

ARBORICULTURAL IMPACT ASSESSMENT AT NEWLANDS ROAD, BOGNOR REGIS



Prepared for Gleave Partnership Limited

By A.T. Coombes Associates Ltd.

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Executive Summary

This assessment outlines the tree constraints that affect minor modifications to the existing commercial unit. The proposed works consist of removal of a pillar from the warehouse canopy, installation of new smoking shelter and installation of access gantries to the existing waste platform. The assessment demonstrates how the retained trees can be protected throughout the development process.

No trees will need to be removed for development purposes.

All the retained trees will be provided with proper protection as set out in BS5837:2012 during the construction phase. Protection measures will include erecting temporary protective fencing,

This assessment forms an important stage in the process of managing and protecting the trees on site in relation to the proposed development. However, it will only ensure the protection of the trees on site if the tree protection measures in the Arboricultural Method Statement are implemented in full and the prescribed system of arboricultural supervision is followed. Tree protection works must be fully integrated into the construction process.

From an Arboricultural standpoint the proposed development will not impact on the three protected oak to the north of the development and the row of young trees in the adjoining unit to the south.

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29 August 2025



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1. Terms of Reference

- 1.1 The aim of this assessment is to survey trees that may be affected by minor modifications to the existing commercial unit. The proposed works consist of removal of a pillar from the warehouse canopy, installation of new smoking shelter and installation of access gantries to the existing waste platform.
- 1.2 The assessment addresses the likely impact of the proposed development on surrounding trees and provides recommendations for the protection of retained trees during construction work based on BS 5837:2012 "Trees in relation to design, demolition and construction-Recommendations".
- 1.3 The client has provided a plan showing the position of the proposed development. However, the plan provided did not show the tree positions which have been plotted on the plan based on site measurements. These tree positions should be regarded as approximate and if accurate positions are needed the services of a land surveyor would be required.
- 1.4 The three oak trees adjoining site are the subject of a Tree Preservation Order (ref TPO/BE/2/19) issued by Arun District Council.
- 1.5 The Flood Risk Assessment and Drainage Strategy prepared by EIR Consulting Engineers was also provided.

2. Site Description

- 2.1 There are no trees within the red line development area other than some newly planted standard trees with stem diameters under the minimum size to be included in this BS5837 Assessment. However, outside of the compound are three protected mature pedunculate oak trees shown in Figures 1 and 2. The oak trees are growing in a waterlogged area at a lower level than the yards and building and separated by a retaining wall and fence.



Fig 1: The smaller of the three oaks has extensive dead wood and veteran features



Fig 2: The two other mature oak with broad healthy crowns



Fig 3: The yard and canopy where the modifications will take place has no tree cover



Fig 4: The eastern boundary which has no trees

2.2 The yard and loading area where the modifications will take place has no adjacent trees as shown in figure 3. Figure 4 shows the eastern boundary fence with low shrubs beyond but no trees.



Fig 5: A row of young mixed broadleaved trees in the neighbouring Rolls Royce site separated by a ditch and two fences



Fig 6: The western yard and carparks showing newly planted standards most of which are suffering from the drought conditions

3. Tree Survey Details

- 3.1 Appendix 1, the Tree Survey Schedule gives the survey findings in tabular form. The schedule contains all the information specified in section 4.4.2.5 of the British Standard. Appendix 2 gives a full explanation of the survey headings.
- 3.2 The trees were surveyed on 28 August 2025; they were not climbed but surveyed from ground level.
- 3.3 The details recorded during the tree survey have been collected independently of any development proposals, and the categorisation of the quality and amenity value of the trees is made purely on arboricultural grounds.

- 3.4 No assessment of the soil has taken place as part of this report. The British Standard states that a soil assessment should be carried out by a competent person to establish the structure, clay content and potential for volume change of the soil. A survey of this nature is considered outside the scope of this Arboricultural Assessment. For guidance on soil structure in relation to construction advice should be sought from a Structural Engineer. Guidance on foundation depth in relation to building and trees can be found in NHBC Chapter 4.2.

