

**Kirsten Bowden**  
CHARTERED LANDSCAPE ARCHITECT

## TREE SURVEY REPORT – Rev A

The Galley, Market Hill, Woodbridge



December 2018

Prepared by:  
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# CONTENTS

## Arboricultural Report including Arboricultural Implications Assessment

1.0	Introduction	3
2.0	Site Visit	3
3.0	Soils	3
4.0	Tree Survey Data	4-5
5.0	Tree Quality Assessment	6
6.0	Root Protection Areas	10
7.0	Legal Constraints	10
8.0	Arboricultural Implications Assessment	11
9.0	Conclusions	14

## **References**

- British Standards 5837:2012 Trees in relation to design, demolition and construction – Recommendations
- British Standards 3998:2010 Tree Work Recommendations
- NJUG 4 Vol 10 – National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and maintenance of Utility apparatus in proximity to trees

**Appendix 1** Tree Survey Plan showing Tree Quality Categories

**Appendix 2** Plan showing Root Protection Areas

**Appendix 3** Ground Protection Areas

## **EXECUTIVE SUMMARY**

Two trees have been surveyed for planning purposes due to their proximity to the Site and the proposed changes. Some pruning works are recommended as the branches are already touching the buildings and rubbing against one another. It is considered that the trees can be adequately protected and retained providing special protection measures in accordance with BS5837:2012 are used.

### **1.0 INTRODUCTION**

1.1 This report was commissioned by Plaice Architects, in relation to the alterations to The Galley Restaurant, Market Hill, Woodbridge. The scope of survey work includes a site visit and visual tree inspection, the collection of tree data, the production of a tree condition survey report and a tree constraint drawing. The tree survey and arboricultural assessments have been carried out in accordance with British Standard 5837: 2012. The position of the trees on the site is illustrated in Appendix 1 on the site plan and information about the tree stock and its current condition is given. The aim of this report is to assist the planning process by discussing the impact that the proposals would have on the existing tree stock.

### **2.0 SITE VISIT**

2.1 The site visit was undertaken on the 12<sup>th</sup> of December 2018. The trees were surveyed visually, externally and from ground level only. No samples or internal decay detection readings were taken for further analysis. All dimensions have been measured unless stated otherwise. Weather conditions at the time of the survey were clear and sunny.

2.2 An existing site layout plan and proposed layout were made available at the time of the tree survey. Appendices were revised in December 2020 to reflect layout proposal changes.

### **3.0 SOILS**

3.1 A full laboratory soil assessment has not been provided. The British Geological Survey digital geological map for this part of Suffolk shows that the soils of the site comprise of freely draining slightly acid sandy soils.

The soils are unlikely to be shrinkable as they are not present; but ground conditions should still be checked by a structural engineer prior to the foundations being designed.

#### 4.0 TREE SURVEY DATA

In accordance with BS 5837:2012, the characteristics of trees over 75mm stem diameter measured at 1.5m above ground level have been recorded and they have been categorised in accordance with Table 1 of BS5837: 2012. The following tree data table should be read in conjunction with the annotated site plan shown at **Appendix 1** and the key on page 6.

Tree Number and Species	Height (m)	DBH (mm)	Branch Spread (m)				Clearance above ground level (m)	Age Class	Remaining Contribution (Years) and Physiological Condition	Comments	BS 5837 Category and Recommendations Necessary for Development	RPA (m <sup>2</sup> )	Radial Distances for RPAs (m) from Centre of Stem
			N	S	E	W							
T1 <i>Betula pendula</i> (Birch)	12	590	7.0	7.0	6.0	6.0	4.0	M 10-20 Good	Tree is in good health with little or no signs of decay.	A  Check for deadwood, but no work otherwise required.	158	7.1	
T2 <i>Salix cinerea</i> (Grey Willow)	9	600	7.5	7.0	7.0	5.0	2.0	M 20+ Fair	Large branch adjoins the main stem 1m above GL to the north hangs low over the existing toilet block and the crown touches the adjacent buildings at various points.	B  Remove branch overhanging the existing toilet block back to main stem. Reduce the length of the branches which are touching the buildings as well as those branches which are rubbing against one another.	163	7.2	

*The comments made with regard to the health of the trees within this report were correct at the time of inspection. Trees are dynamic structures and changes can occur in response to biological, mechanical or environmental changes at any time.*

Key to terms.

