Tree Condition Report
on Behalf of
Mr and Mrs Jarvis

Barry Carter BSc M.I.C For

In Relation To:
Trees Located at Land Known as Chickenden Barn, Staplehurst Kent. TN12 0DP

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1: Summary

At the request of Mr and Mrs Jarvis and Andrew Jenner of Peach Land and Homes, a Tree Condition Report and associated tree protection plan has been conducted for trees and hedgerows in the vicinity of proposed work for the development of an existing old barn into a new residential dwelling and outbuildings at land at Chickenden Barn, Chickenden Land , Staplehurst Kent. TN12 0DP

Barry J Carter, of Independent Woodland Services, conducted a visual inspection and survey on 24 August 2021. The following report is based on the findings and conclusions of the site survey.

The objective of this report is to determine the condition of several trees within hedgerows and surrounding a large pond number that are located on the site. It is unlikely that the proposed development of the barn and location of a proposed store area and car port will not impact significantly on any tree. This report focuses on the current conditions of the trees and remedial tree management work that will improve and or maintain tree longevity.

This report follows the guideline detailed in BS 5837: 2012 Trees in Relation to Construction.

Large shrubs, hedgerows (not containing trees) and ground cover species have not been surveyed as these do not impact on structures or pose risk to personnel or property. Small individual fruit trees are also not included in this report.

2: Report Limitations

Trees and shrubs are living organisms whose health and condition can change rapidly. The health, safety and condition of trees should be checked on a routine basis, preferably at least once yearly, and conclusions and recommendations are only valid for a period of 1 year. Checks on trees close to structures and high usage areas must be checked when high winds, heavy snow or inclement is experienced as these factors affect stability and safety in the most extreme instances.

All trees are surveyed and inspected from ground level using non invasive methods, unless otherwise stated.

Sub-terrain roots have not been inspected and therefore the condition and or structure and extent cannot be commented upon.

Should a more detailed arboreal inspection be required, this is highlighted in the preliminary management recommendations section of the tree survey sheet.

3: General Observations

Due to the location of the trees being either close to a deep ditch running through the middle of the property or those that surround a large pond to the southern end of the property, trees have had average diameter and height assessments measured from a distance using a digital hypsometer.

As individually assessment is impaired the trees on this site have been grouped and recorded as:

1. Hedgerow 1 : Tress in a continuous line running from south to north along the central line on the west side of the existing barn.

2. East Side of the pond

3. West Side of the pond

4. Southern Side of the pond adjacent Chickenden Lane

The location of the tree groups is identified in the tree location plan in section 9 of this report.

It is evident that most of the trees have had little or no management for many years. The exception to this being on the southern boundary of the property where the trees border Chickenden Lane. Here, there has been a high degree of pruning to prevent damage or interference to the low voltage power line that supplies all houses along the private Lane.

Tree species are a mix of oak, ash , thorn withing the hedgerows and willow species , alder and ash around the pond area where ground conditions favour water tolerant species. Trees are uniform in age class , size and structural condition with no real hazards observed.

A. Hedgerow 1.(HR1)
The hedgerow runs north along the western side of the barn between what will be a garden and the existing paddock. All trees are stable and structurally sound showing no external signs of diseases or pathogens. The hedgerow contains 10 individual trees with a degree of hedgerow scrub. These being , from the south, 3 No Field Maple,4No Oak, 1 No Ash ad a furth 2 No Oak.

The trees range in height from 15 -22 m and between 150 -550 mm diameter at 1.5 m above ground level. There is a degree of deadwood through the oak trees and ash which is indicative of species type and age class.

The spread of the trees is east to west rather than north to south with most of the overhang being on the paddock and garden side of the hedgerow. The overhang of boughs into the garden extends to 5 m in places which is shading a significant are of the garden. This can be alleviated by sympathetically reducing (pruning back) the overhang on both the east and west sides of the hedgerow. It is important to ensure that the hedgerow trees remain balanced and symmetrical where possible to ensure that

instability, weight distribution bias. Height reduction is not required however, any large deadwood can be removed during the tree management work.

B. Pond Trees, Eastern Side
Trees locate on the eastern side of the pond and predominantly Grey and Crack Willow and Grey Alder. These species are indicatively found in wet ground and high-water table areas and survive for many years even during dry periods.

