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Tree Condition Report
Arboricultural Impact Assessment
Tree Protection Plan and Method Statement

Land at Aston Hall, Aston Munslow, Shropshire

For

6.8.2021

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The Root Protection Area barrier must be erected and then approved by the Local Planning Authority **before** the start of demolition and construction works on site; including the installation of temporary site office, storage and welfare facilities if required. Refer to the Tree location and protection drawing appended for location of the protective fencing

AIA Full (3rd Iteration) 10.9.2021

Contents

1.0 Remit: Inspect the condition of trees within and adjacent to the proposed development based upon the Block Plan with Topographical Overlay supplied by the Client. Provide an Arboricultural Impact Assessment, Method Statement and Tree Protection Plan to BS5837 (2012) 'Trees in relation to design, demolition and construction – Recommendations'.

2.0 Report limitations:

The tree condition conclusion and recommendations in this report are valid for a period of one year, or a lesser period when indicated in the report. All trees are susceptible to exceptional weather events or deterioration resulting from other environmental changes in close proximity to the tree. The evaluation is based upon Visual Tree Assessment (Mattheck & Breloer 2001). Observations have been made from ground level with the aid of binoculars.

2.1 Statutory Obligations

Bats and the Law (Woodland Management for Bats 2005)
'The Wildlife and Countryside Act 1981 makes it an offence to disturb, damage or destroy bats or their roosts. The Act applies in both England & Wales and requires consultation with the appropriate SNCO before carrying out activities which might harm or disturb bats or their roosts.
The Act is amended by the CROW Act 2000. This adds *recklessness* to the offence of damaging or destroying a place a bat uses for shelter or disturbing a bat while using a roost.
The Conservation (Natural Habitats Regulations 1994) implements the European Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora 1992, amended August 2007 & Oct 2010. Under the regulations, damaging or destroying a breeding site or resting place is an absolute offence, regardless of whether the act of doing so may be regarded as reckless, deliberate or incidental.

Wild Birds (Mynors 2002) The Primary legislation affecting wild birds in England, Scotland and Wales is the Wildlife and Countryside Act 1981 (as amended). In January 2001 the Countryside and Rights of Way Act 2000 (CRoW) included amendments, which strengthened the law in England and Wales. The basic principle of the Wildlife and Countryside Act 1981 (as amended) is that all wild birds, their nests and eggs, are protected by law and some rare species are afforded special protection. There are certain exemptions to this notably in respect of wildfowl, game birds and various species that may cause damage. (Cowan 2002)

Felling licence: Subject to tree size, location, condition and other Statutory protection, or prior planning approval, not more than $5m^3$ of timber can be felled in any Calendar quarter without first obtaining a Forestry Commission (FC) felling licence. Failure to obtain a licence where required is a prosecutable offence. Detailed information including exemptions can be found on the FC web site

Conservation Area and Tree Protection Orders: The Local Authority protects trees within the district by the use of and administration of Tree Preservation Orders (TPOs). Trees can also be protected if they are within a Conservation Area. TPOs are used to protect trees (including areas of woodland) where their removal would have a significant impact on the local environment and its enjoyment by the public. TPOs prohibit the cutting down, uprooting, wilful damage or destruction of trees. Any works to a tree(s) protected by a TPO or falling within a Conservation Area first requires the consent of the Local Authority.
It is a prosecutable offence to carry out work to a tree protected by a TPO, or remove it, without the prior consent of the Local Authority. Detailed information including exemptions can be found on the Local Authority web site

2.2 **Tree Condition Survey and Arboricultural Impact Assessment (AIA)**

Inspection method: Visual Tree Assessment (VTA) from ground level.
Location: Land at Aston Hall, Aston Munslow, Shropshire
Inspection Date: 6.8.2021
Protection Status: Not known at date of inspection
Limitations: Trees and shrubs have been identified, current height measured to the nearest metre and ultimate height assessed with reference to The Hillier Manual of Trees and Shrubs. A Visual Tree Assessment (VTA) has been carried out on trees in, or adjacent to, the development site. Refer to proposed site layout drawing for tree locations. The risk assessment and recommendations are valid for a period of one year. No detection equipment has been used other than a sounding hammer and metal probe.
NB. All trees are at risk of failure through exceptional weather conditions.

Identification No.	**T1** not tagged, growing on neighbouring property. No access to neighbouring property.
Species	Western Red Cedar *Thuja plicata D. Don*
Current Height (M)	18m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	50cm estimated
Crown clearance	1m
Crown Spread (M)	Radius N = 3m; E = 3m; S = 3m; W = 3m
Growth stage	Early-Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi where visible
Stem: no evidence of bark necrosis where visible
Crown: No evidence of recent breakouts or dieback where visible
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category A2: 'trees, groups or woodlands of visual importance in a semi-formal landscape'. Safe, Useful, Life expectancy >40 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 50cm diameter at 1.5m (0.50m x 12) = **6m Radius**
Total RPA required at current stage of growth = 113m^2
Arboricultural Impact Assessment AIA:

- 20% of the RPA is covered by the existing drive
- The proposed new boundary wall falls within the extended RPA perimeter.
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'.*
- The protective barrier cannot be positioned at the perimeter of the RPA on the south side
- Geogrid tiles require a compacted foundation for security and are unsuitable for use within the extended RPA
- An above-ground Cellular Confinement System CCS (Raft) will raise the ground level by at least 300mm.
- A 3-dimensional No-Dig cellular confinement system (CCS) with a permeable surface is proposed for the new drive section within the RPA e.g., www.geosyn.co.uk/product/**cellweb**-tree-root-protection

Method Statement: Construction of new boundary wall, driveway and parking area

- Utilize a metal railing boundary fence to avoid strip foundation within the extended RPA.
- Excavate post holes with a soil auger to minimise root damage within the extended RPA.
- Utilize dry-mix concrete to minimise root damage from alkaloids in wet concrete mix.

- Ramping on and off the above-ground CCS section must be constructed outside of the RPA
- The CCS should be designed by an engineer to carry the maximum anticipated loading for site construction traffic and future use
- The CCS must be constructed before vehicles cross the RPA using the 'rolling out' system of installation.
- The permeable surface within the RPA and compensatory area should be protected with a temporary sacrificial surface laid over a geotextile separator to ensure permeability is retained (i.e., interstices should not become blocked by the passage of construction vehicles). No excavation for haunching is permitted on side of the CCS closest to the tree/s within the RPA. The CCS edge must be supported e.g., by above-ground retaining boards/blocks secured with road pins to minimise damage to the lateral roots**.**
  Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended

Identification No.	**T2** not tagged, growing on neighbouring property. No access to neighbouring property.
Species	Lawson cypress *Chamaecyparis lawsoniana (Murr.) Parl.*
Current Height (M)	18m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	45cm estimated
Crown clearance	1m
Crown Spread (M)	Radius N = 2.5m; E = 2.5m; S = 2.5m; W = 2.5m
Growth stage	Early-Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi where visible
Stem: no evidence of bark necrosis where visible
Crown: No evidence of recent breakouts or dieback where visible
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category A2: 'trees, groups or woodlands of visual importance in a semi-formal landscape'. Safe, Useful, Life expectancy >40 years
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 45cm diameter at 1.5m (0.45m x 12) = **5.4m Radius**
Total RPA required at current stage of growth = 92m^2
Arboricultural Impact Assessment AIA:

- 30% of the RPA is covered by the existing drive
- The proposed new boundary wall falls within the extended RPA perimeter.
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.
- The protective barrier cannot be positioned at the perimeter of the RPA on the south side
- Geogrid tiles require a compacted foundation for security and are unsuitable for use within the extended RPA
- An above-ground Cellular Confinement System CCS (Raft) will raise the ground level by at least 300mm.
- A 3-dimensional No-Dig cellular confinement system (CCS) with a permeable surface is proposed for the new drive section within the RPA e.g., www.geosyn.co.uk/product/**cellweb**-tree-root-protection

Method Statement: Construction of new boundary wall, driveway and parking area

- Utilize a metal railing boundary fence to avoid strip foundation within the extended RPA.
- Excavate post holes with a soil auger to minimise root damage within the extended RPA.
- Utilize dry-mix concrete to minimise root damage from alkaloids in wet concrete mix.
- Ramping on and off the above-ground CCS section must be constructed outside of the RPA
- The CCS should be designed by an engineer to carry the maximum anticipated loading for site construction traffic and future use
- The CCS must be constructed before vehicles cross the RPA using the 'rolling out' system of installation.
- The permeable surface within the RPA and compensatory area should be protected with a temporary sacrificial surface laid over a geotextile separator to ensure permeability is retained (i.e., interstices should not become blocked by the passage of construction vehicles). No excavation for haunching is permitted on side of the CCS closest to the tree/s within the RPA. The CCS edge must be supported e.g., by above-ground retaining boards/blocks secured with road pins to minimise damage to the lateral roots**.**
  Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.

Identification No.	**T3** not tagged, growing on neighbouring property. No access to neighbouring property.
Species	Common ash *Fraxinus excelsior L.*
Current Height (M)	22m
Ultimate Height (M)	22m
Current Stem Dia (cm) at 1.5m	60cm estimated
Crown clearance	1m
Crown Spread (M)	Radius N = 2.5m; E = 2.5m; S = 2.5m; W = 2.5m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi where visible
Stem: no evidence of bark necrosis where visible
Crown: No evidence of recent breakouts. Infected with Class 2 ash dieback (ADB) 75% to 51% of live foliage remains. Foliage retention estimated at 70% at date of inspection.
Risk assessment: timber embrittlement with advance of disease.
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category C2: 'trees with limited safe, useful life expectancy, subject to climatic stressors.
Water Demand NHBC 4.2-B: moderate
Root Protection Area RPA: for tree of 60cm diameter at 1.5m (0.60m x 12) = **7.2m Radius**
Total RPA required at current stage of growth = 163m^2
Arboricultural Impact Assessment AIA:

- 20% of the RPA is covered by the existing drive
- The proposed new boundary wall, driveway and parking area falls within the extended RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new boundary wall, driveway and parking area

- Advise neighbouring owner of tree condition and potential for collapse onto Aston Hall property and neighbouring Drive

Identification No.	**T4** growing on neighbouring property. No access to neighbouring property.
Species	Common ash *Fraxinus excelsior L.*
Current Height (M)	20m
Ultimate Height (M)	22m
Current Stem Dia (cm) at narrowest point below fork	45cm estimated
Crown clearance	4m
Crown Spread (M)	Radius N = 5m; E = 5m; S = 5m; W = 4m
Growth stage	Early-Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi where visible
Stem: no evidence of bark necrosis where visible
Crown: No evidence of recent breakouts. Infected with Class 1 ash dieback (ADB) 100% to 76% of live foliage remains. Foliage retention estimated at 90% at date of inspection.
Risk assessment: timber embrittlement with advance of disease.
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category C2: 'trees with limited safe, useful life expectancy, subject to climatic stressors.
Water Demand NHBC 4.2-B: moderate
Root Protection Area RPA: for tree of 45cm diameter at narrowest point below fork (0.45m x 12) = **5.4m Radius**
Total RPA required at current stage of growth = 92m^2
Arboricultural Impact Assessment AIA:

- 30% of the RPA is covered by the existing drive
- The proposed new boundary wall falls within the extended RPA perimeter.
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.
- The protective barrier cannot be positioned at the perimeter of the RPA on the south side
- Geogrid tiles require a compacted foundation for security and are unsuitable for use within the extended RPA
- An above-ground Cellular Confinement System CCS (Raft) will raise the ground level by at least 300mm.
- A 3-dimensional No-Dig cellular confinement system (CCS) with a permeable surface is proposed for the new drive section within the RPA e.g., www.geosyn.co.uk/product/**cellweb**-tree-root-protection

Method Statement: Construction of new boundary wall, driveway and parking area

- Utilize a metal railing boundary fence to avoid strip foundation within the extended RPA.
- Excavate post holes with a soil auger to minimise root damage within the extended RPA.
- Utilize dry-mix concrete to minimise root damage from alkaloids in wet concrete mix.
- Ramping on and off the above-ground CCS section must be constructed outside of the RPA
- The CCS should be designed by an engineer to carry the maximum anticipated loading for site construction traffic and future use
- The CCS must be constructed before vehicles cross the RPA using the 'rolling out' system of installation.
- The permeable surface within the RPA and compensatory area should be protected with a temporary sacrificial surface laid over a geotextile separator to ensure permeability is retained (i.e., interstices should not become blocked by the passage of construction vehicles). No excavation for haunching is permitted on side of the CCS closest to the tree/s within the RPA. The CCS edge must be supported e.g., by above-ground retaining boards/blocks secured with road pins to minimise damage to the lateral roots**.**
- Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.