- Identification numbers have been used and correspond to the site plan shown at **Appendix 1**.
- Vegetation type has been categorized as one of the following: Tree (T), Hedge (H), Shrub (S), Group (G), Stump (ST)
- Species are listed by common and botanical name where appropriate.
- Where possible, measurements have been made in accordance with the conventions detailed below. Where this was not possible, due to site conditions or the vegetation being in third party ownership, dimensions have been estimated. \* Indicates estimated measurement.
- Height has been estimated to the nearest half metre.
- Stem diameter (of single stem trees and multi stemmed trees) has been measured at 1.5m above ground level and recorded in millimetres.
- Crown spread has been recorded in metres.
- Age class has been recorded as follows:
  - Y** Young recently planted or establishing tree that could be transplanted without specialist equipment, i.e. up to 12-14cms-stem girth.
  - S/M** Semi mature. An established tree but one that has not reached its potential ultimate height and has significant growth potential.
  - E/M** Early mature. A tree reaching its ultimate potential height, whose growth rate is slowing down but will increase in stem diameter and crown spread, and has a safe life expectancy.
  - M** Mature. A mature specimen with limited potential for any significant increase in size but with a reasonable safe life expectancy.
  - O/M** Over mature. A senescent or moribund specimen with a limited safe life expectancy. Possibly also containing significant structural defects with attendant safety and/or duty of care implications.
- Physiological Condition has been recorded as Good, Fair or Poor.
- Recommendations for tree management have been based on current Arboricultural Best Practice as set out by the Arboricultural profession and all relevant publications.

## 5.0 TREE QUALITY ASSESSMENT

### 5.1 Tree Quality Assessment

The trees have been categorized according to BS5837: 2012 as a guide to their condition. Table 1 indicates whether the tree is to be removed or retained as part of the proposed layout.

#### Category and definition

- Category A: Those of high quality with an estimated remaining life expectancy of at least 40 years.
- Category B: Those of moderate quality with an estimated remaining life expectancy of at least 20 years.
- Category C: Those of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm.
- Category U: Those in such a condition that they cannot be realistically be retained as living trees in the context of the current land use for longer than 10 years.

There are two trees on site that have been surveyed for planning purposes. The trees are coloured on the plan attached at **Appendix 1** to indicate their category and the colours are explained in the key of the plan. Both are well established specimens.

### 5.2 Category A Trees

#### **T1 *Betula pendula* (Birch).**

This tree is considered to be category A due to its high quality and value in contributing to the visual amenity of the surrounding area. It is in good condition and capable of making a substantial contribution for 20 years or more.

The image attached of T1 illustrates the close proximity of the tree to the existing buildings nearby. Its height and stature means that it contributes to the character of the Site and since it is in good health it is proposed that it is retained.

The tree was not surveyed when in full leaf, so although it appears to be in good health currently, it should be monitored when in full leaf to check for any signs of dieback or stress in the crown. If there are any concerns then the tree should be further inspected by a qualified Arboriculturalist.



**Photo 1.** T1 as viewed from Theatre Street looking south-west. The tree is growing in a grassed area between the public toilets and the road. A beech hedge to the front of the Site helps soften the appearance of the existing setting.



### 5.3 Category B trees

#### **T2 *Salix cinerea* (Grey Willow).**

T2 is not within the Site, but to the back of No.1 Theatre Street and within the rear garden of No.3 Theatre Street. This tree is considered to be category B due to its only moderately good form and its value in contributing to the visual amenity of the local area. It is in generally fair condition, with some scars on the main stem and nodular growths, but it appears to be in reasonable health and is capable of making a contribution to the setting for 20 years or more.

The image below of T2 illustrates the close proximity of the tree to the existing buildings nearby. The branches overhang the Site and some of these are rubbing against one another. The low branch growing towards the existing toilet building is a concern. The branch connects with the main stem at a height of approximately 1m and there is little clearance between the branch and the roof of the public toilets. Other branches growing in an easterly direction towards the Market Hill are in physical contact with the backs of the listed buildings.

The tree was not surveyed when in full leaf, so although it appears to be in reasonably good health currently, it should be monitored when in full leaf to check for any signs of dieback or stress in the crown. If there are any concerns then the tree should be further inspected by a qualified Arboriculturalist.



**Photo 2.** Looking east towards the back of the buildings on the Market Hill. Branches from T2 are in contact with the buildings, both of which are Grade II listed.





**Photo 3:** T2 is outside the Site and is not readily accessible. It is also constrained by the adjoining boundaries of neighbouring properties.