In the far southern corner, there is a large Oak tree with a height of 15.3m and diameter at 1.5m of 690mm. This tree over-hangs Chickenden Lane and the low voltage power cables that run parallel to the lane. The powerline spurs in the corner of the pond and heads north along the eastern boundary of the property to feed the barn with power, running through the alder and willow trees inside the boundary of the neighbouring property.

Around the pond on the eastern side the willow and alder are in clumps of mature trees , some coppice form , interspersed with younger and varying age natural regeneration.

Height of the tees in this area is between 15- 25m with average diameter of between 150 – 500mm at 1.5m above ground.

The trees have received no management for many years and are in need of pollarding or coppicing. This will rejuvenate the trees, clear the low voltage power line, and prevent interference and possible damage. The work will also remove the risk of damage to neighbouring structures as some of the willow structurally weak due to the height and upper crown weight distribution.

There is a small ash tree in amongst the willow in this area which is structurally in good condition showing no signs of Ash dieback which impacts many trees throughout the UK.

C. Pond Trees , Western Side
On the western boundary of the pond are several scrubby, poorly formed and, in pats, damages willow trees. Most of the willows are showing signs of instability and structural damage. The below image details a structurally poor tree that has continued to survive for many years.

There are a small group of willow immediately to the rear of the barn which are leaning and in need of management.

In the southwest corner of the pond there are 2 Oak trees similar in size and shape to those in hedgerow 1 Heigh of the trees is 15 – 22m with a dbh of 450cm. Neither will be impacted upon during the development of the barn. The Oak will benefit from lateral side and overhang reduction by 30 % of the total spread and width of the tree.

D . Pond Trees, Southern Boundary
There are several scrubby trees along the boundary of Chickenden Lane. Except for a large veteran oak tree with a height of 29m and dbh of 810mm , all trees have been excessively cut back to prevent interference with the low voltage power line that runs along the boundary of the pond area. The management work has created weight imbalance favouring the pond and north side of the trees. The trees appear structurally stable at point of inspection.

General :
Many of the oak and willow trees show signs of potential roost for both bats and owls with large natural cavities. As the trees have been largely under-managed and undisturbed for many years there are clear indications that site is ecologically rich in numerous fauna species. The large overgrown garden is a habitat for lepidoptera , reptiles and bird life. It is highly recommended that a habit survey and protection plan is undertaken by appropriately qualified ecologist to record species and mitigate any potential disturbance the development may cause.

4: Specific Precautions During Construction for Trees

- Method Statements for working in close proximity to retained trees must be provided prior to work commencement
- Installation of tree protection fencing as described in Appendix 1
- Avoid disturbance to major tree root structures
- Avoid damage to tree stem and bark by plant and lifting equipment
- Conduct necessary remedial tree work prior to construction process
- In sensitive areas within the RPA, carry out digging or piling operations by hand methods especially where large roots are evident
- Protect the ground within the RPA with suitable ground protection designed to withstand heavy weights.
- Avoid ground compaction within the RPA

5: Schedule of recommended Tree Work

Table 1.

Tree Group	Species	Recommended Work
Hedgerow 1	Field Maple, Oak and Ask	Reduce lateral growth and overhang to garden side and paddock side of all trees by 30%. Remove larger deadwood throughout trees.
Trees East Side of Pond	Willow and Alder	Coppice / pollard trees closest to neighbouring property to alleviate risk of damage to structures in case of structural failure
Trees West Side of Pond	Willow	Coppice all leaning and falling trees to rejuvenate. Allow to re-coppice and keep managed every 10 yrs
Pond Trees , southern boundary	Oak and Willow	No work Required

6: Root Protection Area (RPA)

Table 2 below provides details of RPA in relation to tree diameter. Where trees are multi-stemmed, the average stem diameter, taken at 1.5m, has been used for calculation. Although individual RPA measurements have been given, it may not be practical to protect all trees individually. In this case, the methods of protection described in section 7, must be installed around the perimeter of the trees on the outer most limits of edge tree RPA radiuses. This will ensure that the trees are protected during the construction process.

Although no surface roots from the surveyed trees was seen, machinery should not cross surface roots without root protection. The level of protection is directly proportional to weight and ground pressure exerted by specific machinery. Therefore, the level, type and structural composition of ground protection should be designs by a qualified engineer to ensure that ground pressure does not exceed 30 psi.