Identification No.	**T534**
Species	Common sycamore *Acer pseudoplatanus L.*
Current Height (M)	20m
Ultimate Height (M)	22m
Current Stem Dia (cm) at narrowest point below fork	53cm
Crown clearance	3m
Crown Spread (M)	Radius N = 5m; E = 1m; S = 3m; W = 1m
Growth stage	Early-Mature

Tree Condition:
Root: No evidence of soil movement. Strangler root on north side.
Stem: Localised bark necrosis between buttressing on south side
Crown: No evidence of recent breakouts of dieback.
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category C2: 'trees with limited safe, useful life expectancy
Water Demand NHBC 4.2-B: moderate
Root Protection Area RPA: for tree of 53cm diameter at narrowest point below fork (0.53m x 12) = **6.4m Radius**
Total RPA required at current stage of growth = 128m^2
Arboricultural Impact Assessment AIA:

- The tree falls within the footprint of the proposed new boundary wall, driveway and parking area

Method Statement: Construction of new boundary wall, driveway and parking area

- The tree is proposed for removal and replacement with New native woodland planting

Identification No.	**T535**
Species	Norway maple *Acer platanoides L. purple cv*
Current Height (M)	18m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	45cm
Crown clearance	3m
Crown Spread (M)	Radius N = 2m; E = 6m; S = 6m; W = 5m
Growth stage	Early-Mature

Tree Condition:
Root: No evidence of soil movement.
Stem: No evidence of bark necrosis
Crown: No evidence of recent breakouts of dieback.
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality
Water Demand NHBC 4.2-B: moderate
Root Protection Area RPA: for tree of 45cm diameter at 1.5m (0.45m x 12) = **5.4m Radius**
Total RPA required at current stage of growth = 92m^2
Arboricultural Impact Assessment AIA:

- The tree falls within the footprint of the proposed new boundary wall, driveway and parking area

Method Statement: Construction of new boundary wall, driveway and parking area

- The tree is proposed for removal and replaced within New native woodland planting

Identification No.	**T536**
Species	Lawson cypress *Chamaecyparis lawsoniana (Murr.) Parl.*
Current Height (M)	18m
Ultimate Height (M)	18m suppressed
Current Stem Dia (cm) at narrowest point below fork	68cm
Crown clearance	1m
Crown Spread (M)	Radius N = 2.5m; E = 2.5m; S = 2.5m; W = 2.5m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: no evidence of bark necrosis. Multiple bark inclusions characteristic of species.
Crown: No evidence of recent breakouts or dieback. Suppressed
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category A2: 'trees, groups or woodlands of visual importance in a semi-formal landscape'. Safe, Useful, Life expectancy >40 years
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 68cm diameter at narrowest point below fork (0.68m x 12) = **8.2m Radius**
Total RPA required at current stage of growth = 210m^2
Arboricultural Impact Assessment AIA:

- 5% of the RPA is covered by the existing drive
- The proposed new boundary wall falls within the extended RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.
- The protective barrier cannot be positioned at the perimeter of the RPA on the south side
- Geogrid tiles require a compacted foundation for security and are unsuitable for use within the extended RPA
- An above-ground Cellular Confinement System CCS (Raft) will raise the ground level by at least 300mm.
- A 3-dimensional No-Dig cellular confinement system (CCS) with a permeable surface is proposed for the new drive section within the RPA e.g., www.geosyn.co.uk/product/**cellweb**-tree-root-protection

Method Statement: Construction of new boundary wall, driveway and parking area

- Utilize a metal railing boundary fence to avoid strip foundation within the extended RPA.
- Excavate post holes with a soil auger to minimise root damage within the extended RPA.
- Utilize dry-mix concrete to minimise root damage from alkaloids in wet concrete mix.
- Ramping on and off the above-ground CCS section must be constructed outside of the RPA
- The CCS should be designed by an engineer to carry the maximum anticipated loading for site construction traffic and future use
- The CCS must be constructed before vehicles cross the RPA using the 'rolling out' system of installation.
- The permeable surface within the RPA and compensatory area should be protected with a temporary sacrificial surface laid over a geotextile separator to ensure permeability is retained (i.e., interstices should not become blocked by the passage of construction vehicles). No excavation for haunching is permitted on side of the CCS closest to the tree/s within the RPA. The CCS edge must be supported e.g., by above-ground retaining boards/blocks secured with road pins to minimise damage to the lateral roots**.**
- Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.

Identification No.	**T537**
Species	Goat willow *Salix caprea L.*
Current Height (M)	16m
Ultimate Height (M)	16m
Current Stem Dia (cm) at narrowest point below fork	7 stems averaged at 30cm
Crown clearance	4m
Crown Spread (M)	Radius N = 5m; E = 6m; S = 4m; W = 8m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: no evidence of bark necrosis.
Crown: No evidence of recent breakouts or dieback.
Evaluation: adequate annual shoot extension, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 7 stems averaged at 30cm diameter at 1.5m $\sqrt{}$ (0.30^2 x 7) x 12 = **9.5m. Radius**
Total RPA required at current stage of growth = $284m^2$
Arboricultural Impact Assessment AIA:

- The tree falls within the footprint of the proposed new driveway and parking area
- FWD pipes fall within the RPA

Method Statement: Construction of new driveway and parking area

- The tree is proposed for removal by the developer and replaced within New native woodland planting

Identification No.	**Tag 538** Confirm ownership as boundary line conflicts on different layout drawings
Species	Lawson cypress *Chamaecyparis lawsoniana (Murr.) Parl.*
Current Height (M)	20m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	60cm
Crown clearance	0m
Crown Spread (M)	Radius N = 2.5m; E = 2.5m; S = 2.5m; W = 2.5m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category A2: 'trees, groups or woodlands of visual importance in a semi-formal landscape'. Safe, Useful, Life expectancy >40 years
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 60cm diameter at 1.5m (0.60m x 12) = **7.2m Radius**
Total RPA required at current stage of growth = 163m^2
Arboricultural Impact Assessment AIA:

- 30% of the RPA is covered by the existing drive
- The proposed new boundary wall falls within the extended RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.
- The protective barrier cannot be positioned at the perimeter of the RPA on the south side
- Geogrid tiles require a compacted foundation for security and are unsuitable for use within the extended RPA
- An above-ground Cellular Confinement System CCS (Raft) will raise the ground level by at least 300mm.
- A 3-dimensional No-Dig cellular confinement system (CCS) with a permeable surface is proposed for the new drive section within the RPA e.g., www.geosyn.co.uk/product/**cellweb**-tree-root-protection

Method Statement: Construction of new boundary wall, driveway and parking area

- Utilize a metal railing boundary fence to avoid strip foundation within the extended RPA.
- Excavate post holes with a soil auger to minimise root damage within the extended RPA.
- Utilize dry-mix concrete to minimise root damage from alkaloids in wet concrete mix.
- Ramping on and off the above-ground CCS section must be constructed outside of the RPA
- The CCS should be designed by an engineer to carry the maximum anticipated loading for site construction traffic and future use
- The CCS must be constructed before vehicles cross the RPA using the 'rolling out' system of installation.
- The permeable surface within the RPA and compensatory area should be protected with a temporary sacrificial surface laid over a geotextile separator to ensure permeability is retained (i.e., interstices should not become blocked by the passage of construction vehicles). No excavation for haunching is permitted on side of the CCS closest to the tree/s within the RPA. The CCS edge must be supported e.g., by above-ground retaining boards/blocks secured with road pins to minimise damage to the lateral roots**.**
- Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.

Identification No.	**Tag 539**
Species	Western red cedar *Thuja plicata D. Don*
Current Height (M)	20m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	58cm
Crown clearance	0m
Crown Spread (M)	Radius N = 2m; E = 2m; S = 2m; W = 2m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category A2: 'trees, groups or woodlands of visual importance in a semi-formal landscape'. Safe, Useful, Life expectancy >40 years
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 58cm diameter at 1.5m (0.58m x 12) = **7m Radius**
Total RPA required at current stage of growth = 154m^2
Arboricultural Impact Assessment AIA:

- The tree falls within the footprint of the proposed new boundary wall, driveway and parking area

Method Statement: Construction of new boundary wall, driveway and parking area

- The tree is proposed for removal and replaced within New native woodland planting

Identification No.	**Tag 540**
Species	Lawson cypress *Chamaecyparis lawsoniana (Murr.) Parl.*
Current Height (M)	16m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	42cm
Crown clearance	1.5m
Crown Spread (M)	Radius N = 2.5m; E = 2.5m; S = 2.5m; W = 2.5m
Growth stage	Early-Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: no evidence of bark necrosis
Crown: Crown collapse and regrowth
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 42cm diameter at 1.5m (0.42m x 12) = **5m Radius**
Total RPA required at current stage of growth = 79m^2
Arboricultural Impact Assessment AIA:

- The tree falls within the footprint of the proposed new boundary wall, driveway and parking area

Method Statement: Construction of new boundary wall, driveway and parking area

- The tree is proposed for removal and replaced within New native woodland planting

Identification No.	**Tag 541**
Species	Common yew *Taxus baccata L.*
Current Height (M)	18m
Ultimate Height (M)	18m
Current Stem Dia (cm) at 1.5m	46+86cm
Crown clearance	3m
Crown Spread (M)	Radius N = 7m; E = 8m; S = 5m; W = 10m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category A2, A1: 'trees, groups or woodlands of visual importance in a semi-formal landscape'. Safe, Useful, Life expectancy >40 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 46+86cm diameter at 1.5m $\sqrt{}$ ($0.46^2 + 0.86^2$) x 12 = **11.7m. Radius**
Total RPA required at current stage of growth = 430m^2
Arboricultural Impact Assessment AIA:

- The proposed new boundary wall, driveway and parking area fall within the extended RPA perimeter
- Lateral rooting will have been constrained by the presence of the boundary wall and outbuilding foundation.
- The majority of roots will extend over the grass area.
- FWD, SWD pipes, stopcock and inspection covers fall within the extended RPA.
- The existing FWD is not up to standard and must be replaced.
- It is proposed to blank off the existing system and install the new pipework situated close to the Hall side elevation to minimise trench excavation damage to the root system, while retaining access for drain maintenance.
- A 3-dimensional No-Dig cellular confinement system (CCS) with a permeable surface is proposed for the new drive section within the RPA e.g., www.geosyn.co.uk/product/**cellweb**-tree-root-protection

Method Statement: Construction of new boundary wall, driveway and parking area

- Utilize a metal railing boundary fence to avoid strip foundation within the extended RPA.
- Excavate post holes with a soil auger to minimise root damage within the extended RPA.
- Utilize dry-mix concrete to minimise root damage from alkaloids in wet concrete mix.
- Ramping on and off the above-ground CCS section must be constructed outside of the RPA
- The CCS should be designed by an engineer to carry the maximum anticipated loading for site construction traffic and future use
- The CCS must be constructed before vehicles cross the RPA using the 'rolling out' system of installation.
- The permeable surface within the RPA and compensatory area should be protected with a temporary sacrificial surface laid over a geotextile separator to ensure permeability is retained (i.e., interstices should not become blocked by the passage of construction vehicles). No excavation for haunching is permitted on side of the CCS closest to the tree/s within the RPA. The CCS edge must be supported e.g., by above-ground retaining boards/blocks secured with road pins to minimise damage to the lateral roots**.**
- Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.