## **6.0 ROOT PROTECTION AREAS**

- 6.1 In accordance with BS5837:2012, the root protection areas (RPA) of the trees have been calculated and shown in the previous table and on the plan attached at **Appendix 2**. This is the minimum area in m<sup>2</sup>, should be left undisturbed where possible around the trees to ensure their safe retention during the development process. It is calculated as an area equivalent to a circle with a radius twelve times stem diameter. Where the tree is growing next to structures such as roads, walls, buildings etc, it would be expected that the shape of the RPA be altered (but not reduced in size) to take into account the area of ground that the roots are most likely exploiting. In some circumstances, the incorporation of hard surfaces and other construction can take place within the RPA.

## **7.0 LEGAL CONSTRAINTS**

- 7.1 The site is within a Conservation Area and the trees are therefore afforded protection and any works must only be done with consent from the local planning authority. The existing toilet block which is proposed for conversion is not protected, but many of the adjacent buildings are listed and therefore the trees also fall within the curtilage of the listed buildings. The trees form part of and contribute to the setting of the buildings.

## **8.0 ARBORICULTURAL IMPLICATIONS ASSESSMENT**

### **8.1 Description of Proposed Development**

It is proposed to convert an existing toilet block in Theatre Street Woodbridge. The existing foot print of the building is being extended with a proposed new building link to the existing listed Galley Restaurant building. This would necessitate work to one of the two trees, namely T2.

The building of a small new independent toilet which faces onto Theatre Street would mean that new walls would be constructed within the RPA of tree T1. In order to reduce this potential impact it is suggested that all excavation in the RPA is done by hand and care taken in accordance with the relevant BS5837. The fence between the existing toilet block and the proposed new toilet would be of timber construction and other than a few post holes, the impact on the roots should be minimal. A Construction Exclusion Zone (CEZ) has been defined in Appendix 3 in order to reduce the potential for root compaction and damage to the main stem.

A new parking space accessed from Theatre Street is also proposed and this would be directly under T1. In order to ensure that the potential impact is reduced it is suggested that no-dig construction methods are used and that the surface material is permeable. A gravel filled cellular structure beneath a surface such as permeable block paving would help ensure that the weight is evenly distributed. The use of a Permafilter

geotextile under the gravel grid system would also help to prevent the potential for pollution from vehicles poisoning the tree. With the above construction or similar approved, the impact on the tree should be minimal.

## 8.2 **Drawings Used**

A proposed site plan was used to show the location of the trees on the Tree Quality Assessment Plan (**Appendix 1**) and the root protection areas of those to be retained (**Appendix 2**). A tree protection plan (**Appendix 3**) has been produced in line with the proposed layout.

## 8.3 **Trees in Relation to Proposed Development**

There are few trees in this area, with the exception of those immediately adjacent to the existing building. Neither would need to be removed to facilitate the new proposals and conversion of the building, but some work would be required to T2. The work suggested would be unlikely to result in a loss of amenity. The material removed would improve the shape of the tree crown which has become overgrown and its form has been compromised due to lack of light and space.

The trees identified are in fair to good condition and make a valuable contribution to the setting. Their position in relation to the existing buildings has been considered and providing they are protected in accordance with BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations, any impact could be minimised.