4. Assessment of Tree Constraints

- 4.1 To facilitate the proper assessment of tree constraints a Tree Constraints Plan (TCP) has been prepared and forms Appendix 3. The plan has been produced as a basis for the assessment of the constraints imposed by existing trees on the proposed design.
- 4.2 Appendix 3 shows the position of trees marked by a coloured dot matching the retention category status and a reference number (as listed in Appendix 1). Heights (Ht) are marked in metres for each tree, together with the predicted ultimate heights (U/Hgt).
- 4.3 The plan deals with constraints that the trees may place on the development in two areas as follows:

Below ground Constraints

- 4.4 The Root Protection Areas (RPA) for the trees are shown as a coloured circle to match the retention category colour. The RPA will be used to help inform the closest positions of any future buildings. The RPA will be protected during any development work with temporary barriers as prescribed by the British Standard.

Above Ground Constraints

- 4.5 The branch spreads were measured at the four cardinal compass points, with a shape drawn around these points to indicate approximate branch spread, represented by green broken lines on the plan. The ultimate crown spread has been shown with an orange dashed line. This is a predicted distance and is based on personal experience of how far it is likely the crown will grow.
- 4.6 A shade pattern has been shown for each tree forming an arc from northwest to due east. This gives an indication of the patterns of shadows created by the trees around mid-day in the summer. This is as recommended in BS5837:2012 (Section 5.2.2) but actual shade patterns throughout the year will vary widely. If shading is likely to be a serious constraint a more detailed analysis of shade pattern using proprietary software may be deemed necessary.

5. Arboricultural Impact Assessment

- 5.1 A total of three individual trees and two groups were included in this report. Groups contain trees forming continuous features or clusters with similar characteristics.
- 5.2 The trees and tree groups included in the survey are all beyond the red line boundary of the development.

- 5.3 The three pedunculate oak (T1, T2 and T3) to the northwest of the development site tree have been classed as Category A which is the highest category available under the British Standard 5837:2012. All three trees are protected by a TPO. T1 is also considered Veteran tree and has been given an increased protection zone of 15 x the stem diameter with no cap as recommended in the NPPF. These trees must be retained and protected.
- 5.4 The two groups (G1 and G2) have been classified as Category C. These trees are small or in poorer condition and do not play such a significant role in the local landscape. C category trees are usually of such a quality that the Local Authority may consider it acceptable for them to be removed for development purposes, if required.
- 5.5 Any trees that are retained will be provided with their proper protection according to BS5837:2012 and the NPPF regardless of which category they have been placed in.
- 5.6 The tree constraints for each element of the development, are considered separately below:

Element	Detail
Alterations to the existing building	There are no tree constraints directly relating to the proposed improvements to the existing building. However, the adjoining protected oak trees (T1, T2 and T3) will be provided with temporary fencing to ensure that there is no access to the sunken area beyond the existing wall and fence.
Services and Soakaways	The position the oak trees leaves them vulnerable to changes in the drainage pattern. However, the Flood Risk Assessment and Drainage Strategy states that the proposed will not change the drainage of the site. Given the nature of the proposed works no new trenching for drainage or electricity will be needed. Any above-ground apparatus including CCTV cameras and lighting should also be positioned to avoid the need for any regular or detrimental pruning to the trees. Minor facilitative pruning is acceptable. However, positions that require repetitive and significant tree work must be avoided.
Site access Hard Surfaces, Paths and Drives	Access to the works will be via the existing road and hard standings. There is no tree constraints associated with this aspect of the development assuming there is no change to the current road and yard layout.

6. Tree Management

- 6.1 No tree work has been specified in column 12 of Appendix 1 for arboricultural and health and safety reasons.
- 6.2 Please note that the inspection of trees on site was of a preliminary nature, gathering, as set out in the British Standard, only information needed to assess tree constraints. While any obvious tree defects that may constitute a risk have been recorded in the survey and appropriate remedial work

specified this assessment does not constitute a full tree health and safety survey. In particular inaccessible trees, trees with heavy ivy cover and trees within groups have not been inspected fully and dimensions estimated. However, any comments on the trees relating to health and safety remain valid for 12 months from the date of this report after which the trees will require re-inspection.

6.3 No trees will be removed for development purposes.

7. Further Arboricultural Input into the Design Process, Construction and Aftercare

7.1 A Tree Protection Plan (TPP), Arboricultural Method Statement (AMS) and Timetable for implementation of Tree Protection Works form Appendices 4, 5 and 6, respectively.