Identification No.	**Tag 542**
Species	Silver birch *Betula pendula Roth.*
Current Height (M)	18m
Ultimate Height (M)	18m
Current Stem Dia (cm) at 1.5m	54cm
Crown clearance	4m
Crown Spread (M)	Radius N = 6m; E = 5m; S = 5m; W = 5m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Low
Root Protection Area RPA: for tree of 54cm diameter at 1.5m 0.54m x 12) = **6.5m Radius**
Total RPA required at current stage of growth = 132m^2
Arboricultural Impact Assessment AIA:

- The tree falls with the footprint of the realigned SWD and FWD pipeline.
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new drainage system

- The tree is proposed for removal and replacement with New native woodland planting

Identification No.	**Tag 543**
Species	Variegated Holly *Ilex aquifolium cv*
Current Height (M)	12m
Ultimate Height (M)	12m
Current Stem Dia (cm) at narrowest point below fork	48cm
Crown clearance	1.5m
Crown Spread (M)	Radius N = 3m; E = 3m; S = 3m; W = 2m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: Cavity at 1st bifurcation. Woundwood response.
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Low
Root Protection Area RPA: for tree of 48cm diameter at narrowest point below fork (0.48m x 12) = **5.8m Radius**
Total RPA required at current stage of growth = 105m^2
Arboricultural Impact Assessment AIA:

- The tree falls with the footprint of the realigned new access drive, SWD and FWD pipeline.
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new drainage system and access driveway

- The tree is proposed for removal and replacement with New native woodland planting

Identification No.	**Tag 544**
Species	Lawson cypress *Chamaecyparis lawsoniana (Murr.) Parl.*
Current Height (M)	18m
Ultimate Height (M)	18m
Current Stem Dia (cm) at 1.5m	54+68cm
Crown clearance	2m
Crown Spread (M)	Radius N = 3m; E = 3m; S = 3m; W = 3m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category A2: 'trees, groups or woodlands of visual importance in a semi-formal landscape'. Safe, Useful, Life expectancy >40 years
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 54+68cm diameter at 1.5m $\sqrt{}$ ($0.54^2 + 0.68^2$) x 12 = **10.4m. Radius**
Total RPA required at current stage of growth = 340m^2
Arboricultural Impact Assessment AIA:

- The proposed new drainage system falls outside the RPA.
- The proposed new driveway falls within the extended RPA perimeter
- Lateral rooting will have been constrained by the presence of the boundary walls.
- The majority of roots will extend over the grass area.
- Existing FWD, SWD pipes and inspection covers fall within the extended RPA.
- The existing FWD is not up to standard and must be replaced.
- It is proposed to blank off the existing system and install the new pipework situated at the extent of the RPA to minimise trench excavation damage to the root system, while retaining access for drain maintenance.
- A 3-dimensional No-Dig cellular confinement system (CCS) with a permeable surface is proposed for the new drive section within the RPA e.g., www.geosyn.co.uk/product/**cellweb**-tree-root-protection

Method Statement: Construction of new boundary wall, driveway and parking area

- Ramping on and off the above-ground CCS section must be constructed outside of the RPA
- The CCS should be designed by an engineer to carry the maximum anticipated loading for site construction traffic and future use
- The CCS must be constructed before vehicles cross the RPA using the 'rolling out' system of installation.
- The permeable surface within the RPA and compensatory area should be protected with a temporary sacrificial surface laid over a geotextile separator to ensure permeability is retained (i.e., interstices should not become blocked by the passage of construction vehicles). No excavation for haunching is permitted on side of the CCS closest to the tree/s within the RPA. The CCS edge must be supported e.g., by above-ground retaining boards/blocks secured with road pins to minimise damage to the lateral roots**.**
- Install section of Heras fence set back within the RPA as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.

Identification No.	**Tag 545**
Species	Goat willow *Salix caprea L.*
Current Height (M)	16m
Ultimate Height (M)	16m
Current Stem Dia (cm) at narrowest point below fork	70cm estimated
Crown clearance	2m
Crown Spread (M)	Radius N = 8m; E = 4m; S = 5m; W = 6m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement
Stem: Obscured by ivy and sucker growth
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 70cm diameter at narrowest point below fork (0.70m x 12) = **8.4m Radius**
Total RPA required at current stage of growth = 222m^2
Arboricultural Impact Assessment AIA:

- The proposed new drainage system falls outside the RPA.
- The proposed new driveway falls within the extended RPA perimeter
- Lateral rooting will have been constrained by the presence of the boundary walls.
- The majority of roots will extend over the grass area.
- Existing FWD, SWD pipes and inspection covers fall within the extended RPA.
- The existing FWD is not up to standard and must be replaced.
- It is proposed to blank off the existing system and install the new pipework situated at the extent of the RPA to minimise trench excavation damage to the root system, while retaining access for drain maintenance.
- A 3-dimensional No-Dig cellular confinement system (CCS) with a permeable surface is proposed for the new drive section within the RPA e.g., www.geosyn.co.uk/product/**cellweb**-tree-root-protection

Method Statement: Construction of new boundary wall, driveway and parking area

- Ramping on and off the above-ground CCS section must be constructed outside of the RPA
- The CCS should be designed by an engineer to carry the maximum anticipated loading for site construction traffic and future use
- The CCS must be constructed before vehicles cross the RPA using the 'rolling out' system of installation.
- The permeable surface within the RPA and compensatory area should be protected with a temporary sacrificial surface laid over a geotextile separator to ensure permeability is retained (i.e., interstices should not become blocked by the passage of construction vehicles). No excavation for haunching is permitted on side of the CCS closest to the tree/s within the RPA. The CCS edge must be supported e.g., by above-ground retaining boards/blocks secured with road pins to minimise damage to the lateral roots**.**
- Install section of Heras fence set back within the RPA as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.

Identification No.	**Tag 546**
Species	Norway spruce *Picea abies (L.) Karst.*
Current Height (M)	20m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	55cm
Crown clearance	3m
Crown Spread (M)	Radius N = 4m; E = 2m; S = 4m; W = 4m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of stem bleeds
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 55cm diameter at 1.5m (0.55 x 12) = **6.6m Radius**
Total RPA required at current stage of growth = 137m^2
Arboricultural Impact Assessment AIA:

- The proposed new drainage system falls outside the RPA.
- The proposed new driveway falls within the RPA perimeter
- A 3-dimensional No-Dig cellular confinement system (CCS) with a permeable surface is proposed for the new drive section within the RPA e.g., www.geosyn.co.uk/product/**cellweb**-tree-root-protection

Method Statement: Construction of new boundary wall, driveway and parking area

- Ramping on and off the above-ground CCS section must be constructed outside of the RPA
- The CCS should be designed by an engineer to carry the maximum anticipated loading for site construction traffic and future use
- The CCS must be constructed before vehicles cross the RPA using the 'rolling out' system of installation.
- The permeable surface within the RPA and compensatory area should be protected with a temporary sacrificial surface laid over a geotextile separator to ensure permeability is retained (i.e., interstices should not become blocked by the passage of construction vehicles). No excavation for haunching is permitted on side of the CCS closest to the tree/s within the RPA. The CCS edge must be supported e.g., by above-ground retaining boards/blocks secured with road pins to minimise damage to the lateral roots**.**
- Install section of Heras fence set back within the RPA as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.

Identification No.	**Tag 547**
Species	Norway spruce *Picea abies (L.) Karst.*
Current Height (M)	20m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	53cm
Crown clearance	3m
Crown Spread (M)	Radius N = 2.5m; E = 2.5m; S = 2.5m; W = 2.5m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement
Stem: 'Bottle-butt' adaptive growth response and resin bleeds on east side of stem base is indicative of stem decay.
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category C2: 'trees with limited safe, useful life expectancy, subject to climatic stressors. Potential for windblow.
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 53cm diameter at 1.5m (0.53 x 12) = **6.4m Radius**
Total RPA required at current stage of growth = 128m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway falls within the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway

- The tree is proposed for removal on safety grounds

Identification No.	**Tag 548**
Species	Norway spruce *Picea abies (L.) Karst.*
Current Height (M)	18m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	29cm
Crown clearance	5m
Crown Spread (M)	Radius N = 2.5m; E = 2.5m; S = 2.5m; W = 2.5m
Growth stage	Early-Mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of stem bleeds
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 29cm diameter at 1.5m (0.29 x 12) = **3.5m Radius**
Total RPA required at current stage of growth = 38m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway falls outside the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway

- Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.

Identification No.	**Tag 549**
Species	Common beech *Fagus sylvatica L.*
Current Height (M)	16m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	20+22cm
Crown clearance	2m
Crown Spread (M)	Radius N = 1m; E = 4m; S = 5m; W = 5m
Growth stage	Young

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of stem bleeds
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 20+22cm diameter at 1.5m $\sqrt{(0.20^2 + 0.22^2)} \times 12 =$ **3.6m. Radius**
Total RPA required at current stage of growth = $40m^2$
Arboricultural Impact Assessment AIA:

- The proposed new driveway falls outside the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway

- Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.

Identification No.	**G1** group of 10 trees
Species	Lawson cypress *Chamaecyparis lawsoniana (Murr.) Parl.*
Current Height (M)	16m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	12cm average of 10 trees
Crown clearance	3m
Crown Spread (M)	Radius N = 1m; E = 1m; S = 1m; W = 1m
Growth stage	Young

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of stem bleeds
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 12cm diameter at 1.5m (0.12 x 12) = **1.4m Radius**
Total RPA required at current stage of growth = $6m^2$ /tree
Arboricultural Impact Assessment AIA:

- The majority of stems fall within the footprint of the proposed new driveway
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway

- The group of trees is proposed for removal by the developer and replacements included in the new native woodland planting.

Identification No.	**Tag 550**
Species	Variegated Western Red Cedar *Thuja plicata Zebrina*
Current Height (M)	10m
Ultimate Height (M)	16m
Current Stem Dia (cm) at 1.5m	26cm
Crown clearance	0m
Crown Spread (M)	Radius N = 1.5m; E = 1.5m; S = 1.5m; W = 1.5m
Growth stage	Young

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of stem bleeds
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 26cm diameter at 1.5m (0.26 x 12) = **3.1m Radius**
Total RPA required at current stage of growth = 6m^2 /tree
Arboricultural Impact Assessment AIA:

- The proposed new driveway falls within the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway

- The tree is proposed for removal by the developer and a replacement included in the new native woodland planting.

Identification No.	**Tag 551**
Species	Lawson cypress *Chamaecyparis lawsoniana (Murr.) Parl.*
Current Height (M)	18m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	44cm
Crown clearance	1.5m
Crown Spread (M)	Radius N = 2m; E = 2m; S = 2m; W = 2m
Growth stage	Early-mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of stem bleeds
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 44cm diameter at 1.5m (0.44 x 12) = **5.3m Radius**
Total RPA required at current stage of growth =88m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway falls within the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway

- The tree is proposed for removal by the developer and a replacement included in the new native woodland planting.

