KEY TREE SOLUTIONS

ARBORICULTURAL CONSULTANTS

BS 5837: 2012 Arboricultural Survey & Impact Assessment

Site Address:	103 High Street, Penistone, S36 6BR	Client:	John Mahoney
Report Ref:	HSP01-24	Report Date & Revision:	12th March 2024 I
Author:	Laurence Smith BSc (Hons) Arb, M Arbor A	Signed:	Laurence Smith

Terms of Reference

Key Tree Solutions has been commissioned by Mr John Mahoney to undertake an arboricultural survey following the British Standard BS 5837:2012 'Trees in Relation to Design, Demolition and Construction – Recommendations' (BS5837). This report has been conducted in support of a planning application to modify the existing two-story sunroom with a raised terrace and garage below. The proposed development layout is shown in the Arboricultural Impacts Plan (AIP) under Appendix: D which indicates the impact of the proposal on the existing site trees.

The arboricultural survey was carried out by Laurence Smith, BSc (Hons) Arb, M Arbor A, an Arboricultural Consultant. Laurence has a degree in Arboriculture and a BTEC National Diploma in Forestry and Arboriculture. He is a professional member of the Arboricultural Association with over a decade of experience within the arboricultural industry, initially as an arborist and for the last seven years as a consultant.

Summary

There are no listed Tree Preservation Orders (TPO) either on the site or within 15m of the boundary according to the interactive map on the Barnsley Council Website. The site is, however, within a conservation area.

The works proposal is to modify the existing two-story sunroom by extending it to the east and developing a new raised terrace to the north. This terrace then connects to the garden via steps and an encircling patio around the proposal. The space under the sunroom and terrace will be converted into a garage.

To achieve this, no trees will need to be removed. However, there is a foreseeable impact within the Root Protection Area (RPA) of T2 from the expanded sunroom and terrace. This impacted region measures approximately 25m^2 and covers approximately 3.8% of the total RPA.

Given that the level of incidence is <5% and that no other constraints have been put on this tree root expansion, this level of incidence may be acceptable. However, exploratory hand-digging through the first 600mm should be conducted to ensure that this can be achieved with no damage to structural roots.

The surrounding patio will also have a foreseeable impact on the RPA. This measures approximately 15m^2 and covers 2.3% of the total RPA. Development of this feature should be conducted using no dig methodology eliminating the need for further excavation within the RPA. Further details of the patio design should be included within an Arboricultural Method Statement (AMS) should the local authority deem it necessary.

Retained trees and rooting volumes should be protected from damage via the use of temporary fencing. Unmade ground that can not be fully excluded using fencing should be protected via the use of temporary ground protection specific to any expected loads. Additional details should be included with an AMS.

Tree locations have been estimated by the surveyor and as such the levels of incidence are given as an estimation only.

1 Introduction

1.1 Arboricultural Report

This report comprises an arboricultural survey and an Arboricultural Impact Assessment (AIA). It categorises and reports on the trees within and adjacent to the site boundary along with providing details of the development proposal and how this will impact the arboricultural elements. These impacts have been shown in the Arboricultural Impacts Plan included in Appendix D, which acts as a visual aid for the proposal.

1.2 Proposed Works

The works proposal is to modify the existing two-story sunroom by extending it to the east and developing a new raised terrace to the north. This terrace then connects to the garden via steps and an encircling patio around the proposal. The space under the sunroom and terrace will be converted into a garage.

The proposal's layout has been overlaid with the arboricultural constraints plan to determine the impacts of the works on the existing tree stock.

1.3 Scope of Works

This report presents arboricultural information captured on the 7th of March 2024 by Laurence Smith BSc (Hons) Arb, M Arbor A. The scope of work includes:

- Survey of arboricultural elements potentially impacted by the scheme.
- A map showing any statutory protection which may affect the site.
- Constraints plan to show the location and quality of existing features.
- An Arboricultural Impact Assessment (AIA).
- An Arboricultural Impact Plan (AIP).

2. Methodology

2.1 General

This tree survey has been undertaken and compiled in line with BS5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations (BS5837). This document contains guidance and recommendations on the relationship between trees and the design, demolition, and construction processes, providing an overview of the principles and procedures to ensure a harmonious and lasting relationship between trees and structures.

BS5837:2012 does not provide explicit parameters for measuring an arboricultural resource's sensitivity, nor does it assess the impact of a proposed development on trees (other than listing the number of trees that would have to be removed or pruned for the undertaking). By using the parameters specified in the British Standard, Arboriculturalists can determine the quality of all trees and other arboricultural features that may be affected by a development.

While the BS categories may be interpreted differently, the cascade chart in BS5837:2012 provides guidance on defining a tree's qualities so that the design process can determine how to retain the higher-quality trees.

2.2 Spatial Scope

In some instances, trees may be located outside the site boundary but still have the potential to impact any development, for example, overhanging branches and root protection areas. In these instances, they have been included in the survey. However, some data is likely to have been estimated so as not to trespass. Trees on access routes are not part of this survey unless specifically requested.

2.3 Data Gathering

Data has been collected following BS 5837, as outlined in Appendix A within this report. The tree categorisation method applied by the arboriculturist is to identify the quality and value (in a non-fiscal sense) of the existing tree stock, allowing informed decisions about which trees should be removed or retained if development occurs.

For a tree to qualify under any given category, it should fall within the scope of that category's definition as defined in Appendix A (categories U, A, B, C) and, for trees in categories A to C, it should qualify under one or more of the three sub-categories (1, 2, 3). Sub-categories 1, 2 and 3 are intended to reflect the arboricultural, landscape and cultural values, respectively.

Trees were recorded as individual specimens and groups. Where trees were recorded as groups, measurements were typically taken from the largest tree within the group. This survey level meets the requirements of BS 5837:2012, which states that "trees growing as groups or woodland should be identified and assessed as such". The British Standard defines the term group as "trees that form cohesive arboricultural features either aerodynamically (e. g. trees that provide companion shelter), visually (e.g. avenues or screens) or culturally including for biodiversity (e.g. parkland or wood pasture)".

In all reasonable circumstances, tree diameters were measured via a specialist measuring tape at 1.5m from ground level. Where access was not possible, measurements have been estimated and indicated with an asterisk (*) on the arboricultural data sheets. The crown spread of the surveyed trees was measured in each of the four cardinal points using a laser distometer or paced out if access was not feasible. This survey level is deemed sufficient by the arboriculturist to establish the extent of the crown spread. All crown spread measurements should be taken from the arboricultural data sheet (Appendix B of this report).

The trees were assessed using the Visual Tree Assessment (VTA) methodology devised by Mattheck and Breloer (1994). VTA is a ground-level visual assessment of a tree, carried out to identify obvious mechanical defects, signs of ill health, potential mechanical failure and the suitability of a tree to a site.

2.4 Survey

The approach to the survey involved a ground-level walk assessment with tree and vegetation locations plotted over the site plans data provided by J Mahoney Architects Ltd. No checking of this document was undertaken, and any comments are given on the assumption that this supplied document is correct.

Arboricultural elements which were not included in the site plans but have the potential to impact any development have been indicated with an 'X' over the stem on the constraints plan and AIP. These locations have been estimated via a handheld GPS device and aerial photography. Given this lack of topographical data, Key Tree Solutions can not be held responsible for any inaccuracies in asset location.

Survey elements have been prefixed with a descriptive letter which can include Trees (T), Groups (G), Shrub Groups (SG), Woodlands (W) and Hedges (H).

2.5 Limitations to Survey

Where access was permitted, trees were identified and inspected from ground level only and were not climbed. No invasive examination techniques (such as increment boring or internal decay detection) were carried out. As such, no assessment of the internal condition of the wood of these trees can be given.

The tree survey is not intended to be a risk management survey targeting safety-related issues. However, where specific hazards have been identified, these have been recorded, and management recommendations provided and are detailed within the tree survey schedule (see Appendix B of this report).

BS 5837:2012 does not include arguments for or against the development or the removal or retention of trees. Where development is to occur, the standard guides how to decide which trees are most appropriate for retention.

The reliability of the tree locations relates directly to the accuracy of the supplied data, if applicable, available aerial imagery and in-field plotting. As such, tree locations are potentially open to discrepancies, and their exact locations may need verifying.

The report does not comment on the possible effects of trees on neighbouring properties, including in relation to subsidence or heave or with regard to potential hazards presented by trees surveyed.

While this report aims to highlight any potential issues it cannot guarantee against pest and disease attacks or weather-related failures.

3. Existing Site Conditions

3.1 Existing Land Use

The site is residential with the dwelling located in the southwestern corner of the plot. Access is via the western end of Green Road which leads onto a large area of hardstanding. To the northeast of this hardstanding and the property is a modest garden with two significant Ash specimens.

3.2 Existing Trees

The two main arboricultural features of the garden are the two Ash trees, T1 and T2. However, alongside these more significant specimens are several individual shrubs and further woody vegetation predominantly located around the northern and eastern boundary which is delineated by a managed Cypress and Beech hedge.

3.3 Site Topography

The site has a minor fall in height from north to south.

3.4 Soil Assessment

No soil assessment was carried out on site by the Arboriculturist. However, baseline data from the British Geological Survey states that the area's underlying bedrock is considered part of the Penistone Flags Sandstone Group. No superficial deposits were recorded.

Further information collected from the Cranfield Soil and Agrifood Institute shows that the site is considered to have "Slowly permeable seasonally wet acid loamy and clayey soils with a loamy and clayey texture."

Where clay-based soils are present, the ground may be susceptible to volumetric changes resulting from the uptake and release of moisture by tree roots, which may influence any potential foundation development.

3.5 Statutory Protection

Local Planning Authorities (LPAs) have the power to preserve selected trees and woodlands by making Tree Preservation Orders (TPOs). Similarly, special provision is provided to trees located within a Conservation Area (CA) which are not the subject of a TPO. The LPA's powers to do this are provided by the following Act of Parliament and its associated regulations:

- Town and Country Planning Act 1990
- Town and Country Planning (Determination of Appeals by Appointed Persons) (Prescribed Classes) (Amendment) (England) Regulations 2008
- Town and Country Planning (Trees) (Amendment) (England) Regulations 2012

The principal effect of a TPO is to prohibit the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of trees without first obtaining the consent of the relevant local authority. Where works to trees within a CA are proposed, the relevant LPA must first give six

weeks' notification. Unauthorised works on trees protected by a TPO or those within a CA could result in an unlimited fine.

The interactive map on the Barnsley Council's website visited on the 12th of March 2024, shows that there are no TPO designations within the site or 15m of the boundary. However, the site is located within a conservation area. The results from this search are given in Appendix C and illustrated in the supplied plans.

Trees should be checked for protected species before work is undertaken where tree works are necessary. While it is outside of the scope of this tree survey to comment on the actual or likely presence of protected animal species, it is against the law to disturb bats or their roosts under the Conservation of Habitat and Species Regulations (2010). Likewise, nesting birds are protected by the Wildlife and Countryside Act (1981) (as amended) and Badgers by the Protection of Badgers Act (1992). If protected species are discovered, works should cease immediately, and Natural England should be contacted for advice.

Alongside these animal protections, landscape features may also be protected under the following acts and regulations.

- The Hedgerow Regulations 1997
- Countryside and Rights of Way Act 2000
- Natural Environment and Rural Communities Act 2006 & Environment (Wales) Act 2016

4. Arboricultural Impact Assessment

4.1 General

This report considers the trees adjacent to the proposed works and assesses their condition and suitability for retention. The report is supplemented by the AIP (Appendix D of this report), which presents in graphic form the trees recorded as part of the survey, their specific reference numbers and any impact the proposed development will have upon them.

The arboricultural data sheets within Appendix B of this report cover all the trees recorded as part of this assessment in line with the *BS 5837:2012* guidance.

4.2 Root Protection Areas

The Root Protection Area (RPA), as defined in *BS 5837:2012*, is the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability and where the protection of the roots and soil structure is treated as a priority. This area should be protected from disturbance "in order to avoid unacceptable damage to the tree as a result of severance or asphyxiation of the root system".

The recommended minimum area (m2) to avoid potentially harmful disturbance has been calculated and entered into the tree schedule (see Appendix B of this report) for all trees. The RPA for each individual tree has been illustrated on the site plans as a pink dashed circle centred on the tree's stem.

4.3 Utilities and services

No information has currently been made available regarding the locations of drainage and underground utility runs.

