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Pre-Development Tree Survey BS5837:2012

Client: Malcolm Watson

Site: Thistledown, Stoke ferry PE33 9SW

Scope: Arboricultural Survey to BS5837:2012

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1.0 Introduction

1.1 Instruction

S.P. Landscapes & Tree Contractors were instructed by Malcom Watson to undertake an arboricultural survey at Thistle Down, Lynn Road, Stoke Ferry. This survey will assess the health and condition of the trees within the site and any trees within 12m of the proposed development.

1.2 Survey

The survey carried out assessed the condition of the trees based on a visual inspection made at ground level with the use of a binocular, a stem diameter measuring tape and a clinometer. If further inspection of any specific tree is required, including the use of decay detection equipment, the recommendation to do so will be made clear in this report and noted on the tree schedule (appendix V). Any measurements written in the report are approximate. The data collected is in accordance with BS5837: 2012.

1.3 Report Limitations

This report is only concerned with the trees within the grounds of the proposed development and any trees off site, within 12m. Trees are dynamic living organisms that are subject to constant external stresses and to biological and non-biological influences. The structure of a tree can change at any given time and should be assessed for risk regularly. A survey may need to be carried out more frequently depending on location and the surrounding population. The assessment of the tree(s) in this report may be considered valid for a period of twelve months.

1.4 Importance & Legal Framework

Trees are an important part of our urban landscape and can be taken for granted. They have important visual amenity value allowing their aesthetic beauty to break up and soften the surrounding built environment. Trees signal a change of seasons, producing flowers, fruit and autumnal colours. Collectively they can produce large quantities of oxygen, filter pollution and shelter us from wind and direct sunlight.

In recent years there has been an average of around six tree related deaths annually, which is a chance of 1 fatality per 10 million of the population. Compared with other daily risks such as industrial or traffic accidents, this figure is broadly acceptable and tolerable. These risks do increase slightly in highly populated urban areas with a high concentration of people close to trees.

However, there is an obligation of reasonable safety owed by a site owner or manager to both visitors and to those adjacent to the site under the Occupier's Liability Act 1957 and as revised in 1984. The owner/manager of the land may be held liable for any physical harm to persons or property arising from an accident that was both reasonably foreseeable and reasonably preventable in that situation.

1.5 Qualification & Experience

This survey and report has been completed by Ian Clarke, who holds an ABC Level 4 Diploma in Arboriculture and based this report on site observations, continual professional development courses and knowledge gained over the last 10 years as a practicing arborist.

1.7 Survey Date & Data Collected

The tree(s) were surveyed at this site on Thursday 18th of March 2021. The weather on the day was dry, overcast with clear visibility. The survey involved collected the following data:

- Tree Number and / or Group Reference;
- Species;
- Height (in meters);
- Stem diameter (in mm measured at 1.5m above ground level);
- Age Class;
- Physiological Condition;
- Structural Condition;
- Management Recommendations
- Crown height
- Crown spread along the four cardinal points

2.0 Site Description

2.1 Overview

The site is a rectangular plot and borders neighbouring properties to the West and East. Access to the property is From Lynn Road. The surrounding area is urban with a moderate density of housing.

2.2 Current Works

There are no structural works in place at the time of the survey.

2.3 Site Restrictions

At this stage the data search undertaken shows no Tree Preservation Order (TPO) designation and the site is outside any Conservation Area (CA).

3.0 Observations & Tree Assessment

3.1 Property Grounds

The area surveyed had a mixed variety of species consisting of Ash *(Fraxinous sp.)* Conifer *(Cupressess sp.)* and Poplar *(Populus sp.)* In total there were 11 assessments, 8 Trees Five within the property boundary and three outside of the boundary. 3 Groups two within the property boundary and one outside. The trees marked on the site plan are within 12m of the proposed development site.