Table 2: Root Protection Area in Relation to Tree Diameter

Tree Ref	Ave Diameter at Breast Height mm	Root Protection Area Radius M	Root Protection AreaM²
Hedgerow 1	400	4.80	72
Trees East Side of Pond	450	5.40	92
Trees West Side of Pond	500	6.00	113
Pond Trees , southern boundary	550	6.60	137

RPA is calculated using the following equation:-

$$RPA(m^2) = \frac{(\text{stem diameter (mm) @ 1.5m x 12})^2 \times \pi}{1000}$$

7: Tree Protection During Construction

The extract **Appendix 1** details tree protection according to BS5837 and details the design and specification of tree protection. Alternative fencing may be used if it is authorised by the local planning authority. This can take the form of panelled Heras fencing supported with base plates and secured with clamps or paling type fencing attached to scaffold framework.

It is therefore recommended that any work within the RPA is carried out using techniques agreed with the DPA during the planning approval process. Where possible, manual working techniques should be adopted to avoid unnecessary damage or disturbance to roots or the integrity of the tree. During the work every care must be taken not to cut through roots that have a significant stabilising impact on any tree. Tree roots are robust and will tolerate a degree of disturbance and pruning if conducted in a sympathetic manner.

The authors of this report are not qualified to provide engineering specification for construction techniques, and it will therefore be the architect's responsibility to design and submit suitable systems to the planning authority.

A driveway is proposed to provide access into the development. The drive may be position very close to trees in hedgerow 1 and trees on the western boundary of the pond. It is suggested that rather than use tarmac, block type or other nonporous type surfacing, alternatives should be considered. This will minimise root disturbance and maintain a pours surface that will not impact on moisture or nutrient availability to the trees

When working with the RPA of any tree, all work must take place promptly to minimise the exposure to any severed root regardless of size. Once the work is complete all tree roots must be covered immediately to avoid infection from airborne disease and pathogens.

8 : Tree Survey Schedule

The following tree survey schedule details specification and species of trees and indicates the retentive vale in years and by BS 5837 categorisation.

Tree Survey Schedule

Survey Ref & No: Chickenden Barn , TN12 0DP

Year of Survey : Aug-21

Surveyed by: IWS, Barry Carter

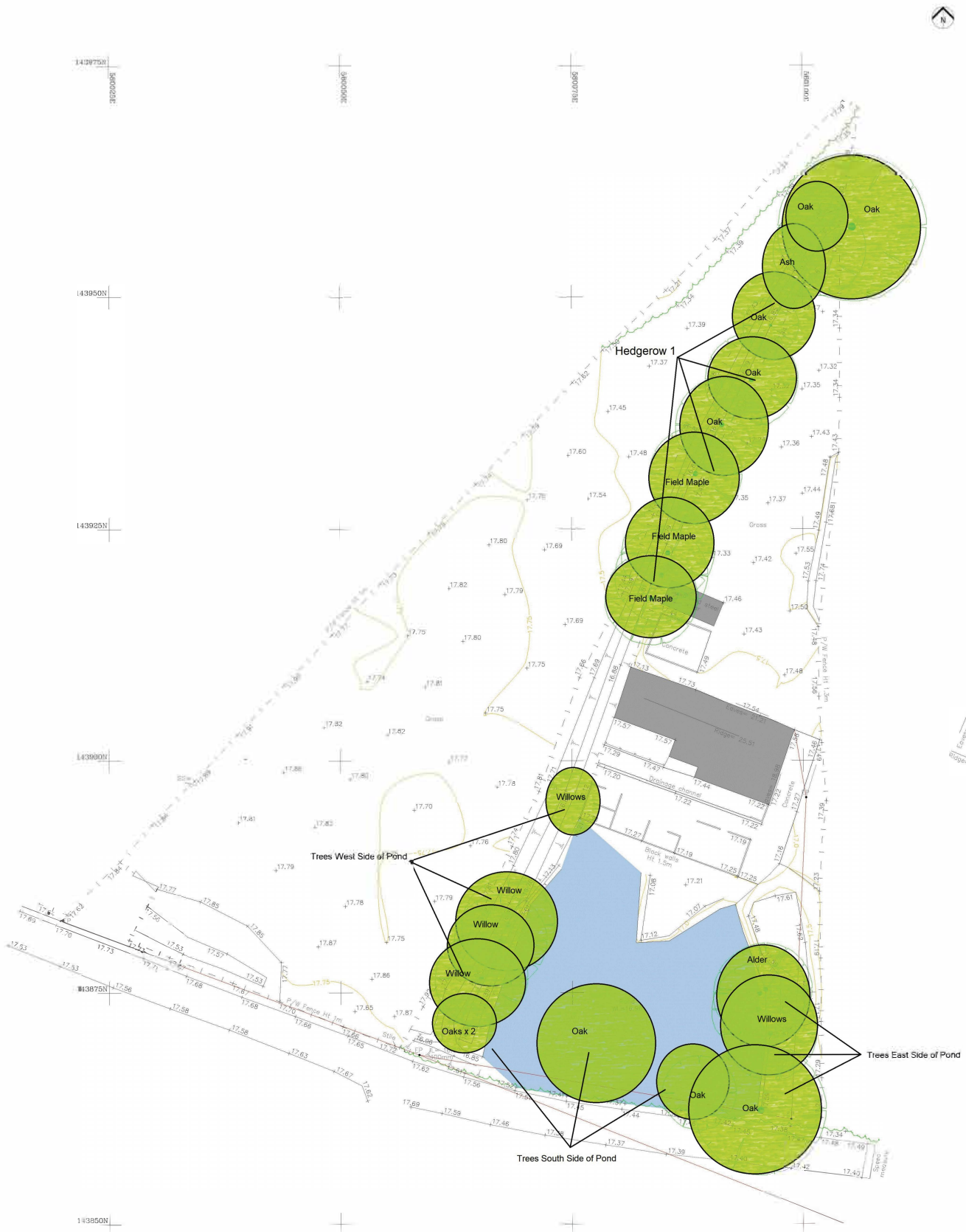
Location Chickenden Lane , Staplehurst. TN12 0DP