Identification No.	**Tag 552**
Species	Western red cedar *Thuja plicata D. Don*
Current Height (M)	19m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	63cm
Crown clearance	0m
Crown Spread (M)	Radius N = 2.5m; E = 2.5m; S = 2.5m; W = 2.5m
Growth stage	Early-mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of stem bleeds
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 63cm diameter at 1.5m (0.63 x 12) = **7.6m Radius**
Total RPA required at current stage of growth = 180m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway and drainage route falls within the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway and drainage

- The tree is proposed for removal by the developer and a replacement included in the new native woodland planting

Identification No.	**Tag 553**
Species	Norway spruce *Picea abies (L.) Karst.*
Current Height (M)	18m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	34cm
Crown clearance	4m
Crown Spread (M)	Radius N = 2.5m; E = 2.5m; S = 2.5m; W = 2.5m
Growth stage	Early-Mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of stem bleeds
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 34cm diameter at 1.5m (0.34 x 12) = **4.1m Radius**
Total RPA required at current stage of growth = 53m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway and drainage route falls at the RPA perimeter
- Proposed removal of G1 will expose T553 to windblow.
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway and drainage

- The tree is proposed for removal by the developer and a replacement included in the new native woodland planting

Identification No.	**Tag 554**
Species	Norway spruce *Picea abies (L.) Karst.*
Current Height (M)	18m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	38cm
Crown clearance	3m
Crown Spread (M)	Radius N = 1m; E = 2m; S = 4m; W = 3m
Growth stage	Early-Mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of stem bleeds
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 38cm diameter at 1.5m (0.38 x 12) = **4.6m Radius**
Total RPA required at current stage of growth = 66m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway and drainage route falls at the RPA perimeter
- Proposed removal of G1 will expose T554 to windblow.
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway and drainage

- The tree is proposed for removal by the developer and a replacement included in the new native woodland planting

Identification No.	**Tag 555**
Species	Western red cedar *Thuja plicata D. Don*
Current Height (M)	18m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	35cm
Crown clearance	6m
Crown Spread (M)	Radius N = 1m; E = 0m; S = 3m; W = 2m
Growth stage	Early-mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of stem bleeds
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 35cm diameter at 1.5m (0.35 x 12) = **4.2m Radius**
Total RPA required at current stage of growth = 55m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway and drainage route falls within the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway and drainage

- The tree is proposed for removal by the developer and a replacement included in the new native woodland planting

Identification No.	**Tag 556**
Species	Horse chestnut *Aesculus hippocastanum L.*
Current Height (M)	6m to live foliage
Ultimate Height (M)	8m
Current Stem Dia (cm) at 1.5m	40cm
Crown clearance	2m
Crown Spread (M)	Radius N = 3m; E = 3m; S = 3m; W = 3m
Growth stage	Young

Tree Condition:
Root: No evidence of soil movement
Stem: active bleeding canker infection. Nest hole
Crown: Crown dieback and partial collapse. Leaf minor and leaf fungi
Evaluation: tree in decline spiral
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category C2: 'trees with limited safe, useful life expectancy, subject to climatic stressors.
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 40cm diameter at 1.5m (0.40 x 12) = **4.8m Radius**
Total RPA required at current stage of growth = 72m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway and drainage route falls within the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway and drainage

- The tree is proposed for removal by the developer and a replacement included in the new native woodland planting

Identification No.	**Tag 557**
Species	Hybrid poplar *Populus* Belgian clone
Current Height (M)	20m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	50cm
Crown clearance	6m
Crown Spread (M)	Radius N = 3.5m; E = 3.5m; S = 3.5m; W = 3.5m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence necrosis
Crown: Crown dieback. Mistletoe in lower crown
Evaluation: Early evidence of decline
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category C2: 'trees with limited safe, useful life expectancy, subject to climatic stressors.
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 50cm diameter at 1.5m (0.50 x 12) = **6m Radius**
Total RPA required at current stage of growth = 113m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway and drainage route falls within the RPA perimeter
- The tree is proposed for removal on safety grounds
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway and drainage

- The tree is proposed for removal by the developer and a replacement included in the new native woodland planting

Identification No.	**Tag 558**
Species	Wych elm *Ulmus glabra Huds.*
Current Height (M)	Basal shoots
Ultimate Height (M)	N/a
Current Stem Dia (cm) at 1.5m	34cm
Crown clearance	4m
Crown Spread (M)	Radius N = 2.5m; E = 2.5m; S = 2.5m; W = 2.5m
Growth stage	Dying

Tree Condition:
Root: No evidence of soil movement
Stem: Dead. Basal regrowth
Crown: Dead
Evaluation: Elm disease
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category C2: 'trees with limited safe, useful life expectancy, subject to climatic stressors.
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 34cm diameter at 1.5m (0.34 x 12) = **4.1m Radius**
Total RPA required at current stage of growth = 53m^2
Arboricultural Impact Assessment AIA:

- The tree is proposed for removal on safety grounds

Method Statement: Construction of new driveway and drainage

- The tree is proposed for removal by the developer and a replacement included in the new native woodland planting

Identification No.	**Tag 559**
Species	Japanese Larch *Larix kaempferi (lamb.) Carr.*
Current Height (M)	16m
Ultimate Height (M)	18m
Current Stem Dia (cm) at 1.5m	33cm
Crown clearance	6m
Crown Spread (M)	Radius N = 1.5m; E = 1.5m; S = 1.5m; W = 1.5m
Growth stage	Early-mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of stem bleeds. Poor form
Crown: Asymmetric development. No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 33cm diameter at 1.5m (0.33 x 12) = **4m Radius**
Total RPA required at current stage of growth = 50m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway and drainage route falls at the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway and drainage

- The tree is proposed for removal by the developer and a replacement included in the new native woodland planting

Identification No.	**Tag 560**
Species	Common holly *Ilex aquifolium L.*
Current Height (M)	10m
Ultimate Height (M)	12m suppressed
Current Stem Dia (cm) at narrowest point below fork	40cm
Crown clearance	0m
Crown Spread (M)	Radius N = 3m; E = 3m; S = 3m; W = 3m
Growth stage	mature

Tree Condition:
Root: No evidence of soil movement
Stem: multiple. No evidence of necrosis
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Low
Root Protection Area RPA: for tree of 40cm diameter at narrowest point below fork (0.40 x 12) = **4.8m Radius**
Total RPA required at current stage of growth = 72m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway and drainage route falls within the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway and drainage

- The tree is proposed for removal by the developer and a replacement included in the new native woodland planting

Identification No.	**Tag 561**
Species	Japanese Larch *Larix kaempferi (lamb.) Carr.*
Current Height (M)	12m
Ultimate Height (M)	18m
Current Stem Dia (cm) at 1.5m	16cm
Crown clearance	6m
Crown Spread (M)	Radius N = 1.5m; E = 1.5m; S = 1.5m; W = 1.5m
Growth stage	Young

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of stem bleeds. Poor form
Crown: Asymmetric development. No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 16cm diameter at 1.5m (0.16 x 12) = **1.9m Radius**
Total RPA required at current stage of growth = 11m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway and drainage route falls within the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway and drainage

- The tree is proposed for removal by the developer and a replacement included in the new native woodland planting

Identification No.	**Tag 562**
Species	Poplar
Current Height (M)	14m monolith
Ultimate Height (M)	N/a
Current Stem Dia (cm) at 1.5m	50cm
Crown clearance	Na/
Crown Spread (M)	Radius 0
Growth stage	Dead

Tree Condition:
Root: No evidence of soil movement
Stem: Dead. Obscured by ivy growth. Nest holes
Crown: missing
Evaluation: Potential for collapse
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category C2: 'trees with limited safe, useful life expectancy, subject to climatic stressors.
Water Demand NHBC 4.2-B: N/a
Root Protection Area RPA: N/a
Arboricultural Impact Assessment AIA:

- The proposed new driveway falls within the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway

- Recommended for removal

Identification No.	**Tag 563**
Species	Common beech *Fagus sylvatica L.*
Current Height (M)	16m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	43cm
Crown clearance	3m
Crown Spread (M)	Radius N = 4m; E = 4m; S = 4m; W = 4m
Growth stage	Early-Mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of stem bleeds
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 43cm diameter at 1.5m (0.43 x 12) = **5.2m Radius**
Total RPA required at current stage of growth = 84m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway falls outside the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway

- Install section of Heras fence as indicated on Tree Protection plan. Specification as recommended in BS5837 (2012) Fig 3 appended.

Identification No.	**Tag 564**
Species	Horse chestnut *Aesculus hippocastanum L.*
Current Height (M)	14m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	54cm
Crown clearance	1m
Crown Spread (M)	Radius N = 5m; E = 5m; S = 5m; W = 4m
Growth stage	Early-Mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of active bleeding canker stem bleeds
Crown: No evidence of recent breakouts or significant dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 54cm diameter at 1.5m (0.54 x 12) = **6.5m Radius**
Total RPA required at current stage of growth = 132m^2
Arboricultural Impact Assessment AIA:

- The proposed new driveway and drainage route falls within the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway and drainage

- The tree is proposed for removal by the developer and a replacement included in the new native woodland planting

Identification No.	**Tag 565**
Species	Ornamental cherry *Prunus cv*
Current Height (M)	15m
Ultimate Height (M)	18m
Current Stem Dia (cm) at 1.5m	54cm
Crown clearance	1.5m
Crown Spread (M)	Radius N = 7m; E = 7m; S = 4m; W = 3m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or significant dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 54cm diameter at 1.5m (0.54 x 12) = **6.5m Radius**
Total RPA required at current stage of growth = 132m^2
Arboricultural Impact Assessment AIA:

- The tree falls within the proposed new driveway footprint
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new driveway

- The tree is proposed for removal by the developer

Identification No.	**H1:** 45m of lapsed hedge
Species	Common beech *Fagus sylvatica L.* Common ash *Fraxinus excelsior L.*
Current Height (M)	14m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	35cm largest stem
Crown clearance	2m
Crown Spread (M)	Radius N = 5m; E = 1m; S = 5m; W = 1m
Growth stage	Young

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or significant dieback. No evidence of ADB
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 35cm diameter at 1.5m (0.35 x 12) = **4.2m Radius**
Total RPA required at current stage of growth = 55m^2 /tree
Arboricultural Impact Assessment AIA:

- The proposed new drainage route bisects H1 at the northern end
- 4 trees are proposed for removal to allow 3m width for trench excavation
- The remaining trees fall outside the proposed new driveway footprint
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new drainage route

- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**The Avenue south side 9xtrees**
Species	Copper beech *Fagus sylvatica forma purpurea (Ait.) Schneid.*
Current Height (M)	16m
Ultimate Height (M)	18m
Current Stem Dia (cm) at 1.5m	70cm averaged
Crown clearance	4m
Crown Spread (M)	Radius N = 5m; E = 5m; S = 5m; W = 5m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category A2: 'trees, groups or woodlands of visual importance in a semi-formal landscape'. Safe, Useful, Life expectancy >40 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 70cm diameter at 1.5m (0.70 x 12) = **8.4m Radius**
Total RPA required at current stage of growth = 222m^2
Arboricultural Impact Assessment AIA:

- 10% of the RPA is covered by the existing drive
- Site the GSHB boreholes outside of the extended RPA radius of **9m**
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of GSHB boreholes

- Site the Protective fencing outside the extended RPA perimeter of **9m** radius
- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**Tag 566**
Species	Copper beech *Fagus sylvatica forma purpurea (Ait.) Schneid.*
Current Height (M)	16m
Ultimate Height (M)	18m
Current Stem Dia (cm) at 1.5m	56cm
Crown clearance	4m
Crown Spread (M)	Radius N = 6m; E = 6m; S = 6m; W = 4m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category A2: 'trees, groups or woodlands of visual importance in a semi-formal landscape'. Safe, Useful, Life expectancy >40 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 56cm diameter at 1.5m (0.56 x 12) = **6.7m Radius**
Total RPA required at current stage of growth = 141m^2
Arboricultural Impact Assessment AIA:

- 15% of the RPA is covered by the existing drive
- The proposed new drive junction falls outside the RPA perimeter
- Site the GSHB boreholes outside of the extended RPA radius of **7m**
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of GSHB boreholes and new drive junction

- Site the Protective fencing outside the extended RPA perimeter of **7.5m** radius on the field side
- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**Tag 567**
Species	Copper beech *Fagus sylvatica forma purpurea (Ait.) Schneid.*
Current Height (M)	16m
Ultimate Height (M)	18m
Current Stem Dia (cm) at 1.5m	64cm
Crown clearance	4m
Crown Spread (M)	Radius N = 6m; E = 6m; S = 6m; W = 6m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category A2: 'trees, groups or woodlands of visual importance in a semi-formal landscape'. Safe, Useful, Life expectancy >40 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 64cm diameter at 1.5m (0.64 x 12) = **7.7m Radius**
Total RPA required at current stage of growth = 186m^2
Arboricultural Impact Assessment AIA:

- 15% of the RPA is covered by the existing drive
- The proposed new drive junction falls at the RPA perimeter
- Site the GSHB boreholes outside of the extended RPA radius of **8m**
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of GSHB boreholes and new drive junction

- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**H2:** managed hedge 30m
Species	Hawthorn *Crataegus monogyna Jacq.*
Current Height (M)	2m
Ultimate Height (M)	2m managed hedge
Current Stem Dia (cm) at narrowest point below fork	20cm
Crown clearance	0m
Crown Spread (M)	Radius 0.75m from centre line
Growth stage	mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or significant dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 20cm diameter at narrowest point below fork (0.20 x 12) = **2.4m Radius**
Total RPA required at current stage of growth = 18m^2 /tree
Arboricultural Impact Assessment AIA:

- The hedge is proposed for removal to facilitate a new junction with the existing drive.

