

# **A30 Chiverton to Carland Cross Environmental Statement**

**Volume 6 Document Ref 6.4 ES Appendix 7.6  
Arboricultural Impact Report**

**HA551502-ARP-ELS-SW-RP-LE-000007**

**August 2018**

Planning Act 2008  
Infrastructure Planning (Applications: Prescribed Forms and Procedure)  
Regulations 2009 (as amended)  
APFP Regulation 5(2)(a)



# Arboricultural Impact Assessment (AIA)

Site: A30 – Chiverton to Carland Cross

Prepared for: Arup 63 St Thomas Street Bristol  
BS1 6JZ

Prepared by Simon Brain *Chartered arboriculturist*

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- 1 Tree Protection Plan
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## **1.0 Introduction**

### **1.1 Instruction, Scope, Methodology, Mitigation & Limitations**

- 1.2 Simon Brain (Managing Director) carried out this assessment site whom is a chartered arboriculturist, with 20 years' experience. I have compiled several hundred arboricultural constraints reports and I have specific and detailed experience of major road improvement schemes through involvement in the A470, Llangefni, Sirhowy Enterprise and A40 road improvement schemes.
- 1.3 This Arboricultural Implications Assessment (AIA) is based on the proposed development as shown on the layout drawing reference HA551502-ARP-HML-SW-DR-CH-000004 and incorporated into the Tree Protection Plan (TPP) in Appendix 1 of this report.
- 1.4 The assessment will be carried out in line with the recommendations in BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations* and will evaluate the direct and indirect impacts of the proposed design and where necessary recommend mitigation.
- 1.5 The AIA considers constraints posed above and below ground and where appropriate makes recommendations to mitigate impacts associated with the development sites' and retained trees.
- 1.6 Where specialist design and construction techniques are required the site has been mapped with Special Measure Areas (SMA). Where SMA have been recommended further detailed specifications and methodology will be needed in an Arboricultural Method Statement (AMS).
- 1.7 Below ground constraints are influenced by the root protection area and are determined in line with the recommendations set out in BS 5837:2012. These recommendations quantify the root protection area based on a measured stem diameter in accordance with Annex C, and the root protection area determined from Annex D.
- 1.8 It is important to understand that when considering the root protection area with regards to the circular plot as delineated on the TPP that a number of site factors can influence root morphology and disposition of tree roots.

- 1.9 Above ground constraints are considered above and below ground and in line with the recommendations in BS 5837:2012 to include; shade, dominance, current and future crown spread as well as the ultimate height of those retained trees.
- 1.10 Impacts associated with development sites and retained trees can be associated with single or multiple site operations that can subject trees to multiple impacts (*root severance, compaction, loss of photosynthetic material*), where this is applicable it will be highlighted in the AIA.
- 1.11 The mitigation measures proposed in this report are essential to ensure that trees marked for retention are adequately protected during the period of post and pre-construction.

## **2.0 Arboricultural Impact Assessment**

### **2.1 Area for proposed development**

- 2.1.2 The development proposals have been embedded within the Tree Constraints Plan data and are as shown in Appendix One (Tree Protection Plan TPP). The TPP shows the following arboricultural items: retained and removed trees, Construction Exclusion Zone (CEZ), Special Measure Areas (SMA) and retention values of trees as measured by BS5837:2012.
- 2.1.3 The scheme proposals include direct impacts such the position of new highway infrastructure and earthworks affecting existing vegetation. In addition, several in direct and indirect impacts of the scheme are anticipated on vegetation where temporary works areas are located.

### **2.2 Direct impacts of development**

The direct arboricultural impacts of the new road scheme result in the removal of vegetation for the installation of the permanent works. The permanent works include the following items:

- carriageway with on line (existing A30) and off-line positions throughout the route
- embankments and cuttings

- verges and hard shoulders
- visibility splays
- attenuation areas and proposals
- contractor compounds
- tie in points between old and new surfaces
- temporary works areas under SMA (vegetation and construction methodology loss to be confirmed in AMS)

2.2.1 The extent of tree removal for the direct impact of highway infrastructure has been based on the proximity of the proposal to the principle arboricultural constraints; canopy extent, RPA extents and retention value. Where for example unacceptable breaches of RPA (>20% of anticipated modified RPA or circular plot) or canopy occur, the vegetation requires removal as indicated in Appendix 1 Tree Protection Plan and Appendix 2 Survey sheets.

### **2.3. In direct impacts of development**

Indirect arboricultural impacts of the scheme largely occur where for example partial tree group loss is required for new infrastructure. The loss of areas of trees within continuous groups can have a disproportionately negative affect on the stability of retained trees as indicated within section 4.2 of the Tree Constraints Report. Therefore, consideration is given to factors such as the safety and stability of those remaining trees, particularly mature trees within falling range of the new highway. Some tree references such as hedges are unlikely to be affected by instances of altered exposure. The larger hedges and tree groups are also considered. The nature and type of vegetation present such as newly planted or establishing trees within these groups are unlikely to cause significant harm and / or fail. Where embankments, verges or cuttings facilitate partial group retention retained trees have been bounded by CEZ. In cases where the vast majority of continuous areas are to be removed for the permanent works and such areas are growing in isolated groups all trees are to be removed for example W17 and W13.

The risk of altered exposure and subsequent significant tree failure onto the highway is at its highest when retaining sections of high canopy coniferous

woodland near the highway. Sections of W23 are located within temporary works and SMA for these reasons and as such the detailed design in SMA zone needs to be provided for an Arboricultural Method Statement to be produced for working on these areas. In addition, it is envisaged that the arborist will be needed to monitor on site during excavations and further advise on retained tree safety.

In some cases, a small overlap for cutting of embankment purposes applies to a retained tree such as G27 and T15, 17 and T18 and therefore an SMA applies and on-site arborist advice is required to determine the acceptability of ground disturbance of trees and advise on their safety.

## **2.4 Special Measures Areas**

SMA are formed where there is a requirement for works within the RPA of retained trees that could potentially render the tree structurally unsound such as excavation of its rooting area. Therefore, an element of supervisory site attendance shall be required to judge the arboricultural impact of excavations (watching brief) on site and ensure that works undertaken do not cause a health and safety hazard.

In other cases, and where cuttings and embankments are minimal design change has been requested such as Ch1650 T15, T17-T19 and G27 and Ch7650 T64. The use of a no dig surface has been recommended for T64 the details of which are found in section 2.5 – no dig surfacing.

Where a watching brief is not considered appropriate and a final design is required to assess impact and prescribe an acceptable construction working method this has been stated in the table below as an AMS requirement. There are several temporary works areas that are part of attenuation and drainage of the site and as the installation of such infrastructure requires excavation in sometimes closed canopy woodland further assessments are required (AMS). In the case of W6, W7 and W8 and Tree Preservation Order applies to the site as referred to in section 3 of this AIA.

### 2.4.1 Special Measures Areas

The table below shows the chainage location of each SMA, the proposed development activity and the need for supervisory requirement on site to determine health and safety of retained trees and / or an Arboricultural Method Statement. In some cases where design change is conceivable this has also been stated to retain notable trees. The presence of TPO is also indicated and in such areas no works can commence until the Local Planning Authority has granted its approval to a site specific AMS for temporary works located at chainage 3737 to 3850.

<b>Table 1 Special Measures Areas</b>					
<b>Location</b>	<b>Activity</b>	<b>Supervisory requirement</b>	<b>AMS</b>	<b>Design change</b>	<b>TPO</b>
Ch700 G6	Earthworks general cut and verge tie in	Watching brief during excavations			
Ch1650 T15, T17-T19 and G27	Earthworks general cut and verge tie in	omit / supervise excavations at base of stem		Omit excavations at base	
Ch3735 W6, W7, W8	Temporary works boundary (drainage)	Yes	Yes	submit design	Yes
Ch3850 W6	Private entrance widening	Yes	Yes	submit design	Yes
Ch4200 T46-T50, G40, W9, W10 and W11	Temporary works boundary (drainage)	Yes	Yes	submit design	No
Ch6050 H32a	Temporary works boundary (drainage)	Yes	Yes	submit design	No
Ch7200 G61, G62 and G63	Temporary works boundary (drainage)	Yes	Yes	submit design	No
Ch7650 T64	Earthworks general cut and verge tie in	Yes	Yes	Omit / supervise re grading / cutting works and no dig surfacing for footway	No

Table 1 Special Measures Areas					
Location	Activity	Supervisory requirement	AMS	Design change	TPO
Ch8950 W18	Temporary works boundary (drainage)	Yes	Yes	submit design	No
Ch9700 T83-T90, T67, T68, T117	Temporary works boundary (drainage)	Yes	Yes	submit design	No
Ch10940 G113	Earthworks general cut and verge tie in	Yes			
Ch126500 to Ch12780 W23	Earthworks and temporary works area	Yes	Yes	submit design	No
Ch13650 to Ch13725 W24	Earthworks and temporary works area	Yes	Yes	submit design	No
Ch 14000 W25	Earthworks and temporary works area	Yes	Yes	submit design	No

### 2.4.2 No dig construction

Within Table one above the following tree reference shall be managed by the following means:

Ch7650 T64 Earthworks general cut and verge tie in within RPA of significant off-site tree. Therefore, to maintain the health and safety of T64 supervised excavations and ‘no dig’ surfacing for the pave edge within the SMA are required. Should an absence of significant rooting material be found during excavation the supervising arborist may recommend design change. It is however envisaged that this SMA shall conform to the principles of no dig construction, typically ‘no dig’ requires the following

- Establishment of the California Bearing Ratio of the land in question order to inform engineers of type and capacity of load bearing cellular confinement system to be used.
- Appoint and confirm engineer for design and supply of a suitable load bearing geo cellular confinement system requiring no more than 25cm of excavation for top soil preparation only.

- Accord with Arboricultural Method Statement (AMS) and details therein including ensuring access and private driveways are constructed and finished to the agreed specifications before any other activity commences on site.
- The cellular confinement system shall be guaranteed by the supplier so as not to cause subsequent compaction for a period of ten years.
- Typically a 'no dig' approach (based on APN12 Driveways close to trees) will be taken with the confinement system being laid directly onto the existing ground level; where local cuts and fills are required this shall be no more than 75cm in depth. This exercise shall be overseen by the arboriculturist on site.
- Typically a confinement system of 150mm in depth is used.
- Edge restraints shall be required and they shall be secured by means of small metal ties approximately 50cm+ long at appropriate intervals.
- The cellular confinement system shall be laid by pedestrian means under the consultant's on site supervision. Small excavators can be used on the surface when it is newly laid and when ground boarding is provided.
- The system shall be filled with granular material that retains porosity and maintain a porous finished wearing surface such as pea gravel or resin bonded gravel. Proprietary surface coverings that may be suitable for some surfaces include Flexipave and Permadrive.
- All surface construction when complete shall be covered in on ground boarding throughout the SMA for the remainder of the build period.
- All surface construction is located with Special Measure Areas (SMA) as designated on the Tree Protections Plan (TPP) and shall therefore be supervised on site by a qualified consultant whom shall record all progress and oversee all new surface installations in the RPA's affected.

NOTE: The chronological order of events shall be as follows:

Following installation of the CEZ access is installed under supervision to no dig specification provided and all new surfacing's are protected by on ground boarding such as bog mats prior to any other construction activity commencing. It is however critical that ground boarding is proportionate to the load anticipated to be exerted on the surface which can be confirmed in method statement.

### **3.0 Tree Preservation Orders**

3.1 There is a Tree Preservation Order that applies to this site covering W6, W7 and W8 which is affected by offsite temporary works and drainage. No works can commence until a suitable scheme for the adequate protection of the closed canopy woodland (Arboricultural Method Statement) has been approved by the Local Planning Authority.

### **4.0 Trees to be removed, retained and those unaffected**

#### **4.1 Individual trees**

Removed: T60, T33, T37, T40, T44, T54, T66, T69, T70, T71, T72, T73, T75, T77, T79, T92, T93, T4, T74, T76, T81.

Retained: T64, T55, T117, T67, T68, T83, T84, T85, T86, T87, T88, T89, T90, T15, T17, T18, T19, T45, T46, T47, T48, T49, T50, T2, T3, T6, T13, T16, T8, T9, T10, T11, T12, T1, T1a, T5, T7, T14, T78, T108, T109, T118, T119.

Unaffected: T80, T82, T91, T94, T95, T96, T97, T98, T99, T100, T101, T102, T103, T104, T105, T107, T110, T111, T113, T114, T115, T116, T120, T121, T122, T123, T20, T21, T22, T23, T24, T25, T26, T27, T28, T29, T30, T31, T32, T34, T35, T36, T38, T41, T42, T43, T51, T52, T53, T56, T57, T58, T59, T61, T62, T63, T39, T65, T106, T112.

#### **4.2 Tree Groups**

Largely removed (retain vegetation within CEZ on TPP): G73, G78, G72, G31, G99, G74, G126, G131, G35, G37, G38, G39, G45, G58, G65, G71, G76, G84, G85, G86, G132, G133, G134, G82, G83, G10, G16, G17, G19, G21, G8, G95, G94, G69, G57.



Partial loss as shown (retained trees in CEZ):

G3,G70,G77,G96,G116,G120,G20,G129,G9,G11,G44,G144.

Removed:G73,G78,G72,G31,G99,G74,G126,G131,G35,G37,G38,G39,G45,  
G58,G65,G71,G76,G84,G85,G86,G132,G133,G134,G82,G83,G10,G16,G17,  
G19,G21,G8,G95,G94,G69,G57.

Unaffected:G12,G25,G26,G28,G29,G30,G33,G34,G36,G60,G68,G81,G101,  
G102,G103,G104,G105,G106,G107,G108,G109,G110,G111,G112,G114,G11  
5,G121,G122,G123,G124,G125,G130,G135,G136,G141,G142,G143,G145,G  
23,G24,G46,G47,G48,G49,G50,G51,G52,G53,G54,G55,G56, G15,G4,G5.

Unaffected (require CEZ): G113, G66,G67,G128,G59, ,G119,G2.

#### 4.3 Hedgerows

Retained: H43,H31,H68,H71,H69,H19,H4,H6,H2,H3,H7,H8.

Removed/largely removed:

H66,H9,H62,H24,H23,H11,H10,H18,H25,H26,H28,H42,H46,H50,H72,H27.

Partial loss: H44,H47,H32a, H34, H40.

Unaffected:H1,H12,H13,H14,H49,H51,H52,H53,H54,H55,H56,H57,H58,H59,  
H60,H61,H67,H73,H15,H16,H17,H20,H21,H22,H29,H30,H35,H36,H37,H39,H  
41,H45,H5,H32,H33.

Unaffected (install CEZ) H63, H64 Minor works apply; H70, H65, H48 and  
H38.

#### 4.4 Woodlands

Removed / largely removed: W5,W2,W1,W13,W17.

Retain / largely retain:

W20,W21,W23,W3,W6,W7,W8,W18,W25,W9,W10,W11,W22.

Partial removal: W15,W16,W24,W26.

Unaffected: W4,W12,W14,W19.

#### 4.5 Evaluation of impact of tree losses

A total of 96 records out of 369 are either partially or fully removed for the permanent works to be implemented. From the 96 removal records 11 are retention value A1/A2; 11 are retention value A2; 3 are retention value B1/B2; 50 are B2; 4 are C1/C2; 13 are C2 and there are 3 category U records.

<b>Table 2 Removed tree references by retention value</b>	
<b>A1</b>	None
<b>A1/A2</b>	T69,T70,T71,T72,T73,T75,T77,T79,G82,G83,G57
<b>A1/A2/A3</b>	None
<b>A2</b>	G78,G99,H32a,H44,W1,W13,W17,W2,W15,W16,W24
<b>A3</b>	None
<b>B1</b>	None
<b>B1/B2</b>	T4,G37,G58,G8
<b>B2</b>	T60,T33,T37,T40,T44,T54,T66,T93,G38,G45,G65,G71,G76,G86,G132,G133,G134,G10,G16,G21,G94,G69,G73,G72,G31,G74,G131,G3,G70,G77,G120,G129,G11,H9,H10,H11,H18,H25,H26,H27,H28,H46,H50,H66,H72,H34,H47,H40,W5,W26
<b>C1</b>	None
<b>C1/C2</b>	G35,G17,G19,G20
<b>C2</b>	T92,G39,G84,G85,G95,G126,G96,G116,G9,H23,H24,H42,H62
<b>U</b>	T74,T76,T81

The overall percentage of trees to be removed for the permanent works is 26% of those surveyed, of these 22 are category A and 53 are category B, a total of 75 tree references excluding category C trees. Category C trees can be mitigated using general landscape highway planting. Within the category A and B trees for removal larger woodlands (7 Cat A and 2 Cat B) and tree groups (62 Cat B and 6 Cat A) can also be mitigated by new landscape planting within the highway. In areas of temporary works where continuous closed canopies exist re planting shall cover all the areas cleared for

temporary works and aim to retain the original area of continuous cover. Where possible areas within the site shall be identified for woodland replanting consisting of native high canopy woodland species.