3.2 Trees

The assessment showed a mixed quality of individual trees, categorised as either 'A', 'B', 'C' or 'U' (as shown in appendix II) which provides more of a collective arboricultural and landscape contribution. The site has several trees over 75mm in diameter and over 1.5m in height, these are recorded and categorised as either 'T' for **tree** or 'G' for **group**. A 'group' has been determined where there are several smaller trees growing near one another, where the height and stem diameter are of a similar size. The site is of domestic use and the trees located within these grounds have, during their lifetime, had some minor works carried out in the form of branch removal and branch reduction.

4.0 Management Recommendations

4.1 Present Requirements

See appendix V.

4.2 Implementation of Works

All tree works should be carried out to BS 3998:2010, *recommendations for tree work* as modified by more recent research. It is advisable to select a contractor from the local authority list and preferably one approved by the Arboricultural Association.

4.3 Statutory Wildlife Obligation

The Wildlife and Countryside Act 1981, as amended by the Countryside and Right of Way Act 2000, provides statutory protection to birds, bats and other species that inhabit trees. All tree work operations are covered by these provisions and advice from an ecologist must

be obtained before undertaking any works that might constitute an offence. A risk assessment will be required prior to commencement of any tree work or felling to assess the likelihood of disturbing or endangering any protected wildlife or habitat.

4.4. Future consideration:

Any remaining tree should be inspected on a regular basis by a qualified arborist approximately every 4 years. To help get the best results from a follow up survey it is recommended that all Ivy-covered trees identified should have the Ivy severed at ground level to allow for a clearer inspection. Severing and/or removing Ivy will also benefit the tree(s) by allowing the stems to permit gas exchange through their lenticels; small openings in the bark.

5.0 Summary

5.1 Appraisal

The trees are a mix of on site and neighbouring trees due to the shape of the land the Large Poplar is not easily viewed from the public footpath. There are two ash stems on site that are located next to the neighbouring boundary that have been monolithed in the past and are showing signs of decay. There are two larger ash trees have been reported to me by the home owner to be losing limbs that show no decay/dysfunction. The neighbouring Ash trees are more visible but the view is blocked by the Conifer hedge at the front of the neighbouring property. They provide good arboricultural value and have some ecological value to the local area. Any recommendations are made giving due regard to all the fact contained within this report and associated appendices.

5.2 Statement

Every endeavour has been made to present this report in a clear fashion, with accurate information, reasonable conclusions and appropriate recommendations. The report will be reviewed and agreed before release by a second person within the company. This should ensure compliance with our quality standard. However, should you have any questions, problems or queries about this report please do not hesitate to contact us.

Appendix I

Terms & Definitions

"*Arboriculturist"* – A person who has, through relevant education, training and experience, gained recognized qualifications and expertise in the field of trees in relation to construction.

"BS5837 Tree survey" – This should be undertaken by an arboriculturist and should record the information about trees on a site independently of and prior to a specific design for development. The results of the survey should be included in the preparation of a tree constraints plan, which should be used to assist with the site design.

"Tree categorization method" – This method is in accordance with the cascade chart. This will help identify the quality and value of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained should development occur.

"Tree constraints plan" – A scaled plan prepared by an arboriculturist. It is used as design tool showing the tree stem, identification number, below ground, below ground constraints (root protection area) and above ground constraints (crown spread).

"Root protection area (RPA) – Indicated on the constraints plan containing sufficient rooting to ensure the survival of the tree, written in m^2. The size of which is based on the diameter of the trees trunk measured at 1.5m.

"Crown break" – The point where the crown develops from the main stem

"Bark necrosis" – Localised death of living tissue

"Minor dead wood" – Considered to be wood that is 10-50mm in diameter

"Major dead wood" – Considered to be wood that is 50mm plus in diameter

"Compartmentalize" – A natural defence process in a tree whereby chemical and physical boundaries are created that help to limit the spread of disease and decay.