Any new subsurface utilities should be directed away from or around existing RPAs.

4.4 Scheme Details

The proposed works are illustrated on the AIP and are as described in Section 1.3.

4.5 Arboricultural Impacts and Mitigation

The proposal's impacts are listed in Table 1, along with recommendations for mitigation.

Table 1.

Group / Tree No.	Age & Species	Cat.	Removal due to:		Mitigation required for		Details of how proposed build layout affects trees and recommendations for mitigation.
			Cons.	Cond.	Canopy	RPA	
T2	Mature Ash (*Fraxinus excelsior*)	A2				✓	The proposal is located over the RPA of T2. The impacts of the proposal is broken down into two sections. The extension of the sunroom and new terrace are to be developed approximately over the existing block paving and stone flagged patios. This is an incurrence of 25m² into the RPA which equates to 3.8% of the total RPA. Given that this proposal is over an existing region of hard standing, the incidence is <5% and that there are no other factors limiting RPA extension, this level of incidence may be acceptable. The new patio has an incurrence of 15m² into the RPA which equates to 2.3% of the total RPA. Although this is also <5% the total for both parts is over the 5% threshold. Given that this excavation is also potentially closer to structural roots it should be constructed using 'no dig' principles as to prevent any further potential damage to underground structures.

Group / Tree No. - ID referenced within the arboricultural survey.
Age & Species - Age classification and common name for specimen.
Cat - BS 5837 category rating.
Removal due to - '*Cons*' = Construction. '*Cond*' = Condition.
Mitigation required for - Canopy or for RPA (Root Protection Area).

4.6 Preliminary Management Recommendations

The arboricultural data sheets (see Appendix B) show management recommendations for those trees that were identified as requiring management intervention at the time of the survey.

As part of a duty of care, the property owner is responsible for ensuring the health, safety and management of all trees within the boundary. As such, monitoring should be an ongoing process with periodical inspections by a qualified arborist where applicable.

4.7 Mitigation Measures

The above-ground part of the proposal is located over an existing region of hardstanding and as such the extent of the underground rooting structures from T2 may have been limited by this sub-base. Given that the level of incidence is <5% and that no other constraints have been put on this tree root expansion, this level of incidence may be acceptable. However, exploratory hand-digging through the first 600mm should be conducted to ensure that this can be achieved with no damage to structural roots.

The surrounding patio should be developed using a ‘no dig’ methodology. This involves no excavations into the existing soil level other than the removal of surface vegetation. Further information on a ‘no dig’ design method is contained in the Core Landscape Products information PDF under Appendix F.

4.8 Protection For Retained Trees

Trees that are to be retained will require protective measures during the development, typically involving temporary fencing around the RPA securely anchored to the ground. Where this is not possible or practicable, ground protection can be utilised, which is specific to the vehicle's weight. Where RPA buts up to the side of the proposal a setback of the fencing must be at least 2m to allow for scaffolding and access. The unmade ground between the fencing and the proposal must be protected by temporary ground protection.

Where development is to take place within the RPA ‘no dig’ methodology should be utilised to minimise the impact on the retained trees.

No material storage is permitted within the RPA of retained trees unless confirmed to be acceptable by the consulting arboriculturalist. The exact details and location of protective measures should be included within the Arboricultural Method Statement (AMS), however, guidance has been given on the AIP.

Positioning of any site compound, including office, facilities, toilets and storage of materials, should be carefully considered and, where possible, be located away from trees and their associated RPAs.

Appendix A: Key & British Standard BS5837:2012 Survey Table

A1. Survey Key

Column Heading	Description
ID	Each surveyed element has been given a unique reference number as shown on the survey drawings. Each number is prefixed with a letter to represent the element type. (T) Tree, (G) Group, (H) Hedge, (W) Woodland.
Age Class	The tree is described as Young, Semi Mature, Early Mature, Mature, Over Mature, Veteran or Dead.
Species	The English common name has been used. In some instances the botanical name is also given in *italics*.
Height (m)	An indication of the tree's height measured in metres.
Stem Diameter (mm)	The diameter of the tree stem when measured at 1.5 metres from ground level.
Branch Spread (m) N E S W	The distance the live crown extends in each fo the four cardinal directions.
First Main Branch Height (m) / Direction	Height given in meters that the first significant branch extends from the stem and the direction of which it points towards.
Canopy Height (m)	Height given in metres of the lowest part of the canopy.
Vitality	A quick reference guide to the trees overall health and condition. Given as Good, Fair, Poor or Dead **Good** – a tree with little or no obvious physiological defects; leaf density and colour are typical for the species, bud, flower and fruit production are good and there are no signs of dieback at any point throughout the crown. **Fair** – a tree with moderate physiological defects may have some or all of the following factors; leaf density is less than typical for the species, leaf cover is chlorotic, bud, flower or fruit production are deficient, there are signs of minor dieback within the crown, there is a moderate degree of deadwood within the crown. **Poor** – a tree with major or multiple physiological defects; evidence of extensive crown thinning, bud, flower or fruit production is poor or missing, there are signs of advanced dieback throughout the crown, there is extensive or major deadwood throughout the crown. **Dead** – a tree that has died due to either old age, drought, disease, pest infestation, physical damage to the main stem or rooting system, or a combination of these factors.
General Observations	Narrative comment on the general condition including significant defects and overall appearance.
Preliminary Management Recommendations	Any works recommended in order to minimise risk, improve form or maintain a high value.
Estimated Remaining Contribution	An estimation of how long the feature will contribute to its surroundings in the current landscape context. Recorded in bands of either 10< years, 10> years, 20> years and 40> years.
Category Grading	The trees are graded to the categories prescribed within BS5837:2012 (U, A, B & C). These letters are suffixed with a number which gives an indication of how the tree sits within the landscape. More information on these values is given in the cascade chart in A2.
Root Protection Area Radius (m)	The minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability.

A2. BS5837 : 2012 Cascade Chart

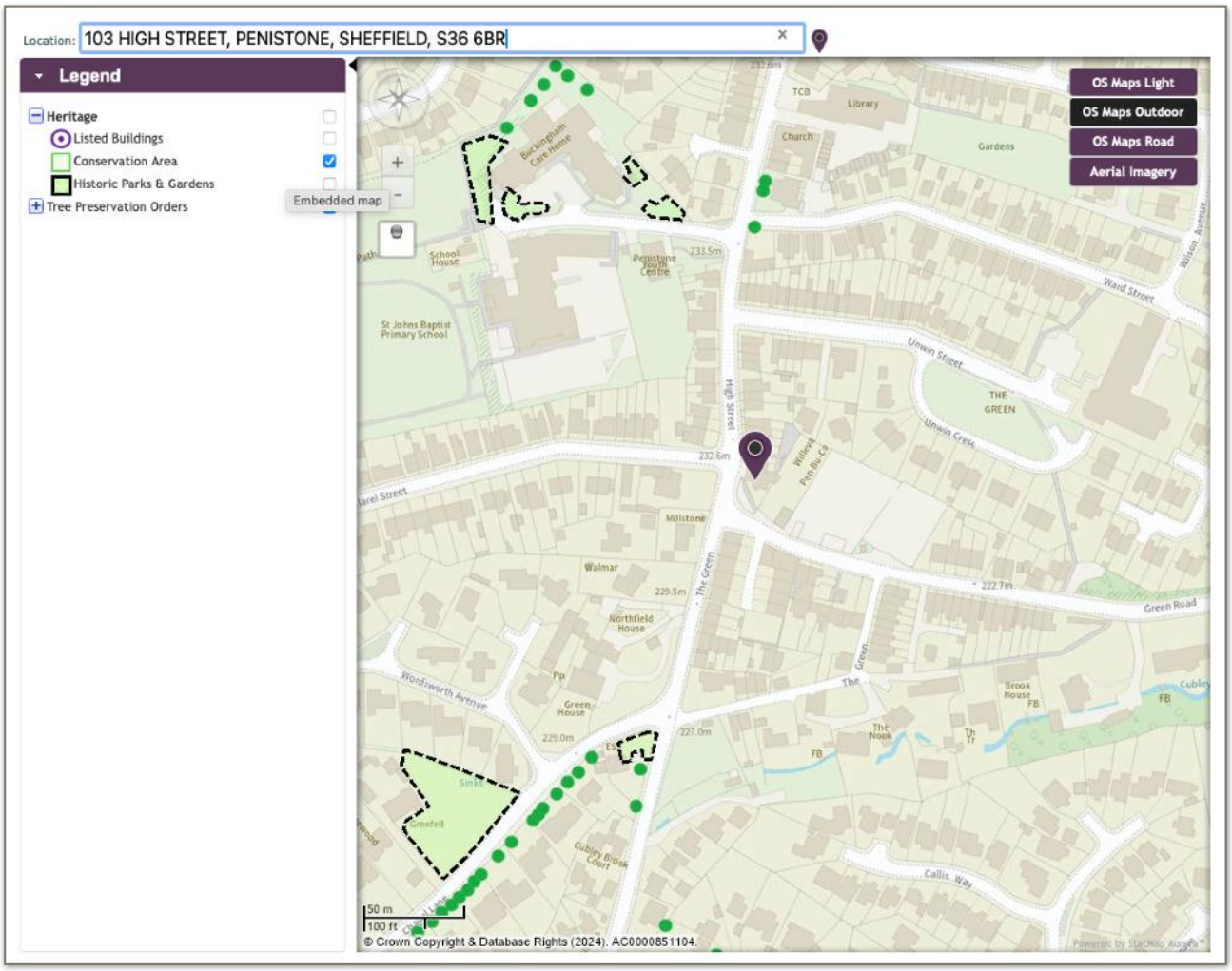
Trees to be considered for retention	**(1) Mainly arboricultural qualities**	**(2) Mainly landscape qualities**	**(3) Mainly cultural values, including conservation.**	**Identification on plan**
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	**Light Green**
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	**Mid Blue**
Category C **Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/ transient landscape benefits	Trees with no material conservation or other cultural value	**Grey**
Trees unsuitable for retention				
Category U Those in such a condition that they cannot realistically be retained as living trees in the contact of the current land use for longer than 10 years.	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning). • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. • Tree infected with pathogens of significant to health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality **NOTE**: Category U trees can have existing or potential conservation value which it might be desirable to preserve.			**Red**

