

# Arboricultural Impact Assessment (AIA) Version 2

Prestatyn

Prepared for: CASTLE GREEN

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## Appendix

- 1 Tree Protection Plan
- 2 Survey sheets (updated as a result of AIA)

## **1.0 Introduction**

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

- 1.2 My name is Simon Brain, I am a chartered arboriculturist, with 25 years' experience holding the LANTRA Professional Tree Inspection certificate. I have been instructed by the client to prepare the following Arboricultural Impact Assessment for land at Midnant Rd Prestatyn.
- 1.3 This Arboricultural Implications Assessment (AIA) is based on the proposed developments as shown on the Proposed Site plan and incorporated into the Tree Protection Plans (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 development sites and retained trees.
- 1.6 Where specialist design, construction techniques or in areas where supervision of the works is required a Special Measure Area (SMA) has been shown on the TPP for the study areas.
- 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 (RPA) 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/preconstruction.

## **2.0 Arboricultural Impact Assessment**

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

2.2 The proposed development has been embedded within the Tree Constraints Plan which indicates the following developments associated with this site to have an arboricultural impact:

- Installation of proposed development infrastructure requiring tree removal

2.3 The arboricultural impacts of these items have been identified below.

2.3.1 Installation of proposed development access requires the removal of the following tree references:

- T3,T4,T23,T18-T22

### **3.0 Tree Preservation Orders**

3.1 I have not checked with Council over Conservation Area or Tree Preservation Order.

### **4.0 Trees to be removed and retained**

4.1 The following trees have been identified for removal due to their condition (Category U): none

4.2 A total of 8 trees are identified to be removed for the direct impact of development as listed in section 2.3.2, although further confirmation of positioning in relation to T1, T2 and T10 are needed and confirmations which may change tree removals.

4.3 The remaining trees are due to be retained and protected as outlined on the TPP by methodology needed in an AMS.

## **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. No RPA modifications have been shown for this scheme.

## **6.0 Post construction considerations**

6.1 Not applicable.

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

7.1 There are some requirements for minor levels of tree pruning to facilitate the proposed development if off site trees and plot 25 are retained.

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

8.1 New surfacing is not required.

## **9.0 Construction Exclusion Zones and Special Measure Areas**

9.1 The Construction Exclusion Zone has been shown as a black fenced polyline on the TPP in Appendix 1 and shall be constructed using heras panels and rubber feet securely staked to the ground.

9.2 The CEZ is purposefully located within proposed new surfacing near TPO trees in order to prompt site supervision and wider protective measures when new surfacing is installed.

9.3 The CEZ must be installed as signed off as fit for purpose before any other works commence on site.

## **10.0 Site supervision and monitoring**

- 10.1 Where a tree has been delineated on the TPP as requiring retention there will be a requirement to oversee construction operations in these areas in order to ensure that no damage occurs to the retained tree.
- 10.2 To ensure that there is an auditable system of site monitoring, reports will be compiled by an appointed arborist and following site visits they issued to the site manager and design team, copies of which will be available on site at all times for inspection by a Council planning/Tree officer.

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

- 11.1 No detailed plans have been provided specifying the location of site utilities
- 11.2 Specialist advice with regards to the position of utilities will need to be sought from engineers and must be reviewed by the consulting arboriculturist prior to commencement on site.
- 11.3 The usual construction techniques for installing site utilities within an RPA 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. Trees need to maintain a balance between shoot and root growth to ensure that the resources supplied by each can meet the demand of the other. 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.

11.4 The use of trenchless techniques can be acceptable provided the depth of service run that is excavated is below the anticipated root depth.

## **12.0 Design change requirements**

12.1 Design change requirements have been implemented in accordance with previous Arboricultural advice to retain T1-T3 and offset distances from T6-T11.

## **13.0 Amenity Value**

The retention of significant arboricultural assets has been achieved.

## **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 to achieve a harmonious balance of retained and removed trees that can be considered acceptable by the LPA because of previous design changes as reported.