Appendix II

British Standard 5837:2012 Quality Assessment

BS5837:2012 Table 1 – Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context 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 • Trees infected with pathogens of significance to the 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; see [BS5837:2012]* ***4.5.7****.*			
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
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)	
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	
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	

FLAC Note

The original contents of the column *Identification on plan* have been replaced by FLAC in the version above; spot colours to RGB codes given in BS5837:2012 Table 2

Appendix III

Explanatory Notes

Measurements/estimates: All dimensions are estimates unless otherwise indicated. Measurements taken with a tape or clinometer are unmarked. Less reliable estimated dimensions are indicated with a '*'.

Species: The species identification is based on visual observations with the botanical name used. In some instances, it may be difficult to quickly and accurately identify a tree without further detailed investigations. Where there is some doubt of the precise species of tree the botanical name is followed by the abbreviation 'sp' if only the genus is known the name in order to avoid delay in the production of the report.

Diameter: These figures relate to 1.5m above ground level and are recorded in millimetres. If appropriate, diameter is measure with a diameter tape. '*' indicates trees where it was not possible to access the trunk to accurately measure it.

Height: Height measurement is approximate and in metres.

Spread: The maximum crown spread is visually estimated from the centre of the trunk to the tips of the live lateral branches.

Life stage: In this case Y= Young establishing tree, SM= Semi mature; an established tree but with growth to make before reaching its potential maximum size, EM= Early mature; a tree that is reaching its ultimate potential height, whose growth rate is slowing down but if healthy, will still increase its stem diameter and crown spread. M= Mature; a specimen with limited potential for significant increase in size, even if healthy.

Priorities: Priority 1 = Urgent / As soon as possible. Priority 2 = within 18 months of the survey date. Priority 3 = within 3 years of the survey date work recommended in order to benefit the trees life span potential.

Max Life expectancy: Age is based on research by the Botanist and Forester Alan Mitchell.

RPA Root protection area: Calculated according to British Standard 5837:2012.

Appendix IV:

Ref	Species	Height (m)	Stem Diam (mm)	Crown Spread (m)				Crown Clearance (m)	Life Stage	General Observations	Recommendations	Rem. Contrib.	Retention Category	RPA
				North	South	East	West							
G01	Leyland Cypress x15 (Cupressocyparis leylandii X)	7	200	2	2	1	1	1	Semi Mature	Rooting area has previously been disturbed by neighbouring property installing a fence creating a 60cm difference in soil level between the two sides. The stems are free from wounds and have good taper. The trees were topped within the last two years and have good vigour.	Pre construction: Crown reduction on the south east side to stop branches being hit by construction traffic. During construction: Ground protection of the rooting area from construction traffic. Post construction: No action required.	<10 years	C1	Area: 57.31 sq m.
G02	Leyland Cypress x8 (Cupressocyparis leylandii X)	4	100	1	1	1	1		Young	Group of young conifers on outside of fence providing noise screening and privacy. Trees appear in good health and have formed a dense hedge that has restricted access to view the trees that has been maintained well.	Pre construction: Fell to ground level and grind out stumps to facilitate construction During construction: No action required. Post construction: Replant with similar species to form a new hedge.	10+ Years	C1	Area: 22.19 sq m.
G03	Leyland Cypress x70 (Cupressocyparis leylandii X)	6	200	1	1	1	1		Young	conifers belonging to the neighbouring property forming a boundary hedge with overhang of about 1M. root plate and stem inspection restricted by fence obstructing view. They have good vigour.	Pre construction: Crown reduction back to boundary line any overhanging branches. During construction: Ground protection for 1M from the fence line in to thistledown side of the fence. Post construction: No action required.	10+ Years	C1	Area: 113.21 sq m.