## **5.0 Root Protection Areas (RPA)-modifications**

5.1 Root Protection Areas have been plotted in line with the guidance given in BS 5837: 2012 where ground constraints have had or are likely to effect the root morphology of trees e.g. where underground utilities or building foundations have obstructed root growth this shall require formal confirmation by excavation to establish presence or absence of significant rooting material.

## **6.0 Shading and associated constraints**

6.1 The re development of the A30 does not encounter shading and or post construction arboricultural issues. The extents of clearance needed for the permanent works shall be maintained by Highways England in the future.

## **7.0 Tree pruning to facilitate development**

7.1 There are no requirements for minor levels of tree pruning to facilitate the proposed development

## **8.0 New surfacing and ground level modifications**

8.1 New surfacing is required in the form of a paved edge in the RPA of T64. The construction of all new surfacing shall accord with section 2.3.1 'no dig' construction.

## **9.0 Construction Exclusion Zones**

9.1 The Construction Exclusion Zone has been shown as a black fenced polyline on the TPP in Appendix 1.

9.2 The specification for the protective fence is shown on the TPP overview sheet. It is noted that the use of heras panels securely staked to the ground with driven metal retaining spikes is an acceptable fencing method.

## **10.0 Site supervision and monitoring**

- 10.1 Where trees have been delineated on the TPP as being in SMA there will be a requirement to oversee construction operations in these areas in order to ensure that no damage occurs to retained trees and in many SMA an AMS is also required. Site supervision is required by the consultant arborist during construction in all SMA. It is recommended that the following substantial completion the supervising arborist completes a final site check and hand over report.
- 10.2 To ensure that there is an auditable system of site monitoring, reports will be compiled following site visits and issued to the site manager, copies of which will be available on site always for inspection by a Council planning/Tree officer.

## **11.0 Installation of below ground infrastructure**

- 11.1 Detailed plans have not been provided specifying the location of site utilities and design change may be sought where this has conflicted with RPA of retained trees.
- 11.2 Specialist advice with regards to the installation of utilities will need to be sought from engineers and must be reviewed by the consulting arboriculturist prior to commencement on site when operating in RPA/SMA.
- 11.3 The usual construction techniques for installing site utilities within an RPA/SMA will be unacceptable due to the level of root severance that would occur. The impact of root severance will have a detrimental effect on tree health as trees require a healthy root system in order to maintain water and mineral uptake from the soil. Severance of tree roots caused by trenching can lead to reduced water uptake which in turn impacts on the trees ability to supply water to the canopy, resulting in desiccation. A further complication associated with root severance can be problems associated with tree stability. The tree relies on an intact root system in order to maintain stability; this stability will be compromised by root severance.

## **12.0 Design change requirements**

### **12.1 Design change requirements have been provided in relation to:**

Located at Ch1650 (T15, T17-T19 and G27) where earthworks and general cut and verge tie in with the existing road are required. The works are minimal but are located <1m from the tree stems and consideration of such a negative impact may be mitigated by design change

Also located at Ch7650 (T64) where earthworks and general cut and verge tie in with the existing road are required. It would be preferable to omit cuttings at this location.

## **13.0 Amenity Value**

The visual amenity conferred by the trees on the site is significant in the wider landscape, it is however transitory to the road user and the significance of the visual amenity is a softening of the landscape in general due to the presence of trees. The conferred amenity shall in many cases be retained where either new tree groups, hedges or woodland will be seen from off line vantage points and existing vegetation online remains unaffected. In some cases, the visual amenity is likely to increase due to the road moving closer to retained vegetation for example W23. The impact of tree losses throughout the A30 improvement scheme are mitigated by new landscape planting.

## **14.0 Concluding statement**

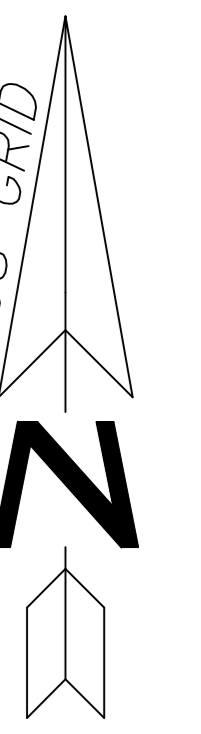
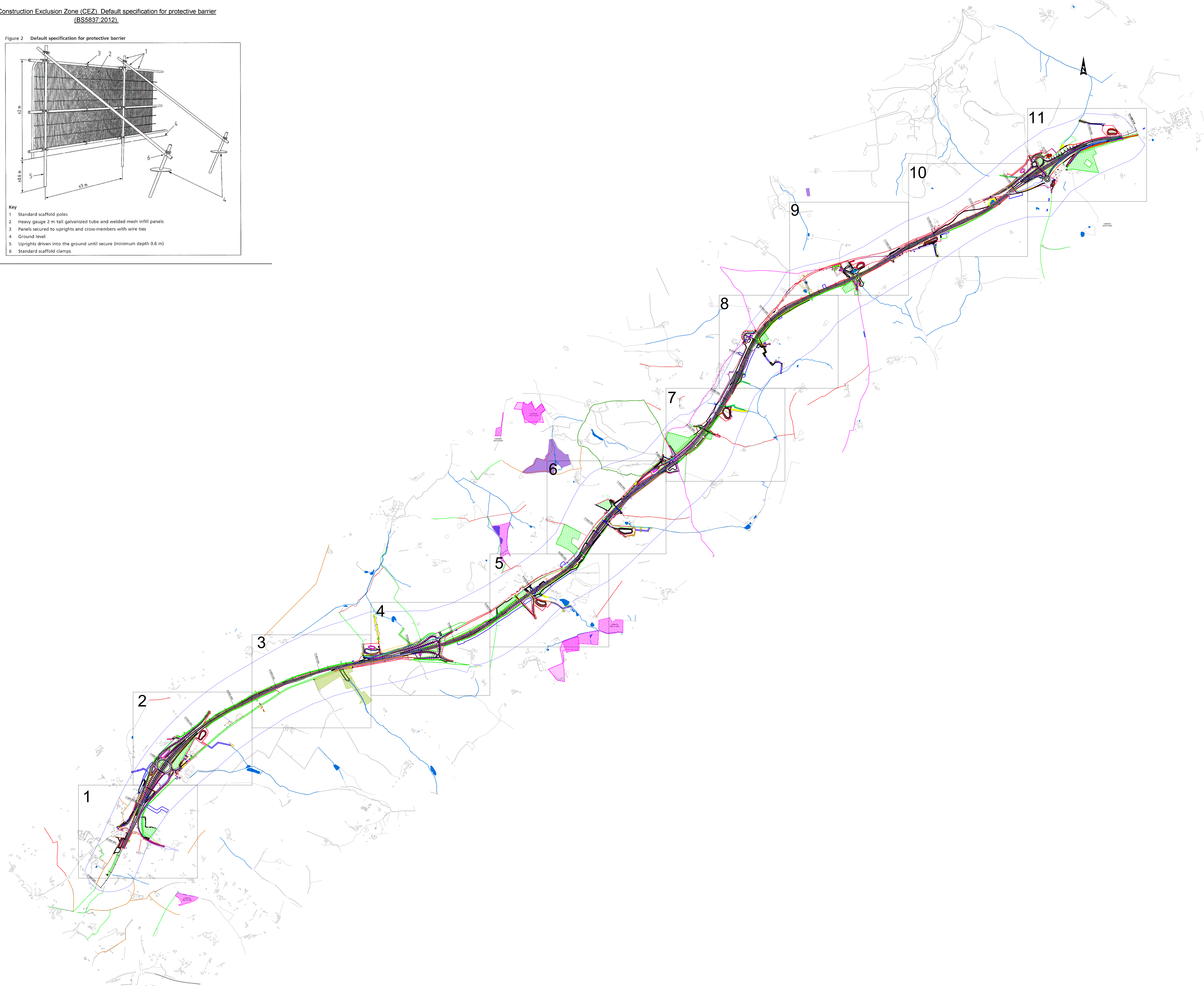
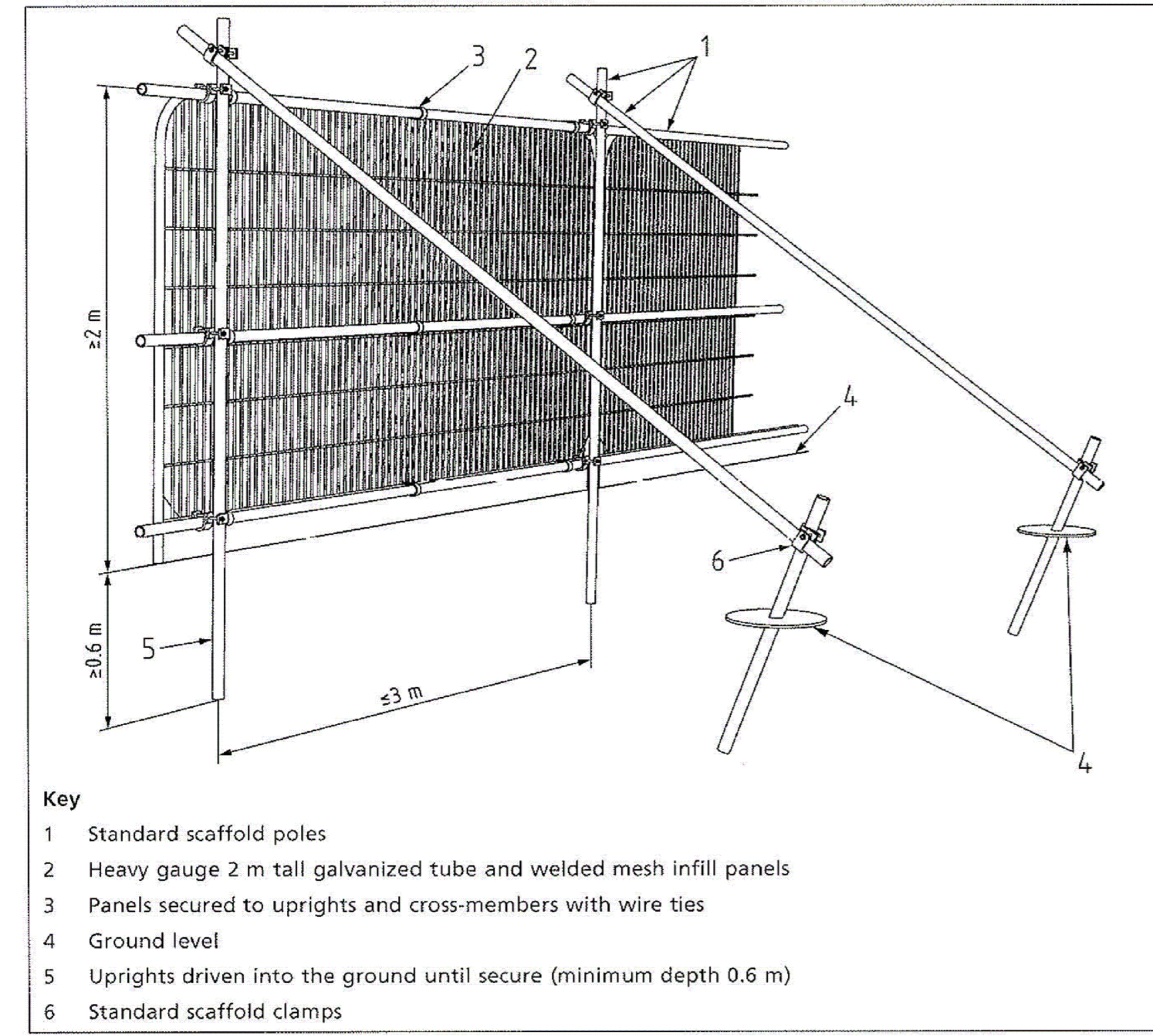
14.1 The proposed scheme was assessed in line with guidance provided in BS 5837:2012 *Trees in relation to design demolition and construction – Recommendations* with the aim to achieve a harmonious relationship between trees and structures that can be sustained in the long term.

14.2 It is my professional opinion as an arboriculturist that the proposed development should be allowed to proceed on the grounds that the design proposal has achieved a harmonious relationship between those trees retained on site and the proposed scheme.

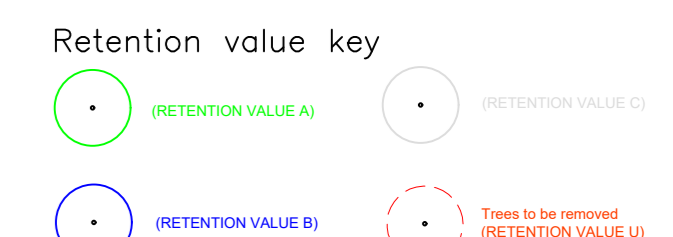
## Appendix 1 Tree Protection Plan



Figure 2 Default specification for protective barrier



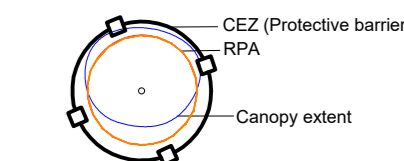
TREE PROTECTION PLAN



**Root Protection Areas (RPA) Construction Exclusion Zones (CEZ)**

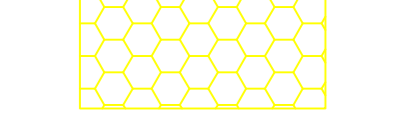
Root Protection Areas (RPA's) have been identified and are based on BS5837:2012. RPA's and Construction Exclusion Zones (CEZ) have been shown as detailed below. The CEZ shall act as the protective barrier for retained trees.

RPA's have been identified and are based on BS5837:2012. RPA's have been shown as an orange polyline.



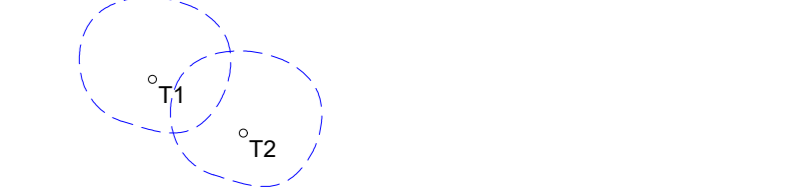
**Special Measure Areas (SMA)**

Special measure areas have been identified where further protective measures are required in Arboricultural Method Statement (AMS) format.

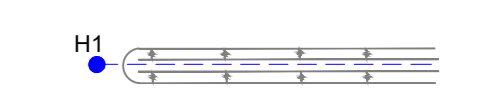
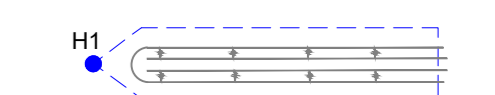
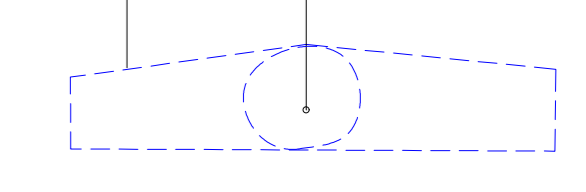


**Tree and Group removal**

Trees, groups, hedges and woodland to be removed are shown dashed as below



Woodland or group canopy extents  
Un numbered individual sample tree within group



**Amenity Tree Care**

The Annexe, Willow Hill Cottage, School Lane,  
Burwardsley, Chester, CH3 9NX  
Tel. 01829 770075

Client:  
**Arup**

Project:  
**A30 Chiverton to Carland Cross**

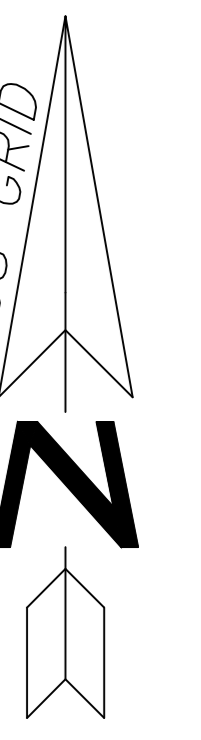
Detail:  
**TREE PROTECTION PLAN - Overview**

Drawn By: **SB** Date: **16 05 18** Scale: **1:1250(A4)**

Dwg No: **TR-01** Revision: **V1**



# 1



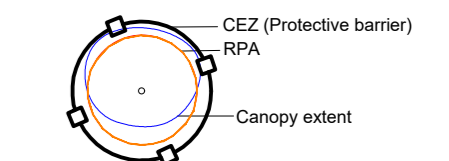
### TREE PROTECTION PLAN

- Retention value key
- RETENTION VALUE A
  - RETENTION VALUE B
  - RETENTION VALUE C
  - Trees to be removed

**Root Protection Areas (RPA) Construction Exclusion Zones (CEZ)**

Root Protection Areas (RPA's) have been identified and are based on BS5837:2012. RPA's and Construction Exclusion Zones (CEZ) have been shown as detailed below. The CEZ shall act as the protective barrier for retained trees.