7.2 The AMS contains a timetable for implementation of the tree protection works. No work will commence until the protective fencing is in place.

7.3 If the proposed layout of the development changes it will be necessary to revise this report.

8. Permissions and Constraints

8.1 The three oak trees adjoining the site are subject to a Tree Preservation Order. Therefore, written permission must be obtained from the Arun District Council prior to commencing any work that may affect the condition of the protected trees, including any ground works adjacent to them.

8.2 To assist the planning process the LPA should be provided with a copy of this report and invited to comment on the proposals.

8.3 When dealing with developments close to trees, special attention should be paid to related legislation ensuring that the Wildlife and Countryside Act (1994), Conservation of Habitats and Species Regulations (2010) and the Countryside Rights of Way Act (2000) are adhered to. It must be ensured that nesting birds and protected species such as bats and reptiles are considered and protected.

9. Conclusions

9.1 All trees can be retained and protected as set out in BS5837:2012 throughout the works.

9.2 The A category veteran oak (T1) and other protected oaks (T2 and T3) will be protected by existing permanent fencing and addition temporary fencing providing the recommended degree of protection to conform both to the British Standard and in the case of the veteran tree the NPPF.

9.3 There will be no drainage changes that will impact on the protected trees.

A. T. Coombes NDF, MSc (Arb & Urban For), FICFor, PDArb (RFS) MArborA
A.T. Coombes Associates Ltd
29 August 2025



**APPENDIX 1-
TREE SURVEY SCHEDULE**

SITE: Newlands Road, Bognor Regis

SURVEY COMPLETED:28/08/2025

1	2	3	4	5	6				7	8	9	10	11	12	13	14	15	16
Tree No.	Species	Ht (m)	Stem dia (mm)	No of Stems	Branch Spread				Height and Direction of First Branch (m)	Mean Canopy Ht	Life Stage	Physiological Condition	Structural Condition	Preliminary Tree work	Estimated remaining contribution (Yrs)	Cat grading	Radius of RPA (m)	RPA (sq m)
					N	E	S	W										
T1	Pedunculate oak#	14.6	900	1	7.0	9.0	7.0	7.0	E3	5.0	V	Fair - some die back	Moderate - dead wood throughout crown	None	40+	A3	13.5 (Veteran Buffer Zone)	572.6
T2	Pedunculate oak #	17.0	1242	2	8.0	10.0	8.0	7.0	NE4	1.0	M	Good	Moderate - dead wood in lower crown	None	40+	A3	14.9	697.6
T3	Pedunculate oak #	14.0	990	2	8.0	8.0	8.0	8.0	n/a	2.0	M	Good	Moderate - Forked at base	None	40+	A3	11.9	443.4
G1	Willow #	6.0	100	1	3.0	3.0	3.0	3.0	n/a	0.0	Y	Good -Dense group of stems	Good	None	10+	C2	1.2	4.5
G2	Mixed broadleaves #	9.0	120	1	3.0	3.0	3.0	3.0	n/a	0.5	SM	Good- Single row over ditch in neighbouring RR Unit	Good	None	10+	C2	1.4	6.5