Client Mr and Mrs Jarvis

Independent Woodland Services

Tree Reference	Species	Height M	DBH MM	Spread M N, E S W	Height M Crown Clearance	Age Class	Physiological Condition	Structural Condition	Root Protection Radius M Area M²	Estimated Remaining Contribution Yrs	BS Category Grading
Hedgerow 1	Oak, Field Maple, Ash	15-22	150-550	5,5,5,5,	2	Mature	Good	Good	4.80 72	≥ 40	B
East Side of Pond	Willow, Alder, Ash	15-22	150-550	4,4,4,4	05-Jan	Maure	Good	Good	5.4 92	≥ 40	B
West Side of Pond	Willow , Oak	15-22	450-550	6,5,6,6	2.5	Mature	Fair / Poor	Fair / Poor	6.0 113	≥ 15	B
Pond Trees Southern Boundary	Willow, Oak	15-29	450- 810	5,3,3,2	3	Mature / Veteran	Good / Fair	Fair	6.60 137	≥ 40	B

9 :
Tree Location Plan



Independent Woodland Services

Chickenden Barn TN12 ODP
Tree Location Plan
Mr and Mrs Jarvis
IWS Tree Report August 2021

EMP CHARTERED SURVEYORS
7 Linden Close, Bridge Road, Tunbridge Wells, Kent TN4 8HH
Tel: 01892 877878 Email: info@empsurveyors.com

Client: Mr & Mrs Jarvis

Address: Benge Barn, Chickenden Lane, Staplehurst, Kent TN12 0DP

Size	Drawing No.	Rev.
A1	091120_SH	A

Scale: 1:200 Date: 04/02/2021 Sheet: 1 of 1

10. Survey Methodology

This survey has been prepared in accordance with BS 5837 2012, Trees in Relation to Construction.

These are identified on plan numerically using the suffix 'T'.

The survey schedules provided in section 5 are understood with consideration of the following explanation of scoring and categorisation.

Table 2

Tree Survey Sections

Survey Section	Detail
• Tree Reference	Reference No detailed-on survey plan i.e., T1, T2 G1, G2
• Species	Common or scientific name of tree
• Height	In Metres
• Stem diameter mm	Diameter taken at 1.5m above adjacent ground level. Above root flare for multi-stemmed trees. Shown in mm
• Branch Spread	In metres taken at minimum and maximum spread
• Height of crown	Height in metres of lower crown above adjacent ground level
• Age Class	Young (Y) Semi-mature (SM), Mature (M), Over Mature (OM), Veteran (V)
• Physiological condition	Good, Fair, Poor, Dead
• Structural condition	Collapsing, presence of decay and physical defect
• Preliminary management recommendations	Further investigations / work required of suspected defects that require more detailed assessment and potential for wildlife habitat
• Estimated remaining contribution in years	Less than 5, 10, 10 – 20, 20 – 40, more than 40
• R or A-C BS Category	See table 2 - 4 below