RPA's have been identified and are based on BS5837:2012. RPA's have been shown as an orange polyline.

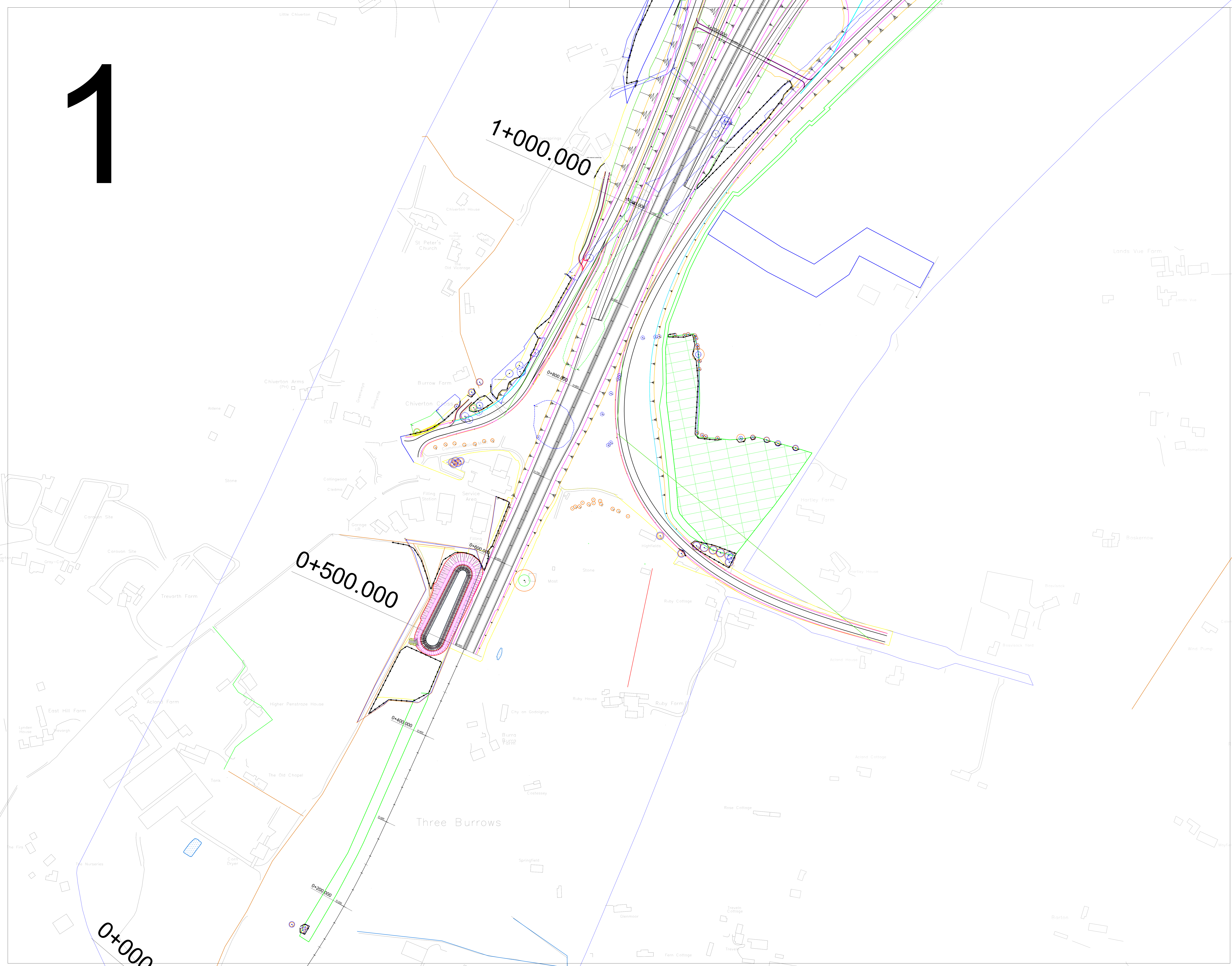
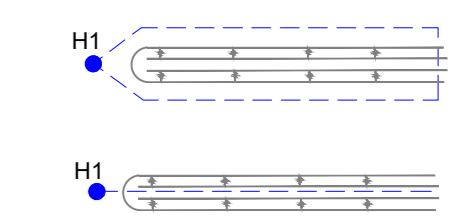
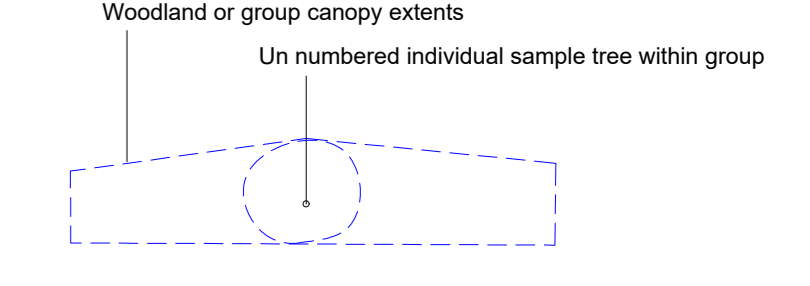
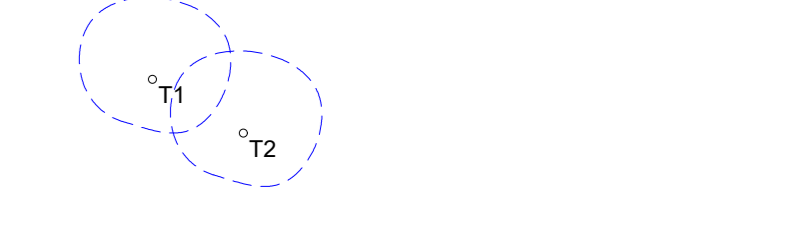


**Special Measure Areas (SMA)**

Special measure areas have been identified where further protective measures are required in Arboricultural Method Statement (AMS) format.

**Tree and Group removal**

Trees, groups, hedges and woodland to be removed are shown dashed as below



### Amenity Tree Care

The Annexe, Willow Hill Cottage, School Lane,  
Burwardsley, Chester, CH3 9NX  
Tel. 01829 770075

Client:	Arup	
Project:	A30 Chiverton to Carland Cross	
Detail:	TREE PROTECTION PLAN - Sheet 2	
Drawn By:	Date:	Scale:
SB	16.05.18	1:1250(A4)
Drawn No:	Revision:	
TR-01	V1	

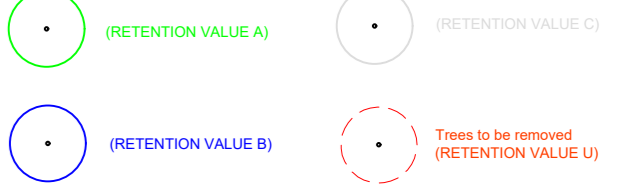


# 2



### TREE PROTECTION PLAN

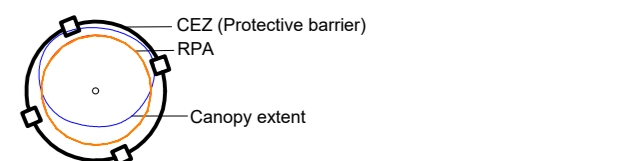
Retention value key



### Root Protection Areas (RPA) Construction Exclusion Zones (CEZ)

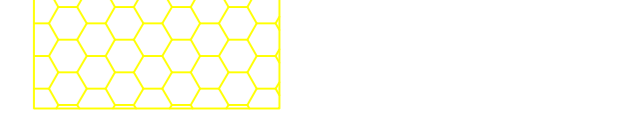
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RPA's have been identified and are based on BS5837:2012. RPA's have been shown as an orange polyline.



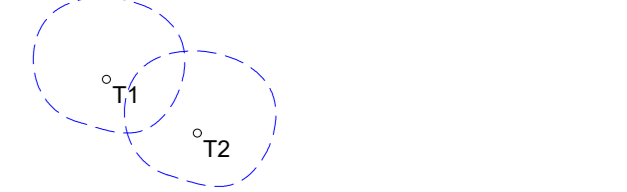
### Special Measure Areas (SMA)

Special measure areas have been identified where further protective measures are required in Arboricultural Method Statement (AMS) format.



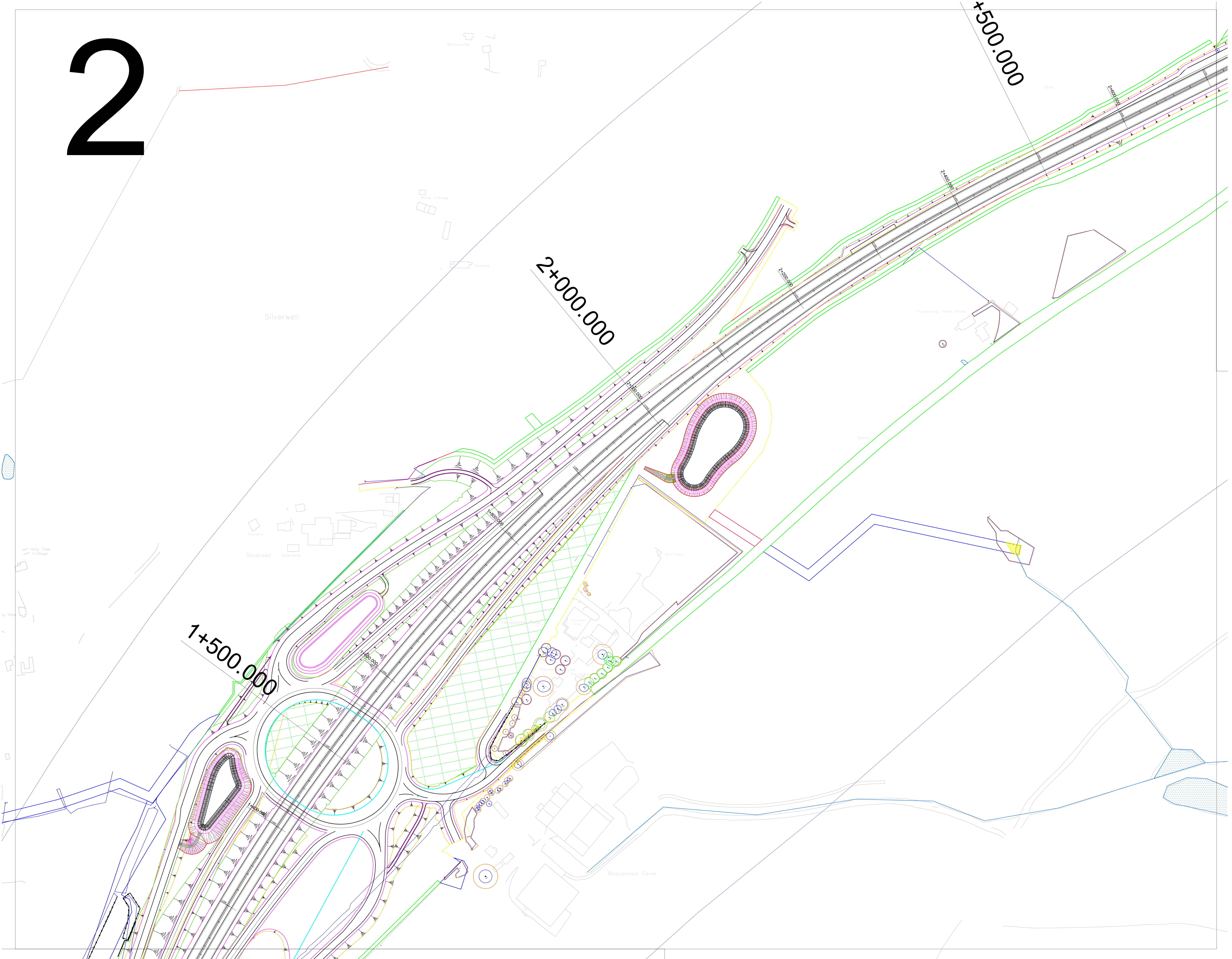
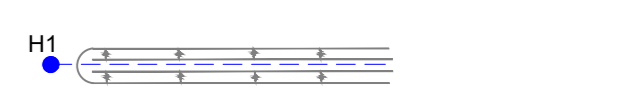
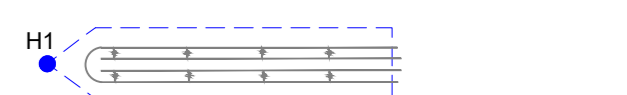
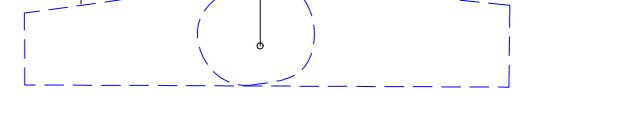
### Tree and Group removal

Trees, groups, hedges and woodland to be removed are shown dashed as below



### Woodland or group canopy extents

Un numbered individual sample tree within group



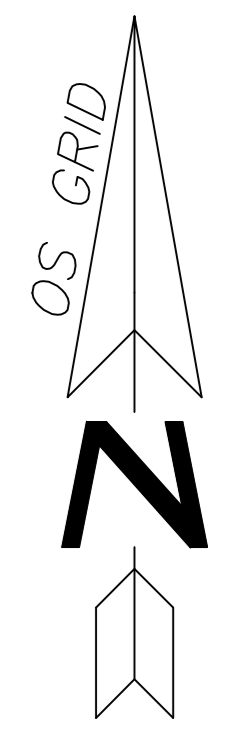
### Amenity Tree Care

The Annexe, Willow Hill Cottage, School Lane,  
Burwardsley, Chester, CH3 9NX  
Tel. 01829 770075

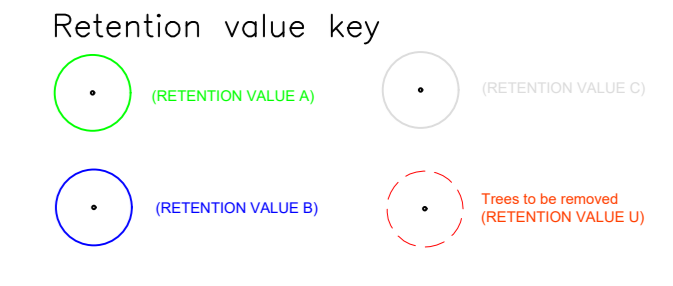
Client:	Arup		
Project:	A30 Chiverton to Carland Cross		
Detail:	TREE PROTECTION PLAN - Sheet 2		
Drawn By:	Date:	Scale:	
SB	16 05 18	1:1250(A4)	
Drwg No:	TR-01	Revision:	V1



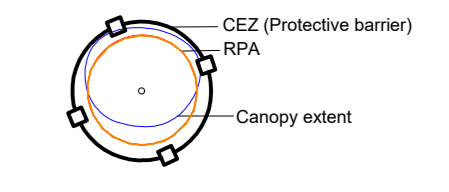
# 3



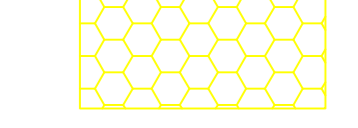
### TREE PROTECTION PLAN



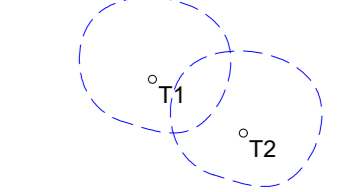
**Root Protection Areas (RPA) Construction Exclusion Zones (CEZ)**  
Root Protection Areas (RPA's) have been identified and are based on BS5837:2012. RPA's and Construction Exclusion Zones (CEZ) have been shown as detailed below. The CEZ shall act as the protective barrier for retained trees.  
RPA's have been identified and are based on BS5837:2012. RPA's have been shown as an orange polyline.