Appendix B: Arboricultural Survey Data

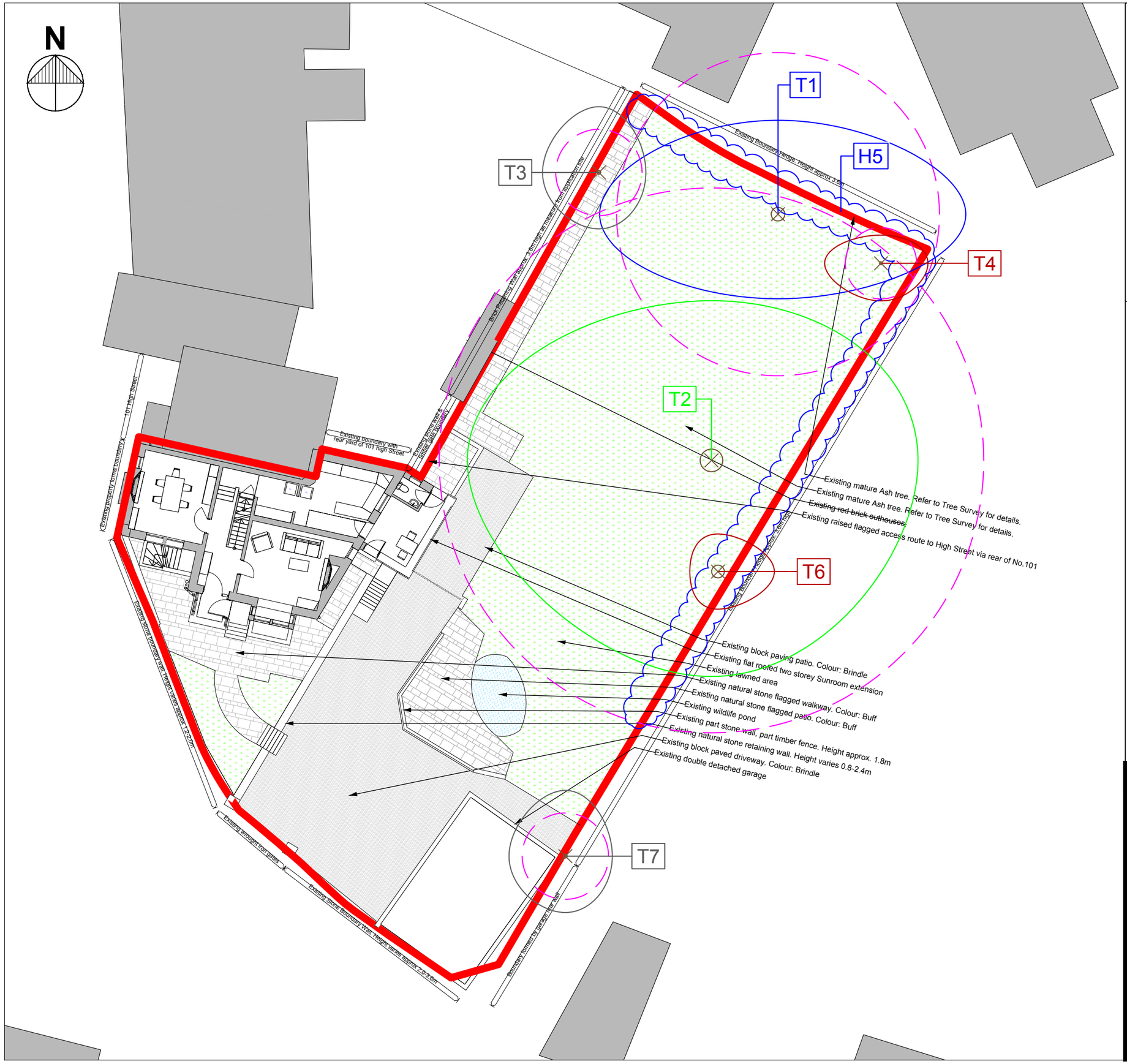
ID	Age Class	Species	Height (m)	Stem Diameter (mm)	Branch Spread (m) N E S W	First Main Branch Height (m) / Direction	Canopy Height (m)	Vitality	General Observations	Preliminary Management Recommendations	Estimated Remaining Contribution	Category Grading	Root Protection Area Radius (m)	Fig ref:
T1	Mature	Ash *Fraxinus excelsior*	20	720	5, 10, 4.5, 9.5	6 W	5.5	Fair	Occluded pruning wounds to 6m where the canopy develops two long lateral limbs growing east and west. Minor reduction in vigour although not considered significant to health at this point.	None	20>	B2	8.6	Fig 1.
T2	Over Mature	Ash *Fraxinus excelsior*	22	1210	8.5, 11, 11.5, 13	6.5 S	5	Normal	Large surface roots visible under the grass. Swelling around the base on the southern aspect assumed to be as a result of ongoing epicormic development. Moderate occluded pruning wounds to around 6m before the canopy expands out laterally. Branches have sporadic epicormic along the length of the limbs. Minor deadwood but generally good condition for its age.	None	40>	A2	14.5	Fig 1.
T3	Early Mature	Elder *Sambucus nigra*	6	140, 130, 130	3.5, 2.5, 3, 3	N/A	1.5	Normal	Woody shrub species with typical multi stem form located against the boundary wall.	None	10>	C1	2.3	Fig 2.
T4	Semi Mature	Laburnum *Laburnum anagyroides*	5	140, 130	1.5, 2.5, 2, 3	N/A	2	Poor	Die back and cambial death on the two main limbs. Heavily suppressed. Limited long-term retention value due to ongoing decline.	None	10<	U	1.9	Fig 3.
H5	Early Mature	Mixed	3.5	150 ave	N/A	N/A	Ground level	Normal	Mixed species hedgerow, with Cypress in the north and Beech along the east. Several woody shrubs are located against this boundary feature, including Holly, Hazel and laurel.	None	20>	B2	1.8	Fig 2, 3, 4 & 5.
T6	Over Mature	Sycamore *Acer pseudoplantanus*	3.5	670*	2, 3, 2, 1.5	N/A	1	Poor	Retained stem and heavily pruned scaffold limbs of a once much larger tree. Stem and branches are heavily decayed with the only viable foliage being young epicormic growth pruned as part of the hedge. The tree is considered to be part of the boundary feature.	None	10<	U	8	Fig 4.

ID	Age Class	Species	Height (m)	Stem Diameter (mm)	Branch Spread (m) N E S W	First Main Branch Height (m) / Direction	Canopy Height (m)	Vitality	General Observations	Preliminary Management Recommendations	Estimated Remaining Contribution	Category Grading	Root Protection Area Radius (m)	Fig ref:
T7	Semi Mature	Willow Sp. *Salix*	6	200*	2, 2.5, 2, 2	N/A	2	Normal	No access to the base of the tree with vision obscured. The diameter is estimated based on canopy visible. The tree makes up part of the boundary feature although it is not clear if the stem is located within the site boundary.	None	10>	C2	2.4	Fig 5.

Appendix C: Statutory Protection



Screenshot 1. An image lifted from the Barnsley Council website visited on the 12th of March 2024 showing the site (purple arrow) with no Tree Preservation Order designations within 15m of the site boundary.



KEY TREE SOLUTIONS
ARBORICULTURAL CONSULTANTS

KEY- Arboricultural Survey and Constraints Plan
(to be read in conjunction with report ref. HSP01-24)

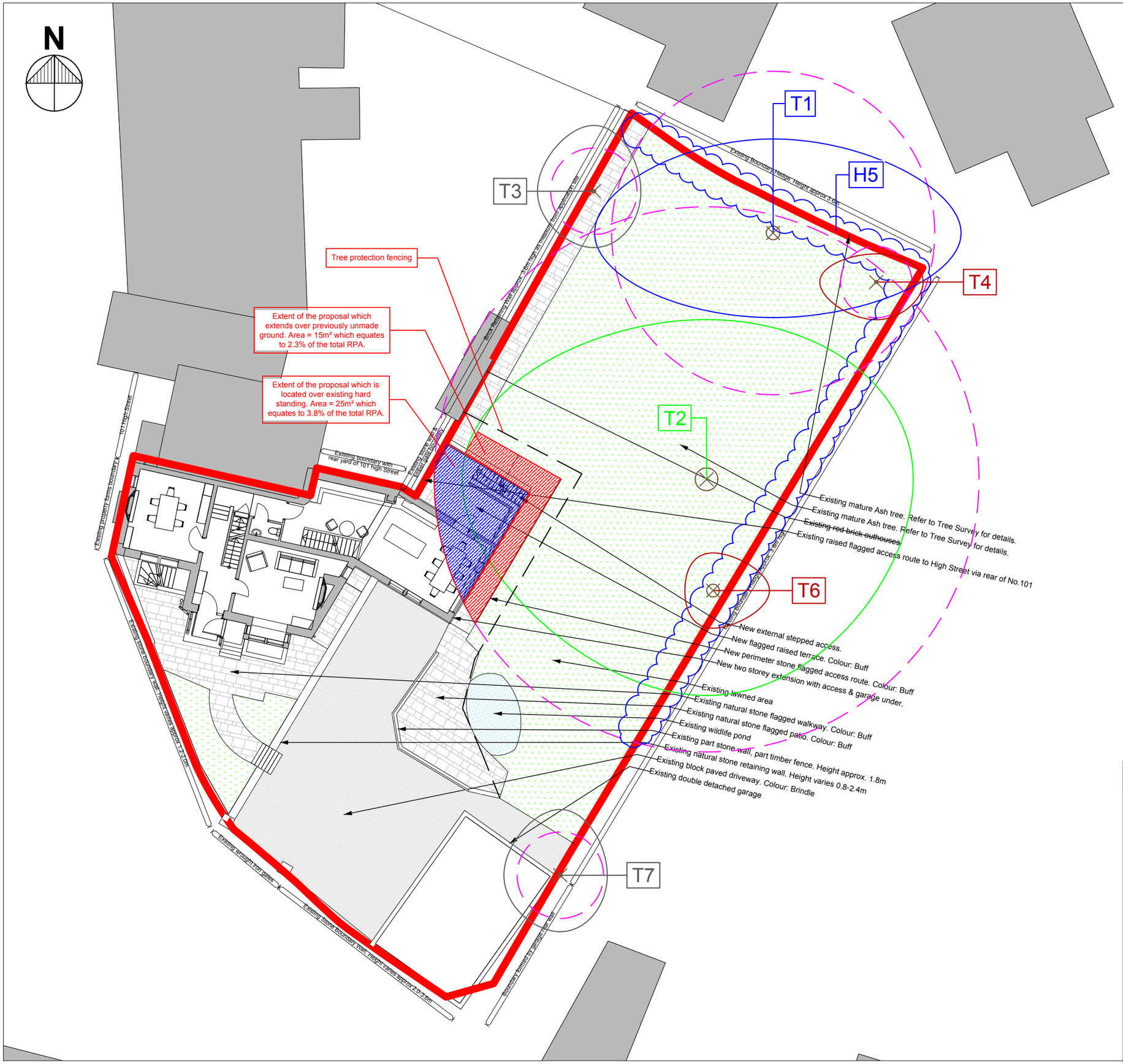
- Tree surveyed by Key Tree Solutions - location of tree centre from topographic survey
- Tree surveyed by Key Tree Solutions - tree location approximated by surveyor

Tree categories (BS 5837:2012)

- Category A Trees
- Category B Trees
- Category C Trees
- Category U Trees
- Root Protection Area (RPA)

Site Location **103 High Street, Penistone, S36 6BR**	Key Tree Solutions Rolys Cottage, YO61 2QY Tel. 07716 638 613 www.KeyTreeSolutions.co.uk
Job **Arboricultural Constraints & Impact Assessment**	
Title **Appendix D: Arboricultural Locations Plan**	

Drawn by	Date	Scale @ A3	Drg. no.
L Smith	**Mar 2024**	**1:200**	**1/2**



KEY TREE SOLUTIONS
ARBORICULTURAL CONSULTANTS

KEY- Arboricultural Survey and Constraints Plan
(to be read in conjunction with report ref. HSP01-24)

Tree surveyed by Key Tree Solutions - tree location approximated by surveyor

Tree categories (BS 5837:2012)

- Category A Trees
- Category B Trees
- Category C Trees
- Category U Trees
- Root Protection Area (RPA)
- Tree Protection Fencing

Site Location **103 High Street, Penistone, S36 6BR**	Key Tree Solutions Rolys Cottage, YO61 2QY Tel. 07716 638 613 www.KeyTreeSolutions.co.uk
Job **Arboricultural Constraints & Impact Assessment**	
Title **Appendix D: Arboricultural Impacts Plan (AIP)**	

Drawn by	Date	Scale @ A3	Drg. no.
L Smith	**Mar 2024**	**1:200**	**2/2**

Appendix E: Images

Figure 1. T1 (background) and T2 (foreground).

Figure 2. T3 located against the boundary wall with H5 to the right of the image.

Figure 3. T4 located under T1 and T2 with H5 behind.

Figure 4. T6 located slightly proud of the boundary feature H5.