Table 3

Category Classification and Criteria

Category	Criteria
Trees for Removal	
R	Those that are 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 arboriculture management
Trees To Be Considered for Retention	
A	Those of high quality and value; in such a condition as to be able to make a substantial contribution (minimum value of 40 years)
B	Those of moderate quality and value: those is such a condition as to make a significant contribution (minimum value of 20 years)
C	Those of low quality and value: currently in adequate condition to remain until new planting could be established (minimum value of 10 years)

Table 4

Tree Group Criteria - Subcategories

Category	Criteria		
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation
A	Trees that are good examples of their species, especially if rare or unusual, or essential components of groups	Tree groups or woodlands which provide a definite screening or softening to the locality in relation to views into or out of the site, or those of visual importance	Trees or groups of trees of significant conservation, historical, commemorative, or other value

B	Trees that may be included in the high category but have been downgraded due to impaired condition	Trees in groups or significant numbers such that they form a distinct landscape feature, therefore attracting a higher collective value than they might have had as a single specimen	Trees with clearly identifiable conservation or other cultural benefits
C	Trees not qualifying in higher categories	Trees in groups but without this conferring on them significantly greater landscape value and/or trees offering low or only temporary screening benefit	Tree with very limited conservation or other cultural benefits

Table 5

Tree and Tree Group Location Plan Colour Coding

Category Class	**Colour Identification on Plan**
Category R	Dark Red
Category A	Light Green
Category B	Mid Blue
Category C	Grey

11 : Appendix 1

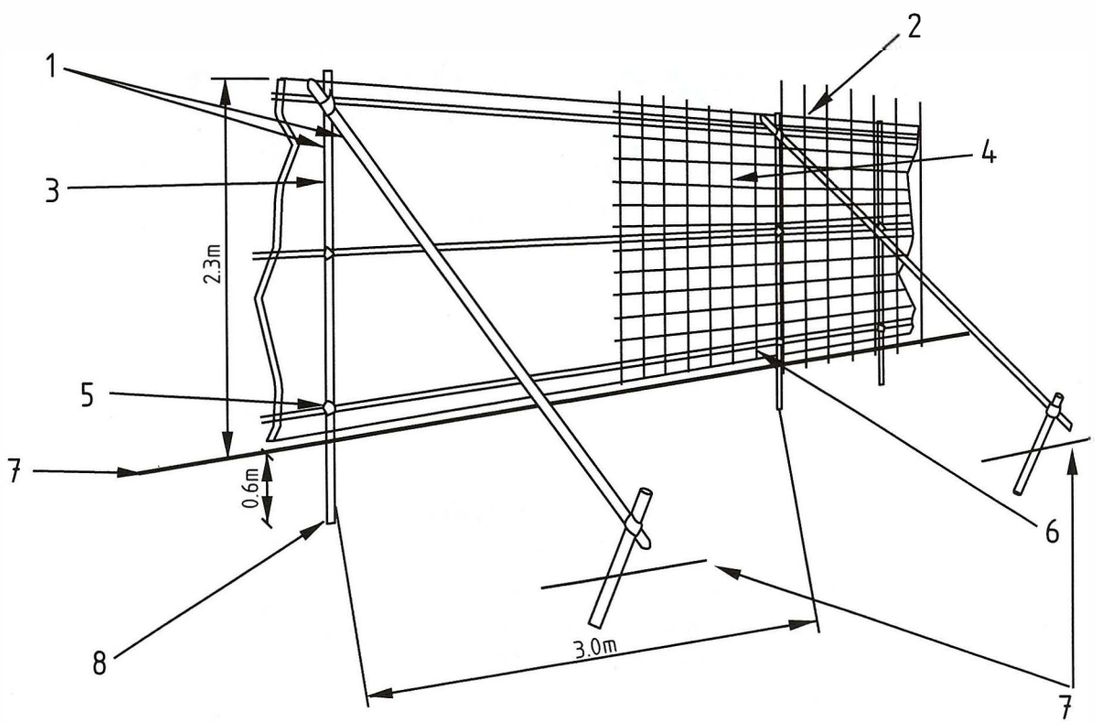
Tree Protection Barrier and Root Protection

9.3 Ground protection

9.3.1 Where it has been agreed during the design stage, and shown on the tree protection plan, that vehicular or pedestrian access for the construction operation may take place within the root protection area (RPA), the possible effects of construction activity should be addressed by a combination of barriers and ground protection. The position of the barrier may be shown within the RPA at the edge of the agreed working zone but the soil structure beyond the barrier to the edge of the RPA should be protected with ground protection.