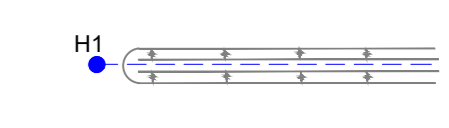
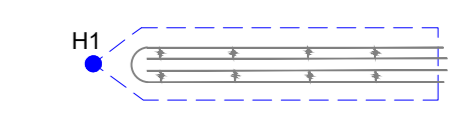
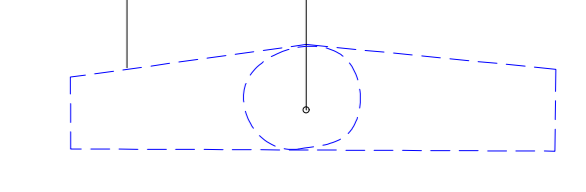
**Special Measure Areas (SMA)**  
Special measure areas have been identified where further protective measures are required in Arboricultural Method Statement (AMS) format.



**Tree and Group removal**  
Trees, groups, hedges and woodland to be removed are shown dashed as below



**Woodland or group canopy extents**  
Un numbered individual sample tree within group



### Amenity Tree Care

The Annexe, Willow Hill Cottage, School Lane,  
Burwardsley, Chester, CH3 9NX  
Tel. 01829 770075

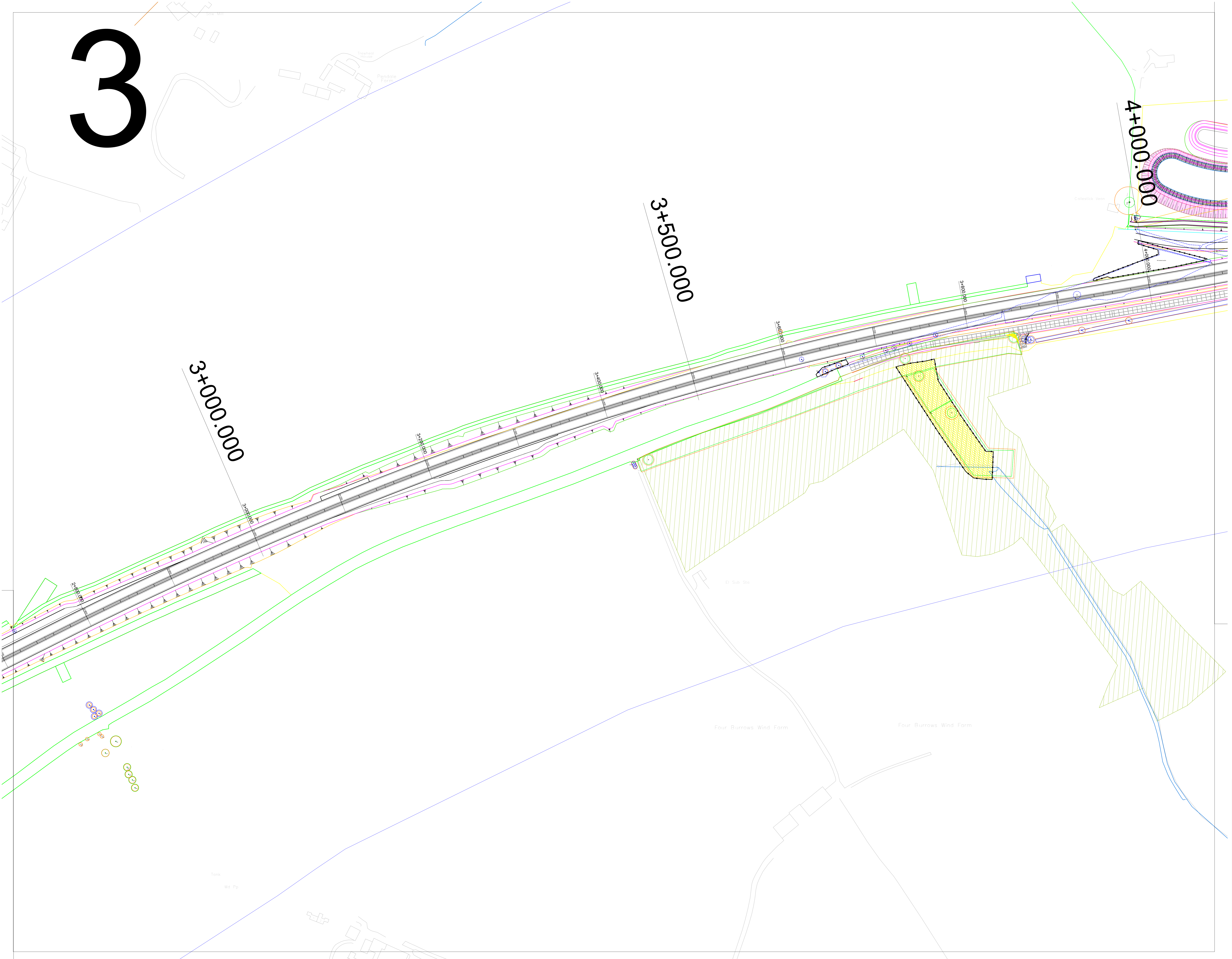
Client:  
**Arup**

Project:  
**A30 Chiverton to Carland Cross**

Detail:  
**TREE PROTECTION PLAN - Sheet 3**

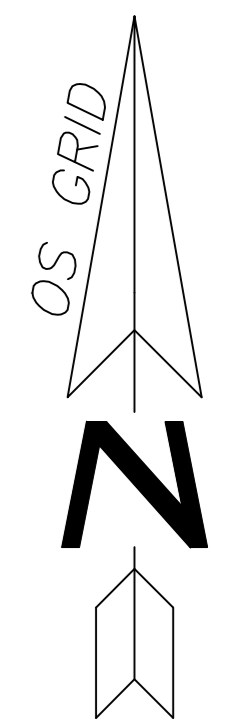
Drawn By: Date: Scale:  
SB 16.05.18 1:1250(A4)

Orig No: Revision:  
TR-01 V1





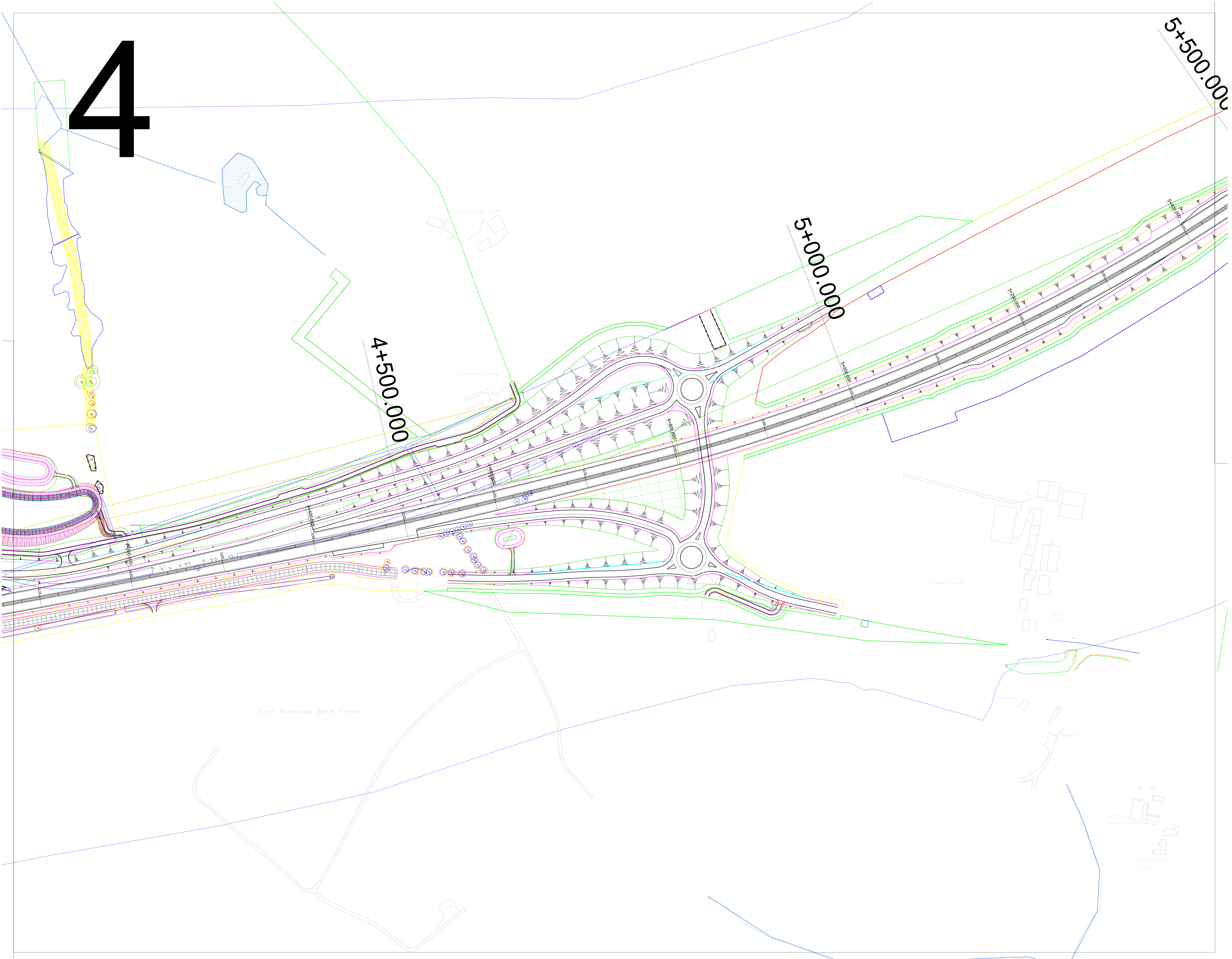
# 4



5+500.000

5+000.000

4+500.000



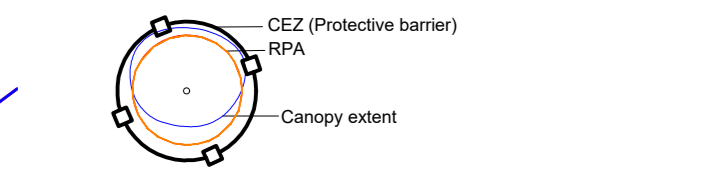
### TREE PROTECTION PLAN

- Retention value key
- RETENTION VALUE A
  - RETENTION VALUE B
  - RETENTION VALUE C
  - Trees to be removed
  - RETENTION VALUE D

**Root Protection Areas (RPA) Construction Exclusion Zones (CEZ)**

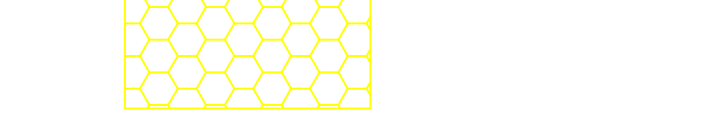
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RPA's have been identified and are based on BS5837:2012. RPA's have been shown as an orange polyline.



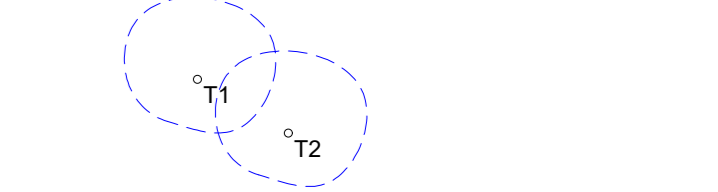
**Special Measure Areas (SMA)**

Special measure areas have been identified where further protective measures are required in Arboricultural Method Statement (AMS) format.

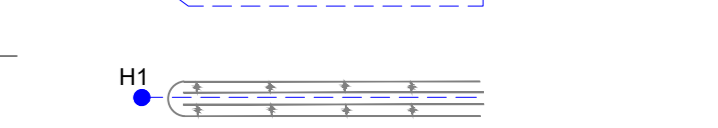
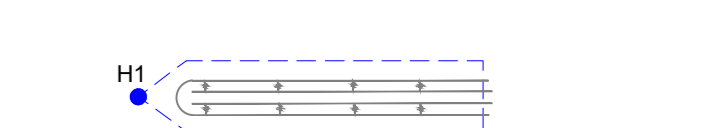
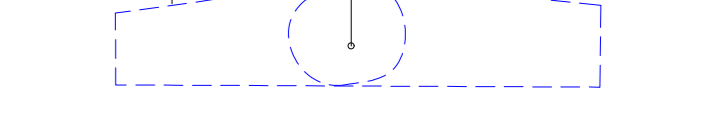


**Tree and Group removal**

Trees, groups, hedges and woodland to be removed are shown dashed as below



Woodland or group canopy extents  
Un numbered individual sample tree within group



### Amenity Tree Care

The Annexe, Willow Hill Cottage, School Lane,  
Burwardsley, Chester, CH3 9NX  
Tel. 01829 770075

Client:	Arup		
Project:	A30 Chiverton to Carland Cross		
Detail:	TREE PROTECTION PLAN - Sheet 4		
Drawn By:	Date:	Scale:	
SB	16.05.18	1:1250(A4)	
Dwg No:	Revision:		
TR-01	V1		

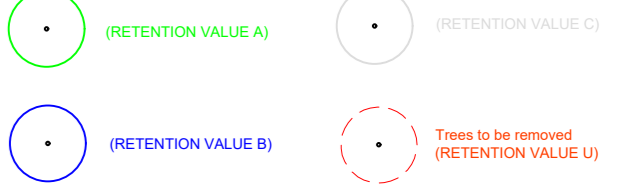


# 5



### TREE PROTECTION PLAN

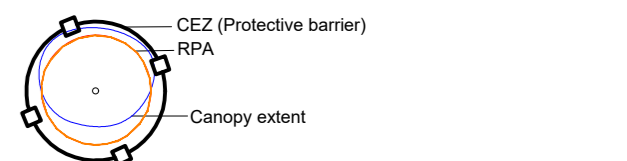
Retention value key



### Root Protection Areas (RPA) Construction Exclusion Zones (CEZ)

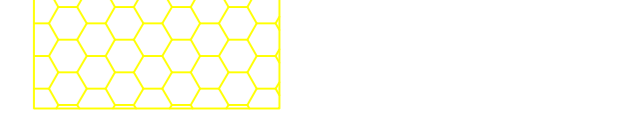
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RPA's have been identified and are based on BS5837:2012. RPA's have been shown as an orange polyline.



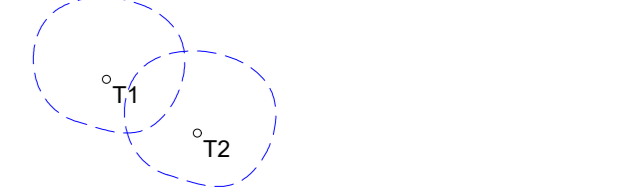
### Special Measure Areas (SMA)

Special measure areas have been identified where further protective measures are required in Arboricultural Method Statement (AMS) format.