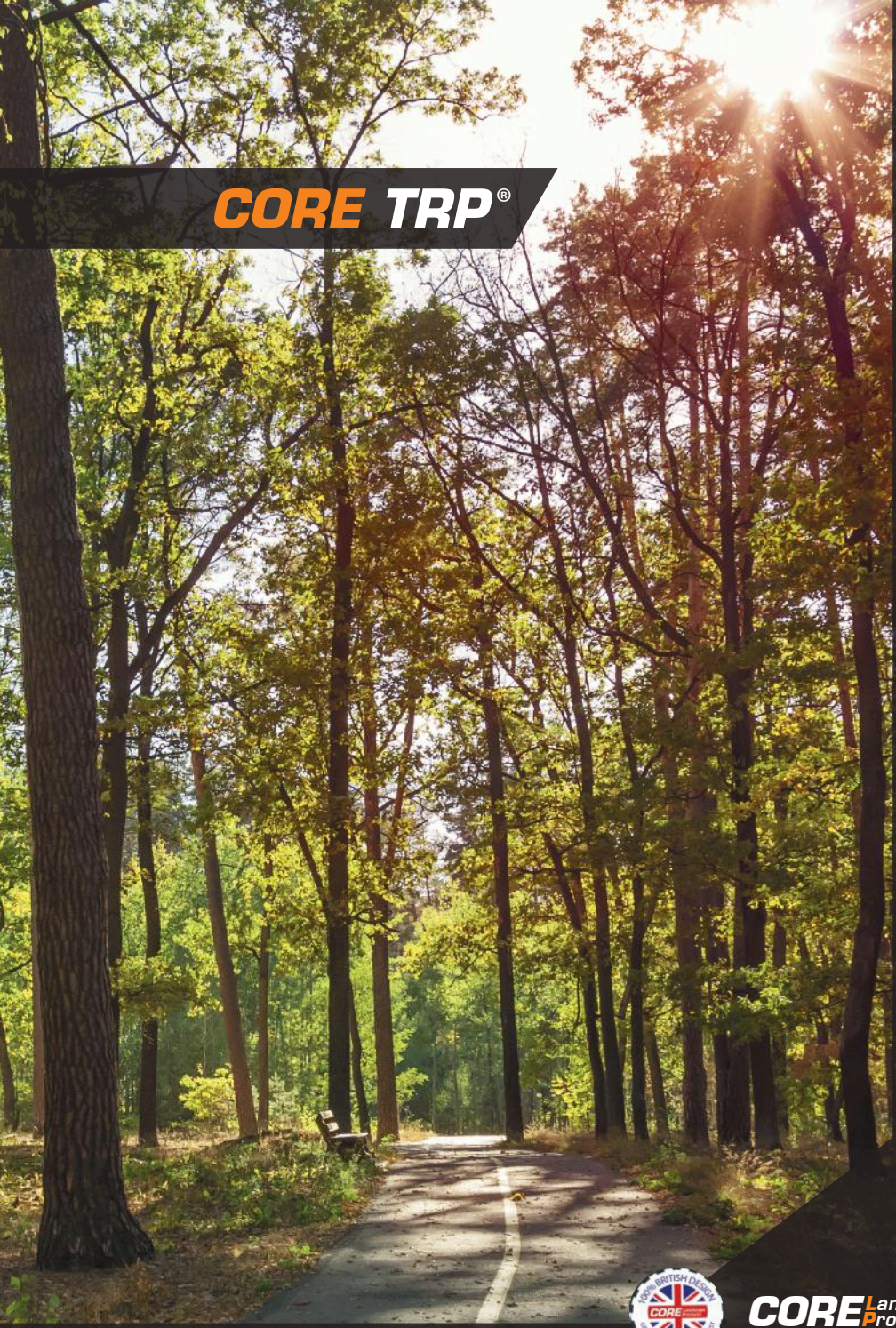
Figure 5. T7 located behind existing structures and vegetation.

Appendix F: Core Landscape Products

Please see the following pages.

CORE TRP®

TREE ROOT PROTECTION SYSTEM



CORE Landscape Products

www.corelp.co.uk

WHY CHOOSE THE ***CORE TRP***® SYSTEM?

We are one of the UK's leading suppliers of tree root protection systems and have specifically designed and manufactured a range of protection panels and accessories to provide a fully APN12 compliant system that can be used in both domestic and commercial applications.

0800 118 2278

We have an experienced technical team on hand to deal with any site specific queries and an online library of product specification sheets, install guides and case studies available to download.

The CORE TRP product specification sheets can also be found on the RIBA Product Selector and have been included on the NBS Plus database for architects & specifiers.

FULLY COMPLIANT SYSTEM

Our system has been tried and tested on a range of projects from small residential driveways to large commercial car parks. As a contractor or specifier you can set your mind at ease. Our TRP system is CE certified and complies with BS 5837:2012 and APN12.

WARRANTY

CORE LP provide the option of obtaining a comprehensive written guarantee for an additional fee. Our system is one of the few systems available in today's market with this option. *(See page 29)*

TECHNICAL SUPPORT

We have a team of technical experts on hand who will be happy to give advice and guidance on specification and installation as well as answer any site specific questions.

PRICE PROMISE

You will not buy an equivalent system cheaper anywhere else on the market. We strive to give our customers our lowest possible price at all times but on the rare occasion you receive a cheaper price, just send us the competitors itemised quotation and we promise to beat it by at least 5%.

FAST DELIVERY

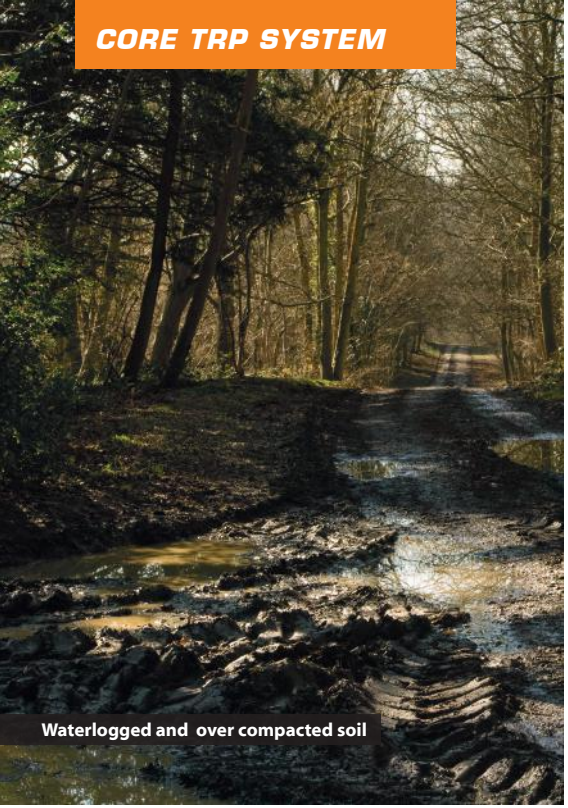
We have a huge UK stock holding which enables us to dispatch same day and offer a next day delivery service to most locations in the UK.

A COMPLETE SYSTEM

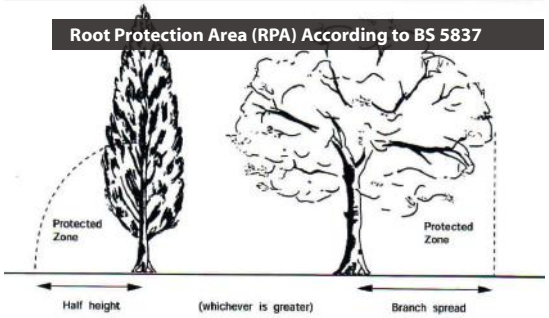
We not only manufacture and supply a complete tree root protection system but also offer specialist infill aggregates; wearing course materials; on site training; or a complete 'turn key' installation service.





Waterlogged and over compacted soil



THE PROBLEM...

Due to the rate of urbanisation within the UK it is becoming ever more popular to find trees located in both rural and urban areas with Tree Preservation Orders (**TPOs**). This is an attempt to ensure the protection and welfare of mature trees, especially where construction or groundworks are being carried out nearby.

Damage to trees can be caused by a number of factors including:

- Contamination of surrounding soils due to oil, diesel or chemical spills.
- Root damage due to excavations.
- Waterlogging of surrounding soil.
- Storage of heavy building materials within the root protection area (**RPA**).
- Over compaction of surrounding soils due to construction & vehicular traffic.

The BSI group published a document (BS 5837:2012) that contains explanatory guidance on tree care, carefully outlining best practice for every aspect of dealing with trees throughout the development. It explains the importance of the RPA and how it should be dealt with.

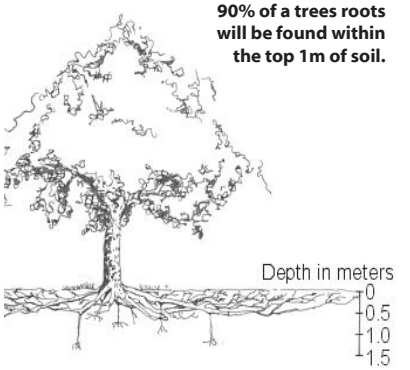
Failure to provide adequate protection within the RPA could result in the surface becoming over compacted and rutted; reducing oxygen and nutrient exchange to the roots, ultimately causing damage or destroying the tree.

Local authorites have the right to prohibit construction work within the RPA of any mature tree and can issue a TPO. Failing to protect the tree means you have failed to comply with the TPO. This is treated as a serious offence towards the environment and can result in a fine of up £20,000 per tree.

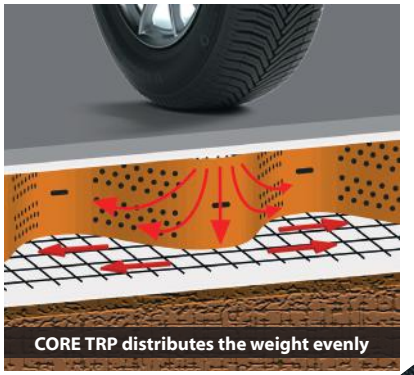
The majority of roots are found within 1m of the surface and can extend to a distance equal to the tree's overall height. This makes it an impossible task to build a sustainable track or driveway, near to a mature tree, using traditional excavation methods without disturbing the feeder roots.

Arboricultural Practice Note 12 (APN12) explains how the installation of 2-dimensional and 3-dimensional load spreading products can be used to achieve a '**No Dig**' construction for trafficked areas such as roads, car parks, driveways and pathways.

With this in mind, many local authorities across the UK are recognising tree root protection systems, such as the CORE TRP system, as a practical solution to reduce the impact of construction on the environment.



Downward pressure causes over compacted soil



CORE TRP distributes the weight evenly

...THE SOLUTION

CORE TRP is a 3-dimensional cellular web system that provides protection to the roots of mature trees from pedestrian and vehicular traffic.

It comprises of a geocellular confiment panel that provides 3-dimensional load distribution; porous and highly puncture resistant TRP membranes; and a TRP geogrid that provides additional 2-dimensional support.

The CORE TRP system is fully compliant with BS 5837:2012 section 7.4.2 Note 1 and has been specifically designed to achieve the 'No Dig' construction method set out in APN12.

The system is installed within the RPA on top of the existing soil to create a shallow high load-bearing 'above ground' subbase.

It helps distribute the weight of traffic evenly across the surface delivering a significant reduction in the loads transferred from above. This prevents harmful subsoil compaction around the roots.

It is a completely porous system allowing continued water permeation which helps to maintain a healthy tree.

The CORE TRP panels should be filled with a clean angular cohesive material with 'reduced fines' as highlighted in APN12, such as our CORE SubFlow20 aggregate. This will allow oxygen to diffuse into the soil and damaging gases such as carbon dioxide and methane to escape out of the soil.

The correct fill material is a key requirement for the success of the system as it needs to remain porous yet have sufficient surface friction to enable adequate compaction.

The system can be used as a temporary track for construction traffic, or as a permanent subbase for all types of traffic.

If it is intended for permanent use the system will require a porous wearing course.

The most popular options of porous wearing course are:

- **Porous Pavers / Gravel Grids** *such as the CORE TRP gravel grid.*
- **Porous Grass Pavers** *such as the CORE Grass HD reinforcement grid.*
- **Porous Asphalt.**
- **Porous Resin Bound Surfaces** *such as CORE Bound.*
- **Permeable Paving Systems.**

CORE TRP® SYSTEM
Is a CE Certificated Product

To comply with BS 5837:2012, s7.4.2.3
Any new hard surface should not exceed 20% of any existing unsurfaced ground within the Root Protection Area (RPA).

Go to www.corelp.co.uk to see our full range of landscaping products

WATER INFILTRATION & GASEOUS EXCHANGE

It is no secret that without sufficient access to water and oxygen our trees would ultimately perish.

Therefore, it is paramount to consider the impact that architecture & construction has on the landscape when designing structures that are within, or that are close to, Root Protection Areas (RPAs).