9.3.2 For pedestrian movements within the RPA the installation of ground protection in the form of a single thickness of scaffold boards on top of a compressible layer laid onto a geotextile, or supported by scaffold, may be acceptable (see Figure 3).

9.3.3 For wheeled or tracked construction traffic movements within the RPA the ground protection should be designed by an engineer to accommodate the likely loading and may involve the use of proprietary systems or reinforced concrete slabs (see **11.8** and **11.9**).



1 Standard scaffold poles
2 Uprights to be driven into the ground
3 Panels secured to uprights with wire ties and where necessary standard scaffold clamps
4 Weldmesh wired to the uprights and horizontals
5 Standard clamps
6 Wire twisted and secured on inside face of fencing to avoid easy dismantling
7 Ground level
8 Approx. 0.6 m driven into the ground

Figure 2 — Protective barrier

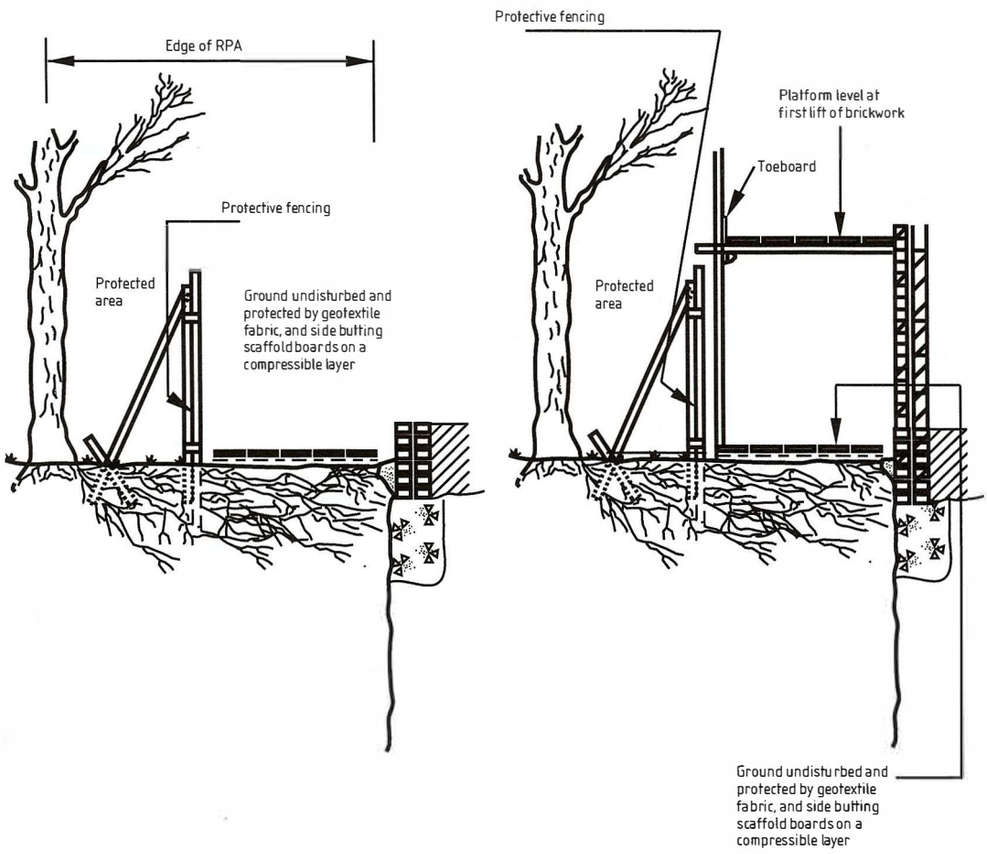


Figure 3 — Scaffolding within the RPA

9.4 Additional precautions outside the exclusion zone

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

"Construction exclusion zone — Keep out".

9.4.2 In addition the following should be addressed or avoided.

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

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

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

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