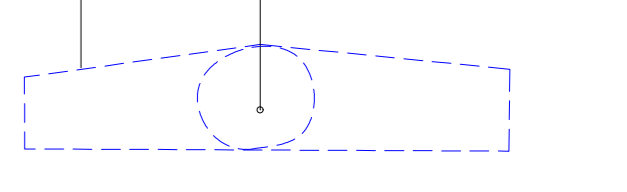


### Tree and Group removal

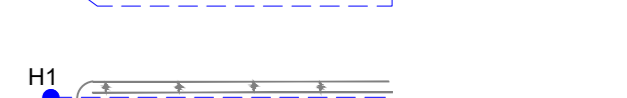
Trees, groups, hedges and woodland to be removed are shown dashed as below



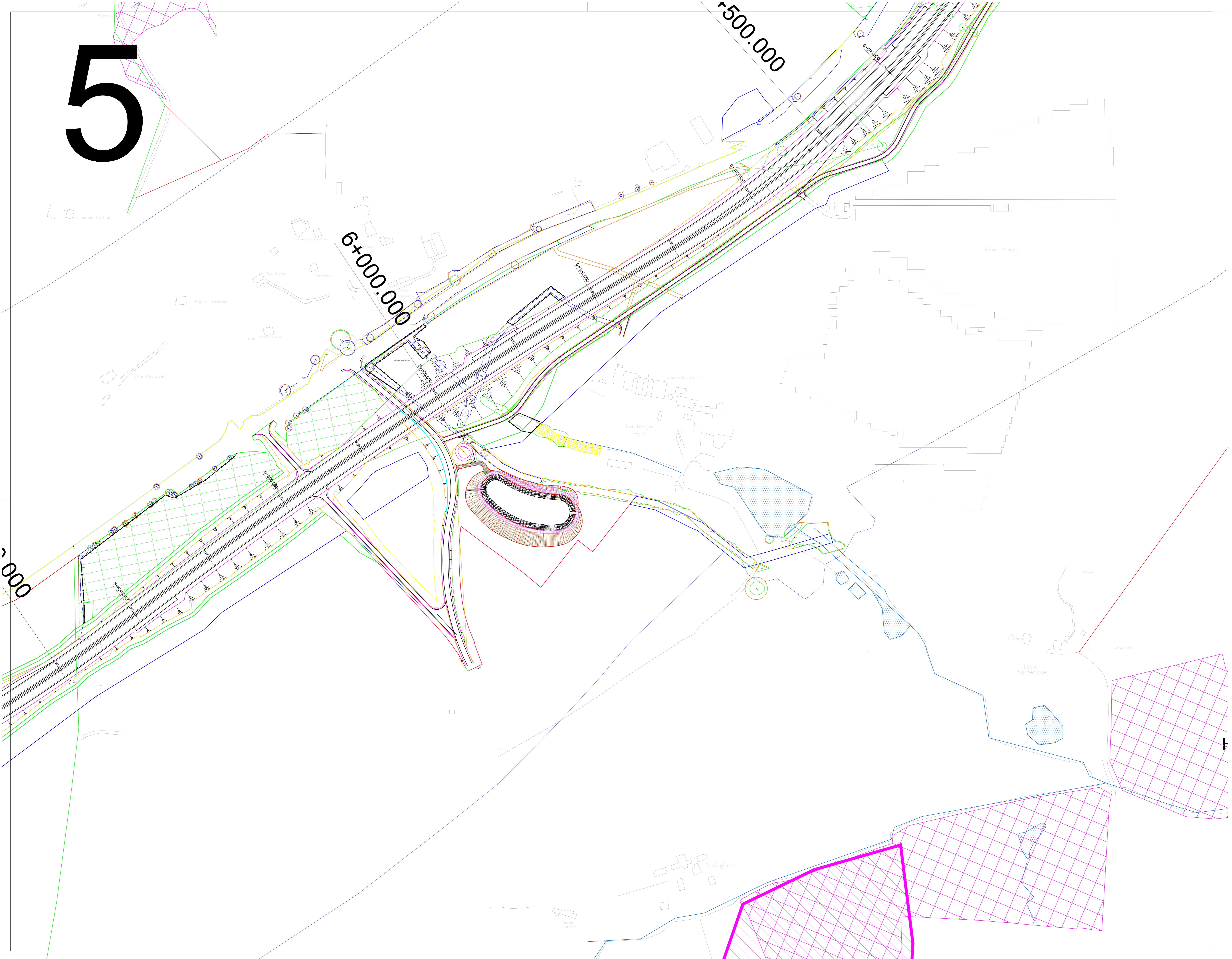
Woodland or group canopy extents  
Un numbered individual sample tree within group



H1



H2



### Amenity Tree Care

The Annexe, Willow Hill Cottage, School Lane,  
Burwardsley, Chester, CH3 9NX  
Tel. 01829 770075

Client:  
**Arup**

Project:  
**A30 Chiverton to Carland Cross**

Detail:  
**TREE PROTECTION PLAN - Sheet 5**

Drawn By: Date: Scale:  
SB 16 05 18 1:1250(A4)

Draw No: Revision:  
TR-01 V1

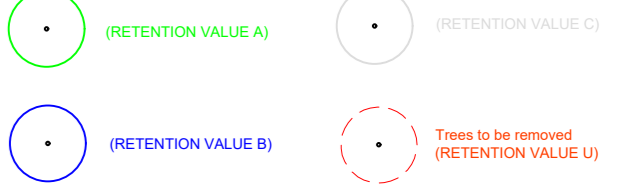


# 6



### TREE PROTECTION PLAN

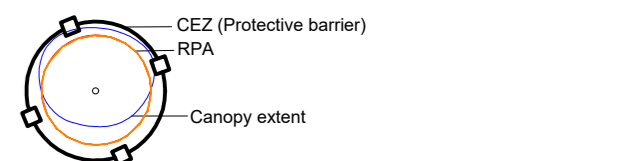
Retention value key



### Root Protection Areas (RPA) Construction Exclusion Zones (CEZ)

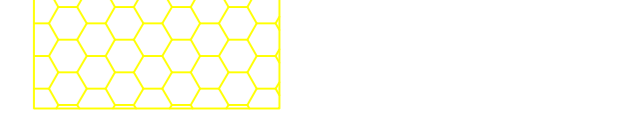
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RPA's have been identified and are based on BS5837:2012. RPA's have been shown as an orange polyline.



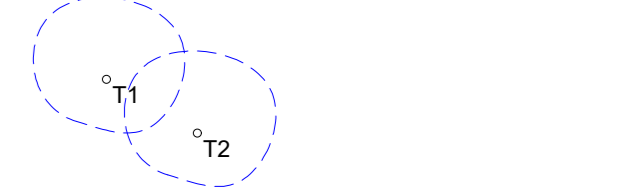
### Special Measure Areas (SMA)

Special measure areas have been identified where further protective measures are required in Arboricultural Method Statement (AMS) format.

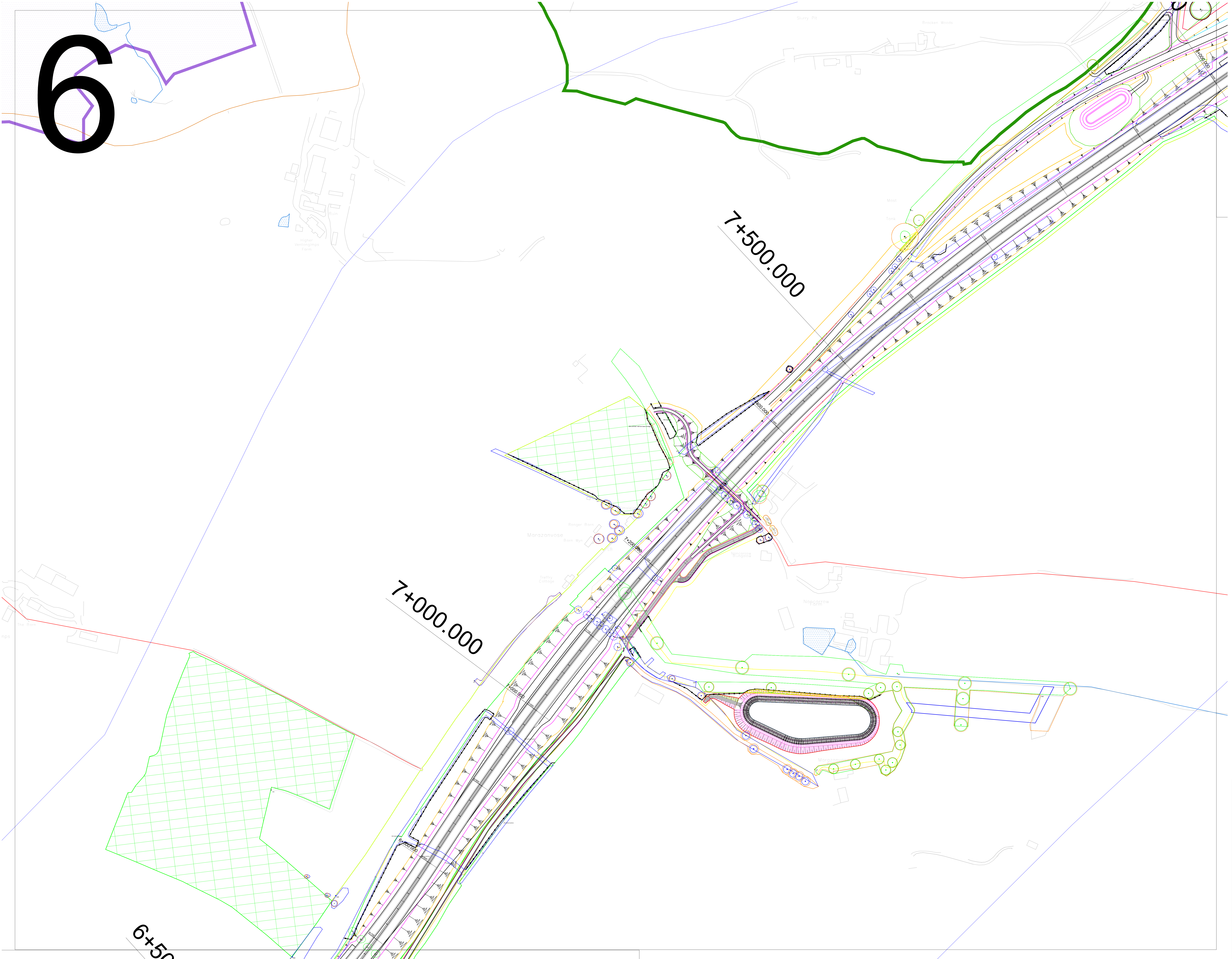
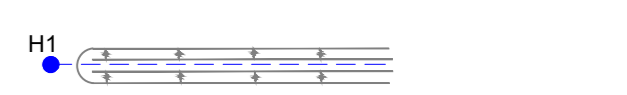
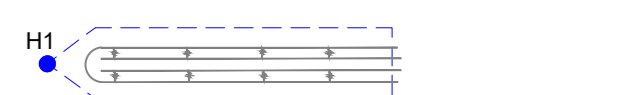
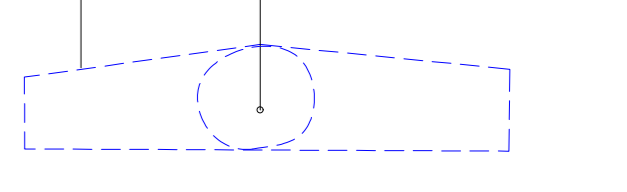


### Tree and Group removal

Trees, groups, hedges and woodland to be removed are shown dashed as below



Woodland or group canopy extents  
Un numbered individual sample tree within group



### Amenity Tree Care

The Annexe, Willow Hill Cottage, School Lane,  
Burwardsley, Chester, CH3 9NX  
Tel. 01829 770075

Client:  
**Arup**

Project:  
**A30 Chiverton to Carland Cross**

Detail:  
**TREE PROTECTION PLAN - Sheet 6**

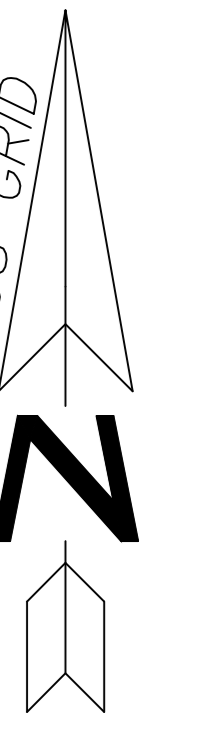
Drawn By: Date: Scale:  
SB 16 05 18 1:1250(A3)

Orig No: Revision:  
TR-01 V1

6+500

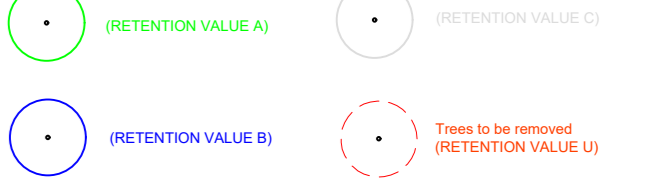


# 7



### TREE PROTECTION PLAN

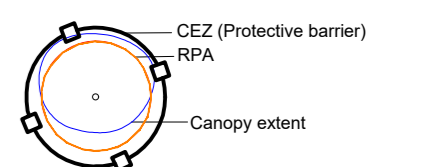
Retention value key



### Root Protection Areas (RPA) Construction Exclusion Zones (CEZ)

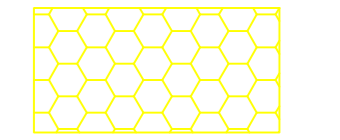
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RPA's have been identified and are based on BS5837:2012. RPA's have been shown as an orange polyline.



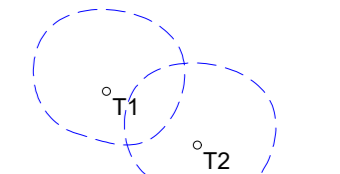
### Special Measure Areas (SMA)

Special measure areas have been identified where further protective measures are required in Arboricultural Method Statement (AMS) format.



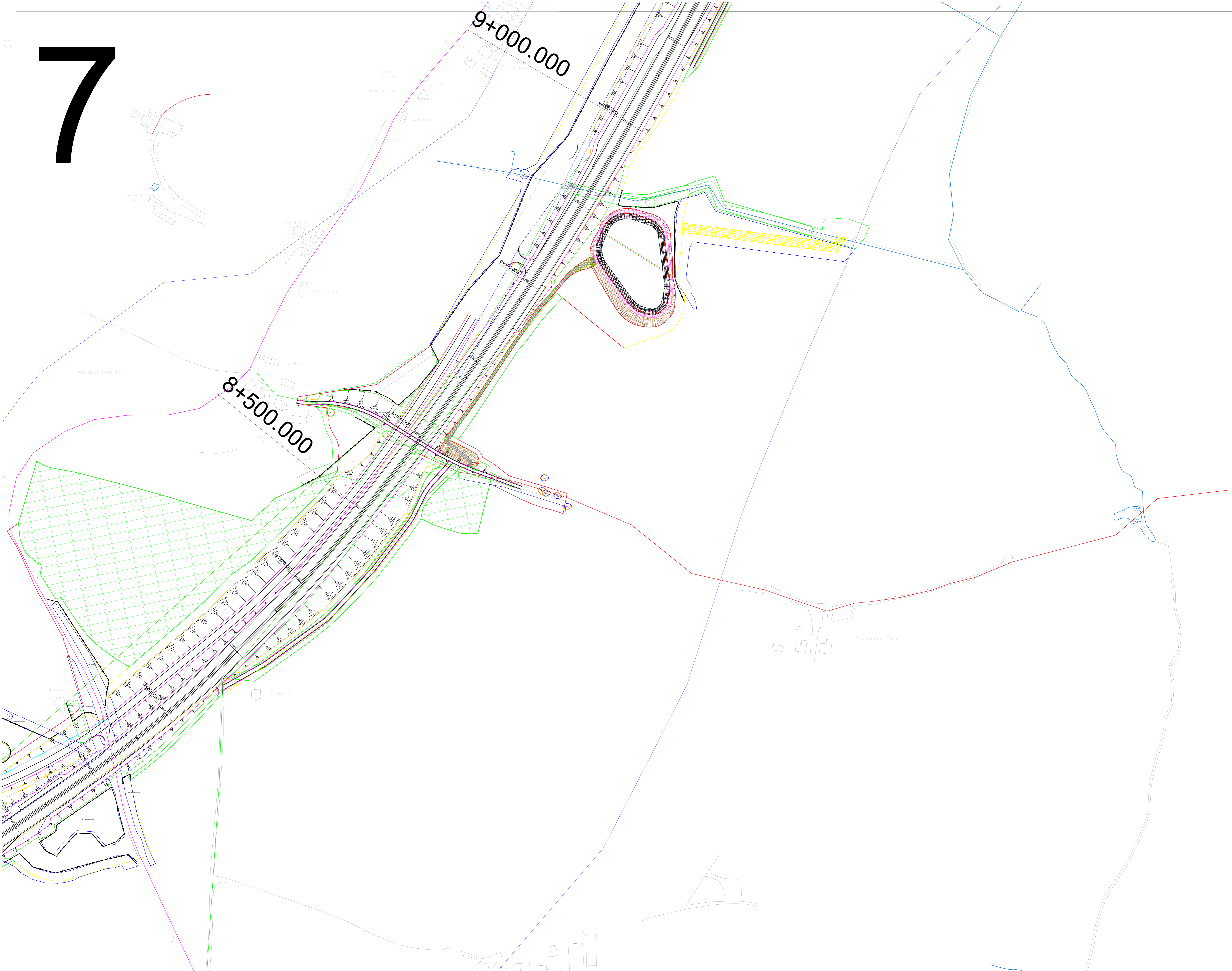
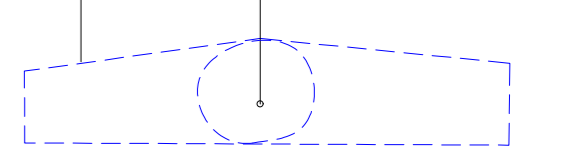
### Tree and Group removal