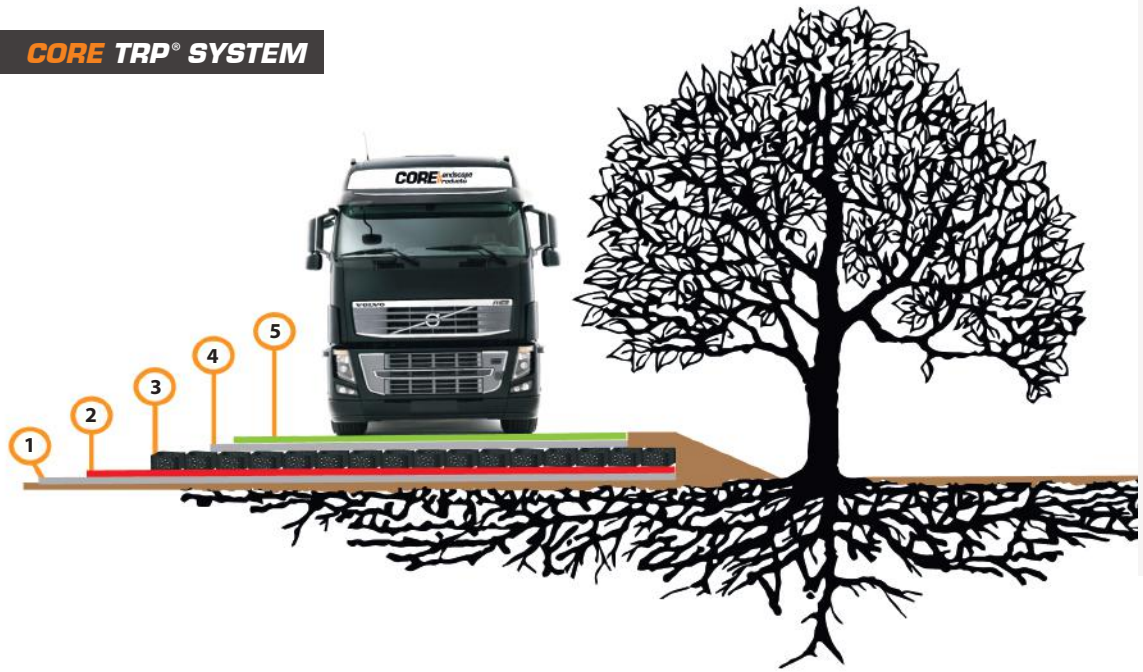
It is important to incorporate design elements that allow the roots maximum accessibility to water and oxygen.

The main reason tree roots are starved of water and oxygen are:

- Over compaction of the soil surrounding the roots.
- Impermeable surface/wearing courses and ground coverings that prevent water infiltrating through to the roots.

These problems can be easily avoided by using the CORE TRP system with a porous or permeable wearing course. The two combined promote both water infiltration and gaseous exchange.

CORE TRP® SYSTEM



CORE TRP SYSTEM COMPONENTS & HOW THEY WORK...

1. CORE TRP 30 Membrane - 300g/m² non-woven geotextile membrane prevents the granular infill material from migrating into the subsoil due to it's high puncture resistance. It also filters four times as many hydrocarbons than standard geotextiles and allows water infiltration at a significantly higher rate than standard membranes.

2. CORE TRP Geogrid - provides additional 2-dimensional support to the infill material within the cellular structure of the system as recomended by APN12. It also reinforces the TRP 30 membrane below, creating an even stronger separation barrier between the subsoil and the TRP infill material.

3. CORE TRP Panel - the geocellular confinement panel provides a 3-dimensional erosion barrier and structural bridge that ensures the loads placed upon it are laterally dissipated rather than transferred to the soil and roots below. The walls of the cells are perforated and, when combined with the clean infill material, enable free movement of water and oxygen, ensuring that nutrient supply to the tree roots are maintained.

The TRP panel should be filled with a SUDS compliant free draining subbase material such as CORE SubFlow20; a cohesive angular 4/20mm mix that has been screened and washed to create a 'reduced fines' infill that remains porous even after compaction within the cellular structure.

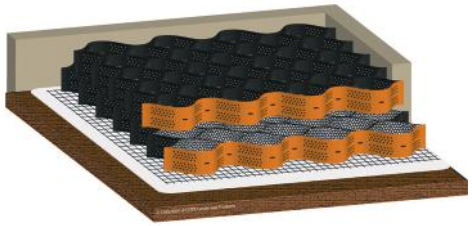
4. CORE TRP 10 Membrane - 100g/m² non-woven geotextile separation membrane that serves two purposes. Firstly, it prevents migration of the bedding/laying course into the fill material and secondly, it protects the system from contamination from silt and pollutants.

5. Permeable/Porous Wearing Course - There are several options of permeable/porous wearing courses (see construction diagrams starting on page 11).

DESIGN FLEXIBILTY

As we all know, no two projects are identical... Conditions often vary and many site specific factors will need to be taken into consideration when designing a suitable tree root protection system.

One of the most common questions we are asked is; Can the CORE TRP panels be stacked if I need to raise ground levels? YES, they can! The CORE TRP panels come in 5 different depths and can be stacked and combined to tailor the depth and meet each site's individual requirements.



CORE TRP Panels can be staggered & stacked.

This provides maximum flexibility when designing both temporary and permanent access.

Panels can be layered to cope with intial construction loadings and can be removed, once construction has finished, to leave a single layer of TRP panel in preparation for the final wearing course.

Edge restraints can also be tailored to project requirements. The selection process will often depend on the project's budget; suitability for the intended traffic load; and application.

Tanalised wooden edging is commonly specified as it is the most cost effective option. Sometimes a more substantial kerb is required: concrete kerbs, granite setts or heavy duty flexible steel edging (CORE EDGE) can all be used with the CORE TRP system. Concrete haunching can be installed to the perimeter cells of the TRP panels should it be required. *(Please refer to Step 7 of our Installation guide on page 26).*

FULL SYSTEM GUARANTEE AVAILABLE

We can provide a full system guarantee that will cover the cost of up to £10,000 per tree. Please see page 29 for more information.

CPD SESSIONS & TRAINING

Here at CORE LP we are committed to providing industry leading training and sharing our extensive knowledge and experience of tree root protection systems.

We have a CPD session solely focused on tree root protection and have received fantastic feedback from the Landscape Architects/ Specifiers that we have shared it with.

If you would like to find out more about our CPD sessions please visit our website or call on 01753 652 555.

INSTALLATION & SUPERVISION

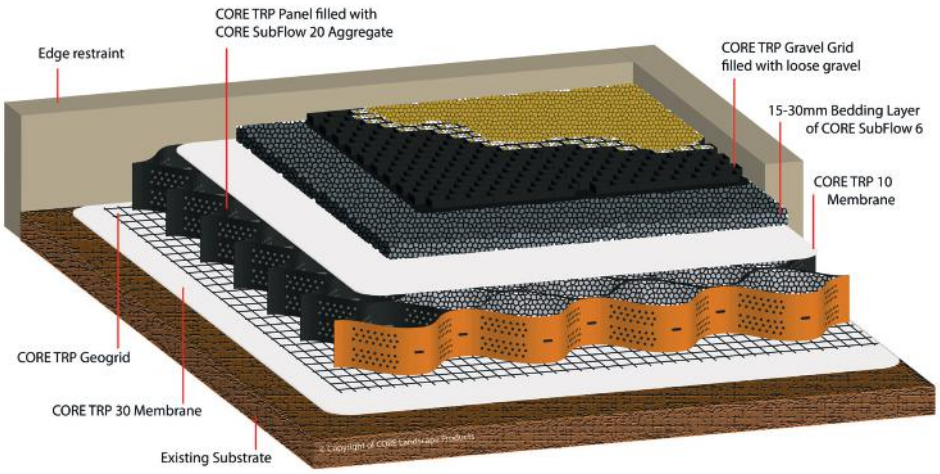
NATIONWIDE INSTALLATION SERVICE AVAILABLE

All operatives and supervisors are NRSWA qualified and have extensive experience of tree root protection systems and surfacing.

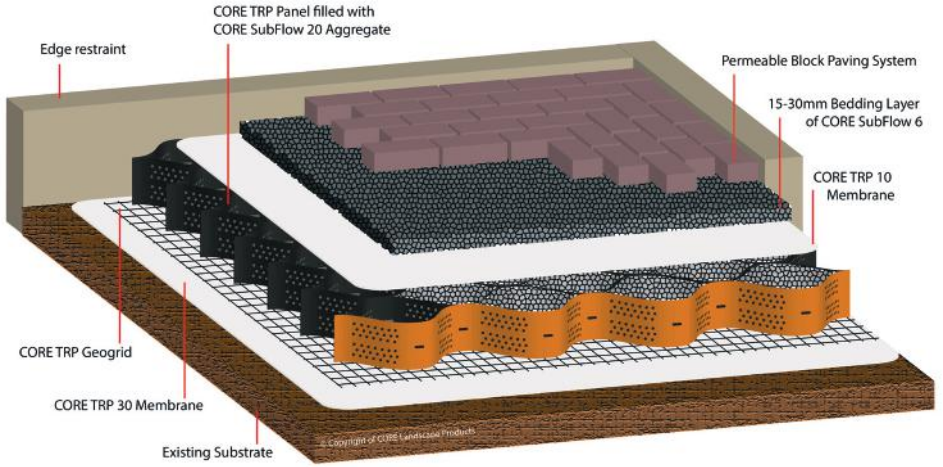
We also offer an unrivalled installation service across the UK. All of our contractors have a wealth of experience when it comes to tree root protection and surfacing.

If you are installing the system yourself and are looking for some guidance, we have a technical support team just a phone call away. We can even send one of our supervisors to oversee your install to give you peace of mind that it is being carried out correctly.

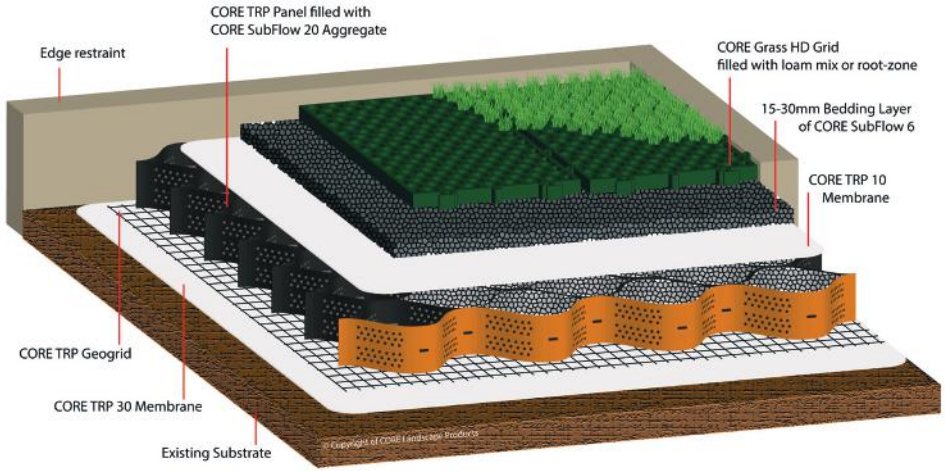
POROUS PAVER/ GRAVEL GRID WEARING COURSE