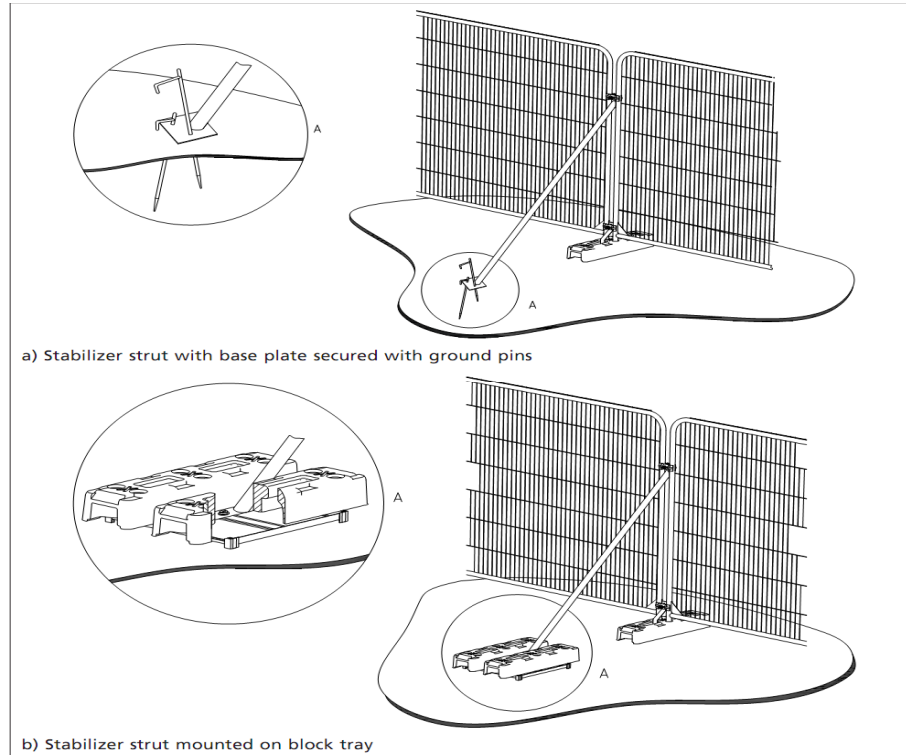
## 8.4 **Tree Surgery Work**

The birch tree (T1) does not require any work as it is in good health and recent wounds from branch removals are occluding well. Apart from a check to ensure there is no deadwood, no work is required.

T2 is in fairly good health, but it does have a low branch overhanging the Site and in order to facilitate the proposals it is recommended that this is removed and cut back to the main stem. The crown of the tree is also in contact with the rear of the buildings on Market Hill and it would therefore be advisable to trim these branches back on a regular basis (every 2-3 years) to ensure that they do not damage the buildings.

## 8.5 **Tree Protection Detail**

A construction exclusion zone (CEZ) would be designated on site by using protective barriers and ground protection to ensure the safe retention of the trees identified in **Appendix 3**. These barriers would guard against impact damage to the trunks and branches and would protect the below ground rooting environment so that the soil structure remains viable for root growth and not compacted by construction operations. The diagram below illustrates recognised and approved industry standard protective fencing.



- Protective Barriers

Protective barriers in accordance with BS 5837: 2012 would be erected around the trees to be retained. Where possible, the positions of these barriers should be based on a distance equivalent to the radius of each tree's RPA.

Once erected all weather signage should be displayed stating 'Tree Protection Area Keep Out'. All site personnel shall be made aware of the importance of root protection areas and shall ensure that these areas within the barriers - the construction exclusion zones (CEZ) are properly maintained at all times.

No development works shall commence within or adjacent to the construction exclusion zone until written confirmation has been obtained from the Local Planning Authority. A qualified Arboriculturalist would supervise the work within the RPAs.

- Construction Space

Space for construction work, mixing and material storage would be designated on site away from the construction exclusion zone as defined by the protective barriers and ground protection. No materials or washing out etc should take place under the canopies of the trees.

## 8.6 **Infrastructure Detail**

### Access

Only pedestrian access onto the site is facilitated for at the moment, but this would be changed to include vehicular parking access as indicated on **Appendices 2 and 3**.

### Services

No specific detail available at the time of writing. No dig techniques in line with NJUG 4 Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees', to be used for installation of services if installed or modified within the RPAs of any retained tree.

All work within the RPAs is to be supervised by the project Arboriculturalist.

## 8.7 Landscaping

There is no planned loss of any trees and new planting on the roadside of the new wall on Theatre Street is planned. The retention of the trees would ensure that the overall impact on the existing townscape is limited. The limited quantity of the existing planting in the vicinity means that the loss of any trees would be very noticeable. New planting to the front of the proposed wall facing onto Theatre Street would soften the visual impact of the redevelopment of the Site.

## 8.8 Justification for building within the RPA

The proposed redevelopment, new connecting structure and the new individual toilet building would in some cases penetrate previously undisturbed ground. Whilst the existing toilet block is well within the RPA of T1 and T2, the age of the toilet block is likely to be contemporary with the trees and subsequently the renovation works to the existing building should not affect the trees. Due to the size of the Site and the tight space constraints, the potential impact of the new additional building structures are of greater concern as they would disturb the RPA's. Therefore it is essential that care is taken to ensure that sufficient protection to the roots is provided in accordance with BS5387.



