Tree Inspection and Risk Assessment

Site: The Bays
Greenfield Close
Hedge End
SO30 4DN

Client: Joanne McDonnell

Date of Inspection: 9th February, 2015

Date of Report: 12th February, 2015

Client's Reference: n/a

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Introduction

Instruction

Instruction was received from Joanne McDonnell to inspect trees at The Bays, Greenfield Close, with particular reference to risk.

The instruction was to provide a detailed tree inspection and risk assessment of all identified trees. Identification of the trees was provided through a site-meeting on the 19th January, 2015. The inspection and this subsequent report were commissioned on the 27th January, 2015.

The aim of this report is to provide an overview of the tree inspection and risk assessment findings and to make recommendations for mitigation work, where required.

Documents

No documents were provided.

Methodology

Tree Inspection

All trees, identified through the instruction, underwent a systematic visual tree inspection, from ground level, of their stem, branches and crown, in order to identify any structural or physiological condition of concern (defect). In addition to the visual inspection of the trees, potential targets and situation within the landscape were also observed (context). This was recorded, along with basic data such as species, age and height.

Where defects were found, signs of defects observed, or where the context required it, further investigation was carried out and the likelihood of failure and the likelihood of impacting a target assessed. Where this was deemed to be "significant" a risk assessment was undertaken, with observations, recommendations and priorities recorded in the *Schedule*.

In situations where the visual inspection was limited through obstructions (such as ground cover), and there was reasonable reason further investigation (sign of a defect or the context), recommendations were made for the removal of these limitations. These were noted in the *Schedule*.

Boundaries

The tree inspection and risk assessment was carried out from within the boundary of the site.

Tree Identifications

All tree identification numbers found in the *Schedule* refer to the *Site Plan*.

Results

Context

All six specimens are located in a residential back garden, surrounded by further residential gardens. Targets include people using residential gardens (occasional occupancy), minor property (constant occupancy) and major property (constant occupancy). People and minor property (fences, sheds, etc.) can be found within the drip-line of T1-T6, while major property (dwelling) is within falling distance.

Schedule

T1 Scots pine (*Pinus sylvestris*)

T1 is a mature Scots pine of 18m height and 8m spread, situated at the eastern end of a line of trees located in the garden of a residential property.

The rooting soil volume is shared with a garden pond (2m distance from the base of the stem); a holly and mature shrub. The shrub is immediately adjacent to the eastern side of the stem, which limits a complete view of the base of the stem.

The base of the stem shows typical proportionality to the overall individual. The stem is straight, vertical and rises to 10m above ground level (agl) before separating to form two co-dominant branches joined at a tension union. Between 9 and 11m agl, there are several pruning wounds, measuring between 150-200mm in diameter, none of which show signs of decay. In the lower crown there is typical small diameter deadwood.

The crown of T1 is balanced and largely intact, measuring 3m north, 4m east, 4m south and 4m west. The crown is dominant, which supresses its immediate neighbouring tree, and is of typical size for the species. The foliage is slightly sparser than may be expected, but the colour is typical.

Risk rating: n/a.

Recommendations: there are no obvious significant defects observed so no action is required at present.

Re-inspection interval: 5 years from the date of this report.

T2 Scots pine (*Pinus sylvestris*)

T2 is a supressed specimen of unknown age category (probably the same age as other specimens, but significantly smaller). It has a height of 11m and a spread of less than 2m. T2 has a particularly diminished crown and sparse foliage.

Within the rooting soil volume of T2 there is a historical level change from the border, in which the tree stands, down to the mown lawn of 200-300mm in height.

The stem shows limited taper (change in diameter of the stem with height), possibly because it has been sheltered by its neighbouring specimens and not required for development. The stem is straight and vertical to 7m agl where there is a pruning wound measuring 100mm diameter. There are several natural wounds at 9m resulting from a recent structural failure in T3.

The crown is diminished in size, broken structure and heavily supressed, measuring 1m north, 0m east, 1m south and 0m west. The foliage is very sparse.

Risk rating: low

Recommendations: Option 1 - Remove and replant. It is not expected that T2 will be able to sustain enough energy for itself following damage during the structural failure of T3. Therefore, it is predicted that it will be relatively short lived. Option 2 - No action. Despite the prediction that the specimen will be short-lived, the risk from structural failure is categorised as low because of the lack of crown and the more sheltered position amongst the group. Assigning a smaller in-inspection interval will allow the physiological condition to be monitored. This will allow consistency for the line of trees, if desired, and action to be taken when required.

Priority: low - remove (option 1) within 2 years from the date of this report.