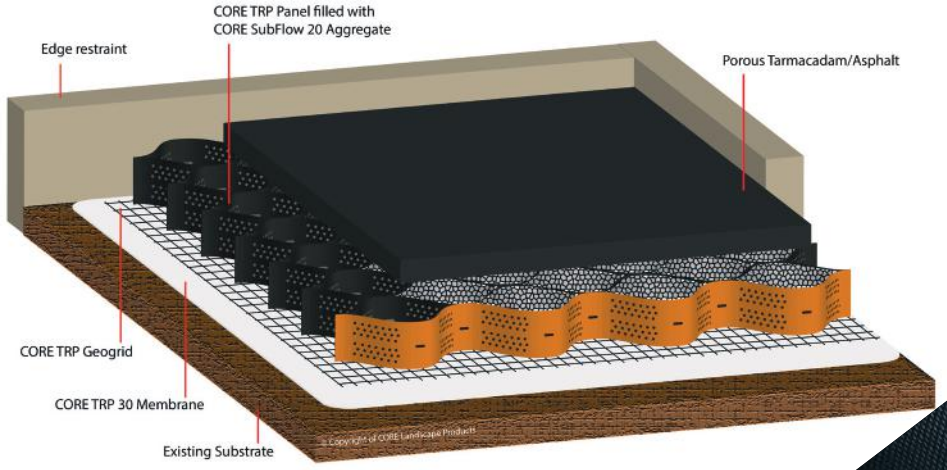
PERMEABLE BLOCK PAVING WEARING COURSE



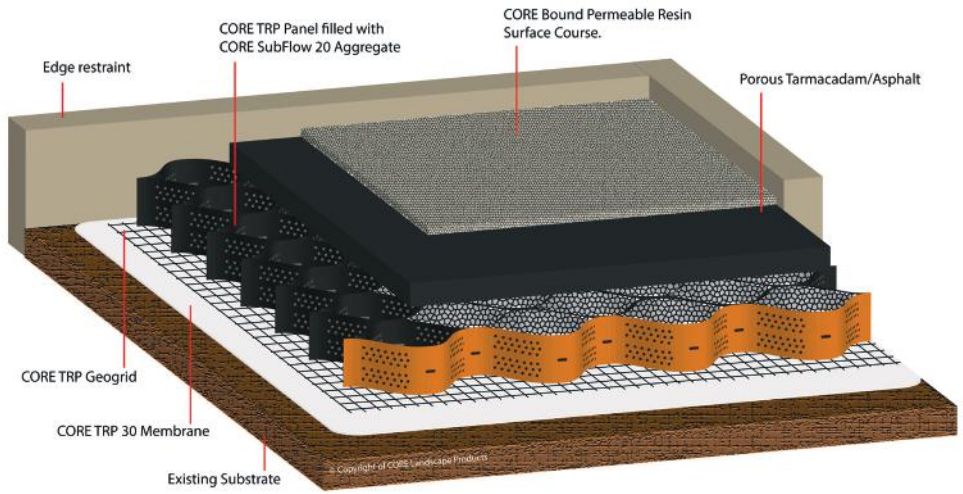
GRASS REINFORCEMENT GRID WEARING COURSE



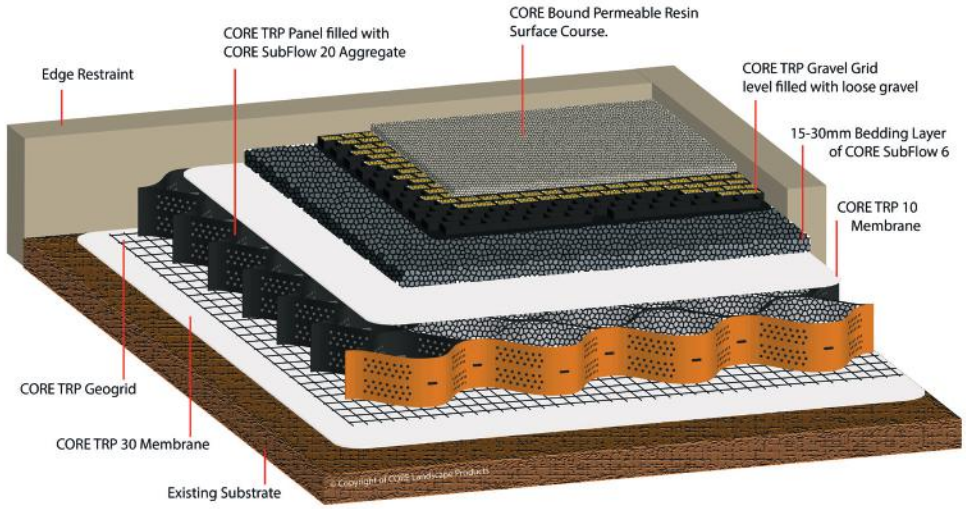
POROUS ASPHALT WEARING COURSE



RESIN BOUND SURFACE OVER POROUS ASPHALT WEARING COURSE



RESIN BOUND SURFACE OVER GRAVEL GRID WEARING COURSE



RESIN BOUND SURFACING

Resin bound paving is fast becoming the UK's first choice for permeable surfacing.

A porous resin bound layer can be installed over the porous asphalt wearing course to provide a unique and modern finish.

For pedestrain areas where access is restricted and asphalt is not a viable option, the CORE TRP gravel grid can be used as the base layer for a resin bound surface course.

Level fill the cells of the gravel grid with a standard angular gravel, then lay the resin bound surface course as you would over a traditional asphalt or concrete base.

CORE BOUND

If you are looking for resin bound surfacing options, give our sales team a call or head over to www.corelp.co.uk/core-bound to see our range of colour mixes.

CORE LP supply all the necessary tools and materials for resin bound surfacing.

Call for your free resin bound samples today!

TRP FOR TEMPORARY SITE ACCESS

It is often the case that the need for tree root protection is highlighted at the intial stages of project planning.

If the main access route to the site is hindered by the presence of mature trees the local authority will want to be satisfied that sufficient protection measures have been put in place to minimise the impact the construction traffic will have on the protected trees well before any works commence.

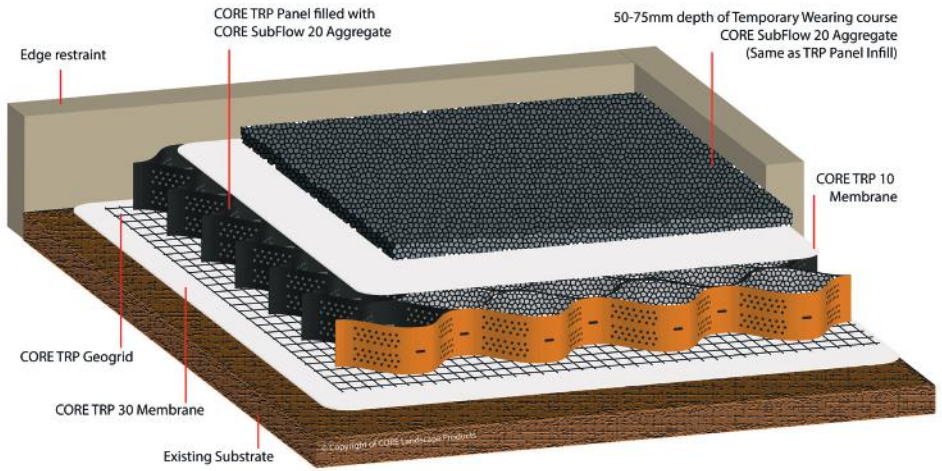
The CORE TRP system can be installed to provide safe access for all types of construction traffic.

By installing a temporary wearing course which can be removed at the end of the construction phase you have the option to utilise the TRP system as a permanent subbase for your final wearing course once the heavy construction is complete.

Panels can be layered to cope with heavy construction loadings and can be removed, once construction has finished, to leave a single layer of TRP panel suitable for lighter traffic.

The CORE TRP 10 membrane and temporary wearing course will prevent pollutants and silt from construction traffic contaminating the TRP system.

TEMPORARY SITE ACCESS CONSTRUCTION



RE-USING THE ACCESS...

After removing the temporary wearing course and TRP 10 membrane, inspect the CORE SubFlow 20 infill material to ensure no contamination has taken place. If areas of contamination are found remove and replace with clean fill.

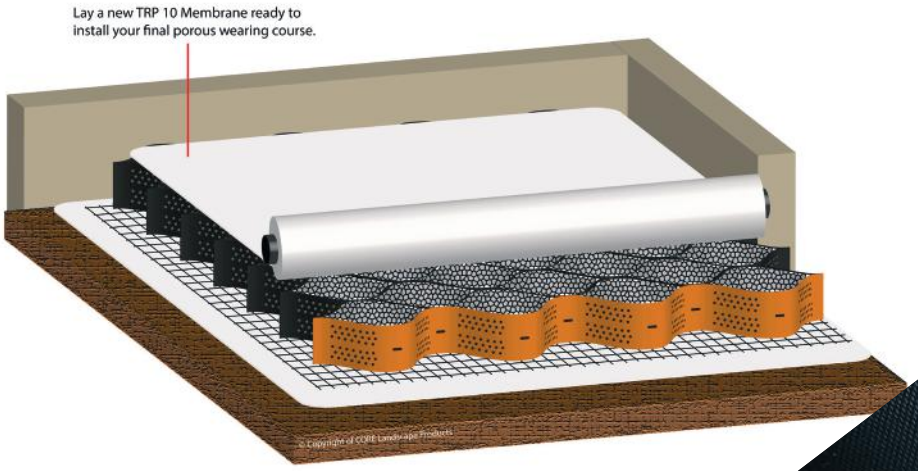
Next install a new layer of TRP 10 membrane followed by the specified build for your chosen wearing course.

(If laying porous asphalt, TRP 10 membrane is not required).

STILL UNSURE?

For site specific advice or questions regarding design specification or installation, give our experienced technical support team a call on **0800 118 22 78**

RE-USING THE TEMPORARY SITE ACCESS



Go to www.corelp.co.uk to see our full range of landscaping products

DESIGN & SPECIFICATION

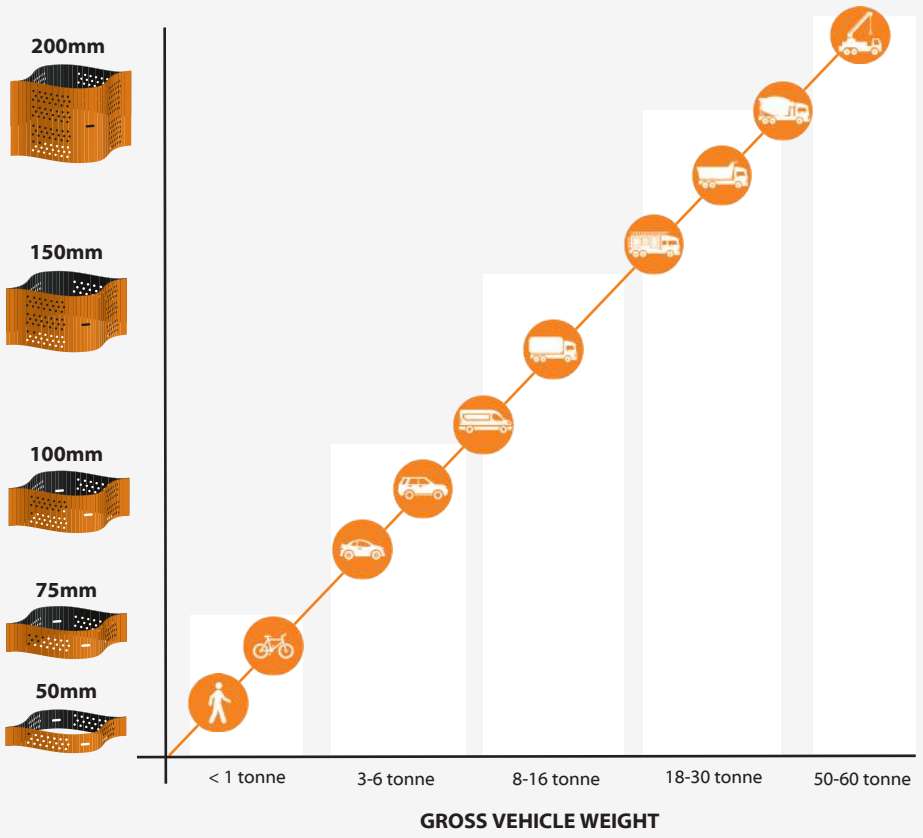
The chart below should be used as a guide for planning your tree root protection project. We always recommend you seek the advice from an arboriculturist or our technical support team with regards to your full requirements.

The guide has been based on a firm and stable subsoil condition with a CBR value of 3%.

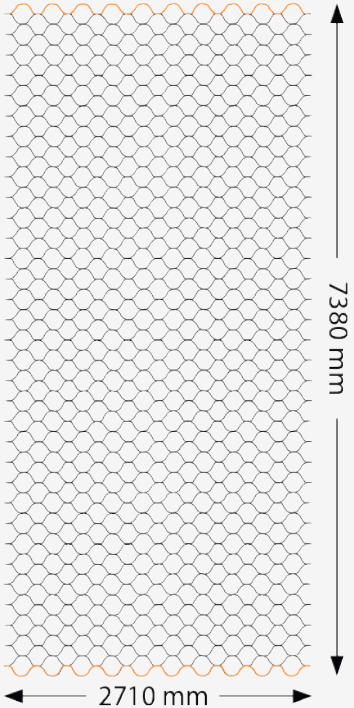
We offer 5 depths of CORE TRP panel to cover the entire spectrum of traffic you may encounter.

Our TRP panels all come flat packed to make them easy to transport around site. The panels should always be fully expanded and then cut to size if required.

WHICH DEPTH OF CORE TRP PANEL WILL YOU REQUIRE?



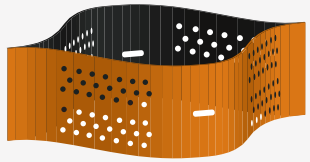
EXPANDED PANEL DIMENSIONS



CORE TRP PANEL

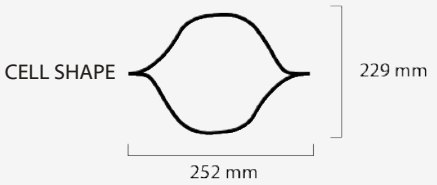
3D Cellular Confinement System

CELL STRUCTURE



Perforations in the cell wall promote lateral drainage and gaseous exchange.