Trees, groups, hedges and woodland to be removed are shown dashed as below



### Woodland or group canopy extents

Un numbered individual sample tree within group



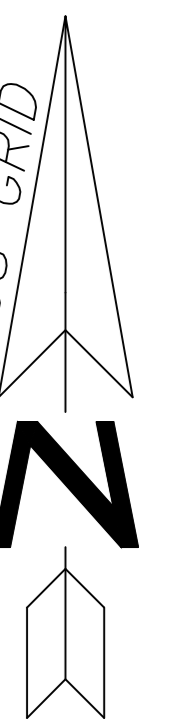
### Amenity Tree Care

The Annexe, Willow Hill Cottage, School Lane,  
Burwardsley, Chester, CH3 9NX  
Tel. 01829 770075

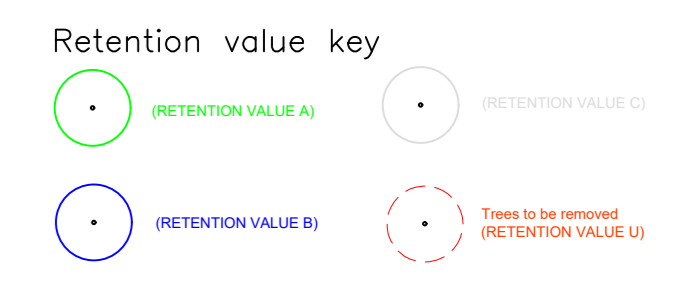
Client:	Arup		
Project:	A30 Chiverton to Carland Cross		
Detail:	TREE PROTECTION PLAN - Sheet 7		
Drawn By:	Date:	Scale:	
SB	16.05.18	1:1250(A4)	
Drwg No:	TR-01	Revision:	V1



# 8

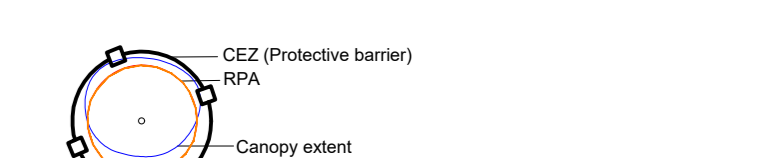


### TREE PROTECTION PLAN



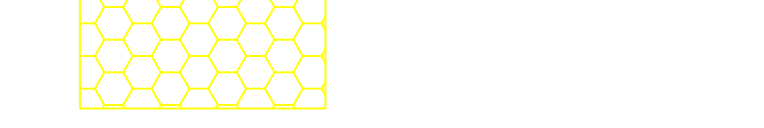
#### Root Protection Areas (RPA) Construction Exclusion Zones (CEZ)

Root Protection Areas (RPA's) have been identified and are based on BS5837:2012. RPA's and Construction Exclusion Zones (CEZ) have been shown as detailed below. The CEZ shall act as the protective barrier for retained trees.



#### Special Measure Areas (SMA)

Special measure areas have been identified where further protective measures are required in Arboricultural Method Statement (AMS) format.

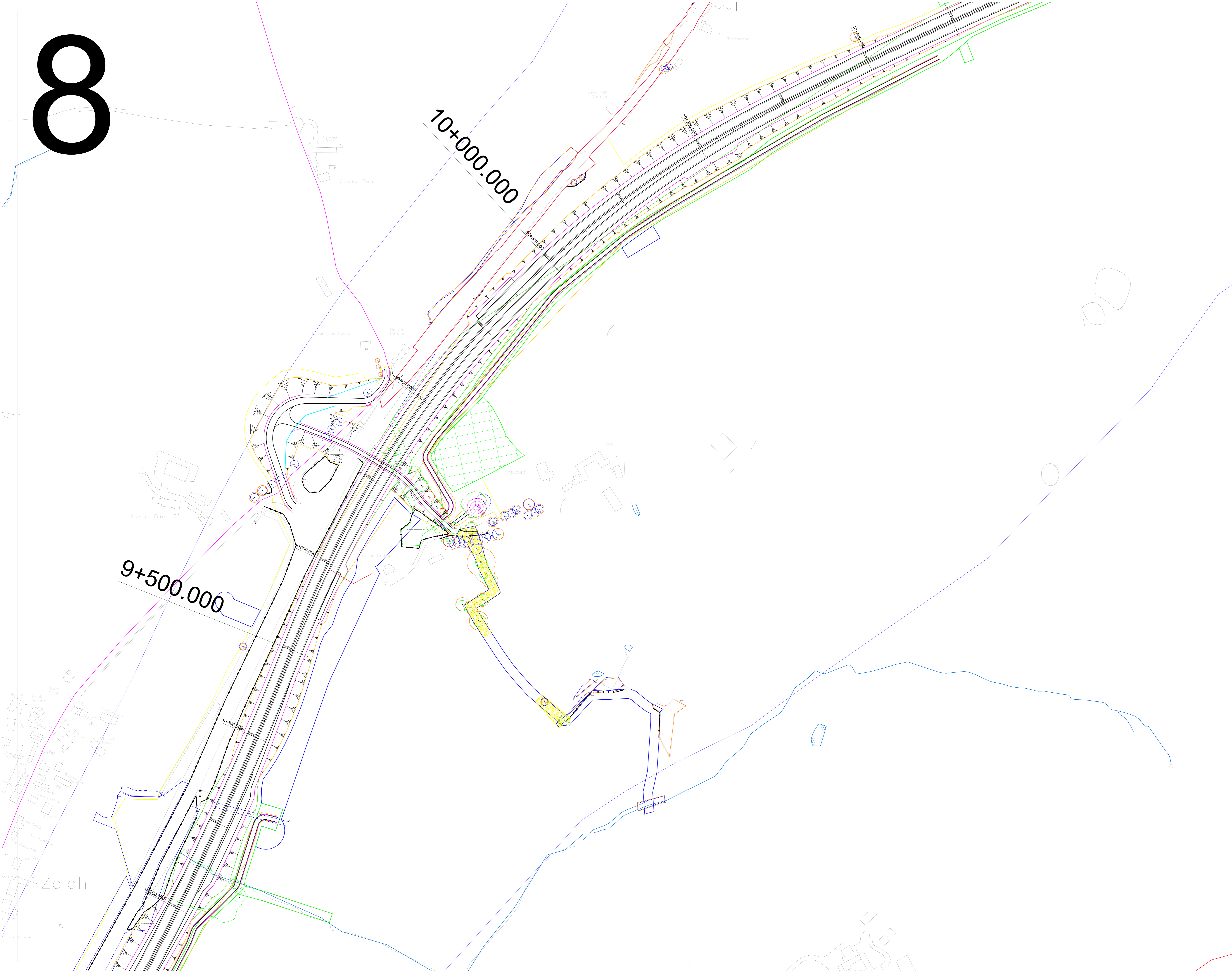
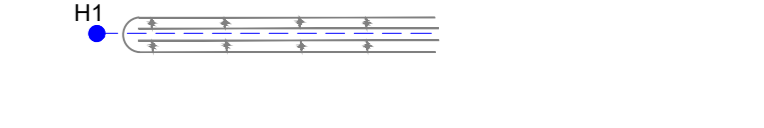
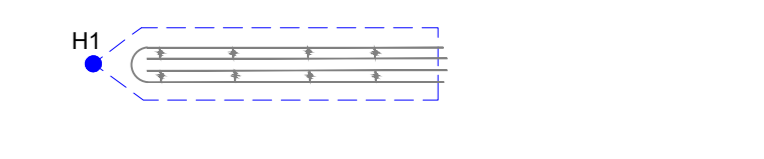
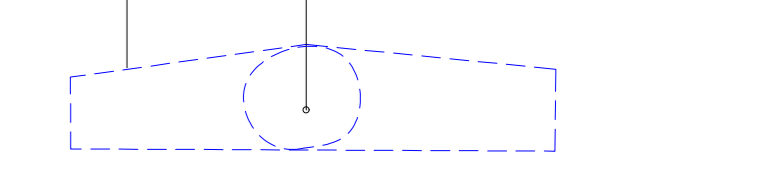


#### Tree and Group removal

Trees, groups, hedges and woodland to be removed are shown dashed as below



Woodland or group canopy extents  
Un numbered individual sample tree within group



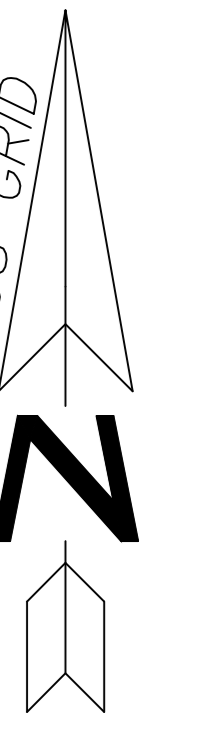
### Amenity Tree Care

The Annexe, Willow Hill Cottage, School Lane,  
Burwardsley, Chester, CH3 9NX  
Tel. 01829 770075

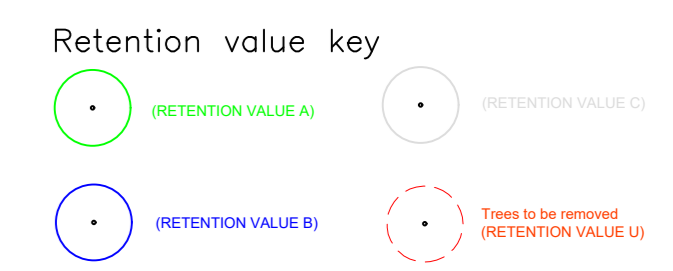
Client:	Arup		
Project:	A30 Chiverton to Carland Cross		
Detail:	TREE PROTECTION PLAN - Sheet 8		
Drawn By:	Date:	Scale:	
SB	16.05.18	1:1250(A4)	
Dwg No:	TR-01	Revision:	V1



# 9



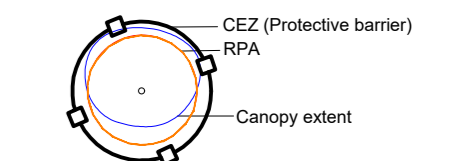
### TREE PROTECTION PLAN



**Root Protection Areas (RPA) Construction Exclusion Zones (CEZ)**

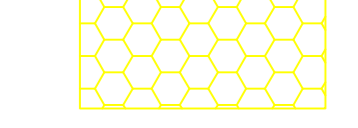
Root Protection Areas (RPA's) have been identified and are based on BS5837:2012. RPA's and Construction Exclusion Zones (CEZ) have been shown as detailed below. The CEZ shall act as the protective barrier for retained trees.

RPA's have been identified and are based on BS5837:2012. RPA's have been shown as an orange polyline.



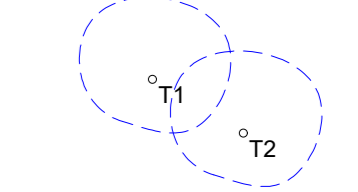
**Special Measure Areas (SMA)**

Special measure areas have been identified where further protective measures are required in Arboricultural Method Statement (AMS) format.



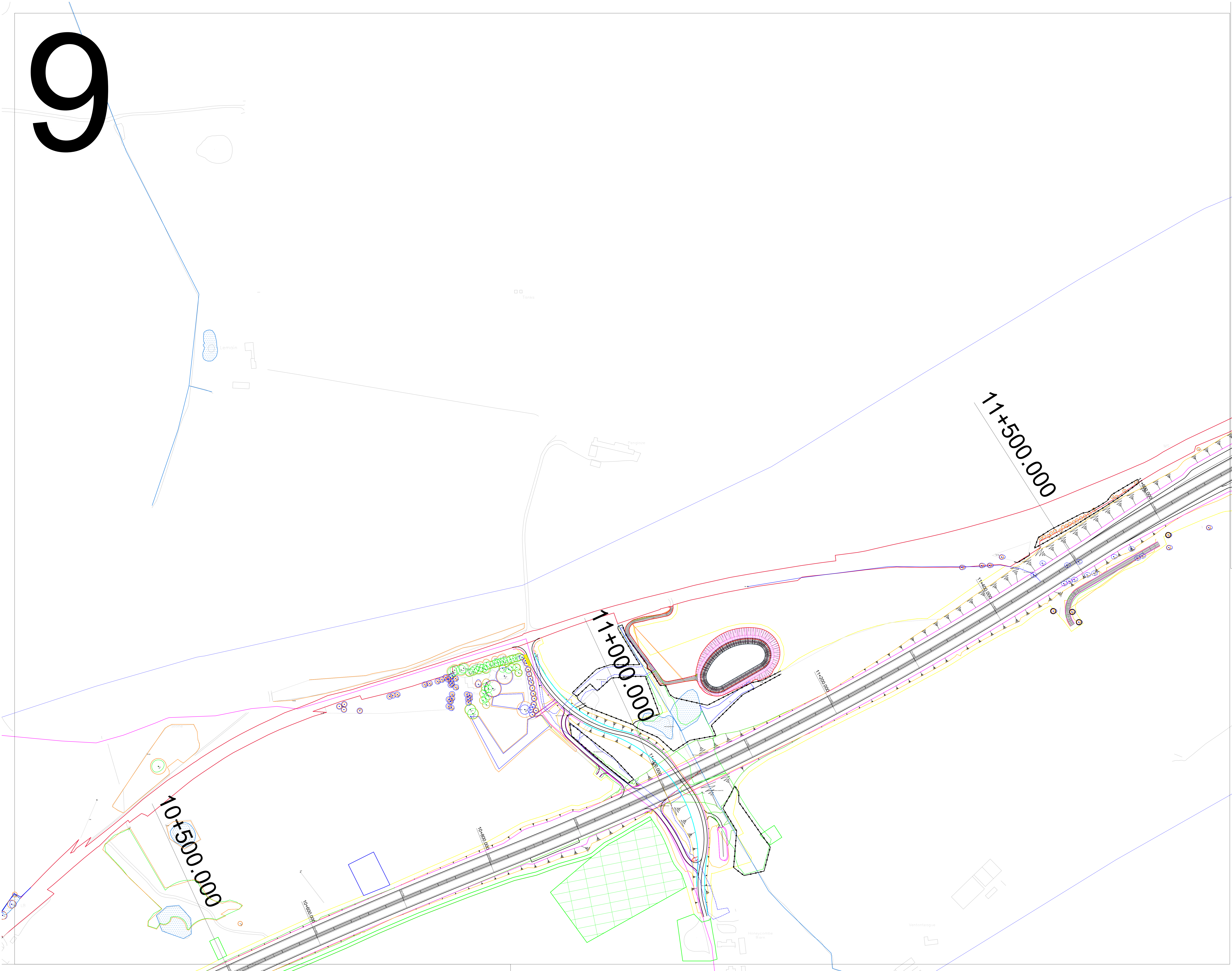
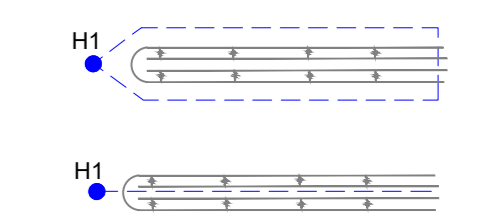
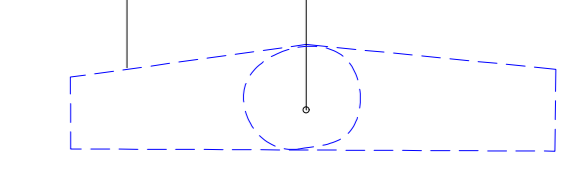
**Tree and Group removal**

Trees, groups, hedges and woodland to be removed are shown dashed as below



**Woodland or group canopy extents**

Un numbered individual sample tree within group



### Amenity Tree Care

The Annexe, Willow Hill Cottage, School Lane,  
Burwardsley, Chester, CH3 9NX  
Tel. 01829 770075

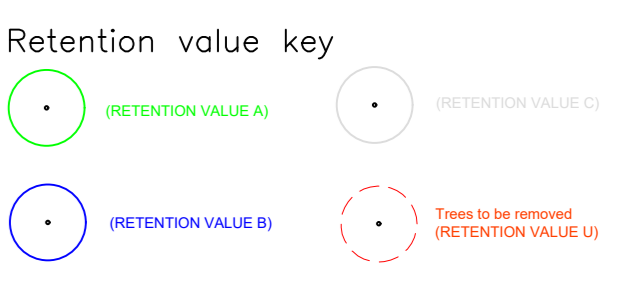
Client:	Arup		
Project:	A30 Chiverton to Carland Cross		
Detail:	TREE PROTECTION PLAN - Sheet 9		
Drawn By:	Date:	Scale:	
SB	16 05 18	1:1250(A4)	
Orig No:	Revision:		
TR-01	V1		



# 10

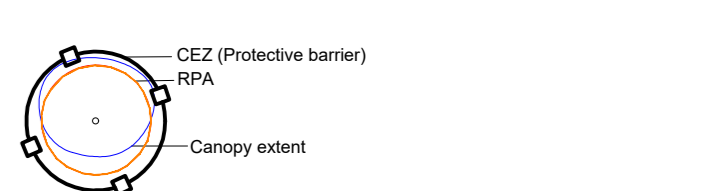


### TREE PROTECTION PLAN



### Root Protection Areas (RPA) Construction Exclusion Zones (CEZ)

Root Protection Areas (RPA's) have been identified and are based on BS5837:2012. RPA's and Construction Exclusion Zones (CEZ) have been shown as detailed below. The CEZ shall act as the protective barrier for retained trees.