SURVEYED BY A.T. COOMBES ASSOCIATES

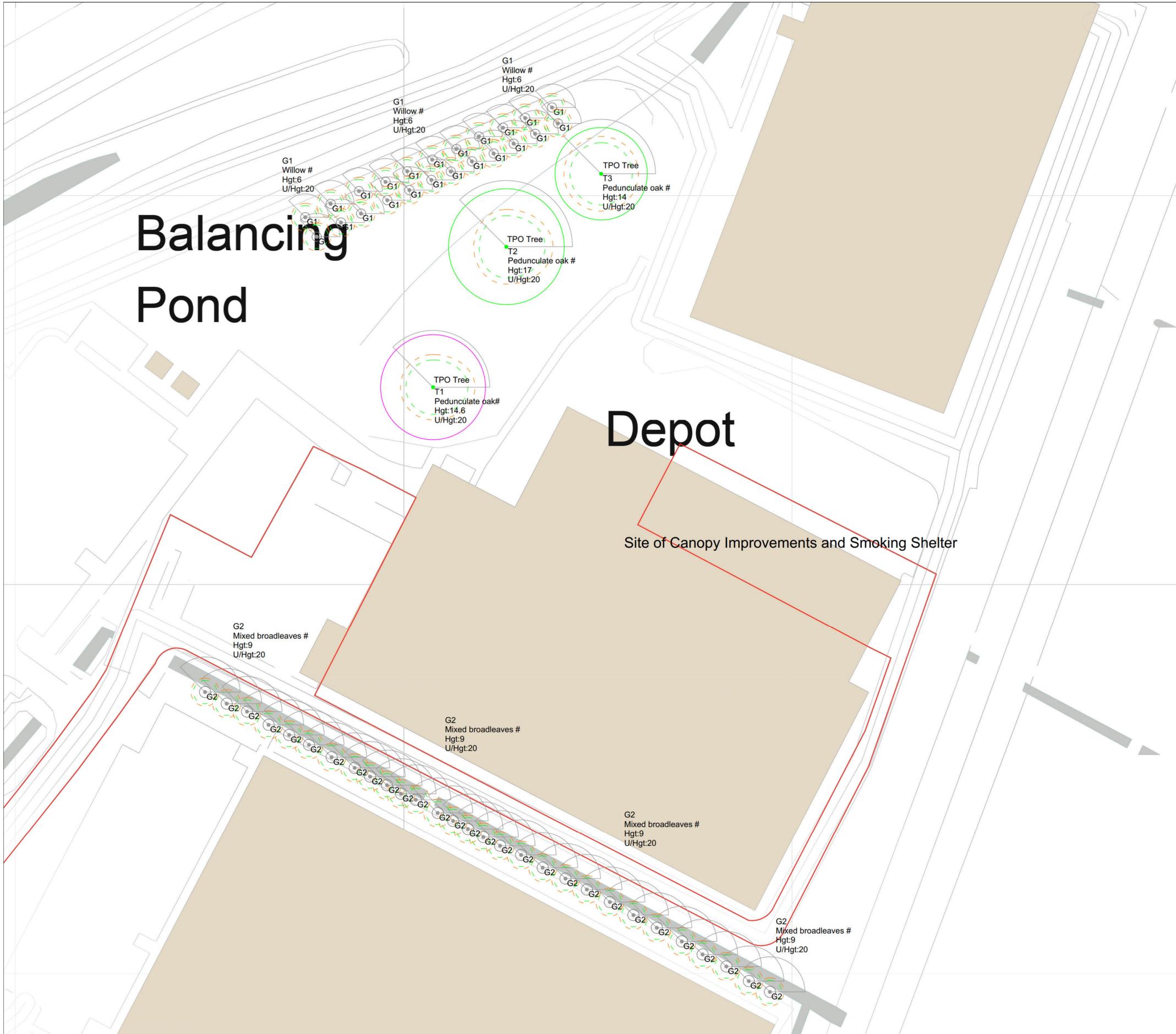
denotes estimated dimensions due to lack of access to tree

Appendix 2: Notes on the Column Headings in Appendix 1

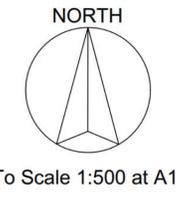
Col#	Title	Notes
1	Tree No.	Tree numbers to correspond with those shown on the TCP.
2	Species	Each tree has been identified and the common name given in each case.
3	Ht (m)	Height of the tree
4	Stem dia (mm)	<p>The stem diameter measured in millimetres at 1.5 metres above ground.</p> <p>For multi-stemmed trees the stem diameter has been calculated according to the formula given in BS 5837:2012. For trees with up to 5 stems, each stem has been measured at 1.5m, squared and added together. The diameter shown is the square root of the total.</p> <p>For multi-stemmed trees with over 5 stems a sample of five diameters has been taken at 1.5m, averaged and squared, then multiplied by the total number of stems. The square root of this sum gives the stem diameter figure.</p>
5	Number of Stems	Total number of stems on the tree.
6	Branch Spread	The branch spread measured in metres from the stem to the tip of the outer branches has been measured in four directions of the compass North, South, East and West.
7	Height and Direction of First Branch spread (m)	First significant branch and direction of growth (relative to the four cardinal compass points).
8	Canopy Ht	Mean height of the canopy above ground level.
9	Life Stage	The life stage of the tree has been assessed into one of the following categories: Y =Young, SM = Semi Mature, EM = Early Mature M = Mature, OM = Over mature and V = Veteran.
10 and 11	Condition	The British Standard recommends that a note is made of the structural and physical condition of the tree.