CELL DIMENSIONS



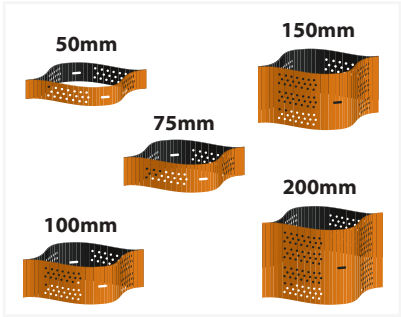
TECHNICAL PROPERTIES

PANEL MATERIAL	VIRGN HIGH DENSITY POLYETHYLENE
CELL WALL THICKNESS	1.5 MILLIMETRES
AREA COVERED PER PANEL	APPROX. 20M² (7380 X 2710 MM)
SEAM WELD STRENGTH	1420KN PER 100MM
TENSILE STRENGTH	18.4 MPa / 19.5 MPa
BIOLOGOCAL RESISTANCE	UNAFFECTED BY ALGEA & MOULD
CHEMICAL RESISTANCE	EXCELLENT CHEMICAL RESISTANCE
TEMPERATURE RANGE	-20°C TO 120°C

MATERIALS LIST

CONNECTING STUDS

MATERIAL	VIRGIN HDPE
THREAD LENGTH	15 mm
NUT SIZE	16 mm
BOLT HEAD TYPE	FLAT SCREWDRIVER
SOLD IN QUANT.	PACKS OF 100



CORE TRP PANELS

MATERIAL	VIRGIN HDPE
PANEL SIZE	2710 x 7380mm (20m²)
OPEN CELL DIMS.	252 x 229 mm
DEPTHS AVAIL.	50/75/100/150/200mm
PANEL WEIGHTS	12/ 18/ 24/ 36/ 48Kg
SOLD IN QUANT.	INDIVIDUALLY

GALVANISED STAKING PINS

MATERIAL	GALVANISED STEEL
LENGTH	300 / 750 / 1000 mm
THICKNESS	12mm REBAR
SOLD IN QUANT.	PACKS OF 10

CORE TRP MEMBRANES

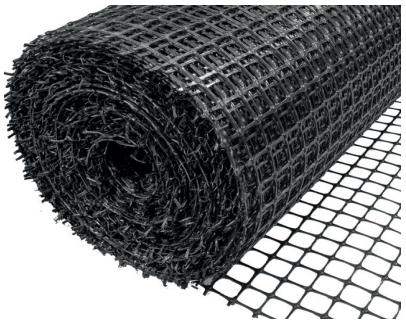
MEMBRANES	TRP 10	TRP 30
MATERIAL	Non-Woven	Non-Woven
WEIGHT	100g/m²	300g/m²
FULL ROLL	4 x 100m	5.25 x 100m
HALF ROLL	2.25 x 50m	2.62 x 100m

Both the TRP 10 and TRP 30 membranes are sold in full or part rolls.

AGGREGATE MATERIAL

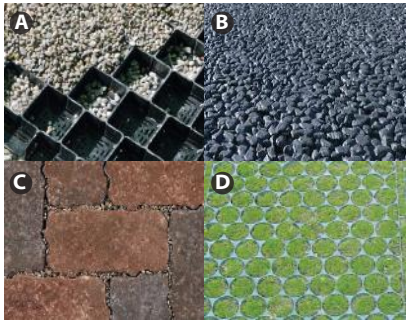
CORE SubFlow20 or 40 - a 4-20mm or 20/40mm graded clean angular aggregate that has been washed to provide the ultimate 'reduced fines' fill material for SUDS compliance.

CORE SubFlow6 - a 2-6mm hard clean grit used as the bedding/laying course for both gravel/grass grid and permeable block paving wearing courses.



CORE TRP GEOGRID

MATERIAL	VIRGIN PP
COLOUR	BLACK
TENSILE STR.	20, 30 or 40 kN/m²
MANF. METHOD	PUNCHED & DRAWN
FULL ROLL	4 x 50m (200m²)
HALF ROLL	2 x 50m (100m²)



POROUS WEARING COURSE

A | CORE TRP GRAVEL GRID

B | POROUS ASPHALT

C | PERMEABLE BLOCK PAVING

D | CORE GRASS HD GRID

Install Guide

The following guide is designed to be an overview of the installation process. As you can appreciate, site conditions will often vary so please seek expert advice or call our technical support team if you have questions that have not been covered in the install guide or the FAQs below. Our team will also be happy to visit your site if you require any site specific guidance.

FAQ's

Q | WHAT CAN I DO TO LEVEL THE UNDULATING GROUND WITHIN THE ROOT PROTECTION AREA (RPA)?

A | TRP Panels require an evenly graded subbase layer, which can be made up to any high points with granular, permeable fills such as crushed stone (CORE SubFlow20 or 6), sharp sand or clean graded soil, dependant on depth of fill required.

Q | CAN I USE A STANDARD WEED MEMBRANE?

A | No, standard separation membranes do not have the adequate tensile strength required for tree root protection. A specialist TRP membrane should be used below the system, they have high tensile strength and help maintain water and gaseous exchange.

Q | WHY DO I NEED A TRP GEOGRID BELOW THE SYSTEM?

A | CORE TRP Geogrid is an additional 2-dimensional support layer that helps to distribute the traffic load further, preventing the fill material within the cells from puncturing the specialist TRP membrane when exposed to extremely heavy traffic loads.

Q | WHAT AGGREGATE SHOULD BE USED TO FILL THE TRP PANELS WITH?

A | The fill material is one of the most important elements of the TRP system. The TRP Panel should be filled with a SUDS compliant free draining subbase material such as CORE SubFlow20 or SubFlow40 (a cohesive angular 4/20mm or 20/40mm mix that has been screened and washed to create a 'reduced fines' infill that remains porous even after compaction within the cellular structure).

Q | WHICH DEPTH OF CORE TRP PANEL SHOULD I BE USING ON MY PROJECT?

A | The depth of TRP panel required depends on the intended traffic loads. The heavier the traffic or softer the subsoil, the deeper the panel will need to be to sufficiently distribute the load. Please refer to page 17 for guidance and consult your arborcultural advisor.

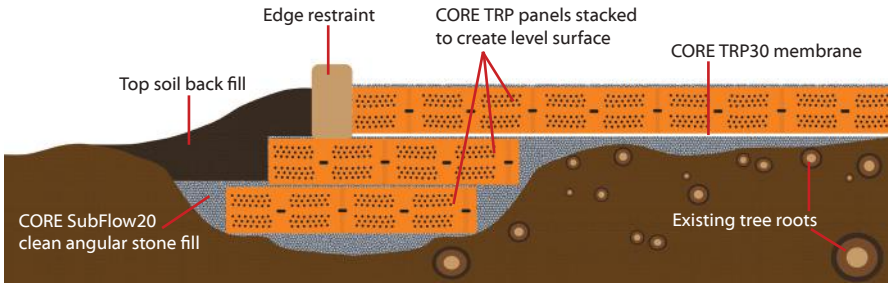
Q | HOW CLOSE TO A TREE CAN I GO WITH THE CORE TRP SYSTEM?

A | BS 5837 recommends a minimum distance of 500mm between new surfacing and buttress roots. There may be scope for flexibility in this separation for mature trees with little potential for future growth, if agreed by the supervising arboriculturist.

STEP 1 - Prepare existing subsoil

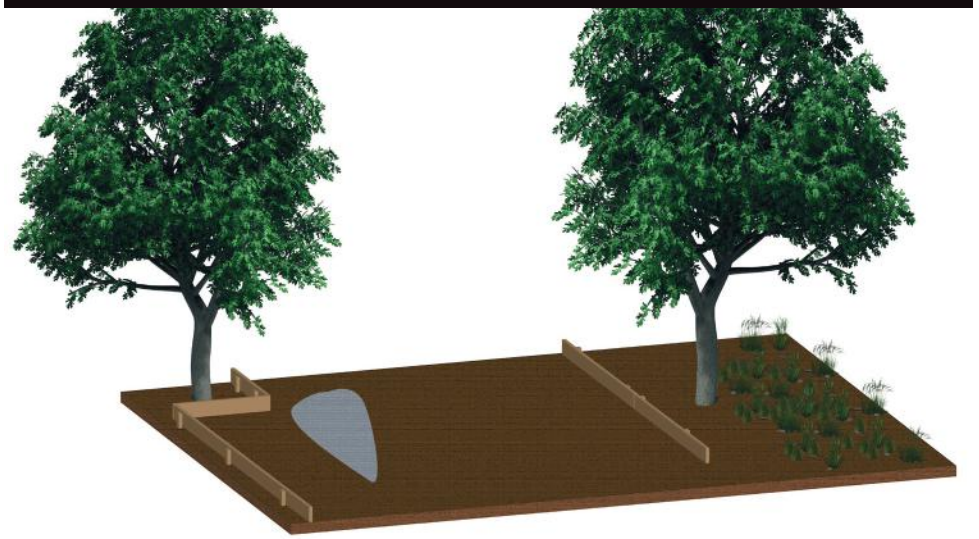
1. If agreed with the supervising arboriculturist remove the surface vegetation using hand held tools or herbicides. Cover any exposed tree roots using a suitable fill material. If large roots pretrude above ground the enitre surface level may need to be adjusted. Please consult your supervising arboriculturist.

Fill any dips and undulations with a clean granular permeable fill material to bring the surface level in line with existing high spots. Do not remove any high spots and do not use mechanical compaction equipment to compact the fill material or surrounding soil.



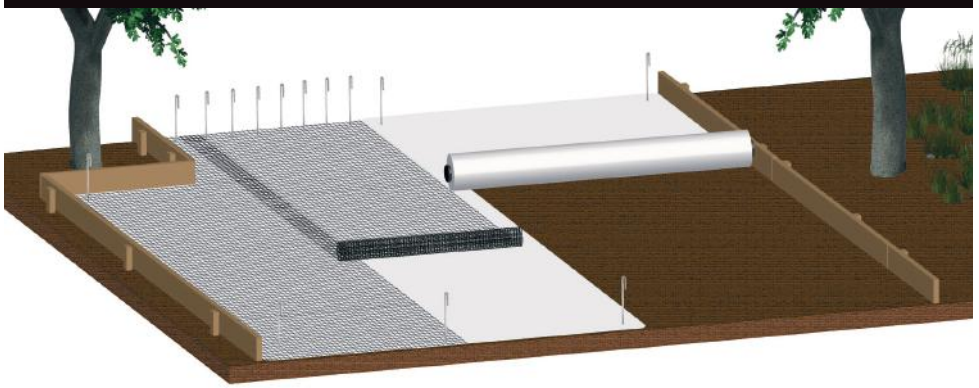
If the existing subsoil level within the RPA is sloping or has large undulations it may be necessary to stack the TRP panels to create a level surface for the final wearing course. Filling large dips and bumps with unstabilised fill material is not advised.

STEP 2 - Install Edge Restraint



2. An edge restraint should be used around the perimeter of the TRP area. Tanalised timber and railway sleepers are the most commonly used edging for TRP systems. If a more substantial edging is required, concrete kerbs or path edgings can be used. *Edgings for the wearing course are explained in greater deatil in Step 7.*

STEP 3 - Lay TRP Membrane



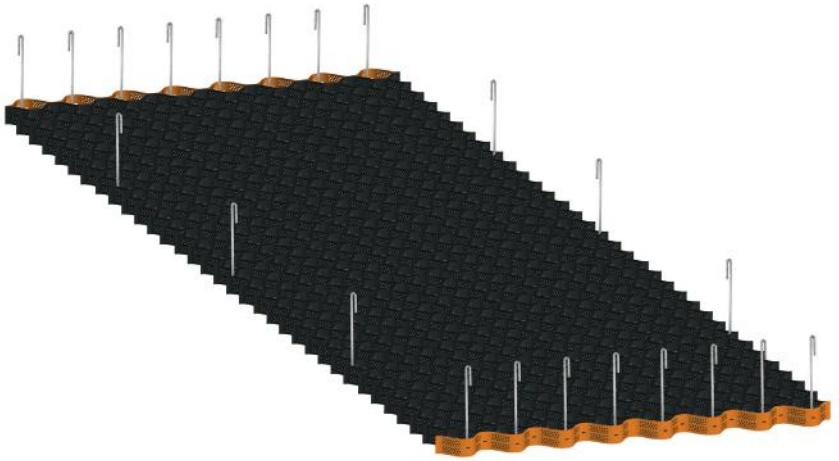
3. Once a generally level surface has been achieved lay the TRP 30 membrane. Ensure there is a minimum 150mm overlap on any membrane joints. *This may need to be more depending on soil structure. Seek advice from your aboricultural supervisor.*

Pin the corners of the membrane to prevent it from moving. Pin the leading edge of TRP Geogrid and roll out over the membrane. Remove the pins from the membrane and re insert pinning the outer corners of the TRP Geogrid.