Method Statement: Construction of new drive junction

- The hedge is proposed for removal by the developer

Identification No.	**H3:** managed hedge beneath Copper beech avenue
Species	Common yew *Taxus baccata L.* Hornbeam *Carpinus betulus L.* Common holly *Ilex aquifolium L*. Hawthorn *Crataegus monogyna Jacq.*
Current Height (M)	1.5m
Ultimate Height (M)	1.5 managed hedge
Current Stem Dia (cm) at narrowest point below fork	15cm
Crown clearance	0m
Crown Spread (M)	Radius 75cm from centre line
Growth stage	Early-mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or significant dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 15cm diameter at narrowest point below fork (0.15 x 12) = **1.8m Radius**
Total RPA required at current stage of growth = 10m^2 /tree

- Site the GSHB boreholes outside of the extended RPA radius of **2m**
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of GSHB boreholes and new drive junction

- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**Tag 568**
Species	Copper beech *Fagus sylvatica forma purpurea (Ait.) Schneid.*
Current Height (M)	16m
Ultimate Height (M)	18m
Current Stem Dia (cm) at 1.5m	70cm
Crown clearance	4m
Crown Spread (M)	Radius N = 8m; E = 8m; S = 8m; W = 8m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or dieback
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category A2: 'trees, groups or woodlands of visual importance in a semi-formal landscape'. Safe, Useful, Life expectancy >40 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 70cm diameter at 1.5m (0.70 x 12) = **8.4m Radius**
Total RPA required at current stage of growth = 222m^2
Arboricultural Impact Assessment AIA:

- 15% of the RPA is covered by the existing drive
- Site the GSHB boreholes outside of the extended RPA radius of **9m**
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of GSHB boreholes and new drive junction

- Site the Protective fencing outside the extended RPA perimeter of **9m** radius on the field side
- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**T569:**
Species	Hawthorn *Crataegus monogyna Jacq.*
Current Height (M)	10m
Ultimate Height (M)	10m
Current Stem Dia (cm) at narrowest point below fork	57cm
Crown clearance	4m
Crown Spread (M)	Radius N = 3m; E = 3m; S = 3m; W = 3m
Growth stage	mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis. Single stem reduced
Crown: No evidence of recent breakouts or significant dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 57cm diameter at narrowest point below fork (0.57 x 12) = **6.8m Radius**
Total RPA required at current stage of growth = 146m^2
Arboricultural Impact Assessment AIA:

- The proposed new drainage route and GSHB boreholes fall outside the RPA
- Site the GSHB boreholes outside of the RPA radius of **6.8m**
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of GSHB boreholes and new drainage route

- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**Tag 570**
Species	Ornamental cherry *Prunus cv*
Current Height (M)	12m
Ultimate Height (M)	14m
Current Stem Dia (cm) at 1.5m	48cm
Crown clearance	2m
Crown Spread (M)	Radius N = 5m; E = 5m; S = 5m; W = 5m
Growth stage	Early-mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or significant dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 48cm diameter at 1.5m (0.48 x 12) = **5.8m Radius**
Total RPA required at current stage of growth = 105m^2
Arboricultural Impact Assessment AIA:

- The proposed new drainage route falls outside the RPA
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new drainage route

- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**T571**
Species	Portugal laurel *Prunus lusitanica L.*
Current Height (M)	12m
Ultimate Height (M)	12m
Current Stem Dia (cm) at narrowest point below fork	15 stems averaged at 12cm
Crown clearance	0m
Crown Spread (M)	Radius N = 5m; E = 5m; S = 5m; W = 5m
Growth stage	Late-Mature

Tree Condition:
Root: No evidence of soil movement or perennial fungi
Stem: no evidence of bark necrosis.
Crown: No evidence of recent breakouts. Top dieback on central stems
Evaluation: adequate annual shoot extension, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 15 stems averaged at 12cm diameter at 1.5m √ (0.12^2 x 15) x 12 = **5.6m. Radius**
Total RPA required at current stage of growth = $98m^2$
Arboricultural Impact Assessment AIA:

- The proposed new drainage route falls outside the RPA
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new drainage route

- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**G2: group of 3 small trees + 1 cotoneaster shrub**
Species	Damson *Prunus domestica subsp. insititia (L.) Poir.*
Current Height (M)	8m
Ultimate Height (M)	10m
Current Stem Dia (cm) at 1.5m	3 stems averaged at 15cm
Crown clearance	3m
Crown Spread (M)	Radius N = 3m; E = 3m; S = 3m; W = 3m
Growth stage	Young

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or significant dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for 3 trees of 15cm diameter at 1.5m $\sqrt{}$ ($0.15^2 + 0.15^2 + 0.15^2$) x 12 = **3.1m Radius**
Total RPA required at current stage of growth = $30m^2$ /tree
Arboricultural Impact Assessment AIA:

- The proposed new drainage route falls outside the RPA
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new drainage route

- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**T572: group of 1 small tree + mixed shrubs**
Species	Damson *Prunus domestica subsp. insititia (L.) Poir.*
Current Height (M)	8m
Ultimate Height (M)	10m
Current Stem Dia (cm) at 1.5m	15cm
Crown clearance	3m
Crown Spread (M)	Radius N = 2m; E = 2m; S = 2m; W = 2m
Growth stage	Young

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis
Crown: No evidence of recent breakouts or significant dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 15cm diameter at 1.5m (0.15 x 12) = **1.8m Radius**
Total RPA required at current stage of growth = $10m^2$ /tree
Arboricultural Impact Assessment AIA:

- The proposed new drainage route falls outside the RPA
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of new drainage route

- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**T573 Walled Garden**
Species	Ornamental cherry *Prunus cv*
Current Height (M)	12m
Ultimate Height (M)	12m
Current Stem Dia (cm) at 1.5m	44cm
Crown clearance	1.8m
Crown Spread (M)	Radius N = 4m; E = 4m; S = 4m; W = 4m
Growth stage	mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis.
Crown: No evidence of recent breakouts or dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 44cm diameter at 1.5m (0.44 x 12) = **5.3m Radius**
Total RPA required at current stage of growth = 88m^2
Arboricultural Impact Assessment AIA:

- The proposed development falls outside the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of Swimming Pool Barn

- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**T574 Walled Garden**
Species	Ornamental cherry *Prunus cv*
Current Height (M)	12m
Ultimate Height (M)	12m
Current Stem Dia (cm) at 1.5m	43cm
Crown clearance	1.8m
Crown Spread (M)	Radius N = 4.5m; E = 4.5m; S = 4.5m; W = 4.5m
Growth stage	mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis.
Crown: No evidence of recent breakouts or dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 43cm diameter at 1.5m (0.43 x 12) = **5.2m Radius**
Total RPA required at current stage of growth = 84m^2
Arboricultural Impact Assessment AIA:

- The proposed development falls outside the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of Swimming Pool Barn

- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**T575 Walled Garden**
Species	Common oak *Quercus robur L.*
Current Height (M)	11m
Ultimate Height (M)	20m
Current Stem Dia (cm) at 1.5m	48cm
Crown clearance	2m
Crown Spread (M)	Radius N = 7m; E = 7m; S = 5m; W = 2m
Growth stage	Young

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis.
Crown: No evidence of recent breakouts or dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 48cm diameter at 1.5m (0.48 x 12) = **5.8m Radius**
Total RPA required at current stage of growth = 105m^2
Arboricultural Impact Assessment AIA:

- The proposed development falls outside the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of Swimming Pool Barn

- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**T576 Walled Garden**
Species	Ornamental cherry *Prunus cv*
Current Height (M)	8m
Ultimate Height (M)	12m
Current Stem Dia (cm) at 1.5m	36cm
Crown clearance	1.5m
Crown Spread (M)	Radius N = 4m; E = 4m; S = 4m; W = 4m
Growth stage	Early-mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis.
Crown: No evidence of recent breakouts or dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 36cm diameter at 1.5m (0.36 x 12) = **4.3m Radius**
Total RPA required at current stage of growth = 58m^2
Arboricultural Impact Assessment AIA:

- The proposed development falls outside the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of Swimming Pool Barn

- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**T577 Walled Garden**
Species	Lilac *Syringa cv*
Current Height (M)	4m
Ultimate Height (M)	4m
Current Stem Dia (cm) at narrowest point below fork	20cm
Crown clearance	1m
Crown Spread (M)	Radius N = 4m; E = 3m; S = 0m; W = 3m
Growth stage	mature

Tree Condition:
Root: No evidence of soil movement. Old root heave has stabilised
Stem: Subsided. No evidence of bark necrosis.
Crown: No evidence of recent breakouts or dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 20cm diameter at narrowest point below fork (0.20 x 12) = **2.4m Radius**
Total RPA required at current stage of growth = 18m^2
Arboricultural Impact Assessment AIA:

- The proposed development falls outside the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of Swimming Pool Barn

- Install the section of Heras fence barrier, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**T578 Walled Garden**
Species	False acacia *Robinia pseudoacacia* 'Frisia'
Current Height (M)	15m
Ultimate Height (M)	15m
Current Stem Dia (cm) at 1.5m	44cm
Crown clearance	2m
Crown Spread (M)	Radius N = 6m; E = 6m; S = 6m; W = 6m
Growth stage	Early-mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis.
Crown: No evidence of recent breakouts or dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 44cm diameter at 1.5m (0.44 x 12) = **5.3m Radius**
Total RPA required at current stage of growth = 88m^2
Arboricultural Impact Assessment AIA:

- The proposed new FWD falls outside the RPA perimeter.
- The existing/refurbished SWD falls within the RPA
- The existing main access drive provides permanent ground protection within the RPA

Method Statement: Construction of new drainage

- Install the section of Heras fence barrier set back within the RPA, positioned as indicated on the tree protection plan. Specification as recommended in BS5837 (2012) fig 3 appended

Identification No.	**T579 Walled Garden**
Species	Ornamental cherry *Prunus cv*
Current Height (M)	10m
Ultimate Height (M)	12m
Current Stem Dia (cm) at 1m	39cm
Crown clearance	1.5m
Crown Spread (M)	Radius N = 5m; E = 3m; S = 6m; W = 7m
Growth stage	Early-mature