Col#	Title	Notes
12	Preliminary Management Recommendations	<p>This column includes all work considered necessary to, as far as is practicable, ensure health and safety and for the good arboricultural management of the trees. These works are not associated with the development proposals. All work to be carried out to BS 3998: 2010 "Tree Work-Recommendations".</p> <p>Recommendations given in respect of Health and Safety remain current for 12 months from the date of this assessment after which further inspection is recommended.</p> <p>It should be noted that trees are dynamic structures subject to the forces of nature, which can fail without showing external symptoms.</p>
13	Estimated remaining Contribution (Yrs)	<p>The estimated remaining contribution of each tree in years has been assessed, using personal experience, into the following groupings:</p> <p>< 10 = Less than 10 years 10+ years = More than 10 years 20+ years = More than 20 40+ years = More than 40 years</p>
14	Category grading	<p>U = Those in such a condition that any existing value would be lost within 10 years and which should in the current context, be removed for reasons of sound arboricultural management.</p> <p>(Trees that have serious, irremediable structural defects, such that their early loss is expected due to collapse or ill health including trees that will become at risk due to the loss of other U category trees).</p> <p>A = Those trees of high amenity quality and value in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)</p> <ol style="list-style-type: none"> 1) Trees that are particularly good examples of their species if rare unusual or essential components of groups or formal or semi-formal arboricultural features 2) Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views in or out of the site, or those of particular visual importance. 3) Trees groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran tree or wood pasture)

Col#	Title	Notes
14 cont	Category grading cont	<p>B = Those of Moderate quality and amenity value: those in such a condition as to a significant contribution (a minimum of 20 years is suggested)</p> <ol style="list-style-type: none"> 1) Trees that might be included in the high category but are downgraded because of impaired condition (e.g. remediable defects) 2) Trees and woodland that forming distinct landscape features but do not form essential components 3) Trees with clearly identifiable conservation or other cultural benefits. <p>C = Those of low quality and amenity value currently in adequate condition to remain until new planting is established (minimum of 10 years is suggested) or trees under 150 mm stem diameter.</p> <ol style="list-style-type: none"> 1) Tree not qualifying in higher categories 2) Trees present in groups or woodlands but not with a significantly higher landscape value and or offering low or temporary screening benefit. 3) Trees with very limited conservation or other cultural benefits. <p>Note: Category C trees are the least suitable for retention, where they would impose a significant constraint on the development their removal for development purposes may be considered acceptable by the LPA. Trees with a stem diameter under 150mm could be considered for relocation.</p>
15	Radius of RPA (m)	The distance that would form the radius of a circular protection zone is given in metres calculated by multiplying the stem diameter given in column 4 by 12. The methods for calculating the stem diameter of multi-stemmed trees is given in section 4 above.
16	RPA (m ²)	<p>The area of the RPA is given in square metres calculated by the following formula:</p> <p>Single Stemmed Trees;</p> $RPA\ m^2 = \left(\frac{(stem\ diameter\ mm\ @\ 1.5m \times 12)}{1000} \right)^2 \times 3.142$ <p>The methods for arriving at the stem diameter for multiple stemmed trees are described above in the notes for column 4.</p>



Drawing Title:
Appendix 3 - Tree Constraints Plan
 Site:
 Newlands Road, Bognor Regis
 Client:
 Gleave Partnership Ltd