## 9.0 CONCLUSIONS

- 9.1 The trees within the site are of mixed value and condition in terms of health and contribution to visual amenity. T1 has had some lower branches removed, which are occluding well. T2 would benefit from some remedial work as it appears to have received little work in recent years. They are both capable of standing for up to 20 years and would benefit from ongoing inspection to ensure that they remain in good health due to their proximity to the existing building and outside working spaces associated with the restaurant.
- 9.2 The trees surveyed are both situated adjacent to the existing toilet block building. They are both visible from the properties nearby. In particular T1 is the largest tree and clearly visible from Theatre Street, which is overlooked by adjoining property owners. The canopies of the trees are also visible from properties which are not immediately adjacent and the loss of T1 and T2 would have an impact on amenity.
- 9.3 T1 appears to be the oldest and is in good health. It has a good form and it is typical of the species. It is quite tall as it has had to compete for light. The size of both trees in relation to the location and setting means that there is the potential for impact on the proposed building conversion and proposed new buildings. The health of both trees should be monitored to ensure that they remain in good health. Some works to the crown of T2 are recommended in order to ensure that it is not in physical contact with the buildings immediately adjacent.
- 9.4 The proposals would not require the removal of either tree. Even though excavations would fall inside the RPA for T1 and T2, both trees are healthy and it is considered that they would tolerate some ground disturbance. Appropriate protection measures would be put in place so that the structure of the soil nearby remains viable for root growth and is not compacted during construction operations.
- 9.5 The retained trees would pose some constraint upon the proposed toilet block conversion and associated other new structures, but their removal would have a significant impact on visual amenity in terms of loss. The reduced open character of the Site would be compensated for by the planting of new vegetation to the fore of the wall, which would soften the street scene and compliment the sensitive conservation area setting. All tree work is to be carried out in line with the current British standard for Tree Work BS 3998 by qualified Arborists.

**Details within this AIA are considered correct at the time of writing but, modifications may need to be made as more information becomes available.**

## Glossary

<b>Adventitious Growth</b>	New growth arising from dormant or new buds directly from main branches/stems or trunks
<b>Arboriculturist</b>	Person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction
<b>Construction Exclusion Zone</b>	Area based on the root protection area from which access is prohibited for the duration of the project.
<b>Root Protection Area (m2)</b>	Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the trees viability and where the protection of the roots and soil structure is treated as a priority.
<b>Services</b>	Any above ground or below ground structure or apparatus required for utility provision. E.g. drainage, gas supplies, ground source heat pumps, CCTV and satellite communications.
<b>Stem</b>	Principal above ground structural components of a tree that supports its branches.
<b>Tree Protection Plan</b>	Scale drawing informed by descriptive text where necessary, based upon the finalized proposal showing trees for retention and illustrating the tree and landscape protection measures.

### **CREDENTIALS OF THE AUTHOR**

Kirsten Bowden has worked in the landscape profession since 2002. Her experience has been gained from both the public and private sector. She has worked for Hillers Tree Nursery in Hampshire, Daventry District council, The Landscape Partnership and Suffolk County Council. In addition to her experience, she holds the following qualifications:

Masters Degree in Landscape Architecture, Heriot-Watt University. (MA Hons)

Chartered Member of The Landscape Institute (CMLI)

Certificate in Landscape History (UEA)

She is also a Technician Member of the Arboricultural Association and completed a level 4 diploma in Arboriculture in September 2017 (Tree Life).



**Key:**

- Trees of high quality and value
- Trees of moderate quality and value
- Trees of low quality and value
- Trees in decline or to be removed

Date	Revision
14.12.2020	A - Amended layout.



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<b>Site</b> The Galley Restaurant, Market Hill, Woodbridge, IP12 4LX.		
<b>Client</b> Plaiçe Architects		
<b>Drawing Title</b> Tree Quality Assessment - Appendix 1		
<b>Drawn by:</b> KB	<b>Purpose of issue:</b> Planning	
<b>Date</b> 14.12.2018	<b>Scale</b> 1:125 @ A4	
<b>Job Number</b> 2018_64	<b>Drawing No.</b> 001	<b>Rev</b> A