T01	White Poplar (Populus alba)	13	1000	5	4	4	3	3	Mature	Root plate not showing signs of disturbance. Stem has good taper with buttress roots in all cardinal directions and the stem is free from wounds. Crown breaks at 6M above ground level with a minor branch at 3M above ground level towards the northwest. Major deadwood seen throughout the canopy. The tree does not appear to of had any recent Arboriculture work	Pre construction: Dead wood (major greater than 25mm). During construction: No dig method of drive way construction to be used where the driveway encroaches the RPA. Post construction: No action required.	20+ Years	B1	Radius: 12.0m. Area: 452 sq m.
T02	Common Ash (Fraxinus excelsior)	10	300	1	2	1	2	5	Young	Tree on neighbouring property could not gain access to get accurate measurement. view was blocked by fence and conifer trees of group 3	Pre construction: No action required. During construction: No action required. Post construction: No action required.	10+ Years	B1	Radius: 3.6m. Area: 41 sq m.
T03	Common Ash (Fraxinus excelsior)	10	400	1	2	1	2	5	Young	Tree on neighbouring property could not gain access to get accurate measurement. view was blocked by fence and conifer trees of group 3	Pre construction: No action required. During construction: No action required. Post construction: No action required.	10+ Years	B1	Radius: 4.8m. Area: 72 sq m.
T04	Common Ash (Fraxinus excelsior)	10	300	1	2	1	2	5	Young	Tree on neighbouring property could not gain access to get accurate measurement. view was blocked by fence and conifer trees of group 3	Pre construction: No action required. During construction: No action required. Post construction: No action required.	10+ Years	B1	Radius: 3.6m. Area: 41 sq m.

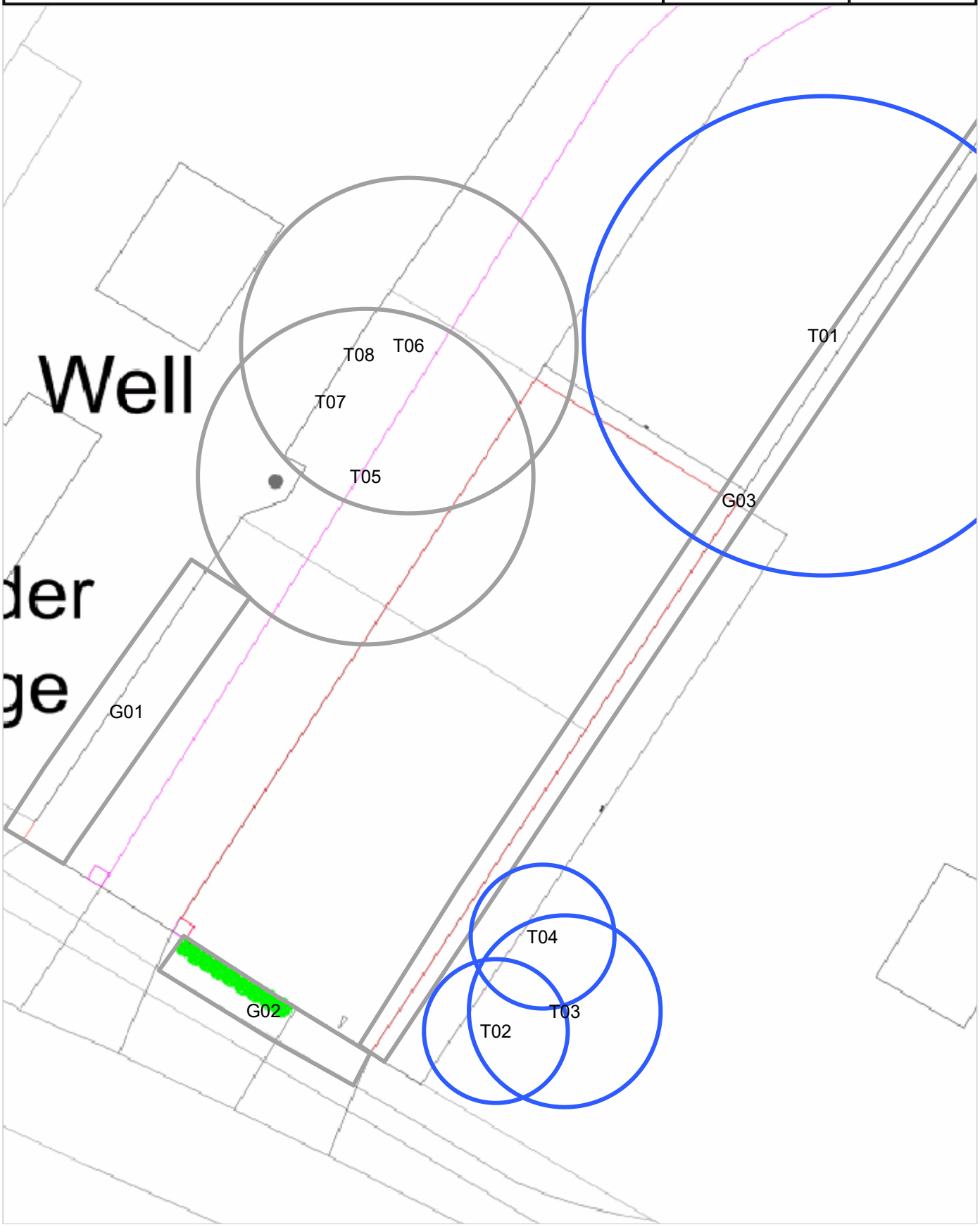
T05	Common Ash (Fraxinus excelsior)	13	700	4	4	3	3	6	Mature	Root plate not showing signs of disturbance. Stem has good taper with buttress roots in all cardinal directions and the stem is free from wounds. Crown breaks at 6M above ground level. Major deadwood seen throughout the canopy. Reported the tree has been losing limbs that have not been decayed/diseased. The tree does not appear to of had any recent Arboricultural work	Pre construction: Fell to facilitate construction During construction: No action required. Post construction: No action required.	10+ Years	C	Radius: 8.4m. Area: 222 sq m.
T06	Common Ash (Fraxinus excelsior)	13	700	4	4	3	3	6	Mature	Root plate not showing signs of disturbance. Stem has good taper with buttress roots in all cardinal directions and the stem is free from wounds. Crown breaks at 6M above ground level. Major deadwood seen throughout the canopy. Reported the tree has been losing limbs that have not been decayed/diseased. The tree does not appear to of had any recent Arboricultural work	Pre construction: Fell to facilitate construction. During construction: No action required. Post construction: No action required.	10+ Years	C	Radius: 8.4m. Area: 222 sq m.