KEY

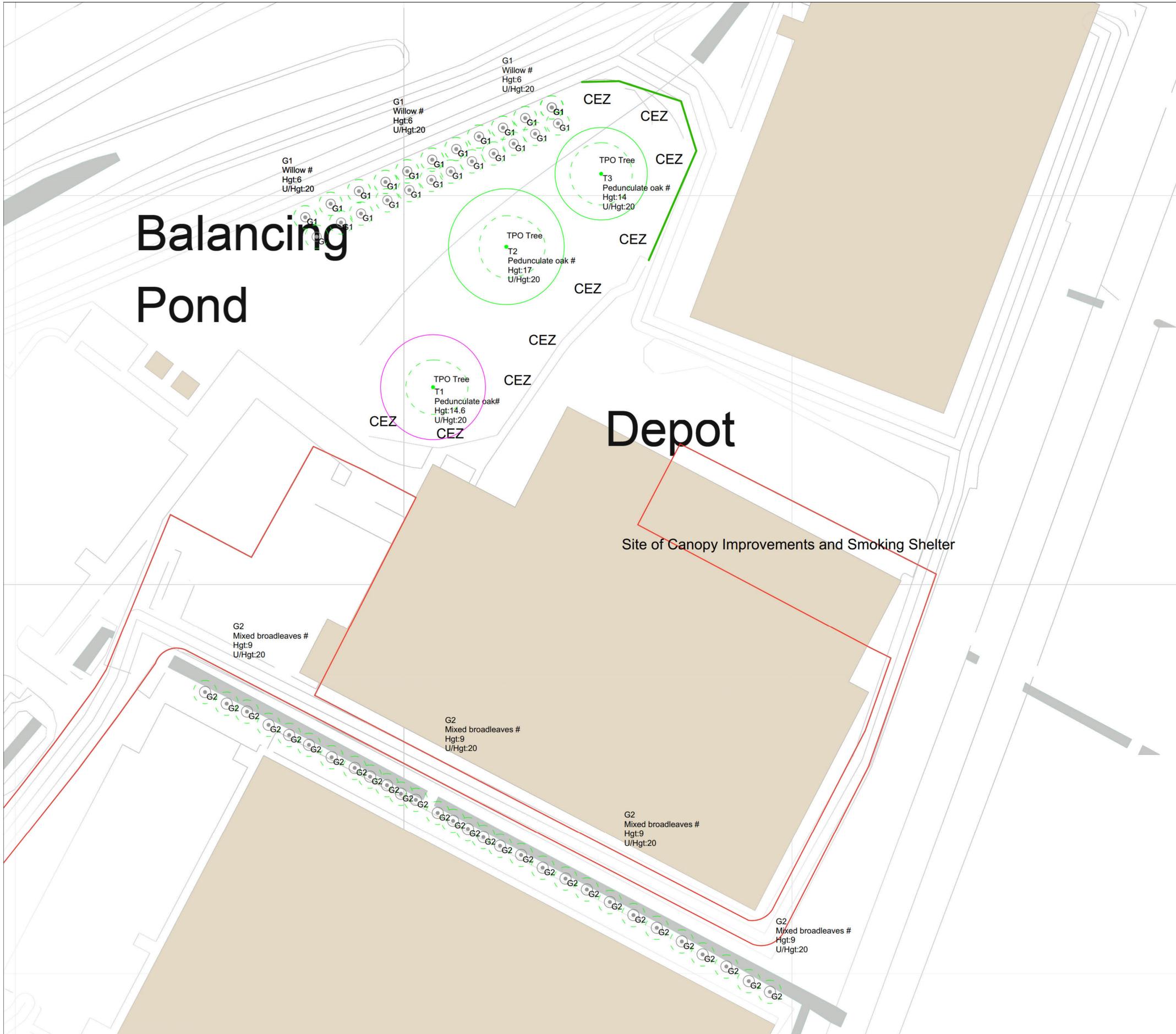
A Category RPA	
C Category RPA	
Veteran RPA as per NPPF	
Current Crown Spreads	
Ultimate Branch Spreads	
Shade Patterns	

Drawn By: RG Date: 29/08/2025

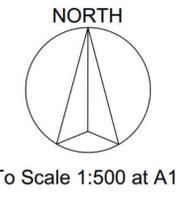


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Drawing Title:
Appendix 4 - Tree Protection Plan
 Site:
 Newlands Road, Bognor Regis
 Client:
 Gleave Partnership Ltd



KEY

A Category RPA	
C Category RPA	
Veteran RPA as per NPPF	
Current Crown Spreads	
Temporary Protective Fencing	
Construction Exclusion Zone	CEZ

Drawn By: RG Date: 29/08/2025



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Appendix 5: Arboricultural Method Statement for a Proposed Development at Newlands Road, Bognor Regis

1. Scope of the Works

- 1.1 The document provides a methodology for protection of trees during the minor modifications to the existing commercial unit at the above site and should be read in conjunction with the Tree Protection Plan Appendix 4 and Timetable for Protection Works Appendix 6.
- 1.2 The main features in the protection of the retained trees on site are as follows:
 - Provision of temporary protective barriers
 - Audited arboricultural site monitoring
- 1.3 A meeting between the site manager/main contractor and a consulting arboriculturist must take place prior to construction work commencing so that the above protection measures set out in this document can be discussed and agreed. At this point a list of contact details for all relevant parties will be produced and circulated including the Tree Officer of the Local Planning Authority.
- 1.4 Protective measures must be in place prior to any ground or construction works take place.