Re-inspection interval: 2 years (option 2) from the date of this report.

T3 Scots pine (*Pinus sylvestris*)

T3 is a mature specimen of 10m height and a crown spread of 4m and is situated amongst other specimens within the line. T3 has lost a large proportion of its original height and crown.

The rooting soil volume is shared with a young sycamore and T4. There is a historical level change from the border down to the mown lawn, as described with T2.

The base of the stem is dis-proportionate to the crown, primarily the result of the loss of crown (see below), but also potentially a sign of decay or compensation for the slight lean. The stem is straight to 5m agl, and then bowed to 10m, suggesting a structural failure early on it its life, and subsequent compensation. There is a natural wound at 10m agl facing north, where the top of the tree was lost through recent structural failure.

The crown is asymmetrical, broken in structure and diminished in size as it only represents a portion of the original crown. The entire 4m spread is south.

Risk rating: low

Recommendations: no action is required at present as T3 has been naturally reduced in height and the crown has been naturally reduced in size, alleviating end-weight acting on the stem and root plate.

Re-inspection period: 5 years from the date of this report.

T4 Scots pine (*Pinus sylvestris*)

T4 is a mature specimen of 17m height and 10m spread.

The rooting soil volume of T4 is shared with T3, the young sycamore, a Portuguese laurel and a holly. There is a historical level change from the border down to the mown lawn, as described with T2.

The base of the stem shows signs of compensation growth from torsion, possibly due to dis-proportionate exposure on one side of the crown as the tree grew. The stem is straight and free from branches until 12m agl, where the crown starts. There is historical sapwood damage on the compression side of the principal branch that spreads west measuring 1-2m in length and encompassing one third of the branch circumference. This is possibly due from contact in high wind with T5.

The crown of T4 is dominant and somewhat broken in structure, with several abrupt bends and crossing branches, suggesting historical minor structural failures. There is some small diameter deadwood. Overall the

crown is slightly asymmetrical, being more vigorous to the west over T5. The foliage is of typical colour and density.

Risk rating: low

Recommendations: selectively reduce branch spreading west to suitable growth points in order to alleviate weight acting on area of damage sapwood.

Priority: low - carry out recommendations within 1 year from the date of this report.

Re-inspection period: 5 years from the date of this report.

T5 Scots pine (*Pinus sylvestris*)

T5 is a supressed specimen of 12m in height with a spread of 5m. T5 leans to the northeast. It is the western most living specimen in the line, on the site.

The rooting soil volume of T5 cannot be viewed in detail as there is debris around the base. A garden shed and associated concrete base is situated within close proximity to the base of the tree.

The stem is straight, but leans by approximately 5-10 degrees from vertical, until 9m agl, when an abrupt bend suggests a lost leading shoot when younger and subsequent compensation growth. At this point, a branch spreads north over neighbouring property, while the remainder of the crown spreads west at 12m. There is a partial structural failure of a minor branch spreading south. It remains *in situ* and alive.

The crown is asymmetrical in shape, broken in structure and diminished in size, possibly due to suppression from T4 and T6 (in the past). It is now vigorously growing to the west. There is possible contact with T4 in high winds.

Risk rating: low

Recommendations: remove hanging limb

Priority: moderate - carry out work within 6 months from the date of this report.

Re-inspection period: 2 years from the date of this report.

T6 Unknown (probably Scots pine)

T6 is a dead specimen of 10m height and a spread of 3m to the north.

Structurally, T6 is a pole having lost probably a third of its height and almost its entire crown at some point in the past.

Risk rating: moderate

Recommendations: remove tree.

Priority: moderate - carry out work within 6 months from the date of this report.

Re-inspection period: n/a.

Discussion and Limitations

Trees are dynamic, living organisms and their condition is subject to change throughout their lifetime or following alteration to their immediate environment. Due to the limitations in predicting such natural processes and events, all observations, recommendations and priorities relate solely to arboricultural condition of the tree at the time of the survey.

The legal status of the trees under the instruction of this survey has not been officially identified with regard to recommended arboricultural work, but it is understood that the trees are subject to a Tree Preservation Order.

It is not possible to eliminate all risk associated with trees because even those apparently free from significant defects can fail when the forces acting upon them exceed their inherent strength. Therefore, some risk must be accepted to experience the benefits that trees provide.

All measurements are approximations.

Site Plan



Plan 1: Site showing approximate tree locations.

Photographs



Photograph 1: Showing (from right to left) T1 to T6



Photograph 2: Showing (from left to right) T6 (dead), T5 (hanging branch), T4 (area of sapwood damage) and T3.