TRP Geogrid may be required subject to intended traffic load and soil structure. Seek advice from your aboricultural supervisor.

STEP 4 - Expand Panels

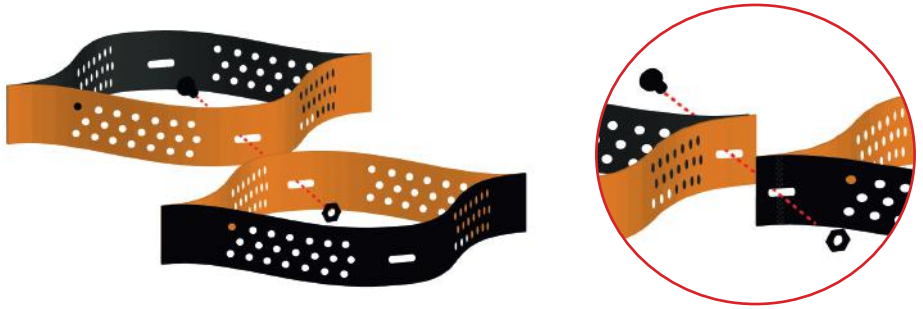
4. Measure in 1355mm from the edge restraint (half the width of the panel). Lay the collapsed CORE TRP panel and pin the centre cell closest to the end of the panel. Expand the panel to its full length (7380mm). Pin the centre cell at the opposite end.



4a. Now measure 2710mm (the full width of the panel). and pin out the four corners to produce a fully expanded panel 2710 x 7380mm. Pin the remaining cells along each 2710mm end and evenly space 3 pins down each 7380mm side.

This will produce a cell size of 229 x 252mm once fully expanded and under tension. Do not try to curve or bend the panel into place. Any curves should be cut from fully expanded panels and pinned accordingly.

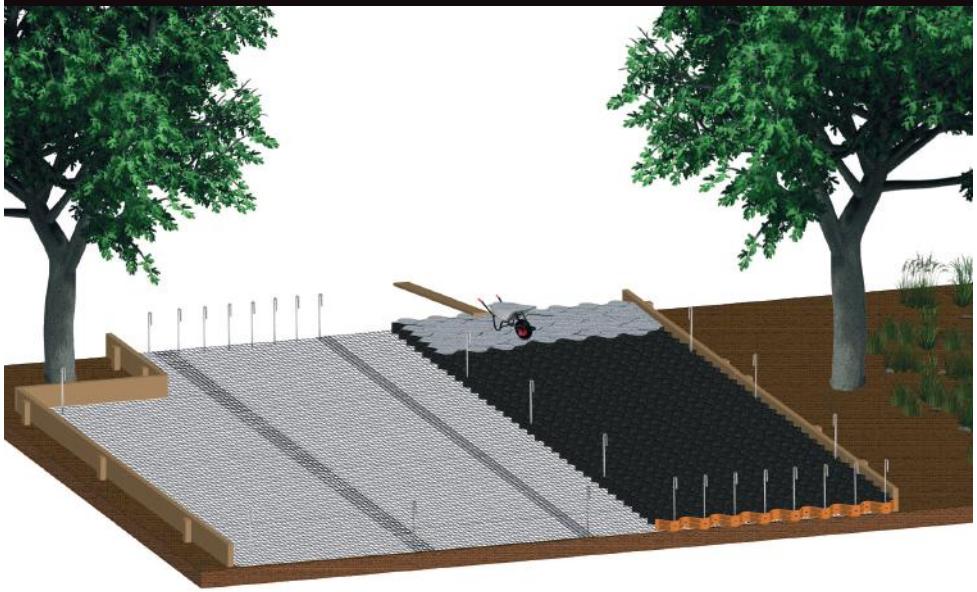
STEP 5 - Connecting Panels



5. When connecting ends of adjacent panels align the elongated holes in the centre of the cell walls. Insert the stud through the holes in both panels and attach the securing nut.

5a. When connecting two panels side-on, align the elongated holes in the centre of the seam welds and insert connecting stud as before.

STEP 6 - Filling Panels



6. Starting at one end, begin to fill the cells progressively using CORE SubFlow20 or SubFlow40 clean angular 4/20 - 20/40mm cohesive stone. Limit the drop height to less than 1m to avoid collapsing unfilled cells.

Once you have completed an area, you can bring vehicles or plant onto the filled cells using a ramp to continue filling. Ensure to fill the complete width of the panel.

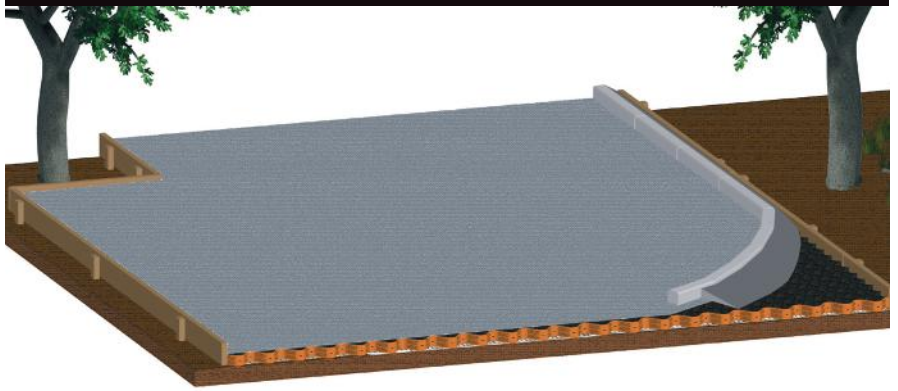
- Do not drive or walk on unfilled cells to avoid damage.

- Flint gravel is not an acceptable fill material as it does not have the cohesive properties required.

- MOT TYPE 1 or crushed stone should also be avoided as they have a high fines content.

- 3 passes with a non-vibrating roller is the best method of settlement for the infill material.

STEP 7 - Edging for wearing course



7. If the edging you installed in Step 2 is not the correct height or a different edging detail has been specified such as a granite sett or concrete kerb, this can be installed on top of the CORE TRP panel. The concrete haunching can go inside the cells of the TRP panel and on top to create an extremely strong and robust edge.

STEP 8 - Surfacing Options

8. The wearing course over the TRP panel must be porous. There are several options including; porous asphalt, permeable block paving; porous gravel or grass grids; resin bound; and rubbercrumb surfacing.
For specific construction diagrams please refer to page 11.

PROJECT LOCATION | East Sussex

CONTRACTOR | SH Groundworks

CLIENT | Homeowner

PROJECT SIZE | 220m²

DEPTH OF TRP | 100mm

WEARING COURSE | CORE TRP Grid

PROJECT BRIEF | CREATE A NEW ACCESS WAY THROUGH AN EXISTING ROOT PROTECTION AREA.

The client had built a new dwelling at the rear of the existing property.

The new access cut across the path of two mature trees that were both subject to TPOs.

The arboriculturalist had requested that the access had to be constructed in strict accordance with Aboricultural Practice Note 12 (APN12) - The 'No Dig' solution.

PRACTICAL SOLUTION | INSTALL THE CORE TRP SYSTEM TO PREVENT ANY DAMAGE TO TREES.

CORE provided guidance and advice to the main contractors on the 'No Dig' solution required and specified the depth of TRP panel producing a materials list to make it easier for the contractors.

This was the first TRP project for the contractors. CORE guided them through the process whilst liasing with the aboriculturalist to ensure the system was to his satisfaction.

PRACTICAL SOLUTION | CONTINUED...

CORE provided additional assistance when it came to installing the TRP system.

One of the experienced technical support team members had a call with the contractor to fully explain the process and the necessary build up.

Once the TRP system had been laid, levelled and compacted, a TRP 10 membrane was installed. A bedding layer of CORE SubFlow6 aggregate was next, followed by a CORE TRP Gravel Grid wearing course and finally a 10mm silver granite infill.

The main contractors had used a gravel stabiliser system before but commented on how easy the CORE TRP Gravel Grid panels were to lay.

OUTCOME | SUCCESSFUL INSTALL AND BOTH CONTRACTOR AND HOMEOWNER WERE HAPPY WITH THE RESULT.

All parties involved were impressed with the performance of the system overall and the main contractors commented on the high level of support provided by CORE throughout the project.

WARRANTY

With the CORE Tree Root Protection (TRP) system you are using tried and tested tree root protection of the highest quality that out performs competitors, offering total peace of mind. Top quality raw materials and intuitive design ensure the roots of the trees you want to protect will not be damaged by traffic or footfall.

By simply following our recommendations and adopting industry standard installation practices, you can rest assured you are not only choosing the best possible system, but also getting the best value for money.

With CORE TRP you have the option of obtaining a comprehensive written guarantee for an additional fee. The CORE TRP system is one of the few systems available in today's market with this option. Independently tested, it offers unrivalled protection for your tree roots, and has been used throughout the world for years without failure.

COMPLETE CONTROL

As every good businessman knows "nothing is truly free in business" so we prefer to offer you the option of paying for the written guarantee. In our experience not everyone requires a guarantee so this allows us to offer you the best possible price for your CORE TRP system.
We will specify and quote your requirements using exactly the same great product with or without the warranty. We will then advise you on the cost of the optional warranty, if you require one. Either way the protection the roots receive is the same, so you have the option of how you spend your resources. With expert guidance from our arboriculturalists and design engineers, CORE TRP gives our customers the assurance that specific site requirements and design criteria will be achieved.

The optional warranty covers the replacement of not only the CORE TRP system but also the tree(s), giving the customer complete peace of mind. Our engineers will offer site specific technical recommendations to help you obtain the best results for the best possible price.

FREQUENTLY ASKED QUESTIONS

What is covered under the warranty? | The guarantee covers the replacement of dead tree(s) within the protected area, up to a value of £10,000.00. The guarantee also covers the replacement of the CORE TRP system which has failed up to the value of £50,000.00. The guarantee is valid for 10 years from date of invoice.

How to Make a claim for loss of a tree? | In the unlikely event that a tree dies within the 10 year guarantee period, you will need to notify us as soon as discovered. We will carry out a full investigation into the actual cause of death. Once our investigation has identified the cause we will establish what remedial action is required.

How to make a claim for material failure? | In the unlikely event that your CORE TRP system fails within the 10 year guarantee period, you will need to notify us as soon as discovered. We will carry out a full investigation into the actual cause of failure. Once our investigation has identified the cause we will establish what remedial action is required.

Can I alter the CORE TRP system? | The system is created and designed using only high quality raw materials that outperform many of our competitors. This manufacturing process creates a truly unique system. Our installation guides and technical recommendations ensure the complete success of the project therefore we can only offer the warranty if the full system has been installed with no alterations, additions or omissions.

Can I pass the warranty on? | Yes, the warranty is owned by the landowner. This can be transferred should the ownership of the land change, provided we are given notice of the transfer.

HOW TO OBTAIN A WARRANTY

Site Survey | Provide us with a copy of the Arboricultural Report for the site. [If a report hasn't already been produced, we would advise approaching an Arboricultural Association registered consultant to have a full survey completed].

Technical Recomendation | We can offer all of our client's engineering advice and services. On all guaranteed projects, we provide full technical recommendations and calculations.

Site Survey Scope Agreement | Once we have received the arboricultural report and produced our technical recommendation, we will advise on which trees can be covered under the warranty using a scoping agreement. We will then advise on the cost of the warranty.

Straight Forward Installation | By following our installation guide and technical recommendations the works should be carried out adhering to basic industry guidelines. Once completed, the customer signs, agreeing to the terms and conditions of the warranty.

Certification | Once your signed agreement is received by us, we will send out a pack containing your guarantee certificate with full details of your purchase.

CORE Landscape Products

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Go to www.corelp.co.uk to see our full range of landscaping products