2. Timing of Works

- 2.1 Tree protection works will be completed as detailed below according to the attached timetable Appendix 6.
- 2.2 The exact commencement date is not known. However, the timetable provided gives the order that the works need to be implemented to ensure the trees are fully protected and states when specific arboricultural input will be required.

3. Tree Protection Barriers

- 3.1 Remaining trees will be protected by forming Construction Exclusion Zones (CEZ) as shown on Appendix 4 the Tree Protection Plan (TPP).
- 3.2 Temporary barriers will be erected as shown by the thick green lines on the TPP to form the Construction Exclusion Zone (CEZ). The barriers will consist of 2m tall, welded mesh panels (Heras) supported on rubber or concrete feet. The fence panels should be joined together using a minimum of two anti-tamper couplers installed so they can be removed from the inside of the fence. The distance between couplers should be at least 1m and be uniform throughout the fence.
- 3.3 Panels should be supported on the inner side by stabilizer struts which should normally be attached to a base plate and secured with ground pins. Where the fence will be erected on hard surfacing or it is otherwise unfeasible to use ground pins the struts should be mounted on a block tray.



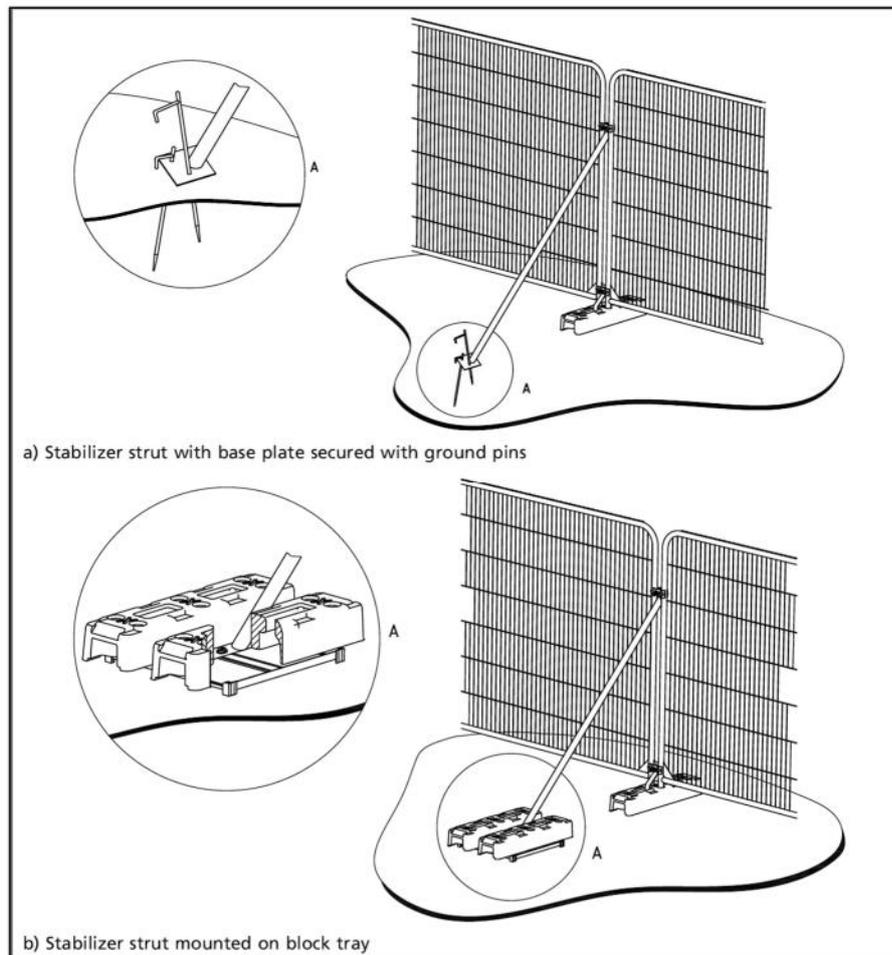


Fig 1: Temporary protective fencing as recommended by the British Standards (2012).