### Special Measure Areas (SMA)

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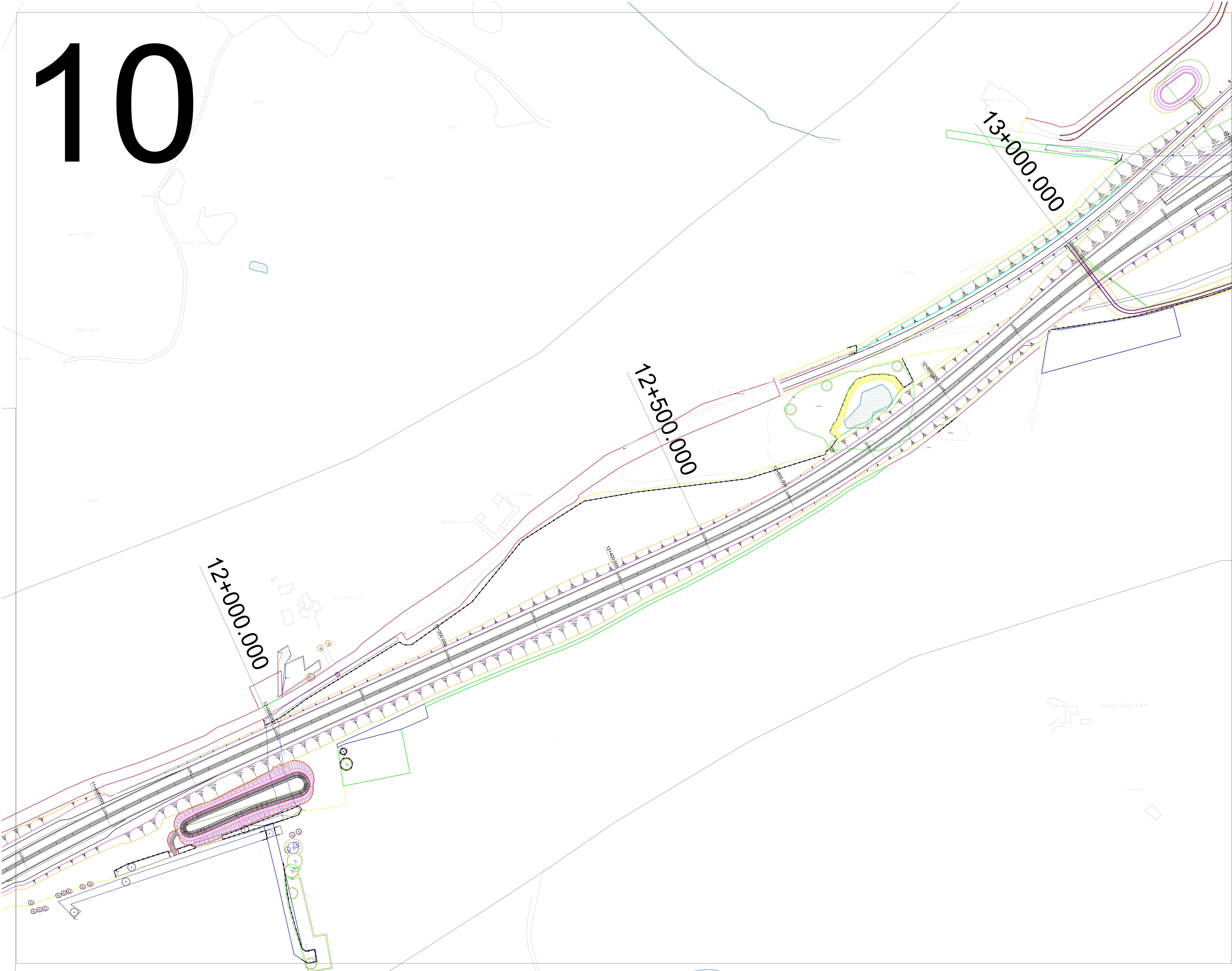
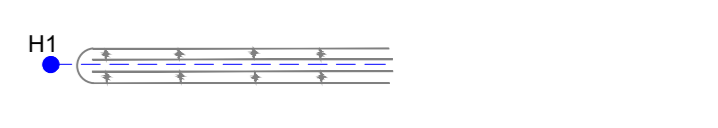
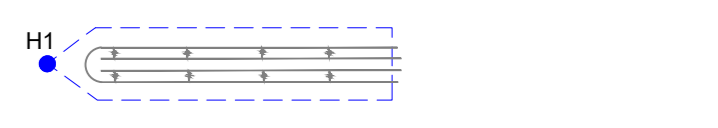
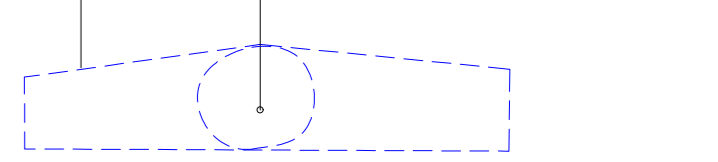


### Tree and Group removal

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Woodland or group canopy extents  
Un numbered individual sample tree within group



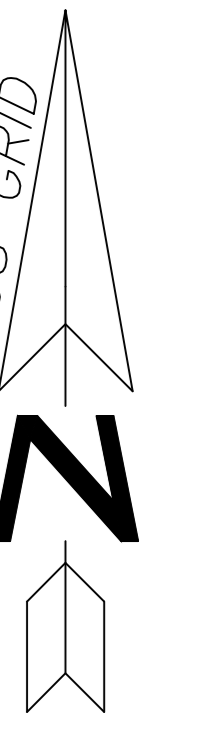
### Amenity Tree Care

The Annexe, Willow Hill Cottage, School Lane,  
Burwardsley, Chester, CH3 9NX  
Tel. 01829 770075

Client:	Arup		
Project:	A30 Chiverton to Carland Cross		
Detail:	TREE PROTECTION PLAN - Sheet 10		
Drawn By:	Date:	Scale:	
SB	16 05 18	1:1250(A4)	
Dwg No:	Revision:		
TR-01	V1		

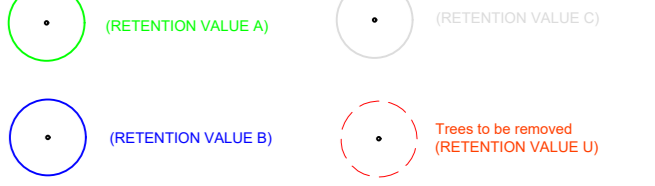


# 11



### TREE PROTECTION PLAN

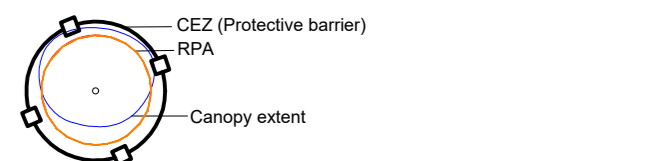
Retention value key



### Root Protection Areas (RPA) Construction Exclusion Zones (CEZ)

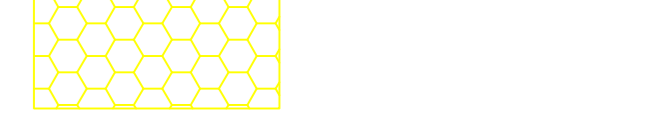
Root Protection Areas (RPA's) have been identified and are based on BS5837:2012. RPA's and Construction Exclusion Zones (CEZ) have been shown as detailed below. The CEZ shall act as the protective barrier for retained trees.

RPA's have been identified and are based on BS5837:2012. RPA's have been shown as an orange polyline.



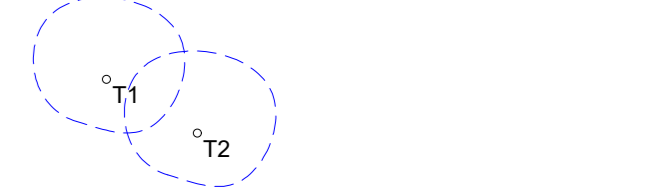
### Special Measure Areas (SMA)

Special measure areas have been identified where further protective measures are required in Arboricultural Method Statement (AMS) format.

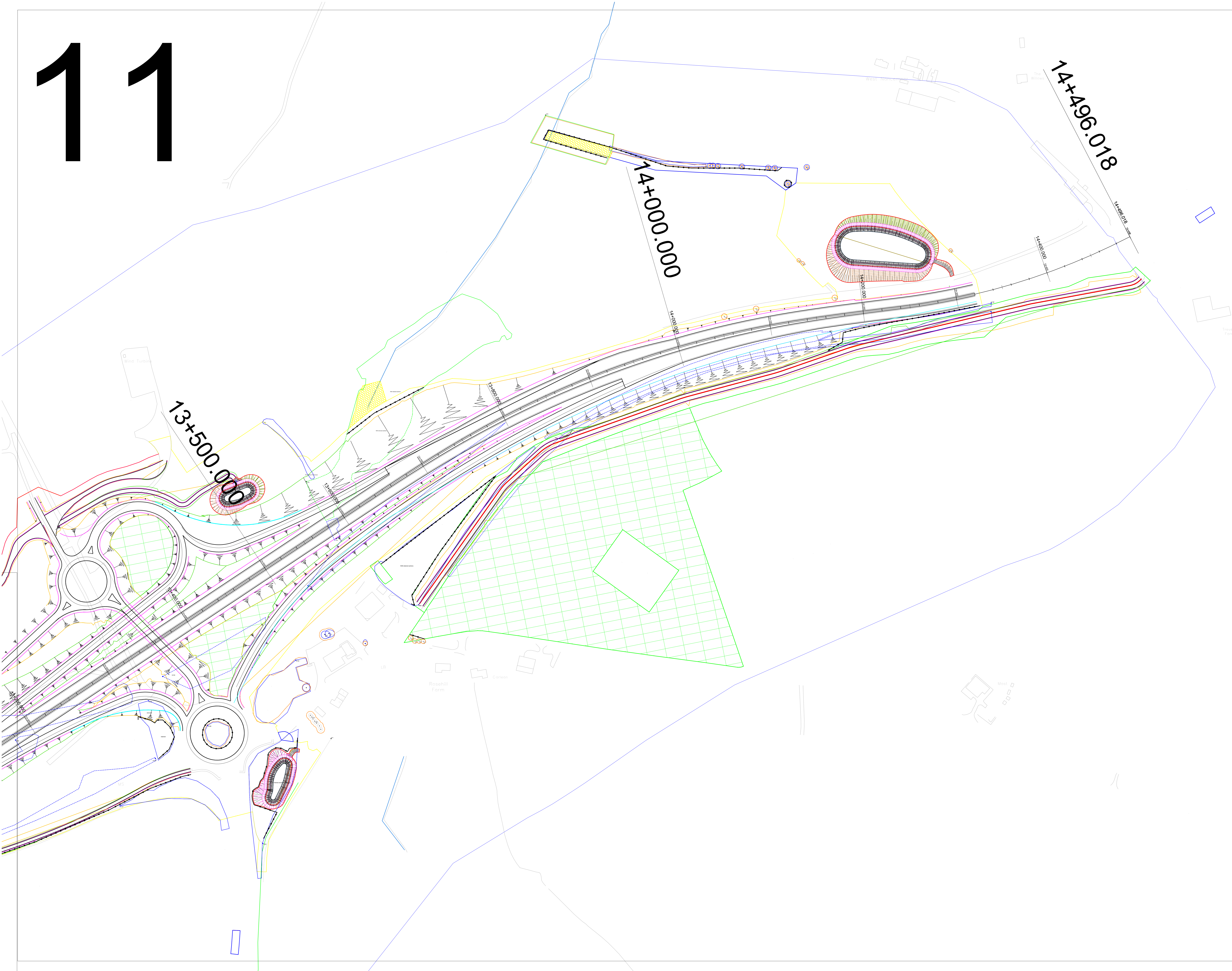
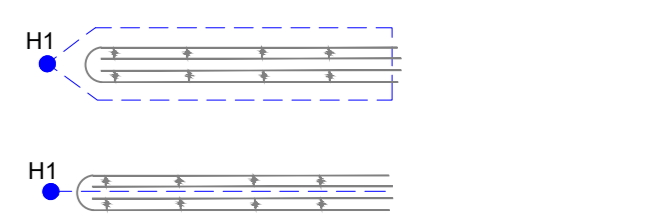
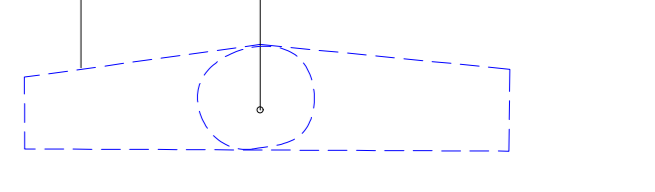


### Tree and Group removal

Trees, groups, hedges and woodland to be removed are shown dashed as below



Woodland or group canopy extents  
Un numbered individual sample tree within group



### Amenity Tree Care

The Annexe, Willow Hill Cottage, School Lane,  
Burwardsley, Chester, CH3 9NX  
Tel. 01829 770075

Client:  
**Arup**

Project:  
**A30 Chiverton to Carland Cross**

Detail:  
**TREE PROTECTION PLAN - Sheet 11**

Drawn By: Date: Scale:  
SB 16 05 18 1:1250(A4)

