below:

Avoid

The starting point of Site layout design should be to avoid the RPA of retained trees and provide suitable clearance from above ground constraints [tree canopies]. Where possible building lines should be at least 2m outside the RPA to provide working space for construction. However, protection measures can be taken if such clearance is not achievable.

Mitigate

Where intrusion within the RPA is unavoidable then its impact on the tree can be mitigated by specialist measures:

Foundations that avoid trenching e.g. screw piles, suspended floor slabs or casting at ground level for lightweight structures such as bin and cycle stores.

Limited use may be made for parking, drives or hard surfaces within the root protection areas, subject to advice from a qualified arboriculturist. Cellular confinement systems that enable hard surfaces to be built above existing soil levels are acceptable methods subject to site-specific soil conditions.

Service runs that cannot be routed outside the RPA(s) can be installed by, for example, thrust boring, directional drilling, air excavation or hand digging. These operations often require supervision by the project arboriculturist.

Compensate

Replacement planting can ensure the continuity of tree cover where tree removal is unavoidable or desirable. Off-site provision may be considered in some circumstances but this will require negotiation with the local planning authority.

Considerations:

For proposed residential developments, consideration must be given to numerous factors future tree growth and orientation.

**Tree constraints**

Root Protection Areas:

With reference to BS5837:2012, a root protection area (RPA) is defined as "a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure should be treated as a priority". "**The default position [when considering design layout in relation to RPAs] should be that structures are located outside the RPAs of trees to be retained**".

BS5837:2012 states (4.6.2) that, "where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced." The BS goes on to state that, "modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution," and that any deviation from the original circular plot should take into account:

- Morphology and disposition of roots;
- topography and drainage;
- soil type and structure;
- the likely tolerance of the tree to root damage/disturbance.

Additional buffer zones beyond the RPA:

The following text is taken from the Standing Advice produced by the Forestry Commission and Natural England as included in the National Planing Policy Guidance:

'A buffer zone's purpose is to protect ancient woodland and individual ancient or veteran trees. The size and type of buffer zone should vary depending on the scale, type and impact of the development'.

Ancient woodland buffer:
'For ancient woodlands, you should have a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, you're likely to need a larger buffer zone. For example, the effect of air pollution from development that results in a significant increase in traffic'.

Ancient and veteran tree buffer:
'A buffer zone around an ancient or veteran tree should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter'.

Above ground:
Above ground constraints posed by trees describe the capacity for trees to have an overbearing or dominating effect on new developments; usually post occupancy. Typical above ground constraints include a number or combination of inconveniences including shading, branch spread, movement of trees during strong winds and so on. If not adequately considered, above ground constraints can lead to repeated requests to fell or heavily prune retained and protected trees.

Shade:
Adverse shading and blocked views from windows raise concerns for incoming residents, which may lead to pressure to fell or remove trees in the future. Wherever possible it is advisable to arrange fenestration away from tree canopies to lessen the conflict, or increase window size to accommodate ambient light.
Conversely, appropriate designed development can use existing or new trees to create necessary and welcome shade and screening.
As part of the adopted approach the above considerations and constraints are assessed cumulatively in order to provide clear and site-specific advice on the areas of a site most suitable for the location of development.

Dependent on the site and nature of the proposed development, the Tree Survey and Constraints Plans may show the following:

*Recommended Developable area* - an advisory area defined in order to minimise arboricultural impacts using standard approaches to construction. Restricting proposed development to this area will limit the risk of harm to retained trees and of the Local Planning Authority objecting to the proposed development. It may be possible to propose development outside of this area but specific 'low impact' construction techniques may be needed recommended.

*Recommended Buffer to development* - similar to the Recommend Developable Area but defined as a line marking a suitable buffer to retained trees. More commonly used on large sites or sites where the presence of trees is localised.

**Tree Opportunities**

Depending on the scale of developments existing trees can often provide opportunities to enhance the existing arboricultural resource of a site by bringing it into good management or by putting in place remedial measures e.g. soil amelioration.

Appropriately designed new tree planting is extremely important in maintaining healthy and sustainable tree populations. For the reasons highlighted, new trees can bring many benefits to new developments. It is critical to the establishment of new tree planting that the locations, species and specification of new trees is appropriate. Subsequently the sourcing of high-quality stock, suitable planting and the provision of post planting maintenance are essential to allow new trees to establish and to allow them to mature.

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## HOW TREE DAMAGE CAN OCCUR

Above the ground

Damage can occur as a result of knocks and scuffs, breakages of branches and/or tree trunks. This is often but not always associated with machine operations, groundworks excavations, tele handlers, high sided vehicles and crane use. Other forms of above ground damage include fixings to trunk and unauthorised cutting back of branches. Wounds will harm a tree's health and shorten its life by letting in disease-causing organisms.

Below the ground

It is often not appreciated that the majority of most tree roots are generally located within the top 600mm of the ground. On this basis it needs to be understood that damage to roots can occur in three ways:

- Root severance can occur as a result of, for example, soil stripping during site clearance or excavations.
- Root dieback and death can result from compaction of the soil. Compaction can occur as a result of vehicle weight, weight of stored materials or increased pedestrian access. Compaction crushes out soil pore space and prevents tree respiration from occurring (respiration requires gas exchange between the ground and the atmosphere). Compacted soil is denser and therefore inhibits/prevents any further new root growth.
- Pollution of the soil with chemicals such as oil or cement washings can destroy the soil environment, making it inhospitable for the tree cause causing it stress.

The effects of these impacts can be disfiguring to a tree's appearance and also weaken a tree making it more liable to attack by pest and diseases. In addition, root damage or death results in corresponding decline above the ground with dieback occurring within the tree crown.

The effects of damage to trees generally take some time to become fully apparent. In many cases, damaged trees decline slowly after the completion of a new development, until they eventually need to be removed due to ill health.

Tree protection barriers and load distributing 'no-dig' paths are specified in order to prevent soil compaction from taking place.

## GENERAL SITE RULES FOR TREE PROTECTION

Do not independently carry out any activity that is at odds with the site scheme of tree protection. This is contained within an approved Arboricultural Method Statement (AMS) and accompanying Tree Protection Plan.

In simple terms: do not carry out any work within any Construction Exclusion Zone (CEZ) without prior liaison with the Project Arboriculturist and written authorisation from the Local Planning Authority.

Within the CEZ:

- No mixing of cement
- No soil/turf stripping, raising/lowering of ground levels (unless advised), deposit or excavation of soil or rubble
- No excavations for services or installation of services
- No storage of materials, machinery fuel, chemicals or other materials of any other description
- No parking/use of tracked or wheeled machinery
- No siting of temporary structures including hard standing areas, portaloos, site huts
- No lighting of fires or disposal of liquids
- Fires on site should be avoided if possible. Where they are unavoidable, they must not be lit in a position where heat could damage foliage or branches. Fires must be a minimum of 20m from the trunk of any retained tree or the centre line of any hedgerow to be retained
- No signs, cables, fixtures or fittings of any other description shall be attached to any part of a retained tree