- 3.4 Figure 1 is an extract from BS5837:2012 showing the method of supporting the panels with ground pins and a block mounted tray for use on hard surfaces. Stabiliser struts should be fitted at each panel junction.
- 3.5 At least five all-weather notices should be erected on the barriers forming each CEZ stating “Construction Exclusion Zone – No Access “. These should face outwards towards the work area. Signs must be maintained in good condition and remain in place until completion of the works.
- 3.6 Barriers will be maintained throughout the duration of the works, ensuring that access is denied to the CEZ throughout the process.

4. Site Huts and Temporary Buildings

- 4.1 All site huts and temporary buildings will be sited outside the CEZ.

5. Additional Precautions

- 5.1 The movement of plant in proximity to retained trees should be conducted under the supervision of a banksman to ensure adequate clearance from the branches of the trees. Hydraulic cranes, forklifts,

excavators or piling rigs (other than small rigs used for mini piling) must be avoided in the immediate vicinity the crown of the trees.

- 5.2 Cement, oil, bitumen or any other products which spillage would be likely to be detrimental to tree growth should be stored well away from the outer edge of the RPA of retained trees. Precautions should include ensuring all toxic liquids are stored in fully bunded containers. Equipment such as barriers or sandbags must be available on site to deal with any accidental spillages that may occur.
- 5.3 Lighting of fires on site should be avoided. Where they are unavoidable they must be at such a distance from retained trees that there is no risk of the heat causing fire damage to the trunk or branches. Full account must be taken of wind direction. Fires must be attended at all times until they are completely extinguished.

6. Service Trenches

- 6.1 The position the oak trees leaves them vulnerable to changes in the drainage pattern. However, the Flood Risk Assessment and Drainage Strategy states that the proposed will not change the drainage of the site. Therefore, no new trenching for drainage or electricity will be needed.
- 6.2 Any overground services including CCTV must also be positioned to avoid the need for any regular or detrimental pruning to the trees.

7. Arboricultural Supervision and Aftercare

- 7.1 Arboricultural/site monitoring will be carried out throughout the construction phase by a nominated arborist who will be responsible for consultation with the Local Authority's Tree Officer.
- 7.2 The arborist will complete regular site visits to check that the tree protection measures are being carried out. The frequency of the visits will be dictated by the level of activity and degree to which the tree protection measures are being respected. A note of the date of each visit and a summary of the findings will be forwarded to both the Tree Officer and the Main Contractor to provide an audit trail enabling the proper implementation of the tree protection measures to be checked and verified.
- 7.3 There are two key stages where on-site arboricultural advice will be needed
- Prior to commencement, to review the contents of the AMS, and deal with any queries the main contractor may have.
 - To confirm that the protective fencing is in place.
- 7.4 On completion of the works the trees will be inspected by the arborist to check the condition of the trees and advise if any remedial work is necessary.

A.T. Coombes Associates Ltd
29 August 2025



Appendix 6: Timetable for Tree Protection Works at Newlands Road, Bognor Regis

Item	Operation *	Before Commencing Construction Works	During Construction Works	On Completion
1.	Carry out a pre-commencement site meeting to discuss any tree protection matters arising.	X		
2.	Erect temporary protective fencing (thick green line) on edge of the CEZ as specified in the AMS and TPP.	X		
3.	Erect warning signs on fencing around each CEZ stating "Construction Exclusion Zone - Keep Out".	X		
4.	Maintain Protective fences and signs in good condition.		X	
5.	Arboricultural supervision and advice including site visits during the course of the works to check the CEZ and liaison with the Local Authority.	X	X	X
6.	Remove protective fencing.			X
7.	Check condition of the protected trees and consider if remedial works are necessary.			X
	<i>* All work to comply with the attached Arboricultural Method Statement and BS5837: 2012 Trees in relation to design, demolition and construction - Recommendations"</i>			