Tree Condition:
Root: No evidence of soil movement
Stem: no evidence of bark necrosis.
Crown: No evidence of recent breakouts or dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 39cm diameter at 1.5m (0.39 x 12) = **4.7m Radius**
Total RPA required at current stage of growth = 69m^2
Arboricultural Impact Assessment AIA:

- The proposed swimming pool building falls at the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of Swimming Pool Barn

- Proposed for removal by developer

Identification No.	**T580 Walled Garden**
Species	Lilac *Syringa cv*
Current Height (M)	5m
Ultimate Height (M)	5m
Current Stem Dia (cm) at narrowest point below fork	25cm
Crown clearance	1m
Crown Spread (M)	Radius N = 4m; E = 3m; S = 2m; W = 3m
Growth stage	mature

Tree Condition:
Root: No evidence of soil movement.
Stem: No evidence of bark necrosis.
Crown: No evidence of recent breakouts or dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >20 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 25cm diameter at narrowest point below fork (0.20 x 12) = **3m Radius**
Total RPA required at current stage of growth = 28m^2
Arboricultural Impact Assessment AIA:

- The proposed swimming pool building falls within the RPA perimeter
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of Swimming Pool Barn

- Proposed for removal by developer

Identification No.	**H4 Walled Garden:** 15m of lapsed hedge
Species	Common yew *Taxus baccata L*.
Current Height (M)	10m
Ultimate Height (M)	12m
Current Stem Dia (cm) at narrowest point below fork	30cm estimated
Crown clearance	0m
Crown Spread (M)	Radius from centre line = 4.5m
Growth stage	N/a

Tree Condition:
Root: No evidence of soil movement.
Stem: obscured by dead foliage. Formerly managed at 2m height. Multiple stems from regrowth
Crown: No evidence of recent breakouts or dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >40 years
Water Demand NHBC 4.2-B: Moderate
Root Protection Area RPA: for tree of 30cm diameter at narrowest point below fork (0.30 x 12) = **3.6m Radius**
Total RPA required at current stage of growth = 41m^2 /tree
Arboricultural Impact Assessment AIA:

- The proposed swimming pool barn footprint falls within the RPA perimeter
- Construction access (scaffolding) will be required within the RPA
- Facilitation pruning will be required for construction access
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of Swimming Pool Barn

- The yew hedge is proposed for coppicing to 150mm above ground level by the developer. Any regrowth from the cut stumps will be supplemented with a row of yew hedging transplants.

Identification No.	**H5 Walled Garden:** 20m of hedge
Species	Leyland cypress *X Cupressocyparis leylandii Dallim*.
Current Height (M)	20m
Ultimate Height (M)	20m
Current Stem Dia (cm) at narrowest point below fork	44cm averaged
Crown clearance	0m
Crown Spread (M)	Radius from centre line = 5m
Growth stage	Mature

Tree Condition:
Root: No evidence of soil movement.
Stem: no evidence of bark bleeds
Crown: No evidence of recent breakouts or dieback.
Evaluation: adequate annual shoot extension, foliage retention, colour and density are indicative of the tree maintaining vitality to grow in the prevailing conditions
Tree Quality Assessment: Ref.BS5837 (2012) 4.5.1 Category B2: 'trees occurring as collectives but situated as to make little visual contribution to the wider locality Safe, Useful, Life expectancy >40 years
Water Demand NHBC 4.2-B: High
Root Protection Area RPA: for tree of 44cm diameter at narrowest point below fork (0.44 x 12) = **3.6m Radius**
Total RPA required at current stage of growth = 41m^2 /tree
Arboricultural Impact Assessment AIA:

- The proposed swimming pool barn footprint falls within the RPA perimeter
- Construction access (scaffolding) will be required within the RPA
- RPA. *'BS 7.7.2.1: The design should not require excavation into the soil, including the lowering of levels and/or scraping, other than the removal, using hand tools, of any turf layer or other surface vegetation'*.

Method Statement: Construction of Swimming Pool Barn

- The 20m section of Leyland cypress hedge is proposed for removal to be replaced with Yew hedging

General Arboricultural Method Statement ref. BS 5837 (2012)

3.0 The root protection area (RPA) recommendation in BS 5837 2012 (Trees in relation to design, demolition and construction – Recommendations), is based upon a minimum area (in m^2) calculated from the measurement of the stem diameter and a factor of the radial distance between the tree stem and the outer extent of the main lateral roots. The resulting area is usually recorded as a generalised circle on the tree survey. However, the significant figure is the equivalent available rooting area in m^2 rather than the circular shape; tree roots exploit the optimum ground conditions for their physical development dependent upon soil aeration, plant-available water, mineral elements and physical barriers to growth. Providing the total minimum area in m^2 recommended in the RPA is available to the tree, the actual shape of the area is less significant, *providing* it can be demonstrated that the construction process will not result in significant damage to existing roots greater than 25mm in diameter. 'The viable retention of trees on construction sites is dictated by the successful protection of their root systems throughout the development process from initial site clearance to installation of the new landscape. Healthy soils contain five basic components: oxygen, organic matter, mineral matter, living organisms and moisture. A soil's porosity allows water to drain through, carbon dioxide to escape and oxygen to enter. Construction vehicles operating on exposed soils, particularly in wet conditions, compact the soil pores and prevent these processes from occurring'(Cowan 2005)

3.1 The Tree Protection Plan (TPP) and method statement details how the construction work will be carried out in proximity to the retained trees, protective barrier specification, timing of work, other mitigation measures where required and supervision of the protection measures during construction.

3.2 Summary of works

Drainage and Utilities: Follow recommendation in the NJUG Volume 4 Code of practice relating to work in proximity to tree roots within the RPA; specifically, the avoidance of trench excavations within the RPA. Any drainage or service-related works to be carried out within the Root Protection Area must be subject to the prior written approval of the LPA of a method statement detailing how such works are to be carried out and monitored, so as to avoid undue damage to the tree.

Site Compound, construction materials, soil/demolition debris storage mixing of concrete and washings: Must be located outside of the Root Protection Areas. Vehicle movements, storage of vehicles or heavy machinery, lighting of fires and no excavations or alterations of ground level is permitted within the protective barrier or areas of temporary ground protection

Method of work for individual trees retained in proximity to construction works or access to the works: refer to the work method described for each retained tree ref. section 2.2 of the report.

3.3 Protective Fencing

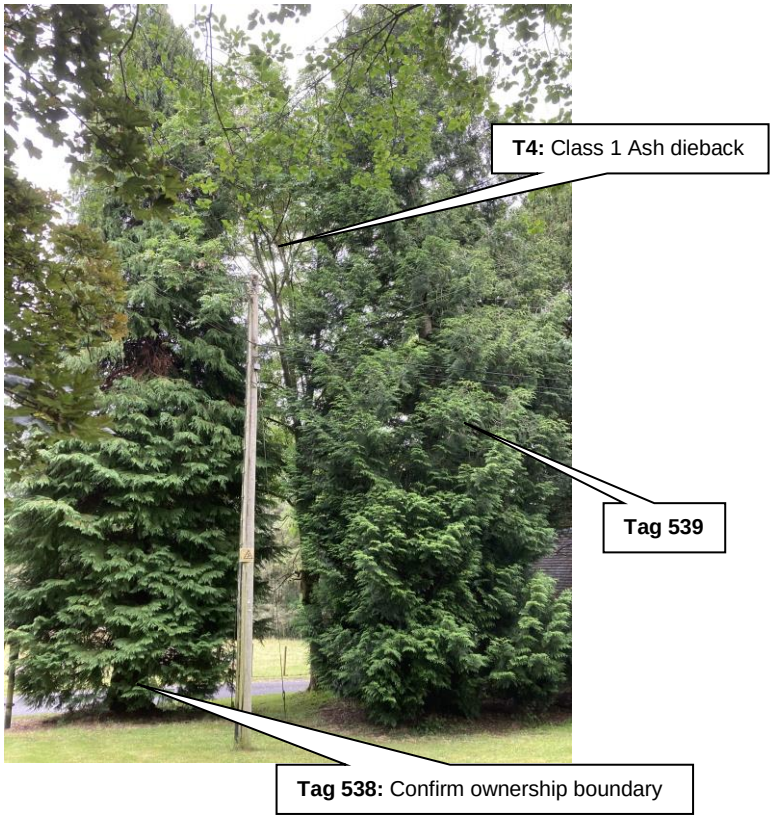
- Protective barriers should be erected with verticals positioned to avoid the lateral roots of the larger trees. Refer to BS 5837 (2012) figure 3 Protective barrier for details of the recommended specification.
- Protective barrier should be erected and then approved by the Local Planning Authority before the start of demolition and construction works on site, including the installation of temporary site office, storage and welfare facilities if required
- The barrier and ground protection shall be maintained in a satisfactory condition throughout the duration of development. There is to be no access or operations of any kind within the barrier, nor repositioning of the barrier even temporarily, without the prior written approval of the LPA.
- The inclusion of all-weather notices to be attached to every third panel of the tree protection fence stating that the fence is a tree protection fence and the zone beyond it is a construction exclusion zone.

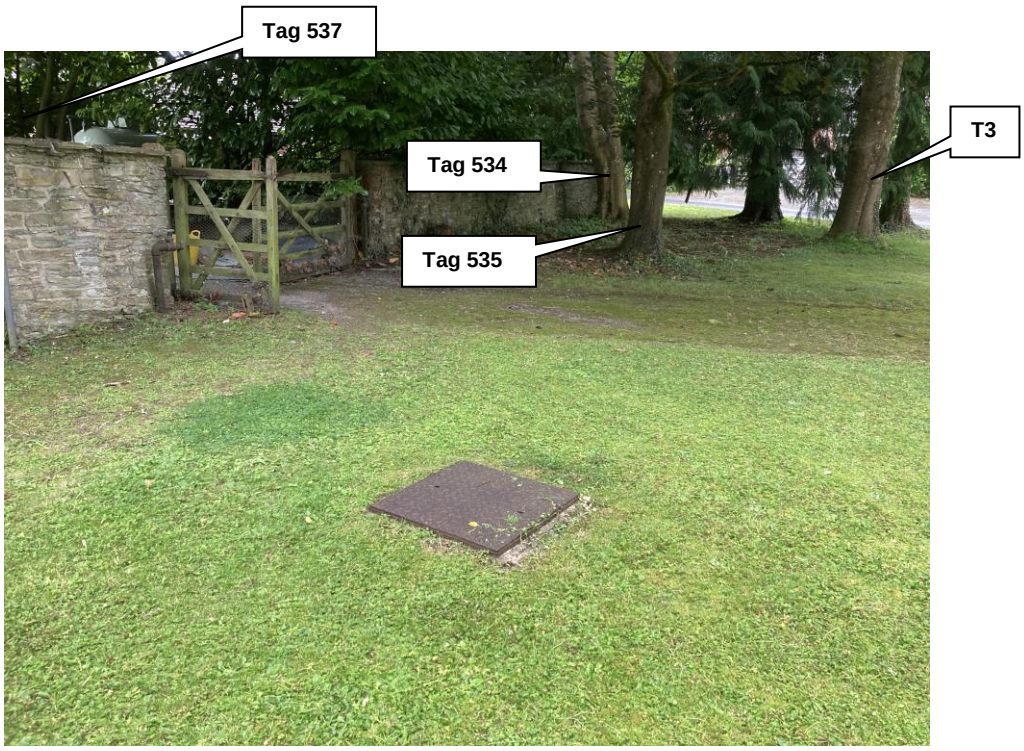
3.4 Arboricultural Supervision (subject to conditioning by LPA)

- The person responsible for day-to-day supervision will be the Construction site manager/foreman (named)
- The Arboricultural Consultant (to be appointed) role will be:

1. Pre-commencement site meeting with foreman/manager and site owner to discuss the practical impact of the method statement and mark out position of protective fencing/ground protection
2. 2nd visit as soon as fencing is in place and **before ground works have started** for photo evidence.
3. 3rd visit unannounced to check on protective measures in place and method statement followed.
4. Final visit on completion of works for photo evidence