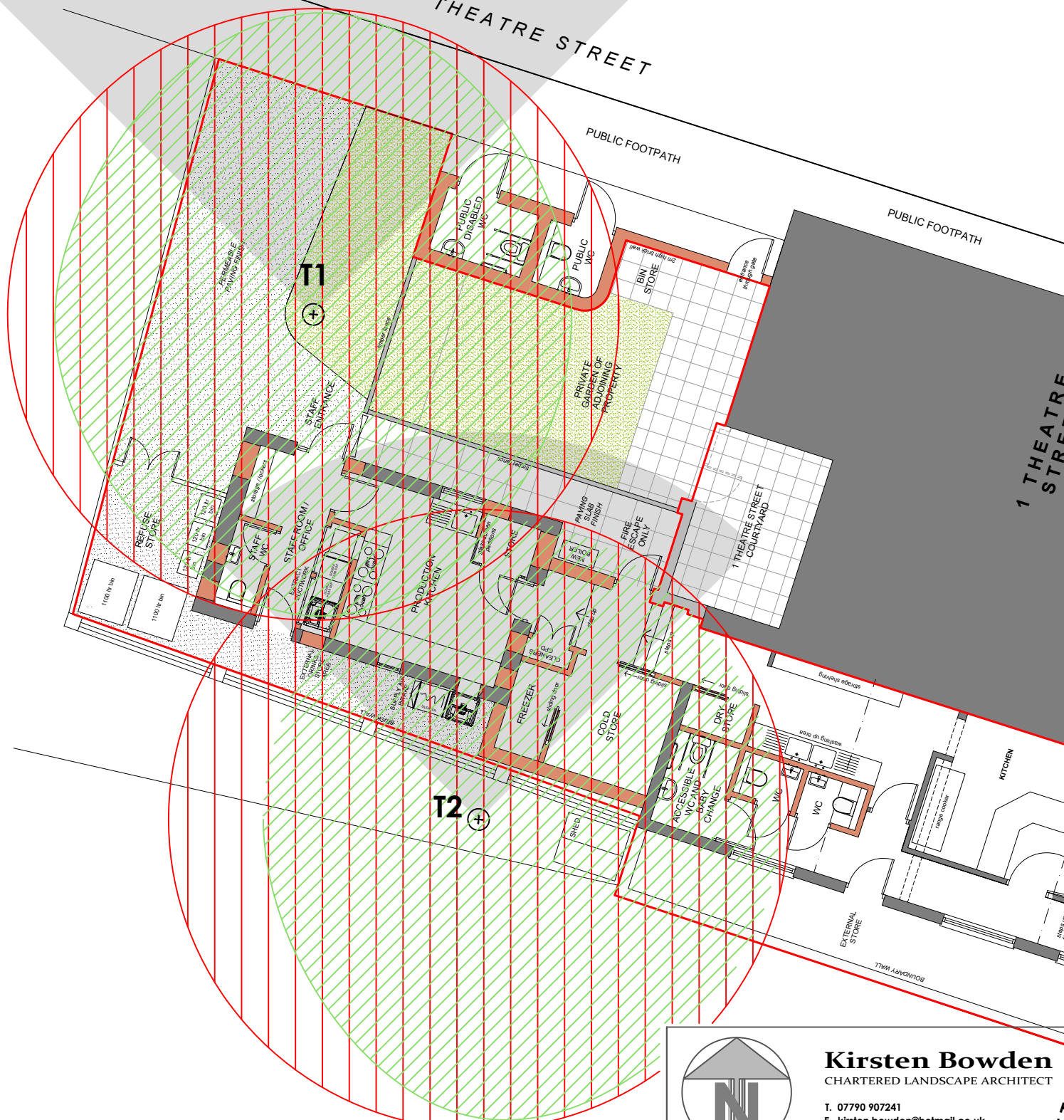
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THEATRE STREET

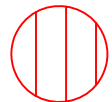
PUBLIC FOOTPATH

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1 THEATRE STREET



**Key:**



Root Protection Area (m2)



Tree canopy spread Area



Shade during the main part of the day

Date	Revision
14.12.2020	A - Amended layout.



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K E T

**Site** The Galley Restaurant, Market Hill, Woodbridge, IP12 4LX.

**Client** Plaiçe Architects

**Drawing Title** Root Protection Areas - Appendix 2

**Drawn by:** KB

**Purpose of issue:** Planning

**Date** 14.12.2018

**Scale** 1:125 @ A4

**Job Number** 2018\_64

**Drawing No.** 002

**Rev** A

THEATRE STREET

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1 THEATRE STREET



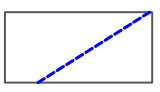
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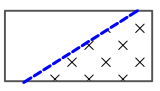
Root Protection Area (m2)



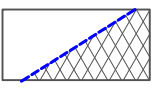
Tree canopy spread Area



Construction Exclusion Zone (CEZ) fence



CEZ area



Ground protection in accordance with BS5387:2012



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**Site** The Galley Restaurant, Market Hill, Woodbridge, IP12 4LX.

**Client** Plaiçe Architects

**Drawing Title** Ground Protection Areas - Appendix 3

**Drawn by:** KB

**Purpose of issue:** Planning

**Date** 14.12.2018

**Scale** 1:125 @ A4

**Job Number** 2018\_64

**Drawing No.** 003

**Rev** A

Date	Revision
14.12.2020	A - Amended layout.

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