T07	Common Ash (Fraxinus excelsior)	7	400	1	1	1	1	1	Dead	Dead monolith stem alongside the neighbouring property fence line located on a steep bank. Stem is at risk of collapsing in the future due to the tree being monolithed. the stem is 460mm at DBH but the stem has not branches of foliage. These stems are too far away to have an impact on the construction but I feel it would be prudent to fell them before they fall. These stems are too far away to have an impact on the construction but I feel it would be prudent to fell them before they fall.	Fell to ground level to prevent the stem from failing	<10 years	U	None - due to Retention Category of U.
T08	Common Ash (Fraxinus excelsior)	7	600	1	1	1	1	1	Dead	Dead monolith stem alongside the neighbouring property fence line located on a steep bank. Stem is at risk of collapsing in the future due to the tree being monolithed. the stem is 460mm at DBH but the stem has not branches of foliage. These stems are too far away to have an impact on the construction but I feel it would be prudent to fell them before they fall. These stems are too far away to have an impact on the construction but I feel it would be prudent to fell them before they fall.	Fell to ground level to prevent the stem from failing	<10 years	U	None - due to Retention Category of U.

Thistle down
Lynn Road
Stoke Ferry
Norfolk
PE33 9SW

5 m
10 ft
Scale = 1 : 200
Page size: A4

N



Thistle down
Lynn Road
Stoke Ferry
Norfolk
PE33 9SW

10 m
20 ft

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Page size: A4

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