Dwg No: Revision:  
TR-01 V1



## Appendix 2 Tree Work schedule

<b>Individual trees to remove</b>			
<b>Tag</b>	<b>Cat</b>	<b>Comments</b>	<b>Recommendations following AIA</b>
T60	B2		Lost for carriageway
T33	B2	Within planted landscape buffer plantings from G16.	Remove for carriageway
T37	B2	Scrub.	Remove for carriageway
T40	B2	Regeneration in hedge bank	Remove for carriageway
T44	B2	Growing outside planted Conifer group G39, behind road sign.	Remove for carriageway
T54	B2		Remove for carriageway
T66	B2	Multiple stems below 1.5m. Included bark present in main fork.	Remove for carriageway
T69	A1/A2	Part of linear group. Notable arboricultural and amenity value in wider landscape	Remove for carriageway improvements
T70	A1/A2	Part of linear group. Notable arboricultural and amenity value in wider landscape	Remove for carriageway improvements
T71	A1/A2	Part of linear group. Notable arboricultural and amenity value in wider landscape	Remove for carriageway improvements
T72	A1/A2	Part of linear group. Notable arboricultural and amenity value in wider landscape	Remove for carriageway improvements
T73	A1/A2	Part of linear group. Notable arboricultural and amenity value in wider landscape	Remove for carriageway improvements
T75	A1/A2	Part of linear group. Notable arboricultural and amenity value in wider landscape	Remove for carriageway improvements
T77	A1/A2	Part of linear group. Notable arboricultural and amenity value in wider landscape	Remove for carriageway improvements
T79	A1/A2	Part of linear group. Notable arboricultural and amenity value in wider landscape	Remove for carriageway improvements
T92	C2	Cavity on stem. Major bark wounding on stem.	Remove for general fill exercise
T93	B2	Part of linear group	Remove for general fill exercise
T4	B1/B2	Single edge tree growing as part of linear group (G11) and established before Pine plantings in G11. Multi stemmed.	Remove for visibility and cutting reasons
T74	U	Dead.	Replacement with suitable species.
T76	U	Major bark wounding on stem.	Replacement with suitable species.
T81	U	Part of linear group. Major bark wounding on stem. Inonotus hispidus infection present	Replacement with suitable species.
<b>Tree groups removed</b>			
G35	C1/C2	Young regeneration of low values	Remove for carriageway
G37	B1/B2	Roadside regeneration	Remove for carriageway
G38	B2	Roadside regeneration	Remove for carriageway
G39	C2	Unsuitable species for highway proximity. Planted feature of no arboricultural merit or interest.	Remove for carriageway
G45	B2	Occasional hedgerow standard within hedge bank.	Remove for carriageway

Tag	Cat	Comments	Recommendations following AIA
G58	B1/B2	Maturing hedge bank trees on road side access to Marazan Farm. Occasional dead and dying Elm. Mainly all growing on hedge bank and unlikely to have RPA overlap into hard surfaces. Some local amenity value applies.	Remove for carriageway
G65	B2	Planted trees in wide strip adjacent to road and set back up to 20m approximately. Also contains mixed regeneration. The group has arboricultural longevity due to suitable species planting.	Remove for carriageway
G71	B2	Existing landscape buffer plantings growing in wide grass verge. Mixed species also containing Gorse and regeneration. Establishing and therefore considerable longevity applies.	Remove for carriageway
G76	B2	A planted linear feature of exclusively Alder growing at base of cutting on grass verge. Notable amenity to road users and growing as cohesive feature.	Remove for carriageway
G84	C2	Mainly Ulex sp. all trees are regenerating on boundary of site within steep embankment. Low merit.	Remove for carriageway
G85	C2	Larger area but largely Gorse with all trees are regenerating on boundary of site / tree group area within steep embankment. Low arboricultural quality but connects to wider landscape features	Remove for carriageway
G86	B2	A recently planted linear feature now maturing around the Zelah bypass section of the A30 conferring local and wider visual amenity and landscape value. The trees are currently young but exhibit longevity and are suitable species.	Remove for carriageway
G132	B2	Regeneration of low individual arboricultural value linking to G131.	Remove for carriageway
G133	B2	Planted landscape buffer of mixed species, located on raised embankment so increased amenity value applies locally and in wider landscape.	Remove for carriageway
G134	B2	Planted landscape buffer leading to roundabout approach.	Remove for carriageway
G82	A1/A2	Mixed species planting on steep banking around fly over bridge. Highly visible due to elevated position therefore increased amenity value applies. No RPA modifications are likely.	Remove for carriageway and infrastructure
G83	A1/A2	Mixed species planting on steep banking around fly over bridge. Also contains area of scrub to east of group adjacent to field enclosure. Highly visible due to elevated position therefore increased amenity value applies. No RPA modifications are likely.	Remove for carriageway and infrastructure
G10	B2	A planted linear feature containing established highway mixed species plantings located in roundabout centre and therefore of increased visual amenity and arboricultural significance. Very dense planting spacing. Managed sward around trees and no RPA overlap.	Remove for main carriageway
G16	B2	The group contains mixed species and appears as existing highway planting within wide roadside verge. Landscape buffer plantings now maturing. Planted with sufficient space to develop into linear strip and notable visual amenity to road users. The same planting mix and age as G21. No RPA modifications apply.	Remove for main carriageway
G17	C1/C2	This group contain a residential dwelling and domestic plantings containing numerous Cupressus on the north east group boundary (driveway) and mixed ornamental species. The trees are visible in the local landscape but overall they have little arboricultural quality and value.	Remove for main carriageway

Tag	Cat	Comments	Recommendations following AIA
G19	C1/C2	Opposite G17 on south of existing driveway to residential dwelling. Garden areas contain domestic plantings containing numerous Cupressus. Individual ornamental trees growing in garden areas of little arboricultural interest. Southern group boundary contains predominantly ash and thorn and they are growing on an older hedge bank. All trees form a cohesive feature.	Remove for main carriageway
G21	B2	The group contains mixed species and appears as existing highway planting within wide roadside verge. Landscape buffer plantings now maturing. Planted with sufficient space to develop into linear strip and notable visual amenity to road users. The same planting mix and age as G16. No RPA modifications apply.	Remove for main carriageway
G8	B1/B2	Contains three individual trees growing in soft landscape realm. Naturally regenerated and forming group shelter for T3.	Remove for visibility splay
G95	C2	Garden plantings in private ownership off Herver lane and at entrance to private dwelling, within red line boundary. Low arboricultural merit and significance.	Remove single tree dashed for embankments and retain remainder
G94	B2	Hedgerow with standard trees within located off intersection with Herver Lane. Within extended redline boundary to the north of tree group, potentially for external works. Notable local amenity and visual impact in landscape.	Remove those trees dashed for embankments and retain those within CEZ
G69	B2	Standard hedgerow trees developing in existing hedge bank forming a cohesive feature and conferring local visual amenity and therefore of significance to softening of landscape	Removed, two trees to south of group retained in CEZ
G57	A1/A2	A considerable arboricultural asset containing a large hedge bank dominated by mature standard Oak. Other species present in hedgerow (H40). Not prominent in landscape due to higher land topography to the west. No RPA modifications apply. Considerable ecological value due to connectivity in landscape. Unlikely to have been planted and probable natural regeneration.	Remove
<b>Tree groups largely removed</b>			
G73	B2	Existing landscape buffer plantings growing in land at intersection. Mixed species also containing Gorse and regeneration. Establishing and suitable species present, therefore considerable longevity applies.	Largely removed for carriageway
G78	A2	A mature hedge of mainly Oak but also mixed species planted around third party dwelling. Notable visual amenity, landscape and ecological importance and connectivity. The RPA is likely to be modified to the west due to the available rooting medium and presence of the carriageway.	Largely removed for carriageway embankments. Retain vegetation growing within CEZ as shown on TPP
G72	B2	Regeneration including Oak in wide grass verge located near intersection.	Largely removed for carriageway, CEZ covers remaining tree
G31	B2	Natural regeneration forming hedgerow with standards. A number of multi stemmed trees containing included bark. Growing at same ground level as existing road surface. Canopy overhang into carriageway. Part of wider landscape plantings in W5 and offering group shelter and ecological connectivity.	Largely removed for carriageway, CEZ covers remaining trees

Tag	Cat	Comments	Recommendations following AIA
G99	A2	High canopy trees growing in hedge bank of considerable conservation and arboricultural quality, mainly adjacent to hedge bank on farm access. Appears third party trees within and outside red line boundary. Notable visual amenity due to size and impact on landscape. A number of individual trees numbered T69 to T77 are also located within the tree group. All trees form a cohesive feature and RPA are likely to be modified away from the road surface to the respective field boundaries.	Largely removed for carriageway, section of retained trees within CEZ
G74	B2	Sparse regeneration on hedge bank near intersection. Vegetation developing into standard hedgerow trees towards north of group. Connected to wider cohesive hedgerow features. Local amenity and no RPA modification applies.	Largely removed for carriageway. Retain vegetation growing within CEZ as shown on TPP
G126	C2	Scrub regeneration developing adjacent to bare hedge bank and outside boundaries of W23.	Largely removed, retained trees within CEZ
G131	B2	Regeneration of low individual arboricultural quality but group value to conservation will be higher than individual tree retention values.	Largely removed, retained trees within CEZ
<b>Tree groups - partial loss (some trees to be retained)</b>			
G3	B2	A larger area consisting of early mature and recent natural regeneration within the group boundary. Also contains extensive Gorse regeneration. The northern areas of the group contain regeneration up to early maturity under a closed canopy. The trees within the central and southern areas of the agricultural enclosure are much younger and tend to cluster around the existing track to the west. Trees are absent from the central and southern areas of the group, these areas are however dominated by Gorse and Brambles. The group can be seen from the road and those trees present contribute to the overall softening of the local landscape. Those trees growing on the northern boundary screen the commercial infrastructure at Carlton Cross roundabout.	Affected, partial group loss for attenuation pond. Install CEZ as shown
G70	B2	Some semi mature Ash and Acer forming cohesive feature and scrub regeneration to north of group also present. Wide grass verge and no RPA modifications apply. Some local amenity applies due to set back position and prominence in local landscape (A30 road corridor)	Partial loss as shown, retain trees in CEZ
G77	B2	Densely planted area developing into woodland with suitable species present hence longevity applies. Large ground level changes from road to trees and no RPA modifications apply.	Partial loss as shown, retain trees in CEZ
G96	C2	Regeneration and young planted highway trees.	Partial loss as shown, retain trees in CEZ
G116	C2	Area of scrub regeneration developing.	Partial loss as shown, retain trees in CEZ
G120	B2	Natural regeneration growing on hedge bank. Mainly coppice stools out of rotation. Notable linear feature of considerable conservation value and local amenity value. Located in hedge and unlikely to have RPA in road surface.	Partial loss as shown, retain trees in CEZ areas
G20	C1/C2	A scattering of mixed domestic plantings located in front garden of dwelling, little arboricultural merit or significance.	Partial loss, install CEZ as shown
G129	B2	Regeneration of medium - low arboricultural quality developing on steep embankment.	Partial loss, retained trees within CEZ
G9	C2	Area of scrub regeneration developing.	Remove and retain. Remove those sections outside CEZ for cuttings

Tag	Cat	Comments	Recommendations following AIA
G11	B2	A planted linear feature containing established highway mixed species plantings to the north of the group and an area of younger and more recently planted Pine in proximity to the car parking bay. The young Pine to the south of the group are a suitable planting and shall compliment those existing Pine in G6 and provide long term sustained visual amenity. Three mature trees are growing on hedge bank to roadside frontage forming western group edge and some are pruned for highway maintenance. The group occupies an elevated strategic position for the provision of wider visual amenity. The group is formed by long established highway planting which is not common on the site due to much younger plantings being present. The tree group connects to H11 and is part of continuous vegetated cover including hedge banks and trees immediately off the site boundary to the north. The RPA of those individuals growing on hedge banks are likely to be modified due to the elevated stem position on top of the banking.	Retain and remove. Remove vegetation up to top of cutting and retain within CEZ position
<b>Hedgerows - removed / largely removed</b>			
H9	B2	Hedgerow with many Ash standard trees .	Largely removed for carriageway, two sections retained outside CEZ adjacent to temp works boundary.
H10	B2	Managed hedgerow with occasional standard.	Remove for carriageway
H11	B2	Sparse regeneration on highway edge and planted hedge material	Mainly removed for cutting embankment, install CEZ for remaing sections
H18	B2	Hedgerow with occasional standard.	Remove for carriageway
H23	C2	Hedge regeneration.	Largely removed, some retained sections north of roundabout
H24	C2	Hedge regeneration very sparse. Occasional Tamarisk.	Largely removed, some retained sections linking to H23
H25	B2	Mature hedge bank	Remove for carriageway
H26	B2	Mature hedge bank, long linear feature - highway hedge.	Remove for carriageway
H27	B2	Unmanaged hedgerow with mature standards.	Remove for carriageway general cut
H28	B2	Unmanaged hedgerow with mature standards.	Remove for carriageway
H42	C2	Garden trees of low merit.	Remove for carriageway
H46	B2	Regeneration and early mature planted highway trees, largely growing under OH lines/stantions. Considerable linear length therefore conservation value and arboricultural longevity due to species mix and wide verge. Vegetation more dense towards field boundary	Remove for carriageway
H50	B2	Managed Hedgerow.	Remove for carriageway
H62	C2	Very occasional regenerating tree	Largely removed, retained sections within CEZ
H66	B2	A larger linear hedgerow, unmanaged and mature therefore considerable conservation value	Largely lost for carriageway, retained trees within CEZ
H72	B2	Long linear feature hedgerow planted and regeneration	Remove for carriageway



Tag	Cat	Comments	Recommendations following AIA
<b>Hedgerows - partial loss</b>			
H32a	A2	A large linear feature containing numerous individuals in hedge bank and similar to H32 and comments are the same.	Some sections lost outside CEZ as shown on TPP
H34	B2	A large linear feature containing individuals in hedge bank. This hedgerow feature contains significant mature trees numbered G44 connecting woodland and highway planting in the wider landscape. It is of some arboricultural and conservation value. The trees are mainly located within a fenced hedge bank which in some areas is over 1m in height, no RPA modifications are considered to apply and the single largest constraint would be the canopy extent which has often been pruned to allow vehicle passage.	Removed and retained sections as per TPP
H44	A2	Mature Oak growing on hedge bank of considerable conservation and arboricultural quality. High hedge banks and road are likely root barriers and some RPA ingress up 4m from base of field hedge bank will apply.	Offset RPA applies therefore increased CEZ on west in compound, some trees on east of road removed for access carriageway and remaining trees in CEZ
H47	B2	Recent landscape buffer planting forming wide hedge around junction verge providing connectivity and mixed species range.	Partial loss of group to north east for embankments, retain those trees within CEZ
H40	B2	A notable hedge as it is a large cohesive feature, largely continuous, contains mixed species and connects to wider landscape. Often sparse on trees in fields	Retained and removed sections as per TPP
<b>Woodlands - removed and or largely removed</b>			
W5	B2	Planted linear feature.	Largely lost for carriageway, retained sections within CEZ
W1	A2	Maturing highway planting located in wider central reservation of considerable arboricultural and ecological value and prominence in the landscape. Provides visual amenity to road users and local/wider landscape.	Remove for carriageway
W13	A2	Off site woodland of considerable conservation and arboricultural quality. Single cohesive feature. Mature trees set back from hedge boundary providing wind firm edge. High wider amenity value due to isolated and elevated position. No RPA modifications apply on the roadside. The group is open grown without hedge banks to the fields and RPA will extent into the adjacent fields.	Remove for carriageway
W17	A2	High canopy woodland containing mixed, mature species similar to North Plantation. Growing in hedge bank therefore minimal RPA overlap outside hedge bank. The group is a single cohesive feature of considerable conservation and arboricultural quality connecting to more recent highway plantings in G89.	Remove for carriageway
W2	A2	A continuation of W1 with the similar age, species mix and importance	Largely removed for carriageway, retained sections within CEZ as shown on TPP
<b>Woodlands - partial removal</b>			
W15	A2	Containing mixed species planting on steep banking around fly over bridge and unmanaged hedge lines around old quarry site adjacent to redline boundary. Highly visible due to elevated position therefore increased wider landscape and amenity value applies. Continuous RPA for group boundary within red line and adjacent. No RPA modifications are likely.	Partial removal to fill line, retained trees within CEZ. Arborist to oversee excavations on newly formed tree edge
W16	A2	Mixed species planting on steep banking around fly over bridge. Highly visible due to elevated position therefore increased wider landscape and amenity value applies. No RPA modifications are likely.	Partial removal to fill line, retained trees within CEZ. Arborist to oversee excavations on newly formed tree edge

Tag	Cat	Comments	Recommendations following AIA
W24	A2	A large linear woodland feature of considerable conservation and arboricultural quality containing scrub regeneration developing into high canopy woodland. Densely grown. Significant wider visual amenity applies but high conservation value also due to size of area. The tree group occupies a considerable area of the red line boundary and considerable woodland areas are present outside the red line boundary.	Removal applies to approximately half of group area, retained trees within CEZ. Temporary works within wooded area pply, AMS and detailed design needed. SMA applies.
W26	B2	Linear woodland of landscape buffer plantings of high amenity due to elevated position in landscape.	Removed trees to east of group removed for general cut and fill in temp works boundary. Install CEZ for retained trees

If you need help accessing this or any other Highways England information, please call **0300 123 5000** and we will help you.