## Appendix 1 Tree Protection Plan

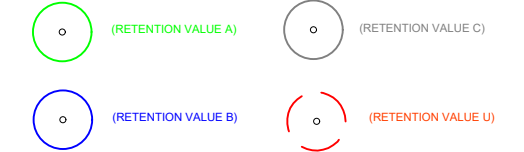
Tree/Group No.	Common Name	Life Stage	Stem Diameter (mm)	Number of Stems	Tree Height (m)	Crown Height (m)	North	East	South	West	Retention Category	Estimated Remaining Contribution (yrs)	Comments	Recommendations following AIA	RPR(m)	RPA(m)
T1	Sycamore	M	865	1	15	6	8	8	8	8	A1	40+		Install CEZ as shown on TPP.	10.4	338
T2	Sycamore	M	1060	1	16	6	8	8	6	8	A1	40+	Measured over ivy, 2m crown garden side.	Install CEZ as shown on TPP.	12.7	508
T3	Ash	M	865	1	16	5	5	6	6	4	B1	20+		Install CEZ as shown on TPP.	10.4	338
#T4	Apple	M	424	2	7	1.5	4	4	4	4	B1	20+	The tree was missing from the topographical survey and was plotted on site by the arboricultural surveyor.	Remove tree for development	5.1	81
#T5	Sycamore	EM	400	1	16	3	6	4	4	4	A2-B1	40+	The tree was missing from the topographical survey and was plotted on site by the arboricultural surveyor.	Install CEZ as shown on TPP.	4.8	72
#T6	Sycamore	M	685	1	16	3	7	7	8	5	A2-B1	40+	The tree was missing from the topographical survey and was plotted on site by the arboricultural surveyor.	Install CEZ as shown on TPP.	8.2	212
#T7	Sycamore	M	705	1	16	2	6	7	5	7	A2-B1	40+	The tree was missing from the topographical survey and was plotted on site by the arboricultural surveyor.	Install CEZ as shown on TPP.	8.5	225
#T8	Sycamore	M	245	2	5	0	3	3	4	2	C2	10+	The tree was missing from the topographical survey and was plotted on site by the arboricultural surveyor.	Install CEZ as shown on TPP.	2.9	27
#T9	Sycamore	M	750	1	16	3	7	4	5	5	A2-B1	40+	The tree was missing from the topographical survey and was plotted on site by the arboricultural surveyor.	Install CEZ as shown on TPP.	9	254
#T10	Sycamore	M	645	1	16	4	8	7	8	6	A2-B1	40+	The tree was missing from the topographical survey and was plotted on site by the arboricultural surveyor.	Install CEZ as shown on TPP.	7.7	188
#T11	Sycamore	M	800	1	5	0.5	3	3	4	2	C2	10+	The tree was missing from the topographical survey and was plotted on site by the arboricultural surveyor.	Install CEZ as shown on TPP.	9.6	290
#T12	Sycamore	M	675	1	16	5	7	4	7	7	A2-B1	40+	The tree was missing from the topographical survey and was plotted on site by the arboricultural surveyor.	Install CEZ as shown on TPP.	8.1	206
#T13	Sycamore	M	545	1	10	2	4	7	6	6	A2-B1	40+	The tree was missing from the topographical survey and was plotted on site by the arboricultural surveyor.	Install CEZ as shown on TPP.	6.5	134
#T14	Ash	EM	424	2	10	2	6	7	5	7	A2-B1	40+	The stem diameter was recorded over mature ivy. The crown height over the road is 6m above ground level and 2m over the garden.	Install CEZ as shown on TPP.	5.1	81
T15	Sycamore	SM	503	3	11	1	6	6	6	6	C1	40+		Install CEZ as shown on TPP.	6	114
T16	Ash	SM	400	1	8	3	2	4	3	4	B2	40+		Unaffected.	4.8	72
T17	Ash	SM	400	1	8	3	5	5	3	5	B2	40+		Unaffected.	4.8	72
T18	Elder	SM	125	1	5	0.5	2	2	2	2	C1	10+		Remove tree for development	1.5	7
T19	Elder	SM	125	1	5	0.5	2	2	2	2	C1	10+		Remove tree for development	1.5	7
T20	Sycamore	SM	179	5	5	0.5	2	2	2	2	C1	40+		Remove tree for development	2.1	14
T21	Elder	SM	13	1	5	0.5	2	2	2	2	C1	10+		Remove tree for development	0.2	0
T22	Elder	M	135	1	6	0.5	3	3	3	3	C1	10+		Remove tree for development	1.6	8
#T23	Apple	M	424	2	7	1.5	4	4	4	4	B1	20+	The tree was missing from the topographical survey and was plotted on site by the arboricultural surveyor.	Remove tree for development	5.1	81
G1	Elder	M	170	1	6	0	3	3	3	3	C2	10+		Unaffected.	2	13

Tree/Group No.	Common Name	Life Stage	Stem Diameter (mm)	Number of Stems	Tree Height (m)	Crown Height (m)	North	East	South	West	Retention Category	Estimated Remaining Contribution (yrs)	Comments	Recommendations following AIA	RPR(m)	RPA(m)
G2	Elder	SM	135	1	5	0.5	2	2	2	2	C1	10+		Remove tree for development	1.6	8
H1-H2	Leyland cypress	EM	200	1	5	0.5	3	3	3	3	C2	20+		Occasional tree removal tree for development on site and prune to boundary line	2.4	18
H3-H7	Crataegus monogyna	M	125	1	2	0>	1	1	1	1	N/A	40+		Mainly retained, occasional areas of pruning to boundary line	1.5	7



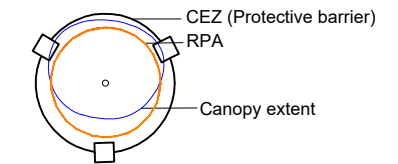
## TREE PROTECTION PLAN

### 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.

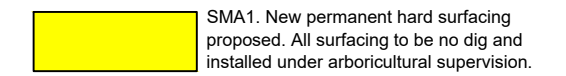


### CEZ

The CEZ's will require installation as shown on the TPP. CEZ shall be repositioned only under arboricultural supervision and only when all construction associated with SMA is complete.

### Special Measure Areas (SMA)

Special Measure Areas (SMA's) have been identified for construction in these areas and they have been shown as detailed below.



Refer to Arboricultural Implications Assessment (AIA) for details of recommended construction in SMA's.

## AMENITY TREE Ltd

Client:  
**TPM Landscape**

Project:  
**Midnant Farm, Prestatyn**

Detail:  
**Tree Protection Plan**

Drawn By: SS      Date: 05.12.22      Scale: 1/500@A3

Drg No: **01**      Revision: **V2**