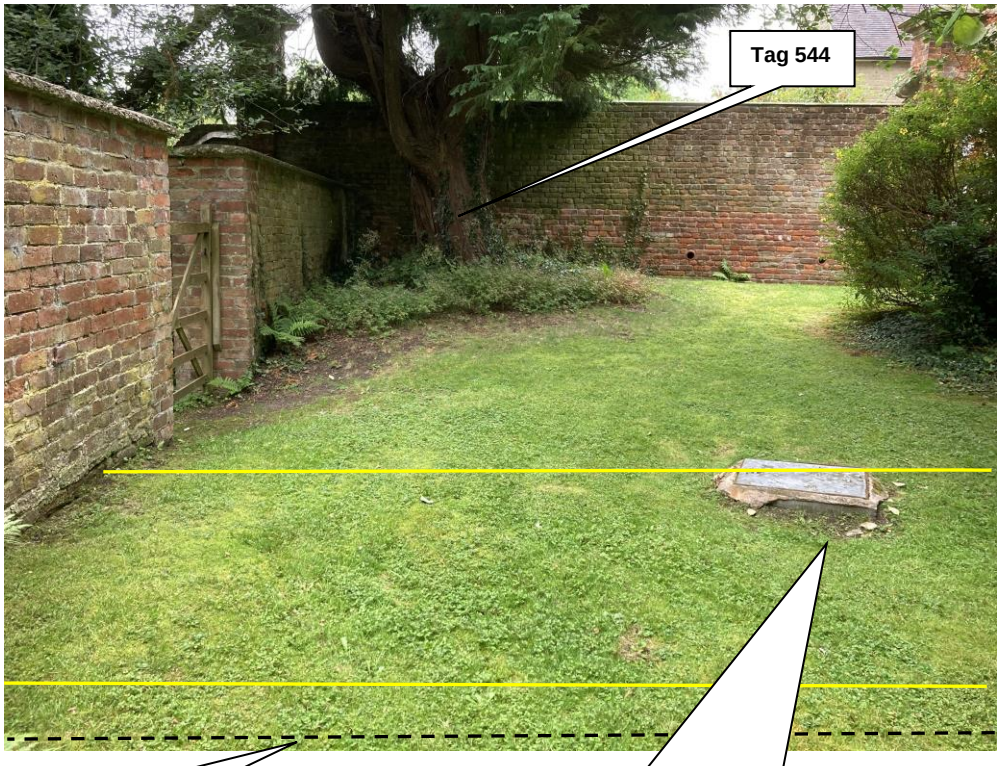
Appendix 1
Photo Detail: Tree condition illustration ref. Sect 2.2



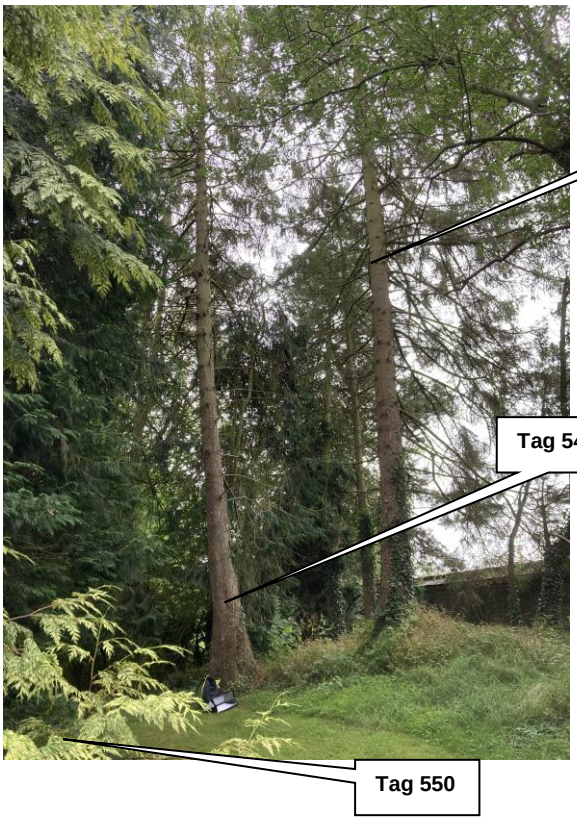

Tag 537
T3
Tag 534
Tag 535


Tag 541

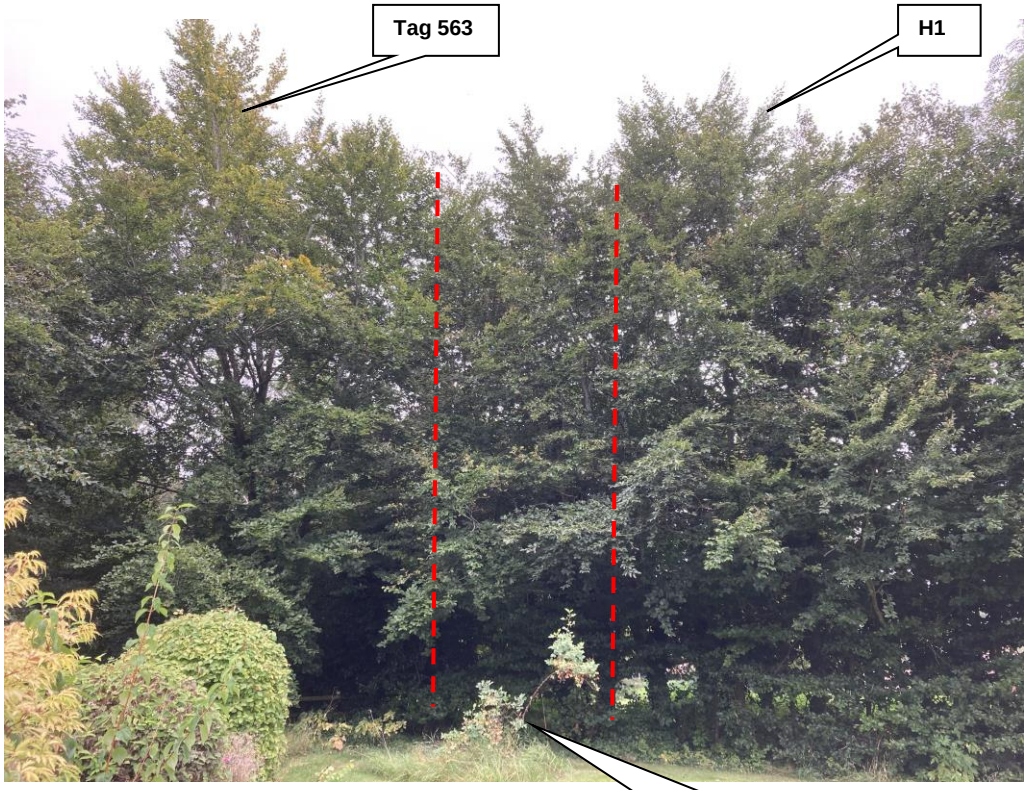

Tag 541: The majority of roots will extend over the grass area.
New FWD/SWD route
Existing FWD/SWD route to be sealed and covered with an above ground Cellular Confinement System raft to form the new main access Drive


Tag 544
New FWD/SWD route
Existing FWD/SWD route to be sealed and covered with an above ground Cellular Confinement System raft to form the new main access Drive


Tag 545


Tag 546
Tag 547
Tag 550

G1 and all trees in the conifer plantation: Propose to remove all trees and utilise the area currently occupied by the conifer plantation for the construction of the new main access drive using a conventional foundation

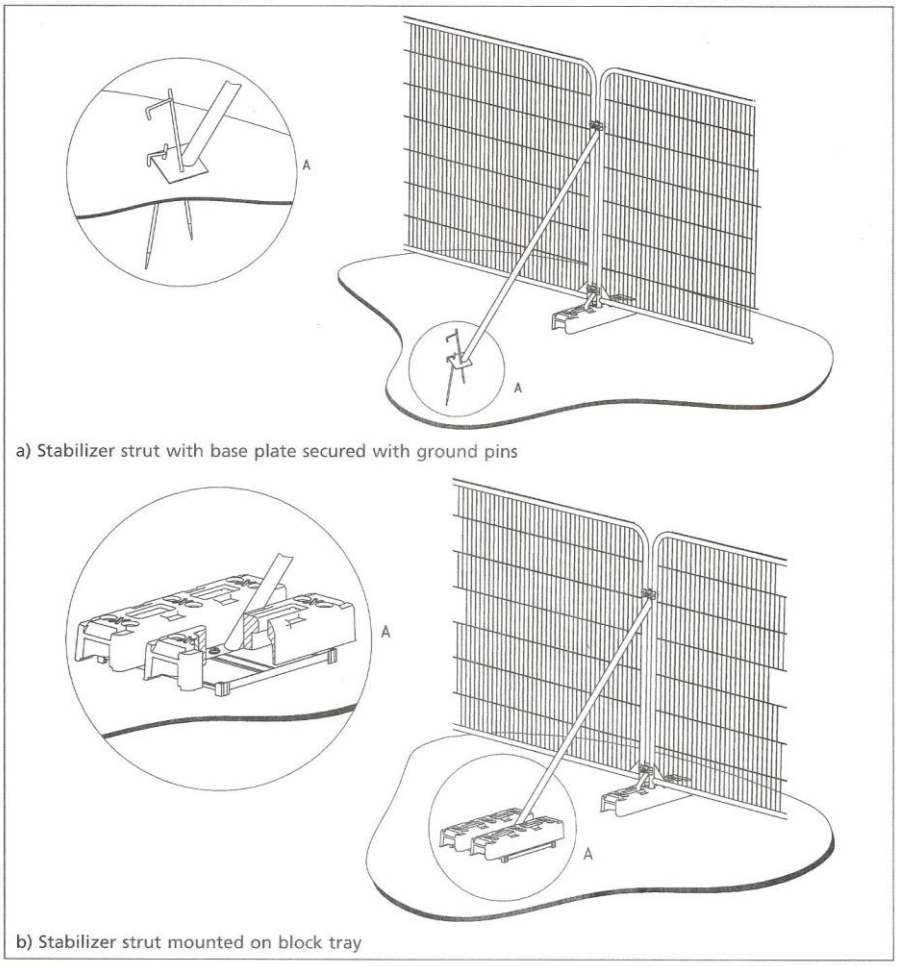

Tag 563
H1
H1: 3m width proposed for removal to accommodate new FWD/SWD route


H4: Yew hedge proposed for coppicing with supplementary planting of yew transplants

H5: Leyland cypress proposed for removal to be replaced with a Yew hedge

Appendix 3
BS 5837 2012 Protection illustrations

Figure 3 **Examples of above-ground stabilizing systems**



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

6.2.3 Ground protection during demolition and construction

6.2.3.1 Where construction working space or temporary construction access is justified within the RPA, this should be facilitated by a set-back in the alignment of the tree protection barrier. In such areas, suitable existing hard surfacing that is not proposed for re-use as part of the finished design should be retained to act as temporary ground protection during construction, rather than being removed during demolition. The suitability of such surfacing for this purpose should be evaluated by the project arboriculturist and an engineer as appropriate.

6.2.3.2 Where the set-back of the tree protection barrier would expose unmade ground to construction damage, new temporary ground protection should be installed as part of the implementation of physical tree protection measures prior to work starting on site.

6.2.3.3 New temporary ground protection should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil.

NOTE The ground protection might comprise one of the following:

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

b) *for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;*

c) *for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.*

6.2.3.4 The locations of and design for temporary ground protection should be shown on the tree protection plan and detailed within the arboricultural method statement (see **6.1**).

6.2.3.5 In all cases, the objective should be to avoid compaction of the soil, which can arise from the single passage of a heavy vehicle, especially in wet conditions, so that tree root functions remain unimpaired.

6.2.4 Additional precautions outside the exclusion zone

6.2.4.1 Planning of site operations should take sufficient account of wide loads, tall loads and plant with booms, jibs and counterweights (including drilling rigs), in order that they can operate without coming into contact with retained trees. Such contact can result in serious damage to the trees and might make their safe retention impossible. Consequently, any transit or traverse of plant in proximity to trees should be conducted under the supervision of a banksman, to ensure that adequate clearance from trees is maintained at all times. Access facilitation pruning should be undertaken where necessary to maintain this clearance.

NOTE In some instances, local planning authority consent for pruning might be required.

6.2.4.2 Fires on sites should be avoided if possible. Where they are unavoidable, they should not be lit in a position where heat could affect foliage or branches. The potential size of a fire and the wind direction should be taken into account when determining its location, and it should be attended at all times until safe enough to leave.

NOTE Local environmental health authorities might have specific restrictions.

6.2.4.3 Any materials whose accidental spillage would cause damage to a tree should be stored and handled well away from the outer edge of its RPA.

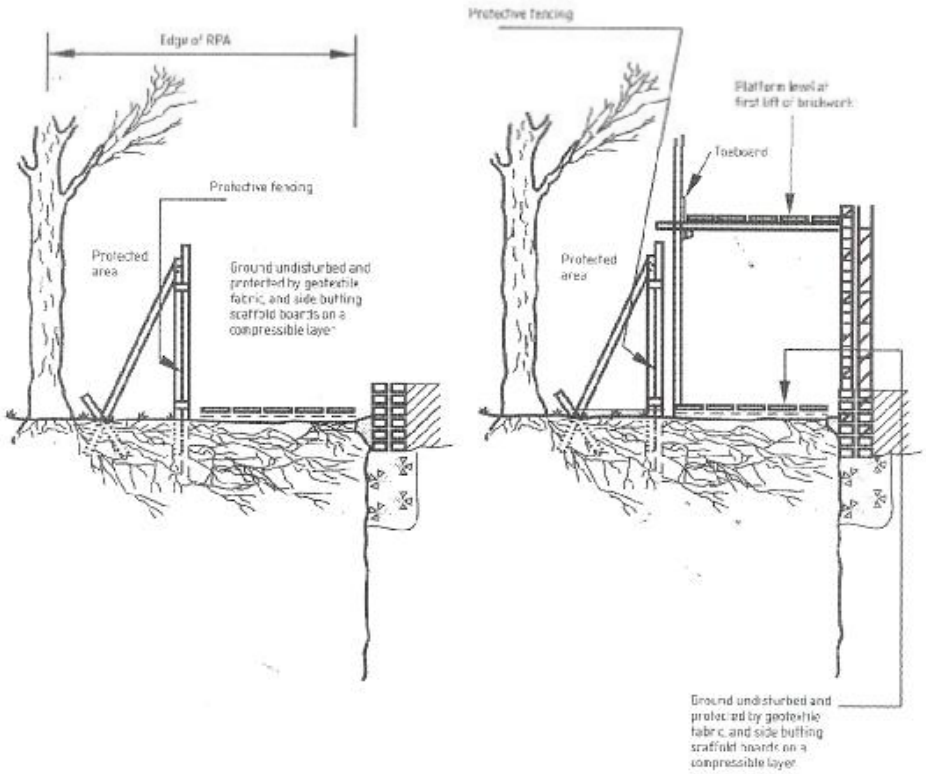


Figure 3 — Scaffolding within the RPA

.4 Additional precautions outside the exclusion zone

.4.1 Once the exclusion zone has been protected by barriers and/or ground protection, construction work an commence. All weather notices should be erected on the barrier with words such as:

"Construction exclusion zone — Keep out".

.4.2 In addition the following should be addressed or avoided.

a) Care should be taken when planning site operations to ensure that wide or tall loads, or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact can result in serious damage to them and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees should be conducted under the supervision of a banksman to ensure that adequate clearance from trees is maintained at all times. In some circumstances it may be impossible to maintain adequate clearance thus necessitating access facilitation pruning (see **11.2.1**).

b) Material which will contaminate the soil, e.g. concrete mixings, diesel oil and vehicle washings, should not be discharged within 10 m of the tree stem.

c) Fires should not be lit in a position where their flames can extend to within 5 m of foliage, branches of trunk. This will depend on the size of the fire and the wind direction.

d) Notice boards, telephone cables or other services should not be attached to any part of the tree.

Appendix 4

Glossary of Arboricultural Terms

Adaptive Growth: Woundwood.	New strengthening woody growth in response to loss of tissue through decay or physical damage
Age Class: Young	Up to 1/3rd life expectancy
Early-mature	Between 1/3rd and 2/3rds life expectancy
Mature	Over 2/3rds life expectancy
Late-mature	Onset of natural limb loss; increase in dysfunctional tissue
Over-mature	Declining or moribund trees of low vigour. **NB** Late-mature and over-mature trees are more prone to structural failure than young or early-mature trees.
Breakout:	Loss of a limb usually close to the junction the main stem or scaffold limb
Branch bark ridge:	Natural feature in the axil of the branch providing a simple guide for locating the best position for the top edge of a pruning cut.
Buttressing:	Root flare at the base of the stem
Crown dieback:	Significant loss of foliage throughout the crown; often the result of root damage. Usually indicating a tree in decline.
Deadwood:	Dead secondary branching persisting on the scaffold limbs. Minor deadwood <50mm diameter is less likely to cause damage in the event of failure. Major deadwood >50mm present a greater hazard and is a greater risk of failure in trees without durable heartwood e.g. Lime and ash. Deadwood which is not presenting a hazard to the highway is excluded from the inspection report. Deadwood stubs: Prevent the sealing of the wound site, providing sites of decay and increasing risk of limb failure.
Epicormic Response:	Growth of dormant buds on areas of the stem or scaffold limbs effected by loss of woody tissue or foliage. New woody tissue is laid down in areas of vigorous epicormic growth.
Included bark:	Weak regions of bark-to-bark contact at the stem or branch junctions.
Retrenchment:	Describes the response in new growth in the lower crown, following dieback in the upper crown. A feature of some over-mature trees, enabling survival into great age (veteran trees)
Scaffold limbs:	1st order limbs; the major limbs supporting the secondary branching or 2nd & 3rd order branches
Soil Heave:	Raised lateral roots or loosened soil surrounding the base of the tree.

References and main literature sources.

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Report date:	23.7.2021	Preliminary Arboricultural Constraints Inspection
	10.8.2021	AIA part 1 PRE-DESIGN DRAFT
	6.9.2021	AIA Full (1st iteration)
	8.9.2021	AIA Full (2nd iteration)
	10.9.2021	AIA Full (3nd iteration)

Arboricultural ASSOCIATION
Professional Member
435

Aston Hall Appd2. Tree Location and Protection Plan 10.9.2021

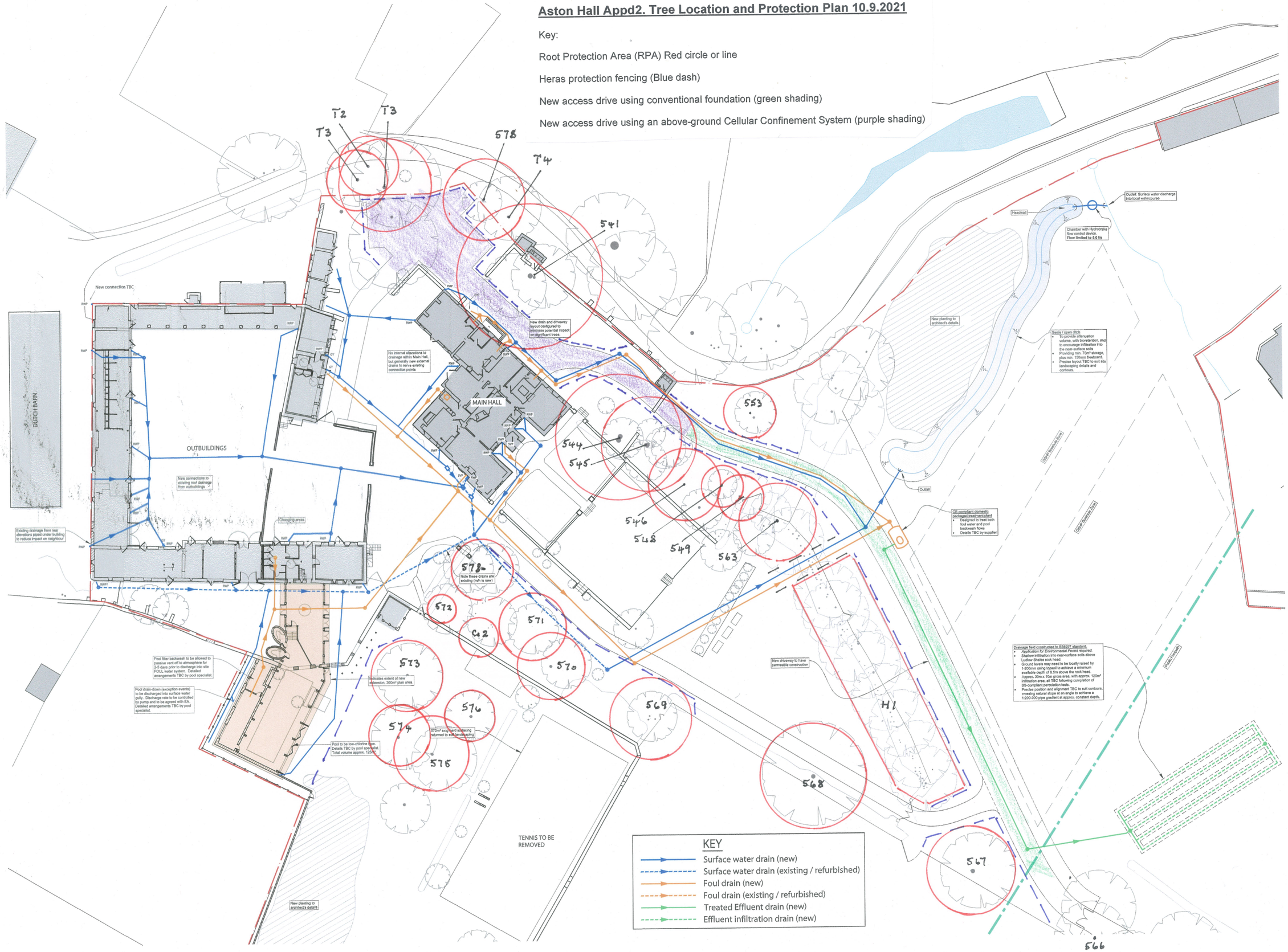
Key:

Root Protection Area (RPA) Red circle or line

Heras protection fencing (Blue dash)

New access drive using conventional foundation (green shading)

New access drive using an above-ground Cellular Confinement System (purple shading)



NOTES

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3. Any ambiguities or discrepancies between this drawing and any other information given elsewhere must be reported to Nann Williams for clarification before work proceeds.
4. All dimensions to be checked on site and any discrepancies reported to the engineer before work commences.
5. Only figured or calculated dimensions should be used and no drawing, in any format should be scaled for construction purposes.

SCALE BAR 1:200

0 10m

REV	DESCRIPTION	BY	DATE
P1	ISSUED FOR PLANNING	HP	08.09.2021

P-PRELIMINARY T-TENDER CONSTRUCTION

PROJECT
ASTON HALL BARNS

TITLE
BELOW GROUND DRAINAGE

OUTLINE STRATEGY
AS PROPOSED

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DRAWN	CHKD	SIZE	SCALE	DATE
HP		A0	1:200	SEPT'21

STATUS
PRELIMINARY

PROJECT	DRAWING	REV
10854	510	P1